Malvaceae

Common names

Okra, Lady's fingers,



Scientific name

Abelmoschus esculentus

Edible portion

Pods, Flowers, Seeds, Leaves, Vegetable,

Description

A tropical annual herb. It grows erect, often with hairy stems. It mostly grows about 1 m tall but can be 3.5 m tall. It becomes woody at the base. The leaves have long stalks up to 30 cm long. Leaves vary in shape but are roughly heart shaped with lobes and teeth along the edge. Upper leaves are more deeply divided than lower ones. The flowers are yellow with red hearts. The fruits are green, long and ribbed. They have 5-7 ribs. They are 7.5-15 cm long. The seeds are 4-5 mm across. They are round and dark green. Many varieties exist.

Distribution

A tropical plant. It suits the hot humid tropical lowlands but is unsuited to the highlands. It cannot tolerate drought. It is very sensitive to frost. It can grow in salty soils. They grow best where temperatures are between 20-36°C. It can grow well in dry climates with irrigation. It suits hot humid environments. It does best on well drained well manured soils but will grow on many soils. A pH or 5.5-7.0 is best. It suits plant hardiness zones 8-12.

Found in:

Africa, Albania, Armenia, Asia, Australia, Bangladesh, Benin, Brazil, Bulgaria, Burkina Faso, Cambodia, Central Africa, Central African Republic, Central America, China, Congo, Costa Rica, Dominican Republic, East Africa, Egypt, Ethiopia, Europe, Fiji, Ghana, Greece, Guam, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Iran, Iraq, Israel, Kazakhstan, Madagascar, Malawi, Malaysia, Mali, Mexico, Moldova, Mozambique, Nepal, Nicaragua, Niger, Nigeria, North America, Pacific, Pakistan, Palestine, Panama, Papua New Guinea, Philippines, PNG, Portugal, Romania, Senegal, Sierra Leone, Singapore, Solomon Islands, South Africa, Southern Africa, South America, Spain, Sri Lanka, Sudan, Swaziland, Syria, Tanzania, Thailand, Timor, Tonga

Use

Pods are eaten cooked. They are slimy, but less so if fried.
Dried powdered seeds can be used in soups. It thickens the soup. They can also be pickled.
Young leaves can be eaten cooked. They can be dried and stored.
Flowers can also be eaten.
Okra is frozen and canned.

Cultivation

They are grown from seeds. Seeds are easy to collect. They need high temperatures for germination (over 20°C) and a sunny position. Often seeds are soaked for 24 hours before sowing to give quick germination. Seeds are sown 1.5-2.5 cm deep with 2-3 seeds per hole. Later these are thinned out to one plant. Seeds can be sown in nurseries and plants transplanted. Pinching out the tops of plants when 30 cm high encourages branching. To select seed of a particular variety seed plants must be separated 400 m from other varieties. A spacing of about 90 x 45 cm is suitable. About 8-10 kg of seed are required for one hectare. Most kinds respond to fertiliser. Seeds do not breed true and can cross with other kinds of okra growing nearby. This is not normally a problem but simply means plants and fruit are not all the same.

Production

Plants maintain production if the fruits are harvested regularly. Plants are ready to harvest 8-10 weeks after sowing. Seed yields of 500-800 kg per hectare are recorded. Pod yields of 4-6 tons per hectare occur. For young pods it takes 2-4 months from sowing. Pods develop 5-10 days after flowering. Pod harvests can continue for 1-2 months. Leaving pods on the plants stops new pods developing.

Nutritional Values

Abelmoschus esculentus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds	9.2	1721	411	23.7				
leaves	81.0	235	56	4.4	116	59	0.7	
fresh pods	88.0	151	36	2.1	185	47	1.2	
fruit - cooked	90.0	134		1.9	58	16.3	0.5	0.6
fruit - raw	90.0	71	16.9	2.0	90	25	1.0	

Malvaceae

Common names

Aibika, Edible Hibiscus,



Scientific name

Abelmoschus manihot

Edible portion

Leaves, Flower buds, Vegetable, Root,

Description

A branched shrub up to 2 m or more high. It has rounded twigs which are green and smooth. The leaves are simple, smooth and with 3 to 5 lobes. The leaves are large and can vary in shape. Normally the leaves are very dark green, but occasionally pale green types occur. The leaf stalks are 6 to 13 cm long. The stalks can be green or have red colours on them. The flowers are borne singly and are yellow with dark purple centres. They are produced on mature bushes and the flowers are hibiscus like. The fruit pods are rather stiff or with bristly hairs. They are a dry capsule with many small seeds. Plants can last for a year or for several years. Old plants produce a hibiscus type flower.

Distribution

A tropical plant. It is well suited to the tropical lowlands but grows only poorly at 1800 metres. It needs fertile soil. The plant occurs in countries from India, China, Japan, Malaysia and Indonesia to the Pacific Islands. Plants will withstand occasional short-lived temperatures down to about -5°C so long as they are in a very well-drained soil. It suits areas with high humidity. It does not do well on atoll soils. It suits hardiness zones 10-12. Hobart Botanical Gardens.

Found in:

Asia, Australia, Bhutan, China, Fiji, FSM, Hawaii, India, Indochina, Indonesia, Japan, Kiribati, Malaysia, Nepal, North America, Pacific, Pakistan, Papua New Guinea, Philippines, PNG, Sikkim, Solomon Islands, Tasmania, Timor, Tokelau, Tonga, Tuvalu, USA, Vanuatu, Vietnam,

Use

Young leaves are cooked and eaten.
They are slimy unless steamed or fried.
They can be eaten with papaya leaves to remove the bitterness of the papaya.
The root is boiled with pork to make a broth.

Cultivation

It is grown from cuttings. Cuttings with 2-3 nodes are sufficient. It can be grown from seeds. The narrow leafed types tend to compete less well with weeds. In some areas people tend to put the narrow leafed types in the middle of the garden, intercropped with kaukau, and the broad leafed kinds near stumps or logs and around the edges of gardens. The pale green leafed kinds that occur only grow very slowly. Aibika is normally grown from cuttings. Lengths of about 25 cm (2 or 3 leaf joints or "nodes") of fresh green stem cuttings are used. These are simply stuck in the ground. A fertile soil is needed. Therefore Aibika can be planted in good soil in a newly cleared garden site, or it can be planted near houses where the soil fertility can be built up by adding scraps and compost and ashes. The growth and colour of Aibika leaves can be improved greatly by spraying the leaves each 2 or 3 weeks with a very small amount of the nitrogen fertiliser called urea, dissolved in water. (A 0.5% solution). This uses less fertiliser than putting it on the ground where it can wash away in the rain. Picking out

Production

Leaves are ready to harvest after about 80 days. Yields of 6.7-7.3 tons/ha/crop have been recorded.

Nutritional Values

Abelmoschus manihot

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	88	120	29	3.4	1.0	7.0	1.5	1.2
flower buds								

Fabaceae

Common names

Bird's eye, Indian liquorice,



Scientific name

Abrus precatorius

Edible portion

Seeds (POISONOUS) , Roots, Leaves,

Description

A climbing vine. It can grow up to 10 m long. The vine can be 1.5 cm thick. The branches are shaped like a rod with small lateral branchlets. The leaves are 5 to 10 cm long and usually smooth underneath. There are 20 to 40 pairs of leaflets. The leaves are like a feather. The leaflets are dull green and much paler beneath and fall off seasonally. The leaflets are 1-2 cm long by 0.3-0.6 cm wide. The flowers stalks are shorter than the leaves. Many flowers are produced on a stalk and they are pinkish white to purple. The pods are oblong and 4-5 cm long. The pods are slightly woody and flattened. They are smooth. They contain 3 to 5 shiny seeds which are bright red with a black spot. The seeds are retained on the pod some time after the pod splits open. The seeds have a very hard coat so are not easily chewed even though they are poisonous. (The poisonous substance must get into the blood stream.)

Distribution

It is a tropical plant. It will grow on most soils but often occurs in sandy positions. It suits areas with a high rainfall and does best in sunny positions. It is damaged by drought and frost. They are widely distributed in areas of shrub throughout the Philippines. In Papua New Guinea it grows near mangroves. In Papua New Guinea they grow up to 660 m altitude. It Africa it grows up to 1,350 m above sea level. It needs a temperature above 16°C.

Found in:

Africa, Andamans, Angola, Asia, Australia, Benin, Botswana, Cape Verde, Chad, East Africa, Egypt, Ethiopia, Ghana, Guinea, Haiti, Hawaii, India, Indochina, Ivory Coast, Kenya, Liberia, Malawi, Mali, Mozambique, Namibia, Nepal, Niger, Nigeria, Pacific, Pakistan, Papua New Guinea, Philippines, PNG, Sierra Leone, Somalia, Southern Africa, South America, Swaziland, Sudan, Tanzania, Timor, Tonga, Uganda, USA, Vietnam, West Africa, Zambia, Zimbabwe,

Use

CAUTION Seeds are very poisonous. They contain a poison called abrin. If chewed they can cause blindness and death. Roots are reported to be eaten in India. They are boiled and eaten in the Andaman Islands. They are a substitute for liquorice. The seeds have been recorded as eaten in Egypt and India after very long cooking. The leaves have been recorded as being used to make tea drinks in Australia. The very young leaves are cooked and eaten in Nepal when other food is scarce. The dry leaves are chewed with the leaves used with betel nut. The pods are recorded as roasted and eaten in the Andaman

Cultivation

It is grown from seed. The seed need to be treated to break the dormancy. Putting them in boiling water can do this. Plants can also be grown from cuttings.

Production

Plants flower in January to April in the southern hemisphere. The fruit develops from December to August.

Nutritional Values

Abrus precatorius

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	79.0	259	62	5.6				
seeds boiled								
root								
leaves - tea								

Malvaceae

Common names

Plains Lanternflower,

Scientific name

Abutilon indicum

Edible portion

Leaves, Seeds, Vegetable, Flowers, Seeds - oil,

Description

A small shrub. It can be up to 2-4 m high. The young shoots are covered with short white hairs. Leaves are 10-15 cm long by 5-8 cm wide. The leaves are heart shaped or star shaped and with irregular lobes along the edge. Flowers are 2-3 cm long. They are yellow and occur singly in the leaf axils. The flowers are often crowded towards the ends of branches. The seed capsule is 1.5 cm across and hairy.

Distribution

It is a tropical and subtropical plant. It suits warm tropical places. It requires well drained soil and does best in a sunny position. It occurs in Asia and Australia. In China it grows below 600 m in S China. It suits hardiness zones 10-12.

Found in:

Afghanistan, Asia, Australia, Bangladesh, Bhutan, Burma, Cambodia, China, Comoros, Congo, Cuba, Dominica, Fiji, French Guiana, Guyana, Haiti, India, Indochina, Indonesia, Iraq, Israel, Jordan, Laos, Malaysia, Maldives, Mauritius, Myanmar, Nepal, New Caledonia, Niue, Oman, Pakistan, Papua New Guinea, PNG, Peru, Philippines, Puerto Rico, Reunion, Samoa, Saudi Arabia, Seychelles, Sri Lanka, Taiwan, Thailand, Timor, Vanuatu, Vietnam, Yemen,

Use

The roasted seeds are eaten in Nepal. They are also used for flour.
The seeds are a source of an edible oil.
The leaves and flowers are cooked and eaten.
The flowers are also eaten raw.

Cultivation

It can be grown from seed or cuttings. It can be pruned.

Production

Nutritional Values

Abutilon indicum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed flour								
leaves					126			
flowers								
seed - oil								

Fabaceae

Common names

Black wattle, Ear Pod Wattle,



Scientific name

Acacia auriculiformis

Edible portion

Gum, Seeds - oil,

Description

An evergreen tree. It grows to 17-20 m height and spreads about 5 m wide. It has lots of leaves and forms a dense round crown. The stems are erect and stout. The bark is greyish-green. It is rough and hard. The branches are angular. The leaves (phyllodes) are sickle shaped. They taper to a blunt tip and are 10-20 cm long. They are 1.5 to 3.5 cm across. The 3 main veins are prominent. The leaves are shiny and dark green. The flowers are dull golden rods. They are about 8 cm long. These rods occur in pairs in the angles of the leaves. The pods are woody, twisted and hard. These ear like pods are distinctive. They are about 5-7 cm long and 1.5 cm wide. They are dark brown when ripe. They contain black seeds arranged diagonally. The seeds are attached by a bright red aril.

Distribution

They are tropical plants. Often trees grow in monsoon vine forest. In tropical Queensland it grows from sea level to 500 m altitude. They are often along the banks of freshwater streams. It prefers open sunny positions. It can survive drought. It is damaged by frost. It can grow on poor soils. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, China, East Africa, Fiji, India, Indochina, Indonesia, Malaysia, Mauritius, Pacific, Pakistan, Panama, Papua New Guinea, PNG, Philippines, Reunion, Tanzania, Thailand, Timor, USA, Vietnam,

Use

Cultivation

It is grown from seed. The seed needs treatment to help it grow. Normally this is by putting the seeds in very hot water and letting the water cool down overnight then planting the seeds immediately. It is a fast growing plant.

Production

It is fast growing. It is brittle in wind storms. Flowering is May to July with pods in August to October.

Nutritional Values

Acacia auriculiformis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds - oil								
gum								

Fabaceae

Common names

Prickly Moses, Mimosa bush,



Scientific name

Acacia farnesiana

Edible portion

Seeds, Gum, Leaves as condiment,

Description

An evergreen shrub. It grows to 5-7 m tall and 3 m across. The stem is slender and erect. The crown is open. It is a spreading, densely branched shrub. The bark is smooth and brown. The leaves are branched and green. There are 4-6 pairs of larger leaves and 10-20 pairs of small leaflets. They have tiny leaflets and thorns up to 2 cm long, occur in pairs. The leaf stalk has a gland at or above the middle. The flowers are large orange balls. They are strongly perfumed. (The oil is used as a perfume in France.) The pods are long and dark brown to black. They are 5-8 cm long by 0.5-1 cm wide. They are inflated and sausage like. Often they are curved. They are marked with narrow lines. The pods have hard grey seeds imbedded in a pithy substance. The pods do not split open at maturity. The seeds are chestnut brown and 7-8 mm long by 5.5 mm wide.

Distribution

It is a tropical plant. This tree occurs naturally in Australia, Asia and Africa. It will grow on most soils. It is drought and frost resistant. It most commonly grows naturally on clay soils. In Papua New Guinea the plants are coastal below 60 m altitude. It grows in areas with an annual rainfall between 400-4,000 mm. It can grow in acid or alkaline soils. It suits hardiness zones 11 -12.

Found in:

Afghanistan, Africa, Algeria, America, Angola, Antigua-Barbuda, Argentina, Asia, Australia*, Bahamas, Belize, Bhutan, Bolivia, Brazil, Burma, Cambodia, Canary Islands, Caribbean, Central America, Chile, China, Colombia, Costa Rica, Cuba, Cyprus, Dominica, Dominican Republic, East Africa, Ecuador, Egypt, El Salvador, Ethiopia, Europe, Fiji, France, French Guiana, Ghana, Greece, Grenada, Guadeloupe, Guatemala, Guinea, Guyana, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Iran, Iraq, Israel, Italy, Jamaica, Japan, Kenya, Kiribati, Laos, Lebanon, Liberia, Libya, Madagascar, Malaysia, Maldives, Martinique, Mauritius, Mediterranean, Mexico*, Montserrat, Morocco, Mozambique, Myanmar, Nepal, Nicaragua, Nigeria, North

Use

The green seed are eaten.
The pods have been recorded as eaten after cooking.
The gum is eaten. The ground up seeds are eaten.
The germinated seeds are claimed to be eaten.
The gum is used to prepare sweets.

Cultivation

It is grown from seed.

Production

It is fast growing. Flowering can occur almost continuously if watering is regular. In northern Australia flowering is normally May to July with pods from September to November.

Nutritional Values

Acacia farnesiana

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed - dry	8.1	1522		36.6			6.0	0.6
gum								
leaves - spice								
seed - young								
pods								
sprouts								

Fabaceae

Common names

Kuteera-Gum,

Scientific name

Acacia leucophloea

Edible portion

Gum, Pods, Seeds, Bark,

Description

A shrub or small tree up to 10 m tall. It can grow 35 m high. It loses its leaves during the year. It is spiny. The trunk is straight. The leaves are twice divided. There are 12-30 leaflets. The flowers are dull white. They are in groups made up of several small round heads. The pods are 10-20 cm long. They have a covering over them.

Distribution

A tropical plant. It grows in wasteland and open forest. It grows in dried parts of India. In Timor it grows on heavy clay soils below 300 m altitude in the Savannah. It grows in areas with an annual rainfall between 450-1,560 mm. It grows in dry shallow soils

Found in:

Africa, Asia, Burma, Cambodia, India, Indochina, Indonesia, Malaysia, Mauritius, Myanmar, Pakistan, Sri Lanka, Tanzania, Thailand, Timor, Vietnam,

Use

The young pods and seeds are used as a vegetable.
The seeds are ground and mixed with flour.
The bark is ground and mixed with flour when food is short. The bark is also used to flavour brewed spirit made from sugarcane and palm juice.

Cultivation

The seedlings must have light. The plant can be cut back and will re-grow.

Production

It grows slowly.

Nutritional Values

Acacia leucophloea

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
bark								
seeds								
pods								

Fabaceae

Common names

Golden wattle, Australian Golden Wattle,



Scientific name

Acacia pycnantha

Edible portion

Seeds, Gum, Flower nectar,

Description

An evergreen shrub or tree. It grows to 8 m tall with a spread of about 4 m. The stem is smooth and erect. The stem is rarely more than 25 cm across. The bark of the branches can have a bluish bloom. The stems can sometimes hang downwards. The leaves (phyllodes) are bright green and shiny. They are curved or sickle shaped and broad. They are 6-20 cm long and 1 -2 cm wide. They are usually broadest above the centre and tapering towards both ends. They have a prominent central nerve and side veins. There is a gland near the base of the leaf. The flower heads are deep golden yellow balls. They are large and have a sweet smell. The flower clusters are on zigzag stalks. These flowering stalks are 8-15 cm long. These dense clusters of golden flowers characterise the plant making it the floral emblem of Australia. The pods are brown. They are 8-13 cm long by 1-2 cm wide. They are flat, straight and leathery. The seeds are moderate sized and oval.

Distribution

It occurs naturally in eastern Australia. It prefers shallow sandy soils. It is drought resistant but frost tender when young. It will grow in part shade or full sun. They do not suit high altitudes or very wet conditions. Naturally it grew in areas with a rainfall of 35-70 mm but now grows in areas with rainfall up to 2,280 mm. It suits hot dry areas. It grows between 1,450-2,000 m above sea level. It suits hardiness zones 9-11. Tasmania Herbarium.

Found in:

Africa, Asia, Australia*, East Africa, France, India, Indonesia, Israel, Italy, Kenya, Libya, Mediterranean, New Zealand, Portugal, South Africa, Southern Africa, Spain, Tanzania, Tasmania, Timor, USA,

Use

The seeds are eaten.
The gum is eaten.
The nectar from the flowers is used for a drink.

Cultivation

It is grown from seed. The seed need treatment to break the hard seed coat. Normally this is by putting the seeds in very hot water and letting the water cool down overnight then planting the seeds immediately. Seed can be sown directly in the field. It can also be grown from cuttings.

Production

Trees grow quickly. They are short lived lasting 10-15 years. The pods open, dropping the seed to the ground.

Nutritional Values

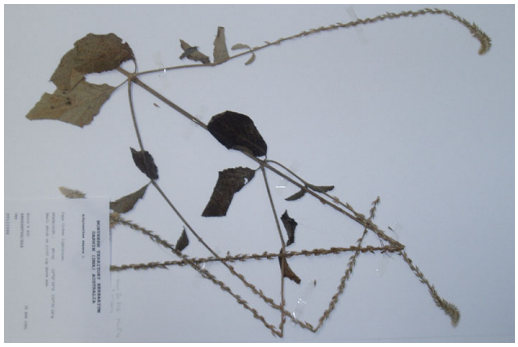
Acacia pycnantha

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds								
gum								
nectar								

Amaranthaceae

Common names

Chaff-flower, Rough chaff tree,



Scientific name

Achyranthes aspera

Edible portion

Leaves, Flower, Seeds,

Description

A coarse rambling annual herb. It has many branches but the branches are not close together. The plant grows 0.5 to 2 m high and spreads 0.5 m across. The stem is erect, hairy and woody. It often has many joints. The leaves are in opposite pairs. The leaves are 6 to 15 cm long, somewhat wedge shaped and slightly hairy and tapering to a point. The flower spikes are 10 to 50 cm long with small green flowers about 5 mm long. The chaffy flowers on long spikes tend to eventually point downwards. They have rigid curved spines near the flower. The seeds attach to clothes.

Distribution

A tropical plant. A native plant of tropical areas. It occurs in waste places at low and medium altitudes in the Philippines. It grows in northern Australia. It prefers moist well drained soils. It can grow in a partly shaded position but is most commonly in full sunshine. It is drought and frost tender. It does best in soils with high organic matter but can grow in sandy areas. It has become common in Papua New Guinea in low altitudes in areas with seasonal climates.

Found in:

Afghanistan, Africa, Angola, Asia, Australia, Bhutan, Botswana, Burma, Cambodia, Cameroon, Central Africa, Chad, China, Congo, Dominican Republic, East Africa, Egypt, Eritrea, Ethiopia, Fiji, Greater Antilles, Haiti, India, Indochina, Indonesia, Kenya, Laos, Lesser Antilles, Malawi, Malaysia, Myanmar, Nepal, Nigeria, Norfolk Island, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Senegal, Somalia, South Africa, Southern Africa, Sri Lanka, Swaziland, Tanzania, Thailand, Timor, Tonga, Uganda, Vietnam, West Africa, West Indies, Zambia, Zimbabwe,

Use

The young leaves and seeds are cooked and eaten. They are boiled without salt.

Cultivation

It is grown by seed.

Production

Nutritional Values

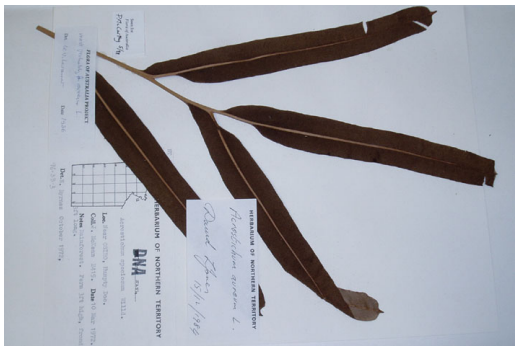
Achyranthes aspera

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Adiantaceae

Common names

Golden Mangrove fern,



Scientific name

Acrostichum aureum

Edible portion

Shoots, Roots, Fronds,

Description

A fern with a short to medium creeping rhizome. The rhizome is up to 3 cm thick. It has large fleshy roots. The fronds are erect and up to 4 m long. The leaflets are large, thick and leathery. They are only divided once. They have blunt tips. They often have a yellowish colour. It grows in clumps or spreads out over the ground. Under the uppermost leaves there is often a mass of spores in a brown sugary mass.

Distribution

A tropical plant. Usually found in open swampy or mangrove situations. It cannot tolerate saltwater. It grows in Australia in the Northern Territory and Queensland. It is eaten in the Solomon Islands. It occurs throughout the tropics. It is very frost tender. It occurs in brackish pools and swamps and creeks near the beach. It can be on cliff-faces by the sea.

Found in:

Africa, Asia, Australia, Bangladesh, Cambodia, Cameroon, Equatorial Guinea, Fiji, Ghana, Guinea-Bissau, India, Indochina, Indonesia, Malaysia, Pacific, Papua New Guinea, PNG, Senegal, Sierra Leone, Solomon Islands, Timor, Tonga, Vietnam, West Africa,

Use

The young leaves (fronds) are eaten in salads.

Cultivation

It is slow to re-establish if transplanted. Often transplanted plants die. The best option is to transplant young plants growing from spores. It can be grown from spores.

Production

Nutritional Values

Acrostichum aureum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves								
roots								

Fabaceae

Common names

Barbados pride, Coral Pea, Bead Tree,



Scientific name

Adenanthera pavonina

Edible portion

Seeds, Leaves,

Description

A deciduous tree up to 7-20 m high. It spreads to 4 m across. It loses many of its leaves during the hot dry season of the year. The stem is erect and slender. The bark is smooth and light brown. The leaves are green and divided twice into leaflets. The whole leaf is 30-45 cm long. The leaf is divided into 3-5 pairs of segments 10-15 cm long. Each is divided again into 10-18 alternate oblong leaflets. These are 1.7-4 cm long by 0.8-2 cm wide. These leaflets are dark green on top and paler underneath. The flowers are small and white or yellow. They occur at the ends of branches. The fruit is a long (20 cm) dark brown pod with red seeds. The pod twists up as it opens. The seeds are shiny red and hard and 0.7-1 cm across. The pods remain on the tree long after ripening. It is a legume.

Distribution

A tropical plant. It grows in the tropical lowlands and up to 600 m. It is often planted as a shade and ornamental tree. It also grows wild in the rainforest. It prefers well drained soil and an open sunny position. It cannot tolerate drought and in frost tender. It will grow on most soil types. It suits hardiness zones 11-12. In the Cairns Botanical Gardens.

Found in:

Africa, Antigua-Barbuda, Arabia, Australia, Asia, Bahamas, Barbados, Brazil, Burma, Cambodia, Cameroon, Chad, China, Congo, Dominica, Dominican Republic, East Africa, Fiji, French Guiana, Ghana, Grenada, Guadeloupe, Guinea Bissau, Haiti, Hawaii, India, Indochina, Indonesia, Jamaica, Laos, Malaysia, Maldives, Martinique, Mauritius, Mozambique, Myanmar, New Caledonia, Nigeria, Niue, North America, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Reunion, Samoa, Sao Tome & Principe, Sierra Leone, Singapore, Solomon Islands, South America, Southern Africa, Sri Lanka, St Lucia, Suriname, Taiwan, Tanzania, Thailand, Timor, Tonga, Togo, Tokelau, Tonga, Uganda, USA, Vanuatu, Vietnam, West Africa

Use

The leaves are eaten as a vegetable.
The seeds are roasted and shelled and eaten.

Cultivation

It is grown from seeds. The seeds should be soaked before sowing.

Production

It grows quickly. In the southern hemisphere flowering occurs November to February and fruiting from December to March.

Nutritional Values

Adenanthera pavonina

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds								
leaves								

Myrsinaceae

Common names

Horned mangrove, River Mangrove,

Scientific name

Aegiceras corniculatum

Edible portion

Leaves, Salt, Fruit,

Description

A small tree or shrub. It grows up to 1.5-7 m tall. It often has several stems. The young branches are reddish brown. The bark is smooth and grey to brown. The leaf stalk is 5-10 mm long. The leaves are oval. They are 2.5-8.5 cm long by 0.9-3.6 cm wide. They are leathery. There are 7-11 side veins on each side of the main vein. The midrib is easily seen under the leaf. The flower arrangement is made up of flowers from a common point arranged on stalks of equal length. They arise from a knob like point. The fruit are curved and like a cylinder up to 8 cm long by 5-6 mm across. They taper to a sharp point.

Distribution

A tropical plant. It grows in tropical and warm temperate areas. It occurs along banks of tidal creeks. It is also on the seaward edge of mangroves. It can grow in brackish and salty water. It likes light.

Found in:

Asia, Australia, Bangladesh, China, India, Indochina, Indonesia, Lord Howe Island, Malaysia, Pacific, Papua New Guinea, PNG, Philippines, Sri Lanka, Timor, Vietnam,

Use

The leaves are eaten raw or cooked.
Salt is collected from the leaves.

Cultivation

Plants can be grown from seed.

Production

Nutritional Values

Aegiceras corniculatum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves								
fruit								

Common names

Bael fruit, Bengal quince,

Rutaceae



Scientific name

Aegle marmelos

Edible portion

Fruit, Leaves condiment, Spice,

Description

A medium sized tree. It loses its leaves. It grows to 3-6-12 m tall and spreads 2 m across. The stem is erect and thorny. The leaves are green and with 3 leaflets and generally sword shaped. They are aromatic. The flowers are yellowish-white. They have a strong sweet smell. They contain both sexes and occur in clusters. The fruit is large and with a hard shell about 3 mm thick. It is 8-10 cm across. The fruit is yellow-green when ripe. The pulp is reddish or orange. The pulp of the fruit is edible. The fruit is made up of small cells (about 15) each with woolly seeds.

Distribution

A tropical plant. It prefers rich well drained soils in an open sunny position. It suits tropical or warm places. It appears to do best where there is a distinct dry season. It is drought and frost tender. It grows in Nepal to about 1100 m altitude. A hot dry summer is best. It can tolerate some alkalinity and saline soils. It can tolerate alkalinity.

Found in:

Africa, Asia, Australia, Bangladesh*, Bhutan, Brazil, Burma, Cambodia, China, Fiji, Hawaii, Himalayas, India*, Indochina, Indonesia, Laos, Malaysia, Myanmar, Nepal, Nigeria, North America, Pacific, Pakistan*, Papua New Guinea, Philippines, PNG, Singapore, South America, Sri Lanka, Suriname, Taiwan, Tanzania, Thailand, Timor, Uganda, USA, Vietnam, West Africa,

Use

The fruit are eaten raw. They are also used to make drinks. The fruit are often sliced and dried.
Marmalade can be made from ripe pulp. They can also be pickled or used in jams and jellies.
The young shoots and leaves can be eaten raw in salad. They are also used in chutneys.
The flowers are used to make a drink.
CAUTION: There are reports that leaves make women sterile or cause abortions.

Cultivation

It is grown from seed. Seed are taken from freshly picked ripe fruit. Seedlings are planted out after one year. It can be grown from root offshoots. They are best grown using patch budding. Trees are spaced 6-9 m apart. Trees can be pruned to have 4 -6 strong branches. Suckers should be removed.
It can also be grown from root suckers or air layering.

Production

It is slow growing. Trees produce in 3-4 years. Full production is gained after 15 years. Fruit are produced throughout the year. Fruit should be picked and not allowed to drop. There can be 200-400 fruit per tree.
Fruit ripen in the dry season. Fruit can be ripened off the tree. Trees can continue bearing for 50 years. The fruit can be stored for 2 weeks at 30°C and for 4 months at 10°C.

Nutritional Values

Aegle marmelos

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	58.0		138	2.3	0.13	219	0.55	
leaves								
flowers								

Asparagaceae

Common names

Sisal, Yaxci, Hemp, Mkonge,



Scientific name

Agave sisalana

Edible portion

Leaves, Sap, Plant heart,

Description

A woody herb. It grows for several years. The leaves come out in spirals and have spines. The leaves occur near ground level. The leaves are sword shaped and 2 m long. The leaves end in a sharp dark brown tip. The plant flowers at maturity. The flowers occur in a stem which can be 6-8 m tall. The flowers are small and green to yellow. The fruit is a dry capsule which contains seed. Few seed will grow. Some flower buds become thick and develop into bulbils. These can be planted and will grow. Suckers are produced at the base of the leaves.

Distribution

A tropical plant. It suits tropical and subtropical places. It grows on a wide range of soils. It can withstand waterlogging and can tolerate drought. It suits hardiness zones 9-11. It does best in gritty, well drained soils and in full sun. It can grow in light shade. It is sensitive to cold.

Found in:

Africa, Angola, Asia, Australia, Belize, Botswana, Burma, China, East Africa, El Salvador, Fiji, Guatemala, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Kenya, Madagascar, Malawi, Malaysia, Mediterranean, Mexico, Mozambique, Myanmar, Pacific, Pan tropical, Papua New Guinea, PNG, South Africa, Southern Africa, Swaziland, Tanzania, Timor, Uganda, USA, Venezuela, Zambia,

Use

The sweet sap is used to make beer.
The heart of the new shoots is eaten.

Cultivation

Plants are normally grown from suckers or from the bulbils on the flower stalk. Mostly very few of the seeds will grow. After flowering the whole plant dies. Flowering normally occurs after 7 years.

Production

The plant is fast growing.

Nutritional Values

Agave sisalana

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
heart of plant								
sap								

Asteraceae

Common names

Billygoat Plant, Goatweed,



Scientific name

Ageratum conyzoides

Edible portion

Leaves - oil, Flowers - oil, Seeds - oil, Leaves,

Description

A small annual under shrub. It grows to 0.6 m tall and spreads to 1 m across. The stem is erect and branching. The leaves are oval and opposite. They are 6 cm long by 4 cm wide. They taper towards the tip and are hairy. The edges have teeth. The flowers are white and insignificant. They occur in small clusters at the ends of branches. The fruit are dry, black hairy capsules.

Distribution

A tropical plant. It does best in well composted well drained soils. It suits a sunny position. It is drought and frost tender.

Found in:

Africa, Angola, Asia, Australia, Bahamas, Bangladesh, Bhutan, Bolivia, Brazil, Burma, Burundi, Cambodia, Cameroon, Cape Verde, Central African Republic, Central America, China, Colombia Comoros, Congo, Cuba, Dominican Republic, East Africa, Ecuador, Egypt, Equatorial Guinea, Ethiopia, Fiji, France, French Guiana, Gabon, Gambia, Ghana, Guadeloupe, Guatemala, Guinea, Guinea-Bissau, Haiti*, Hawaii, Honduras, India, Indochina, Indonesia, Ivory Coast, Jamaica, Japan, Kenya, Laos, Lebanon, Liberia, Madagascar, Malawi, Malaysia, Mali, Mauritius, Mexico, Mozambique, Nepal, New Caledonia, Nicaragua, Nigeria, Norfolk Island, Pacific, Panama, Papua New Guinea, PNG, Paraguay, Peru, Puerto Rico, Rwanda, Samoa, Sao Tome

Use

The plant produces an essential oil used for flavouring.
The young leaves are eaten. They are occasionally added to soup.
CAUTION: Only use very sparingly.

Cultivation

Plants can be grown from seed.

Production

Nutritional Values

Ageratum conyzoides

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	90.4	130		3.5		29		

Rubiaceae

Common names

Archer cherry,



Scientific name

Aidia racemosa

Edible portion

Fruit,

Description

A shrub or tree. It grows up to 15 m tall. The bark is light grey. The leafy twigs are smooth. The leaves are oval and 9-17 cm long by 3-5.5 cm wide. They are thin and leathery. They have 5-8 pairs of secondary veins. The base of the leaf is rounded and the tip is pointed. The leaf stalk is 1-2 cm long. The flower stalk is branched and has up to 50 flowers. The flowers are white. They have a jasmine scent. The fruit is a berry which is red when ripe. It is 5-15 mm long by 4-10 mm across. Fruit are in clusters in the axils of leaves. There are several tiny seeds.

Distribution

It is a tropical plant. It grows in coastal swamps and dry monsoon forest. It also occurs in lowland and upland rainforest.

Found in:

Asia, Australia, Indonesia, Pacific, Papua New Guinea, Philippines, PNG, Samoa, Timor, Tonga,

Use

The fruit are eaten when ripe. They fall to the ground when ripe and are collected off the ground.

Cultivation

It can be grown from fresh seed or cuttings.

Production

In Australia flowers are December to February and fruit from April to July.

Nutritional Values

Aidia racemosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit								

Common names

Candle nut, Country walnut,

Euphorbiaceae



Scientific name

Aleurites moluccanus

Edible portion

Kernel, Seeds, Nut,

Description

A large tree up to 40 m tall and 1 m through at the base. The bark is rough. The leaves are large and can be round, triangular or have several lobes. The leaves have a pale colour. The leaves are alternate, silvery green and crowded near the tips. Young leaves are hairy and sometimes lobed. The leaves, leaf stalks and flowers are all covered with short soft hairs. There are 2 distinct brown glands where the leaf blade and stalk join. The flowers are small and white and in large groups on the ends of branches. Male and female flowers are separate but on the same tree. The female flowers are on the end surrounded by small male flowers. The fruit is a large (4 to 5 cm across) green 2 lobed berry with 1 or 2 large (2.5 cm across) seeds with a hard corrugated shell. They do not open naturally to release the seeds.

Distribution

It is a tropical tree. It mostly grows in the lowland rainforest but can be at up to 2000 m altitude. It suits drier climates. It does well on well drained sandy soil. It must have a temperature above 8°C. In the Pacific it usually grows between 0-700 m altitude in areas with a rainfall of 600-4,300 mm per year. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Burma, China, East Africa, Fiji, Guam, Haiti, Hawaii, India, Indochina, Indonesia, Malawi, Malaysia, Marquesas, Myanmar, New Caledonia, New Zealand, Pacific, Pakistan, Palau, Papua New Guinea, PNG, Philippines, Polynesia, Samoa, Solomon Islands, South Africa, Southern Africa, Sri Lanka, Swaziland, Tahiti, Taiwan, Thailand, Timor, Tonga, Uganda, USA, Vanuatu, West Africa, Zambia, Zimbabwe,

Use

The nuts are normally roasted. The hard, oily nut is used for thickening in Asian dishes. They are used in a sauce for the greens eaten with rice.
CAUTION The nuts contain a moderately poisonous substance so should be cooked before eating.
The raw kernels of candle nut are poisonous. They are a strong purgative. Before eating they must be well cooked. Mostly the nuts are roasted in the fire until the shell is blackened and half burnt, then the kernels are taken out by cracking the shells.

Cultivation

The trees grow wild but are transplanted. Often candle nut trees are just self sown, growing in the bush where the seeds fell. These small trees can be transplanted to a more suitable place if needed. Seeds are very hard shelled. To get seeds to start growing more quickly, the seed coat needs to be cracked. To do this a single layer of seeds are put on the ground covered with dry grass then burnt. Immediately after burning while the seeds are still hot they are thrown into cold water, and then planted. This cracks the shells allowing more rapid germination. Without this it may take many months for this hard shell to break down and germination to commence. Trees can also be grown from cuttings.

Production

The tree grows quickly. They can grow 0.5-1.5 m in a year. Yields of 30-45 kg of nuts can be produced on a tree in one year. Yields of 80 kg per tree are possible under good cultivation. Trees can start producing after one year.

Nutritional Values

Aleurites moluccanus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Alliaceae

Common names

Shallot, Chhyapi, Kyet-thun-ni, Khtim kraham, Kon tsung-tau, Chota piaz, Bawang merah, Aka wakegi, Sibuyas, Rathu-lunu, Hom daeng,



Scientific name

Allium cepa var. ascalonicum

Edible portion

Leaves, Bulbs, Flowers,

Description

An onion family plant. A herb about 25 cm high. It often produces new shoots from the base. These form a group of small bulbs. The leaves are narrow and thin. They are flat on one side. They taper and can reach 40 cm high. They are purplish-red or brown. There are a cluster of single bulbs at the base. The flowers occur as 25-50 flowers in a head. The flowers are violet.

Distribution

A tropical plant. In Nepal it is grown between 500 and 2000 m altitude. It does best in fertile, well-drained sandy soil. Prefers a pH in the range 6 to 7, but tolerates a pH in the range 4.5 to 8.3. It tolerates a range of soils but does best in light well drained soils.

Found in:

Africa, Asia, Australia, Burma, Cambodia, China, East Africa, Ethiopia, Ghana, Guyana, India, Indonesia, Japan, Malaysia, Myanmar, Nepal, Nigeria, Pacific, Philippines, Singapore, South Africa, Southern Africa, South America, Sri Lanka, Thailand, Timor, Tonga, Vietnam, Zambia,

Use

Both the bulbs and the leaves can be eaten as a vegetable.
The bulbs are eaten raw or cooked.
The leaves are eaten raw or cooked.
The flowers are used raw or to flavour salads.

Cultivation

Plants can be grown from seed or by using bulbs. The clumps are uprooted and divided. Plants are spaced 15-20 cm apart. Bulbs are planted to half the bulb depth.

Production

The first leaves can be harvested after 2-3 months.
The plant is easier to grow than onions, matures faster and keeps better, though yields are lower. Plants are very tolerant of high temperatures up to 30°C and bulbing only occurs at temperatures above 20°C. Plants rarely produce viable seed in temperate areas, they are usually propagated by means of their bulbs, each one dividing up in the growing season to produce from 2 to more than 12 new bulbs.

Nutritional Values

Allium cepa var. ascalonicum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

Shallot,

Alliaceae



Scientific name

Allium cepa var. ascalonicum

Edible portion

Flowers, Leaves, Roots, Herb,

Description

An onion family plant. A bulb plant. It grows to about 30 cm high. The bulb can be 6 cm across. The protective coat over the bulbs is purplish, brown or white. The leaves are 10-35 cm long by 3-10 mm wide.

Distribution

Prefers a pH in the range 6 to 7 but tolerates a pH in the range 4.5 to 8.3. It tolerates a range of soils but does best in light well drained soils.

Found in:

Africa, Asia, Australia, Brazil, Central America, Chile, China, Cuba, Czech, Slovakia, Dominican Republic, East Africa, Egypt, Europe, Fiji, France, Germany, Ghana, Guatemala, Haiti, Hawaii, India, Iraq, Indonesia, Kurdistan, Malawi, Malaya, Mexico, North America, Pacific, Panama, Peru, Salvador, Slovakia, South America, Spain, Timor, Trinidad, Turkey, USA, USSR, Vanuatu, Venezuela, West Africa,

Use

The bulbs are eaten raw or cooked.
The leaves are eaten raw or cooked.
The flowers are used raw or to flavour salads.

Cultivation

Plants are grown from offsets. Bulbs are planted to half the bulb depth.

Production

The plant is easier to grow than onions, matures faster and keeps better, though yields are lower. Plants are very tolerant of high temperatures up to 30°C and bulbing only occurs at temperatures above 20°C. Plants rarely produce viable seed in temperate areas, they are usually propagated by means of their bulbs, each one dividing up in the growing season to produce from 2 to more than 12 new bulbs.

Nutritional Values

Allium cepa var. ascalonicum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Alliaceae

Common names

Bulb onion, Pyaj, Yang cong, Bawang, Palandu, Piyaz, Pyanj, Kanda, Dungari, Nirulli, Ulligaddalu, Vengayam, Nirulli, Irulli, Chivannaulli,



Scientific name

Allium cepa var. cepa

Edible portion

Leaves, Bulbs, Seeds, Herb, Spice, Vegetable,

Description

An onion family plant. A herb with a two year life cycle. Normally it develops fattened bulbs at the base. It has a shallow fibrous root system. The actual stem in very short and condensed. Leaves are produced in an alternate fashion one after the other from the top of this stem. Successive leaves grow up inside, then burst through the leaf sheath of the previous leaf. Leaves are thin and long. They are slightly to markedly flattened on the upper surface. Long day lengths and warm temperatures help the leaf bases become swollen and store food reserves. Flowers are greenish white in colour. Flowers develop on a rounded head with stalks all coming from the centre. Flowers in the rounded head open irregularly. There are no bulbils on the flower-head.

Distribution

A temperate plant. It is more easy to get onions to grow and form bulbs in the highlands in the tropics but they can be grown from sea level to 2600 m altitude in Papua New Guinea. In Nepal they grow to 3000 m altitude. They do not suit the wet humid tropics. Because the day lengths are short near the equator, onions often do not produce a bulb. Some newer varieties will yield in the tropics. It plant grows best at 12-21°C and the bulb forms best at 15-25°C. It grows best with a pH 5.7-6.6. It suits hardiness zones 5-10.

Found in:

Afghanistan, Africa, Asia, Australia, Bangladesh, Brazil, Britain, Burkina Faso, China, East Africa, Egypt, Fiji, Finland, Greece, Guyana, Haiti, Hawaii, India, Indonesia, Iran, Iraq, Ireland, Italy, Japan, Malawi, Malaysia, Nepal, Netherlands, Nicaragua, North America, Pacific, Papua New Guinea, PNG, Philippines, Poland, Romania, Russia, South Africa, Southern Africa, South America, South Korea, Spain, Tajikistan, Tasmania, Timor, Tonga, Turkey, USA, Vanuatu, West Africa, Zambia,

Use

The bulbs and leaves are used as flavouring raw or cooked.

Cultivation

They are grown from imported seed. For bulbs, a tropical cultivar is needed and bulbing is normally better at higher altitudes. Cultivars which form flowers early need to be avoided. Seedlings can be transplanted.

Production

Nutritional Values

Allium cepa var. cepa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
bulbs raw	92.8	99		0.9	0	10	0.3	0.1
bulbs boiled	96.6	53		0.6	0	6	0.3	0.1
leaves	90.0			1.4	49		0.5	0.5

Common names

Garlic,

Alliaceae



Scientific name

Allium sativum

Edible portion

Leaves, Bulb, Seeds, Herb, Spice, Stem, Vegetable,

Description

An onion family plant. It is an erect herb. It grows one year, then flowers the next. It grows about 40 cm high. This onion family plant has a number of tightly packed bulbs (cloves) wrapped in papery scale leaves. The true leaves of the plant are long, flat and solid. Leaves are 2.5 cm wide. The roots are side roots. The number of cloves per bulb varies from 16-50 depending on variety. Flowers are borne on a long stalk in a head where the flowers are on equal length stalks from one point forming a rounded head.

Distribution

A temperate plant. It grows in the tropical highlands mostly between 1600 and 2200 m but will grow satisfactorily down to 500 m. In Nepal it grows to 3000 m altitude. There are kinds that will grow in hot coastal tropical places. Best bulb development occurs with temperatures up to 30°C. It is frost resistant. High humidity or high rainfall is not suitable. It is best grown in low rainfall areas with irrigation. Bulb development is favoured with long day lengths. It does best with pH 6-7. It suits hardiness zones 8-10.

Found in:

Africa, Asia, Australia, Bangladesh, Brazil, Britain, Burkina Faso, Burma, Cambodia, Central America, China, East Africa, Egypt, Ethiopia, Fiji, Hawaii, India, Indochina, Indonesia, Italy, Japan, Kenya, Korea, Lebanon, Madagascar, Malaysia, Mediterranean, Mexico, Myanmar, Nepal, Nicaragua, Pacific, Papua New Guinea, PNG, Philippines, South Africa, Southern Africa, South America, Sri Lanka, Tasmania, Thailand, Timor, Turkey, USA, Vanuatu, Vietnam, West Africa,

Use

The cloves are used in small amounts to flavour food.
The leaves can also be used. Leaves should be cut before they are mature.

Cultivation

Plants are grown by planting individual cloves. The individual segments of the clove are separated out then planted. A spacing of 20 cm is suitable. They should be planted into a deeply dug but firm seedbed. They are planted almost covered with fine soil. Cloves or "rounds" are best planted at the end of the wet season. Plants rarely produce fertile flowers or seed. They can be grown from seed.

Production

Bulbs should be ready about 90-120 days from planting. Bulbs can be stored at 25-30°C for 90 days with low humidity and good air circulation.

Nutritional Values

Allium sativum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
bulb	66.0	512		5.0	Tr	7	1.2	
leaves	87.0	50		2.1	684	38	0.4	1.0
seed								

Alliaceae

Common names

Garlic chives, Chinese chives, Jiu Cai, Kau, Bawang Kuchai, Kui chaai, Koo chye, Gau choy, He, Oriental garlic, Flowering chives, Yellow



Scientific name

Allium tuberosum

Edible portion

Flowers, Leaves, Root, Bulb, Herb, Vegetable,

Description

An onion family plant. It is a herb which keeps growing year after year. It can be 40 cm high. It grows in clumps. These onions have rhizomes but no real bulbs. The leaves are long and grass like, and flat and solid. They are 15-30 cm long and about 5 mm wide. The young leaves are erect but the mature leaves bend gracefully down. The blades of the leaves are not folded length-wise, as are those of garlic and leek. Flowers are white. The flowers are produced at the top of a flower stalk which grows from the underground stem. The flower head is round due to the small flowers being on the same length stalks and arising from the same point. The flower stalk can be 45 cm long. A dense clump of plants is produced.

Distribution

A temperate plant. They are native to eastern Asia. Seeds are rarely formed in the lowland tropics. It is naturalised in S China. It suits hardiness zones 7-10.

Found in:

Asia, Australia, Burma, Cambodia, China, Hawaii, India, Indochina, Indonesia, Japan, Malaysia, Mongolia, Myanmar, Nepal, Pacific, Papua New Guinea, PNG, Philippines, Singapore, Tasmania, Thailand, Timor, USA, Vanuatu, Vietnam,

Use

The leaves and young flowers are used to flavour foods.
The bulbs are used like garlic.

Cultivation

Plants can be grown by dividing the clump of plants or by seed. Seed production is not easy. Plants are sown in rows 30 cm apart.

Production

Chives may be cultivated for its flowers which are plucked together with the stalks before the buds emerging from the sheath. They can also be grown for its edible leaves which have a special flavour considered fragrant by some people.

Nutritional Values

Allium tuberosum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
bulb								
leaves								
flowers								

Sapindaceae

Common names

Threeleaf allophyllus, Rakhalphul, Tipani, Eravalu, Amalai, Naimaram, Togaratti, Sidisale, Eruala, Mukkanamperu, Khondokoli,

Scientific name

Allophylus cobbe

Edible portion

Fruit,

Description

A small tree which grows up to 3-5 m tall. It spreads 1-4 m across. The young shoots are covered with woolly hairs. The flush of new leaves are pinkish. The leaves have 3 leaflets. The leaflets are 5-10 cm long by 2-4 cm wide. The leaves are oval and with coarse teeth around the edge. They are smooth on top and hairy underneath. The flower bunch have flowers around a common stalk. These are 5-10 cm long. The flowers are 0.2 cm across. The flowers are greenish. The fruit is a berry about 0.5 cm across. It is orange.

Distribution

A tropical plant. It occurs in coastal places in the tropics in rainforests. Plants are very frost tender. Plants require a protected site in a well drained soil.

Found in:

Africa, Asia, Australia, India, Indonesia, Madagascar, Malaysia, Pacific, Papua New Guinea, North America, PNG, South America, Sri Lanka, Timor,

Use

Cultivation

Plants are grown from seed. Seed should be sown while fresh.

Production

Nutritional Values

Allophylus cobbe

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit								

Sapindaceae

Common names

Kaingga, Nggalinggawa,

Scientific name

Allophylus timoriensis

Edible portion

Fruit,

Description

A small tree or shrub. It can grow up to 12 m high. The leaves are alternate and have 3 leaflets. The leaf stalk is 3-10 cm long. The leaf blades are narrowly oval and 6-18 cm long. The end leaflet is the largest. The flowers occur as many in branched flower arrangements. These can be 12 cm long. They are at the ends of branches or in the axils of the upper leaves. The flowers are separately male and female but on the same tree. The sexes are mixed in the same flower cluster. The fruit are double and dry. They are orange to red and 7-10 mm across.

Distribution

A tropical plant. It grows in lowland forest. It is mostly on the coast but can grow up to 1150 m altitude in Samoa.

Found in:

Asia, Cook Islands, Fiji, Indonesia, Malaysia, Pacific, Philippines, Samoa, Timor, Tonga,

Use

Cultivation

Production

Nutritional Values

Allophylus timoriensis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit								

Zingiberaceae

Common names

Greater galangal, Kulinjan, Lengkuas, Pa-de-gaw-gyi, Romdeng, Gao liang kiang, Lam kieu, Kulanjan, Gieng, Pera-rattai, Laos, Kha, Hong



Scientific name

Alpinia galanga

Edible portion

Rhizome, Roots, Leaves, Seeds, Herb, Spice,

Description

A herb which grows year after year. It grows to 1.6 m high and spreads to 1 m across. The rootstock creeps under the ground. This is round like a cylinder and branches. This thick rhizome can be 10-12 cm long by 3 cm wide. It grows as a dense clump. The outside of the root is reddish brown and inside is white. The stems lie along the ground. The leaves are long and narrow and sword shaped. The leaf blade is 25-35 cm long by 6-10 cm wide. They taper to the tip. They have a sweet scent. The flower spike is at the end of the shoot. It is hairy and 15-30 cm long. The flower bracts are oval and 2-8 mm long. The flowers are white. They occur in clusters at the ends of stalks. Each bracts surrounds 4-5 flowers. The flowers are 1.5 cm long and white with purple lines. The fruit is a round capsule. It is 1 cm across. It is orange-red.

Distribution

A tropical plant. It does best in rich moist soils. It prefers a protected shady position. It is drought and frost tender. The soil needs to be well-drained. It can be grown in sheltered sites in cooler climates but needs a heated glasshouse in cold places. In China it grows in grasslands between 100-1300 m altitude in S China. It suits hardiness zones 9-12.

Found in:

Asia, Australia, Burma, Cambodia, China, Hawaii, India*, Indochina, Indonesia, Laos, Malaysia, Myanmar, Pacific, Singapore, Taiwan, Thailand, Timor, USA, Vietnam,

Use

The root is used for flavouring curries. They are often sliced then removed before serving the dish. They can be pounded to a paste then added to dishes. They are also pickled.
The young shoots and leaves are also eaten.
Flower buds and flowers can also be cooked and eaten. They are also pickled.
The red fruit are edible.

Cultivation

It is grown by dividing the rootstock. A piece about 5-10 cm long with at least 2 undamaged buds is used. Rhizomes are planted just below the surface and 60 cm apart.

Production

Young rhizomes have more flavour than older ones.

Nutritional Values

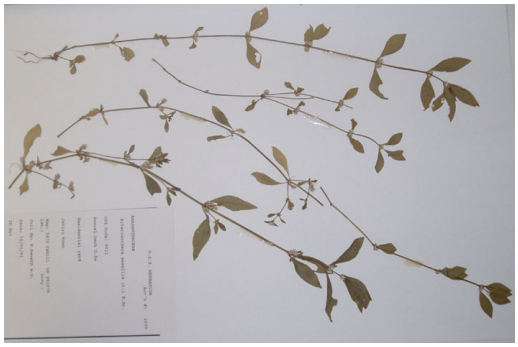
Alpinia galanga

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves				0.5-1				
rhizome	85.9		51	1.0			2.1	
seed								
flowers								
fruit								

Amaranthaceae

Common names

Lotus-seed Herb, Joyweed,



Scientific name

Alternanthera sessilis

Edible portion

Leaves, Flower, Vegetable,

Description

A low lying and spreading plant which has many branches. It continues to grow from year to year. The stem and branches are up to 60-100 cm long and near the ends there are 2 lines of hairs along the stem. The leaves are smooth and attached to the stem without a stalk. They are opposite. The leaves are 1-10 cm long and 0.2-2 cm wide. The flowers heads are white and 5 to 7 mm long. They grow along the plant and do not have flower stalks. It flowers all year round. The fruit are oval and compressed on the side. The seed is about 1.5 cm across. When plants are growing in water the stems become hollow and the plants float.

Distribution

A tropical plant. It occurs in most tropical places. It is common in waste land at low and medium altitudes in the Philippines. It grows in open moist places from sea level to 2,000 m in Papua New Guinea. In Fiji it grows from sea level to 500 m. In Nepal it grows to 2400 m altitude.

Found in:

Africa, Algeria, America, Asia, Australia, Bangladesh, Benin, Bhutan, Botswana, Burundi, Cambodia, Cameroon, Central Africa, Chad, China, Congo, East Africa, Egypt, Ethiopia, Fiji, Gabon, Gambia, Ghana, Guinea, Hawaii, Honduras, India, Indochina, Indonesia, Iran, Israel, Ivory Coast, Jordan, Kenya, Laos, Lebanon, Liberia, Madagascar, Malaysia, Malawi, Mali, Mozambique, Namibia, Nepal, Nigeria, Norfolk Island, Pacific, Pakistan, Palestine, Papua New Guinea, PNG, Philippines, Rwanda, Senegal, Sierra Leone, South Africa, Southern Africa, Sri Lanka, Sudan, Swaziland, Syria, Tanzania, Thailand, Timor, Tonga, Tunisia, Uganda, USA, Vietnam, Yemen, Zambia, Zimbabwe

Use

The leaves and tender tips are cooked and eaten. They are used in soups.
It is also used to prepare a cool drink.

Cultivation

It can be grown by dividing the underground stem. It can also be grown from sections which root at then nodes.

Production

The first harvest of leaves can be taken 50-60 days after planting.

Nutritional Values

Alternanthera sessilis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Araceae



Common names

Elephant foot yam, Stinking Snakeskin Lily, Pungapung, Buk, Loki, Ubi kekek, Hakai, Kembang bangah, Suweg, Badur, Walur, Iles-iles,

Scientific name

Amorphophallus paeonifolius var. campanulatus

Edible portion

Tuber, Corm, Leaves, Leaf stalks, Vegetable,

Description

A taro family plant but with a very divided leaf. It grows to 0.75-1 m high. It is a herbaceous plant with rough and mottled leaf stalks. It has a straight stem and the leaf is divided into leaflets. The leaves can be 1 m in width. The leaves usually come singly from the ground. The leaf blades are divided into many lobes. The leaflets can be 3-35 cm long and 2-13 cm wide. The flower stalk can be 3-20 cm long. The bract around the flower is bell shaped and fluted. It can be 60 cm across. The edge is curved back and wavy. The flower is dull purple and up to 30 cm across. It can be 70 cm long. The flower gives of a bad smell like rotting meat and this attracts flies. The flower only develops after the leaves have died off. The leaves and corms especially in the wild varieties contain many stinging crystals. Edible kinds have a smooth petiole. It has a large round tuber up to 25 cm across. The large round underground corm produces small corms around the side. These can be 10 cm long. These are usually used for planting.

Distribution

A tropical plant. It occurs mainly in seasonally dry areas and grassland up to 800 m altitude in equatorial zones. It requires an average temperature of 25-35°C and rainfall of 1000-1500 mm during the growing season. Soils need to be well drained as it cannot stand waterlogging. It occurs widely around the Philippines in low altitude places especially where people have cleared the forest. It is common in Indonesia and Vietnam.

Found in:

Asia, Australia, Bangladesh, Bhutan, Burma, Cambodia, China, Fiji, India, Indochina, Indonesia, Malaysia, Myanmar, Nepal, Pacific, Papua New Guinea, PNG, Philippines, Solomon Islands, Tahiti, Thailand, Timor, Tonga, Vanuatu, Vietnam,

Use

The corm is cooked and eaten.
The leaves are edible.
The young petioles or leaf stalks are eaten cooked.

Cultivation

The cormels are planted. Seeds will grow but flowers need hand pollination. Small corms from around the side are the normal part planted. If a very small corm is planted, the plant may need to grow for several seasons to produce a large yield. Setts or small cormels of 200 g are suitable for use planted at 30 cm x 30 cm spacing and produce seed corms of about 500 g. Larger corms take 3-4 years to produce. This is achieved by digging up corms and replanting next season. Each crop takes about 8 months to mature. Corms are planted 15 cm deep. Spacing is increased between plants in successive years of growth. After harvest, the corm needs to be kept for a few months before it is ready to produce a new shoot and re-grow.

Production

The stalk dies back when the plant is mature. The corm will keep for several months. An individual corm can finally weigh 8 kg. When it is planted a single leaf stalk is produced and the irregular shaped leaf is produced at the top of the stalk. Eventually the corm under the ground increases in size then the leaf dies back. The corm could be harvested and stored, or eaten at this stage. If it is just left, a very large flower is produced. This type of growth pattern where vegetative growth is followed by a storage organ with dormancy, is the type of growth that suits areas with a distinct wet and dry season. It has the advantage that the corm will store well after harvest and can be eaten in the dry season when food is short.

Nutritional Values

Amorphophallus paeonifolius var. campanulatus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
tuber	78.0	340	72	2.0	0	6	2.4	1.1
tuber	79.0	268		1.5			2.3	0.9

Vitaceae

Common names

Scientific name

Ampelocissus aculeata

Edible portion

Fruit,

Description

A thorny climber. The branches have a grey covering. It has strong tendrils. The leaves have 3 leaflets each divided into another three. The leaflets are narrowly oval. The flowers are in long stalks in flat topped groups. The fruit are berries with 2 seeds.

Distribution

Found in:

Asia, Timor,

Use

Cultivation

Production

Nutritional Values

Ampelocissus aculeata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Anacardiaceae

Common names

Cashew,



Scientific name

Anacardium occidentale

Edible portion

Nut, Leaves, Fruit pulp, Flavouring,

Description

A spreading evergreen tree up to 7-14 m tall. It has spreading branches. The canopy can spread 12 m. The roots grow deeply and spread widely. The bark is rough. The trunk is 15-20 cm across. The leaves are alternate. The leaves are pale green and large. They are 10-15 cm long by 6-8 cm wide. They have fine veins. They are narrow at the base. The leaf stalk is 1-2 cm long. The leaves are shiny. The flowers are produced on the ends of the branches. They are red in colour. About 14 % of the flowers are both male and female and the remainder are male. Many of the flowers which contain female flower parts do not form fruit. The nut is borne below the "apple" which is really a fleshy stalk. The nut is kidney shaped. It is about 3 cm long.

Distribution

It is a tropical plant. It suits the lowland tropics but will grow up to about 1200 m altitude. It only bears well in dry areas because of blight of the flowers. It needs warm frost free locations. It grows with temperatures between 22-26°C. A rainfall of 1750 mm per year is considered suitable but good yields have been obtained with rainfall of 750 mm. Wider spacing is needed in drier areas. It can grow on poor soils. It needs good drainage. It is drought resistant. It grows in the Sahel. In South India it grows up to 1000 m altitude. It suits hardiness zones 11-12.

Found in:

Africa, Amazon, Asia, Australia, Belize, Bolivia, Brazil*, Burma, Cambodia, Cameroon, Caribbean, Central Africa, Central America, China, Colombia, Congo, Costa Rica, East Africa, Ecuador, El Salvador, Fiji, France, French Guiana, Gabon, Ghana, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, India, Indochina, Indonesia, Jamaica, Lesser Antilles, Madagascar, Malawi, Malaysia, Mexico, Mozambique, Myanmar, Nicaragua, Nigeria, Pacific, Panama, Papua New Guinea, PNG, Peru, Philippines, Puerto Rico, Sahel, Sierra Leone, Singapore, Solomon Islands, South Africa, South America, Southern Africa, Sri Lanka, Suriname, Tahiti, Tanzania, Thailand, Timor, Tonga, Uganda, Vanuatu, Venezuela, Vietnam, West Africa, West Indies, Yap

Use

The fleshy "apple" is edible but acid until very ripe. It is used for jams and drinks. It is also candied, made into chutney and pickles.
The nut is eaten after roasting.
The young shoots and leaves are edible. They are picked during the rainy season and eaten fresh with hot and spicy dishes.
CAUTION The oil of the nut can blister the skin till roasted.
The seeds are said to be anthelmintic.

Cultivation

It is usually grown from seeds. Seeds germinate poorly and slowly. Only nuts which sink in water (or a solution of 150 g of sugar in a litre of water) should be planted. Seeds are sun dried for 2-3 days to improve germination. Seeds can be sown in a nursery then transplanted or more commonly are sown directly. Trees are spaced 7-10 m apart. The crop is cross pollinated mostly by insects. It can be propagated by air layering. For good production complete fertiliser or appropriate organic material should be applied. Pruning to shape the tree is often undertaken in the first 2 or 3 years. Cashews are often planted scattered in gardens or amongst other trees. Clearing under the tree prevents fire and makes finding nuts easier. Allowing nuts to fall before harvesting ensures only ripe nuts are collected. Resin in the cashew nut shell can damage hands and discolour the nuts. Roasting the nuts before removing the kernel avoids this.

Production

Trees commence bearing after 3 years. Fruit production is seasonal. The fruiting season is normally October to January. Mature nuts are produced in 2-3 months. Yields of 80-200 kg per hectare of nuts are normal. Trees produce maximum after 10 years and trees last for about 100 years.

Nutritional Values

Anacardium occidentale

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
nut	4.0	2478		17.5			2.8	4.8
leaves	69.9	418	100	5.2				
fruit	84.7	213	51	0.8	0.12	265	1.0	0.2

Menispermaceae

Common names

Kakamari, Levant berries, Fish berries,

Scientific name

Anamirta cocculus

Edible portion

Fruit - flavouring,

Description

A strong climbing shrub.

Distribution

A tropical plant.

Found in:

Asia, India, Indochina, Malaysia, Timor, Vietnam,

Use

Fruit were used as an adulteration in beer.
CAUTION: They are poisonous.

Cultivation

Production

Nutritional Values

Anamirta cocculus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit - flavour								

Common names

Pineapple,

Bromeliaceae



Scientific name

Ananas comosus

Edible portion

Fruit, Shoots,

Description

A perennial herb with a rosette of long, thick, spiky leaves up to 1 m high & spreading 1-1.5 m. The leaves are arranged in spirals. Some kinds have thorns along the edges of the leaves. The plant produces suckers both near the base of the stem and also higher up the stem near the fruit. These are called slips and these, and the suckers, are broken off and used for planting. The main plant dies after producing a fruit but the suckers keep growing. The plant produces a flower and fruit at the end. The fruit is made up of about 150 berry-like fruitlets that are almost fused together. There is a small crown of leaves on top of the fruit. The fruit can be 25 cm long and weigh 0.5-4 kg. The two main kinds of pineapples are the rough leafed variety which has spines on the leaves and produces a smaller but sweeter fruit. The other kind is the smooth leaf kind with spineless leaves and larger fruit. There are several cultivated varieties.

Distribution

It is a tropical plant. They grow from sea level up to 1800 m altitude near the equator. It can survive brief periods down to freezing but cold retards growth, delays fruiting and causes fruit to be more acid. A friable well drained soil with high organic matter is best. Plants cannot stand water-logging. It can survive drought but adequate soil moisture is necessary for good fruit production. Pineapples need an annual average temperature between 17.2°C and 26.9°C. Growth ceases below 20°C. In the equatorial tropics this is mostly between sea level and 1800 metres altitude. Pineapples need well drained and fertile soil. They suit an acid soil and can develop rots in soils where lime has been added. The soil acidity can be between pH 3.3 and 6.0. The best range is pH 4.5 to 5.5. Soils which are not sufficiently acid can be treated with sulphur. It suits hardiness zones 9-10.

Found in:

Africa, Asia, Australia, Bangladesh, Bolivia, Brazil*, Cambodia, Cameroon, Central Africa, Central America, China, Congo, Costa Rica, Cuba, Dominican Republic, East Africa, Ecuador, Ethiopia, Fiji, FSM, French Guiana, Ghana, Guam, Guinea, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Ivory Coast, Jamaica, Kenya, Kiribati, Laos, Lesser Antilles, Madagascar, Malawi, Malaysia, Maldives, Mexico, Nepal, New Caledonia, Nicaragua, North America, Pacific, Papua New Guinea, Paraguay, PNG, Peru, Philippines, Puerto Rico, Solomon Islands, South Africa, Southern Africa, South America*, Sri Lanka, Suriname, Swaziland, Taiwan, Thailand, Timor, Tonga, Uganda, USA, Vanuatu, Vietnam, West Africa, West Indies, Zambia

Use

The fruit is eaten fresh or used for juice. The fruit can also be sliced and cooked with ham.
The fruit is used in ice cream, jams and juices.
The young heart leaves can be eaten. They are cooked in curry dishes.
Unripe fruit are also cooked and eaten.
The flower spikes are peeled and sliced and steamed as a vegetable or added to stews.
The rind of the fruit is used for drinks.

Cultivation

The suckers and slips can be used for planting as well as the top of the fruit. The time to maturity is the fastest for the suckers near the bottom of the plant and slowest when the top of the fruit is planted. Therefore use suckers that grow from the stem near the ground, for earliest yield. Other suckers or the top of the fruit can be used. Pineapples can grow well under shade. Pineapple flowering hormone can be used for fruit production with thorny varieties and calcium carbide for smooth kinds. Fruiting is less seasonal in the highlands than in the lowlands. Pineapples can be planted with 35,000 to 43,000 plants per hectare or 3 or 4 plants per square metre. If plants are spaced more widely they produce more suckers. Fruits become more acid where plants are closely spaced. If too many suckers are left growing from the main plant then smaller fruit will be produced. They can grow in partial shade and in this situation the plants are normally more green. The red colouring of pineapple leaves is due to a deficiency of the nutrient nitrogen. This shows up more quickly in plants in full sunlight.

Production

growth rate for pineapples gets slower as the temperature gets less. So plants grown in the highlands or at higher latitudes take longer to get ready for harvest. It takes 60 days from when the flower starts to form until it appears. Then there are 5 months until the fruit is ready for harvest. The time from planting to harvesting ranges from 11 months up to 32 months depending on temperature. The fruit are smaller, poorer shape and more acid where the temperatures are lower or there is less sunlight.

Nutritional Values

Ananas comosus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	84.3	194		0.5	60	25	0.4	0.1
shoots								

Annonaceae

Common names

Pond apple, Monkey apple,



Scientific name

Annona glabra

Edible portion

Fruit,

Description

A small to medium sized tree. It grows 6-12 m high. The leaves are simple and 6-25 cm long. They are alternate. They vary in size. The flowers occur singly. The fruit is large and yellow. It is 70-80 mm across. They occur single in the axils of leaves. There are several seeds inside. These are about 12 mm long. The flesh is orange and edible.

Distribution

A tropical plant. It grows in a range of tropical countries. It is widely cultivated between 100-200 m altitude in southern China. It suits the humid lowlands and grows in the mangrove swamps. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Belize, Cambodia, Cameroon, Central Africa, Central America, China, Congo, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Fiji, French Guiana, Gambia, Guatemala, Guianas, Guyana, Haiti, Hispaniola, Honduras, India, Indochina, Ivory Coast, Liberia, Malaysia, Maldives, Mexico, Nicaragua, Nigeria, North America, Pacific, Panama, Puerto Rico, Sao Tome, Senegal, Sierra Leone, South America, Sri Lanka, Taiwan, Timor, USA, Vietnam, West Africa, West Indies,

Use

The fruit are used for jellies and eaten raw.
The flavour can be improved by boiling.
The fruit is often used for juice.

Cultivation

Plants are grown from seed. The seeds should be planted fresh and are best scratched to break the hard seed coat. Seeds germinate in 50-60 days. Seedlings can be transplanted after 7-8 months.

Production

Nutritional Values

Annona glabra

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	86.6		52	0.4			2.3	

Annonaceae

Common names

Soursop,



Scientific name

Annona muricata

Edible portion

Fruit, Leaves,

Description

It is a low bushy tree 8-10 m high. The leaves are long (14 cm) and narrow (4 cm). The leaves are thick and slightly shiny on top. The flowers are large (2-3 cm), rounded and produced on short stems on the branches. They occur singly, or in groups of three. The flowers have two layers of thick fleshy petals. The fruit are 10-30 cm long. The fruit is spiny and the flesh is juicy. Many black seeds are embedded in the white flesh. Fruit are often distorted due to only some of the ovules being fertilised. Beetles are normally thought to do the pollinating. This means fruit end up heart shaped when unevenly pollinated. The flesh of the fruit is white. Several kinds with different sweetness, shape and juiciness occur.

Distribution

A tropical plant. It grows in tropical lowland areas below 1200 m altitude. It can tolerate quite poor soils and a humid climate. It cannot tolerate frost. The trees can withstand temperatures down to freezing (0°C) for a short time but salt laden winds from the sea can kill the trees. They need a well drained soil and cannot tolerate water-logging. The trees continue to grow and produce satisfactorily in fairly poor compact soil. But improving the fertility increases the amount of fruit. They can grow well in hot humid areas but a fungus disease called Blossom blight can cause flowers to fall off. It suits hardiness zones 10-12.

Found in:

Africa, Amazon, Angola, Antilles, Asia, Australia, Barbados, Belize, Bolivia, Brazil, Cambodia, Cameroon, Canary Islands, Central Africa, Central America, China, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, East Africa, Ecuador, El Salvador, Ethiopia, Fiji, FSM, Gabon, Ghana, Guatemala, Guianas, Guyana, Haiti, Hawaii, Hispaniola, Honduras, India, Indochina, Indonesia, Jamaica, Laos, Madagascar, Malaysia, Maldives, Mexico, Nicaragua, Pacific, Pakistan, Panama, Papua New Guinea, PNG, Peru, Philippines, Puerto Rico, Senegal, Sierra Leone, Solomon Islands, South America, Southern Africa, Sri Lanka, Suriname, Taiwan, Tanzania, Thailand, Timor, Tokelau, Tonga, Uganda, USA, Vanuatu, Venezuela, Vietnam, West

Use

Fruit can be eaten fresh or used in ice-cream and for drinks.
Young fruit can be cooked as a vegetable.
Leaves are edible cooked. They are used for tea.
CAUTION The seeds are toxic, so should be removed before processing.

Cultivation

Trees are grown either as seedling trees or grafted plants. They can be grown from cuttings or air layering. Trees are easy to grow and maintain. Plants can easily be grown from seeds. Seeds can be planted fresh or stored. Seeds grow in about 15 to 20 days. Trees grown from seeds vary in the quality of the fruit. Seedlings are transferred to polythene bags when 15 cm tall. Trees can also be grown from cuttings or by grafting. This allows better trees to be selected and produced. Seedlings are suitable for grafting after 6 months. Trees need to be about 5m apart. Flowers are pollinated by insects. Hand pollination of flowers can increase the number of fruit that are produced. Fruit are soft and fleshy and difficult to transport.

Production

Trees grow quickly. Trees commence bearing by the third year. It bears fruit almost continually throughout the year, but there is normally one season when more fruit are getting ripe. Fruit can weigh up to 4-5 kg each. A tree can produce 12-24 fruit in a year. The fruit contain 11-14% sugars.

Nutritional Values

Annona muricata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	82.4	294		0.88		16	0.3	0.1
leaves								

Common names

Bullock's heart,

Annonaceae



Scientific name

Annona reticulata

Edible portion

Fruit,

Description

A small tree up to 7.5 m tall. It has several branches near the base. Trees loose their leaves at some times of the year. New shoots have short brown hairs but older wood is smooth and shiny. The leaves are long and spear shaped with short leaf stalks. Around the edge of the leaf is a clear edge. The leaves smell when crushed. Flowers are greenish yellow. They occur in groups where the leaves join the stalk. Flowers occur on new wood growth. The fruit are reddish brown in colour and 10-12 cm across. There is a fine hexagonal pattern over the fruit. Inside there are large brown seeds. The fruit are edible but the seeds are not eaten.

Distribution

A tropical plant. It occurs in the tropical lowlands and grows up to at least 1200 m altitude. It can grow on poorer soils with different levels of acidity. It cannot stand water-logging. It suits humid climates. It is less suited to dry climates. In Brisbane Botanical Gardens. In Nepal it grows to 900 m altitude. It suits hardiness zones 10-12.

Found in:

Africa, Angola, Antilles, Asia, Australia, Bangladesh, Belize, Bolivia, Brazil, Burma, Cambodia, Cameroon, Central Africa, Central America, China, Colombia, Costa Rica, Cuba, Dominican Republic, East Africa, Ecuador, Fiji, Gabon, Grenada, Guatemala, Guyana, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Jamaica, Kenya, Madagascar, Malawi, Malaysia, Maldives, Marshall Is., Martinique, Mexico, Myanmar, Nepal, North America, Pacific, Pakistan, Panama, Papua New Guinea, PNG, Peru, Philippines, Puerto Rico, Solomon Islands, South America, Sri Lanka, Tanzania, Timor, Thailand, Tonga, USA, Venezuela, Vietnam, West Africa, West Indies, Zambia

Use

The ripe fruit is eaten fresh.
They are also used for preserves, drinks, ice cream, custards and other desserts
CAUTION: The seed kernel is poisonous.

Cultivation

Plants are normally grown from seeds. Seedling trees vary quite a bit. Seedlings are easy to transplant. A spacing of 4-7 m is suitable. Better kinds can be grown using budding or grafting.

Production

Trees begin fruiting at 3-5 years. Fruit setting is often improved by hand pollination. Fruit can vary from 0.25 to 2.25 kg each. The fruit has 13% sugar. Fruit production is seasonal. The season is normally Dec. to March.

Nutritional Values

Annona reticulata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	66.4	462		2.06	10	50	0.5	

Annonaceae

Common names

Sweetsop,



Scientific name

Annona squamosa

Edible portion

Fruit,

Description

A bushy deciduous tree up to 6 m high. It has irregular spreading branches. The leaves are oblong and narrow, often 12 cm long by 4 cm wide. The leaves have fine hairs underneath. The leaves are dull green and smell when crushed. The flowers droop or hang from branches either singly or in groups of 2 or 3. The flowers are greenish colour. The fruit are 8-10 cm across and greenish in colour. The fruit is covered with round fleshy scales which drop off as the fruit ripens. Inside the fruit are several shiny black seeds about 1.5 cm long. The fruit flesh is white and soft.

Distribution

A tropical plant. It suits lowland drier climates. It grows naturally in the dry hills around Port Moresby in Papua New Guinea. The trees will probably grow satisfactorily up to about 1000 metres altitude in equatorial zones. Sweetsops cannot stand frost but they are able to survive droughts better than many fruit trees. Trees do not like waterlogged soils. Sweetsops can grow on fairly poor, dry, stony soils. In Bolivia they grow in areas with rainfall or 500-1,000 mm per year. It suits hardiness zones 10 -12.

Found in:

Africa, Andamans, Antilles, Asia, Australia, Bangladesh, Brazil, Burma, Burundi, Cambodia, Cameroon, Cape Verde, Central Africa, Central America, China, Colombia, Congo, Cuba, Dominican Republic, East Africa, Ecuador, Fiji, Gabon, Guadeloupe, Guatemala, Guianas, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Jamaica, Kenya, Laos, Madagascar, Malawi, Malaysia, Maldives, Martinique, Mexico, Mozambique, Mayanmar, Nepal, Pacific, Pakistan, Papua New Guinea, Philippines, PNG, Reunion, Sao Tome, Seychelles, Solomon Islands, South America, Sri Lanka, Sudan, Suriname, Taiwan, Tanzania, Thailand, Timor, Tonga, Trinidad Tobago, Uganda, USA, Vanuatu, Venezuela, Vietnam, West Africa, West Indies, Yemen

Use

The fruit is eaten raw. It is also used in ice cream.
The juice is used for drinks.
CAUTION: The seeds, leaves and roots are poisonous. Both an alkaloid, and hydrocyanic acid have been shown to occur in these parts of the plant.

Cultivation

They are normally grown from seeds and the seeds retain their viability for several years. It is better to grow sweetsops from fresh seeds and it is best to soak seeds for 3 days before sowing. Seeds germinate and start to grow 50 to 70 days after planting. The fruit is borne on old and new wood. As the fruit is more commonly on new wood, pruning is an advantage. Trees can be budded or grafted. A small branch of a selected variety is grafted onto another seedling sweetsop. Plants are very hard to get to grow from cuttings. A spacing of 6 m apart is suitable for sweetsop trees. The fruit is eaten raw. The sweet soft fleshy layer around the seeds can be eaten raw. When the fruit is ripe it is easy to separate the different soft fleshy parts of the fruit. Often it is easiest and best to harvest the fruit when they are nearly ripe and then let them ripen in a warm place.

Production

The tree is slow growing. Trees can start to produce fruit 2 years after they are planted. Fruit are often 200-300 g each. The pulp is 20% sugar.

Nutritional Values

Annona squamosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Moraceae

Common names

False iroko, Ako,

Scientific name

Antiaris toxicaria

Edible portion

Fruit, Caution,

Description

A tree. It loses its leaves during the year. It grows to 45 m high. The trunk is straight and normally only has branches above 25 m high. The trunk can be 180 cm across. There are buttresses 3 m high. The leaves are alternate and simple. The leaves are 6-20 cm long by 3-12 cm wide. There are 1-8 flowers in a group in the axils of leaves. The male and female flowers are separate. The fruit is oval and fleshy. The fruit stalk is large and fleshy. They are 1-1.5 cm long and have 1 seed. The seeds are 7-9 mm long.

Distribution

In West Africa it grows from sea level to 1,800 m altitude.

Found in:

Africa, Angola, Asia, Australia, Burkina Faso, Cameroon, Central Africa, Central African Republic, Chad, Congo, East Africa, Ethiopia, Fiji, Gabon, Gambia, Guinea, Guinea Bissau, Kenya, Madagascar, Mali, Niger, Nigeria, Pacific, Senegal, Sierra Leone, Sudan, Tanzania, Timor, Tonga, Uganda, Zambia,

Use

Cultivation

Plants grow from trees. They grow easily and germinate in 3-13 weeks. Seeds do not store easily.

Production

Nutritional Values

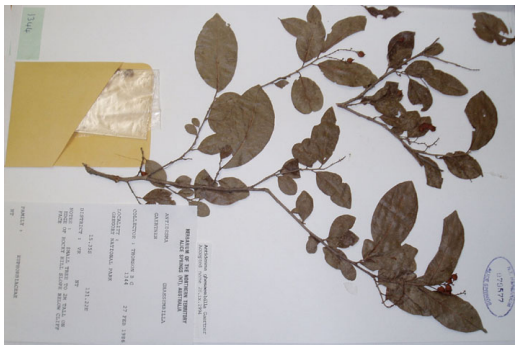
Antiaris toxicaria

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Phyllanthaceae

Common names

Black currant tree, Umtao, Dangkep k'dam, Gucil, Gunchiak, Gunchek, Gucheh, Binayuyu, Ande-ande, Dempul, Kenyan, Sepat, Onyam,



Scientific name

Antidesma ghaesembilla

Edible portion

Fruit, Leaves as condiment, Leaves,

Description

A stout and erect tree. It grows 3-8 m tall and spreads 2-4 m across. The trunk is covered with chalky yellowish brown bark. It is rough and mottled. The timber is light coloured and hard. The young branches and new leaves have woolly hairs. The tree loses its leaves during the dry season. The leaves are 3-7.5 cm long by 2-3 cm wide. They are broadly oval with a blunt tip. The leaves are thinly textured and shiny on the upper surface but paler underneath. The leaves are numerous. The flowers are numerous and densely clustered. Male and female flowers occur on separate trees. The male flower spikes are 2.5-5 cm long and the female flowers are on short thick stalks at the ends of branches. The individual flowers are very small and about 1-2 mm long. The fruit are small, oval and fleshy. They are 0.4-0.6 cm long and purple when ripe. The fruit are edible.

Distribution

A tropical plant. They are common at low and medium altitudes throughout the islands of the Philippines. It grows to 120 m altitude in Malaysia. In Australia they grow in the north in open vine forest.

Found in:

Asia, Australia, Bangladesh, Burma, Cambodia, China, India, Indochina, Indonesia, Laos, Malaysia, Myanmar, Pacific, Papua New Guinea, PNG, Philippines, Sri Lanka, Thailand, Timor, Vietnam,

Use

The fruit are eaten raw when ripe. They are sour. They can be used for jam. The fruit are also used with meat and fish dishes. The leaves are used as acid flavouring in food.

Cultivation

Plants can be grown from seed or cuttings.

Production

Fruit are available September to December in Australia.

Nutritional Values

Antidesma ghaesembilla

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	71.9	450		1.4			2.5	0.4
leaves - flavour								

Phyllanthaceae

Common names

Gunchiak, Gunchiak gajah, Ande-ande, Buni menir,



Scientific name

Antidesma montanum

Edible portion

Fruit,

Description

A small tree. It grows about 13 m high. The branches are slender. The leaves are oblong and have a sharp tip. The flowering shoots are at the ends of branches and in the axils of leaves.

Distribution

A tropical plant.

Found in:

Asia, Australia, Bangladesh, Cambodia, China, India, Indonesia, Malaysia, Philippines, Taiwan, Thailand, Timor, Vietnam,

Use

Cultivation

Production

Nutritional Values

Antidesma montanum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit								

Apiaceae



Common names

Celery, Stalk celery, Seledri,

Scientific name

Apium graveolens var dulce

Edible portion

Leaves, Stalks, Herb, Spice, Seeds, Vegetable,

Description

A herb up to 1 m high. It has leaf stalks with ridges and they are like a half circle when cut across. The plant is strong smelling. The plant is smooth and hairless. The leaves are divided into a compound leaf. The wild plant has leaves in tufts from the base or spread along creeping stems. The flowers are white and in small compound arrangements where each flower is on a stalk from the same point.

Distribution

It is a warm temperate plant. It is mainly grown in the highlands in the tropics. It grows up to about 2100 m altitude. It is damaged by frost. It often grows naturally in swampy conditions. In the tropical lowlands it grows as a small leafy plant but can be used for flavouring. Seed germination is best at 14-21°C. It requires a rich sandy loam soil. Because celery has shallow roots it needs plenty of moisture and does best in humus rich soils. It does best with temperatures below 26°C. It needs a pH between 5.8-7.0. It suits plant hardiness zones 5-10.

Found in:

Africa, Algeria, Asia, Australia, Cambodia, China, East Africa, Egypt, Ethiopia, Hawaii, India, Indochina, Indonesia, Japan, Malaysia, Mediterranean, New Zealand, Pacific, Papua New Guinea, PNG, Philippines, Singapore, South Africa, Southern Africa, Sri Lanka, Sweden, Thailand, Timor, Tonga, USA, West Africa,

Use

The leaf stalks are eaten raw or used to flavour foods.
The leaves can also be used for flavouring.
The dry ripe fruit can be used for flavouring. e.g. in salt.
The juice is blended with other vegetable juices.
Caution: It is not recommended in large amounts during pregnancy.

Cultivation

Plants are mostly grown from seed and transplanted. Seedlings are spaced at 10-25 cm apart. To produce white stalks, the plant is wrapped up or soil is mounded up around the plant. Newer varieties will naturally form whiter stalks. Plants should be grown close together to keep sunlight off the stalks. This applies especially for the naturally whitening (blanching) varieties. The stalks are cut before the plant flowers.

Production

Leaf stalks take about 9 months from seed until harvest.

Nutritional Values

Apium graveolens var dulce

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed	6.0	1641		18.1	5	17.1	44.9	6.9
leaves - boiled	95.7	88		0.6	13	5	0.4	0.1
Leaf stalks raw	94.6	67		0.8	13	7	0.4	0.1
leaves - raw	93.5	51		0.9	13	7	0.6	0.1

Common names

Peanut, Groundnut,

Fabaceae



Scientific name

Arachis hypogea

Edible portion

Seeds, Leaves, Flavouring, Spice, Pods, Vegetable,

Description

A spreading bushy plant up to about 40 cm high. Leaves are made up of 2 pairs of leaflets arranged opposite each other. Flowers are produced in the axils of leaves. Two main kinds occur. They are often called runner and bunch types. The runner kind has a vegetative or leafy branch between each fruiting branch and therefore produces a more spreading type of plant. This is called "Virginia" peanut. The pods have 2 dark brown seeds. The other kind produces fruiting branches in a sequence one after the other along the branches. These are called "Spanish-Valencia" types. They grow as a more upright plant and grow more quickly. They have lighter coloured leaves and the pods have 2 to 6 seeds which are often white. Virginia types have the flowers in alternate pairs. Spanish and Valencia types have several flower branches one after another along the stem. Pods are produced on long stalks which extend under the ground. The stalk or peg from the flower grows down into the soil and then produces the pod and seed under the ground. The flower needs to be no more than 18 cm from the soil for the

Distribution

A tropical and subtropical plant. Peanuts grow well from sea level up to about 1650 metres altitude in the equatorial tropics. They need a temperature of about 28°C and between 24°C and 33°C. The plants get killed by frost. They need a well drained soil and cannot stand water-logging. Therefore they are often grown on raised garden beds. They do better in drier areas but need 300 to 500 mm of rain during the growing season. Near harvest dry weather is needed. It is grown between 40° N and 40°S. Short season cultivars are used in semi arid regions. It suits hardiness zones 8-12.

Found in:

Africa, Angola, Antigua-Barbuda, Antilles, Argentina*, Asia, Australia, Bangladesh, Barbados, Belize, Benin, Bolivia, Brazil*, Burkina Faso, Burma, Burundi, Cambodia, Cameroon, Central Africa, Central America, Chad, China, Colombia, Comoros, Congo, Costa Rica, Cuba, Djibouti, Dominican Republic, East Africa, El Salvador, Equatorial Guinea, Ethiopia, Fiji, France, French Guiana, Gabon, Gambia, Ghana, Grenada, Guadeloupe, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Hawaii, Hispaniola, Honduras, India, Indochina, Indonesia, Iraq, Ivory Coast, Jamaica, Japan, Kenya, Laos, Liberia, Madagascar, Malawi, Malaysia, Mali, Marianas, Martinique, Mauritius, Mexico, Montserrat, Mozambique, Myanmar, Namibia, Nepal, New

Use

The seeds can be eaten raw, or cooked. They are boiled, steamed, roasted, salted or made into peanut butter or flour for bread.
The young leaves are edible, cooked. The unripe pods are cooked and eaten. Sprouted seeds are eaten.
Oil is extracted from the seeds and is edible. It is often used for stir-frying. The remaining meal is also eaten.

Cultivation

Peanuts require soil with good levels of calcium or they produce empty pods. Adding gypsum will improve this. If the nutrient boron is short then flowers won't flower and fruit properly. Because peanuts are legumes, they have root nodule bacteria which can fix their own nitrogen and this means they can still give good yields in grassland soils where nitrogen is at a lower level. The seeds or nuts are normally removed from the shell before planting and are sown 2 to 3 cm deep. The alternately branched or Virginia-type of peanuts have a dormancy period so that they must be stored before replanting. A suitable spacing is 10 cm between plants and 60 to 80 cm between rows. Often plants are grown in mixed cultures with other plants but where a pure stand is used up to 250,000 plants per hectare are used. The soil needs to be weeded and loose by the time the flowers are produced to allow the peg for the seed pods to penetrate the soil. Normally when the whole plant dies off the plant are ready to pull. They are left to dry in the sun for 3 or 4 days.

Production

Flowering may commence in 30 days. It takes from 3.5 to 5 months till maturity. They are harvested when the top of the plants die. The whole plant is pulled out. Virginia peanuts have a longer growing season and the seeds need to be stored for a while before they will start to re-grow. (30 days.)

Nutritional Values

Arachis hypogea

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed dried	4.5	2364		24.3	0	Tr	2.0	3.0
seed fresh	45.0	1394		15.0	Tr	10	1.5	
leaves	78.5	228	69	4.4			4.2	
pods								
sprouts								

Arecaceae

Common names

Betel nut, Pinang, Buai, Areca nut, Maak, Poogiphalam, Supari, Vakka, Pakku, Adike, Adakka, Bonga, Pugua, Poc, Pu, Bu, Bua, Vua, Angiro,



Scientific name

Areca catechu

Edible portion

Nut, Cabbage, Palm heart, Male flower,

Description

A straight slender palm up to 30 m tall. The leaves can spread 5 m across. The trunk is slender and erect. The trunk has rings around it and is about 10 to 15 cm across. The fronds or leaves are divided into leaflets along a stalk. The leaves are a dark green and 1.5 m long with leaf divisions about 25 cm long. The leaves arch over. The ends of the leaflets have irregularly placed teeth. A much branched flower cluster develops below the sheath. This can be 60 cm long with pale yellow flowers. The female flower occurs on its own at the base surrounded by small, white, sweet smelling male flowers. The fruit are egg shaped and up to 7 cm long. They change from green to red or yellow as they ripen.

Distribution

A tropical plant. They occur from sea level up to 900 m altitude in the tropics. It does best in rich moist soils in a shady, sheltered position. It needs soils of reasonable depth for good production. Plants are drought and frost tender. The seed needs to be sown when temperatures are 24-27°C. Plants can tolerate temperatures down to a minimum of 13-15°C. Found in settled areas throughout the Philippines. Also found in virgin forest in Palawan. It grows in Nepal up to 400 m altitude. In Cairns Botanical Gardens including var. alba. It suits hardiness zones 11-12.

Found in:

Africa, Andamans, Asia, Australia, Bangladesh, Burma, Cambodia, Cameroon, Central Africa, China, Cuba, Dominican Republic, Fiji, Guam, Haiti, Hawaii, India, Indochina, Indonesia, Jamaica, Malaysia, Maldives, Myanmar, Nepal, Pacific, Pakistan, Palau, Papua New Guinea, PNG, Philippines, Puerto Rico, Samoa, Singapore, Solomon Islands, Sri Lanka, Taiwan, Thailand, Timor, USA, Vietnam, West Africa, West Indies, Yap,

Use

The nut is chewed (with lime and betel pepper) as a masticatory.
The heart of the palm is edible and eaten raw or cooked.
CAUTION Chewing betel nut is associated with cancer of the mouth and throat. It contains alkaloids and tannins.

Cultivation

Trees are grown from seed. The seedlings are transplanted at 1-2 years of age. A spacing of 3 m between plants is the best spacing. Bananas can be used to provide temporary shade while betel nut palms get established. Holes 50 cm across and deep need to be dug. The seedlings should be planted 20 cm below ground level. As emerging prop roots develop the hole should be filled in.

Production

The palm commences bearing fruit after about 7 years. The fruit take 6-8 months to ripen. Trees can continue fruiting for 30 -60 years.

Nutritional Values

Areca catechu

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
nut	10.8	1671	399	4.4				
palm heart								

Arecaceae



Common names

Black Sugarpalm, Gomuti palm, Sugar palm, Enau, Inau, Nau, Kabong, Habong, Berkat, Aren, Lirang, Nanggung, Taren, Kawung, Anau,

Scientific name

Arenga pinnata

Edible portion

Juice - flowers, Sap, Seeds, Cabbage, Sago, Starch,

Description

A large palm. It grows to 18 m high. It forms one trunk 30 cm across and covered with old leaf bases and black fibres. It has spines 7.5 cm long. It has long leaves which reach upwards. They have leaflets along the stalk made up of 100 or more pairs. The leaves are 8.5 m long. The leaflets are whitish beneath, lobed at the tip and with ear like pieces near the base. They have large flower stalks hanging down from the leaf axils. Several fruit stalks develop from the top downwards. When the palm is mature a flowering shoot is sent out from the axil of the upper leaf then followed by other flowers until the tree reserves are exhausted and the palm dies. The fruit are round and dark red. They are 4 cm across. The fruit pulp damages skin. There are usually 3 seeds per fruit. They have one flat side.

Distribution

A tropical palm. It needs warmth and humidity. It grows in lowland forest up to 500 m altitude. Widely distributed at low and medium altitudes throughout the settled areas of the Philippines along streams. It suits hardiness zones 10-12. In the Cairns Botanical Gardens.

Found in:

Africa, Asia, Australia, Bangladesh, Benin, Burma, Cambodia, China, East Africa, Fiji, Guam, India, Indochina, Indonesia, Malaysia, Myanmar, Pacific, Papua New Guinea, Philippines, PNG, Sri Lanka, Tanzania, Timor, USA, Vietnam, West Africa,

Use

The bud is eaten raw or cooked. The sap is collected for vinegar etc.
The fleshy kernels of the fruit are cooked and eaten. (The fruit contain calcium oxalate and are not edible)
Edible starch can be extracted from the stem.
The palm heart is edible.

Cultivation

Plants are grown from seed. The seed grow easily.

Production

It is fast growing and short lived. An estimated sugar yield for 150-200 trees per hectare is 10 tons of marketable sugar over 10-15 years. A tree can yield 2 litres per day for 25 days.

Nutritional Values

Arenga pinnata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
sap		1656						
palm heart	94.7	79	19	0.1			0.5	
pith starch								
nut								

Moraceae



Common names

Breadfruit,

Scientific name

Artocarpus altilis

Edible portion

Fruit, Seeds, Leaves, Flowers, Vegetable,

Description

A large tree up to 20-26 m in height. The trunk can be 6 m tall before branching. The trunk can be up to 1 m across. It is an evergreen tree but can lose its leaves in dry weather. The leaves are large and vary in the amount the leaves are divided. They can be entire or divided into 5 to 11 lobes. The leaves are bright green on the upper surface with yellow veins and are pale and dull on the under surface. They have very small stiff hairs underneath. Male and female flowers occur on the same tree. The male flowers are cylindrical spikes which droop and are 12-30 cm long. The female flowers are grouped in a round head. The flower head develops into the compound fruit. The fruit are large and green. They can be 20 cm across. Seeded kinds have spines, and seedless kinds have a more smooth surface. Seeded, small seeded, and non seeded types occur. There are a number of cultivars of each. Seed can be 2 cm across and with darker lines.

Distribution

A tropical plant. It occurs in the hot, humid, tropical lowlands. The plant is purely tropical and normally below about 650m altitude, but trees grow from sea level up to about 1150 m. Seeded types are more dominant in the west of Papua New Guinea. Trees are killed by temperatures below 5°C. It probably requires an average temperature over 22°C to grow well. It tends to grow in the temperature range 16°C to 38°C. It grows on a range of soils providing they are well drained. There is some cultivar difference in drought tolerance and salt tolerance. Uniformly warm humid climates suit it best. An annual rainfall of 200-250 cm and a relative humidity of 70-80% suits. It suits hardiness zone 11-12.

Found in:

Africa, Asia, Australia, Brazil, Burma, Cambodia, Cameroon, Central Africa, Central America, China, Colombia, Congo, Costa Rica, Cuba, Dominican Republic, Fiji, Ghana, Guam, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Jamaica, Japan, Kiribati, Madagascar, Malaysia, Marianas, Marquesas, Marshall Islands, Martinique, Mexico, Myanmar, Nicaragua, Pacific, Palau, Panama, Papua New Guinea, PNG, Peru, Philippines, Puerto Rico, Samoa, Singapore, Society Islands, Solomon Islands, South America, Sri Lanka, St Lucia, St Vincent, Tahiti, Taiwan, Thailand, Timor, Tokelau, Tonga, Trinidad, Truk, Tuvalu, USA, Vanuatu, Vietnam, West Africa, West Indies

Use

The large seeds are roasted and eaten.
The flesh of the fruit is eaten cooked. It can be boiled, baked, steamed, mashed, or turned into soups, puddings, cakes and pies. Dried fruit are made into flour.
The young leaves are edible.
The male and female flowers are edible.

Cultivation

Seeded forms are self sown by birds or bats, and also grown from seed. The presence or absence of seeds significantly affects the production. Seeded trees are mostly propagated by seed which needs to be sown fresh, without seed drying out. Seedless trees are propagated by root cuttings. Cuttings of roots 1.5 cm to 4 cm across and 25 cm long are suitable. Cuttings can be rooted during the wet season, in sand. They should be placed horizontally. They need to be kept moist and shaded. Using intermittent mist improves root formation and cutting establishment. Rooting hormones also assists. This process takes 10 weeks or more and then rooted cuttings should be hardened off in a sunny position for up to 3 more months before planting out into the field. Young plants do best with adequate sun and not shade. Root suckers produced naturally, or by damaging the roots, are a common method of production of new material. Marcottage or budding can also be used for propagation. The vegetatively propagated trees are therefore clones and the variation is presumably therefore somatic. Fruit set can be

Production

Trees begin to bear after 3-6 years. Growth of the trees is vigorous, with fruiting starting after about 3 years. Trees grow to 10 -15 m in 10-12 years. Mature trees can be 30 m high. Fruiting can occur over 5-8 months in some locations and this is partly due to varieties with overlapping fruit seasons. A tree can produce 50-150 fruit per year. A fruit can weigh 1-1.6 kg each.

Large trees can give 700 fruit per year of 1-4 kg each. An average seed weighs 5 g. Fruit are harvested 65-95 days after flowering.

Nutritional Values

Artocarpus altilis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	74.4	506		1.5	4	25	0.4	0.2
leaves	75.5	314	75	5.0			17.5	
fruit and seeds	87.1	192	46	2.0				
seed								
flowers								

Moraceae

Common names

Koeto, Chang ye bo luo mi, Tampang, Tapang, Tampang telur, Tampang tulong, Tampang pelandok, Tampang burong, Tampang nasi,

Scientific name

Artocarpus gomeziana

Edible portion

Fruit,

Description

An evergreen tree. It grows 10 m high. The bark is dark grey. The small branches are 2-4 mm thick. They are slightly wrinkled and covered with fine hairs. The leaf stalk is 1.5-3 cm long. The leaf blade is oblong and 11-15 cm long by 7-16 cm wide. There is an irregular edge to the leaf and the base is rounded. The male flowers are in a round head 1-1.5 cm across. The fruit is yellow to pale red. It is 8 cm across. It is smooth and fleshy. The fruit stalk is 1.5-4.5 cm long.

Distribution

A tropical plant. It grows in broad-leaved and semi evergreen forests in Taiwan. In Timor it grows in the tropical mountain cloud forest.

Found in:

Andamans, Asia, Burma, China, India, Indochina, Indonesia, Malaysia, Myanmar, Pacific, Philippines, Sri Lanka, Taiwan, Timor, Vietnam,

Use

The fruit are cooked and eaten. They are also used for making jelly.
Young fruit are salted as a pickle.

Cultivation

Production

Nutritional Values

Artocarpus gomeziana

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit								

Common names

Jackfruit,

Moraceae



Scientific name

Artocarpus heterophyllus

Edible portion

Fruit, Seeds, Leaves, Flowers,

Description

An evergreen tree up to 20 m tall and in the breadfruit family. Trees form many branches but have one or two main trunks. The bark is smooth and dark green. Leaves of young trees have 1 or 2 lobes but mature leaves are long (15 cm) and entire. They are leathery, deep green and glossy. Flowers occur on spikes, on stalks from the trunk or main branches. Some stalks only have male flowers, others only have female flowers while some have both male and female spikes. Generally male flowers are on short stalks among the leaves, and female flowers are on trunks. Male flowers are 5 cm long by 2 cm wide and are dull green. Female flowers are bright green. The very large spiny fruit grow on main branches and the trunk. The fruit is a composite fruit made up from the many individual flowers of the flower cluster. Fruit can be 1 m long and weigh 36 kg. They have 6 sided fleshy spines. Each seed is surrounded by a yellow fleshy sheath. Seed are 2-4 cm long and 1-2 cm wide. There can be 100-500 seed in a fruit. Unlike breadfruit, there are no seedless Jackfruit. When ripe the unopened fruit has a

Distribution

A tropical plant. It grows in the tropical lowlands and up to about 1200 m altitude. It grows in Nepal up to 800 m altitude. It can stand some drought, but not water-logging. Trees do best where there is year round rainfall. It yields poorly where humidity is low. It does best in a well drained, frost-free location that is warm and sunny. They are slightly more tolerant of cold than breadfruit. It suits areas with a temperature range 22-35°C. Trees can survive occasional frosts down to 0°C. It is best with a pH of 6-6.5. They have some wind and salt tolerance. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Bangladesh, Bhutan, Brazil, Burma, Cambodia, Cameroon, Caribbean, Central Africa, Central America, China, Cuba, Dominican Republic, East Africa, Fiji, Ghana, Guinea-Bissau, Guyana, Haiti, India*, Indochina, Indonesia, Jamaica, Laos, Madagascar, Malaysia, Myanmar, Nepal, North America, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Samoa, Sierra Leone, Singapore, Solomon Islands, South America, Southern Africa, Sri Lanka, Suriname, Tanzania, Thailand, Timor, Uganda, USA, Vanuatu, Vietnam, West Africa,

Use

The flesh of ripe fruits can be eaten raw.
Unripe fruit can be cooked and eaten as a vegetable. They are fried in curries, preserved in syrup, dried, cooked in milk or made into alcoholic drinks. Caution: Alcohol is a cause of cancer.
Unripe fruit are pickled.
The seeds (5%) can be roasted and eaten. They are also boiled. (Some kinds have more seeds).
The young leaves and flowers are edible. They are eaten mixed with chilis, fish paste, sugar, salt etc

Cultivation

Trees are usually sown from seeds, but it is best to sow them in their final location as the plants don't transplant easily. They have a long delicate taproot which makes transplanting difficult. Fresh seed must be used (less than 4 weeks). If fresh seed are planted immediately they grow more quickly and more seeds germinate. It is better to use larger seed. The fleshy layer around the seeds should be removed. Seeds can be soaked in water for 24 hours to give better germination. It is best to sow seeds with the embryo pointing downwards and also with the narrow end pointing downwards. Seeds germinate in 3-8 weeks. A spacing of 12 m is suitable. Where trees are used as a wind break, trees are spaced 6 m apart. Air-layering can be used, and stem cuttings are also possible. Air layering is best done in the rainy season. Rooting hormones can be used to help roots develop. The shoots used for air layering should be 2-3 years old and brown in colour. To produce air layers, a small branch 3-4 cm across, is cut below a node and only part way around the stem. A ring 5-7 cm wide is cut and a layer of sand

Production

Jackfruit is a fast growing tree. They can be 7 m tall by 3 years old. Trees begin bearing after about 8 years. The fruiting season lasts about 4 months in subtropical places, but fruit can be produced year round in tropical places. Fruit take about 100 to 120 days from when the flower is pollinated until a fully mature fruit is developed but can take another 4 months to ripen. Trees tend to have heavy crops every second year. Pollination is by wind but hand pollination has been used to improve the

amount of fruit set. Fruit can be up to 50 kg in weight. Fruit change from green to yellow when mature. Up to 250 fruit can be produced each year on large trees. Fruit do not store well but can be kept in a cool store for 4-6 weeks at 11°-12°C and with high humidity

Nutritional Values

Artocarpus heterophyllus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed boiled	57.6	673	161	5.0		10	0.7	
fruit raw	74.5	395		1.5	30	6.7	0.6	0.4
leaves	75.5	360	75	5.0			17.5	
seed raw	60.9	224	151	4.3		10	1.2	
immature fruit + seed	85.8			1.6		13	0.1	
flowers								

Apocynaceae

Common names

Butterweed,

Scientific name

Asclepias curassavica

Edible portion

Flavouring, Caution,

Description

An erect small shrub. It grows 60-90 cm high. The leaves are 13 cm long. They are narrowly oval and taper at both ends. The flowers are in clusters at the ends of branches. These are 5-10 cm across. They are orange and red. The fruit are spindle shaped pods.

Distribution

It needs subtropical climates. It suits hardiness zones 8-11.

Found in:

Africa, Asia, Australia, Bahamas, Central America, China, Costa Rica, Cuba, Dominican Republic, Haiti, Jamaica, Mexico, Pakistan, Singapore, South America, Timor, West Indies*, Zambia,

Use

Caution: The plant is poisonous.
It is used to flavour tortillas in Mexico.

Cultivation

It can be grown from seed or cuttings.

Production

Nutritional Values

Asclepias curassavica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
- flavour								

Aspleniaceae

Common names

Lau mea, Bird's Nest Fern, Crows Nest fern, Daun semum, Paku langsuyarm Paku pandan, Rumah langsuyar, Selimbur, Karedep,



Scientific name

Asplenium nidus

Edible portion

Leaves, Fronds,

Description

An evergreen fern. It grows to 1.5 m high and spreads 3 m across. It can grow by feeding on other plants. It forms nest like bowls on the upper side of branches. The underground thickened horizontal stem is dark brown and short. It is covered with blackish scales. The roots are hairy. The fronds grow out from a central point so that the fern forms rounded tussocks. The fronds are simple and entire and sword shape. The fronds can be 2 m long and up to 20 cm wide. They are dark or yellowish green. They have a raised, bluntly rounded mid vein.

Distribution

It is a tropical plant. It grows in well drained moist soils. It prefers a well protected partly shaded position but not heavy shade. It is drought and frost tender. It suits hardiness zones 10-12. Mt Cootha Botanical Gardens.

Found in:

Africa, Asia, Australia, Caroline Is, China, East Africa, Hawaii, Indochina, Indonesia, Madagascar, Marshall Islands, Niue, Pacific, Papua New Guinea, PNG, Tahiti, Taiwan, Tasmania, Timor, Tokelau, Tonga, USA, Vietnam,

Use

In the Caroline Islands and Marshall Islands young leaves are eaten. Also in India. They are an emergency food in famines in China.

Cultivation

Plants can be grown from spores.

Production

Nutritional Values

Asplenium nidus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fronds								

Oxalidaceae

Common names

Bilimbi,



Scientific name

Averrhoa bilimbi

Edible portion

Fruit, Flowers,

Description

A small evergreen tree up to 7-10 m high. It can spread 3 m across. The stem is erect and short. Leaves are large. Leaves have from 5 to 17 or 34 pairs of leaflets. Leaves are pale green. The leaves are often clustered near the branch tips. Flowers are crimson. They are produced on old branches and the stem. The flowers are in 15 cm long clusters. These then bear clusters of cucumber shaped fruit on the trunk and older branches. Fruit are 8-10 cm long and yellow or green. They are soft and fleshy with a few flat seeds in the centre. Fruit are sour but edible.

Distribution

A tropical plant. The tree is drought resistant. It will grow from sea level up to at least 750 m altitude in the tropics. It prefers well composted, moist soil, in a protected, partly shaded position. It is frost tender. In the Cairns Botanical Gardens. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Brazil, Cambodia, Central America, China, Costa Rica, Fiji, Ghana, Guyana, Haiti, Hawaii, India, Indochina, Indonesia*, Malaysia, Maldives, Nicaragua, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Singapore, Solomon Islands, South America, Thailand, Timor, USA, Vietnam, West Africa,

Use

The fruit are used for souring dishes.
They can also be used for jams, drinks, pickles and in curries.
The flowers can be made into conserves.

Cultivation

Trees are mostly grown from seeds. It grows wild in secondary forest in many coastal areas.

Production

Flowers are produced all year round. Flowering is more common in dry seasons.

Nutritional Values

Averrhoa bilimbi

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	94.2	84	20	0.8	30	16	1	
flowers								

Oxalidaceae

Common names

Carambola,



Scientific name

Averrhoa carambola

Edible portion

Fruit, Flowers, Leaves,

Description

A small evergreen tree up to 6-12 m high. The trunk of the tree is short and crooked and has branches near the base. The bark is smooth and dark grey. A leaf is made up of 2 to 11 leaflets with a leaflet at the end. The leaves are darker and more shiny on the top surface. The flowers are small (8 mm long) and red and white in clusters on the small branches. The fruit are star shaped with five or six angled ridges. They are yellow and up to 16 cm long and 9 cm wide. The flesh is white. There are one or two shiny light brown seeds about 1 cm long, in the bottom of each lobe. Some carambola have short styles (female flower parts) and these types need to be cross pollinated by insects. This means two types need planting. Long style types can fertilise themselves. Fruit flavour can vary from very acid to very sweet. There are several named cultivated varieties.

Distribution

A tropical plant. Five corners need a warm tropical climate so they are mostly seen in the coastal lowlands below about 500m altitude. They will grow up to 1200m in the equatorial tropics. Mature trees can tolerate slight frost. Five corner can grow on several different types of soil. The soil should be well drained. It will grow on alkaline soils but is better in acid soils. Plants cannot stand water-logging. It is suited to moist places but performs better in areas where there is some dry season rather than in places with heavy, constant rain. Trees are fairly wind resistant providing the winds are not cold. Trees are stressed by temperatures near 0°C as well as above 37°C. It grows in Nepal to about 300 m altitude. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Bangladesh, Brazil, Cambodia, Cameroon, Central Africa, Central America, China, Costa Rica, East Africa, Fiji, Ghana, Guyana, Haiti, Hawaii, India, Indochina, Indonesia*, Japan, Jamaica, Malaysia*, Maldives, Nepal, New Zealand, Nicaragua, North America, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Solomon Islands, South America, Sri Lanka*, Thailand, Timor, Tonga, Uganda, USA, Vietnam, West Africa,

Use

Fruit can be eaten raw or used for drinks. They are used in curries.
They can be used for souring dishes. They are also used for jams, jellies, preserves and pickles.
(They are also useful for cleaning brass.)
The acid flowers are eaten in salads or made into conserves.
Leaves have been eaten as a substitute for sorrel. They can be eaten with coconut milk sauce.
CAUTION The fruit contain soluble oxalates

Cultivation

Trees are grown from seed. Seeds grow easily but in fact only a small number of seeds are fertile. Well developed seeds should be chosen. Seeds are planted in a seed bed and planted out when 15-20 cm high. Because seeds are produced by cross pollination, variation is common. It is therefore better to use budding or grafting. Taking buds off good trees, or grafting twigs from them, onto 1 year old seedling roots, is the commonest method. Marcottage or air layering can also be used, although it is difficult. A spacing of 6 m x 6 m is suitable. Trees need to be grafted if sweeter kinds of fruit are to be selected. Because the seeds are covered by a fatty layer, washing them with soap improves the germination.

Production

Seedling trees fruit after 4-5 years. They can produce 400 fruit per tree. Flowers open after 14-21 days and fruit mature after 14-15 weeks. Trees live for a long time and some fruit is produced at most times of the year. Flowers and fruit can be found on the tree at most times, although there is often 2 or 3 main flushes of flowering and fruiting. Fruiting tends to be seasonal about March to May in the southern hemisphere. The tree does not require pruning or any special care once established. Flowers are cross pollinated by bees, flies and other insects. Hand pollination does not help fruit set much. Fruit once ripe will keep for 7-20 days but can be stored longer at 12°C.

Nutritional Values

Averrhoa carambola

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	90.8	149		0.5	300	40	1	0.1
flowers								
leaves								

Poaceae



Common names

Common bamboo,

Scientific name

Bambusa vulgaris

Edible portion

Shoots,

Description

An erect clump forming spineless bamboo. It is a large bamboo with strong stalks used for buildings. The stalks can be 20 m tall and 5-10 cm across at the base. They are often not straight. The stalks can be green and glossy or yellow or yellow with green stripes. It very rarely flowers. The distinctive culm sheath (top of the leaf that is wrapped around the stalk) helps identify the plant. The culm sheath is triangular and 15-45 cm long by 20 cm wide. The edges are hairy. The leaf blade is 6-30 cm long by 1-4 cm wide.
The stems are smooth and usually yellow green and smaller than Kauayan-tinik of the Philippines and with a thinner wall.

Distribution

A tropical plant. It grows throughout the tropics and subtropics. It grows up to 1,200 m altitude. It does best at low altitudes. It can stand frost down to -3°C. It has been introduced to PNG and is common in the lowlands. (A different large bamboo is grown and eaten in the highlands of Papua New Guinea.) In the Cairns Botanical Gardens. It suits hardiness zones 9-12.

Found in:

Africa, America, Asia, Australia, Burkina Faso, Burma, Cambodia, Cameroon, Central Africa, Central African Republic, Central America, China, Congo, Costa Rica, East Africa, Fiji, Gabon, Ghana, Guinea, Guinea-Bissau, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Ivory Coast, Kenya, Laos, Madagascar, Malawi, Malaysia, Mozambique, Myanmar, Nigeria, Pacific, Papua New Guinea, PNG, Philippines, Senegal, Sierra Leone, Southern Africa, South America, Sudan, Tanzania, Thailand, Timor, Tonga, Uganda, USA, Vanuatu, Vietnam, West Africa, Zambia,

Use

The very young shoots are cooked and eaten.
They are cooked, or added to soups and made into pickles.

Cultivation

It is easily grown by planting cut portions of the green stalks. It can also be grown from shoots off the rhizome or underground stem and from branches.

Production

Offsets can produce mature clumps in 7 years. They grow very quickly. Haulms can grow 4 m high in 2 weeks.

Nutritional Values

Bambusa vulgaris

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
shoots		72		2.5				

Lecythidaceae

Common names

Fish Poison Tree, Fish Killer tree, Reang, Putat laut, Putat gajah, Putat ayer, Pertun, Butun, Keben, Beach Barringtonia, Botong, Bitung,



Scientific name

Barringtonia asiatica

Edible portion

Leaves, Pods, Seeds,

Description

A small tree. It is 5-9 m tall. It can grow up to 25 m. It spreads to 3-5 m wide. The trunk is short and erect and branches occur from near the base. The leaves are 20 to 40 cm long and 10-15 cm wide and without individual leaf stalks. They are shiny light green, and larger near the tip than the base. The tip is rounded and somewhat pointed. The flowers are large and pink and white. They are 3-5 cm across. The fruit is sharply 4 and rarely 5-angled. The fruit are 12 cm across, woody and broad at one end. They contain one large seed.

Distribution

A tropical plant. They occur along the sea shore throughout the islands of Asia and the Pacific. Trees often lean out over the sea. It prefers well composted, moist, well drained soil. It can grow easily in sandy soil. It can tolerate salty soils. It suits a protected sunny position. It is drought and frost tender. It suits hardiness zones 11-12.

Found in:

Africa, Asia, Australia, Cambodia, Hawaii, India, Indochina, Indonesia, Madagascar, Malaysia, Pacific, Papua New Guinea, Philippines, PNG, Singapore, Tahiti, Thailand, Timor, Tonga, USA, Vanuatu,

Use

The young leaf shoots may be eaten fresh
The young fruit have been recorded eaten as a vegetable. Cooking destroys the saponins.
CAUTION This plant is used as a fish poison. They contain saponins.
The seeds are oily and toxic. They have been recorded as being cooked and eaten in Indonesia and the Andaman Islands.

Cultivation

Plants can be grown from cuttings or seed. Seed need to be sown fresh. Seed germinate readily. Young trees need shade. Plants can be grown by layering.

Production

Seed take up to 2 months to germinate but seedlings grow very quickly.

Nutritional Values

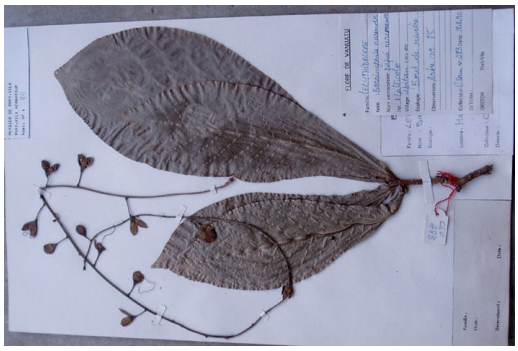
Barringtonia asiatica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves								
pods								

Lecythidaceae

Common names

Fish Poison Tree, Paopao, Mango Pine, Powder-puff tree, Ijjal, Jik, Putat kamp, Putat kedul, Putat darat, Samudraphala, Freshwater



Scientific name

Barringtonia racemosa

Edible portion

Leaves, Fruit, Seeds, Caution,

Description

A small evergreen tree or shrub reaching a height of 10-16 m. It spreads to 5 m across. The stem is erect and branching. The tree has a rounded crown. The leaves are crowded at the ends of the branches. They are dark green and 25 cm long by 2-3 cm wide. Leaves can be twice this size. They are pointed at both ends and with toothed edges. The branches are marked with leaf scars. The flowers are white or pink and about 2 cm across. They occur in hanging stalks with individual flowers along the stalk. These stalks can be 25 cm long. The fruit hang along these stalks. The fruit is oblong to oval and somewhat 4 angled. Fruit can be 8 cm long and 2-5 cm wide. They are oval and irregular. They are green or purple. They contain only one seed.

Distribution

A tropical plant. It prefers well drained, moist, humus rich soil. It can grow in a sheltered, partly shaded position. It is drought tender and very frost tender. Found throughout the Philippines in areas of shrub near the seashore and open lowlands up to 320 m altitude. It grows in coastal swamps and along stream banks. It can resist strong sea breezes. It is salt tolerant. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Bangladesh, Burma, Comoros, East Africa, Fiji, Guam, Hawaii, India, Indonesia, Japan, Kenya, Laos, Madagascar, Malaysia, Mozambique, Myanmar, Pacific, Papua New Guinea, Philippines, PNG, Samoa, Seychelles, Singapore, Solomon Islands, Somalia, South Africa, Southern Africa, Taiwan, Tanzania, Thailand, Timor, Vanuatu,

Use

The seeds and young leaves are eaten. The seeds are pounded and starch extracted.
The leaves are cooked and eaten as a vegetable. They are first soaked in lime water.
Caution: The fruit are used to poison wild pigs.

Cultivation

Plants are grown from seed. Seed need to be sown fresh. It can be grown from cuttings.

Production

Trees grow easily and rapidly.

Nutritional Values

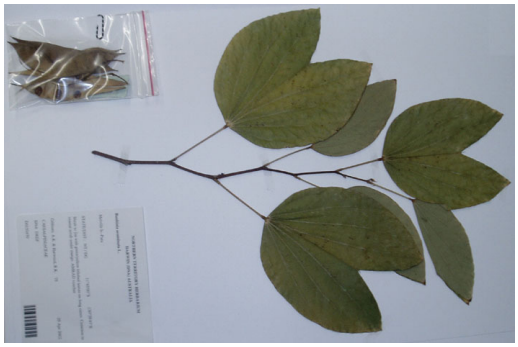
Barringtonia racemosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves								
seeds - starch								

Fabaceae

Common names

Dwarf white Bauhinia, Kupu kupu, Tapak kuda, Bunga perak, Kaa-long, Sivamalli, Kokkumandarai, Vellutthamandarom, Quach vang,



Scientific name

Bauhinia acuminata

Edible portion

Flowers, Leaves,

Description

An evergreen shrub. It grows 3 m tall. The leaves have 2 lobes. They are downy and rounded. The leaves are 15 cm long. The flowers are white to pale yellow. There are only a few flowers on a stalk. The flowers are 5 cm wide. The fruit are flattened pods.

Distribution

A tropical plant. It needs regular moisture and humidity. It needs a fertile, humus-rich, well-drained soil. It suits hardiness zones 10-12.

Found in:

Asia*, Australia, Burma, China, India, Indonesia, Malaysia, Myanmar, Pacific, Philippines, Thailand, Timor, Vietnam,

Use

The flowers are eaten raw.

Cultivation

It can be grown by seeds or root suckers.

Production

Nutritional Values

Bauhinia acuminata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
flowers								

Fabaceae

Common names

Sampoe chhe,

Scientific name

Bauhinia viridescens

Edible portion

Leaves, Fruit,

Description

An erect shrub 1-4 m tall.

Distribution

A tropical plant. It grows in the tropical lowlands.

Found in:

Asia, Burma, Cambodia, Indochina, Laos, Myanmar, Thailand, Timor, Vietnam,

Use

The young leaves and fruit are eaten in salads with fish sauce.

Cultivation

Production

Nutritional Values

Bauhinia viridescens

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves								
fruit								

Asteraceae

Common names

Cobbler's pegs, Spanish needles,



Scientific name

Bidens pilosa

Edible portion

Leaves, Leaves - tea, Seeds, Vegetable,

Description

A small annual upright herb with small black seeds in heads. It is an erect branched herb 0.2 to 1.5 m tall. The branches or stems have parallel lines or ridges. The stems are four angled. The leaves are up to 15 cm long with the upper ones much smaller. The leaves are divided into 3-5 leaflets. The end leaflet is usually larger (3 cm x 9 cm). The edges of the leaves are toothed. The flowers occur at the end of branches. They are on long stalks. The flowers are brown or yellow. The seeds are black with 2-4 projections at the top. (The seeds often stick to clothes.)

Distribution

It grows in tropical rainforest areas. It grows on many different soil types. It grows from near sea level to over 2000 m altitude. It needs plenty of moisture and is not drought tolerant. Very common and widely distributed from northern Luzon to southern Mindanao in the Philippines. It occurs and is widely used throughout Malawi.

Found in:

Africa, America, Angola, Argentina, Asia, Australia, Azores, Bahamas, Belgium, Belize, Benin, Bermuda, Bolivia, Botswana, Brazil, Britain, Burkina Faso, Burma, Burundi, Cameroon, Canary Island, Cape Verde, Central Africa, Central African Republic, Chad, China, Colombia, Comoros, Congo, Costa Rica, Cuba, Dominica, Dominican Republic, East Africa, Ecuador, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Fiji, Gabon, Gambia, Germany, Ghana, Guadeloupe, Guatemala, Guinea, Guinea Bissau, Guyana, Haiti, Honduras, India, Indochina, Indonesia, Ivory Coast, Jamaica, Japan, Kenya, Lesotho, Liberia, Madagascar, Malawi, Malaysia, Maldives, Mali, Martinique, Mauritania, Mauritius, Mexico, Mozambique, Myanmar, Namibia, Nepal, New

Use

The seeds are used in making an Igorot rice wine called "sinitsit" in the Philippines.
The seeds are eaten, particularly by children (e.g. in Enga) in Papua New Guinea.
The young leaves are edible cooked. They should be cooked due to saponins.
The leaves are cooked in soups and stews. The young leaves can be dried for later use.
They are also used as a substitute for tea.

Cultivation

Plants grow from seed. Seed need light and good aeration for them to grow. Seeds can become dormant and last for many years but will still grow. Good manuring of soils gives better leaf yields. A spacing of 15 cm between plants is suitable.

Production

It grows quickly. First leaves can be harvested 6 weeks after planting. Plants can be harvested for leaves 4-6 times over a 5-7 week period. Seed are produced 8-10 weeks after planting. Yields of leaves of 2 kg per metre square are possible.

Nutritional Values

Bidens pilosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	82.0	239		4.1		50		
seeds								

Phyllanthaceae

Common names

Java cedar, Koka, Bishop wood, Kainjalo, Paniala, Kainjal, Kain, Kaen, Pankain, Boke, Nalupumushti, 'o'a, Thondi, Gobranerale, Nira,



Scientific name

Bischofia javanica

Edible portion

Leaves, Fruit, Seeds,

Description

A large stocky tree. It grows up to 40 m tall. It can range from 5 to 30 m tall. The trunk is 1 m across, and straight. The trunk is covered with dull brown scaly bark. It is 2 cm thick and peels off in irregular flakes. The bark gives a red exudate when cut. The branches are numerous and form a dense rounded crown. The leaves are alternate, and with 3 leaflets. The leaf has a long leaf stalk. The leaflets are oval and tapering towards the tip. The edges of the leaflets are toothed. The leaves are dark green and glossy on the upper surface and light green and smooth underneath. The flowering branch has many branches. The individual flowers are small numerous and yellow-green. Trees have male and female flowers on separate plants. The fruit are rounded and fleshy. They have 3 to 4 cells and are reddish brown. They are 3 mm across. They contain 6 small seeds.

Distribution

A tropical plant. It grows in the lowland and lower mountain zones. It grows from sea level to 900 m in Fiji. In Nepal it grows to about 1000 m altitude. It is often in disturbed forest or old garden land. They occur throughout the Philippines in dry open places. It can tolerate some shade and light frost but is best in full sun. It needs fertile, well drained soil. It suits hardiness zones 9-12.

Found in:

Andamans, Asia, Australia, Bangladesh, Burma, China, Fiji, Hawaii, Himalayas, India, Indochina, Laos, Malaysia, Myanmar, Nepal, New Caledonia, Niue, Pacific, Papua New Guinea, Philippines, PNG, Samoa, Solomon Islands, Taiwan, Timor, Tonga, USA, Vanuatu, Vietnam,

Use

The ripe fruit are eaten raw and are sweet.
The leaves are cooked with pork. (This may be to tenderise the pork.)
Young leaves are eaten in salads and used as a condiment.
The seeds are eaten.

Cultivation

Plants can be grown by seed or cuttings. Seedlings are transplanted after 3-4 months.

Production

It grows very quickly.

Nutritional Values

Bischofia javanica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	76.9	294		4.1		30		
fruit								
seeds								

Blechnaceae

Common names

Bungwall fern, Swamp fern, Swamp Water Fern, Majuwa,



Scientific name

Blechnum indicum

Edible portion

Rhizome, Fronds,

Description

A medium sized fern. It grows 0.2-1 m high. It has a long, creeping, branched rhizome. It forms extensive spreading patches. The fronds can be 2 m high in shady places. The fronds are held stiffly erect. They are crowded and shiny green. The segments are narrowly sword shaped. They are leathery and have fine teeth along the edge. The segments are slightly reduced in size towards the base of the frond. The fertile segments are similar to the sterile ones.

Distribution

A tropical plant. It grows in tropical and subtropical places. It grows in swampy low lying places in warm climates. It can grow in open moist places. It can tolerate frost. It cannot stand heavy shade.

Found in:

Asia, Australia, Indochina, Malaysia, Pacific, Polynesia, Timor, Vietnam,

Use

The underground stems are dug up, dried in the sun and roasted and eaten.

Cultivation

It can be grown by division of the rhizome or from spores.

Production

Nutritional Values

Blechnum indicum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
rhizome	7.2	1376		3.9				
fronds								

Nyctaginaceae

Common names

Tarvine,



Scientific name

Boerhavia dominii

Edible portion

Root, Tuber,

Description

A herb. It is a trailing plant or lies along the ground. It keeps growing from year to year. The leaves are simple and 2-7 cm long by 1-6 cm wide. It is paler underneath. The flowers are in a cluster in the axils of the leaves or at the ends of branches. They are white or pink and 1-2 mm long. The fruit is a nut. It is green or brown and 3-4 mm long.

Distribution

A tropical plant. It grows in vine thickets.

Found in:

Australia, Timor,

Use

The root tuber is roasted then peeled and eaten.

Cultivation

Production

Nutritional Values

Boerhavia dominii

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
root								

Common names

Kapok tree,

Malvaceae



Scientific name

Bombax ceiba

Edible portion

Roots, Leaves, Flowers, Fruit, Seeds - oil, Gum,

Description

A large tree. It loses its leaves in the dry season. It grows to 20-25 m tall and spreads to 8-15 m wide. The stem is erect. It has buttresses when mature. The trunk and branches are covered with large pyramid shaped spines. The crown is umbrella shaped. The bark is pale ash coloured. It develops cracks along its length with age. The leaves are arranged like fingers on a hand. The leaves are rounded and 30-50 cm across. There are 5-7 leaflets which are elliptical. These are 12-20 cm long. The leaves are bright green and leathery. The trees flower during the dry season when the tree has no leaves. The flowers are red, open or cup shaped and 10-15 cm across. The flowers are often clustered near the ends of branches. The flowers appear while the leaves have fallen from the tree. The flower petals are thickened and curved backwards in the upper half. The fruit is a brown oval capsule. This seed envelope is about 15 cm long. It has 5 angles and many seeds. The seeds are covered with soft, silky cotton.

Distribution

A tropical plant. It grows in tropical monsoonal rainforest. It requires an open sunny position. It will grows on most soils. It is drought and frost tender. Trees must have a temperature above 13°C. In Nepal plants grow to 1200 m altitude. They are found at low altitudes throughout the Philippines. In India they grow in all deciduous forests. It suits hardiness zones 10-12.

Found in:

Africa, Andamans, Asia, Australia, Bangladesh, Burma, Cambodia, Central America, China, Hawaii, India, Indochina, Indonesia, Iraq, Malaysia, Myanmar, Nepal, Pacific, Pakistan, Papua New Guinea, Philippines, PNG, Solomon Islands, South America, Sri Lanka, Tanzania, Thailand, Timor, USA, Vietnam, West Indies,

Use

The taproot of young plants is peeled then roasted and eaten.
Flowers are cooked as a vegetable or pickled. The flowers are dried and pounded and used for bread. They are also used in five flower tea.
The young leaves are boiled with condiments then eaten.
The unripe and ripe fruits are cooked as vegetables.
The seeds yield an edible fatty oil.
The buds, young pods and roots of seedling can be eaten cooked.

Cultivation

Plants can be grown from seed or cuttings. Seed germinate easily. Cuttings of half ripe wood are used.

Production

It is fast growing. The seeds contain 22-25% oil that is edible.

Nutritional Values

Bombax ceiba

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
flower	94.1			0.4				
roots								
leaves								
fruit								
seeds - oil								
bark								

Arecaceae

Common names

Wine palm, Palmyra Palm, Lontar palm, Toddy palm, Taan, Thnot, Tal, Tar, Tad, Tad-mar, Pannei, Karatalamu, Karumpana, Tatichettu, Ental,



Scientific name

Borassus flabellifer

Edible portion

Sap, Seeds, Cabbage, Flower spikes, Fruit, Palm

Description

A small evergreen palm. It grows to 10-20 m tall. It can be 40 m high. It spreads to 5 m across. The stem is stout and it may be 1 m across. It is often swollen at the base. It has a crown of leaves shaped like the fingers on a hand or spreading out like a fan. There can be 30-40 of the fan like leaves at the crown. The leaves are large with short stout leaf stalks. There can be 80 slender leaflets which are pointed, folded and rich green. Younger trees are covered with dead leaves or leaf bases. Leaves can be 1-2 m across. The flowers occur in flower stalks up to 1.5 m long. The male and female flowers occur in different trees. The females spikes are larger and have a boat shaped spathe. The fruit are borne in bunches like coconuts. The fruit are 10-12.5 cm across and slightly flattened at the ends. They have dark purple skin. Green bracts occur at the base. Each fruit has 3 seeds. The flesh resembles the flesh of a coconut.

Distribution

A tropical plant. It prefers a well drained soil. It needs a protected sunny position. It is drought and frost tender. Seed need to have a temperature of 24-29°C to grow. Trees need a temperature above 15-18°C. It does better in the drier tropics than in the humid tropics. Trees are very sensitive to cold. It suits hardiness zones 11-12.

Found in:

Asia, Australia, Bangladesh, Burma, Cambodia, China, Egypt, Gambia, India*, Indochina, Indonesia, Ivory Coast, Laos, Madagascar, Malaysia, Maldives, Myanmar, Nepal, Niger, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Senegal, South Africa, Southern Africa, Sri Lanka, Sudan, Thailand, Timor, Vietnam,

Use

The flesh and the water of the fruit are edible. They can be eaten fresh or made into ice-cream.
Edible starch can be extracted from the stem. The palm heart is edible.
The palm can be tapped for sugary sap. This can be drunk, boiled and concentrated or fermented.
The seeds are germinated and the young shoots eaten. The swollen storage leaf is eaten either as flour or boiled and dried.
CAUTION: The palm hearts have been shown to be toxic to rats even when cooked.

Cultivation

Plants are grown from seed. Seed take 2-6 months to germinate. Seedlings are difficult to transplant so seed should be sown where they are to grow. To extract the sap, male flower stalks give more sap than female. The unopened flower stalk is tied with a string then banged with a mallet for short times over 3 days before the end being sliced off and the sap collected. A small slither is cut off the end each day to keep the sap flowing.

Production

One flower stalk can yield 2 litres per day of sap. One person can tap 30 trees per day. Each flowering stalk will yield for about 3 months. Tapping normally begins when a palm is 20 years old but then may continue for 30 years. A single palm can yield 100,000 litres of palm wine over a 40 year lifespan.

Nutritional Values

Borassus flabellifer

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
palm heart	69.5	431	103	2.7				
seed - sprouts	69.5	431	103	2.7				
seed immature	82.3	297		0.9				
fruit	89.4		39	0.7			0.9	
sap								
stem starch								

Brassicaceae

Common names

Cabbage, Bandha-kopi,



Scientific name

Brassica oleracea var. capitata

Edible portion

Leaves, Seeds, Stems, Vegetable,

Description

A cabbage family herb. It is a short leafy plant with a thick stalk. In cold areas it forms a thick tightly packed ball of leaves called a "head". If the plant is left growing in the ground it will later produce a flower stalk. The flowers are yellow. There are 3 main types - the white cabbage, a purple kind and one with wrinkled leaves.

Distribution

It is a temperate crop. It does best at higher altitudes in the tropics where there is a greater difference between day and night temperatures. Seed germinate when soil temperature is between 13-16°C. It does not grow properly when temperatures are above 26°C. New varieties grow in warmer places. It is mostly above 1000 m altitude in the tropics. They are frost resistant. It suits hardiness zones 8-11.

Found in:

Africa, Asia, Australia, Bangladesh, Brazil, Britain, Cambodia, Canada, China, East Africa, Europe, Fiji, Finland, France, Germany, Ghana, Guyana, Hawaii, India, Indochina, Italy, Japan, Madagascar, Malawi, Malaysia, Mediterranean, Nepal, Netherlands, North America, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Poland, Portugal, Romania, Russia, Solomon Islands, South Africa, Southern Africa, South America, South Korea, Spain, Swaziland, Sweden, Timor, Tonga, Turkey, Uganda, USA, Vanuatu, Vietnam, West Africa, Yugoslavia,

Use

The leaves can be eaten raw or cooked.
Stems can be eaten boiled or pickled.
The seeds can be sprouted and eaten.

Cultivation

Plants are normally first grown from seeds. But in most places they are re-grown from cuttings or sprouts that develop on the cut stalk.

Production

Cabbages take 5-7 months to be ready for harvest.

Nutritional Values

Brassica oleracea var. capitata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	93.0	125	30	1.6	1	41	0.8	0.3
leaves - raw	93.0	96		1.5	280	46	0.8	0.2
stems								
seed sprouts								

Euphorbiaceae

Common names

Kenidai babi, Kenidai samak, Kerenan, Chenderai gajah, Kerenan, Kanyere badak, Kanyere aroi, Kandri kebo, Koto-koto, Hatsakun pi,

Scientific name

Bridelia stipularis

Edible portion

Fruit,

Description

A shrub that often lies over. The branches are slender, hang down and are covered with soft brown hairs. The leaves are many and thin. They are carried alternately and the end ones are much smaller. They are covered with fine soft hairs. The flowers are in small compact more or less rounded clusters in the axils of leaves. The fruit are nearly black when ripe and have an enlarged group of outer leaves which stay on the fruit.

Distribution

It is a tropical plant. It is common in some areas of the Philippines.

Found in:

Africa, Asia, India, Malaysia, Pacific, Philippines, Thailand, Timor,

Use

The fruit are eaten raw.

Cultivation

Production

Nutritional Values

Bridelia stipularis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit								

Euphorbiaceae

Common names

Kenidai, Kenidai jantan, Kanyere, Kandri, Gandri, Kang pla, Mindri, Sirai, Patkunti, Dieng-soh-puetparao,



Scientific name

Bridelia tomentosa

Edible portion

Fruit,

Description

A small spindly shrub 2-3 m high. They can grow to 10 m high and be 2-3 m across. The young shoots are covered with short tangled hairs. The tree loses many of its leaves during the year. The bark is tight and smooth and mottled creamy-grey. The leaves are small and not shiny. The leaf shape and size varies considerably even on one plant. Leaves are 3.5-8.5 cm long by 1-5 cm wide. They are light green above and paler underneath. The leaf tip can be rounded or pointed. The veins are easily seen. The flowers are small and green. They can occur on their own or in small groups. It produces small berry like fruit along the twigs. The fruit are green when young and turn black when ripe. They are 0.4-0.6 cm across. These enclose one or two hard shelled seeds.

Distribution

A tropical plant. It grows in open savannah grassland and in secondary regrowth. It grows in tropical lowland areas below about 450 m altitude. The plant occurs in countries from India to Australia.

Found in:

Asia, Australia, Cambodia, China, Himalayas, India, Indonesia, Malaysia, Pacific, Papua New Guinea, PNG, Taiwan, Timor,

Use

The small ripe fruit are eaten raw.
The fruit have been used in pepper.

Cultivation

Plants grow wild. They can be grown from seed or cuttings.

Production

In Australia they flower in March to May and fruit from April to June.

Nutritional Values

Bridelia tomentosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit				7.9		1	17.5	3.1

Simaroubaceae

Common names

Buah Makasar, Ya dan zi, Kusam seeds,



Scientific name

Brucea javanica

Edible portion

CAUTION,

Description

An evergreen shrub. It grows to a height of 3-7 m and spreads to 3 m across. The stem is erect and branching. It is hairy when young. The leaves are compound leaves and produced alternately. They are 30-50 cm long and have 5 to 11 leaflets. These are oval but tapering to the tip and with coarse teeth around the edge. The leaflets are 5-8 cm long by 2-4 cm wide. The flowers are purple and small.

Distribution

It is a tropical plant. It grows best in rich, moist, well drained soils in a sheltered partly shaded position. It commonly grows along creek banks. It needs a temperature above 15-18°C.

Found in:

Asia, Australia, China, Fiji, India, Indochina, Indonesia, Pacific, Papua New Guinea, PNG, Sri Lanka, Timor, Vietnam,

Use

Check if it has any edible parts.
CAUTION: Fruit normally considered very poisonous. It is probably used in medicine. It is rich in alkaloids.

Cultivation

It can be grown from seed. Seed should be sown when fresh.

Production

Nutritional Values

Brucea javanica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Rhizophoraceae

Common names

Rib-fruited Orange Mangrove,

Scientific name

Bruguiera exaristata

Edible portion

Fruit,

Description

A small spreading tree. It grows 3-10 m high. It has buttresses at the base and many knee like aerial roots. The bark is dark grey and has a chequered pattern. The leaves grow opposite each other and are crowded towards the ends of branches. They are smooth and thick and leathery. They are oval with a sharply pointed stalk. The leaf blade is 4-10 cm long by 2-5 cm wide. The leaves are dark green and shiny on top and lighter green below. The leaf stalk is about 2 cm long. The leaf scar leaves 3 small distinct U shaped traces on the stem. The flowers are large and orange. They are 2-3.5 cm long by 1-3 cm wide. They are enclosed in a prominent green ring of sepals. The flowers hang down from the axils of the upper leaves. The fruit is cone shaped and about 1.5 cm long. The seed germinates on the plant. This produces a long narrow hypocotyl 4-9 cm long and 0.6-0.8 cm wide. It has ribs along its length. It is orange brown and with a ring of lobes from the flower at the end. The seed germinates on the bush before the fruit falls.

Distribution

It is a tropical plant. They are found along river banks and estuaries. It is more common in areas with a seasonal rainfall and long dry season.

Found in:

Asia, Australia, Bangladesh, East Timor, Indonesia, Malaysia, Pacific, Papua New Guinea, PNG,

Use

The fruit is eaten. It needs special preparation.

Cultivation

Seeds can be planted directly from the tree. Seedlings transplant easily.

Production

In Australia plants flower from May to November and fruit June to December.

Nutritional Values

Bruguiera exaristata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit								

Crassulaceae

Common names

Scientific name

Bryophyllum pinnatum

Edible portion

Leaves,

Description

A succulent herb The stems are 0.3-2 m high. They are stout and erect. They can be woody at the base. The leaves can be simple or have 3-5 leaflets. They are succulent. The leaves are 5-20 cm long by 3-12 cm wide. The flowers hang down. They are large and have red and purple stripes. The fruit follicles are 10-14 mm long. There are several seed in each fruit.

Distribution

It is a tropical plant.

Found in:

Africa, Asia, Australia, Brunei, Burma, China, India, Indonesia, Madagascar, Malawi, Malaysia, Mauritius, Mozambique, Myanmar, North America, Pakistan, Philippines, Taiwan, Thailand, Timor, USA, Vietnam, Zimbabwe,

Use

Cultivation

Production

Nutritional Values

Bryophyllum pinnatum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Anacardiaceae

Common names

Little Gooseberry tree, Beach Berry, Kampinh doong, Jungle plum, Balinghasai,



Scientific name

Buchanania arborescens

Edible portion

Fruit,

Description

A medium sized evergreen tree. It grows 10-15 m high and with a spread of 3 m. The tree shape is like a cone, not an umbrella. It has round branches and a smooth tip. The leaves come one after the other around the branch and are crowded near the ends of branches. The young shoots are covered with silky hairs. New growth is bronze red. The leaves are darker green on the upper surface. They are shiny and stiff and look like mango leaves. The leaves are 5-26 cm long by 2-7 cm wide. The veins and mid rib show up clearly. The leaf stalk is 4-6 cm long. The flowers are dull white to cream and very small (0.2-0.4 cm long) in long flowering branches. These flowering branches occur on the ends of branches or in the angles of upper leaves. At flowering time the whole tree has a white display of flowers. The flowers have a sweet smell. Only one of the five female flower parts is fertile producing fruit. The fruit are berries (drupes) and on short stalks. They are hard, smooth and dull red or purple. They are about 1 cm across and flattish. It is an attractive ornamental and shade producing tree.

Distribution

A tropical plant. They are found throughout the islands of the Philippines in the lower wooded regions. It is also native to Australia occurring in the northern tip regions. It prefers rich, moist, well drained soils in a sunny position but often occurs on sandstone hills. Often trees are found near monsoon forest beside freshwater streams. It gets damaged by both drought and frost. It is very frost sensitive.

Found in:

Asia, Australia, Cambodia, Indochina, Pacific, Papua New Guinea, Philippines, PNG, Singapore, Solomon Islands, Timor,

Use

The fruit are eaten raw. They are sweet.
The fruit can be used to make drinks.

Cultivation

It can be grown from seed or by cuttings. Seeds should be planted in well drained soil. It needs to be kept well watered.

Production

Flowering in the southern hemisphere occurs August to October and fruiting follows November to December being ready to harvest in January.

Nutritional Values

Buchanania arborescens

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit								

Fabaceae

Common names

Pigeon pea,



Scientific name

Cajanus cajan

Edible portion

Seeds, Leaves, Pods, Sprouts, Vegetable,

Description

An upright perennial shrubby legume. It lives for 3-4 years. They can be up to about 4 m tall and spreads to 1.5 m wide. The stem is erect and branching. It has a bushy appearance. It has a strong deep taproot. The root nodules are round and sometimes lobed. Young stems are angled and hairy. A leaf consists of 3 leaflets. Leaflets are narrow and green with a silvery green underneath. Leaflet size can be 10 cm x 3 cm. The end leaflet is larger with a longer leaf stalk. Flowers are red and yellow. The large petal has red lines. They are pea shaped and on branched flower stalks which stick upwards in the axils of leaves. Pods are long, straight and narrow, often with 4-8 seeds. The pods are slightly hairy. Pods are often 4-8 cm long and have a beak at the end. Pods are constricted between the seeds. Many varieties of pigeon pea occur. Some are dwarf and day length neutral. Seeds vary in shape, size and colour.

Distribution

A tropical plant. Plants require a tropical or subtropical climate. Plants grow from sea level up to about 1800 m in the tropics. They can tolerate drought and are suited to a drier climate. They can grow in places with less than 600 mm rainfall per year. They do less well in the wet tropics. It suffers in waterlogged soils and is damaged by frost. It can also tolerate heat. It will grow on poor soils. It cannot grow on salty soils. It grows to about 2000 m in Nepal. It suits hardiness zones 10-12.

Found in:

Afghanistan, Africa, Angola, Anguilla, Antigua-Barbuda, Asia, Australia, Azerbaijan, Bahamas, Bangladesh, Barbados, Belize, Benin, Bhutan, Bolivia, Botswana, Brazil, Burkina Faso, Burma, Burundi, Cambodia, Cameroon, Central Africa, Central African Republic, Central America, Chad, China, Colombia, Comoros, Congo, Costa Rica, Cuba, Djibouti, Dominica, Dominican Republic, East Africa, Ecuador, Egypt, El Salvador, Eritrea, Ethiopia, Fiji, French Guiana, Gabon, Gambia, Georgia, Ghana, Grenada, Guadeloupe, Guatemala, Guinea, Guinea Bissau, Guyana, Haiti, Hawaii, Himalayas, Honduras, India*, Indochina, Indonesia, Ivory Coast, Jamaica, Japan, Kenya, Laos, Liberia, Madagascar, Malawi, Malaysia, Mali, Marianas, Martinique

Use

Young leaves, shoots and pods are eaten. The pods can be used in curries. The leaves and shoots as potherbs.
Young seeds are cooked and eaten like peas. Ripe seeds are also cooked and eaten in soups and curries.
Bean sprouts can be produced and eaten.
Preparation of the seeds for dahl is somewhat complicated.

Cultivation

They are grown from seeds. It is best to sow seeds where the plants are to grow. Seeds normally germinate easily and well. Before sowing seed it helps to soak them in cold water for one day. Seeds store well if kept cool and dry. A spacing of 1.5 m x 1.5 m is suitable. Plants can be cut back and allowed to re-grow. Plants can also be grown from cuttings.

Production

Plants are fast growing. Pods are ready after 5 months. Mature seeds take about 8 months. Plants will often live for 3-4 years. Plants are cross pollinated by insects, or self pollinated.

Nutritional Values

Cajanus cajan

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds	10.0	1449		19.5	55	Tr	15.0	
pods young	64.4	477	114	8.7			2.0	
seeds young boiled	71.8	464		6.0	13	28.1	1.6	0.8
leaves								
sprouts								

Arecaceae

Common names

Rattan Cane, Bet, Vetasa, Vetra, Chachi bet, Perambu, Pemu,

Scientific name

Calamus rotang

Edible portion

Shoots, Fruit,

Description

An erect or climbing palm. It can have one or several stems. It grows to 10 m long. The leaves are light or mid green. They are 80 cm long and composed of narrow, long, shaped leaflets. The flowers are star shaped and 3 pointed. They are cream and 1.5 cm long. The fruit are round.

Distribution

It is a tropical and subtropical plant. It needs a temperature above 10°C. It needs moist, well-drained soil. It is best in partial shade. Plants are damaged by frost. It grows in thickets in damp ground. It suits hardiness zones 11-12.

Found in:

Asia, Australia, Bangladesh, India, Sri Lanka, Timor,

Use

The young tender shoots are used as a vegetable.
The fruit are sometimes sucked. They are also pickled with salt and eaten.

Cultivation

Production

Nutritional Values

Calamus rotang

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit								
shoots								

Clusiaceae



Common names

Beauty leaf, Beach kalofilum, Beach Calophyllum, Alexandrian Laurel, Hong hou ke, Penaga laut, Pudek, Bentangor bunga, Nyamplung,

Scientific name

Calophyllum inophyllum

Edible portion

Fruit, Caution, Seeds - oil, Seeds,

Description

A medium sized tree. It grows up to 20 m tall. The branches spread out. The bark is light yellow-grey and smooth. The leaves are opposite and leathery. They are glossy green. The leaves are oval and 10-15 cm long by 4-6 cm wide. They have many fine side veins which come out at right angles to the midrib. The flowering structure is unbranched and they are in the axils of leaves. The flowers are white and have both sexes. They are 2-2.5 cm across. The fruit is round, ending in a point. It is 2.5 cm across and yellowish. It has a woody layer around the seed.

Distribution

A tropical plant. It is native to tropical Asia and the Pacific. It often grows near water and near the sea shore. It can tolerate salt spray. It needs sandy well drained soil. It grows wild or cultivated on open waste sites on hills, seashores, sandy wastelands; 100(-200) m altitude in China. It grows in places with an annual average temperature of 18-33°C. It is damaged by drought and frost. It suits hardiness zones 11-12.

Found in:

Africa, Asia, Australia, Cambodia, China, Fiji, Ghana, Hawaii, India, Indochina, Indonesia, Japan (Ryukyu Is.), Madagascar, Malaysia, Mascarenes, Nigeria, Pacific, Papua New Guinea, PNG, Philippines, Polynesia, Solomon Islands, Sri Lanka, Taiwan, Thailand, Timor, Tonga, USA, Vanuatu, Vietnam, West Africa, Zambia,

Use

The oil is edible after refining and removing toxic components.
The ripe fruit and seeds are eaten. The unripe fruit are pickled.
Caution: The seed, sap and leaves are poisonous.

Cultivation

They are grown from seed which must be sown fresh. Seeds germinate easily. Seedlings can be transplanted into the field after 5-6 months.

Production

Young seedlings grow rapidly. The tree grows slowly. The seeds yield oil to 20--30%, but seed kernels to 50-60%.

Nutritional Values

Calophyllum inophyllum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed	27.7			6.4				
fruit								

Clusiaceae

Common names

Nicobar canoe tree, Lalchuni, Dakartalada,



Scientific name

Calophyllum soulattri

Edible portion

Fruit,

Description

A tree up to 26 m high. The fruit are dark bluish black.

Distribution

A tropical plant. It occurs at 465 m altitude. It grows between sea level and 1220 m altitude. It does best in well drained places.

Found in:

Andamans, Asia, Australia, India, Nicobar, Pacific, Palau, Papua New Guinea, PNG, Solomon Islands, Timor, Vietnam,

Use

Cultivation

Production

Nutritional Values

Calophyllum soulattri

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit								

Apocynaceae

Common names

Bow-string hemp, Crown-flower,



Scientific name

Calotropis gigantea

Edible portion

Manna, Plant - drink,

Description

An evergreen shrub. It grows to 5 m high. The stems are covered with white woolly hairs. The leaves are fattened oval shape. They are 20 cm long. They are woolly and the veins are light. The flowers are about 5 cm across.

Distribution

It is a tropical plant. They can grow in hot dry situations. They can grow in humid climates if they have very good drainage. They can tolerate salt. It suits hardiness zones 10-11.

Found in:

Africa, Angola, Asia, Burma, Central America, China, Guyana, Hawaii, India, Indonesia, Kenya, Malaysia, Maldives, Mauritius, Mozambique, Myanmar, Nepal, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Samoa, Seychelles, South America, Sri Lanka, Sudan, Surinam, Tanzania, Thailand, Timor, Trinidad-Tobago, USA, Venezuela, Vietnam, West Indies,

Use

An alcoholic drink is made from the leaves. Caution: Alcohol is a cause of cancer.
The plant yields a kind of manna.
The flowers are made into a sweet meat.
CAUTION: The milky sap is poisonous. It can also cause skin irritation.

Cultivation

Plants are grown from seed. They can also be grown from cuttings.

Production

Nutritional Values

Calotropis gigantea

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
manna								

Theaceae



Common names

Tea, Chiya, Chashu, Pokok cha, Pokok teh, Cha, Chai, Thayili, Theyaku,

Scientific name

Camellia sinensis

Edible portion

Leaves - tea,

Description

An evergreen tree. It grows to a height of 10-15 m and spreads 4 m across. Trees are normally pruned into bushes. The stem is slender. The bark is yellowish grey. It has a strong taproot and side roots just under the soil. The leaves are dark green and glossy. They are elongated and leathery. They can be 5-30 cm long. The leaves taper towards the base and the tip. The edges of the leaves have fine teeth along them. The leaf stalks are short. The flowers are white and small. They can occur either singly or in broad flat clusters. The fruit is a woody capsule. It can be 1.5 cm across. There are over 350 named cultivated varieties.

Distribution

A tropical and subtropical plant. It suits warm temperate climates. It needs light, humus rich soils. Soils should be well drained. A pH less than 6 is best. It requires an open sunny position. It is damaged by drought and by frost. It is common in the wet highlands of many tropical countries. A rainfall over 1,500 mm is suitable. Temperatures in the range 13°-30°C are suitable. In Nepal it grows between 450-1200 m altitude. It suits hardiness zones 10-12. Hobart Botanical Gardens.

Found in:

Africa, Asia, Australia, Bangladesh, Brazil, Burma, Burundi, Cambodia, China*, East Africa, Ethiopia, Europe, Fiji, Hawaii, Himalayas, India, Indochina, Indonesia, Japan, Korea, Laos, Malawi, Malaysia, Myanmar, Nepal, Pacific, Papua New Guinea, PNG, Russia, Sri Lanka, Taiwan, Tasmania, Thailand, Timor, Turkey, Uganda, USA, Vietnam,

Use

The leaves are used for tea.
The leaves are fermented and eaten in Burma. They are prepared as a vegetable by mixing with garlic, salt, oil and other ingredients.

Cultivation

Plants are normally grown by cuttings or layering. They can be grown from seed. Because the seed out breed, this produces a mixture of plants. For seed production special trees are kept and not pruned. The capsule matures after 9-12 months. Seed need to be sown fresh. Seeds can be sown in a nursery and transplanted, or sown and staked in the field. When seedlings are about 3-4 years old they are pruned back to about 10 cm from the ground then transplanted. From cuttings short stem cuttings with a single leaf and its bud in the leaf axil are used. These are grown in moist, shaded propagating nurseries. The cuttings are transplanted after about 1 year. Tea is commercially planted at 5,000-7,000 plants per hectare. That is a spacing of 1.2 m by 1.5 m. Trees are pruned to encourage side branches. The bush height is normally pruned to about 60 cm. The leaves grow in flushes at 70-90 day cycles. Two to four leaves are plucked each 7-14 days from the tree but only every 70-90 days from any one branch shoot. Plants are pruned back each 2-5 years.

Production

Young tips are plucked, then wilted on trays for 18-24 hours, then crushed between rollers and fermented for 18-24 hours before drying at 100°C for half an hour. A shrub can live for 100 years.

Nutritional Values

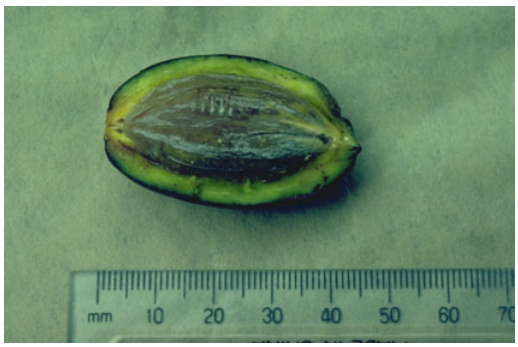
Camellia sinensis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves - tea								

Burseraceae

Common names

Galip nut, Java almond, Kanari, Kenari, Keanee, Pili, Rata kekuna, Jangli badam, Kagli mara, Java badami, Ngali, Nangai, Lawele, Hinuei,



Scientific name

Canarium indicum

Edible portion

Nut, Seeds - oil,

Description

It is a large tree often up to 40m high. The stems are often twisted or rough and 1 m across the trunk and there are usually buttresses at the base of the tree. The buttresses are tall but thin. The small branches are more or less powdery. The vascular strands are unusual as can be seen in the pith or centre mass of cells, not spaced in a continuous circle as in many trees. The leaf of a galip tree is made up of 3 to 7 pairs of leaflets. The leaves do not have hairs on them. The leaflets are oblong and can be 7 to 28 cm long and 3 to 11 cm wide. In young trees the leaves are distinctly larger. The leaves are pointed at the tip and rounded at the base. The leaflets are stiff and glossy being dark green on top and light green underneath. At the base of a leaf where the stalk joins the branch there is a stipule and it is large and has saw like teeth around the edge. This is important for identifying species. The flowers are mostly produced at the end of the branches. A group of flowers are produced on the one stalk. The flowers are separately male and female often on separate trees. The male flowers have 6

Distribution

A tropical plant. The galip (*Canarium indicum*) grows in coastal areas, and is most common in the islands such as North Solomons Province, New Britain and New Ireland. It also occurs naturally in the Solomon Islands, Vanuatu and Guam. It occurs on the New Guinea mainland and Irian Jaya as well as in Maluku in Indonesia. It has been taken to some other countries to grow. Galip nuts are common in the lowland rainforest. They mostly grow from sea level up to about 450 m altitude in the equatorial tropics.

Found in:

Africa, Asia, Australia, Fiji, Guam, Hawaii, Indonesia, Malaysia, Niue, Pacific, Palau, Papua New Guinea, PNG, Philippines, Samoa, Solomon Islands, Sri Lanka, Tahiti, Timor, Tonga, USA, Vanuatu,

Use

The kernels are eaten raw or slightly roasted.
Seeds can be dried and stored.
The nuts can be pressed for oil. The fresh oil is mixed with food.
CAUTION The seed coat should not be eaten as it carries some substance producing diarrhoea.

Cultivation

Trees are planted near houses. They are mostly grown from seed. Many of the galip nuts take several months for the seeds to start to grow. As well, the seeds normally should not be buried under the ground, but should be just near the surface of the ground. Care is needed to see that the seeds and seedlings do not dry out. As the seed grows or germinates, a well defined cap is split off the nut. Trees grow fairly quickly. They can be grown by budding or grafting.

Considerable varietal variation occurs.

Production

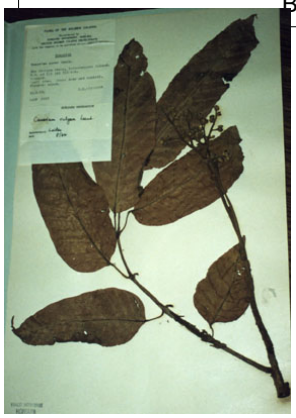
The main season is often April to May but trees can bear nuts 2 or 3 times a year. An average kernel weighs 3 g. Climbing the large trees is difficult and dangerous, so often nuts are harvested after they fall. Nuts are often stored inside houses after the fleshy outer layer is removed but the hard shell remains. Nuts which are removed from the shell and roasted can be stored in sealed containers for many months. The nuts are often coarsely ground and added to other foods.

Nutritional Values

Canarium indicum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
nut	35	1931	461	8.2	14	8.0	3.5	2.4

Burseraceae



Common names

Pili nut, Chinese-olive, Java-almond, Kenari nut-tree, Gisau,

Scientific name

Canarium vulgare

Edible portion

Nut, Seeds,

Description

A tree which grows up to 45 m high. It can be 70 cm across the trunk. Buttresses can be 3 m high and 1.5 m wide. The small branches are about 0.5 cm across. (When cut across, this, like most Canariums has separate vascular bundles similar to that found in a root). The leafy structures (stipules) fall off early but are more on the branch than the leaf stalk. They are oblong and 1-5 cm long by 0.5-1.7 cm wide. The edges are not divided. The leaves have 4 or 5 pairs of leaflets and are without hairs. The leaflets are oblong and 5-16 cm long by 3-8 cm wide. They can be papery in texture. The base can be broadly wedge shaped. The tip tapers. There are 12-15 pairs of veins which are slightly curved. The flower clusters occur at the ends of branches. Male flower clusters can be 35 cm long with branches 20 cm long. Female flower clusters are 20 cm long with branches 10 cm long. The flowers are hairy and male flowers have almost no stalk while female flower stalks are 6-7 mm long. The fruiting stalks can be 15 cm long with about 12 fruit. The fruit are oval and slightly triangular. They are 3-5 cm long by 1.5

Distribution

It is a tropical plant. It does well on limestone soils.

Found in:

Asia, Cook Islands, Fiji, Hawaii, Indonesia, Malaysia, Pacific, Papua New Guinea, PNG, Ponape, Philippines, Solomon Islands, Sri Lanka, Timor, USA, Vanuatu,

Use

The seeds are eaten.
An oily mixture made from the seeds is used as a baby food.

Cultivation

Production

Nutritional Values

Canarium vulgare

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
nut								

Fabaceae

Common names

Wild Jack bean,

Scientific name

Canavalia papuana

Edible portion

Beans as coffee,

Description

A climbing bean up to 1-4 m tall. The stems are thin and wiry. They do not have hairs except at the nodes. The leaves have 3 leaflets. The leaf stalks are 4-10 cm long. They have a channel on the top surface. The leaflets are 10-13 cm long by 5-8 cm wide. The leaflets are thin, but oval and pointed at the top. The flowers are about 3 cm long. They are purple with a curved blunt keel. The flowers are in clusters of 10-20 flowers on flower stalks 10-14 cm long. The pods are 6-8 cm long by 1.5-2 cm wide. They are oblong and have a keel. The seeds are dark brown and oblong. They are 1.3 cm long by 8 mm wide. The seed scar is about 1 cm long.

Distribution

A tropical plant. It grows in warm, moist coastal districts. It is very cold sensitive. It needs well drained soil in a sunny position. It grows from 5 to 1250 m altitude in Papua New Guinea. In tropical Australia it grows from sea level to 630 m altitude.

Found in:

Australia, Pacific, Papua New Guinea, PNG, Timor,

Use

The seeds have been used to roast and make coffee.

Cultivation

Plants are grown from seed.

Production

Nutritional Values

Canavalia papuana

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
beans - coffee								

Fabaceae

Common names

Mackenzie Bean, Fire Bean, Coastal jack bean, Tua-kla, Norfolk Island bean, Kachang rang-rang, Kachang laut, Kia tia, Kam pra, Lerelere,

Scientific name

Canavalia rosea

Edible portion

Seeds, Pods, Flowers, Fruit,

Description

A perennial climbing or trailing legume. It can be 1.8-10 m long. The stems are silky hairy when young. Leaves have 3 leaflets and the central one is the largest. The leaves are smooth, dark green and slightly leathery. The leaflets are oval or round and often with an indent at the top and 2.5-9.5 cm long by 1.5-9 cm wide. The leaf stalk is 2-7 cm long. The flower cluster can stick upright or hang over. It is 4-18 cm long and the flower stalk is 10-21 cm long. The main rear petal is pink or purple often with a white area near the base. The fruit or pods are oblong and compressed. They are flattened and woody. They can be 11.5-15 cm long by 2.5-3 cm wide. Each section of the pod has a rib. The seeds are brown with streaks. The seeds are 1.5-2 cm long, 0.9-1.4 cm wide and 5-11 mm thick. The seed scar is 7-9 mm long.

Distribution

It is a tropical plant. It occurs throughout the tropics and into the subtropics. It is very common along sea shores. It occurs on sandy beaches at high tide mark. It suits hardiness zones 9-12.

Found in:

Africa, Angola, Asia, Australia, Benin, Cameroon, Congo, Equatorial Guinea, Gambia, Ghana, Guinea-Bissau, Haiti, Ivory Coast, Japan, Kenya, Liberia, Malaysia, Mauritania, Mozambique, Nigeria, Norfolk Island, Pacific, Papua New Guinea, PNG, Sao Tome & Principe, Senegal, Sierra Leone, Somalia, South Africa, Tanzania, Thailand, Timor, Togo, Vanuatu, Zambia,

Use

CAUTION: The seeds are poisonous raw.
The seeds are edible after thorough cooking. They are also used as a coffee substitute.
The flowers are eaten as a flavouring. They are used in sauces.
The pods are edible when young.

Cultivation

Plants are grown from seed. They can also be grown from cuttings.

Production

It takes 2 years to complete its life cycle.

Nutritional Values

Canavalia rosea

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	10.4			4.3				
seeds	10.9			22.0				
flowers - flavour								

Opiliaceae

Common names

Akusepin,

Scientific name

Cansjera leptostachya

Edible portion

Fruit,

Description

A climbing tropical forest plant. It can be 6 m long. It can also be as an erect shrub. The branches hang downwards. The young twigs are hairy but these often become smooth. The leaves are oval and 4-9 cm long by 1.1-4 cm wide. The leaf stalk is 2-6 mm long and hairy. The midrib is easy to see underneath the leaf. The top of the leaf often comes to a small point and the base tapers. There are 1-4 flower spikes in each leaf axil. They are 2 cm long. The flowers are sweetly scented. The floral tube is green or yellow. The fruit is yellow to orange an oval. It is 1.5 cm long by 1 mm wide.

Distribution

A tropical plant. It is in vine thickets. It is often climbing on the edge of forests. It grows from sea level up to 700 m altitude. It can grow on limestone rocks or sandy soil.

Found in:

Asia, Australia, East Timor, Indonesia, Pacific, Papua New Guinea, PNG, Timor,

Use

The fruit are eaten.

Cultivation

Production

It flowers throughout the year.

Nutritional Values

Cansjera leptostachya

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit								

Capparaceae

Common names

Halubagat-Kahoi, Kanh che bay dach, Ching-chee, Chieng chi, Melada, Halubagat,



Scientific name

Capparis micracantha

Edible portion

Fruit,

Description

A vine or half erect shrub with drooping branches. It grows 4-5 m tall. It is thorny. The leaves are alternate, leathery and shiny. Both the tips and base of the leaves are usually rounded. Flowers occur on the stem above the leaf axils. They are on trailing branches. The flower petals are white with lower ones yellow or reddish. There are 20 long stamens. The fruit are oval and 3 or 4 cm long. They are smooth and bright red when ripe. The fruit is on a long stalk.

Distribution

A tropical plant. They occur in areas of shrubs and secondary forest at low and medium altitudes from northern Luzon to southern Mindanao in the Philippines.

Found in:

Asia, Burma, Cambodia, India, Indochina, Indonesia, Malaysia, Myanmar, Pacific, Philippines, Taiwan, Thailand, Timor, Vietnam,

Use

The fruit are eaten raw when ripe.
They are also used like capers.

Cultivation

Production

Nutritional Values

Capparis micracantha

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit								

Common names

Capsicum,

Solanaceae



Scientific name

Capsicum annuum var. annuum

Edible portion

Fruit, Leaves, Herb, Spice,

Description

An annual plant up to 1.5 m high. The leaves can be long and sword shaped or oval to rounded. The leaves can be 12 cm long. The flowers are produced singly, and are yellow or white. They are bell shaped. The flowers are 1.5 cm across and in the axils of leaves. Fruit are about 10 cm long and 6 cm wide and red when fully ripe. They are hollow. They contain many seeds. Kinds with different shaped fruit also occur.

Distribution

A tropical or subtropical plant. Plants grow from sea level up to about 2400 m altitude. They are killed by frost. Soils need to be well drained and fertile. The fruit and plants can rot in the middle of the wettest seasons. They need a temperature above 4°C. A night temperature of 16-18°C and a day temperature of 26-28°C is best. A pH of 5.4-6.9 is suitable. They suit plant hardiness zones 8-12.

Found in:

Africa, Asia, Australia, Bangladesh, Bulgaria, Cambodia, Central America, China, Costa Rica, Cuba, East Africa, Egypt, Fiji, Ghana, Haiti, Hawaii, Honduras, Hungary, India, Indochina, Indonesia, Italy, Japan, Kenya, Madagascar, Malawi, Malaysia, Mexico, Nigeria, North America, Pacific, Pakistan, Papua New Guinea, PNG, Peru, Philippines, Romania, Spain, Taiwan, Tasmania, Thailand, Timor, Tonga, Turkey, USA, Vanuatu, Vietnam, West Africa, Yugoslavia, Zambia, Zimbabwe,

Use

The fruit are edible raw or cooked. They are stuffed, roasted, fried, preserved and use as flavouring.
The leaves are edible cooked.

Cultivation

Plants are grown from seed. Both self and cross pollination occur. It is possible to save your own seed. Seed will keep for 2 to 3 years. Seeds germinate in 6 - 10 days. Plants can be transplanted. Plants need to be about 50 cm apart. About 50% of flowers set fruit.

Production

The first fruit can be harvested after 3-4 months.

Nutritional Values

Capsicum annuum var. annuum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit yellow raw	92.0	113		1.0	24	183.5	0.5	0.2
fruit green raw	93.5	65		0.9	59	100	0.4	0.2
fruit green boiled	93.7	59		0.9	59	60	0.4	0.2
leaves								

Solanaceae

Common names

Bird's eye chillies,



Scientific name

Capsicum frutescens

Edible portion

Leaves, Fruit, Herb, Spice,

Description

It is a shrubby perennial plant about 1 m tall. The leaves are smaller than round capsicums or bell peppers. Two or more flowers occur together in the axils of leaves. They have small pointed fruit about 1-2 cm long and they are red when ripe. They have a very hot taste when eaten or touched on the lips.

Distribution

A tropical plant. A native of tropical America. The plants grow from sea level up to about 1800 m altitude in the equatorial tropics. They can't stand water-logging or frost. They are tolerant to high temperatures and a wide range of rainfall. Very high rainfall leads to poor fruit set and rotting of fruit. Soil needs to be well drained and preferably fertile with adequate organic material. Light loamy soils rich in lime are best. It does not do well on atolls. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Bangladesh, Benin, Burkina Faso, Cambodia, China, East Africa, Ethiopia, Fiji, Guinea, Guyana, Haiti, India, Indochina, Indonesia, Japan, Korea, Madagascar, Malaysia, Nepal, Nicaragua, Pacific, Pakistan, Papua New Guinea, PNG, Peru, Philippines, Senegal, Solomon Islands, South Africa, Southern Africa, South America, Sri Lanka, Swaziland, Taiwan, Tasmania, Thailand, Timor, Tokelau, Tonga, Vanuatu, Vietnam, West Africa, Zimbabwe,

Use

The leaves are eaten cooked. The fruit can be used in very small quantities to spice food.
The small red fruit are very hot to eat due to a chemical called capsaicin. They are therefore used to add spice and flavour to other foods.
They are used to make many foods and sauces hot and spicy.

Cultivation

The seeds are dried in the sun. They are small. For large scale plantings, 1.8-2.3 kg per ha of seed are needed. Seed is best sown in nurseries and the seedlings transplanted when they have 4-5 leaves. (After 3-4 weeks). They can be transplanted at about 0.8 m spacing. Pruning out the tops can increase branching. This is often done 10 days before transplanting. Excessive nitrogen can reduce fruit setting.

Production

The first picking of fruit can occur 3 months after planting and continue about every two weeks. Plants continue to be harvested for about 4-5 years before replanting. For dried chillies, the fruit are dried in the sun for 3-15 days. The fresh weight is reduced by about two thirds during drying. Yields of dry chillies can be from 300 kg to 2500 kg per hectare depending on growing conditions, irrigation etc.

Nutritional Values

Capsicum frutescens

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit - flavour	74.0	395		4.1	7140	121	2.9	
leaves								

Rhizophoraceae

Common names

Billabong tree, Corkwood, Kierpa, Cork Tree, Tromeng, Merpuing, Merpoi, Kesinga, Ganding, Bibis, Sepat, Kieng pra, Kierpa, Panasi,

Scientific name

Carallia brachiata

Edible portion

Fruit, Leaves - tea, Seeds - oil,

Description

A medium sized tree. It grows up to 5-15 m tall. Sometimes it has aerial roots. The bark is cream and thick. It has cracks along it and a corky texture. The branches are in pairs which cross at right angles. It has spreading branches which point upwards. It spreads to 3-6 m wide. It can occasionally have buttresses and aerial roots. The leaves are oval and broad. They are 7-14 cm long by 4-8 cm wide. The leaves are rich glossy green on top. They have a papery texture and the underside is covered with tiny black spots. The midrib is raised underneath the leaf. The leaf stalk is 1.2 cm long. The flowers are small and composed of 5-8 greenish petals up to 2 mm long. The flowers are borne in clusters in short woody stems. These are produced in the axils of leaves or on old wood. The fruit are succulent berries which are green but turn red when ripe. They are 0.6 cm across. The have persistent sepals at their crown. The ripe fruit are edible. There is one seed inside. It is 4-5 mm across.

Distribution

A tropical plant. It grows in rainforests along river banks and the edges of freshwater swamps. It will grow on a range of soils. It can grow on salty soils or in areas with salt spray. In Indonesia it grows to 1,800 m altitude. In Madagascar it grows up to 1,500 m altitude.

Found in:

Andamans, Asia, Australia, Brunei, Cambodia, China, India, Indochina, Indonesia, Madagascar, Malaysia, Pacific, Papua New Guinea, PNG, Solomon Islands, Thailand, Timor,

Use

The ripe fruit are eaten raw.
The leaves are used for a tea like drink.
The seeds yield an edible oil.

Cultivation

Plants can be grown from seed. The seed should be sown fresh.

Production

It is moderately fast growing. In northern Australia it fruits June to October. (April to July).

Nutritional Values

Carallia brachiata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	77.2	395		2.2		4		
leaves - tea								
seeds - oil								

Sapindaceae

Common names

Heart seed, Heart pea,

Scientific name

Cardiospermum halicacabum

Edible portion

Leaves, Seeds, Fruit, Stems,

Description

A straggling vine or climber. It can be an annual or perennial. It has a woody base and tendrils. It grows 3-5 m long. The stems are angular and very hairy. The leaves are 15-20 cm long. The leaves have 3 leaflets. The leaflets have 3 lobes which are oval and have coarse teeth. They are light green, thin and hairy. The leaflets are 0.5-2 cm wide. The flowers have 4 white petals. The flowers are borne in groups of 3 or 4. The flowers are 7 cm long. The flowers have a delicate scent. The fruit is a 3 cornered, balloon-like capsule with 6 prominent ribs. They are pale green and become papery when ripe. They are 2-3 cm long. They split to release 1-3 black seeds. The seeds are 5 mm across. They are attached to the centre of a papery wing.

Distribution

A tropical plant. It grows in rocky areas or on clay pans. It grows in the topics and into the subtropics. It is drought resistant but frost tender. In Nepal it grows up to 1500 m altitude.

Found in:

Africa, Angola, Argentina, Asia, Australia, Bahamas, Bermuda, Bhutan, Bolivia, Botswana, Brazil, Burma, Burundi, Cambodia, Cameroon, Cape Verde, Central Africa, China, Colombia, Comoros, Congo, Cuba, Cyprus, Dominica, East Africa, Ecuador, Egypt, Equatorial Guinea, Ethiopia, Fiji, Ghana, Greece, Grenada, Guatemala, Guinea, Guinea-Bissau, Haiti, Hawaii, India, Indochina, Indonesia, Iraq, Ivory Coast, Jamaica, Japan, Kenya, Lesotho, Liberia, Madagascar, Malawi, Malaysia, Maldives, Mali, Mediterranean, Mexico, Mozambique, Myanmar, Nepal, New Caledonia, Nigeria, Oman, Pacific, Pakistan, Papua New Guinea, PNG, Paraguay, Peru, Philippines, Puerto Rico, Rwanda, Samoa, Sao Tome & Principe, Saudi Arabia, SE Asia

Use

The leaves and young shoots are eaten as greens.
The fruit pulp is used as the base for a drink.

Cultivation

Plants are grown from seed. They germinate easily. It can also be grown from stem cuttings.

Production

Nutritional Values

Cardiospermum halicacabum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves					35			
fruit								

Caricaceae

Common names

Pawpaw, Papaya,



Scientific name

Carica papaya

Edible portion

Fruit, Flowers, Leaves,

Description

Pawpaw is one of the very well known fruits of the tropics. The straight soft stemmed plant grows up to 3-5 metres tall and only occasionally has branches. The stem is softly woody and has scars from fallen leaves along it. At the top of the plant there are a clump of leaves. The leaves are large (50 cm wide) deeply lobed and on long leaf stalks. The leaf stalks are 90 cm long. There is a crown of leaves at the top of the trunk. Trees can be male, female or bisexual. The male flowers are small and white and on long stalks. Female and bisexual flowers are on short stalks. These have no fruit, round fruit and long fruit respectively. There are three forms of long fruit. The seeds are black.

Distribution

It is a tropical plant. Pawpaws will grow from sea level up to about 1700 m altitude in the equatorial tropics. In cooler regions they have to be planted but in humid tropical regions are commonly self sown. Sunlight allows germination when forest is cleared. Plants cannot stand frost. They need a night temperature above 12°C. Also they cannot stand water-logging. Plants die after 48 hours in standing water. It needs a pH between 5-8. It suits hardiness zones 11-12.

Found in:

Afghanistan, Africa, Andamans, Argentina, Asia, Australia, Bahamas, Bangladesh, Belize, Bolivia, Brazil, Cambodia, Cameroon, Caribbean, Central Africa, Central America*, Chile, China, Colombia, Congo, Costa Rica, Cuba, Dominican Republic, East Africa, Ecuador, El Salvador, Ethiopia, Fiji, FSM, French Guiana, Gabon, Gambia, Ghana, Grenada, Guadeloupe, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Ivory Coast, Jamaica, Japan, Kiribati, Lesser Antilles, Liberia, Madagascar, Malawi, Malaysia, Maldives, Mali, Martinique, Mexico, Nepal, Nicaragua, Niger, Nigeria, North America, Pacific, Pakistan, Panama, Papua New Guinea, Paraguay, PNG, Peru, Philippines

Use

Fruit can be eaten ripe and raw.
Green fruit can be cooked as a vegetable.
The young leaves can be eaten cooked, but are bitter.
The flowers and the middle of the stem can be eaten.
Papayas contain papain which is a meat tenderiser.

Cultivation

Pawpaw seeds grow easily and plants grow quickly. Fresh seeds can be used, or if dry seeds are used they should be soaked before planting. Seeds should be planted with a temperature of 24-30°C. To produce well they need a reasonably fertile soil. Seeds can be sown directly or the seeds can be put in a nursery and the seedlings transplanted. Seeds in a nursery should be about 1-2 cm deep. Seedlings can be transplanted when they are about 20 cm high. Plants should be about 3 m apart. Continuous fruit production depends on fertility, temperature and moisture being adequate to maintain active growth. The fruit is produced year round but the growth and development rate decreases with temperature. Also the size and quality of fruit declines at lower temperatures. Pollination is by wind and insects. Normally cross and self pollination both occur. Pollination is not normally limiting. Seeds are widely dispersed by birds, bats and people. Seeds remain viable for a few months and also germinate freely.

Production

Seeds emerge in 2 to 3 weeks. Vegetative growth before flowering is 4-8 months. Fruit is produced as one or more per leaf axil, about every 1-2 weeks, under good growing conditions. So with good growth 100 fruit can be produced from one plant in a year. Fruit development from pollination to maturity is about 2-3 months. On the coast in tropical equatorial regions, pawpaws start producing fruit after about 4 or 5 months but in the highlands this may not start for 12-18 months. The first fruit produced and ripe, are ready 6-11 months from planting. Practical tree life is about 2 to 3 years, although trees may live for 10 -12 years.

Nutritional Values

Carica papaya

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	75.4	378		8.0		140	0.77	
fruit	88.0	163		0.5	290	54	0.4	0.18
fruit unripe	92.1	109	26	1.0			0.3	

Apocynaceae

Common names

Karandan, Karanda, Ci huang guo, Vaka, Karaunte, Karonda, Nam-daeng, Ci huang guo, Karwand, Kalakai, Wakay okachettu, Karamarda,

Scientific name

Carissa congesta

Edible portion

Fruit,

Description

A shrub or small tree. It grows to 3-5 m tall. It can spread like a vine. It is thorny and prickly. The spines can be simple or forked and up to 5 cm long. It produces latex. The bark is pale brown or greyish and not very rough. The leaves are in opposite pairs. They taper at the base and are rounded at the tip. The tip has a tiny sharp point. Young leaves are red. The flowers are small and white. They are 3.5 cm across and tube shaped. They occur at the ends of the twigs. There are 5 pointy petals that overlap to the right. The fruit are pinkish or reddish-purple berries. They are 2.5 cm long. They have juicy acid pulp.

Distribution

A tropical and subtropical plant. Salt tolerance is high. In Nepal it grows to 1000 m altitude. It suits dry sunny places. In India they are common on dry, sandy or loamy soils in the plains and low hills. It is very hardy and drought tolerant. It cannot tolerate heavy rainfall or waterlogged soils.

Found in:

Asia, Burma, China, East Africa, India, Indochina, Indonesia, Iran, Malaysia, Myanmar, Nepal, Pacific, Pakistan, Philippines, Sri Lanka, Taiwan, Thailand, Timor, Vietnam,

Use

Fruit can be eaten fresh or used for juice or jelly. The can be very sour but ripe fruit are sweet. They are used for puddings, pickles, jams or as cooked fruit.
The unripe fruit are pickled.

Cultivation

Plants can be grown from seed. Plants can be kept clipped into a shrub otherwise they will be a climbing creeper. Plants can be grown from cuttings. Plants are often grown as a hedge.

Production

Plants grown from seed fruit is the third year. A plant can keep producing for 30 years. A plant produces 4-5 kg of fruit. Fruit mature 100-110 days after fruit set. The fruit become darker and softer on ripening.

Nutritional Values

Carissa congesta

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit								

Arecaceae

Common names

Fishtail palm,



Scientific name

Caryota rumphiana var. papuana

Edible portion

Pith, Starch, Fruit,

Description

A spineless palm with delta shaped leaflets. It grows to a height of 18 m and spreads to 5 m across. The stem is slender and erect. The leaflets are bipinnate (Two branches on the leaves) and the whole leaf is up to 5-6 m long and 3-4 m wide. The leaves have irregular teeth on the edges towards the top. The leaves arch over. The flowers are purple and yellow-green. They occur on long spikes. These can be 3 m long. These fruiting stalks are stout. Long chains of fruit hang from near the leaves along this stalk. The fruit are bluish. The fruit irritate the skin of people.

Distribution

A tropical plant. The palm is common and widespread at low elevations in Papua New Guinea. It grows up to at least 1200 m altitude. It will grow on most soils. It needs a protected, warm, moist position. It is sensitive to frost. It suits hardiness zones 10-12.

Found in:

Australia, Pacific, Papua New Guinea, PNG, Solomon Islands, Timor,

Use

The pith of the young trunk is eaten (Heart cabbage)
The trunk is sometimes used to pound for sago starch.
The trunk is also used to cultivate sago grubs.
The fruit are eaten after a long time of boiling.
CAUTION The juice of the fruit can irritate the skin

Cultivation

It grows wild. It can be grown from seeds. Seed need to be sown while fresh. Seed can take 6-12 months to germinate.

Production

Nutritional Values

Caryota rumphiana var. papuana

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Cassia, Golden Shower,



Scientific name

Cassia fistula

Edible portion

Leaves, Flowers, Pod pulp, Fruit,

Description

A deciduous or evergreen tree. It grows to 9-20 m high and spreads 3-5 m wide. The stem is erect and slender. Sometimes it has small buttresses. The leaves are 45-60 cm long and divided with 6-16 leaflets which are 15 cm long and 4-9 cm wide. The leaflets are wedge shaped at the base. The leaves are bright green. The leaf stalk is 7-10 cm long. The flowers are yellow and have a smell. They occur in long drooping sprays which can be 20-40 cm long. The flowers are 4 cm across. The fruit are brown pods. These can be 20-60 cm long and 1.5-2 cm wide. They are black and smooth. The seeds are brown and glossy. They are 1.3 cm long and flattened.

Distribution

A tropical plant. It is native to India. It prefers a rich well drained soil. It needs a protected sunny position. It is drought and frost tender. Plants need a temperature above 16°C for growth. It grows all over India up to 1500 m altitude. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Burma, Cambodia, Central America, China, Costa Rica, East Africa, Ethiopia, Haiti, Hawaii, Himalayas, India, Indochina, Indonesia, Kenya, Malawi, Malaysia, Myanmar, Nepal, Nicaragua, Pacific, Pakistan, Panama, Papua New Guinea, PNG, Philippines, Senegal, Singapore, South America, Sri Lanka, Tanzania, Thailand, Timor, USA, Vanuatu, Vietnam, West Africa, West Indies, Zimbabwe,

Use

The young leaves and flower buds are cooked as a vegetable.
The pulp of the pods is eaten but not the seeds.
CAUTION: The pod pulp is a purgative but safe.
The pulp is used as an ingredient in spiced Indian tobacco.

Cultivation

The plants are grown from seed. The seed need to have the hard seed coat broken. This can be done by boiling them for a few minutes before sowing. It can be cut back and will re-grow.

Production

It is fairly slow growing. Trees start flowering when 5 years old.

Nutritional Values

Cassia fistula

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
flowers								
leaves								
pod pulp								

Lauraceae

Common names

Dodder laurel,



Scientific name

Cassytha filiformis

Edible portion

Fruit,

Description

A fine straggling leafless creeper which climbs over plants and gets at least some if its food from the other plants. The leaves are very small and like scales, and clasp the stem. The stem is orange to yellow and twines around plants, attaching by small suckers. The flower is small and the sepals are like bracts. The petals are white and fleshy. The flowers are 0.1-0.2 cm long. It has very small, berry-like fruit (4-5 mm across) which are green when young and turn white when ripe. The flesh is clear and the black seed can be seen from the outside.

Distribution

A tropical plant. It grows in lowland mangrove swamp areas and in scattered forest. It suits sandy and infertile areas and is often on coastal dunes. It occurs throughout the tropics.

Found in:

Africa, Asia, Australia, East Africa, Fiji, Haiti, India, Indochina, Indonesia, Malawi, Malaysia, Pacific, Papua New Guinea, PNG, South Africa, Southern Africa, Swaziland, Tasmania, Thailand, Timor, Tokelau, Tonga, Vietnam, Yemen, Zambia, Zimbabwe,

Use

The ripe fruit is eaten. There is only a small amount of edible flesh around the central seed.
CAUTION: Some Cassytha have an alkaloid that can cause abortion and should not therefore be eaten by pregnant women.

Cultivation

It grows wild. Seeds germinate in the soil, but the plants attach to another plant getting support and food from the host plant.

Production

Nutritional Values

Cassytha filiformis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	86.9					5		

Casuarinaceae

Common names

She oak, Shingle Oak, Coastal She Oak, Beach She-oak, Horsetail She-oak, Mvinje, Moinga,

Scientific name

Casuarina equisetifolia

Edible portion

Seeds - salt, Probably leaves for water,

Description

A small tree. It grows 5-10 m high. It can spread to 3-10 m wide. Often there are several stems. The bark is rough and brown. It peels off in long strips. The branches hang downwards. There are 6-8 angled needles. The leaves hang downwards. The leaves are reduce to tiny scales on long fine branches. The flowers are separately male and female. The male are in small spikes and the female in round clusters. The fruit are brown round, woody cones. They are 1.5-2 cm across.

Distribution

A tropical plant. It grows in coastal sand dunes in drier regions. It suits hardiness zones 10-12.

Found in:

Africa, Australia, East Africa, India, Pacific, Papua New Guinea, PNG, Tanzania, Timor,

Use

The seeds are roasted for salt.

Cultivation

Plants can be grown from seed. Some forms can be grown by aerial layering or large cuttings.

Production

Nutritional Values

Casuarina equisetifolia

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
water								

Apocynaceae

Common names

Madagascan Periwinkle,

Scientific name

Catharanthus roseus

Edible portion

Leaves, Seeds, Poisonous,

Description

An evergreen shrub. It grows 1 m high and spreads to 1 m wide. In colder climates it is smaller and grown as an annual. It has a woody base and a fleshy top. The stem is short, erect and branching. The leaves are glossy green and oval. They are 5 cm long. The leaves have pale midribs. The flowers are soft pink tinged with red. There are 5 petals. The flowers are 4 cm across.

Distribution

A tropical plant. It is native to Madagascar. It prefers rich, moist, well drained soil. It needs a protected sunny position. It is drought and frost tender. Seed need a temperature of at least 13-18°C to grow. The plant can grow in temperatures down to 5 -7°C. It is drought resistant. It suits hardiness zones 9-11.

Found in:

Africa, Asia, Australia, Central Africa, Central America, China, Congo, Costa Rica, Cuba, East Africa, Ethiopia, Haiti, Hawaii, India, Indochina, Indonesia, Jamaica, Madagascar*, Malaysia, Mexico, Pacific, Pakistan, Papua New Guinea, PNG, Puerto Rico, South Africa, Southern Africa, Swaziland, Thailand, Timor, USA, West Indies, Zambia,

Use

CAUTION: Due to alkaloids this leaf should not be eaten without suitable processing.
The leaves have been recorded as eaten but should probably not be eaten in large quantities.
A tea is made from the leaves.

Cultivation

Plants can be grown from seed or cuttings. Seedlings grown slowly. Seed are sown 6 mm deep. They should be in a temperature of 24-27°C to quicken germination. Seedlings can be transplanted.

Production

Nutritional Values

Catharanthus roseus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves								

Fabaceae

Common names

Cathormion, Bean-tree, Cathormium,



Scientific name

Cathormion umbellatum

Edible portion

Fruit, Seeds, Pods,

Description

A medium sized tree. It grows to 6-15 m high and spreads to 3-8 m wide. It has a fine lacy crown with small branches which droop over. The bark is dark brown, rough and furrowed. It becomes flaky. The trunk can be crooked or divided. It often has several stems. The young shoots are hairy. On young shoots from re-growing branches, there are spines. The leaves are twice divided. The leaves are 1.2-2.5 cm long then there are 1-2 pairs of branches with 4-7 pairs of leaflets each. These leaflets are 2.5-5 cm long by 1-2 cm wide. There are small round glands where the small leaf branches join. They are glossy light green on top and dull underneath. The flower cluster occurs at the end of the stalk in the axils of leaves and is erect and short. The flowers are about 1 cm long and yellow. They occur in round clusters where each flower stalk of the same length comes from the same point. The flowers have a perfume. The fruit are pods and these are 7-10-20 cm long by 1.5-2 cm wide. The pods are curved and thick and hard. They break into segments which have one seed each. The seeds are dark brown

Distribution

A tropical plant. It occurs in coastal areas near streams. They do best with well drained soil and a sunny position. Often they are on the inner edge of the mangrove forest.

Found in:

Asia, Australia, India, Indochina, Indonesia, Malaysia, Pacific, Papua New Guinea, PNG, Timor, Vietnam,

Use

The young pods are eaten after roasting.

Cultivation

Plants are grown from seed. The seed need treatment before sowing.

Production

Plants are moderately fast growing. In Northern Australia the pods are ripe July to October.

Nutritional Values

Cathormion umbellatum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds								
pods								

Vitaceae

Common names

Native Grape, Ow cho, Tradet, Yugali,

Scientific name

Cayratia trifolia

Edible portion

Tuber, Fruit, Sap,

Description

A slightly woody creeper. It has a large taproot system. It climbs by suction pads on the tendrils. The leaves are compound with 3 leaflets. The leaflets are oval and thin and softly hairy. They are 3-8 cm long by 2-4 cm wide. There are coarse teeth along the edge. The flowers are small and greenish. They occur in long clusters. The fruit are flattened berries. They are black and about 0.4 cm across.

Distribution

A tropical plant. It suits tropical and subtropical places. It is often grown near houses. It grows naturally in Northern Australia in open forest. It is damaged by frost.

Found in:

Asia, Australia, Cambodia, China, India*, Indochina, Pacific, Philippines, Timor,

Use

The sap from cut stalks can be drunk.
The roots are edible after they have been cooked in hot coals.

Cultivation

Plants can be grown from fresh seeds or cuttings. It dies back to the tuber in the dry season.

Production

Nutritional Values

Cayratia trifolia

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
grape	72.2			1.1				
fruit	82.0			0.8		7		
tuber								
sap								

Rombacaceae



Common names

Kapok, White silk cotton tree,

Scientific name

Ceiba pentandra

Edible portion

Seeds, Leaves, Calyces, Flowers,

Description

A very large tree with a straight trunk and height of 30-40 m. Trees can be 60 m high and the trunk 8 m around. It has large prickly buttresses near the base. The branches come out horizontally and there is a ring of them around the trunk. The leaves are compound. The leaflets spread out like fingers on a hand, with 5-8 leaflets. They are 5-18 cm long by 2-4.5 cm wide. The leaf stalk is 7-20 cm long. The leaves all fall off the tree (deciduous). Flowers are yellowish white, in clusters near the ends of branches. These hang downwards. A long seed capsule hangs from branches. It is 10-30 cm long. It splits into 5 valves. The seeds are embedded in white or grey kapok.

Distribution

It is a tropical plant. Mostly in the lowlands and up to about 1000 m. It suits rainforest areas with a heavy rainfall. The soil needs to be well drained. The tree is easily damaged by strong winds. It needs a temperature of 25°-30°C and not below 15° C. It is light demanding. It suits hardiness zones 11-12.

Found in:

Africa, Asia, Australia, Belize, Brazil, Cambodia, Cameroon, Caribbean, Central Africa, Central America, China, Colombia, Congo, Costa Rica, Cuba, Dominica, Dominican Republic, East Africa, El Salvador, Ethiopia, Fiji, Gabon, Ghana, Guadeloupe, Guatemala, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Jamaica, Kenya, Laos, Malawi, Malaysia, Mali, Martinique, Mexico, Micronesia, Nicaragua, Nigeria, Pacific, Pakistan, Panama, Papua New Guinea, PNG, Peru, Philippines, Puerto Rico, Rwanda, Sierra Leone, Singapore, Somalia, South Africa, Southern Africa, South America, St Lucia, Sudan, Tanzania, Thailand, Timor, Tonga, Trinidad & Tobago, Uganda, USA, Venezuela, Vietnam, West Africa, West Indies, Zambia

Use

The young pods can be eaten cooked.
The young leaves can be eaten cooked.
The seeds can be eaten either roasted fresh, or after sprouting. They are also added to soups.
The young flowers can be eaten. They are blanched before eating.
The resin from the trunk is put in water and drunk.

Cultivation

Seeds germinate quickly and seedlings can be transplanted. It can be easily grown from large cuttings.

Production

It is a fast growing tree. Pods are produced seasonally.

Nutritional Values

Ceiba pentandra

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds dried	6.8	2065		30.9				
leaves								
flowers								
fruit								
sap								

Ulmaceae

Common names

Bang, Odu amuk, Bege, Bwege, Kolohonfe, Itako, Ohia,

Scientific name

Celtis philippensis

Edible portion

Fruit, Seeds - oil,

Description

A medium sized tree. It grows 4-10 m tall. It often has buttresses. It has a dense rounded crown. The tree can lose many of its leaves during the dry season of the year. The bark is smooth with a mottled cream grey pattern on it. The leaves are alternate and smooth. They are stiff and brittle. They are oval and about 3-12 cm long by 2-6 cm wide. The leaves are dark green above and paler underneath. There are 3 easy to see veins along the leaf. These are raised and white, underneath the leaf. The leaves have a pointed tip and short stalk (1 cm). The young leaves have teeth along the edge. The flowers are small and white and 2-3 mm across. They occur in small clusters (2 cm across) in the axils of leaves. Flowers of one or both sexes can occur on the same plant. The fruit are smooth and fleshy. They are round but flattened. They can be 0.7-1 cm across. They are yellow, but bright red when ripe. They contain a single hard shelled seed. The seed can be 6 mm across.

Distribution

It is a tropical plant. It grows in coastal monsoon forests. It can be on sand dunes and is often near permanent water. It needs well drained soil. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Central Africa, CAR, Central African Republic, China, East Africa, India, Indonesia, Mozambique, Pacific, Papua New Guinea, PNG, Philippines, SE Asia, Southern Africa, Sri Lanka, Sudan, Timor, Vietnam,

Use

The fruit are eaten raw when ripe.
The seed oil is edible.

Cultivation

Plants can be grown from fresh seed.

Production

In northern Australia plants flower from October to January and fruit mainly from April to August.

Nutritional Values

Celtis philippensis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit								

Ceratophyllaceae

Common names

Hornwort, Jin yu zao, Shivala, Sivara, Nasu, Sheoyala, Mpusi, Ksitsi, Foxtail,



Scientific name

Ceratophyllum demersum

Edible portion

Leaves,

Description

A plant which grows in water and under the water. It forms tangled colonies. The stems are brittle and do not have roots. They are branched. They can be 2 m long. The leaves are 1.5-4 cm long and slender. They are dark green and forked. There are 7-12 leaves in a ring. The flowers are small and occur singly at the nodes. The flowers are of one sex. Male flowers have several stamens on a common stalk. Female flowers have an ovary without a stalk. The fruit are black and 4.5 mm long. There are 3 spines one at the end and 2 at the sides.

Distribution

They grow in temperate to tropical waters. It occurs in streams, ponds and lakes. It grows in still or slow-flowing water. It can be in water up to 10 m deep. Flowers and fruit occur in water about 25°C. It grows best in slightly alkaline water rich in nitrogen.

Found in:

Africa, Asia, Australia, Britain, Central America*, China, Dominican Republic, East Africa, Europe, Fiji, Haiti, Hawaii, India, Jamaica, Japan, Malawi, Mexico, New Zealand, North America, Pacific, South America*, Timor, USA, West Indies, Zambia, Zimbabwe,

Use

Cultivation

Plants are grown by using pieces of the stem.

Production

Nutritional Values

Ceratophyllum demersum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves								

Apocynaceae

Common names

Sea Mango, Grey Milkwood, Bentan, Native Frangipani, Pink eyed Cerbera, Bintaru, Bintaro, Batano, Pompong, Pong-pong, Dteen-ped-



Scientific name

Cerbera manghas

Edible portion

Leaves, CAUTION, Seeds VERY POISONOUS,

Description

An evergreen tree up to 8 m tall. It can reach 20 m high. It spreads to 2-5 m across. The stem is erect and branching. It has milky sap. The bark is grey brown. The branches come out in whorls, and they are marked with leaf scars. The leaves are bright green. The leaf stalk is 3-6 cm long. The leaf blade is oblong, and narrowing towards the tip. It is 6-37 cm long by 3-8 cm wide. Leaves are deeply veined and arranged in spirals around the stem. The flowers are white with a yellow throat. They are like tubes and 7.5 cm long by 2.5-5 cm across. They occur in dense clusters at the ends of branches. The flowers have a strong scent. The fruit are round and fleshy berries, which are 7.5 cm across. They are pink, tinged with purple. Often the fruit occur in pairs. They hang down.

Distribution

A tropical plant. It grows best in rich, moist, well drained soils. It needs a sheltered and partly shaded position. It is drought and frost tender. It is often near swamps, near the sea and on rocky and sandy coasts. It can tolerate exposure near the coast, but is cold sensitive. It suits hardiness zones 11-12.

Found in:

Africa, Asia, Australia, Bangladesh, Burma, Cambodia, China, Fiji, Hawaii, India, Indochina, Indonesia, Japan, Laos, Madagascar, Malaysia, Myanmar, Pacific, Papua New Guinea, PNG, Philippines, Seychelles, Thailand, Timor, Tonga, USA, Vanuatu, Vietnam,

Use

CAUTION: The fruit, and especially the seed, are very poisonous and contain hydrocyanic acid and the cardiac glycosides thevetin and cerberin.
The leaves have been recorded as being eaten.

Cultivation

Plants are grown from seed.

Production

Nutritional Values

Cerbera manghas

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves								

Rhizophoraceae

Common names

Tagal mangrove, Tengar, Prong, Prong deng, Plong, Me, Goran, Gedera, Mkandaa, Pandikutti, Farafaka, Yellow mangrove, Yellow-

Scientific name

Ceriops tagal

Edible portion

Fruit,

Description

An evergreen tree. It grows 8-25 m high. It can also be a bush in some locations. It has stilt roots. These are like five fingers rising from the mud. The bark is light brown. The leaves are green and shiny. They are leathery and oval shaped. The tip is rounded and they taper near the base. The leaves are 7 cm long by 3.5 cm wide. The flowers are creamy white. They are star shaped. They have many red stamens. The fruit are 20 cm long. They are cone shaped. They are greenish brown.

Distribution

It is a tropical plant. It grows in mangrove swamps. It grows on well drained soils not far from the sea and within the reach of occasional tides. It can tolerate salt conditions.

Found in:

Africa, Andamans, Asia, Australia, China, East Africa, India, Madagascar, Malaysia, Pacific, Pakistan, Papua New Guinea, Philippines, PNG, Somalia, Thailand, Timor,

Use

The leathery, berry-like fruit is eaten.

Cultivation

Seedlings can be split in half and both halves will grow.

Production

Nutritional Values

Ceriops tagal

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit								

Asteraceae

Common names

Tunri'en khaet, Christmas bush, Siam weed, Jack-in-the-bush, Triffid weed, Bitter bush,

Scientific name

Chromolaena odorata

Edible portion

Leaves, Caution,

Description

A herb 1-2 m tall. It can be scrambling. It can form roots along the stems. The leaves are simple and can have teeth along the edge. They are 4.5-11 cm long by 2-5.5 cm wide. They are hairy on the top side. Underneath they are very hairy have small glands. The leaf stalks are 1-1.7 cm long. The flowers are in heads at the ends of the stalks or in the axils of leaves. The heads are 5 mm across. They are white, pink or purple. The bracts are green. The fruit is a nut. It is brown to black and 4 mm long.

Distribution

It is a tropical plant. It is one of the plants to grow first in areas where forest has been removed. It grows best in well drained soil and a rainfall above 1,000 mm.

Found in:

Argentina, Asia, Australia, Bahamas, Bangladesh, Cambodia, Central America, China, Cuba, Dominican Republic, Haiti*, India, Indochina, Indonesia, Jamaica, Lesser Antilles*, Mexico*, Nigeria, North America, Papua New Guinea, PNG, Philippines, Puerto Rico, South Africa, Southern Africa, South America, Sri Lanka, Taiwan, Timor, USA, West Indies*,

Use

Young leaves are eaten.
Caution: Leaves can contain high levels of nitrates and also alkaloids.

Cultivation

Production

Nutritional Values

Chromolaena odorata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Lauraceae

Common names

Camphor laurel,



Scientific name

Cinnamomum camphora

Edible portion

Leaves,

Description

A tree. It grows to 36 m high. It keeps its leaves throughout the year. It has a rounded crown 15 m wide. The trunk is short with scaly, grey bark. The trunk can be 3 m across. The whole plant has a strong camphor smell. The bark is yellow brown with cracks along it. The leaves are alternate. The leaves are pink when young. They turn green with age. The leaf stalk is slender. The leaf blade is 6-12 cm long by 2.5-5.5 cm wide. The flower cluster is in the axils of leaves. Flowers are green-white or yellow. The fruit are round. They are greyish-black.

Distribution

It grows in tropical and subtropical locations. It needs a well drained, fertile, sandy loam. It does best in coller locations but needs a temperature above 9°C. In tropical Queensland it grows from 650-1000 m altitude. It is grown in China in areas without a severe winter. In Melbourne Botanical Gardens. It suits hardiness zones 9-11.

Found in:

Africa, Asia, Australia, Burma, Central America, China*, Cuba, Europe, Fiji, Haiti, Hawaii, India, Indochina, Italy, Japan*, Korea, Myanmar, Nepal, North America, Pacific, Pakistan, South Africa, Southern Africa, Taiwan, Timor, Turkey, USA, Vietnam,

Use

Young shoots and leaves are boiled and eaten.
Edible crystalline camphor is used in small quantities as flavouring in milk.
It yields an essential oil used to flavour baked goods and drinks.
Caution: It is poisonous in excess.

Cultivation

It can be grown from seed. The plant spreads by suckers. It can be grown by softwood cuttings.

Production

Trees can live for several hundred years.

Nutritional Values

Cinnamomum camphora

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Lauraceae



Common names

Cinnamon,

Scientific name

Cinnamomum verum

Edible portion

Bark, Spice, Leaves,

Description

A large tree. It grows 10-20 m high. It keeps its leaves during the year. The trunk can be 30-60 cm across. The bark is dark brown. The young branches can be four sided. The leaves are usually opposite. The leaf blade is oval and 11-16 cm long by 4.5-5.5 cm wide. The young leaves are red but change to pale green. They later become dark green and glossy on top but whitish underneath. The flowers are pale yellow and small. The fruit are red but turn black when mature. They are 10-15 mm long.

Distribution

A tropical plant. It grows in wet tropical forests. It grows up to 2000 m altitude in India. It needs adequate rainfall.

Found in:

Africa, Asia, Australia, Brazil, Burma, Cambodia, Central America, China, East Africa, Fiji, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Madagascar, Malaysia, Mauritius, Myanmar, Nicaragua, Nigeria, Pacific, Samoa, Seychelles, Sierra Leone, Singapore, South America, Sri Lanka*, Taiwan, Thailand, Timor, Uganda, USA, Vietnam, West Africa,

Use

The bark is used raw and cooked as a spice.
It is used with puddings and desserts as well as with stews, poultry, pickles and soups.
The leaves are used for food flavouring.
The bark and leaves yield as essential oil also used similarly for flavouring.

Cultivation

Plants are usually grown from seed.

Production

The bark is rolled into lengths about 8 cm long. The layers are paper thin. Lengths 1 m long can be used. These are ground into a pale brown powder.

Nutritional Values

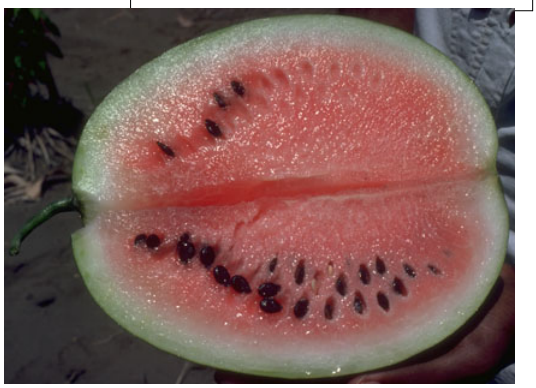
Cinnamomum verum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

Watermelon,

Cucurbitaceae



Scientific name

Citrullus lanatus

Edible portion

Fruit, Seeds, Leaves, Vegetable,

Description

An annual climber with deeply divided leaves and tendrils along the vine. It trails over the ground and has hairy, angular stems. The leaves are on long leaf stalks. The leaves are deeply divided along their length. These lobe are rounded and can themselves be divided. The leaves are 5-20 cm long by 2-12 cm across. The tendrils are divided. The plant has separate male and female flowers on the same plant. The flowers are pale yellow and smaller than pumpkins. The flowers occur in the axils of leaves. The male flowers appear first. Fruit are large and round or oval. They can be 60 cm long. Fruit have a hard smooth skin. Several fruit colours and shapes occur. Often they have a dark green mottle. The fruit has reddish juicy flesh and black or red seeds. The seeds are oval shaped and smooth.

Distribution

A tropical plant. They grow best on the coast in the tropics but will grow up to about 1000 m altitude. They will not stand water-logging and do well on sandy soils. Plants are frost sensitive. Seed will not germinate below 21°C. Temperatures between 24 -30°C are suitable. Fruit are sweeter in arid warm areas. It suits hardiness zones 10-12.

Found in:

Africa, Angola, Asia, Australia, Bangladesh, Benin, Bolivia, Botswana, Brazil, Burkina Faso, Burundi, Cabinda, Cambodia, Cameroon, Central Africa, Central African Republic, Central America, Chad, China, Congo, East Africa, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Fiji, Gabon, Gambia, Ghana, Greece, Guinea, Guinea Bissau, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Iran, Iraq, Italy, Ivory Coast, Japan, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mauritius, Mediterranean, Mozambique, Namibia, Nepal, New Zealand, Nicaragua, Niger, Nigeria, North America, Pacific, Pakistan, Papua New Guinea, PNG, Paraguay, Peru, Philippines, Russia, Samoa, Saudi Arabia, Senegal, Seychelles

Use

The fruit is eaten raw when ripe.
Small unripe fruit can be cooked as a vegetable.
Seeds are also eaten. They are dried, soaked in salt water then roasted. Oil is extracted from the seeds.
Occasionally very young leaves are eaten.
The skin is sometimes candied in vinegar then eaten with fish.
The syrup from the fruit can be used in jams and cakes.

Cultivation

Plants are grown from seed. They are suitable mainly for the dry season. A spacing of 1.5 to 2 m is suitable. They grow easily from seed. They do best when fully exposed to the sun. Seed can be dried and stored. If too much vegetative growth occurs picking out the tip to produce side branches with more fruit.

Production

Plants grow quickly. Harvesting commences after 4-5 months. The main fruit season is November to January. The ripeness can be picked by tapping the fruit to get a dull sound, the part of the fruit on the ground changes from green to light yellow and the tendril near the base of the fruit becomes dry. Fruit yield can be 45-60 tons per hectare. There can be 4-6 fruit on each plant.

Nutritional Values

Citrullus lanatus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed	5.1	2330	557	28.3	0	0	7.3	10.2
fruit	94.0	92		0.4	20	5	0.3	0.1

Common names

Lime,

Rutaceae



Scientific name

Citrus aurantiifolia

Edible portion

Fruit, Herb, Spice,

Description

A small much branched evergreen tree. It grows up to 5-6 m tall with short sharp spines. It spreads to 3 m across. The leaves are small and dark green. There are narrow wings on the leaf stalk. The leaf blade is about 5 cm long by 3 cm wide and oval. They have a sweet smell when crushed. There is a thorn at the base of each leaf. (Thorn free kinds are known). The flowers are yellowish white. They are 2.5 cm across and have 5 petals. The flowers are produced in the leaf axils or at the ends of branches. The fruit is small, round 3-4 cm across and become pale orange to yellow when ripe. They are thin skinned. The flesh of the fruit is green. West Indian limes with larger, better fruit also occur. There are several named cultivated varieties.

Distribution

A tropical plant. They need a warm climate and are most common in coastal regions in the lowland tropics. They grow from sea level to 2200 m altitude in Papua New Guinea. They suit humid areas and can survive in poor soils. Light to medium well drained soils are best. It is drought and frost tender. In Hobart Botanical gardens. It grows in Nepal to about 1800 m altitude. It can grow in alkaline soil. It suits hardiness zones 11-12.

Found in:

Africa, Asia*, Australia, Bangladesh, Brazil, Burma, Cambodia, Cameroon, Caribbean, Central Africa, Central America, China, Cook Is., Costa Rica, Cuba, Dominica, East Africa, Ecuador, Egypt, Ethiopia, Europe, Fiji, France, Ghana, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Iran, Italy, Ivory Coast, Kenya, Kiribati, Madagascar, Malawi, Malaysia*, Mediterranean, Mexico, Myanmar, Nepal, Nicaragua, Niue, North America, Pacific, Pakistan, Palestine, Papua New Guinea, PNG, Peru, Philippines, Senegal, Solomon Islands, South Africa, Southern Africa, South America, Tahiti, Taiwan, Tanzania, Tasmania, Thailand, Timor, Tokelau, Tonga, Uganda, USA, Vanuatu, Vietnam, West Africa, West Indies

Use

They are mainly used for juice and drinks. They are preserved in syrup and made into jam, jelly and marmalade.
They can be used in pickles.
It is used as a coagulant in the manufacture of soft cheeses.
The chopped peel can be made into a sweetmeat with milk and coconut.
The minced leaves are eaten with roast meat. They are also added to soups.

Cultivation

They are often grown from seed but are better if grafted. Plants can be grown by cuttings. A spacing of 4-5 metres is suitable. When grown from seed, several shoots may develop from the one seed, which means the seedlings may be identical to the parent.

Production

Trees can start producing fruit quickly. They fruit in 5-6 years. They normally produce fruit all the year round. Fruit drop when mature. Black limes are sun dried limes. They are 2.5-4 cm across.

Nutritional Values

Citrus aurantiifolia

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Rutaceae

Common names

Wild lime, Kro'ch sae'ch, Mahkroot, Kaffir lime, Shauk-nu, Shauk-waing, Krauch soeuch, Fatt-fung-kam, Limau purut, Jeruk purut, Jeruk



Scientific name

Citrus hystrix

Edible portion

Leaves, Fruit, Spice,

Description

A low shrubby tree up to 6 or 8 m high. The trunk is thin and crooked. It has slender sharp thorns. The leaf petiole has very large lobes. The leaf is oval. The leaves can be 8-15 cm long by 3-5 cm wide including the leafy stalks. The leaves are dark green and shiny above and pale and matt underneath. The flowers are small and white. The fruit are small (8 cm across) with a rough, thick skin and very little edible pulp inside. They are very acid. The peel of the fruit is very fragrant.

Distribution

A tropical plant. It mainly occurs in lowland areas in the tropics. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Brazil, Burma, Cambodia, China, France, Hawaii, India, Indochina, Indonesia, Japan, Madagascar, Malaysia, Mauritius, Mediterranean, Morocco, Myanmar, Pacific, Papua New Guinea, PNG, Philippines, Saudi Arabia, South America, Spain, Sri Lanka, Thailand, Timor, USA, Vanuatu,

Use

The leaves and fruit are used to make drinks or to flavour food. They are added to soups and curries.
The leaves are pounded into a jelly and mixed with hot chili pastes.
The fruit are eaten crystallised. The juice of the fruit is used for flavouring.
The lemon scented fruit are eaten with fish.

Cultivation

Plants can be grown from seed or by grafting. It often now grows wild in coastal areas. It grows slowly.

Production

The tree flowers throughout the year but has most ripe fruit about June and July.

Nutritional Values

Citrus hystrix

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	90.8		38	0.6			0.6	

Rutaceae

Common names

Pummelo, Pomelo,



Scientific name

Citrus maxima

Edible portion

Fruit, Leaves - flavouring,

Description

A spreading, spiny tree. It grows up to 15 m high. It is dome shaped. The leaves are very large. They are glossy and oval and downy underneath. The leaf stalks have broad wings. Young shoots and stems have fine hairs on them. Flowers are large (2 cm) and creamy white. The flowers are produced in bunches from woody shoots. The flowers have a sweet scent. The fruit are oval or pear shaped. The fruit is very large (20 cm) with a thick skin. The skin is dotted with oil glands. The fruit are green but become yellow when ripe. They contain 11-14 segments. The flesh can be pale yellow or pink. Each segment of the fruit is covered by a strong membrane. Some kinds have many seeds, while others are almost seedless. There are several named cultivated varieties.

Distribution

A tropical plant. They thrive in warm lowland areas in the tropics. They can grow from sea level up to 900 m. They are tolerant of brackish and salty conditions. They suit humid climates. In the Cairns Botanical Gardens. It suits tropical and subtropical locations. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Bangladesh, Barbados, Brazil, Cambodia, Cameroon, Central Africa, Central America, China, Fiji, Haiti, Hawaii, India, Indochina, Indonesia, Ivory Coast, Japan, Madagascar, Malaysia, Mediterranean, Nigeria, North Africa, North America, Pacific, Pakistan, Papua New Guinea, Philippines, PNG, Solomon Islands, South America, Spain, Tahiti, Thailand, Timor, Tonga, Turkey, USA, Vietnam, West Africa, West Indies,

Use

The fruit can be eaten fresh. They are used for desserts, jams and marmalades.
The fruit pulp can be dried and candied.
The skin can be eaten as a vegetable.
The leaves are used to flavour meat and fish during cooking.

Cultivation

They are mostly grown from seed, but do not breed true. The seed only produce one seedling unlike many citrus. Trees are often produced by aerial layering, but budding or grafting can be used. Air-layered trees give sweeter fruit. Trees start producing after about 9 years. Trees need to be about 9 m apart. Trees grown away from other trees often produce almost seedless fruit.

Production

Fruit is produced almost all the year round. The time from flowering to ripe fruit, is about 6 months. Fruit can be stored quite well.

Nutritional Values

Citrus maxima

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit raw	90.3	175		0.6	20	37	0.4	

Rutaceae

Common names

Mandarin,



Scientific name

Citrus reticulata

Edible portion

Fruit, Herb, Flavouring, Spice,

Description

A small evergreen tree up to 4-8 m tall. It spreads to 2 m across. The stem is erect, branching and thorny. The leaves are dark green, and long and narrow in shape. They are 3-4 cm long. There is only a narrow wing on the leaf stalk. It has a few or no spines. The flowers are white and star shaped. They are 2.5-4 cm across and have a scent. Fruit are almost round and the skin peels off easily. The fruit are 4-8 cm long. The flesh is red, juicy and sweet.

Distribution

A subtropical plant. The hardiest of the citrus. It grows from sea level up to 2300 m altitude in the tropics. They do best between 800 m and 1200 m altitude. A well drained soil is needed. They also prefer a drier climate. It is drought and frost resistant. They need a temperature above 3-5 °C. It suits hardiness zones 9-11.

Found in:

Africa, Asia, Australia, Brazil, Burma, Cambodia, Cameroon, Central Africa, Central America, China, Costa Rica, East Africa, Ethiopia, Fiji, Ghana, Guinea-Bissau, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Ivory Coast, Japan, Madagascar, Malawi, Myanmar, Nepal, New Caledonia, Nigeria, North Africa, North America, Pacific, Pakistan, Papua New Guinea, PNG, Philippines*, Samoa, Sierra Leone, Solomon Islands, South America, Taiwan, Tanzania, Timor, Tonga, Uganda, USA, Vanuatu, Vietnam, West Africa, West Indies,

Use

The fruit are eaten fresh and raw. They are also used for juice, preserved in syrup, added to salads or used in sweets, cakes, and drinks. The peel is dried and is used as a condiment. The oil from the peel is used to flavour ice cream, chewing gum, and baked goods.

Cultivation

Often trees are grown from seed. Some breed true from seed. Seedling trees take a long time to start producing fruit. Budded trees are best. A spacing of about 8 m between trees is suitable. From one seed, several seedlings can grow. Using seedlings of seeds with 3 or more shoots helps produce trees true to type. Cuttings or layering can also be used.

Production

Seedling trees take 4-6 years to fruit. Grafted trees fruit after 2-4 years. Fruit tend to be produced seasonally. The season is often from April to August in the Southern Hemisphere.

Nutritional Values

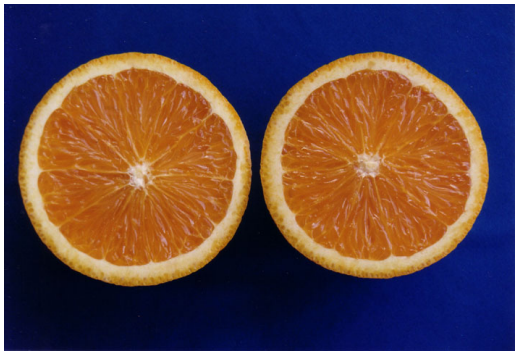
Citrus reticulata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit - raw	87.6	184		1.5	42RE	136	0.8	

Rutaceae

Common names

Orange,



Scientific name

Citrus sinensis

Edible portion

Fruit, Herb, Fruit skin, Spice,

Description

An evergreen tree up to 8-10 m high. It spreads to 4 m across. The stem is short, stout and spiny. It has a dense, rounded crown. The leaves are dark green, sword shaped and tapering towards the tip. They are 5-15 cm long. The leaves have a sweet smell when crushed. The leaf stalks have narrow wings and the stalk is jointed to the blade. The flowers are white and have a scent. The flowers have 5 petals and occur either singly or in clusters. The fruit often remain green colour and don't turn orange when ripened below 600 m altitude in the tropics. The fruit are about 9 cm across. They have 10-14 segments.

Distribution

A subtropical plant. Not suited to very wet areas. Not suited to high altitudes. Seeds won't grow below 13 °C. They need a well drained, fertile, sandy soil. They are drought and frost tender. Trees need temperatures above 3-5°C to grow. In Brisbane Botanical Gardens. It suits hardiness zones 9-11.

Found in:

Africa, Algeria, Asia, Australia, Bhutan, Brazil, Burma, Cambodia, Cameroon, Central Africa, Central America, China, Cook Is., Costa Rica, Cuba, East Africa, Ethiopia, Fiji, French Guiana, Ghana, Guinea-Bissau, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Madagascar, Malawi, Mauritania, Mediterranean, Mexico, Morocco, Mozambique, Myanmar, Nepal, Nicaragua, North America, Pacific, Pakistan, Panama, Papua New Guinea, PNG, Peru, Philippines, Portugal, Sierra Leone, Solomon Islands, South Africa, Southern Africa, South America, Spain, Sri Lanka, Suriname, Taiwan, Tanzania, Timor, Tonga, Turkey, Uganda, USA, Vanuatu, Vietnam, West Africa, Zambia

Use

The fruit is eaten fresh, and the juice used in drinks. They are also added to salads and made into wine.
The juice is canned, bottled, and used in ice cream and jellies.
The peel is candied and used for flavouring. It is made into marmalade.
The flowers are eaten as a vegetable.
The roots are used to flavour soup.

Cultivation

Trees are often grown from seeds but these do not breed true. Seeds grow most easily between 27°C and 32°C. It is better to use budded plants. Plants can also be grafted. Green fruit can be treated with ethylene to give an orange colour, if people think an "orange" fruit is not supposed to have green colour!

Production

Grafted trees produce in 2-3 years. Seedling trees take 3-5 years to fruit. Fruit take 6-8 months to mature after fruit set. A good tree can produce 100 fruit in a year. Fruit can be left on trees for several weeks after ripening for storage.

Nutritional Values

Citrus sinensis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	86.8	197		0.94	21	53.2	0.1	0.1

Cyperaceae

Common names

Jamaica Swamp Sawgrass,



Scientific name

Cladium mariscus

Edible portion

Leaves,

Description

A sedge. These grow in clumps and have grass like leaves and solid stalks. It grows about 1 m tall. It is a herb. It has an underground stem or rhizome and leaves arranged in a spiral.

Distribution

It grows in temperate and tropical regions worldwide. It grows on the edges of lakes, swamps and pools.

Found in:

Africa, Arabia, Asia, Australia, Bahamas, Britain, Central America, Europe, Haiti, Iraq, Israel, Jamaica, Kazakhstan, Lebanon, Pakistan, Syria, Timor, Turkey,

Use

Cultivation

Production

Nutritional Values

Cladium mariscus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Cleomaceae

Common names

Spider flower, Cat's-whiskers,



Scientific name

Cleome gynandra

Edible portion

Leaves, Flowers, Pods, Seeds, Vegetable, Caution,

Description

An annual herb. It grows to 0.6-0.9 m. It has a long tap root. It is erect and somewhat hairy. It usually has purple stems. The leaves occur one after another along the stalk. The leaf stalk is long. There are 5-7 leaflets which are unequal and spread out at the end. They are oblong and about 2.5-6 cm long by 1.4-3.2 cm wide. The leaflets are pointed at the base and a rounder near the tip with a rounder point at the tip. There are fine teeth along the edges of the leaves. The flowers are white or purple They occur in long flower clusters at the end of branches. These are 30 cm long. The flower clusters are showy with white or purplish flowers and a spidery like appearance. The fruit are a slender capsule with 2 valves and with many small seeds. They are 5-10 cm long and very narrow. The seeds are kidney shaped and rough. They are brown and have fine lines along them. They are 1-1.5 mm across.

Distribution

A tropical plant. It commonly occurs as a self sown weed on cultivated land. It grows in warm or tropical regions. It grows at a range of elevations but especially above 600 m altitude. It will grow in semi arid, to wet humid climates. It will grow on many soil types, but needs fertile soil for good leaf production. A temperature of 18-25°C seems best. Plants need plenty of sunlight. They are not drought resistant but can produce a crop with short periods of rain. Plants cannot withstand flooding. A common weed of waste places throughout the Philippines as well as other tropical countries. It is often abundant near the sea and near Baguio.

Found in:

Afghanistan, Africa, Angola, Argentina, Asia, Australia, Bangladesh, Benin, Bhutan, Bolivia, Botswana, Brazil, Britain, Burkina Faso, Burma, Burundi, Cambodia, Cameroon, Central Africa, Central African Republic, Central America, Chad, Chile, China, Colombia, Comoros, Congo, Cuba, Dominican Republic, East Africa, Egypt, Eritrea, Ethiopia, Europe, Fiji, France, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Haiti, India, Indochina, Indonesia, Italy, Ivory Coast, Jamaica, Japan, Kenya, Korea, Laos, Lesser Antilles, Liberia, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mauritius, Mexico, Mozambique, Myanmar, Namibia, Nepal, New Zealand, Niger, Nigeria, North America, Oman, Pacific, Pakistan, Papua New Guinea, PNG, Paraguay

Use

The leaves are eaten. If they are cooked the bitter taste is reduced. They are also used in flavouring sauces. The flowers can be eaten.
Young pods are also eaten.
The oil from the seeds is edible without needing to be refined.
The leaves can be candied in vinegar or in salt water, then eaten with fish.

Cultivation

The plant is grown from seed. The seed are broadcast. Fertile soil is needed to get plants with good leaf coverage. The seed germinate erratically, because the seed have a rest period after harvest. Seed germinate best 6 months after harvest. Once they are ready to grow, they germinate in 4-5 days. Leaves or whole plants can be harvested when 15 cm high. Picking out the tops encourages side growth and longer leaf production. Removing flowers extends the harvest period.

Production

Leaves can be harvested 4-5 weeks after planting. Seeds reach maturity about 5 months after sowing.

Nutritional Values

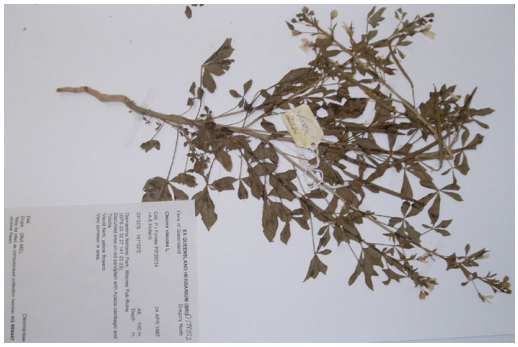
Cleome gynandra

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	86.6	142	34	4.8		26	6.0	

Cleomaceae

Common names

Sticky Cleome,



Scientific name

Cleome viscosa

Edible portion

Leaves, Fruit, Seeds,

Description

An erect annual herb. It is sticky. It has a rank smell and is about 0.3 to 1 m high. The leaves are made up of 3 to 5 leaflets each 1 to 3 cm long. The flowers are in leafy groups at the end of branches. The flower stalks are less than 1 cm long. The petals are yellow and 7 to 8 mm long. The fruit is a capsule. It is narrow. It narrows and gradually tapers near the tip. The stems and seed pods are hairy. The seeds are round, black and 1 mm across.

Distribution

It is a tropical plant. They are found in waste places at low and medium altitudes throughout the Philippines. In Nepal it grows up to 1200 m altitude. It is damaged by drought and frost.

Found in:

Afghanistan, Africa, Antigua-Barbuda, Asia, Australia, Barbados, Belize, Benin, Bermuda, Brazil, Burkina Faso, Burma, Cambodia, Cameroon, Cape Verde, Central America, Chad, China, Comoros, Cuba, Dominica, Dominican Republic, Egypt, El Salvador, Ethiopia, Fiji, Gambia, Ghana, Grenada, Guadeloupe, Guatemala, Guinea, Guinea-Bissau, Haiti, Honduras, India, Indochina, Indonesia, Iraq, Ivory Coast, Jamaica, Liberia, Madagascar, Malaysia, Maldives, Mali, Martinique, Mauritania, Mauritius, Mexico, Myanmar, Nepal, Nicaragua, Niger, Nigeria, Pacific, Pakistan, Papua New Guinea, Philippines, PNG, Samoa, Saudi Arabia, Senegal, Seychelles, Sierra Leone, Socotra, South America, Sudan, Taiwan, Tanzania, Thailand, Timor

Use

The leaves are edible cooked.
The young fruit are eaten candied.
Roasted seeds are used in curries and pickles.
Seed oil is used for cooking.
The leaves are soaked, fermented and used as a spice.

Cultivation

Plants are grown from seed.

Production

Nutritional Values

Cleome viscosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Lamiaceae

Common names

Thurkoo, Lollybush, Bleeding heart, Smooth Spiderbush, Smooth Clerodendrum,

Scientific name

Clerodendrum floribundum

Edible portion

Roots,

Description

A shrub or small tree. It grows 1.5-4 m high. Plants often sucker freely. The leaves vary in size and shape. They are often oval. The blade is 6-17 cm long by 3.5-13 cm wide. The leaves have a long stalk and pointed tip. The flowers are white and like tubes with stamens sticking out the end. They are 2-7 cm long in open groups which are 15-25 cm across. They are produced towards the ends of branches. The fruit is a round dry capsule with lobes. There is a red star like calyx at the base. The fruit is 1-1.5 cm across. It is red and turns black when ripe. There are several varieties.

Distribution

A tropical plant. It suits tropical, subtropical and warm temperate regions. It grows in coastal areas on sand dunes. In tropical Queensland it grows from sea level to 1200 m altitude. It suits hardiness zones 10-12.

Found in:

Asia, Australia, China, Timor,

Use

The roots are boiled and eaten.

Cultivation

Plants can be grown from seed. They can also be grown from cuttings and root suckers.

Production

Nutritional Values

Clerodendrum floribundum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
root	52.3	918		1.6				

Lamiaceae

Common names

Tulang-tulang, Terong gambul, Limau lelang, Kembang lugang, Melati utan, Kundali, Vanajai, Lanjai, Sangkupi, Banjai, Batraj, Vanajai, Anjali,



Scientific name

Clerodendrum inerme

Edible portion

Fruit,

Description

An evergreen scrambling shrub. It grows to 2-5 m high and spreads to 2 m across. It can be a bushy climber. The stem is erect and branching. The bark is smooth and mottled cream-brown. The leaves are glossy green, and tapering. The leaf blade is 4-12 cm long by 1-5 cm wide. They have a small pointed tip. The leaf stalk is long. The flowers are white and like tubes 4-5 cm long and 2 cm across. They have 5 spreading lobes. The stamens are purple, about 3 cm long and protrude out the end. The flowers have a sweet smell and occur in clusters. These are normally at the ends of new shoots. The fruit is round and 1-2 cm across. There are cup shaped lobes at the base. The fruit are purple black when ripe.

Distribution

A tropical plant. It prefers rich, well drained soil. It grows best in a sheltered, partly shaded position but also likes sun. It is drought and frost tender. It occurs naturally in coastal regions and in monsoon vine forests. Often it is on old sand dunes and near mangroves. It can tolerate being flooded with salty water. Adelaide Botanical Gardens.

Found in:

Asia, Australia, Fiji, India, Indochina, Indonesia, Malaysia, Pacific, Papua New Guinea, PNG, Sri Lanka, Thailand, Timor, Tonga,

Use

The fruit is eaten.

Cultivation

Plants can be grown from seed or cuttings. Plants can be kept bushy by regular pruning.

Production

Plants flower in February to September and fruit April to July.

Nutritional Values

Clerodendrum inerme

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Lamiaceae

Common names

Bunga pagoda, He bao hua, Bakan,

Scientific name

Clerodendrum japonicum

Edible portion

Flower, Leaves,

Description

A shrub. It loses its leaves during the year. It grows about 2 m high. The leaves are opposite. They are 5-17 cm long by 3.5 -18 cm wide. They are broadly oval. The base is heart shaped and taper towards the point. It has small rounded teeth around the edge. The flowers are red and in large spreading panicles. The fruit are round. They become black when ripe. They have a red outer covering.

Distribution

A tropical plant. It grows up to 1600 m altitude in Nepal. It grows in valleys, open spaces and in forests.

Found in:

Asia, Burma, China, Indochina, Indonesia, Myanmar, Nepal, Timor,

Use

The young leaves and shoots are cooked as a vegetable or pickled.

Cultivation

Plants are grown by seeds or stem cuttings.

Production

Nutritional Values

Clerodendrum japonicum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

Coconut,

Arecaceae



Scientific name

Cocos nucifera

Edible portion

Nut, Sap, Cabbage, Nut milk, Apple, Palm heart,

Description

A palm with an unbranched trunk. The trunk has ring-like leaf scars along it. At the base it is swollen and surrounded by a mass of roots. They grow to about 25 m tall. Dwarf varieties have been produced. The fronds are 2-6 m long. They are divided along the stalk into strap shaped leaflets. The leaflets are 60-90 cm long. They are narrow and tapering. Clusters of large fruit develop beneath the fronds. Male and female flowers are separate on the one stalk. Female flowers are near the base. Flowers are cream. The flowers are covered by boat shaped bracts. About 10-12 fruit/stalk is a good crop. Leaves are up to 5 m long. Fruit can be 25 cm across. The fruit are fibrous. The hard shell inside is filled with coconut milk and the white copra layer.

Distribution

A tropical plant. Mainly in coastal areas but occasionally up to 1000 m in the tropics. In Fiji coconut palms rarely fruit above 400 m altitude. Temperatures of 27°-32°C are best with a daily range of 5-7°C. They need a minimum temperature of over 18°C to bear fruit. They need over 1000 mm of rain/year preferably 1500 mm. Soils need to be well drained. It requires plenty of sunlight. Sunlight of 1,800 hours per year gives good growth. It is salt tolerant. It can tolerate soils with pH between 5-8. In Nepal plants grow to 500 m altitude. Coconuts are normally confined to within 26° of the equator. It suits hardiness zones 12.

Found in:

Africa, Andamans, Asia, Australia, Bangladesh, Brazil, Burma, Cambodia, Cameroon, Caribbean, Carolines, Central Africa, Central America, China, Cocos Island, Congo, Costa Rica, Cuba, Dominica, Dominican Republic, East Africa, Ecuador, Fiji, French Guiana, Ghana, Guam, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Ivory Coast, Jamaica, Kenya, Kiribati, Madagascar, Malawi, Malaysia, Marianas, Mexico, Mozambique, Myanmar, Nepal, Nicaragua, Nigeria, North America, Pacific*, Pakistan, Palau, Papua New Guinea, PNG, Peru, Philippines, Samoa, Senegal, Seychelles, Sierra Leone, Singapore, Solomon Islands, South Africa, Southern Africa, South America, Sri Lanka, Suriname, Tahiti, Taiwan, Tanzania, Thailand, Timor

Use

The liquid of fresh nuts is drunk.
The flesh is eaten, and the "apple" in sprouting nuts is eaten.
The flesh is grated and used in cooking as "coconut" milk.
The young shoots at the top of the palm can be eaten. This kills the palm. It is fried or added to curries.
The sap from the flower stalk can be tapped for the sugary juice.

Cultivation

Seeds should be selected from regular bearing palms that produce more than 80 nuts per year. Selected nuts are sprouted in a nursery, then planted out. Seeds that have not germinated within 3 months are usually rejected. Seedlings are ready for transplanting when they have 3-4 leaves (about 1 year). The nut should be planted in a hole 0.6 x 0.6 m. A spacing of about 7 -8 m is suitable. Temperatures need to be above 15°C for nuts to germinate.

Production

Early germinating nuts, give early production in the field. They can commence production after 6-8 years. The best yields are often produced between 12 and 60 years of age. Trees can live for 100 years. Palms can produce 15-100 nuts per year. Fruit take about 1 year to be mature. Tapping the flower stalk can give 1 kg sap/day for 6 months.
For palm hearts plants are put at a close spacing of about 2 m and are ready to harvest in 2 years.

Nutritional Values

Cocos nucifera

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
flesh dried	12.2	2429		6.6				
milk	84.9	1004		3.7		8	1.3	0.4
apple	84	310	74	1.3	0	5.0	0.7	
flesh	80.9	119		1.1			0.2	0.2

Rubiaceae



Common names

Arabian coffee,

Scientific name

Coffea arabica

Edible portion

Seeds, Leaves, Herb, Spice, Leaves - tea,

Description

An evergreen shrub. It grows to 3-5 m high and spreads to 3 m across. The stem is slender and the branches are flexible. The leaves are glossy green, oblong, and tapering towards the tip. They occur opposite each other and have easy to see veins. The leaves are 10-15 cm long by 5 cm wide. The flowering stalks grow from these side branches and have 1-4 flowers. The flowers are white, with 5 petals. They have a scent. Flowers occur in clusters in the axils of leaves. The fruit are green but change to red when ripe. They contain 2 seeds. The seeds are grey-green. They are about 12 mm long. They are flattened on the side where they are pressed together. Coffee seeds are commonly called "beans".

Distribution

It is native to NE tropical Africa. A tropical and subtropical plant. It grows best in rich deep soils in a protected partly shaded position. It is drought and frost tender. It cannot stand flooding. It needs a temperature above 10°C. In West Africa it grows between 1,000-2,000 m altitude. It suits hardiness zones 10-11.

Found in:

Africa, Arabia, Asia, Australia, Bolivia, Brazil, Burundi, Cambodia, Cameroon, Central Africa, Central America, China, Colombia, Costa Rica, Cuba, East Africa, Egypt, Ethiopia, Fiji, Guiana, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Jamaica, Kenya, Malawi, Martinique, New Caledonia, Nicaragua, Niger, Norfolk Island, Pacific, Papua New Guinea, PNG, Peru, Philippines, Sierra Leone, South Africa, Southern Africa, South America, Sri Lanka, Sudan, Suriname, Swaziland, Timor, Tonga, USA, Vanuatu, Vietnam, West Africa, West Indies, Yemen, Zimbabwe,

Use

The seeds are used for coffee. The seeds are roasted and then ground to make a drink.
Coffee extrcat is used for flavouring ice cream, candies, pastries, and soft drinks.
The roasted seeds are eaten as snacks.
The red fruit and leaves are chewed for their stimulant properties.
The leaves are used as a tea substitute.

Cultivation

Plants can be grown from seed. They can also be grown from cuttings. Budding and grafting can also be used. Seeds are planted in a nursery, under shade at first. They take 6-24 months before being ready to transplant. Plants are commonly pruned to produce a densely branched shrub, 3 m high. Two kinds of branches occur. The ones which stick upwards do not bear fruit but can produce buds for new branches. The branches which grow sideways then hang over, are the ones which fruit. Normally, only one, or up to four, of the upright branches are kept and others are pruned out.

Production

Plants normally self pollinate. The fruit develops over 9 months. Coffee bushes bear fruit after 3-4 years and can continue to do so for 50 or 60 years. For best quality the outer layer of the seeds is removed in a pulping machine then fermented while wet for 12-24 hours before drying in the sun and having the parchment removed in a hulling machine. Five kgs of fresh berries would yield about 1 kg of dried clean coffee.

Nutritional Values

Coffea arabica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Rubiaceae



Common names

Coffee (Robusta),

Scientific name

Coffea canephora

Edible portion

Seeds, Spice,

Description

A larger tree than Arabica coffee. It is an evergreen shrub. It grows to 10 m tall and has thicker, larger leaves. It is shallow rooted with most feeding in the top 12 cm of soil. In heavy shade, trees have a more developed trunk. The leaves are 15-30 cm long by 5-15 cm wide, and rounded at the base, with wavy edges. The midrib is prominent underneath the leaf. There are 8-13 pairs of side veins. The leaf stalk is stout and 1-2 cm long. The flower clusters arise in the axils of leaves on sideways growing, fruiting branches. Normally only 3-4 buds develop in each leaf axils and 2-4 flowers develop on each flower stalk. The flowers are white and have a scent. The flowers have almost no stalk. The fruit are round and 0.8-1.5 cm long by 1.2 cm wide. The fruit are green, but turn red when ripe. They turn black and remain on the tree till harvest. 20-40 fruit can develop at each node. The seed are 7-9 mm long, and flattened on the surface which is pressed together.

Distribution

A tropical plant. It grows more in the lowland tropics. It occurs naturally in rain-forests in Africa from 10°S & N of the equator and from sea level to 1,600 m altitude. It grows in areas with rainfall from 1000 to 2,500 mm per year. Temperatures in the range 18°C to 32°C are suitable. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Angola, Benin, Brazil, Cameroon, Central Africa, Central America, China, Congo, Costa Rica, Cote d'Ivoire, East Africa, Fiji, Gabon, Guinea, India, Indochina, Indonesia, Ivory Coast, New Caledonia, Nigeria, Pacific, Papua New Guinea, PNG, Philippines, Sierra Leone, Solomon Islands, Sudan, Tanzania, Timor, Uganda, Vanuatu, Vietnam, West Africa,

Use

The seeds are used for coffee. They are roasted.
In some places the fruit are lightly boiled then chewed.

Cultivation

Many plants are grown from seed. They can be grafted onto other rootstock. If clonal cuttings are used, two different clones need to be planted together to ensure good pollination. Plants are spaced at 3 m by 3 m. Light shade is normally helpful. Several of the upright stems are allowed to grow, because some side branches die off.

Production

Plants are cross pollinated. It takes 9-10 months from flowering to harvest. One harvest is made, picking dried cherries off the tree. These are then dried and hulled.

Nutritional Values

Coffea canephora

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Rubiaceae

Common names

Coffee (Liberian),

Scientific name

Coffea liberica

Edible portion

Seeds - coffee,

Description

An evergreen tree up to 17 m high. There are two kinds of branches, those which grow upwards and those which grow sideways, bearing fruit. The leaves are large and leathery. They are oblong and 15-30 cm long by 5-15 cm wide. They taper to a short tip and the base is wedge shaped. There are 7-10 pairs of side veins. The leaf stalk is stout and 1-2 cm long. The flower cluster is in the axils of leaves. There are usually 1-3 flower clusters in each axil, with 1-4 flowers in each. The flowers are white, star like, and have a scent. The fruit are oval and 2-3 cm long by 2-2.5 cm wide. They are streaked red when ripe, and mature black. The mature seeds are up to 1.5 cm long.

Distribution

A tropical plant. It suits the hot, wet, lowland tropics. It requires heavy rainfall and high temperatures. It benefits from light shade. It can grow on a range of soils, including poor soils. It can grow in temperatures between 18-28°C. It cannot tolerate frost. It grows naturally in Liberia in West Africa.

Found in:

Africa, Asia, Australia, Cameroon, Central Africa, Central America, China, Congo, Costa Rica, Cote d'Ivoire, Fiji, Gabon, Hawaii, India, Indonesia, Ivory Coast, Liberia, Nigeria, Malaysia, Pacific, Papua New Guinea, PNG, Philippines, Sierra Leone, Singapore, Timor, Trinidad, USA, West Africa*,

Use

The seeds make a bitter drink. They are roasted.

Cultivation

Plants are grown from seed. Seed breed fairly true. The seed are put in a nursery and planted out at 4 m x 4 m spacing. Trees are often not pruned. Sometimes the plants are topped at 2 m and excessive side branches removed. Usually fruit are dried on the tree and processed by dry methods. The seeds have a hard shell making it more difficult to remove than Arabican coffee. Plants can also be grown from cuttings or by grafting.

Production

Flowering occurs at irregular intervals but not in flushes. Fruit mature one year after flowering. Fruit of various stages of ripeness are found on the one tree. Plants are cross pollinated.

Nutritional Values

Coffea liberica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

Job's tears,

Poaceae



Scientific name

Coix lachryma-jobi

Edible portion

Seeds, Cereal,

Description

A millet grass. It is a loosely tufted, tall, annual grass. It grows up to 1-2 m high with long slender leaves. The stems have a soft, white, centre inside. The leaves can be 60 cm long and 3-5 cm wide. The sheath of the leaf around the stem, is short. The flower stalk is long and arching. Male and female flowers are in separate spikes on the flowering stalk. The female flowers have a hard covering which changes from green to black to white, as it ripens. Male flowers are small and on top. The seed is like a bead and used for necklaces. They are 1.5 cm long. The seeds are green when young, and turn to pearly grey or purple when mature.

Distribution

A tropical and subtropical plant. It grows wild and semi-cultivated in many areas of Papua New Guinea. It is well suited to grow in swampy places. It grows up to 2000 m altitude in the tropics. It needs a temperature above 13-16°C. It suits hardiness zones 9-11.

Found in:

Africa, Asia, Australia, Brazil, Burma, Cambodia, Cameroon, Central Africa, Central America, China, Congo, Ecuador, Fiji, Ghana, Guinea, Guinea-Bissau, Guyana, Haiti, India, Indochina, Ivory Coast, Japan, Laos, Liberia, Madagascar, Malaysia, Myanmar, Nepal, Nigeria, Pacific, Pakistan, Papua New Guinea, Philippines, PNG, Senegal, Sierra Leone, Singapore, South Africa, Southern Africa, South America, Sri Lanka, Taiwan, Thailand, Timor, Tonga, Trinidad, Vietnam, West Africa,

Use

The seeds are eaten raw. They can be cooked like rice.
The seeds can be crushed to produce a cereal flour.
The seeds are used in soups, porridges, drinks or pastries.
It is used for brewing beer.
The parched seeds are used for a tea-like drink.

Cultivation

Plants are grown by seed. It grows wild in many swampy places. Seed are sown 5 cm deep. Plants are spaced at 40-60 cm.

Production

Seeds are ready to harvest about 5 months after sowing. On poor soils in dry conditions, hollow fruits may be produced. The tough seed shell has to be broken.

Nutritional Values

Coix lachryma-jobi

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Araceae



Common names

Taro,

Scientific name

Colocasia esculenta

Edible portion

Corm, Leaves, Stalks, Vegetable,

Description

This plant has large flat leaves on the end of upright leaf stalks. It grows up to 1 m high. The leaf stalk or petiole joins the leaf towards the centre of the leaf. The leaves are 20-50 cm long. Near the ground a thickened rounded corm is produced. Around this plant their is normally a ring of small plants called suckers. Many different varieties occur. If left to maturity, a lily type flower is produced in the centre of the plant. It has a spathe 15-30 cm long which is rolled inwards. The flowers are yellow and fused along the stalk. There are many named cultivated varieties.
Taro comes in two basic forms. The Dasheen type *Colocasia esculenta* var. *esculenta* and *Colocasia esculenta* var. *antiquorum* or the Eddoe type. The basic difference is the adaptation of the Eddoe type to storage and survival in seasonally dry places, while the dasheen type needs to be maintained in a more or less continuously growing vegetative stage.

Distribution

It is a tropical plant. Taro grows from sea level up to about 2300 m altitude in the tropics. It grows well in humid places. It can stand damp soil and grow under light shade. In Nepal it grows up to 1300 m altitude. It suits hardiness zones 9-12.

Found in:

Afghanistan, Africa, Angola, Asia, Australia, Bangladesh, Barbados, Benin, Botswana, Brazil, Burkina Faso, Burundi, Cambodia, Cameroon, Caribbean, Central Africa, Central African Republic, Central America, Chad, China, Colombia, Comoros, Congo, Costa Rica, Cuba, East Africa, Ecuador, Egypt, Equatorial Guinea, Ethiopia, Fiji, Gabon, Gambia, Ghana, Guatemala, Guiana, Guinea, Guinea Bissau, Guyana, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Italy, Ivory Coast, Japan, Kenya, Liberia, Madagascar, Malawi, Malaysia, Mali, Marianas, Marshalls, Mauritius, Mediterranean, Mozambique, Nepal, Nicaragua, Niger, Nigeria, Norfolk Island, Pacific, Pakistan, Palau, Papua New Guinea, PNG, Peru, Philippines

Use

The corms, petioles and leaves are all edible after cooking.
CAUTION Some varieties burn the throat due to oxalate crystals.

Cultivation

Taro can be planted from cormels or from the top of the central corm. Other sections of the corm could also be used but this is not commonly done. Flowering of taro and seed production can lead to new cultivars. Flowering can be promoted by the use of gibberellic acid.
The general growth pattern is for an increase in top growth, in terms of leaf number, leaf area and petiole length, to continue for about 6 months under tropical lowland conditions then for each of these to decrease and tuber storage to continue to increase. Corm weight increases significantly from 5 to 11 months. Starch content also increases with time but protein content declines over the corm development period.
Taro can be grown under flooded conditions but root rots develop if the water becomes stagnant. For flooded cultivation, the land is cleared, ploughed, cultivated and puddled. The aim is to get a field that is flat with embankments allowing the

Production

Crops mature in 6-18 months. Yields of 5-15 tonnes per hectare are probably average.

Nutritional Values

Colocasia esculenta

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Araceae

Common names

Talas Padang, Rombang, Lumpuy, Lumpoi, Rombang, Kamumu, Khun, Bon, Ok dip, D(oj)e m(uf)ng, M(oon) to,



Scientific name

Colocasia gigantea

Edible portion

Leaves, Fruit, Spice, Petioles,

Description

An erect herb. It is fleshy and produces latex. It grows 2 m tall. It has a tuberous underground stem. The leaves are flattened with the leaf stalk attached to the middle of the lower surface. The leaves have 2 lobes at the base. The leaf stalk is 1.5 m long. It is light green. The leaf blade is oval in outline and 25-120 cm long by 17-35 cm wide. The lobes at the base point downwards and are joined for half their length. The flower is a lily like flower with a fleshy stem and enclosed in a spathe. The tubular part is 3-8 cm long. The fruit is an oblong berry. It is about 1 cm long.

Distribution

A tropical plant. It grows in valley forests, swamps, also cultivated between 100-700 m in China. It suits shady sites. It is often on limestone hills. Adelaide Botanical Gardens. Melbourne Botanical gardens.

Found in:

Asia, Australia, Burma, Cambodia, India, Indochina, Indonesia, Laos, Malaysia, Myanmar, Singapore, Thailand, Timor, Vietnam,

Use

The fruit are used as a flavouring.
They are also eaten as a snack.
The leaf stalks are eaten as a vegetable.
The leaves are also cooked and eaten.

Cultivation

Production

Nutritional Values

Colocasia gigantea

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Rhamnaceae

Common names

Sarunai kayu, Kan-soeng, Peria laut, Peria pantai, Guti, Mayirmanikkan, Beach berry bush, Asian Colubrina,

Scientific name

Colubrina asiatica

Edible portion

Leaves,

Description

A tall shrub 3-7 m high. It tends to climb. The branches are slender and flexible. They are often trailing. The leaves are alternate. The leaves are 5-8 cm long, by 2-3 cm wide. They are oval, and heart shaped at the base and taper to the tip. There are teeth along the edge of the leaf. The leaves are dark green and shiny, with 3 prominent veins. The flowers are in the axils of leaves, and dense. The flowers are 0.4 cm across and greenish. The fruit is 0.8 cm across, and furrowed and somewhat sunken at the top.

Distribution

A tropical plant. It needs a sunny position and well drained soil. It is often found along the seashore.

Found in:

Africa, Asia, Australia, Brunei, East Africa, Fiji, India, Indochina, Malaysia, Pacific, Papua New Guinea, PNG, SE Asia, Southern Africa, Thailand, Timor, Tonga, Vanuatu, Zimbabwe,

Use

The young leaves have been recorded as eaten. They are eaten with fish.

Cultivation

Plants can be grown from seed or cuttings.

Production

Nutritional Values

Colubrina asiatica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Commelinaceae

Common names

Wandering Jew, Spreading Dayflower,



Scientific name

Commelina diffusa

Edible portion

Leaves,

Description

A small leafed, straggling plant, with blue flowers. It continues to grow from year to year. It can grow to 1 m long. The stems are weak. The stem is fleshy, and it roots at the nodes. The leaves are alternate and sword shaped. They are 4-10 cm long. They have short stalks and a stem clasping sheath. The flowers are blue and 2.5-3 cm across. One of the 3 petals is smaller than the others. The seeds have fine patterns on one side. They are angular and about 2 mm long.

Distribution

A tropical plant. It grows in moist places. It occurs from sea level up to about 1600 m altitude in the tropics.

Found in:

Africa, Asia, Fiji, Ghana, India, Ivory Coast, Nigeria, Pacific, Papua New Guinea, PNG, Philippines, South Africa, Southern Africa, Swaziland, Taiwan, Timor, Tonga, West Africa,

Use

The young leaf tips are cooked and eaten.

Cultivation

It grows easily from stem pieces. It prefers poorly drained soil, in open sunny positions, but can grow quite well in shady places. Plants can also be grown from seed.

Production

Nutritional Values

Commelina diffusa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Sparrmanniaceae

Common names

Jute, Bush Okra,



Scientific name

Corchorus olitorius

Edible portion

Leaves, Seeds, Vegetable,

Description

An annual plant. It is upright, branching, and slightly woody. Plants vary in height, shape, leafiness and hairiness. Plants grown for leaves are usually only 30 cm tall. They also have many branches. Leaves are shiny and have leaf stalks. The leaves have teeth along the edge. The tips of the lowest leaves in each side, have long bristle like structures. Small clusters of yellow flowers grow in the axils of the leaves. The fruit are ridged capsules. They can be 7 cm long. These have partitions across them between the seeds. A ripe capsules contains 180-230 seeds. The seeds are dull grey and with four faces and one long point. Each seed has one pale line along it.

Distribution

A tropical plant. It is mostly coastal, below 250 m altitude. Temperatures of 22°-35°C are suitable. It can stand both drought (2-3 weeks) and water-logging, except when young. A well drained soil is best. They require humus-rich soils. A pH of 5.5-7.0 is best, but they can grow in soils with pH up to 8.5. They also need adequate moisture for good leaf production. A rainfall of 1,000 mm is suitable. A high relative humidity (80-90%) is best. It produces seeds when day lengths are short.

Found in:

Africa, Angola, Arabia, Asia, Australia, Bangladesh, Benin, Botswana, Burkina Faso, Burma, Cambodia, Cameroon, Caribbean, Central Africa, Central African Republic, Chad, China, Congo, East Africa, Egypt, Eritrea, Ethiopia, Fiji, France, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Haiti, India*, Indochina, Indonesia, Israel, Ivory Coast, Kenya, Liberia, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mozambique, Myanmar, Namibia, Nepal, Niger, Nigeria, North Africa, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Saudi Arabia, Senegal, Sierra Leone, Solomon Islands, Somalia, South Africa, Southern Africa, South America, Sudan, Swaziland, Syria, Taiwan, Tanzania, Thailand, Timor, Togo, Uganda, USA, Vietnam

Use

The young leaves and stem tops are eaten cooked. (They are slimy unless fried.)
They are also used to make a thick soup.
Leaves can be sun dried, pounded to flour, then stored for a significant time.

Cultivation

Plants grow from seed, and they can be transplanted. Seeds are often broadcast into fine seed beds at the beginning of the wet season. Mixing the small seeds with sand makes it easier to sow them evenly. Often seeds are slow to start growing. This can be overcome by soaking them in hot water. A spacing of 20-30 cm between plants is suitable. For vigorous varieties this could be increases to 45-50 cm. Seeds are saved from pods for re-sowing.

Production

First leaves can be harvested after 5-6 weeks. Tips about 20-30 cm long are picked. Production of edible green tips, is not large. 7-8 kg of leaf tips can be harvested from 3-8 pickings over 3-4 months. Seeds can be collected after 13-15 weeks. If seeds of a particular variety are desired, it is necessary to grow these plants 16 m away from other plants, to avoid cross pollination. Seeds can be stored for 8-12 months in well sealed jars.

Nutritional Values

Corchorus olitorius

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves raw	80.4	244	58	4.5	6410	80	7.2	
leaves cooked	87.2	155		3.4	519 RE	33.0	3.1	0.8

Boraginaceae

Common names

Bird Lime Tree, Clammy-cherry, Lisora, Indian-cherry, Lasoora, Lasora, Bhokar, Chokargond, Anonang, Glue Berry Tree, Bohori,



Scientific name

Cordia dichotoma

Edible portion

Seeds, Leaves, Fruit, Flowers,

Description

A medium sized tree, that loses its leaves at some times of the year. They are 5 to 15 m high. It can grow up to 27 m tall and be 50 cm across in the trunk. The tree has spreading branches. The bark is 2 cm thick and grey. It is deeply cracked. The leaves are alternate, smooth and pointed at both ends. They have 2-3, easy to see, veins. The veins are hairy on the underside. They are 5-8 cm long and 2-4 cm wide. The leaf stalk is 3-4 cm long. The flowers are white or yellow, and borne in flower clusters at the ends of branches. The flower clusters are 1-5 cm across, while individual flowers are 2 mm across. The flowers are orange, and funnel shaped at the base. Male and both sex flowers occur on separate trees. The fruit are yellowish white or pink, and soft but with a hard stone. They are 2 cm across and contain a sticky juice. The fruit is sweet and edible.

Distribution

It is a tropical plant. It grows near rainforests and near the coast. It can tolerate wind and salt spray. It is very sensitive to frost. It requires a well drained soil, in a sunny position. They are common and widely distributed in secondary forest and open places at low altitudes in the Philippines. In Nepal it grows between 300-1400 m altitude. In India is grows in all warmer parts of the subcontinent.

Found in:

Africa, Asia, Australia, Burma, Cambodia, China, Egypt, Fiji, Hawaii, India, Indochina, Indonesia, Japan, Laos, Malaysia, Myanmar, Nepal, New Caledonia, Pacific, Pakistan, Papua New Guinea, Philippines, PNG, Sri Lanka, Taiwan, Thailand, Tibet, Timor, USA, Vanuatu, Vietnam,

Use

The pulpy portion of the fruit is eaten raw. Immature fruit are pickled or eaten in curries.
The seeds are also claimed to be edible, but it is not sure if treatment was needed before eating.
Oil is extracted from the seeds and used in cooking.
The young leaves and shoots are cooked as a vegetable. The flowers are also eaten.

Cultivation

Plants are grown from seed. The seed should be sown fresh. It can also be grown from semi-ripe cuttings.

Production

Plants are fairly slow growing.

Nutritional Values

Cordia dichotoma

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Boraginaceae

Common names

Sandpaper cordia, Cork bush,

Scientific name

Cordia monoica

Edible portion

Fruit, Seeds,

Description

A shrub. It has several stems. It grows up to 6 m tall. The bark is blue-grey. It is fibrous and peels off in strips. The leaves are broad and oval. They are 5-8 cm long. The leaf edges are slightly toothed. The upper leaf surface is like sandpaper to touch. It is softly hairy underneath. The leaf stalks is 2 cm long. The small branches, leaf stalks and flower stalks are covered with dense rusty hairs. The flowers are pale yellow. They have a sharp smell. They occur in clusters near the ends of branches. Each flower in the shape of a tube and is about 1 cm across. The fruit are oval and pointed. They are yellow-orange and soft when ripe. They are 2 cm long and held in a case of leaves covering about one third of their length. The pulp of the fruit is edible. There is a single seed inside.

Distribution

A tropical plant. It grows in wet forest as well as in low lying grassland. In East Africa it grows from sea level to 2,200 m altitude.

Found in:

Africa, Botswana, Burundi, Congo, East Africa, Ethiopia, India, Kenya, Mozambique, Namibia, Somalia, South Africa, Southern Africa, Sri Lanka, Sudan, Swaziland, Tanzania, Timor, Uganda, Zambia, Zimbabwe,

Use

The fruit are eaten fresh. They are peeled and the seed discarded.

Cultivation

Plants can be grown from seed. Seed can be collected from fruit which fall to the ground. The seed should be dried carefully. Soaking seed for 6 hours helps them to grow.

Production

The plant is slow growing.

Nutritional Values

Cordia monoica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Boraginaceae

Common names

Sea trumpet, White bush apple, Kou, Tou, Kanau, Nawanawa, Cheng hua po bu mu, Marer, Anau, Beach cordia, Island walnut, Galu, Ikoak,

Scientific name

Cordia subcordata

Edible portion

Fruit, Seeds,

Description

A spreading shrub or tree, 2-15 m high. It spreads to 3-10 m across. The stem is erect and the bark is grey and slightly rough. It has cracks along its length. The leaves are broad and oval. They are 8-20 cm long and 5-15 cm wide. Sometimes they have 2 lobes near the base, making the leaf heart-shaped. On the lower surface of the leaf, there are fine hairs near the veins. The leaves are glossy green on top and paler underneath. The leaf stalks are long (3-5 cm). The flowers are orange. They form a tube 3.5-5 cm long and with 5-7 broad lobes which spread to 3-4 cm across. The flower heads are made up of 6 -20 flowers, and they occur at the ends of branches. The fruit is 2-3 cm long, by 1.5-2.5 cm across. It is green or yellow. It hangs down and turns brown when ripe. There is a single seed inside, and it is 2-3 cm long. The fruit has a beak at the tip and an apple like texture, but fairly hard.

Distribution

A tropical plant. It grows near beaches, above high tide level, in vine thickets. It is usually from sea level up to 30 m altitude. It can grow up to 150 m altitude. It needs well drained, moist soils, in an open sunny position. It needs full sun. It can grow on sandy and clay soils as well as limestone rocky places. It does best with a pH of 6.1-7.4. It can grow on saline soils. It is drought and frost tender. It suits hardiness zones 10-12.

Found in:

Africa, Andamans, Asia, Australia, Burma, China, Comoros, East Africa, Fiji, Guam, Hawaii, India, Indochina, Indonesia, Kenya, Kiribati, Madagascar, Malaysia, Mozambique, Myanmar, New Caledonia, Pacific, Palau, Papua New Guinea, PNG, Philippines, Polynesia, Samoa, Solomon Islands, Southern Africa, Thailand, Timor, Tokelau, Tonga, Tuvalu, USA, Vanuatu, Vietnam, Yap,

Use

The fruit is eaten raw. It is also cooked and used as a vegetable.
The seeds are eaten.
The flowers are pickled or eaten as a vegetable.

Cultivation

Plants are grown from seed. The seed needs to be sown fresh. Whole fruit can be sown or the ends can be clipped to quicken the germination. Hardened or woody fruit can be soaked for 24 hours before sowing. Seeds normally germinate in 3-4 weeks. Seedlings can be planted into the field after 6-8 months.

Production

Young plants can grow rapidly. In Australia the tree flowers from February to March and fruits March to May.

Nutritional Values

Cordia subcordata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	70	292	70	3.7	459	10.0	1.5	5.0

Laxmanniaceae



Common names

Good luck tree, Ti tree,

Scientific name

Cordyline fruticosa

Edible portion

Leaves, Tubers, Fruit, Heart, Roots,

Description

An erect, suckering, clump forming, bush. It grows 2-5 m high. It reaches 1-2.5 m across. Normally the stems don't branch. Older trees form branches higher up. The stems are woody and covered with leaf scars. Often the leaves taper at the base, and have a bluntly pointed tip. The leaf petiole is broad and clasps the stem. It is short and has a channel along it. The leaves are strap shaped, and occur in a crown at the top and clustered in spirals near the end of the stem. The leaves are 75 cm long by 15 cm wide. The leaves are green. Some kinds have leaves with yellow or red stripes. They are 30-60 cm long. The flowers are 0.8 cm long and purple. It produces white to purple flowers in loose panicles, which are 30-60 cm long. The fruit are bright red berries. They are 8-12 mm across.

Distribution

A tropical plant. It needs a temperature above 13°C. Tropical and subtropical. It grows from sea level up to 2600 m altitude. It grows in rainforests. It likes moist places. It suits hardiness zones 10-12.

Found in:

Asia, Australia, Central America, China, Cook Islands, Costa Rica, Dominican Republic, Fiji, Haiti, Hawaii, Himalayas, India, Indonesia, Malaysia, New Zealand, SE Asia, Pacific*, Papua New Guinea, PNG, Philippines, Samoa, Solomon Islands, Tahiti, Thailand, Timor, Tonga, USA, Vanuatu, Vietnam, West Indies,

Use

The starchy rhizomes can be used for food. They are baked. They are sweet.
As food, the roots, although edible are rarely used.
The young, unrolled leaf shoots are also eaten, cooked.
The roasted roots can be fermented to make an alcoholic drink. Caution: Alcohol is a cause of cancer.

Cultivation

It is grown from cuttings of the stalk. It can also be grown from seed, suckers or division of the clump.

Production

Nutritional Values

Cordyline fruticosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Arecaceae

Common names

Corypha palm, Buri palm, Gebang palm, Sugar palm, Gewang, Ibus, Silag, Lan phru, Las, buoon cao, Bajur, Bajurgatul,



Scientific name

Corypha utan

Edible portion

Starch, Kernel, Seeds, Cabbage, Sap, Sago, Nut,

Description

The largest and most stately member of the palm family. It is tall and single stemmed. It grows to 20 m high. The trunk can be 1 m across. The bark is smooth, grey, and has rings around it. The leaves are very large and fan shaped. The leaves are rounded, and the blade can up to 3 m long by 3 m across. The leaf is deeply divided from about half way up, into many pointed lobes. The leaf stalk is 2-4 m long. The leaf stalks and leaf edges are armed with very hard, large, black spines. The flowers are small and cream-green. They are about 5-8 mm across. They occur in groups of 6-20, in flower clusters 2-5 m long near the top of the palm. The fruit are smooth and almost round. They are 2-3 cm across. They are green, and turn brown when ripe. The fruit contain a single, hard-shelled, seed. The palm flowers once, then dies.

Distribution

It is a tropical plant. It grows along the edges of tidal rivers. They are often on heavy soils on flood plains which flood. It grows best with access to ground water. They are very common and widely distributed at low and medium altitudes from northern Luzon to Sulu in the Philippines. It is frost tender when young. It needs a warm sunny position and a well drained soil. It suits hardiness zones 11-12.

Found in:

Asia, Australia, Bangladesh, Burma, Fiji, India, Indochina, Indonesia, Malaysia, Myanmar, Pacific, Papua New Guinea, Philippines, PNG, South America, Sri Lanka, Timor, Venezuela, Vietnam,

Use

The starch extracted from the stem is edible.
The palm cabbage or bud can be eaten raw or cooked.
The sap can be collected from the flower stalk and made into sugar or toddy.
The kernels of the young fruit can be eaten raw.

Cultivation

Plants are grown from seed. Seed can take 18 months to germinate. Fresh seed germinate more quickly. They can germinate in less than one month. Seedlings are difficult to transplant.

Production

Seedlings are very slow growing. After 40-50 years it flowers, then the leaves and palm die. So each plant can only have its sap tapped once in a lifetime.

Nutritional Values

Corypha utan

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Asteraceae

Common names

Thickhead, Okinawan spinach,



Scientific name

Crassocephalum crepidioides

Edible portion

Leaves, Tubers, Vegetable,

Description

A herb. An upright, annual plant about 1 m tall. The stem is thick and soft. The leaves are alternate and 16-18 cm long. The leaves have lobes, and have teeth around the edge. Sometimes the young leaves have a purple edge. The leaves often droop. A flower is yellow and reddish, and develops at the top, bending over at first, then becoming upright. Fluffy seed heads develop after flowering. The fruit is dark brown, with long, silky hairs at the end. The seeds blow in the wind.

Distribution

A tropical plant. A common weed in Papua New guinea from sea level to over 2500 m. It is more common in wet areas and in garden sites. It also grows in many other tropical countries. It prefers light shade.

Found in:

Africa, Angola, Asia, Australia, Benin, Cameroon, Central Africa, Central African Republic, China, Congo, East Africa, Ethiopia, Fiji, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Hawaii, India, Indochina, Ivory Coast, Japan, Kenya, Laos, Liberia, Madagascar, Malawi, Mauritius, Mozambique, Nigeria, Norfolk Island, Pacific, Papua New Guinea, PNG, Philippines, Samoa, Senegal, Sierra Leone, South Africa, Southern Africa, Sri Lanka, Sudan, Swaziland, Taiwan, Tanzania, Timor, Thailand, Tonga, Uganda, USA, Vanuatu, Vietnam, West Africa, Zambia, Zimbabwe,

Use

The leaves are eaten cooked as a vegetable. They have a sharp but not bitter taste.
The leaves have a smell which does not disappear with cooking.
The roots are eaten with chili sauce or cooked in fish curry.

Cultivation

It grows from seed. It is self sown. Seedlings appear in about 9 days and can be transplanted when 8-12 cm high. A spacing of 25 cm by 25 cm is suitable. Plants are topped when 20 cm high to increase branching. To collect seed, the entire bundle is pulled from the receptacle with one hand, and the hairs removed with the other hand, without letting them mix with the seed.

Production

The first leaf harvest can be made in 6-7 weeks. There can be 5-9 harvests over a 60 day period. Seed can be collected for sowing about 16 weeks after sowing.

Nutritional Values

Crassocephalum crepidioides

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	93.1	76		2.5		10		

Capparaceae

Common names

Sacred garlic pear,



Scientific name

Crateva religiosa

Edible portion

Seeds, Leaves, Flowers, Fruit,

Description

An evergreen or deciduous tree. It grows up to 7-15 m tall and 45 cm across the trunk. The tree spreads to 2-4 m across. The stem is erect and the bark is smooth, with branches low down. The leaves have long petioles, 2-9 cm long. The leaves are divided into 3 leaflets growing from the same point. The leaflets are pointed at the base and have a slender point at the tip. The two halves of the leaflets are unequal in size. The leaflets are 5-27 cm long by 3-10 cm wide. The leaves are light green. The flowers are white, then yellow, turning pale violet and they are large, up to 5-7 cm across. They are borne in large bunches 3-14 cm long. These are near the ends of branches. The fruit is rounded and about 6-15 cm long by 5-9 cm across. They are sausage shaped. The fruit is edible. There are many seeds, which are kidney shaped.

Distribution

A tropical plant. It is native to SE Asia and Australia. It prefers moist soils and an open sunny position. It is drought and frost tender. It can tolerate temporary flooding. Found in waste places near streams and in areas of shrubs, near the sea from northern Luzon to Masbate and Palawan and probably also in Mindanao and Sulu Archipelago in the Philippines. In Nepal it grows to about 1500 m altitude. It needs a temperature above 15°C.

Found in:

Africa, Asia, Australia, Burma, Fiji, Hawaii, India, Indochina, Indonesia, Japan, Myanmar, Nepal, Nigeria, Pacific, Papua New Guinea, Philippines, Polynesia, PNG, Samoa, Solomon Islands, Thailand, Timor, Tonga, Vietnam, Yap,

Use

The fruit are edible.
The tender leaves and buds are boiled and squeezed to lessen the bitterness then cooked as a vegetable or pickled.
The flowers are pickled and eaten.

Cultivation

Plants can be grown from seed. Seed need to be sown while fresh. Plants can be grown from cuttings or root suckers.

Production

A slow growing plant.

Nutritional Values

Crateva religiosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves raw	76.0	293	70	5.9			8.4	

Cucurbitaceae

Common names

Melon, Canteloupe, Honey-dew, Kharbuja, Musk-melon, Trasak srow, Madhupaka, Kharmuj, Mulampazham, Kharbujadosa, Putzakova,

Scientific name

Cucumis melo

Edible portion

Fruit, Seeds, Leaves,

Description

A pumpkin family plant. It is an annual climber with tendrils. It grows to 0.5 m high and spreads to 1.5 m across. The stems are soft and hairy and often angled. The leaves have lobes and often a wavy or toothed edge. They are on long leaf stalks. The leaves are often hairy underneath. The tendrils are not branched. The flowers are yellow and funnel shaped with expanded lobes. The male flowers occur in clusters and are produced before the female flowers. The fruit is round, mostly with a rough or streaky skin. It is green or yellow inside. The fruit is edible. Different kinds of melons occur. Some have a hard warty scaly skin. Others have a network of fine ridges over the surface.

Distribution

A tropical plant. It is not suited to places with high rainfall. They suit hot dry places with a fertile well drained soil. It needs a sheltered sunny position. It is drought and frost tender. A temperature range of 24-28°C is best but much higher temperatures is tolerated. Mostly they are grown below 500 m altitude in the tropics. A pH of 6-6.7 is best. Acid soils are not suitable. It suits hardiness zones 9-12.

Found in:

Afghanistan, Africa, Angola, Arabia, Asia, Australia, Bangladesh, Benin, Botswana, Burkina Faso, Burma, Burundi, Cambodia, Cameroon, Cape Verde, Central Africa, Central African Republic, Chad, Chile, China, Comoros, Congo, East Africa, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Fiji, France, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Iran, Iraq, Israel, Italy, Ivory Coast, Japan, Kenya, Liberia, Madagascar, Malawi, Malaysia, Maldives, Mali, Mauritania, Mauritius, Mediterranean, Mexico, Morocco, Mozambique, Myanmar, Namibia, Niger, Nigeria, North America, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Romania, Rwanda, Senegal, Seychelles, Sierra Leone

Use

The ripe fruit are eaten raw. They are also dried, candied and made into jams, jellies and preserves.
The seeds are sometimes eaten. The seeds are blended with fruit juice to form a drink.
Sometimes the immature fruit are cooked as a vegetable.
The seeds contain an edible light oil.

Cultivation

They are grown from seed. The seeds are planted about 1-4 cm deep. Plants need to be 1-2 m apart. Seedlings can be transplanted when about 10-15 cm high.

Production

Plants are ready 3-4 months after planting. Yields of 20 kg per10 sq m is average.

Nutritional Values

Cucumis melo

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed	7.0	2319	385	15.8				
leaves	85.0	172	41	4.2	72			
fruit	93.0	109		0.5	300	30	0.4	0.2

Cucurbitaceae

Common names

Cucumber,



Scientific name

Cucumis sativus

Edible portion

Fruit, Leaves, Seeds, Vegetable, Seeds - oil,

Description

A pumpkin family plant. It is a hairy annual climber with tendrils and yellow flowers. It grows to 0.5 m high and spreads to 2 m wide. The stem is trailing and has bristles. The leaves are heart shaped and the lobes taper. Leaf shape varies with different varieties. The tendrils are not branched. The flowers are yellow and funnel shaped. They occur in clusters in the axils of leaves. Male and female flowers are separate but on the same plant. Male flowers are normally in groups of 2-3 and develop first and female flowers are borne singly and open later. Fruit are long and often with a slightly lumpy skin. The flesh inside is greenish white. The fruit are edible. The fruit contain many seeds. Fruit 20-100 cm long are called cucumbers and fruit which are much smaller and darker green are called gherkins.

Distribution

A subtropical plant. It occurs from sea level up to at least 2200 m in the tropics. It is a traditional vegetable in the highlands of Papua New Guinea. Protection from wind is needed. It is killed by frost. It needs a temperature above 10°C. In Nepal they grow to 1600 m altitude. It suits hardiness zones 9-11.

Found in:

Africa, Asia, Australia, Bangladesh, Benin, Botswana, Brazil, Britain, Burkina Faso, Burma, Cambodia, Central America, Chad, China, Comoros, East Africa, Egypt, Eritrea, Ethiopia, Fiji, Finland, Gambia, Ghana, Greece, Guinea, Guinea Bissau, Guyana, Haiti, Hawaii, Himalayas, India, Indochina, Indonesia, Iraq, Italy, Ivory Coast, Japan, Liberia, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mauritius, Mediterranean, Mexico, Myanmar, Nepal, Netherlands, Niger, Nigeria, North America, Pacific, Pakistan, Papua New Guinea, PNG, Peru, Philippines, Poland, Romania, Russia, Saudi Arabia, Seychelles, Senegal, Sierra Leone, Solomon Islands, Somalia, Southern Africa, South America, Spain, Sri Lanka, Sudan, Syria, Taiwan, Tajikistan

Use

Usually unripe fruit are eaten raw.
Young stem tops and leaves are edible.
The kernels of the seeds are edible. They are also roasted. The seeds can be pounded and added to other dishes. The seeds can be pressed for oil.
Cucumbers are normally eaten fresh while gherkins are pickled in vinegar.

Cultivation

Batches of 2-3 seeds are normally sown together during the dry season and in new gardens. A spacing of 1 m apart per plant is suitable.

Production

Harvesting can commence 6-8 weeks after sowing. Up to 10 fruit per plant can be produced.

Nutritional Values

Cucumis sativus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit flesh raw	96.4	43		0.6	Tr	8	0.3	0.1

Cucurbitaceae

Common names

Pumpkin, Winter squash, Sitaphal, Lal kumra, Mitha, Kumra, Kaddu, Kadimah, Sitaphal, Parangikayi, Gummadi, Mathan, Kumbalakai, Lal



Scientific name

Cucurbita maxima

Edible portion

Fruit, Leaves, Seeds, Flowers, Vegetable,

Description

A pumpkin family plant. It is a creeping vine with tendrils. It is an annual plant. The stems are soft and round in cross section. The leaves are large and hang loose. They are dark green and kidney shaped. The edges of the leaves are entire. There are large nodes at the base of the leaf. The tendrils are fairly stout and are divided half way along their length into many branches. Male flowers are carried on long upright stalks. The 5 petals are united into a long yellow tube. The female flowers are larger than the male and are fewer in number and carried on shorter stalks. The fruit varies in size, colour and patterns on the skin. They can be round, oval or flattened, with yellow, orange or green skin. The surface can be smooth and rough and warty. The flesh is yellow and edible. The seeds are in the centre. The seeds are white or brown. They are flattened but plump and have a slanting scar at the top. The seeds are edible. (*C. moschata* does not have hairy stems but has fruit with a stalk thickened near where it joins the fruit.) There are a large number of cultivated varieties.

Distribution

A subtropical plant. They are grown throughout the country from sea level to 2400 m altitude. They need a fertile soil. *C. moschata* is better suited to coastal areas. They are frost sensitive but better suited to cooler areas than *C. moschata.* It suits hardiness zones 8-11.

Found in:

Africa, Angola, Asia, Australia, Bangladesh, Benin, Bolivia, Burkina Faso, Burundi, Cambodia, Cameroon, Central Africa, Central African Republic, Chad, China, Colombia, Comoros, Congo, East Africa, Eritrea, Ethiopia, Fiji, Gabon, Gambia, Ghana, Guyana, Haiti, Hawaii, Himalayas, India, Indochina, Ivory Coast, Kenya, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mediterranean, Mexico, Mozambique, Namibia, Nepal, Niger, Nigeria, North America, Pacific, Pakistan, Papua New Guinea, PNG, Paraguay, Peru, Philippines, Rwanda, Seychelles, Senegal, Sierra Leone, Solomon Islands, Somalia, South Africa, Southern Africa, South America, Sudan, Tanzania, Tasmania, Timor, Togo, Uganda, USA, Vanuatu, Vietnam, West

Use

The young leaf tips are eaten cooked.
The fruit can be eaten cooked. They are baked, boiled, fried, steamed or mashed. They are used in pies and cakes.
The seeds are edible, raw or roasted. They are also ground into a meal.
The male flowers are eaten after removing the stamen and calyx.

Cultivation

They are grown from seed. Usually 2 or 3 seeds are planted together in a mound. The distance apart depends on the cultivar. Some kinds are better for leaf tips. It is good to save seed of adapted kinds.

Production

Fruit are ready for harvest after about 3-4 months. Seed can be saved from fruit for re-sowing but as pumpkins cross pollinate different types become mixed.

Nutritional Values

Cucurbita maxima

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds - dry	6.9	2264		24.5	38	1.9	14.9	7.5
fruit	69.6	439	105	1.4				
leaves	88.0	160	38	4.9	260	28	2.5	0.9
flower	88.7	107		1.4	173	14	0.8	0.1

Common names

Cucurbitaceae

Pumpkin, Winter squash,



Scientific name

Cucurbita moschata

Edible portion

Fruit, Leaves, Seeds, Vegetable,

Description

A pumpkin family plant. It is a creeping plant with long creeping stems and softly hairy but without prickly hairs. The stem are rounded or 5 angled and moderately hard. They can grow 15-20 m long. The leaves are large and shallowly lobed and divided like fingers on a hand. Occasionally the leaves have white blotches. They have rounded lobes. They are 20 cm by 30 cm. The leaf stalk is 12-30 cm long. The flowers have male and female flowers separately on the same plant. The fruit stalk is distinctly expanded there it joins the fruit. The fruit are not hard shelled and are dull in colour. The flesh is yellow. Often the flesh has fibres through it. The seeds are plump and white to brown. They separate easily from the pulp of the fruit. The edge of the seed is scalloped and irregular in outline. There are a large number of cultivated varieties.

Distribution

A tropical plant. It suits the wet tropics. It will thrive in humid as well as in very hot climates. A temperature of 18-30°C is best. It can tolerate some shade. It can grow in soils with a pH of 5.5-6.9. In Bolivia it grows up to 2000 m altitude. It suits hardiness zones 8-11.

Found in:

Africa, Angola, Asia, Australia, Bangladesh, Benin, Bolivia, Botswana, Burkina Faso, Burundi, Cambodia, Cameroon, Central Africa, Central African Republic, Central America, Chad, China, Comoros, Congo, East Africa, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Haiti, Honduras, India, Indochina, Indonesia, Ivory Coast, Kenya, Liberia, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mauritius, Mexico, Mozambique, Namibia, Nicaragua, Niger, Nigeria, North America, Pacific, Pakistan, Papua New Guinea, PNG, Peru, Philippines, Rwanda, Senegal, Seychelles, Sierra Leone, Solomon Islands, Somalia, South Africa, Southern Africa, South America, Taiwan, Tanzania, Tasmania, Thailand, Timor, Togo

Use

The fruit are eaten cooked. They are boiled, fried or baked. They can be mashed and used in pies, soups, bread and cakes. They can be dried, ground into flour and used for bread.
The young leaves and flowers are edible
The seeds are eaten roasted. They can also be roasted in salt.

Cultivation

Plants are grown from seed. Seeds can be put in a nursery and transplanted.

Production

Fruit mature in 70-180 days after sowing depending on variety.

Nutritional Values

Cucurbita moschata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	90.0	151		1.0	210	15	0.8	0.1
leaves	93.6	88		3.0	95	10	2.1	

Zingiberaceae

Common names

Turmeric, Besar, Kar-jio, Jiang huang, Sa nwin, Romiet, Wong geung fun, Yu-chin, Wong-keong, Ng-kiew, Haldi, Manjal, Eka, Kunyit, Ukon,



Scientific name

Curcuma longa

Edible portion

Rhizome, Leaves as condiment, Herb, Spice,

Description

A herb in the ginger family which continues growing from year to year. For harvesting it is grown as an annual crop. It grows up to 1 m high and spreads to 50 cm across. The stem is erect. Under the ground it has bright orange fattened stem or rhizome. These have a sweet smell. The main fattened part is about 5-8 cm long by 1-5 cm across. It has thinner branches off it. These are thickened with secondary tubers. The leaves are in a cluster and have leaf stalks that clasp the stem. The leaves are sword shaped and have long leaf stalks. Leaves are long, flat and bright green. The flowers are dull yellow. They occur in clusters of 3-5. Normally the cultivated turmeric is a sterile triploid plant which does not bear fruit.

Distribution

It is a tropical plant. It is widespread in coastal areas up to 1000 m altitude in the Philippines. It needs a hot moist climate and a well drained soil. The soil needs to be loose for good rhizomes. Plants can grow in the shade but the yield is lower. Plants are drought and frost tender. It needs a temperature above 13°C. It suits hardiness zones 10-11.

Found in:

Africa, Asia, Australia, Bangladesh, Brazil, Burma, Cambodia, China, East Africa, Ethiopia, Fiji, India, Indochina, Indonesia, Japan, Kiribati, Madagascar, Malawi, Malaysia, Maldives, Marianas, Myanmar, Nepal, Pacific, Pakistan, Papua New Guinea, Peru, Philippines, PNG, Ponape, Samoa, South America, Sri Lanka, Taiwan, Thailand, Timor, Tonga, Vanuatu, Vietnam, West Africa, Yap, Zambia,

Use

The orange coloured rhizome is used as seasoning especially in curry. They are also used for food colouring. They can be used fresh or boiled and dried.
The young shoots are also eaten.

Cultivation

Plants are normally grown from pieces of the rhizome. Pieces with one or two buds are used. Larger side tubers are best. They are planted 6-8 cm deep. The distance between plants needs to be 30-40 cm. They can also be grown from seed where these occur. The roots are harvested as the leaves start to die back.

Production

Leaves appear above ground in about 4 weeks. The crop is harvested in about 9-10 months when the lower leaves turn yellow. When the roots are harvested they are put in boiling water for an hour. This assists drying and avoids sprouting. They are then dried in the sun. The outer layer is removed by rubbing.

Nutritional Values

Curcuma longa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Cycadaceae



Common names

Chatale, Ceylon sago, False sago, Queen sago, Kama, Paiyindu, Ranaguvva, Fadang, Tutappana, Godduyicalu, Rosaimaro, Pitugo,

Scientific name

Cycas rumphii

Edible portion

Seeds, Leaves, Stem starch,

Description

A palm like plant. The plant can be 3-10 m high. The trunk is not swollen at the base. The trunk is covered with the bases of the old leaves. The leaves have leathery leaflets with a distinct midrib. The leaves are something like feathers. They are 1-2 m long and have leaflets along the stalk. These leaflets are 28 cm long by 2 cm wide. A cone of thick leaves with large seeds is produced at the top. They are separately male and female plants. The seeds are 3-4 cm across with a thin fleshy covering and a starchy centre.

Distribution

A tropical plant. They occur in tropical lowland areas in grassland and forest. They grow from sea level to 700 m altitude. They are more common in places with a dry seasonal climate. It suits hardiness zones 9-11.

Found in:

Asia, Andaman Is, Australia, Burma, Cambodia, China, Fiji, Guam, India, Indochina, Indonesia, Malaysia, Myanmar, New Caledonia, Pacific, Pakistan, Palau, Papua New Guinea, PNG, Philippines, SE Asia, Solomon Islands, Sri Lanka, Thailand, Timor, Vietnam,

Use

The pith is processed to extract the starch during times of food shortage.
The seeds are sometimes eaten after treatment by slicing, fermenting for 2 weeks and then cooking. They can be used for flour.
The very young leaves are cooked and eaten in Malaysia.
CAUTION The young leaves are poisonous to cattle. The seeds are poisonous unless treated. They contain a toxic

Cultivation

They can be grown from seeds. Plants, especially damaged ones produce suckers.

Production

It is a slow growing plant. Plants for sago need to be 7 years old and not to have flowered.

Nutritional Values

Cycas rumphii

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

fern,

Thelypteridaceae



Scientific name

Cyclosorus interruptus

Edible portion

Heart, Fronds,

Description

A medium sized fern. It grows 0.5-1.6 m high. It forms extensive spreading patches. The rootstock is creeping and has many branches. The fronds are erect, leathery and dark green. They can be 1 m long. The segments of the fronds are lobed and sword shaped. They are largest at the base of the frond. The largest leaflets are 8-15 cm long by 1-1.8 cm wide. They are leathery. There are hairs on the veins underneath the leaf. The stalk has papery scales on it. The fruit spot of spores are under the leaf in a zigzag line along the edge of the leaf.

Distribution

A tropical plant. It grows in swamps. It can grow in wet clay soil and sunny locations. It can stand frost. In Papua New Guinea it grows from sea level to 1,500 m altitude but mostly it is at low altitudes below 50 m. Geelong Botanical Gardens.

Found in:

Africa, Asia, Australia, Indochina, New Zealand, Pacific, Papua New Guinea, PNG, South Africa, Southern Africa, Swaziland, Timor, Vietnam,

Use

The young growing point and young fronds have been recorded as eaten.

Cultivation

It can be grown from division of the rhizome or from spores.

Production

Nutritional Values

Cyclosorus interruptus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Poaceae

Common names

Comb fringe grass, Coast Button Grass,

Scientific name

Dactyloctenium aegyptium

Edible portion

Seeds, Cereal, Rhizome,

Description

An annual grass. The stems are slender. They can lie along the ground. These can form roots at the nodes. They can have runners and form mats. It is 15-60 cm high. The edges of the leaf sheaths have small hairs. The leaf blades are flat and 5-20 cm long by 0.2-0.6 cm wide. The surfaces are lumpy/hairy. It tapers to the tip. The flowers spread like fingers on a hand. There are 2-9 flower stalks. They are long and narrow. They often spread out horizontally. The spikes are on one side of the stalk. The tip is bare. The seed grains are about 1 mm across.

Distribution

A tropical plant. It grows in disturbed weedy places especially on sandy soils in S China. It grows in tropical to warm temperate regions. It grows on clayey, sandy or black soil along the borders of ponds, swamps and bogs. In West Africa it grows from sea level up to 2,000 m altitude. It grows in alkaline and salty soils. It grows in areas with an annual rainfall between 100-1,580 mm.

Found in:

Afghanistan, Africa, Angola, Argentina, Asia, Australia, Bahamas, Bahrain, Bangladesh, Benin, Bolivia, Botswana, Brazil, Burkina Faso, Burma, Burundi, Cameroon, Cape Verde, Central Africa, Central African Republic, Central America, Chad, China, Colombia, Congo, Costa Rica, Cuba, Cyprus, Djibouti, East Africa, Ecuador, Egypt, Equatorial Guinea, Ethiopia, Fiji, Gabon, Gambia, Ghana, Greece, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Hawaii, Honduras, India, Iran, Iraq, Israel, Italy, Ivory Coast, Jamaica, Kenya, Kuwait, Lebanon, Liberia, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mauritius, Mediterranean, Mexico, Mozambique, Myanmar, Namibia, Nepal, New Caledonia, Nicaragua, Niger, Nigeria, North

Use

The seeds are husked then boiled into a porridge.
The rhizome or runners are eaten raw.

Cultivation

Production

Nutritional Values

Dactyloctenium aegyptium

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds	11.4	1438	344	15.7				

Amaranthaceae

Common names

Tokoi, Latman, Gola-mohani, Gaulmauni, Monbir, Rangoli-lota, Kala-loari,



Scientific name

Deeringia amaranthoides

Edible portion

Leaves,

Description

A small shrub or climber up to 5 m tall. The stem is woody and it branches. Young shoots are slender and smooth. The leaves are alternate and oval or sword shaped. They are 10 cm long and 2-4 cm wide. They are drawn out to a long point and are bright green with a thin texture. The flowers occur in slender spikes up to 25 cm long. These are in the axils of the upper leaves. Flowers are 0.4 cm across and greenish white. Flowers contain both sexes. Seeds are about 1.2 mm across, smooth and black. They are inside a bright red berry which is carried in clusters on long slender spikes. The fruit are 0.5 cm long with 3 furrows long it.

Distribution

A tropical plant. It occurs in the Sepik, Madang, Morobe and Central Provinces in Papua New Guinea. It is often near forest edges near creeks in the rainforest. It occurs up to 1200 m altitude. This plant is also used as food in Fiji, Indonesia and Taiwan. It needs a well drained humus rich soil. It needs a sheltered position and partial shade. It is drought and frost tender.

Found in:

Asia, Australia, Bhutan, China, Fiji, India, Indochina, Indonesia, Laos, Malaysia, Nepal, Pacific, Pakistan, Papua New Guinea, PNG, Solomon Islands, Taiwan, Thailand, Timor, Vietnam,

Use

The young leaves are eaten.

CAUTION This plant is suspected of poisoning cattle.

Cultivation

It grows wild. Plants are grown from seed. The seed need to be sown fresh. Plants can also be easily grown from cuttings.

Production

Nutritional Values

Deeringia amaranthoides

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Poaceae

Common names

Giant bamboo, Zhu Sun, Buloh Betong, Sun, Soon, Bitoong Bamboo, Awi bitung, Buluh batung, Buloh panching, Bukawe, Hok, Phai-tong,



Scientific name

Dendrocalamus asper

Edible portion

Shoots,

Description

A very large densely tufted bamboo. It is a woody grass. It forms large groves. The culms or stems can be 20-30 m high. The clumps can spread 12-24 m wide. The stalks are 15-20 cm across. They are covered with fine velvety brown hairs when young. The internodes can be 10-20 cm long lower down and 30-50 cm long higher up. The nodes are swollen. The lowest nodes have many aerial roots. The nodes in the middle and higher have branches. The culm sheath is 20-40 cm long by 20 -25 cm wide. The leaf blade is 30 cm long by 2.5 cm wide.

Distribution

A tropical bamboo. In tropical Asia it grows from sea level to 1500 m altitude. It does best between 400-500 m altitude. It grows best on heavy soils with good drainage. It is found in Makiling Forest in Laguna in the Philippines at lower elevations and also in Mindanao.In the Cairns Botanical Gardens. It suits hardiness zones 9-12.

Found in:

Africa, Asia, Australia, Benin, China, Congo, East Africa, Ghana, India, Indonesia, Kenya, Laos, Madagascar, Malaysia, Pacific, Papua New Guinea, PNG, Philippines, SE Asia, Singapore, Thailand, Timor, Vietnam,

Use

The tender shoots are eaten as a vegetable or pickled in vinegar or salted. The shoots are harvested before they emerge from the soil.
The shoots have good canning quality.

Cultivation

It can be grown from rhizomes, culm or branch cuttings. The spacing is 5-10 m apart. Mulching is essential to produce young shoots.

Production

The shoots emerge in the rainy season. They develop to their full height in one year. A good healthy clump can produce several shoots each year. A good clump with 10 culms can produce 60 shoots in one year. The edible portion of young shoots is 5.4 kg before peeling and 1.8 kg after peeling. A well established plantation can produce 10 tonnes/ha/yr or edible shoots.

Nutritional Values

Dendrocalamus asper

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
shoots		72		2.5				

Urticaceae

Common names

Gympie stinger, Mulberry-leaved Stinger, Stinging bush,

Scientific name

Dendrocnide moroides

Edible portion

Fruit,

Description

A shrub up to 4 m high. The leaves are simple and 11-28 cm long. Both sides of the leaves have stinging hairs. Plants are separately male and female. The fruit are 1.6 cm long by 1.8 cm wide. They occur in bunches in the axils of leaves. The colour can be white or pink. There are several seeds inside. The seeds are 1-2 mm across. The fruit is edible once the stinging hairs have been removed.

Distribution

A subtropical plant. It grows naturally in rainforest in Queensland and New South Wales in Australia. It is best in a rich, well-composted soils. It grows in an open, sunny position. It is damaged by frost and drought.

Found in:

Australia, Timor,

Use

The hairs sting badly making eating the fruit very difficult.

Cultivation

Plants can be grown by seed or cuttings.

Production

Nutritional Values

Dendrocnide moroides

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Daun buaya, Horse Bush, Chillagoe Pea, Sna hua jia mu dou,

Scientific name

Dendrolobium umbellatum

Edible portion

Description

A small shrub. It grows 1-4 m tall. The leaves have 3 leaflets. The leaves are 5-7 cm long. The leaflets are oval with silky hairs underneath. The leaflets are 3-5 cm long by 1.5-3 cm wide. The pea like flowers are white. They are 1 cm across. They are in the axils of leaves. The fruit is a pod 1-2 cm long by 0.5-0.8 cm wide. It does not split open.

Distribution

A tropical plant. It needs well drained soil. It needs a sunny position in the drier tropics. It grows near sea shores. It grows on sandy soils and also grows on soils with high pH. It is drought tolerant.

Found in:

Africa, Asia, Australia, Burma, East Africa, India, Indochina, Indonesia, Malaysia, Myanmar, Pacific, Papua New Guinea, PNG, Sri Lanka, Thailand, Timor, Vietnam,

Use

Cultivation

Plants can be grown from treated seed.

Production

It can grow quickly.

Nutritional Values

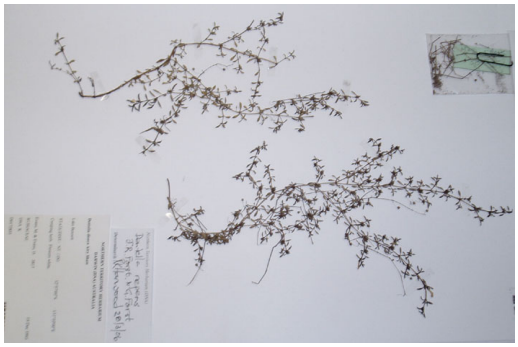
Dendrolobium umbellatum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Rubiaceae

Common names

Bunga karang,



Scientific name

Dentella repens

Edible portion

Leaves,

Description

A spreading annual herb. It lies along the ground and spreads 0.5 m wide. The stems root at the nodes. The leaves are 0.6-1 cm long by 0.2-0.3 cm wide. They are bright green. The flowers are about 1 cm across and like tubes. They are white and grow in the axils of leaves. They occur singly and are without stalks. They have 5 lobes. The fruit is a round capsule which is green.

Distribution

A tropical plant. It suits tropical and subtropical locations. It grows along stream banks and flood plains near coasts in northern Australia. It needs an open sunny position.

Found in:

Asia, Australia, India, Malaysia, Polynesia, SE Asia, Timor,

Use

Cultivation

Plants are grown from seed or cuttings.

Production

Nutritional Values

Dentella repens

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Three-flower beggarweed,



Scientific name

Desmodium triflorum

Edible portion

Leaves,

Description

A prostrate herb which forms mats. It can re-grow each year or continue growing from year to year. The plant can be 10-20 cm tall. The stems are 8-20 cm long. The stems are much branched and covered with yellow-brown hairs. The plant can form roots at the nodes of the stem. The leaves have 3 leaflets. These are oblong and 0.4-1.4 cm long by 0.4-1.2 cm wide. They can be hairy underneath. The leaf stalk is 0.4-1.1 cm long. There are normally 1-3 flowers in the axils of leaves. They are about 5 mm long. The petals are blue, purple or red. The fruit is a pod 1.2-1.8 cm long and with 2-5 segments. These are like a half circle in shape. One edge of the pod is indented.

Distribution

A tropical plant. It grows in drier areas. In Papua New Guinea it grows from sea level to 1110 m altitude.

Found in:

Africa, Asia, Australia, Belize, Burma, Central America, China, Colombia, Fiji, Haiti, Honduras, India, Indochina, Indonesia, Malaysia, Myanmar, Nepal, New Caledonia, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Samoa, South America, Taiwan, Thailand, Timor, Vietnam,

Use

The leaves are eaten as a vegetable.

Cultivation

Production

Nutritional Values

Desmodium triflorum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Dichapetalaceae

Common names

Scientific name

Dichapetalum timoriense

Edible portion

Fruit, Leaves,

Description

A slender straggly shrub. It can also be a climber. The stems are 3-5 cm across. The young branches are covered with soft rusty coloured hairs. The leaves are 7-18 cm long by 3-10 cm wide. The young leaves are edible. Flower clusters are in the axils of leaves. The flower clusters are 2-4 cm long with flowers about 0.4 cm long. They are dull and hairy. Flowers can be of one or both sexes. Fruit are 1.5-2.5 cm across and pear-shaped. They are yellow or golden brown. They contain 1-3 seeds.

Distribution

It is a tropical plant. It does best in a well drained soil and a partly shaded position.

Found in:

Asia, Australia, Indonesia, Malaysia, Pacific, Papua New Guinea, PNG, Timor,

Use

The young leaves and fruit are eaten.
CAUTION: The leaves are poisonous.

Cultivation

Plants can be grown from seed. They can possibly also be grown from cuttings.

Production

Nutritional Values

Dichapetalum timoriense

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Marabou Thorn, Sickle bush,



Scientific name

Dichrostachys cinerea

Edible portion

Seeds, Pods, Fruit, Gum,

Description

A shrub or small acacia like tree. It grows 5-6 m high in dry areas and 12 m high in wetter places. The stems are often twisted and twined together. The side branches form spines. It loses its leaves during the year. The leaves are compound. There are 4-13 pairs of stalks each with 27 pairs of leaflets. The leaflets are narrow and 10 mm long by 3 mm wide. They are dark green and glossy above but dull underneath. The flowers are in spikes in the axils of leaves. Half the flower spike is sterile flowers and the other half are fertile. The flower spikes hangs downwards. The fruit is a cluster of pods. Each one is 10 cm long by 1 cm wide. They are twisted.

Distribution

A tropical plant. It is more common at low altitudes. In East Africa it grows between sea level and 1,700 m altitude. It grows on a range of soils in wooded grassland. It grows in the Sahel. It can form thickets on poor soils. It will grow in most well-drained soils. It needs an open sunny position. It is damaged by frost but can tolerate some drought. It can grow in salty soils.

Found in:

Africa*, Angola, Australia, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, China, Congo, East Africa, Egypt, Ethiopia, Gambia, Ghana, Guinea-Bissau, India, Ivory Coast, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mozambique, Namibia, Niger, Nigeria, Pakistan, Rwanda, Sahel, Saudi Arabia, Senegal, Sierra Leone, Somalia, South Africa, Southern Africa, Sri Lanka, Sudan, Swaziland, Tanzania, Timor, Togo, Uganda, West Africa, Yemen, Zambia, Zimbabwe,

Use

The fruit and seeds are eaten.

Cultivation

They can be grown from seed. The seed needs treatment before sowing. Hot water is poured over the seeds and left to soak for 24 hours before planting. Seeds germinate readily.
Plants can be grown from root cuttings.

Production

It grows slowly.

Nutritional Values

Dichrostachys cinerea

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Gleicheniaceae

Common names

Scientific name

Dicranopteris linearis

Edible portion

Root,

Description

A fern. It has a stout creeping rhizome or underground stem. It grows 2 m high and spreads 1.5 m wide. The fronds form dense thickets. The fronds have 25-60 pairs of narrow segments.

Distribution

In Bangladesh it grows in hilly areas in full sunlight or light shade. It forms dense patches. It is best in moist, well-drained peaty soils. It needs a protected position. It is damaged by frost or drought.

Found in:

Africa, Australia, Asia, Bangladesh, India, Malawi, Mozambique, New Zealand, South Africa, Southern Africa, Swaziland, Taiwan, Timor, Zambia, Zimbabwe,

Use

It is also used for making salt.

Cultivation

Plants can be grown by spores or division.

Production

Nutritional Values

Dicranopteris linearis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Dilleniaceae

Common names

Lesser-flowered dillenia, Karmal, Tanatri, Sahn-chang, Karaola, Aggai, Kallai, Karkotta, Chinnakalinga, Ravundana, Naytekku, Kanigala,

Scientific name

Dillenia pentagyna

Edible portion

Fruit, Flowers,

Description

A tree 6-7 m tall. The twigs are twisted. The bark is grey and smooth. The leaves are 35-53 cm long by 12-30 cm wide. They fall off during the year. The flowers appear before the leaves. The flowers are yellow. The fruit are round. The fruit is succulent.

Distribution

A tropical plant. In Nepal it grows up to 1200 m altitude. It grows in open places in the foothills.

Found in:

Asia, Bangladesh, Cambodia, China, India, Indochina, Indonesia, Nepal, Sri Lanka, Thailand, Timor, Vietnam,

Use

The ripe fruit are edible but not greatly appreciated. They are used for jam.
The flower buds and young fruit are eaten raw or pickled.

Cultivation

Plants are grown from seed.

Production

Nutritional Values

Dillenia pentagyna

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Sapindaceae

Common names

Longan, Mien, Nhan, Lamyai, Laam-yai, Ihau, Loong narn, Mora, Lam-yai, Longyan, Dragon's eye, Lungan, Mata kuching, Ashphal, Wumb,



Scientific name

Dimocarpus longan

Edible portion

Fruit, Leaves - tea,

Description

A tree up to 12-40 m high with a low trunk and spreading branches. The tree has a rounded crown. It keeps its leaves throughout the year. The trunk can be 80 cm across. There can be buttresses 2 m tall. The bark is corky. The twigs have 5 faint grooves. The leaves are 3-45 cm long by 1.8-20 cm wide. The leaves have petioles and six to nine leaflets. Leaflets are up to 12 cm long. Young leaflets are often red before turning green. The flowers occur in upright clusters. These are 8-40 cm long. They are produced on new growth. The flowers are small and reddish-brown. A progression of male, female and hermaphrodite flowers occur. Flowers are pollinated by insects. The fruit is similar to a litchi and about 2.5 cm across. They are yellow-brown when mature and with a pebbly surface. They occur in clusters of 10 to 80. The flesh or aril is white and sweet. The seed is small, round and brownish-black. There are several named cultivated varieties.

Distribution

A tropical plant. It will grow in poorer soils and colder conditions than a litchi. It can stand frost and needs a period of cool temperature to fruit well. So they suit a subtropical to warm temperate climate, but will also grow in the lowland tropics. The chilling requirement is less than litchi which means it will fruit in more tropical areas. It does best with temperatures between 19 -26°C. They can tolerate wind but drying winds at flowering affect fruit set. Excessive rainfall during flowering reduces fruit set. It suits monsoonal regions with a distinct wet and dry season. They can tolerate flooding for a few days. A pH of 5.5-6 is best. It suits hardiness zones 11-12.

Found in:

Asia, Australia, Brazil, Burma, Cambodia, China*, Hawaii, India, Indochina, Indonesia, Laos, Malaysia, Myanmar, North America, Pacific, Papua New Guinea, Philippines, PNG, Singapore, South America, Sri Lanka, Taiwan, Thailand, Timor, USA, Vietnam,

Use

The fruit is eaten raw or cooked.
They can be dried and stored or preserved canned in syrup.

Cultivation

Seedlings do not produce true to type and take up to 20 years to fruit. So air layered or grafted plants are used and these fruit in 3-4 years. For air layering, mature shoots about 2-3 cm across are chosen which do not have active vegetative growth. A ring is cut around the twig 50 cm from the tip removing the bark and soft wood. A plastic sleeve is put over the twig and tied below the cut ring. Then peat moss or rooting mix is filled into the sleeve and this is tied off above the ring. When roots have formed the twig is cut off and planted. Cuttings and budding can also be used. Spacing needs to be 5-8 m apart. Deep rooting needs to be encouraged by good site preparation. This stops trees being blown over. Wind protection is essential. Although flowers need to be cross pollinated, this can be done between flowers on the same tree as flowers develop at different times. Very little pruning should be done. Fruit need to ripen on the tree. They do not ripen further after harvest.

Production

Seedlings grow slowly at first, but then grow more rapidly. Up to 40 to 55 kg of fruit per tree are possible. Fruit can be stored for 6 weeks at 5°C when covered. Trees can live for 400 years.

Nutritional Values

Dimocarpus longan

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit - raw	82.0	255		1.3		84	1.2	0.1

Sapindaceae

Common names

Mata kuching, Cat's eyes, Isau,

Scientific name

Dimocarpus longan var. malesianus

Edible portion

Fruit,

Description

Trees can grow to 10-20 m high. The fruit are round and up to 2 cm across. They occur in large bunches. The skin is pale brown and is rough to the feel, and tough. The flesh is white and lets light through. The flesh layer around the seeds may be 0.5 cm thick. The seeds are large. The seed is deep purple.

Distribution

A tropical plant. It has less cold requirement than *Dimocarpus longan* subsp. *longan*.

Found in:

Asia, Australia, Burma, Cambodia, Indochina, Laos, Malaysia, Myanmar, Sarawak, Timor, Vietnam,

Use

The fleshy layer in the fruit around the seed is eaten.

Cultivation

Production

Nutritional Values

Dimocarpus longan var. malesianus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Dioscoreaceae

Common names

Greater yam,



Scientific name

Dioscorea alata

Edible portion

Tubers, Vegetable,

Description

A yam with a long angular vine. It can climb 15 m high. The stems are square and twine to the right around support sticks. The stem does not have spines. It is often coloured green or purple. The leaves are heart shaped and borne in pairs along the vine. The leaves vary is shape, size and colour with different varieties. Leaves can be 10-30 cm long by 5-20 cm wide. The leaf stalk is 6-12 cm long. The flowers occur in the axils of the upper leaves. The male flowers are in small heads along branched stalks. These can be 25 cm long and green. The female flowers are in shorter spikes. Many cultivated varieties do not produce fertile seed. The fruit are 3-winged and 2.5 cm long by 3.5 cm wide. The seeds when they occur have wings right around them. One large but often irregular shaped tuber occurs under the ground. A very large number of different varieties occur. The tubers can vary in shape, size, colour, texture and other ways. Some varieties produce bulbils along the vine. Plants can vary in number of chromosomes.

Distribution

A tropical plant. It grows from sea level up to about 1800 m in the tropics. Yams are most important in seasonally dry areas. They need a well drained soil and it has to have reasonable fertility. The temperature maximum is >30° C while the minimum is 20°C. The optimum temperature range is 25-30°C. Rainfall is often seasonal in yam areas and the maximum to be needs 14-20 weeks rain with an optimum of 1,150 mm during the growing season. Yams can tolerate drought but give maximum yields with high rainfall. The critical rain period is during the first 5 months. Light influences tuber growth. A continuous exposure of tubers to light significantly reduces tuber yields. Day length - Yams are influenced by photoperiod, or hours of sunlight. Short days (less than 10-11 hours of

Found in:

Africa, Anguilla, Asia, Australia, Benin, Brazil, Burma, Cambodia, Cameroon, Caribbean, Central Africa, Central America, China, Colombia, Comoros, Congo, Costa Rica, Cuba, East Africa, Fiji, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Guyana, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Ivory Coast, Jamaica, Japan, Madagascar, Malawi, Malaysia, Mali, Marianas, Mexico, Mozambique, Myanmar, New Zealand, Nigeria, Pacific, Palau, Papua New Guinea, PNG, Philippines, Polynesia, Puerto Rico, Samoa, Senegal, Sierra Leone, Solomon Islands, Southern Africa, South America, Sri Lanka, Sudan, Taiwan, Thailand, Timor, Togo, Tokelau, Tonga, Truk, Uganda, USA, Vanuatu, Venezuela, Vietnam, West Africa, West Indies

Use

The tubers are boiled, baked or mumued. They can be roasted, fried or mashed.
When they occur the aerial tubers of bulnils are also cooked and eaten.

Cultivation

Ceremonial yams have very specialised production techniques. For general food production, use top pieces of the tuber after they have sprouted, use a branched stick for support of the vine, space plants about 1 m apart and choose a smooth round cultivar. Given the large diversity of cultivars of greater yam, for efficient production varieties need to be chosen which have regular rounded tuber shapes for easier harvesting and preparation; also selection needs to be made for varieties with less leaf spot and virus susceptibility and stable yield. Colour, cooking quality, storage ability, texture and other qualities need to be considered to suit the growers demands.

In most places the yam growth and maturation is integrated with seasonal rainfall patterns. They are mostly planted just before the first rains where a 8-10 month rainy season exists and give better yields in 6-8 month rainy season areas when planted 3

Production

The time to maturity ranges from 5 months on the coast to 9 or 10 months at higher altitudes. Yams will store well for over 6 months if given a dry, dark, well ventilated shed.
Disease - Anthracnose due to the fungus *Glomerella cingulata* causes early dying off of leaves in many areas and immature death in susceptible varieties under conditions favourable to disease. But anthracnose does not appear to stop yam production

in any area. Climatic conditions favouring the disease are hot wet humid conditions and heavy rain. Earlier planting enables plants to be well established at the onset of rains which is the main infection time for the anthracnose fungus. Varieties resistant to anthracnose normally have thicker leaf leaf coatings or cuticles and shorter pores in the stomata or pores in the

Nutritional Values

Dioscorea alata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
tuber	76.6	323	77	2.0	18	10	0.8	0.39

Common names

Potato yam,

Dioscoreaceae



Scientific name

Dioscorea bulbifera

Edible portion

Tuber, Bulbils, Vegetable,

Description

A yam with a long smooth stemmed vine, round in cross section. It winds to the left. It does not have spines. The vine can climb up into trees and grow to long lengths. The leaves are large and round. They are pointed at the tip and round at the base. About 7 veins arise from the tip of the leaf stalk. Leaves can be 14-30 cm across and slightly longer than wide. This yam produces bulbils (potatoes) in the angles of the leaves along the vine. These are often flattened and can be grey brown or purple. Under the ground it has a smaller tuber normally covered with roots. The flowers are large. The male flowers are in spikes up to 20 cm long. The female spikes are usually in pairs. The fruit are winged and about 2.5 cm long by 1.5 cm across. The seeds have wings. The bulbils normally have few fibres through the tissue compared to some yams tubers. The flesh of many varieties is yellow.

Distribution

A tropical plant. It will grow from the coast up to about 1700 m altitude in equatorial zones. It is common near the edge of grassland and forest at mid altitudes. Both wild and cultivated forms occur. It is common in the Philippines, Solomon Islands and Papua New Guinea near secondary forest at low and medium altitudes. It is cultivated in Africa and the West Indies. In Nepal it grows to 2100 m altitude. It suits hardiness zones 9-12.

Found in:

Africa, Asia, Australia, Bangladesh, Benin, Bhutan, Brazil, Burkina Faso, Burma, Cambodia, Cameroon, Central Africa, Central America, China, Colombia, Comoros, Congo, Cook Is., Costa Rica, Cote d'Ivoire, East Africa, Fiji, Gambia, Ghana, Guinea, Guinea-Bissau, Haiti, India, Indochina, Indonesia, Ivory Coast, Jamaica, Japan, Kenya, Korea, Laos, Liberia, Madagascar, Malawi, Malaysia, Mali, Mauritius, Myanmar, Namibia, Nepal, New Caledonia, Niger, Nigeria, North America, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Reunion, Samoa, Senegal, Sierra Leone, Solomon Islands, Southern Africa, South America, Sri Lanka, Tahiti, Taiwan, Thailand, Timor, Togo, Tonga, Tanzania, Uganda, USA, Vanuatu, Venezuela, Vietnam

Use

The tubers are cooked and eaten. More commonly the aerial bulbils are eaten after cooking.
Some kinds are bitter and inedible or at least require special processing and cooking.
Some varieties are poisonous.

Cultivation

Either the bulbils off the vine, or the underground tubers are planted. Because the vines are long, training them up trees is convenient. The bulbils have to be stored for a period of time before they will sprout. The plant is annual and leaves die off for 1-4 months each year before re-sprouting from the tuber. Bulbils only grow shoots from one end unless the bulbil is cut into pieces. If the larger bulbils are cut, the cut surfaces should be dried and healed in a shady place for 2-3 days before planting. Bulbils are planted 8-12 cm below the surface and spacing can be 100 cm by 100 cm or variations of this. Normally nitrogen and potassium fertilisers give greater responses than phosphorus.

Friable well drained soils are most suitable. Often very little cultivation or mounding is done. A high level of organic matter improves yield. Staking is normally required but often trees or living stakes are used. Branched stakes 2 m high are suitable. They need to be strongly erected as vine and tuber growth can be extensive and heavy.

Production

Bulbils or aerial yams are produced as soon as leaves begin to unfold and continue until the plant reaches maturity. These aerial tubers often fall from the plant. Harvesting can start 3 months after planting but immature tubers have less starch. Underground tubers are normally not harvested until the leaves die back. Wounds and damage to the tuber surface normally heals naturally given dry aerated conditions. Some varieties have aerial tubers which are seasonally dormant and only grow after an extended period of storage. Others germinate relatively quickly.

Nutritional Values

Dioscorea bulbifera

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
tuber	70.8	357		2.7		78	3.1	0.4
bulbil	79.4	326	78	1.4			2.0	

Common names

Dioscoreaceae

Lesser yam,



Scientific name

Dioscorea esculenta

Edible portion

Tubers, Vegetable,

Description

A yam which has a spiny vine. It is a prickly climber. It can climb 1.2-2.4 m high and spread 1.8 m across. The vine twines to the left. The leaves are round with a gap where the leaf stalk joins. They are almost heart shaped. The leaf is about 12 cm long. This yam produces a cluster (5-20) of tubers under the ground. In many varieties there are sharp thorns just under the ground. In China forms occur without these spines. Often the tubers are sticky when cut. Many kinds occur. The flowers are green, 4 mm across and borne on long slender spikes. These are singly in the axils of leaves.

Distribution

A tropical plant. It grows from sea level up to about 1500 m but is mostly below 800 m. It cannot tolerate water-logging. It needs a reasonably long rainy season. It needs a loose fertile soil. It does poorly on sandy soils and becomes misshapen in heavy clay soils. High levels of organic matter promote growth. In the Philippines it occurs throughout Luzon and is also found in the Batanes Islands. It suits hardiness zones 9-12.

Found in:

Africa, Asia, Australia, Bangladesh, Brazil, Burma, Cambodia, Central Africa, Central America, China, Comoros, Congo, Fiji, New Caledonia, Ghana, Guyana, Hawaii, India, Indochina, Indonesia, Ivory Coast, Japan, Laos, Madagascar, Malaysia, Martinique, Myanmar, New Caledonia, Nigeria, Pacific, Papua New Guinea, PNG, Philippines, Solomon Islands, South America, Sri Lanka, Taiwan, Thailand, Timor, Togo, Tonga, USA, Vanuatu, Vietnam, West Africa, West Indies,

Use

The tubers are cooked and eaten. They can be used in soups, stews, mashed or fried.

Cultivation

Normally small tubers are planted (50 - 75 g) but cut portions of a tuber can be used. Using either the top section or the bottom section of a tuber gives better establishment and yield than middle portions. Using larger tubers gives larger individual tubers and higher yields for individual plants. Using a plant spacing of 30 cm between plants and 100 cm between rows about 2,000 kg of planting material are used if 70 g tubers are used. Tubers are planted 8-12 cm below the ground.
It is possible to grow plants from stem cuttings where a leaf and node are propagated under mist. This method is normally only for increasing the amount of planting material of a selected variety.
Planting in mounds makes harvesting easier. It also assists drainage and improves aeration. A spacing of 80 - 100 cm between plants is suitable.
Planting is normally adjusted to fit in with the beginning of the rainy season. The growing season of 9-10 months is long and

Production

High yields can be obtained. Plants take about 9 months to reach maturity. In some varieties and under some conditions leaves do not die off and tubers must be harvested to avoid tubers deteriorating as new growth commences. Tubers need to be harvested and handled carefully. They must often be cut from the vine and can be washed and dried. Tubers will store for about 3 months. They need to be stored under ventilated conditions. Fungal growth and rots easily occur on cut or damaged surfaces under damp conditions. Storage probably needs to be at temperatures above 15 °C. Tubers need to be peeled either before or after cooking.

Nutritional Values

Dioscorea esculenta

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
tuber	74.2	470	97	2.1	84	20	0.75	0.5

Dioscoreaceae

Common names

Bitter yam, Asiatic bitter yam, Intoxicating Yam, Bai shu liang, Gloei, Kloy, Gadong, Gadog, Gadong mabok, Gadongan, Ubi arak, Ubi akas,

Scientific name

Dioscorea hispida

Edible portion

Tubers,

Description

A yam. A climbing vine which can be quite long. It can be 10 m long. There are thorns on the stem. It has compound leaves bearing 3 very large leaflets. The leaves can be 30 cm across. The leaflets are unequal on each side. The leaves are produced one after another along the stem. The young leaf stalks, stems and leaflets are hairy. The leaf stalk is as long as the leaflets (10-15 cm). There are small prickles on the under surface of the main vein. The flowers are small, pale yellow and borne on compound flower clusters. The fruit are 5 cm across and divided into 3 lobes. The tuber is covered with root hairs. It has lobes. Tubers are often 15-25 cm across.

Distribution

A tropical plant. In the Philippines they occur in Mt Province and from Luzon to Basilan. Also common in central Luzon and northern Mindanao. Outside PNG it occurs in SE Asia and Indonesia. Plants grow from sea level to 1500 m altitude in Southern China.

Found in:

Asia, Bangladesh, Bhutan, Brazil, Cambodia, China, India, Indochina, Indonesia, Malaysia, Pacific, Papua New Guinea, PNG, Philippines, Ponape, South America, Thailand, Timor, Vietnam,

Use

The tubers are eaten after processing by slicing, soaking in running water for 48 hours and then cooking.
CAUTION THIS YAM CAN BE VERY POISONOUS. NORMALLY SELECTED VARIETIES AND SPECIAL PROCESSES ARE NEEDED BEFORE IT IS USED.

Cultivation

It can be grown from a tuber. The tuber can continue to increase in size over several years.

Production

Nutritional Values

Dioscorea hispida

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

Cucurbitaceae

Kongakonga, Korek kotok, Striped cucumber, Native Bryony,



Scientific name

Diplocyclos palmatus

Edible portion

Leaves, Fruit,

Description

A herb. It is a pumpkin family plant. It is a slender climbing plant with angular stems. The stems are weak but the lower part can be somewhat woody. It can climb to 2-4 m high. The stems are angular and grooved. The rootstock is fleshy. The leaves have 3 or 5 lobes divided like fingers on a hand and are 10-15 cm wide by 6-17 cm long. There are fine teeth on the top edges of the leaves and the leaves are angular. The leaves are rough on top but smooth underneath. The leaf stalks are 3-9 cm long. The stem has tendrils which have 1 or 2 branches. Flowers are small and yellow or green. Male and female flowers are separate but often together near a leaf. Often one or two female flowers are surrounded by several male flowers. The fruit is 4 cm long and green with pale streaks along it. The leaves and stems give off a bad smell when damaged.

Distribution

It is a tropical plant. It occurs on the coast in Papua New Guinea and grows up to about 1000 m above sea level. It Africa it grows to 1,830 m above sea level. It needs a well drained soil and can grow in a sunny or partial shady position. The plant also grows in Africa, India, Malaysia, China and Australia. There are a couple of subspecies.

Found in:

Africa, Asia, Australia, China, Congo, Egypt, Indochina, Indonesia, Kenya, Malaysia, Mozambique, Nepal, New Caledonia, Norfolk Island, North Africa, Pacific, Pakistan, Papua New Guinea, Philippines, PNG, Sao Tome, Solomon Islands, Sudan, Tanzania, Timor, Uganda, USA, Vanuatu, Vietnam, Zimbabwe,

Use

The leaves are eaten, cooked.
CAUTION The fruit are claimed to be poisonous.
It is considered to be poisonous in Australia, but is eaten in India.

Cultivation

Plants can be grown from seeds or cuttings.

Production

Nutritional Values

Diplocyclos palmatus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Sapindaceae

Common names

Sticky hop-bush, Common sand olive,



Scientific name

Dodonaea viscosa

Edible portion

Seeds, Fruit,

Description

A shrub or small tree. It can be 10 m high. It can have many stems. The leaves are sticky and are 3-10 cm long. They are narrow with wavy edges. A variety with purple leaves also occurs. The flowers are greenish. Male and female flowers occur on separate plants. The fruit are hops 18 mm long and with wings. They occur in clusters at the ends of branches. They can be red or white. Many different kinds or subspecies of this plant occur. The seed is edible.

Distribution

They suit tropical and warm places. They often grow on rocky, stony or sandy soil. Plants are damaged by frost. In Tasmania it grows near the East Coast. It can grow in semi arid places as well as on the edges of evergreen forest in high rainfall areas. In East Africa it grows from sea level to 2,700 m altitude. It needs a temperature above 3-5°C. It suits hardiness zones 9-11. Melbourne Botanical gardens. Tasmania Herbarium.

Found in:

Afghanistan, Africa, Angola, Antigua-Barbuda, Argentina, Asia, Australia, Bahamas, Bermuda, Bolivia, Brazil, Burma, Cameroon, Caribbean, Central America, China, Colombia, Comoros, Congo, Costa Rica, Cuba, Djibouti, Dominican Republic, East Africa, Ecuador, Ethiopia, Fiji, Gambia, Ghana, Grenada, Guadeloupe, Guam, Guatemala, Guiana, Guinea, Guinea-Bissau, Guyana, Haiti, Hawaii, Honduras, India, Indonesia, Iran, Iraq, Israel, Ivory Coast, Jamaica, Japan, Kenya, Liberia, Madagascar, Malawi, Malaysia, Martinique, Mauritius, Mediterranean, Mexico, Mozambique, Myanmar, Netherlands Antilles, New Caledonia, New Zealand, Nicaragua, Nigeria, Norfolk Island, North America, Oman, Pacific, Pakistan, Panama, Papua

Use

The seeds have been used as a flavouring.
The bitter fruit have been used as a substitute for hops and yeast in making beer.
The leaves have been chewed as a stimulant but as they can cause cancer and contain saponins which are poisonous but poorly absorbed, this is probably not a good idea.

Cultivation

Plants are grown from seed. Seed germinate in 3 weeks but they can be slow to germinate. They need a temperature above 18°C. Plants can be pruned often and make a good hedge in windy places. Male and female plants must be grown if seed is required. Plants can be grown from cuttings of half ripe wood. Plants need to be transplanted when small or sown directly where they are to grow.

Production

It is fast growing.

Nutritional Values

Dodonaea viscosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Bignoniaceae

Common names

Daun tuwai, Pokok keloh, Kapeng kapal, Kayu jaran, Kayu pelok, Ki jaran, Ke, Ke ket tawa, Ke pung mu, Gorshingiah, Kanbillai, Virbadiri,



Scientific name

Dolichandrone spathacea

Edible portion

Flowers, Fruit,

Description

A medium sized tree which loses its leaves. It is smooth and up to 5 to 15 m high. The leaves are opposite and leathery. They are 35 cm long. They are divided into leaflets along the stalk. These are oblong and glossy. There are 7-9 leaflets are they are oval and 15 cm long. The flower clusters have few flowers and are short and at the end of stalks. The flowers are 15 cm long. The flowers are white or yellow on 2 or 3 cm long fleshy spikes. The flowers are trumpet shape. They come out at night. The seed envelope is as long as the leaves and slightly squashed. It is usually pointed and curved. There are many seeds and they are winged.

Distribution

A tropical plant. It is native to tropical Asia and the Pacific. It grows in mangroves. They are found along the coast and in marshy places inland throughout the Philippines. It is tolerant to salt. It needs full sun. It needs fertile soil. It suits plant hardiness zones 10-11.

Found in:

Andaman Islands, Asia, Australia, Burma, Hawaii, India, Indonesia, Malaysia, Myanmar, New Caledonia, North America, Pacific, Papua New Guinea, PNG, Philippines, Solomon Islands, Timor, USA,

Use

The young flowers and fruit are cooked and eaten as a vegetable.

Cultivation

Plants are grown from fresh seed.

Production

It is fast growing.

Nutritional Values

Dolichandrone spathacea

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Anacardiaceae

Common names

Mon, Dao, Belgian walnut, Argus pheasant tree, Sengkuang, Chengkuang, Bengkuang, Sekuang, Surgan, Sakal, Rau, Dahu, Lamio,



Scientific name

Dracontomelon dao

Edible portion

Fruit, Leaves, Seeds,

Description

A large tree up to 50 m tall and with an umbrella shaped crown of leaves. It often has buttresses at the base. The leaves are hairy and compound with both the leaflets and leaves carried alternately. The leaves come one after the other on opposite sides and have 5 to 7 pairs of leaflets. The leaves are pointed at the end and bluntly pointed at the base. The leaflets have a smooth edge. Young leaves are reddish colour. The flowers are small white, with no smell and carried as several on a stalk. The fruit are yellow and round. The fruit is 2-3 cm across and has 5 flecks around it. There is little edible flesh around a flattened seed.

Distribution

A tropical plant. It grows in lowland rainforest and in valleys up to about 800 m. It occurs in high rainfall areas. It is common throughout the Philippines at low altitudes. The tree also occurs in other SE Asian countries. They are common from northern Luzon to southern Mindanao in the Philippines.

Found in:

Andamans, Asia, Burma, Cambodia, China, Fiji, India, Indochina, Indonesia, Malaysia, Myanmar, Pacific, Papua New Guinea, PNG, Philippines, Solomon Islands, Timor, Vietnam,

Use

The fleshy part of the fruit is eaten raw. It is sour. They are used as a sour relish. They are used to flavour curries.
The fruit can be cooked with soy sauce and eaten with rice.
The flowers and leaves can be cooked and eaten as a vegetable.
The kernel inside the seed is edible.
CAUTION The sap of the tree may be irritating and /or poisonous.

Cultivation

Trees are grown from seed. Many trees grow wild.

Production

It flowers and fruits throughout most of the year. Leaf fall and a fruit flush follows a dry spell. Trees can produce after 3-4 years. An average fruit weighs 17 g.
The season normally coincides with the breadfruit and mango season. The fruit turn slightly yellow when ripe and the seed inside turns brown. If the seed inside is white, then the fruit is not ripe.

Nutritional Values

Dracontomelon dao

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Polypodiaceae

Common names

Rock fern, Oak fern, Oak leaf fern, Garur, Ashvakatri, Basingh, Kadikapana, Pannakilhan-numanavala,



Scientific name

Drynaria quercifolia

Edible portion

Rhizome, Young fronds,

Description

A large fern which grows attached to other plants. It climbs on trees. It can be 1 m high. It forms large spreading clumps. The rootstock is thick and fleshy. There are two kinds of fronds. One forms the "nest" and these do not have a stem and the others which are more like leaves and have a stem. The second ones have stems which are 30 cm long. The frond is one m long by 40 cm wide. It has deep lobes. The first kind of fronds have lobes and teeth around the edge. These turn brown with age but do not fall off the fern. The young fronds of this fern are different shape from the mature fronds on established ferns.

Distribution

It is a tropical plant. It grows in lowland rainforest. It does best in warm humid conditions. It can tolerate cool temperatures. It can grow on rocks and trees in open forests in the tropics.

Found in:

Asia, Australia, Hawaii, India, Indochina, Pacific, Papua New Guinea, PNG, Sri Lanka, Timor, USA, Vietnam,

Use

The rhizome is eaten.

Cultivation

Pieces of the thick rhizome can be planted in soil or attached to wood. They should be in light shade while getting established. In cool weather the roots should be allowed to dry out. Plants can loose all their fronds and then regrow in the wet season. Plants can also be grown from spores. These should be sown fresh.

Production

Nutritional Values

Drynaria quercifolia

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Asteraceae

Common names

White Eclipta, False daisy,

Scientific name

Eclipta prostrata

Edible portion

Herb, Leaves,

Description

A small herb which keeps growing from year to year. It curves upwards along the ground and forms roots at the nodes. It is 30 -60 cm tall. The leaves are sword shaped and hairy. They occur opposite each other and do not have a leaf stalk. They are 1 -5 cm long by 0.4-1 cm wide. The leaves have large teeth along the edge near the tip. The flower is produced in the axils of the leaves. The flower heads are a dirty white. There are a group of seeds in the head. The flower stalk is 2-4 cm long.

Distribution

A tropical and subtropical plant. It occurs in humid places. It grows in damp locations such as river banks. It is a common self sown plant. It is common in rice paddy fields. It occurs in all tropical regions. In Nepal it grows to about 1500 m altitude. It needs a temperature above 10°C.

Found in:

Africa, Asia, Australia, Bangladesh, Benin, Bhutan, Burma, China, Central America*, Congo, Dominican Republic, East Africa, Europe, Fiji, France, Gabon, Ghana, Haiti, India, Indochina, Indonesia, Ivory Coast, Japan, Kenya, Lesser Antilles, Malaysia, Myanmar, Nepal, Nigeria, Pacific, Papua New Guinea, PNG, Philippines, Puerto Rico, SE Asia, Senegal, Sierra Leone, Singapore, South Africa, Southern Africa, Sri Lanka, Swaziland, Tanzania, Timor, Thailand, Tibet, West Africa, West Indies, Zambia,

Use

The tender shoots and leaves are cooked and eaten as a vegetable. They are also eaten raw. They are also used as flavouring in chutneys and relishes.
CAUTION: If eaten in large amounts it can cause intoxication.

Cultivation

Plants can be grown from seed or from rooted offshoots.

Production

Nutritional Values

Eclipta prostrata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves					36			

Boraginaceae

Common names

Koda tree, Silky Ash, Heliotrope tree, Gual, Wu-lan-tzu, Hou ke shu, Punyan, Panyan, Punia, Pania, Lahichan, Koda, Kula-aja, Bual, Punna,

Scientific name

Ehretia acuminata

Edible portion

Fruit, Leaves,

Description

A medium sized to tall tree. It can grow 10-25 m tall and spread 5-12 m across. The stem has deep channels along it. The bark is light grey and develops cracks along it. The young leaves are light green. The leaves are 7-15 cm long by 3-6 cm wide. They are dark green on top and paler underneath. They are oval and thin textured. The edges of the leaves have coarse teeth. The flowers are about 0.5 cm across. They are white and have a sweet scent. The flowers occur on branched clusters 5-20 cm long. These can be at the ends of branches or in the axils of leaves. The fruit is 4-6 mm across. It is round and orange and splits open when ripe. The fruit occur in large numbers. The ripe fruit is edible.

Distribution

A tropical plant. It grows naturally in rainforests and moist forests in tropical and subtropical areas. Often they occur along the banks of streams. It requires well drained soil. In Western China it grows up to 1500 m altitude. It cannot stand frost. Trees can tolerate sun from an early stage.

Found in:

Africa, Asia, Australia, Bhutan, Burma, China, Himalayas, India, Indochina, Indonesia, Japan, Madagascar, Myanmar, Nepal, Pacific, Papua New Guinea, PNG, Philippines, Taiwan, Timor, Vietnam,

Use

The fruit are eaten mostly raw.
The unripe fruit are pickled in India.
The leaves are used in herbal drinks.

Cultivation

Plants are grown from seed. Seed should be sown fresh. Plants can be grown from cuttings.

Production

It is a fast growing tree. In Australia fruit mature March to April from trees flowering in September to November.

Nutritional Values

Ehretia acuminata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Elaeagnaceae

Common names

Millaa vine, Hail hail, Millaa Millaa, Gumi,



Scientific name

Elaeagnus triflora

Edible portion

Fruit,

Description

A vine or climber. The stems are erect but is leans of plants nearby. Young shoots have silvery scales. The leaves are simple and 3-15 cm long by 3-5 cm wide. The leaves are silvery underneath. The flowers are in spikes or clusters in the axils of leaves or at the ends of branches. The flowers are 0.5 cm across. The fruit is 2 cm long by 1.2 cm wide. They hang singly or in bunches in the axils of leaves. There is one seed inside. It is 1.8 cm long by 0.8 cm wide. The flesh of the fruit is edible.

Distribution

A tropical plant. It grows in upland tropical rainforest. Adelaide Botanical Gardens.

Found in:

Asia, Australia, Hawaii, Indonesia, Malesia, Papua New Guinea, PNG, Timor, USA,

Use

Cultivation

It can be grown from fresh seed or cuttings.

Production

Nutritional Values

Elaeagnus triflora

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Arecaceae



Common names

African Oil palm,

Scientific name

Elaeis guineensis

Edible portion

Seeds, Cabbage, Fruit, Palm heart, Sap,

Description

An unbranched palm with a stout erect stem. The stem is rough due to the leaf bases which remain attached. It grows to 20-30 m tall. The trunk is about 75 cm across. The crown consists of about 40 open leaves. These hang downwards. The leaves develop from the bud as a tightly rolled shoot which later opens. The palm crown spreads 5-9 m across. Casual roots grow from the lower 1 m of the base of the trunk. Many roots also grow just under the soil and spread out for 20 m around the palm. The leaves are about 7.5 m long. The leaves have spines along the leaf stalk. These leaves are made up of many leaflets (100-160 pairs). These are slender, long and thin and rich green. These are held at different levels along the midrib (Almost two rows). The flowers are of one sex only. The male flowers occur with a spiny tip. The female flowers are on long stalks. They are 30-45 cm long. The fruit is a large round bunch of small fruits. These are 4 cm long by 2 cm across. There can be 200 fruit in a bunch.

Distribution

A tropical plant. They need a temperature above 18°C. They suit the hot humid tropics. They grow between 16°N and 15°S in Africa. These palms do well in rich moist soil. A rainfall above 2,000 mm is needed for good production. They need a sunny position. They are drought and frost tender. Plantations are established in West New Britain in Papua New Guinea and palms occur in some other areas of the country. In Cairns Botanical Gardens. It suits hardiness zones 10-12.

Found in:

Africa, Angola, Asia, Australia, Benin, Brazil, Burkina Faso, Cambodia, Cameroon, Central Africa, Central African Republic, Central America, Chad, China, Colombia, Congo, Costa Rica, East Africa, Gambia, Ghana, Guiana, Guinea, Guinea Bissau, Guyana, India, Indochina, Indonesia, Ivory Coast, Kenya, Liberia, Madagascar, Malawi, Malaysia, Mali, Mozambique, Nicaragua, Nicaragua, Nigeria, Pacific, Papua New Guinea, PNG, Peru, Senegal, Seychelles, Sierra Leone, Singapore, Solomon Islands, Southern Africa, South America, Sudan, Suriname, Tanzania, Timor, Togo, Uganda, West Africa, Zambia,

Use

The outer layer of the fruits yields an orange cooking oil.
The kernel also produces oil.
The palm cabbage is edible.
The sap tapped from the male flower is used to make wine.
The oily fruit are sometimes eaten but can cause nausea.

Cultivation

They are normally grown from seed in a nursery then transplanted. The seed are soaked for 7 days then sown into warm ground. Seeds are slow to germinate. Heat treatment is often used to ensure even germination. Seed germinate in 2-5 months under hot conditions. Seed are sown in plastic bags and sometimes a second nursery transplant is used before eventually planting in the field 1.5 to 2 years later.

Production

The early growth of seedlings is slow. Palms commence bearing after about 4-6 years. When mature they produce 2-6 bunches per year. The flower bud does not develop until about 9 months after the leaf containing it has opened. Bright sunny weather helps the development of female flowers. Male flowers are more common in wet cloudy weather. Fruit matures 5-9 months after flowering. A bunch can weigh 18-25 kg. Palms live for many years. Individual trees can live for 200 years.

Nutritional Values

Elaeis guineensis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed dried	11.5	2454	587	6.6				
seed	28.0	2247		1.6	18	9	4.0	

Cyperaceae



Common names

Waterchestnut, Tall spike-rush, Edible spike rush, Chinese water-chestnut, Ground-chestnut, Waternut, Chinese Water Chestnut, Ma Ti,

Scientific name

Eleocharis dulcis

Edible portion

Tubers, Corms, Vegetable,

Description

A herb which grows in water. It is a tufted sedge with round green stems. The bases are covered with brown sheaths. The stem is about a metre high and 1 cm across. It grows 30-200 cm high. From the top of each planted corm, several slender horizontal rhizomes radiate out into the mud, each terminating in a corm. The edible part consists of a flattened corm. The rhizome is short. Under the ground there are stolons bearing tubers. The tubers are almost round and have 4-6 distinct rings. They are about 1 cm across but can be 4 cm across. They are dark brown. The stems are tufted and slender. There are fine lines along the stems. The leaves are reduced to thin tube like sheaths. These are purplish. Each plant produces these long tubular leaves that project above the water surface. The flower spike is on the end of the plant. There are many flowers. The flowers are 1.5-6 cm long by 3-6 mm wide. The fruit is a nut 1.5-2 mm long.

Distribution

A tropical plant. It suits tropical and subtropical locations. It suits humid monsoonal conditions. It is found in the Philippines in open wet places and shallow water throughout the islands. It grows in fresh water swampy grounds or in shallow water. It is also found in rice fields. It needs at least 220 frost free days. It needs a soil temperature above 14-15.5°C for germination of the corms. It needs a pH of 6.9-7.3. It can be grown up to 1,200 m altitude. It suits plant hardiness zones 9-12.

Found in:

Africa, Asia, Australia, Botswana, Burkina Faso, Burma, Cambodia, China, Fiji, Gambia, Ghana, Guinea, Hawaii, India, Indochina, Indonesia, Japan, Japan-Ryukyu Islands, Liberia, Madagascar, Malaysia, Mali, Micronesia, Myanmar, New Caledonia, Nigeria, North America, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Ponape, Senegal, Sierra Leone, Singapore, South Africa - Natal, Southern Africa, Sri Lanka, Taiwan, Tasmania, Thailand, Timor, Tonga, USA, Vietnam, West Africa,

Use

The tubers are cooked and eaten. The corms can be eaten raw, roasted or boiled after they have been peeled. Normally, they are cut into small slices and added to soup or to fish and meat dishes.
They can be sweetened for desserts.

Cultivation

Plants can be grown by division or tubers. They are put in holes 20-30 cm deep. Fields are flooded after planting then allowed to drain. When top growth is 20-30 cm high fields are flooded to at least 10-12.5 cm. A spacing of 75 cm x 75 cm is suitable. 500 kg of corms per hectare are required for planting.

Production

Corms mature after 7-8 months. Yields of 20-40 t per ha are possible.

Nutritional Values

Eleocharis dulcis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
corm drier	50.8	635		3.7		52	95.0	1.9
chestnut (fruit)	79.6	268		1.4	0	5	0.7	0.5

Asteraceae

Common names

Elephant's foot, Yah-fai-nok-khum, Gojihva, Karipadam, Bobhi, Samudulan, Gojialata, Shamdulum, Pathari, Bhopathari, Hastikasaka,



Scientific name

Elephantopus scaber

Edible portion

Leaves,

Description

A small herb plant which keeps growing from year to year. It is 30-100 cm high and spreads to 30-60 cm across. It has a creeping rootstock. The stem is stiff and erect. 1-3 stems arise from the base. The stem is densely hairy and warty and is white. The leaves are 10-40 cm long by 1-6 cm wide and oblong. The leaves have a notched edge. The leaves are arranged in a circle near the base. They do not have leaf stalks. There are also some leaves along the stem. These are smaller. The flowers are in compound heads and are yellow or blue. They have leaf like bracts around them. The heads are 2.5 cm across with 20-50 flowers.

Distribution

It is a tropical plant. It prefers rich, moist, well-drained soils. It needs an open sunny position. It is drought and frost tender.

Found in:

Africa, Asia, Australia, China, India, Indochina, Indonesia, Malaysia, Nepal, Pacific, Papua New Guinea, PNG, Thailand, Timor, Zambia, Zimbabwe,

Use

Leaves are eaten with oil and salt.
The plant is powdered and used as a cake for preparing beers and alcoholic drinks. Caution: Alcohol is a cause of cancer.

Cultivation

Plants are grown from seed.

Production

Nutritional Values

Elephantopus scaber

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Poaceae

Common names

Bermuda grass,

Scientific name

Eleusine indica subsp. indica

Edible portion

Seeds, Shoots, Cereal,

Description

A tufted annual grass. It grows up to 0.6 m tall. It has many branches from the base and tough wiry stems. The stems are slender and flattened. The leaves are 17 cm long and 3-8 mm wide. The leaves are covered with a bluish-green bloom. They are folded. The flower spikes are divided like fingers on a hand except for one which is single and below. The flowers do not have stalks and the flower spikes are 4-15 cm long. The seed heads shatter at maturity dropping their seed.

Distribution

It is mainly a tropical and subtropical plant. In the tropics it grows from sea level to 1800 m altitude. It tends to grow in places high in nitrogen. It grows on clayey soil. Tasmanian Herbarium.

Found in:

Africa, Angola, Antigua-Barbuda, Argentina, Asia, Australia, Azores, Bahamas, Bangladesh, Belize, Benin, Bermuda, Bolivia, Botswana, Brazil, Britain, Burkina Faso, Burma, Burundi, Cameroon, Canary Island, Central Africa, Central America, Chad, China, Colombia, Comoros, Congo, Costa Rica, Chad, Cuba, Dominica, East Africa, Ecuador, Egypt, El Salvador, Equatorial Guinea, Ethiopia, Europe, Fiji, France, French Guiana, Gabon, Gambia, Ghana, Greece, Grenada, Guadeloupe, Guam, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Hawaii, Honduras, India, Indonesia, Iran, Italy, Ivory Coast, Jamaica, Japan, Kenya, Korea, Liberia, Libya, Madagascar, Malawi, Malaysia, Maldives, Mali, Martinique, Mauritius, Mexico, Montserrat

Use

The seeds are used as food in times of food shortage. They are parched and ground into flour for cakes, porridge or gruel. They are also used for alcoholic drinks. Caution: Alcohol is a cause of cancer.
The young shoots are eaten. They can be eaten raw or steamed and eaten with rice.

Cultivation

It is mostly self sown from seed. Seed are spread in animal manure.

Production

It Australia plants flower and fruit in April.

Nutritional Values

Eleusine indica subsp. indica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Asteraceae

Common names

Purple emily, Sowthistle tasselflower,



Scientific name

Emilia sonchifolia

Edible portion

Leaves, Vegetable,

Description

An erect or sometimes straggling, smooth or slightly hairy plant. It is about 10 to 40 cm high. The stems are slender. The leaves are somewhat fleshy and the lower ones lobed. The leaves are often clustered towards the base of the plant. They are 5 to 10 cm long and 1-5 cm wide. The flowering heads are purple. They are in loose branched arrangements. The flower stalk is 3-7 cm long. There are about 30 flowers.

Distribution

A tropical plant. It grows in warmer places. It occurs in the Philippines from Luzon to Basilan in open grassland and waste places. Plants are damaged by frost. It suits well drained soils and sunny positions. In Nepal it grows to 1700 m altitude. It suits hardiness zones 9-11.

Found in:

Africa, Asia, Australia, Benin, Cambodia, Central Africa, Central America, China, Congo, Cuba, Dominican Republic, Equatorial Guinea, France, Ghana, Guinea-Bissau, Haiti, India, Indochina, Indonesia, Japan, Malaysia, Nepal, Nigeria, Pacific, Papua New Guinea, Philippines, PNG, Puerto Rico, Senegal, Sierra Leone, South America, Taiwan, Thailand, Timor, Tonga, Vietnam, West Africa,

Use

The young leaves are cooked and eaten as a vegetable. They can also be eaten raw. They are eaten before the plant starts flowering. They are also used in soups.
The flowers can also be eaten.

Cultivation

Plants can be grown from seed. Seed are sown where they are to grow. Planst can be transplanted when small.

Production

In Australia the plant flowers in April to July. The leaves need to be eaten before flowering.

Nutritional Values

Emilia sonchifolia

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
plant	82.3	46		3.0		1		
leaves	91.5			1.9		10		

Fabaceae

Common names

Match box bean,

Scientific name

Entada phaseoloides

Edible portion

Seeds kernel, Leaves, Nut,

Description

A tree climber which forms loops between branches. The stems are thick 12 cm across and irregularly round. They are twisted or have an irregular spiral. The small branches are slender. The leaves have long leaf stalks. The leaves are twice divided. The leaflets are 2.5 to 5 cm long and like leather. The flower stalk is 15 cm or more long. The flowers are 2 to 3 mm long and attached without a stalk. They are yellowish white. They are crowded on a long spike in the axils of leaves. The few pods hang down and the beans have flattened sides and are chocolate brown. They can be 1 m long. They are woody and jointed between the seeds.

Distribution

It is a tropical plant. It is sensitive to cold. It needs well drained soils. They are found throughout the Philippines occurring everywhere in tropical forests. In Yunnan in China it grows between 800-1300 m altitude. It grows in subtropical broadleaved evergreen forest.

Found in:

Africa, Andamans, Asia, Australia, Burma, Africa, Central Africa, Central America, China, Congo, Fiji, India, Indochina, Indonesia, Jamaica, Japan, Madagascar, Malaysia, Marianas, Myanmar, Pacific, Papua New Guinea, Philippines, PNG, Taiwan, Thailand, Timor, Tonga, Vietnam,

Use

The seeds are edible cooked. They are eaten after roasting, baking, grinding, and immersing in running water for 10-12 hours. They contain two saponins.
The leaves are eaten both raw and cooked.

Cultivation

Plants can be grown from seed. The hard seed coat needs to be cut prior to sowing.

Production

Nutritional Values

Entada phaseoloides

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed	9.1			23.5				

Araceae

Common names

False Monsteriosa, Native Monstera, Jalu mampang, Galgalut, Sulang, Lolo munding, Lolo tali, Devil's ivy, Pothos, Taro vine,



Scientific name

Epipremnum pinnatum

Edible portion

Leaf stalk starch, Fruit,

Description

An evergreen vine. It climbs to 6 -50 m high. The stem is slender and fibrous but fleshy. The leaves are green and shiny. They are oval or sword shaped. The leaves can be 70 cm long by 40 cm wide and hang downwards. The form a point towards the tip. The leaves are deeply divided, although forms occur with entire leaves. The leaf stalk is about the same length as the leaf. The flowers are dense fleshy spikes. This is 15-20 cm long. The flower is surrounded by a large green boat shaped bract. The flower spikes contain both sexes where the female flowers are lower. These are followed by fruit. The berry is united into a composite red fruit.

Distribution

A tropical and subtropical plant. It grows best with warm conditions and high humidity. It is best with light shade. It is damaged by drought and frost. They need good drainage. It suits hardiness zones 10-12.

Found in:

Asia, Australia, Bangladesh, Brunei, Cambodia, China, East Timor, Hawaii, India, Indochina, Indonesia, Laos, Malaysia, Pacific, Papua New Guinea, Philippines, PNG, Singapore, Solomon Islands, Thailand, Timor, Tonga, USA, Vanuatu, Vietnam,

Use

Starch is extracted from the leaf stalk.
CAUTION The sap can irritate the skin.

Cultivation

It is grown from runners which are put in water to form roots. Plants need then to be put in shady humid situations and can be trained to climb up trees. Plants can be grown from fresh seed or from stem cuttings.

Production

In Australia it flowers in December to March.

Nutritional Values

Epipremnum pinnatum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Vong hot-da, Dedap, Dedap batik, Chengkering, Dadap lenga, Dadap lisa, Dadap srep, Dadap ri, Dadap lesang, Dadap limit, Dadap minyak,

Scientific name

Erythrina subumbrans

Edible portion

Leaves,

Description

A tall tree. It grows to 15-23 m high. Some kinds have prickles and some do not. The leaflets are smooth. The flowering groups are 22 cm long. The flowers are red. The fruit are pods 10-14 cm long and 2-2.5 cm wide. They contain 1-5 seeds.

Distribution

A tropical plant. It needs light. It grows in dry open forest. It is used as shade for cacao and coffee. In Samoa it grows from sea level to 700 m altitude.

Found in:

Asia, Burma, Cook Islands, Fiji, India, Indochina, Indonesia, Malaysia, Myanmar, Niue, Pacific, Philippines, Samoa, Thailand, Timor, Vietnam,

Use

The very young leaves are steamed and then eaten in salads.

Cultivation

Production

Nutritional Values

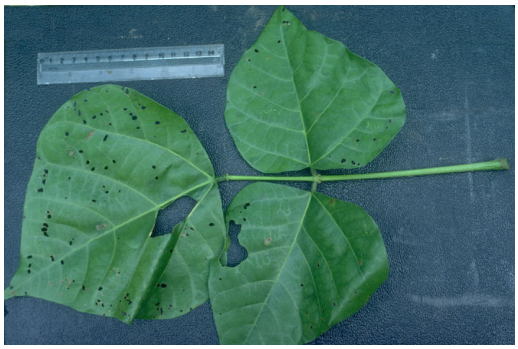
Erythrina subumbrans

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Indian coral tree, Coral Tree, Panga, Pangra, Pangara, Dedap, Dadap belang, Dap-dap, Chengkering, Citong, Thorny Tong, Tawng puak,



Scientific name

Erythrina variegata

Edible portion

Seeds, Leaves,

Description

A deciduous tree. It grows up to 15-20 m tall and loses its leaves for part of the year. The trunk has blunt spines. The branches are spreading, crooked and armed with sharp black prickles. The leaves have 3 leaflets. The leaflets are broadly oval and 8 to 18 cm long. They are shiny green on top and dull flat green underneath. The flowers appear before the leaves. The flowers are at the ends of branches and are hairy and dense. The flowers are large numerous and hang down. They are red. The pod is about 10 to 25 cm long and 1.5 to 2 cm across. The pod is constricted between the beans. Seeds are dark red.

Distribution

A tropical plant. It is native from India to the Philippines and the Pacific. It mostly grows naturally along the dunes very close to the coast but is transplanted as an ornamental. It will grow up to 900 m altitude. It is tolerant to salt. It can tolerate drought. It needs full sun. It can grow in a wide range of soils and soil pH values from 4.5-8.0. It is a nitrogen fixing tree so can grow on poor soils. It suits hardiness zones 11-12.

Found in:

Africa, Andamans, Asia, Australia, Burma, Cambodia, Cape Verde, China, Egypt, Fiji, Haiti, Hawaii, India, Indochina, Indonesia, Laos, Madagascar, Malaysia, Myanmar, Nigeria, Pacific, Papua New Guinea, PNG, Philippines, Samoa, Sao Tome & Principe, Senegal, Sri Lanka, Sudan, Taiwan, Tanzania, Thailand, Timor, Tonga, Uganda, USA, Vanuatu, West Africa, Yap,

Use

The young leaves are eaten cooked. They are added to soups, stews and curries.
The seeds are eaten after boiling or roasting.
CAUTION Some similar coral trees contain alkaloids and are used as medicine. The seeds are poisonous raw.

Cultivation

Trees can be grown from seed. Seed will remain viable for several years. Trees do not breed true from seed. Cuttings also grow easily. Large cuttings can be used.

Production

It is fast growing. It can grow 1.5 m each year. Trees can live for 100 years.

Nutritional Values

Erythrina variegata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae



Common names

Coral tree, Mandar, Parijata, Dadap, Dap-dap, Mandara, Palita mandar, Mandar, Pangara, Bangaro, Panaraweo, Badisa, Badita, Baridamu,

Scientific name

Erythrina variegata var. orientalis

Edible portion

Leaves, Seeds, Roots,

Description

A tree up to 15 m tall which loses its leaves for part of the year. The trunk has blunt spines. The branches are spreading, crooked and armed with sharp black prickles. The leaflets are broadly oval and 8 to 18 cm long. They are shiny green on top and dull flat green underneath. The flowers are at the ends of branches and are hairy and dense. The flowers are large numerous and hang down. They are red. The pod is about 10 to 25 cm long and 1.5 to 2 cm across. The pod is constricted between the beans. Seeds are dark red.

Distribution

A tropical plant. They are found throughout the Philippines at low altitudes especially near the sea coast. It mostly grows naturally along the dunes very close to the coast but is transplanted as an ornamental. It will grow up to 900 m altitude.

Found in:

Australia, India, Indochina, Pacific, Papua New Guinea, PNG, Philippines, Timor, Vietnam,

Use

The seeds are edible cooked.
The leaves are eaten cooked. than 45 cm high are roasted and eaten.
The roots of seedlings less
CAUTION Some similar coral trees contain alkaloids and are used as medicine. The seeds are poisonous raw.

Cultivation

Trees can be grown from seed. Cuttings also grow easily.

Production

Nutritional Values

Erythrina variegata var. orientalis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Myrtaceae

Common names

Sweet cherry, Beach cherry, Cedar Bay Cherry, Agashiru,



Scientific name

Eugenia reinwardtiana

Edible portion

Fruit,

Description

A tree up to 3-6 m tall. It spreads 0.5-2 m across. The bark is smooth and flaky. It is pale brown. The young shoots have short hairs pressed against the stem. The leaves are simple and 2-9 cm long by 1-4.5 cm across. They are smooth and have oil dots along them. The leaf stalks is short (0.2-0.4 cm long). The leaves are fairly thick with a blunt tip. The leaves are shiny on the upper surface. Young leaves are bronze red. The flowers are mostly 1-3 together. The flowers are white and about 1.2 cm across. Both male and female parts occur on the one flower. The fruit occur either singly or in bunches in the angles of leaves. The fruit are 1.5-2.1 cm long by 1.3-2.3 cm wide. When ripe the fruit are red. There is one seed inside. The seed is 0.7-1.2 cm long. The flesh is edible.

Distribution

A tropical plant. It is native to NE Australia. It is a tropical rainforest species. Often it occurs in coastal scrub. They can tolerate salt laden winds. They require a well drained soil. Trees will grow in full sunlight or heavy shade. They can tolerate very slight frosts. In the Cairns Botanical Gardens.

Found in:

Asia, Australia*, Brazil, Cook Islands, Hawaii, Indonesia, Niue, Pacific, Papua New Guinea, PNG, Samoa, South America, Timor, Tonga, USA,

Use

The flesh of the fruit is eaten.

Cultivation

They can be grown from seed. They can also be grown from cuttings but the cuttings are slow to form roots.

Production

Trees are very slow growing but commence flowering while still small. Trees flower and fruit throughout the year. Most commonly flowering is June to February with fruit maturing August to March.

Nutritional Values

Eugenia reinwardtiana

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	70.8	309		1.9			1.1	1.1

Euphorbiaceae

Common names

Sudu-sudu, Sesudu, Som chow, Saladdai, Vajrakantaka, Snuhi, Vajri, Tredhara sehund, Tiktasij, Bajwaran, Narasya, Tansharisehund,



Scientific name

Euphorbia antiquorum

Edible portion

Leaves,

Description

A tree. It grows 8 m tall. It has stiff 3-6 angled branches. These have succulent tissue inside a woody layer. The leaves are small and fall. The spiny stipules remain.

Distribution

A tropical plant. It grows in drier places.

Found in:

Asia, Hawaii, India*, Indonesia, Malaysia, Pacific, Thailand, Timor, USA,

Use

CAUTION: Plants in this group are somewhat poisonous. The latex is poisonous.
A sweetmeat is made from the leaves. They are boiled, then soaked in water for 2 hours, then reboiled with sugar and the latex removed.

Cultivation

Production

Nutritional Values

Euphorbia antiquorum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Euphorbiaceae

Common names

Mexican Fire plant, Mole plant, Pekapar,



Scientific name

Euphorbia heterophylla

Edible portion

Leaves, Poisonous,

Description

A woody herb. It grows up to 2 m high. The young shoots are hairy with long purple hairs. The stems are green. The leaf stalks have a reddish tinge. The leaf is dark green on the upper surface and dull green underneath. The flowers are cream of light green. They occur closely together at the ends of branches. The fruit are green. The seeds are grey. They are almost round and are rough.

Distribution

A tropical and subtropical plant.

Found in:

Africa, Angola, Argentina, Australia, Bahamas, Barbados, Belize, Bermuda, Bolivia, Botswana, Brazil, Britain, Burundi, Cameroon, Central African Republic, Colombia, Congo, Cook Islands, Costa Rica, Cuba, Cyprus, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, Fiji, French Ghana, Guam, Guiana, Guatemala, Guyana, Haiti, Hawaii, Honduras, India, Indonesia, Ivory Coast, Jamaica, Jordan, Kenya, Liberia, Malawi, Malaysia, Mali, Mexico, Mozambique, Namibia, New Caledonia, Nicaragua, Nigeria, North America, Oman, Pacific, Pakistan, Panama, Papua New Guinea, PNG, Paraguay, Peru, Philippines, Puerto Rico, Reunion, Rwanda, Samoa, Saudi Arabia, Sierra Leone, Solomon Islands, Somalia, South Africa

Use

Caution: All Euphorbias or spurges have irritating sap and many have chemicals that can cause cancer.
The leaves are used as a famine food.

Cultivation

Production

In Australia, plants flower and fruit in May.

Nutritional Values

Euphorbia heterophylla

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Euphorbiaceae

Common names

Asthma plant, Aankle jhar, Dudhi, Barokheruie, Dudhi, Mothidudhi, Dudali, Dudeli, Reddinanabrolu, Bidarie, Amampatchaiarisi, Nelapalai,



Scientific name

Euphorbia hirta

Edible portion

Leaves, Fruit,

Description

It can grow as an annual or keep growing from year to year. It grows to 15-60 cm high and spreads to 15 cm wide. The stems lie over and are dull reddish green and hairy. The leaves occur opposite one another and are 5 cm long. The are broadly oblong and with fine teeth long the edge. The flowers are small and occur in the axils of leaves. They are separately male and female and gathered into groups. The fruit are hairy and 3-celled. They are about 1.2 mm across. They are an irregular shaped with ridges across them.

Distribution

It is a tropical plant. It will grow on most soils. It prefers an open sunny position. It is damaged by drought and frost. In Papua New Guinea it grows from near sea level to about 2,000 m altitude.

Found in:

Africa, Argentina, Asia, Australia, Bahamas, Barbados, Bermuda, Bolivia, Botswana, Brazil, Burkina Faso, Burma, Cameroon, Cape Verde, China, Colombia, Comoros, Congo, Costa Rica, Cuba, Dominican Republic, East Africa, Egypt, El Salvador, Equatorial Guinea, Ethiopia, Fiji, Gabon, Gambia, Ghana, Guam, Guatemala, Guinea, Guinea-Bissau, Haiti, Hawaii, Honduras, India, Indonesia, Iraq, Ivory Coast, Jamaica, Japan, Liberia, Madagascar, Malawi, Malaysia, Maldives, Mali, Mauritius, Mozambique, Myanmar, Namibia, Nepal, New Caledonia, Nicaragua, Niger, Nigeria, Oman, Pacific, Pakistan, Panama, Papua New Guinea, PNG, Peru Philippines, Puerto Rico, Qatar, Reunion, Rwanda, Samoa, Saudi Arabia, Senegal, Seychelles, Sierra

Use

Caution: All Euphorbias or spurges have irritating sap and many have chemicals that can cause cancer.
The tender leaves and shoots are cooked as a vegetable. They should only be eaten in small quantities.
The fruit are eaten raw.

Cultivation

Plants can be grown from seed or cuttings.

Production

Nutritional Values

Euphorbia hirta

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	78.0			4.7	62			

Santalaceae

Common names

Broad-leaved native cherry, Misletoe tree, Broad-leaved Ballart,



Scientific name

Exocarpos latifolius

Edible portion

Fruit, Stalk,

Description

A small tree. It grows 4-8 m high. It spreads 3-6 m across. It has very dark green shiny leaves. The leaves are egg shaped. They are 1.5-7 cm long by 1.5-7 cm wide. They are leathery and have veins along them. The flowers a very small and cream. They are arranged in spikes. These can be 1.2 cm long. The fruit are 8 mm long and red. The fruit have a base or stalk which swells and turns bright red when ripe. This plant grows as a parasite on the roots of other plants.

Distribution

A tropical and subtropical plant. It can grow in coastal sand dunes and in mountains near the coast. In tropical Queensland it grows from sea level to 900 m altitude. It suits hardiness zones 9-11.

Found in:

Asia, Australia, Indonesia, Malaysia, Pacific, Philippines, Timor,

Use

Cultivation

Production

Nutritional Values

Exocarpos latifolius

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	71.1	286		2.4			1.4	0.6

Moraceae

Common names

Ilu, Hiluo, Fei lu bin rong,

Scientific name

Ficus ampelas

Edible portion

Leaves,

Description

A small evergreen tree. It grows 3-15 m high. The twigs are pale brown and finely rough. They are thin and sometimes hang down. They are hairy. The leafy structure at the base of the leaf is sword shaped and pale brown with a few hairs. The leaf stalk is 3-8 mm long and coarse. The leaves are somewhat rough. They are oblong and taper towards the end. The base of the leaf can be wedge shaped. Sometimes the edges have teeth. The leaves are 5-13 cm long by 2-6 cm wide. The figs are almost without stalks. They are yellowish-red. They occur in pairs in the axils of leaves. They are 0.5-0.8 cm across and slightly rough.

Distribution

It is a tropical plant. It grows in the lowlands. In China it grows in broad-leaved evergreen forests at low elevations.

Found in:

Asia, China, Indonesia, Japan, Malaysia, Pacific, Papua New Guinea, PNG, Philippines, Taiwan, Timor,

Use

The leaves are eaten.

Cultivation

Production

Nutritional Values

Ficus ampelas

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Moraceae

Common names

Benjamin's fig, Weeping fig, The Waringin, Sai-yoi-bai-laem, Chui ye rong, Beringin, Weringin, Jawi-jawi, Jejawi, Waringin, Charingin,



Scientific name

Ficus benjamina var. benjamina

Edible portion

Fruit,

Description

An evergreen tree. It grows to 12-30 m high and spreads to 4-15 m across. The stem is erect and slender. It has irregular flanges along it. The trunk can be 30-50 cm across. The branches can hang over and the leaves hang down. The plant can produce aerial roots from the largest branches. The bark is smooth and pale grey. The leaves are simple, green and glossy. They are darker on top. The are leathery and oval and taper towards the tip. Leaves are 5-13 cm long and 2-4.5 cm wide. The leaf stalk is 1 cm long. The flowers are very small. There are separate male and female flowers enclosed in a receptacle or fig. The fruit are dark red and small round figs. They are 1 cm across. They are produced in pairs. Some varieties occur based on the size of the figs.

Distribution

It is a tropical plant. It can grow in subtropical and warm temperate regions. It does best in rich, moist soil. It needs a protected sunny position. It is damaged by drought and frost. It can survive light frost. They need a minimum temperature above 15°C. It grows naturally in moist coastal monsoon vine forests. In China it grows in mixed forests between 500-600 m altitude in S China. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Bangladesh, Bhutan, Burma, Cambodia, China, East Africa, Fiji, Haiti, Hawaii, Himalayas, India, Indochina, Indonesia, Laos, Malaysia, Myanmar, Nepal, North America, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Puerto Rico, Solomon Islands, South America, Sri Lanka, Taiwan, Thailand, Timor, USA, Vietnam, West Indies,

Use

The fruit are eaten.

Cultivation

Plants can be grown by cuttings, suckering or layering. Plants can be grown from seed,

Production

It is moderately fast growing. In Australia plants fruit from August to October.

Nutritional Values

Ficus benjamina var. benjamina

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Moraceae

Common names

Brown-woolly fig, Bulu timu, Hairy Fig, Drupe Fig, Red Fig, Zhen guo rong, Bhurvar, Goni,

Scientific name

Ficus drupacea

Edible portion

Fruit,

Description

A small to medium sized tree. It grows 10-15 m high. It has a spreading bushy crown. It has strangling roots but not aerial roots. There are prop roots near the base. The trunk is short and irregular. The bark is grey and smooth. The young shoots have dense rusty coloured hairs. The leaf stalk is 2.5-3 cm long. The leaves are simple and 8-18 cm long by 4-9 cm wide. They are oval but narrow abruptly at each end. They are dark green and leathery. Underneath they are more yellowish brown. Young leaves have rusty hairs while mature leaves are smooth. The fig or receptacle is 1.5-2 cm across. They are round and in the axils of leaves on young shoots. They occur either singly or in pairs. They ripen from orange to dark red. They are edible. There are some varieties described based on the hairiness of the leaves.

Distribution

It is a tropical plant. It grows naturally in the rainforest. In China it grows in mountain forests and along streams between 100 -1500 m altitude in S China.

Found in:

Asia, Australia, Bangladesh, Bhutan, Burma, China, Hawaii, Himalayas, India, Indochina, Indonesia, Laos, Malaysia, Myanmar, Nepal, Pacific, Papua New Guinea, PNG, Philippines, Sikkim, Solomon Islands, Sri Lanka, Thailand, Timor, USA, Vietnam,

Use

The ripe fruit are eaten.

Cultivation

Plants can be grown from seed or by using aerial layering.

Production

Nutritional Values

Ficus drupacea

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Moraceae

Common names

India Rubber Tree, Balete, Rubber plant, Yin du rong, Rambong, Pokok getah rambong, Bor, Attah bar, Karet kebo, Bunoh setaroh, Ara

Scientific name

Ficus elastica

Edible portion

Leaves, Fruit,

Description

An evergreen tree. It grows to 30-60 m high and spreads to 10-60 m across. The trunk can be 25-40 cm across. The stem is erect and stout. It can have buttresses. The bark is pale grey and smooth. It can grow on other plants when young. The tree has a rounded crown. It produces aerial roots which hang down and later become prop roots. It also has an aggressive root system. The leafy growth at the base of a leaf is red and 10 cm long. It leaves an easy to see scar. The leaves are green and glossy. Often new leaves have a red flush. They are oblong and 30-45 cm long. They are leathery and have prominent veins. On fruiting branches of mature trees the leaves are smaller. The fruit are greenish-yellow figs. These are 1 cm long and grow from the axils where leaves fall. Often they occur in pairs.

Distribution

A tropical plant. It does best in rich, moist soil. It suits a protected sunny position. It is damaged by drought and frost. It is salt tolerant. They need a temperature above 15°C. It grows up to 1,200 m altitude in NE India. In China it grows in Yunnan. It suits hardiness zones 11-12.

Found in:

Africa, Asia, Australia, Bhutan, Burma, China, East Africa, Ethiopia, Haiti, Hawaii, Himalayas, India, Indochina, Indonesia, Malaysia, Myanmar, Nepal, North America, Pacific, Papua New Guinea, PNG, Philippines, Sikkim, Singapore, Thailand, Timor, USA, Vietnam, West Africa,

Use

The very young leaves are eaten before they expand.

Cultivation

Plants are grown from cuttings of young shoots. They can also be grown by aerial layering. Plants can also be grown from seed.

Production

It is fast growing.

Nutritional Values

Ficus elastica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Moraceae

Common names

Ngoa khi, Maimenmang, Bamang, Ara berteh, Dok, Kebeg, Kebeg abang, Kebeg lenga, Kebeg lisa, Hamerang badak, Hamerang minyak,

Scientific name

Ficus fulva

Edible portion

Fruit,

Description

A small tree. It grows 6-10 m high. The young branches are stout.

Distribution

A tropical plant. It grows in low hills and valleys. It demands light. In Yunnan in China it grows below 1300 m altitude.

Found in:

Asia, Burma, China, Indochina, Indonesia, Malaysia, Myanmar, Timor, Vietnam,

Use

The fruit are eaten raw.

Cultivation

Production

It is fast growing.

Nutritional Values

Ficus fulva

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Moraceae

Common names

White Sandpaper Fig, Boombil, Hairy Fig, Lovie prei, Ngai, Khasreto, Rough leafed fig, Daduri, Dui ye rong, Epu, Jia jhra, Kathumbar, Ara



Scientific name

Ficus hispida

Edible portion

Fruit, Leaves,

Description

A small bushy tree. It grows 6-8 m high and spreads to 2-5 m across. The branches are hollow. It has strangling roots but not aerial roots. The trunk is short and fairly straight and slender. The bark is grey. The young shoots are red and hairy. The leaves are 10-35 cm long by 6-12 cm wide. The leaf stalks are 2-9 cm long. The leaves are dark green, thin and rough on both surfaces. The fig is 3-5 cm across. They are reddish-green and borne in clumps on the trunk and larger branches. The figs split open and are red inside. There are some varieties described based on the colour and size of the figs.

Distribution

It is a tropical and subtropical plant. It occurs naturally in monsoonal rainforests. In Nepal plants are grown between 500-1100 m altitude. In S China it grows between 1000-1500 m altitude.

Found in:

Andamans, Asia, Australia, Bangladesh, Bhutan, Burma, Cambodia, China, Hawaii, India, Indochina, Indonesia, Laos, Malaysia, Myanmar, Nepal, North America, Pacific, Pakistan, Papua New Guinea, PNG, Sikkim, Sri Lanka, Thailand, Timor, USA, Vietnam,

Use

The green fig fruit are eaten, cooked. They are used in curries. (They may cause giddiness)
The ripe fruit are eaten raw. They are also made into jam.
The young leaves are used as a vegetable.

Cultivation

Plants are grown from seed or root suckers.

Production

Nutritional Values

Ficus hispida

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Moraceae

Common names

Small-fruited Fig, Laurel fig, Curtain fig, Malay banyan, Chinese banyan, Indian laurel fig, Rong shu, Rong tree, Glossy-leaf fig, Cuban



Scientific name

Ficus microcarpa

Edible portion

Fruit,

Description

An evergreen tree. It grows 15-25 m tall and spreads to 5 m across. The trunk can be 50 cm wide. The stem is erect and has buttresses. There are aerial roots. The bark is light grey and smooth. The branches are low and it has an open crown. It has a curtain of strangling roots. The leaves are dark green and shiny above and light green underneath. They are oval and pointed. They are 6-12 cm long by 2-7 cm wide. The leaf stalks are 0.5-1.5 cm long. The figs are rosy red or purple and round. They are produced singly or in pairs and are 1.2 cm across. They do not have fruit stalks. The fruit are edible. This plant varies considerably and 3 different varieties are known.

Distribution

It grows in tropical and subtropical climates. It grows in light to medium soils. It does best in an open sunny position. It is drought resistant but damaged by frost. They need a temperature above 13°C. It is often in coastal rainforests. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Bangladesh, Bhutan, Burma, China, Egypt, Haiti, Hawaii, India, Indochina, Indonesia, Iraq, Japan, Malaysia, Mexico, Myanmar, New Caledonia, North Africa, Pacific, Pakistan, Papua New Guinea, PNG, Sikkim, Sri Lanka, Taiwan, Thailand, Timor, USA, Vietnam,

Use

The fruit are eaten.

Cultivation

Plants are grown by tip cuttings. They can also be grown from seed or by aerial layering.

Production

In Australia trees fruit from January to August.

Nutritional Values

Ficus microcarpa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Moraceae

Common names

Cluster Fig, Lovie thom, Sung, Co dua, Dumri, Maduea-uthumpon, Ju guo rong, Gular, Goolar, Red river fig, Elo, Stem-fruit fig, Country fig,



Scientific name

Ficus racemosa

Edible portion

Fruit, Leaves,

Description

An medium sized evergreen spreading tree. Plants can loose many leaves during the dry season. It grows to 12-20 m high and spreads to 5-10 m across. The trunk can be 60-90 cm across. The stem is erect and branching. There are often buttresses at the base. The bark is smooth and pale grey. It does not have aerial or strangling roots. The leaves are produced alternately. They are oval and taper towards the tip. They are 7-22 cm long and 3-9 cm across. The leaf stalk is 1-6 cm long. Flowers are very small and male and female flowers are enclosed in the fig receptacle. The fruit are large fleshy yellow and red figs. They are 5 cm across. They occur in dense clusters on the trunk and main branches. They are velvety when young and become smooth with age. When ripe they often split open. There are some varieties named based on the hairiness of the young parts. The figs are edible.

Distribution

It is a tropical plant. It does best in humus rich, moist soil. It needs to be well drained. It suits a sheltered sunny position. It is damaged by drought and frost. It occurs naturally along the banks of lowland freshwater streams in the monsoonal vine forests. It can cope with being flooded for short periods. In Nepal it grows up to 1000 m altitude. It suits hardiness zones 9-12.

Found in:

Asia, Australia, Bangladesh, Burma, Cambodia, China, Hawaii, India, Indochina, Indonesia, Laos, Malaysia, Myanmar, Nepal, Pacific, Pakistan, Papua New Guinea, PNG, Sri Lanka, Taiwan, Thailand, Timor, USA, Vietnam,

Use

The ripe fruit are eaten fresh. The fruit are usually eaten green. They are also dried and ground into flour and eaten with sugar and milk.
The powder from roasted fruits are used as a breakfast cereal.
The young leaves are eaten in salads. They are also cooked.

Cultivation

Plants can be grown from seed or by using cuttings. It can also be grown using aerial layering.

Production

In Australia, fruiting is mainly June to December but can be at other times. In India fruiting is March to August.

Nutritional Values

Ficus racemosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	81.9	351		1.3		1	1.3	0.3
leaves	85.2	147		3.7		17		

Moraceae

Common names

Bo Tree, Peepul Tree, Pipal, Pimpal, Sacred fig, Pu ti shu, Arasa marum, Arasu, Ray, Raghie, Bodi, Bodhi tree, Bunut kaloja, Sali, Po



Scientific name

Ficus religiosa

Edible portion

Fruit, Leaf-buds,

Description

A deciduous tree. It grows to 35 m tall. The crown is one. It has fibrous aerial rots. The trunk can be 30-40 cm across. When young it grows living on and attached to other plants. The bark is grey and smooth with cracks along it. The young branches has some hairs. The leaf stalk is thin and up to 15 cm long. The leaves are alternate. The leaf blade is triangle shaped or oval and 9-17 cm long by 8-12 cm wide. They are wavy and thinly leathery. They are shiny above. They are reddish when young. They have 5-7 main veins. The base is heart shaped. The tip of the leaf is long and thread like. There are 5-7 secondary veins on each side of the midrib. Flowers are borne inside the figs. Both male and female flowers occur and the male flowers are few and near the opening. The figs are round but flattened. They do not have stalks and occur in pairs. They are dark purple when ripe.

Distribution

A tropical and subtropical plant. It often grows attached to other plants on rock walls and steep slopes. They are common all over India. It is a tropical and subtropical plant. It suits hardiness zones 10-12.

Found in:

Asia, Australia, Bangladesh, Bhutan, Burma, China, Egypt, Fiji, Haiti, Hawaii, Himalayas, India, Indochina, Indonesia, Libya, Malaysia, Myanmar, Nepal, North America, Pacific, Pakistan, Sikkim, Sri Lanka, Thailand, Timor, USA, Vietnam,

Use

The fruit are eaten ripe.

Cultivation

Plants can be grown from seed or cuttings. They can also be grown from layers.

Production

It is a fast growing tree. Trees can live for hundreds or thousands of years.

Nutritional Values

Ficus religiosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Moraceae

Common names

Sea Fig, Hua li rong, Deciduous fig,



Scientific name

Ficus superba

Edible portion

Leaves,

Description

A large fig. It loses its leaves for a short time. It has some aerial roots. It grows 6-21 m high and spreads 10-18 m wide. The young leaves are pink. They become mid green. The leaves grow to 25 cm long. The figs are dull purple. They are 18 mm across. They are clustered on short stalks.

Distribution

A tropical plant. The variety japonica occurs in China. It grows on plains or in villages near the sea coast in S China. It grows from 100-1400 m altitude. It suits hardiness zones 9-11. Geelong Botanical Gardens.

Found in:

Asia, Australia, Burma, Cambodia, China, Indochina, Indonesia, Japan, Malaysia, Myanmar, Thailand, Timor, Vietnam,

Use

Cultivation

Production

Nutritional Values

Ficus superba

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Moraceae

Common names

Dye fig, Xie ye rong, Mati,



Scientific name

Ficus tinctoria

Edible portion

Fruit, Leaves,

Description

A small tree or shrub 2-4 m high. It can climb and scramble over other plants and be up to 10 m high. The small branches are rough. The small branchlets are yellow or pale brown. The bark is grey or brown and cracked or flaky. The leafy structure at the base of the leaves is sword shaped and 5-10 mm long and thick. The leaves of the tree are yellowish with purple veins and short leaf stalks. The leaves are 4-13 cm long and 2-6 cm wide. The leaf stalk is 0.6-1 cm long. Male and female flowers occur on separate plants. The figs are in the leaf axils and up to 2 cm across and orange coloured. There are some varieties described based on the size of the plant and the size of the figs.

Distribution

A tropical plant. Trees are common on limestone or coral rocks near the sea shore. It tends to be on coral soils. In the Pacific it grows from sea level to 750 m altitude.

Found in:

Asia, Australia, Bhutan, Burma, China, Cook Is., FSM, Fiji, Himalayas, India, Indochina, Indonesia, Kiribati, Malaysia, Marshall Is., Myanmar, Nepal, Niue, Pacific, Palau, Papua New Guinea, PNG, Philippines, Samoa, Solomon Islands, Sri Lanka, Thailand, Timor, Tokelau, Tonga, Tuvalu, Vanuatu, Vietnam,

Use

The young tips are picked and eaten.
The fruit are eaten cooked. They are often cooked in coconut milk.

Cultivation

It normally grows wild.

Production

In Australia, fruit are produced in May to July.

Nutritional Values

Ficus tinctoria

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Moraceae

Common names

Variegated Fig, Va rung, Ngoa rung, Za se rong, Ara kelumpong, Gondang, Kondang, Common red-stem fig, Tangisang-bayauak,

Scientific name

Ficus variegata

Edible portion

Leaves, Fruit,

Description

A medium sized buttressed tree up to 7-18 m high. The trunk varies in length and can be 20-30 cm across. Trees can be larger. The bark is characteristically brown and smooth. It is thick with an abundance of latex. The young shoots are pale green. The leaves are broad and oval and leathery, shiny and smooth. They are 14-20 cm long and 8-12 cm wide. The base of the leaves is rounded and heart shaped. The leaf stalks are 3 to 8 cm long and brown. The leaf like structures (stipules) at the base of the leaf stalks are 1-1.5 cm long, smooth and pinkish. Swollen structures are found along the larger limbs. Red figs with white spots are produced on the trunk and larger branches. The fruit is round and smooth and turns deep yellow when mature. The fruit are 3-4 cm across. Trees may bear thousands of fruit which are eaten by birds. Named varieties occur based on the colour of the fruit. The fruit are edible.

Distribution

A tropical plant. They occur in the Philippines in lower forested regions from Luzon to the provinces of Mindanao. In Australia they are in the tropical rainforests and in coastal districts. Trees demand humidity and light. They are often on well drained soils at the edge of the rainforest. It grows in valleys at low and middle altitudes in S China. In Indonesia trees grow up to 1,500 m altitude.

Found in:

Andamans, Asia, Australia, Burma, China, India, Indochina, Indonesia, Japan, Laos, Malaysia, Myanmar, Pacific, Papua New Guinea, Philippines, PNG, Singapore, Solomon Islands, Timor, Vietnam,

Use

The freshly cut stems yield drinking water.
The fruit are edible but not attractive. Young fruit can be used cooked.
The young leaves are eaten cooked.

Cultivation

It can probably be grown from seed or by aerial layering. It seeds and grows naturally under the right conditions.

Production

It is a fast growing tree. In the northern hemisphere it flowers in April and May and fruits in July and August.

Nutritional Values

Ficus variegata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Moraceae

Common names

White Fig, Banyan, Deciduous Fig, Lu huang ge shu, Biguan Rong, Pen-cap banyan, Amchar, Payer, Pakur, Pakar, Pilkhan,



Scientific name

Ficus virens

Edible portion

Fruit, Leaves,

Description

A tall and often very large tree. It can lose all or some of its leaves during the year. It grows 15-30 m high and spreads 15-40 m across. It is a widely spreading plant often with a rounded crown. It can have both strangling roots and aerial roots. The trunk is short and very thick. It has irregular flanges on it and buttresses. It can have a mass of prop roots. The bark is dark grey to brown. Young shoots are bright green. The leafy growth at the base of the leaf is sword shaped and 10 cm long. The leaf stalk is 2-5 cm long. The leaves are 6-15-20 cm long and 4-6 cm wide. They are oval or sword shaped and thin but leathery. They are dark green above but with pale veins and leaves are dull underneath. The male and female flowers occur in the one fig. The male flowers are few and near the opening. The fruit or figs are about 1 cm across. They are round and greenish white to brown with white or red dots. They are wrinkled on the surface. Varieties with different leaf shapes have been described.

Distribution

It is a tropical plant. It grows in a range of locations including rocky outcrops and rainforest. It needs well drained soil. It can grow in dry and humid regions. It is damaged by frost. In China it grows between 300-2700 m altitude in S China. Melbourne Botanical gardens. It suits hardiness zones 10-12.

Found in:

Asia, Australia, Bhutan, Burma, China, Egypt, Hawaii, India, Indochina, Indonesia, Malaysia, Myanmar, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Sikkim, Solomon Islands, Sri Lanka, Thailand, Timor, USA, Vietnam,

Use

The fruit are eaten.

Cultivation

Trees can be grown from seed or aerial layers. Cuttings from young shoots strike easily. It often naturally starts in the fork of a host tree and eventually strangles and kills the other tree.

Production

Trees grow quickly. In Australia, fruit mature June to October.

Nutritional Values

Ficus virens

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Moraceae

Common names

Large-Leaved Weeping Fig, Dao rong, Daun ulang-ulang, Lumaput, Nunok, Diakit, Kauis, Liuliu,

Scientific name

Ficus virgata

Edible portion

Fruit, Leaves,

Description

A medium size tree. It grows 10-20 m tall and spreads 10-25 m wide. It has a rounded or pointy crown. It has strangling roots but not aerial roots. The trunk can vary in length and has irregular flanges in it. The bark is grey and leathery. The young shoots are pale green. The leaves are simple and 10-20 cm long by 6-8 cm wide. They are oval. They are dark green and shiny on the upper surface and paler underneath. There is a flat gland where the midrib and first side vein join. The leaf stalks are 0.5-1 cm long. The fig fruit are 2-3 cm across. They are round and pink brown and produced in the axils of leaves. The surface of the fruit is rough. When they are ripe the fruit are orange to dark red.

Distribution

A tropical plant. It grows naturally in tropical rainforests. It is at low elevations.

Found in:

Asia, Australia, India, Indonesia, Japan (Ryuku), Malaysia, New Caledonia, Pacific, Papua New Guinea, PNG, Philippines, Solomon Islands, Taiwan, Timor, Vanuatu,

Use

The fruit are eaten.
The young shoots are eaten in curries. (Leaves under 3 days are eaten fresh.)

Cultivation

Plants can be grown from seed or by aerial layering. It can also be grown by cuttings.

Production

In Australia, fruit are produced in all months of the year.

Nutritional Values

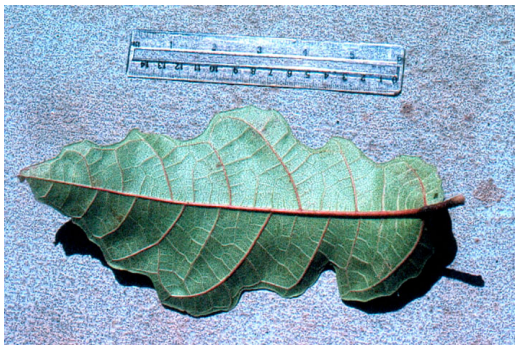
Ficus virgata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Moraceae

Common names

Ngo'ongo'o, Nonali mato, Pakopako, Tivanono, Mimo, Ghaapoli mongi, Huhula, Amusi kilikacha, Gaegale, Igula, Kamwa kamwa, Amiki,



Scientific name

Ficus wassa

Edible portion

Leaves, Fruit,

Description

A shrubby tree up to 4 m tall. The bark is grey, flaky and scaly. The young leaf parts have grey hairs underneath them. The leafy twigs are reddish brown. The leaves are produced opposite one another. The leaf is rough to the touch. The edges of the leaves are wavy and slightly toothed. The tip of the leaf is pointed and the base is wedge shaped. There is a gland at the base of the leaf veins. Fruit are produced in clusters on the leafless stems. They are red to purple when ripe.
Ficus copiosa and *Ficus wassa* are very similar. *Ficus wassa* is usually smaller and has darker bark. *Ficus copiosa* has larger more angular leaves and the figs are normally less red and more green and on longer stalks. The fruit of *Ficus wassa* are smaller and harder.

Distribution

A tropical plant. It occurs in areas of re-growth. In Papua New Guinea it grows in lowland areas and up to 1,300 m altitude or higher. In Solomon Islands it grows up to 1,400 m altitude. In Vanuatu it grows up to 800 m altitude.

Found in:

Asia, Indonesia, Pacific, Papua New Guinea, PNG, Solomon Islands, Timor, Vanuatu,

Use

The leaves are eaten cooked.
The fruit are also cooked with the young leaves.

Cultivation

Plants can be grown from seed or cuttings.

Production

Nutritional Values

Ficus wassa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

Governor's plum,

Flacourtiaceae



Scientific name

Flacourtia indica

Edible portion

Fruit,

Description

A shrub or small tree. It grows 5-15 m high. The trunk is crooked and low branched and armed with scattered slender spines. The leaves are alternate, pointed at the base and rounded at the tip. The edges of the leaves toothed with rounded lobes. Leaves are dark green on top and pale green underneath. They are 6-17 cm long and 3-7 cm wide. Male and female trees occur. The flowers are small and white, occur singly or in pairs in the axils of leaves or near the ends of short branches. The fruit are rounded, fleshy, purple or nearly black. They are smooth and about 1 cm across. The flesh is yellowish, juicy and acid. There are 6 to 10 small flattened seeds inside. The fruit are edible.

Distribution

A tropical plant. They are found in the Philippines in Cagayan, Isabela, Tarlac, Zambales, Bataan, Rizal and Mindoro. They thrive in dry shrubby areas at low altitudes. Trees grow in coastal areas and up to 700 m or higher. In Africa it grows from sea level to 2,400 m above sea level. They suit drier areas. In Yunnan it grows between 700-1500 m altitude. It grows in subtropical broadleaved evergreen forest. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Bangladesh, Botswana, Brazil, Burundi, Cambodia, Cameroon, Central Africa, Central America, China, Comoros, Congo, East Africa, Ethiopia, Ghana, Guyana, Hawaii, India, Indochina, Indonesia, Kenya, Laos, Madagascar, Malawi, Malaysia, Mauritius, Mozambique, Namibia, Nepal, Niger, Nigeria, North America, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Rwanda, Seychelles, Somalia, South Africa, Southern Africa, South America, Sri Lanka, Sudan, Swaziland, Tanzania, Thailand, Timor, Uganda, USA, Vietnam, West Africa, West Indies, Zambia, Zimbabwe,

Use

The fleshy pulp of the fruit is eaten raw when ripe.
They are also cooked and eaten.
They can be used to make jelly.

Cultivation

Trees are normally grown from seed. Because the seeds have a hard seed coat it helps to scratch the seed to help germination. Cuttings can be used. Air layering can be used. Groups of trees containing both male and female trees need to be grown from root suckers or by budding. Some kinds are self pollinating. A spacing of 12-16 m apart is needed.

Production

In India Rajasthan, fruit are available Feb - May. Fruit matures in 60 days from pollination.

Nutritional Values

Flacourtia indica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	69.5	452		0.5	15	14	1.2	

Flacourtiaceae

Common names

Rukam, Ta khop thai, Hong quan, Rukam manis, Indian prune, Ganda rukem, Klang tatah kutang, Rukam gajah, Amaiit, Aganas, Kalominga,



Scientific name

Flacourtia rukam

Edible portion

Leaves, Fruit,

Description

A tree reaching a height of 5-20 m and about 30 cm across the trunk. It can be 40 m tall with a trunk 1 m across. The old branches are usually crooked with furrows along them. The leaves are 5 to 15 cm long and 4-7 cm wide and pointed at the tip. Young leaves are reddish brown and leaves are shiny on top. The young stems are very rough. The flowers are very small and occur in greenish yellow clusters in axils of leaves. They occur with separate sexes in separate flowers. The fruit is a flattened berry with soft juicy flesh and a red colour. The trunk in young trees has many simple spines. The leaf size and shape varies a lot.

Distribution

A tropical plant. It grows in humid tropical conditions. It can grow in shade as well as full sun. They occur in Benguet to the southern parts of the islands of the Philippines. Trees occur in tall lowland rainforest. They probably grow from sea level up to about 1600 m in Papua New Guinea. In Samoa it grows from 50 to 550 m altitude. It suits hardiness zones 10-12.

Found in:

Asia, Australia, Cambodia, China, Fiji, India, Indochina, Indonesia, Laos, Malaysia, Pacific, Papua New Guinea, Philippines, PNG, Samoa, Singapore, Solomon Islands, Thailand, Timor, Tonga, Vanuatu, Vietnam,

Use

The fruit are eaten raw when ripe. The fruit are rolled between the hands to reduce the astringency. It can be sour and is used for jam, sauce or pickles. They
The young leaves and shoots are edible.
The young roots are edible.

Cultivation

Trees are mostly self sown. They grow from seed. Seed germinate quickly and easily. Trees can be grown from seed or root suckers. Root suckers are commonly produced. Fruit are made sweeter by rubbing them after harvest. Trees can also be budded or grafted. Trees are spaced 8-12 m apart.

Production

Fruiting is seasonal. There can be several flowering and fruiting flushes during the year. Fruit are often produced about September to November in the southern hemisphere. Fruit take 14 weeks to ripen.

Nutritional Values

Flacourtia rukam

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	77	345		1.7				

Flagellariaceae

Common names

Supplejack, Whip vine, Lawyer vine, Wai-ling, False rattan, Rotan dini, Rotan tikus, Kokrok, Wala, Wowo, Owar, Rotan mambang, Wai ling,



Scientific name

Flagellaria indica

Edible portion

Fruit, Shoots, Leaves, Stem,

Description

An evergreen vine. It grows to 10 m tall. It climbs high into trees by modified tendrils on the tips of leaves. The stem is vigorous and branching. The stems are woody and 1-3 cm thick. The stem is covered with overlapping leaf sheaths. The leaves are narrow and sword shaped. They taper at both ends and the tips curve backwards forming tendrils. Leaves are 8-30 cm long and 0.7-2 cm wide. They are bright green and have parallel veins. They do not have a leaf stalk but clasp the stem. The flowers are very small and occur in sprays at the ends of branches. They are white. The fruit are berries which are small and fleshy and red when ripe. They are 0.3-0.5 cm across. The fruit are edible.

Distribution

It is a tropical plant. It does best with a well drained soil rich in compost. It needs a protected sunny position. It is damaged by drought and frost. It grows naturally in rain forests and along the edge of streams. It can grow on sandstone soils. It suits hardiness zones 9-12.

Found in:

Africa, Andamans, Asia, Australia, Burma, East Africa, Fiji, India, Indochina, Indonesia, Lord Howe Island, Malaysia, Myanmar, New Caledonia, Pacific Islands, Pan tropical, Papua New Guinea, PNG, Samoa, Taiwan, Thailand, Timor,

Use

The young shoots and leaves are eaten after boiling.
The fruit is eaten.
The sweet stems are also chewed.

Cultivation

Plants are grown from seed. The seed need to be sown fresh.

Production

In Australia, flowering occurs periodically mainly December to March.

Nutritional Values

Flagellaria indica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Serengan,

Scientific name

Flemingia strobilifera

Edible portion

Fruit,

Description

A shrub. It grows to about 3 m high. The bark is reddish. It has many small corky spots on the bark. The leaves are 3-14 cm long by 2.8-4.8 cm wide. They are simple and oval. There are hairs on the midrib. The flowers are greenish white. They occur at the ends of branches. The fruit is a pod. It is finely downy.

Distribution

It is a tropical and subtropical plant. In Nepal it grows between 300-2300 m altitude.

Found in:

Asia, Burma, Central America, China, Haiti, Jamaica, Malaysia, Mauritius, Myanmar, Nepal, Pakistan, Sri Lanka, Taiwan, Thailand, Timor,

Use

The ripe fruit are eaten fresh.

Cultivation

Plants are grown from seed.

Production

Nutritional Values

Flemingia strobilifera

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Euphorbiaceae

Common names

Wart-stem, White-berry bush,

Scientific name

Flueggea virosa

Edible portion

Fruit, Seeds,

Description

A tree. It grows 4 m high. It is densely leafy. The leaves are alternate and simple. The leaf blade is round or broadly oval. They are 3 cm long by 1.5 cm wide. The male and female flowers are small and on separate plants. The fruit are slightly fleshy. They are round and white. They are 5 mm across. They are on slender stalks 4 mm long. The seeds are 2 mm long.

Distribution

It is a tropical and subtropical plant. It grows on river flats and well drained rocky slopes. It can grow in hot arid places. It needs an annual rainfall above 150 mm. It can grow in stony and sandy soils. It needs a sunny position. In Ethiopia it grows between 400-2,050 m altitude.

Found in:

Africa, Angola, Arabia, Australia, Benin, Botswana, Burkina Faso, Burma, Burundi, Cameroon, Central Africa, Central African Republic, Chad, China, Comoros, Congo, East Africa, Egypt, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, India, Indonesia, Ivory Coast, Japan, Kenya, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Myanmar, Namibia, Nepal, Niger, Nigeria, Papua New Guinea, PNG, Philippines, Reunion, Rwanda, Saudi Arabia, Senegal, Sierra Leone, Somalia, South Africa, Southern Africa, Sudan, Swaziland, Taiwan, Tanzania, Thailand, Timor, Togo, Uganda, West Africa, Yemen, Zambia, Zimbabwe

Use

The ripe fruit are eaten raw.
Caution: The fruit should probably not be eaten in large amounts due to alkaloids.

Cultivation

Plants can be grown from seed.

Production

It is fast growing.

Nutritional Values

Flueggea virosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

Mangosteen,

Clusiaceae



Scientific name

Garcinia mangostana

Edible portion

Fruit, Seeds,

Description

A medium sized tree 10-20 m high with bright glossy leaves. Trees keep their leaves all year. Leaves are 15-25 cm long and leathery. Male and female flowers are on separate trees. Commercial trees only have female flowers. Male trees occur but are rare. Flowers are produced on shoots near the end of branches. Female flowers have 4 cream petals and 4 sepals and a round ovary with a thick stigma composed of 4 to 8 lobes. No pollination is required because fruit develop without fertilisation. The fruit is dark blue with 4-8 white juicy segments inside the thick skin. Each segment is enclosed in fine pinkish veins. It is 8 cm across and has flower sepals attached to the stalk end. It leaks yellow sap from wounds. Fruit is produced on side branches near to the tips of the main branches. Fruit often have no seeds or up to 2. These are not true seeds but they will grow.

Distribution

It is a tropical plant. It needs a hot humid climate (25°C to 35°C). Temperatures below 5°C will kill the plant and temperatures below 20°C slow growth. It grows from sea level up to 1000 m altitude in the equatorial tropics although they grow very slowly at this altitude. It can stand light shade. It often does not do well with sea breezes, and needs protection from wind. It cannot tolerate drought. It needs fertile soil. Good fertility enables earlier bearing. It suits high rainfall areas over 2500 mm per year. It cannot tolerate alkaline soils. It suits hardiness zones 11-12.

Found in:

Africa, Asia, Australia, Brazil, Burma, Cambodia, Cameroon, Central Africa, Central America, China, Dominican Republic, Fiji, Ghana, Haiti, Hawaii, India, Indochina, Indonesia, Laos, Malaysia, Myanmar, Nicaragua, North America, Pacific, Papua New Guinea, PNG, Philippines, Puerto Rico, Singapore, Solomon Islands, South America, Sri Lanka, Thailand, Timor, USA, Vietnam, West Africa, West Indies, Zambia,

Use

Fruit is best eaten fresh. It is the arillus or layer around the seeds which is eaten. They are also cooked and used in desserts. The seeds are eaten after boiling or roasting. They can be ground to produce a vegetable butter.

Cultivation

Trees breed true from seed because they are produced asexually. This means trees are very uniform. As well some seeds can produce more than one seedling. They germinate between 10 and 54 days. Seeds need to be fresh (less than 5 days after extraction) and undamaged, and cleaned of pulp. They quickly lose their viability. Transplanting is done with care after 2 years. Long tap roots make this difficult. Young trees require shade during hot weather. The slow early growth is because the original roots of the seedling are replaced by new roots from the base of the stem. A spacing of 7 - 10 m suits. Grafting onto vigorous root stocks is difficult. It has been performed on *Garcinia tinctoria.* Budding, cuttings and layering have been unsuccessful.

Production

Trees are slow growing and begin to bear after 8-20 years. Fruit are produced on shoots which are more than two years old so pruning is unnecessary. Fruiting is seasonal once or twice a year. Often more fruit are produced every second year. The main fruiting season is November to March. Fruit need to be harvested when mature and ripe. Fruit can only be transported with difficulty. They can be stored under refrigeration. (10°C for up to eight weeks). Between 500 to 1500 fruit are produced per tree. Fruit are best opened by cutting the skin around the middle to prevent tannins from the skin spoiling the flavour. Fruit can be stored for 3 weeks if undamaged.

Nutritional Values

Garcinia mangostana

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	81.3	299		0.6		2.7	0.4	

Burseraceae



Common names

Garuga, Kagi, Kagi,

Scientific name

Garuga floribunda

Edible portion

Fruit,

Description

A small tree. It grows 8-12 m tall and spreads 5-10 m wide. The branches are thick and have scars left where the leaves have fallen. The leaves are crowded at the ends of branches. The leaves are 10-30 cm long and divided into leaflets along the central stalk. There are 14-16 leaflets and these are 4-8 cm long by 2-4 cm across. They are oval or sword shaped. They are leathery and dark green on the upper surface and paler underneath. They taper towards the tip and have unequal slanting sides at the base. Young leaves often have a reddish tinge. The flower branch is 20-30 cm across and occurs at the ends of small branches. They flowers are greenish white and hairy and 1 cm across. The fruit is fleshy with a woody shell around the seed inside. The fruit is about 2.5 cm across. It is oval and rough. The fruit is edible.

Distribution

A tropical plant. It suits coastal regions in tropical places. It is very sensitive to cold. They need an open sunny position and well drained soil. It grows from sea level to 450 m altitude in Samoa.

Found in:

Asia, Australia, China, Fiji, India, Indonesia, Malaysia, Pacific, Papua New Guinea, PNG, Philippines, Samoa, Solomon Islands, Timor, Tonga, Vanuatu,

Use

Cultivation

They are grown from seed which should be sown while fresh. The seed germinate irregularly. To break the seed coat it may pay to scratch the seed then soak in water before sowing.

Production

Nutritional Values

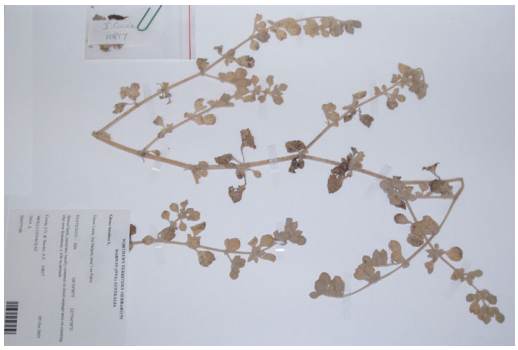
Garuga floribunda

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Molluginaceae

Common names

Hairy Carpet-weed,



Scientific name

Glinus lotoides

Edible portion

Shoots, Leaves,

Description

A herb. It lays along the ground. The stem are hairy. They are 10-40 cm long. There are many branches. The leaves at the base are in a ring. These dry off. The higher leaves are 6-24 mm long by 5-15 mm wide. Several flowers occur in a group. The fruit are capsules which have 5 valves. There are many chestnut brown seeds. They are kidney shaped.

Distribution

A tropical plant. They grow in open sands and riversides and waste places from sea level to 500 m altitude in China. It is often in muddy areas along watercourses and wetlands. It grows between 600-1,440 m above sea level in Africa.

Found in:

Africa, Asia, Australia, China, East Africa, Ethiopia, Europe, India, Indochina, Indonesia, Malawi, Malaysia, Mediterranean, Mozambique, Pacific, Pakistan, Philippines, Southern Africa, South America, Spain, Sri Lanka, Sudan, Swaziland, Timor, Vietnam, Zambia, Zimbabwe,

Use

The young shoots are eaten as a pot-herb.

Cultivation

Production

Nutritional Values

Glinus lotoides

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Mother-of-cacao,



Scientific name

Gliricidia sepium

Edible portion

Leaves, Flowers,

Description

An evergreen shrub or tree. It grows to 10 m high and spreads to 3 m across. The crown is irregular. The bark is grey. The stem is erect and branching. The young branches are hairy. The leaves are compound with 8 to 14 leaflets. These are 7 cm long and 3 cm wide. They come to a blunt tip at the top end and are rounded at the base. The flowers are pink and yellow in the centre with a green stripe. They are pea shaped. The flowers occur in 10 cm long clusters. They are produced on older twigs. The fruit is a woody pod 15 cm long and up to 2 cm wide. The seeds are purplish brown and round. They are 1 cm long and 9 mm wide.

Distribution

A tropical plant. It grows best in warm, seasonally dry climates. It occurs in areas with 900-1500 mm annual rainfall. It grows between sea level and 1200 m altitude. It suits areas with a mean annual temperature of 20-27°C. It does best with light well composted soil. The soil needs to be well drained. It needs a protected sunny position. It is damaged by drought and frost. It grows with soil pH between 5.0-8.5. It suits hardiness zones 10-12.

Found in:

Africa, Antilles, Aruba, Asia, Australia, Bahamas, Belize, Bhutan, Brazil, Brunei, Burma, Cameroon, Caribbean, Central America, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, East Africa, Ecuador, El Salvador, Fiji, French Guiana, Ghana, Guam, Guadeloupe, Guatemala, Guyana, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Jamaica, Kiribati, Madagascar, Malaysia, Martinique, Mauritius, Mexico, Myanmar, Nicaragua, Nigeria, North America, Pacific, Pakistan, Palau, Pan tropical, Panama, Papua New Guinea, PNG, Philippines, Puerto Rico, Reunion, Samoa, Seychelles, Senegal, Sierra Leone, Singapore, Solomon Islands, Southern Africa, Sri Lanka, St Lucia, Suriname, Tanzania, Thailand, Timor, Tonga

Use

The leaves have been reported as being eaten.
The flowers are cooked as potherbs and also folded into an egg batter and fried.
CAUTION: They are also reported as poisonous. Leaves are used to kill rats. As all parts are poisonous it is probably better not to eat any part.

Cultivation

Plants are grown from seed. The seed needs treatment to help it to start growing. Plants are easy to grow from large cuttings.

Production

Nutritional Values

Gliricidia sepium

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves raw	84.7		52	2.4			0.8	

Fabaceae

Common names

Soybean,



Scientific name

Glycine max

Edible portion

Seeds, Leaves, Spice, Vegetable,

Description

A small erect bean up to 60 cm tall. It grows each year from seed. Straggling kinds can occur. Stems, leaves and pods are softly hairy. The leaves have 3 leaflets. The leaflets have stalks. Flowers are small and white or blue. They occur in groups in the axils of leaves. The pods are broad, flat and hairy. Pods have 2-4 seeds. The seeds can be yellow to black.

Distribution

It is a temperate plant. It suits lowland areas. It can be grown from sea level to 2000 m altitude. Many varieties will not flower in the tropics (short days). It needs fertile soil. The best soil acidity is pH 5.5 to 7.0. It is damaged by frost. In Nepal it grows to 1800 m altitude. It suits hardiness zones 7-8.

Found in:

Afghanistan, Africa, Argentina, Asia, Australia, Bangladesh, Benin, Bhutan, Bolivia, Brazil, Bulgaria, Burkina Faso, Burma, Burundi, Cambodia, Cameroon, Canada, Caribbean, Central America, China, Colombia, Congo, Czech Republic, Dominican Republic, East Africa, Ecuador, Egypt, Ethiopia, Europe, Fiji, France, Ghana, Guatemala, Guyana, Haiti, Hawaii, Hungary, India, Indochina, Indonesia, Iran, Iraq, Italy, Ivory Coast, Jamaica, Japan, Kenya, Korea, Laos, Liberia, Madagascar, Malawi, Malaysia, Manchuria, Mauritius, Mexico, Morocco, Myanmar, Nepal, New Zealand, Nigeria, North America, Pacific, Pakistan, Papua New Guinea, Paraguay, PNG, Peru, Philippines, Korea, Romania, Russia, Rwanda, Senegal, Slovakia, South Africa

Use

The young pods and ripe seeds are eaten. They are used for flour. The dried seeds are boiled or baked and used in soups, stews and casseroles. The seeds are used for oil. Toasted seeds are eaten like a snack. Strongly roasted seeds are used for coffee. Soy flour is used for noodles, pasta, confectionary and other foods. The beans are fermented and used in a range of foods.
Sometimes the young leaves are eaten.

Cultivation

It is grown from seed. Seeds need to be inoculated with bacteria before planting. Plants need to be about 20 cm apart.

Production

Plants flower about 8 weeks after sowing and pods mature about 16 weeks after sowing. Often plants are pulled up and hung up before threshing out the seed.

Nutritional Values

Glycine max

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds	9.0	1701		33.7	55		6.1	
immature seeds	68.0	584		13.0	16	27	3.8	0.9
seeds sprouted	79.5	339		8.5	1	8.3	1.3	1.0

Lamiaceae

Common names

Comb tree, Snapdragon tree, Tall beachberry, Gambhari, Gumhar, White Teak, Kasmari, Gandhari, Shriparni, Bhadraparni, Gambhar,



Scientific name

Gmelina arborea

Edible portion

Seeds, Fruit, Flowers - flavouring,

Description

A tree which loses its leaves. It grows to 10-25 m high. The trunk is erect and the branches are horizontal. The bark is greyish brown. The bark peels off in thin flakes. Young parts are covered with silky hairs. The leaves have stalks. The leaves are 10-20 cm long by 7.5-14.5 cm wide. They are broadly oval and have a wedge shaped base. The leaves underneath are covered with hairs. The flowers are brown or yellow. The grow in loose flower clusters at the ends of branches. These are about 25 cm long. The fruit is fleshy and with a hard covering over the seed. It is oval and yellow outside when ripe. It has 1-2 oblong seeds. The fruit pulp is edible.

Distribution

It is a tropical plant. It is native from Pakistan to Malaysia. It grows in Nepal to about 1100 m altitude. It grows in shady places. In India it grows in coastal regions and also in deciduous regions of central India. It needs a wet climate. It does best with a rainfall between 750-4,500 mm per year. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Bangladesh, Benin, Bhutan, Burkina Faso, Burma, Cameroon, Central Africa, Central African Republic, China, Congo, East Africa, Ethiopia, Fiji, Gabon, Gambia, Ghana, Guinea, India, Ivory Coast, Kenya, Liberia, Madagascar, Malawi, Malaysia, Mali, Myanmar, Nepal, Nigeria, Pacific, Pakistan, Philippines, Rwanda, Senegal, Sierra Leone, Singapore, Sri Lanka, Sudan, Tanzania, Thailand, Timor, Togo, Uganda, Vietnam, West Africa, Zambia, Zimbabwe,

Use

The seeds are eaten.
The fruit are eaten.
The flowers are mixed with glutinous rice to make a cake like dish. They are used for flavouring and colouring.

Cultivation

Plants are grown by seed. It can also be grown by cuttings, budding or grafting. Seeds are sown in a nursert then transplanted.

Production

It is very fast growing.

Nutritional Values

Gmelina arborea

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Gnetaceae

Common names

Tu lip, Melimjo, Sukau, Spinach Joint fir, Guan zhuang mai ma teng, Xian zhou mai ma teng, Bago, Belingo, Meninjau, Belinjau, Banago,



Scientific name

Gnetum gnemon

Edible portion

Leaves, Fruit, Flowers, Seeds, Vegetable,

Description

A shrub or small tree about 10 m high. It can grow to 20 m high. It normally has a cone shaped crown. The bark is greyish brown. The small branches are slender and like a vine. The leaves are produced in pairs opposite each other. They are dark green and shiny, oval and pointed at both ends. The leaves are 7.5-12.5 cm long by 2.5-7.5 cm wide. Trees are either male or female. Male spikes are 3-6 cm long. They consist of 50-80 very small flowers in rings along the stalk. Flowers are produced as cones made up of rings of scales along stalks 3-6 or 12 cm long. There are 5-8 flowers at each node. Fruits are oval and green when young but red when ripe. Fruit are 2-3 cm long and contain one seed.

Distribution

A tropical plant. Trees occur in tropical rainforest from sea level to about 1200 metres altitude. It does best with rainfalls of 3000-5000 mm per year. It is best with an annual temperature of 22-30°C. It needs a temperature above 13°C. These trees grow in Malaysia, Indonesia and islands out to Fiji. They can grow on a range of soils but do best on deep well drained soils. It grows well in acid soils. It can grow in full sun but also tolerate shade. It cannot tolerate salt spray. It suits hardiness zones 10 -12.

Found in:

Asia, Australia, Burma, Cambodia, China, Fiji, India, Indochina, Indonesia, Malaysia, Myanmar, Pacific, Palau, Papua New Guinea, PNG, Philippines, Samoa, Singapore, Solomon Islands, Thailand, Timor, Vanuatu, Vietnam,

Use

Young leaf tips are eaten cooked. Young flowers are eaten, cooked.
Young fruit are eaten, cooked. Ripe fruit are eaten raw or cooked.
(Fruit should be crushed before cooking or they can explode.)
Young flowers and fruit need cooking to get rid of irritating substances.
The seeds are dried and flattened and then deep fried in hot oil and salt added.

Cultivation

Trees are grown from seed. For using as seed for growing, a fully ripe red fruit is needed. Seeds exhibit a natural dormancy due to a hard impermeable seed coat. Breaking this seed coat can normally hasten germination. This is done by boring a hole into the seed. Propagation can be naturally by seeds distributed by birds, by planting seeds or by cuttings. A spacing of 6 m is suitable although in rows they are often put more closely.

Trees appear to establish in the forest under-storey indicating some shade tolerance. Trees recover readily from pruning. Coppicing can produce a rapid flush of new leaves. Flushes of new leaves tends to occur seasonally. Trees can be topped to keep them shorter. If plants are grown by air layering they are shorter and more compact.

Production

Trees grow by flushes of young reddish leaves. Flowers are produced throughout the year. Trees grown from seed take 5-8 years to bear fruit. Air layered trees produce fruit in 2-3 years. Leaves are harvested when fully expanded but still soft and succulent. The fruit are harvested when the skin turns red. Trees can produce 20,000 fruit per year or 6-7 kg. Yields of up to 80-100 kg per tree per year have been achieved.

Nutritional Values

Gnetum gnemon

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds	13.0	1442	345	12.0			5.0	
leaves	66.0	378		5.9	3700	200	2.7	
leaves	88.0	147	35	1.6	2220	66.0	1.6	0.2

Malvaceae

Common names

Wild currant, Emu berries, Coffee fruit,

Scientific name

Grewia breviflora

Edible portion

Fruit,

Description

A small tree with many stems. It grows 3-8 m tall. The branches spread out. The tree loses its leaves during the year. The leaves have hairs on both surfaces. The leaf blade is 3.5-8 cm long by 2-4.5 cm wide. The veins are distinct. The edges have teeth. The flowers are yellow and about 0.5 cm long. The occur in small clusters in the axils of leaves. The fruit is smooth, round and fleshy. It has 1-2 lobes. They are about 0.6 cm across. They are dark black when ripe. They contain a hard shell with 2 seeds.

Distribution

A tropical plant. It grows naturally in coastal monsoon vine-thickets.

Found in:

Australia, Timor,

Use

The fruit are eaten.

Cultivation

Production

Nutritional Values

Grewia breviflora

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	44.3	839		3.0				

Malvaceae

Common names

Scientific name

Grewia oxyphylla

Edible portion

Description

It can be a climber, a shrub or a tree. It grows 2-8 m high. The flowers are green and white.

Distribution

It is a tropical plant. It grows on sand and in vine thickets close to the coast.

Found in:

Australia, Timor,

Use

Cultivation

Production

Nutritional Values

Grewia oxyphylla

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Burseraceae



Common names

Kaunigai, Mala Adoa, Gemugi, Ngeemungi, Maramara Ngari,

Scientific name

Haplolobus floribundus

Edible portion

Fruit, Seeds, Nut,

Description

Medium to large trees that develop short medium round buttresses. The tree can vary between 5 and 24 m high. The trunk can be 60 cm across. The bark is covered with small growths but is not rough to touch. The bark smells like green mangoes and when cut oozes pale white latex. The leaves occur on opposite sides along the stalk. The leaflets are hairy on the underside. There is no stipule or leafy structure at the base of the leaf stalk which helps distinguish them from closely related Canariums. Male and female flower parts are on separate flowering stalks. These flowers occur among the leaves not at the very tips. The flowers are small and white and have a smell. The fruit are thinned walled. Fruit range from 2-5 cm and mostly oval with a sharp tip.

Distribution

A tropical plant. It occurs on Rennell Island in the Solomon Islands. In Fiji it grows between 90 and 850 m altitude.

Found in:

Fiji, Pacific, Papua New Guinea, PNG, Samoa, Solomon Islands, Timor, Vanuatu,

Use

The fruit are boiled for about 5 minutes, then the flesh is eaten.
The seeds are soaked for some weeks to remove toxicity, then cooked.

Cultivation

Production

Nutritional Values

Haplolobus floribundus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Helicteraceae

Common names

Po pit, Screw tree, Spiral Bush, East-Indian Screw Tree, Maradphali, Paw-bit, Valampiri, Nargoti, Kayyuna, Chabai tali, Jelumpang,



Scientific name

Helicteres isora

Edible portion

Leaves, Flowers,

Description

A shrub or small tree. It grows 2-3 m high. The branches are cylindrical and long and straggly. The young are densely hairy. They are alternate. The leaves are oval and end abruptly by narrowing to a point. They can be heart shaped at the base. There are irregular teeth. Leaves are hairy. They are 10-20 cm long and 7-9 cm wide. The leaf stalk is hairy. The flower group is like a round ball and grows in the axils of leaves. They are 2 cm long and 1 cm wide. The flowers have 5 unequal petals. They are red. The fruit is a capsule which is oval shaped, twisted and hairy. They are 5 cm long by 7-9 mm wide. They are brown. The seeds have stripes along them. They are 2 mm long.

Distribution

A tropical plant. It grows naturally in deciduous forest and scrub areas.

Found in:

Asia, Australia, Fiji, India, Indochina, Indonesia, Malaysia, Pacific, Philippines, Thailand, Timor,

Use

The dried fruit are sold as medicine.
The flowers are eaten after removing the calyx.

Cultivation

Plants can be grown from seed or cuttings.

Production

Nutritional Values

Helicteres isora

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Boraginaceae

Common names

Blue heliotrope, Da wei yao, Yah-nguang-chang, Wild clary, Indian turnsole,



Scientific name

Heliotropium indicum

Edible portion

Description

An erect annual herb. It grows 100 cm high and spreads 80 cm wide. The leaves are opposite or alternate. They are hairy and oval. They have obvious veins. The flowers are small and pale violet. They appear on one side of a curled spike at the ends of branches. The curved spike straightens as the flowers open. The fruit are small and composed of two nuts.

Distribution

A tropical plant. It grows on hills, river banks and open waste places between 0–700 m altitude in China. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Benin, Botswana, Burma, Cambodia, Haiti, India, Indochina, Indonesia, Japan (Ryukyu Islands), Laos, Malawi, Malaysia, Mozambique, Myanmar, Thailand, Vietnam, West Africa, North America, Pacific Islands, South America, Sri Lanka, Timor, USA, Zambia, Zimbabwe,

Use

Cultivation

Production

Nutritional Values

Heliotropium indicum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Ophioglossaceae

Common names

Flowering fern, Tukod, Tukod-langit, Kamraj, Seven finger fern,



Scientific name

Helminthostachys zeylanica

Edible portion

Leaves, Fronds,

Description

A erect fern with short creeping underground stout rhizomes. The plant is up to 60 cm high. They bear solitary or sometimes several fronds. The stalk of the leaf frond is up to 25-35 cm long and 12-20 cm wide. At the tip it has 3 segments of the sterile frond. The fertile part is like a spike and comes from the stalk. The spores are yellow in brown spore bodies which are 0.8 mm across.

Distribution

A tropical fern. They grow in shady sites in the forest. They are found throughout the Philippines in open bushy places near sea level and on damp ground.

Found in:

Asia, Australia, Bangladesh, Brunei, Burma, China, India, Indochina, Indonesia, Japan, Malaysia, Myanmar, Nepal, New Caledonia, Pacific, Papua New Guinea, Philippines, PNG, Sri Lanka, Taiwan, Timor,

Use

The young fronds of this fern are eaten raw as a salad or cooked as a vegetable.

Cultivation

Plants are grown by splitting the rhizomes.

Production

Nutritional Values

Helminthostachys zeylanica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Sterculiaceae

Common names

Looking Glass Mangrove, Thhiey, Mkungu, Sundrichand, Kolland, Adavibadamu, Chomuntri, Kannadi-yilai, Chandmara, Mukuram,

Scientific name

Heritiera littoralis

Edible portion

Fruit, Seeds, Nut, Leaves - tea,

Description

A tree up to 30 m high with a silvery crown and wide spreading branch-like buttresses. The trunk can be 90 cm across. The bark is light coloured and coarsely furrowed. The leaves are grouped near the ends of branches and are dark green on top and with silvery scales underneath. The leaves are 14-29 cm long. The upper side of the leaves is smooth and without hairs while the under side is silvery. The flowering branches are borne in the axils of leaves and have many flowers. The flowers are small, and hang in tassels. The flowers are of one sex, yellowish green and bell shaped. The fruit are hard, woody, smooth and shiny and boat shaped. The fruit are in clusters near the ends of branches. Fruit are 5-10 cm long. There is one seed inside which is edible. The wood is very hard.

Distribution

A tropical plant. They are found in the inner part of the swamp and sometimes on dry land just at the back of the swamp in the tropics. They grow on sandy and rocky coasts. It can tolerate salt. They occur up to 50 m altitude. The trees occur from tropical Africa, India through Malaysia to Polynesia.

Found in:

Africa, Andamans, Asia, Australia, Brunei, Burma, Cambodia, China, East Africa, Fiji, Hawaii, India, Indochina, Indonesia, Japan, Madagascar, Malaysia, Mozambique, Myanmar, New Caledonia, Pacific, Papua New Guinea, PNG, Philippines, Seychelles, Solomon Islands, Southern Africa, Taiwan, Tanzania, Thailand, Timor, Tonga, USA, Vanuatu, Vietnam, Zimbabwe,

Use

The seeds are eaten after roasting the fruit. They are bitter.
The seeds are sometimes eaten with fish.
The leaves are used in the preparation of tea.

Cultivation

Plants are grown from seed. Trees grow wild. The fruit can float in sea water for long distances and then still germinate.

Production

Trees are slow growing. In the southern hemisphere flowering and fruiting is from April to November.

Nutritional Values

Heritiera littoralis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Poaceae

Common names

Spear grass, Bush Sugarcane, Wheat Spear Grass, Giant spear grass,

Scientific name

Heteropogon triticeus

Edible portion

Stems,

Description

A large grass. It keeps growing from year to year. It grows 2-3 m high. It forms loose tussocks. The stems are 2-3 m tall. The leaves are 5-12 cm long by 0.3-0.4 cm wide. The flower spikes are 5-15 cm long. The male spikelets are 1-2 cm long and the female spikelets are 0.6-0.8 cm long.

Distribution

It is a tropical plant. It grows naturally in open forest and woodlands. It requires sun and well drained soil.

Found in:

Australia, Timor,

Use

The stems are broken into pieces and chewed for the sweet juice.

Cultivation

Plants can be grown from seed or by division of the clump.

Production

Nutritional Values

Heteropogon triticeus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	90.0	57		0.5			0.1	0.7

Malvaceae

Common names

Scientific name

Hibiscus hirtus

Edible portion

Leaves,

Description

A herb or small shrub. It grows 1.5 m tall. The flowers are pink or orange and smaller than most Hibiscus.

Distribution

A tropical plant.

Found in:

Asia, Fiji, India, Malaysia, Timor,

Use

The leaves are eaten as a vegetable.

Cultivation

Production

Nutritional Values

Hibiscus hirtus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Malvaceae

Common names

Hibiscus, Rose of China,



Scientific name

Hibiscus rosa-sinensis

Edible portion

Leaves, Flowers,

Description

A shrubby hibiscus used for hedges. It is a evergreen woody shrub. It grows to 2-5 m tall. The bark is grey and flaky. It has fine stripes. The leaves are bright green. They are oval and the edges of the leaves are entire on the lower leaves. The upper leaves are coarsely toothed. The leaves have long tips. The flowers occur singly in the axils of leaves. Flowers can be single or double. They are bell shaped and 10-15 cm across. There are a range of colours. The fruit are rounded capsules with many seeds inside. The capsules are beaked. Plants usually do not produce fruit in the hot humid tropics.

Distribution

A tropical and subtropical plant. A common ornamental throughout the tropics. It originally came from China. It thrives on any type of soil. Different types are adapted to sunny or shady places. They grow where average temperatures are between 15 -30°C. They are very sensitive to frost. They grow from sea level to 1000 m altitude. They probably require a minimum rainfall of 700 mm per year. It grows in Nepal to 1400 m altitude. It grows in open, moist places. It suits hardiness zones 9-11.

Found in:

Africa, Asia, Australia, Bangladesh, Central Africa, Central America, China*, Congo, Costa Rica, East Africa, France, Ghana, Greece, Haiti, Hawaii, India, Indochina, Indonesia, Italy, Malawi, Malaysia, Mediterranean, Nepal, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Portugal, Sierra Leone, Spain, Sri Lanka, Thailand, Timor, Tonga, USA, Vanuatu, Vietnam, West Africa, Zambia,

Use

The leaves are eaten cooked. In some places they are pounded before cooking.
The flowers are eaten raw or pickled. They are also added to drinks. They are used to colour foods including preserved fruit, sliced pineapple, agar-agar jellies, and cooked vegetables.
The fresh flower ovary is eaten.

Cultivation

It is mostly grown from cuttings.

Production

Nutritional Values

Hibiscus rosa-sinensis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Malvaceae

Common names

Cotton Tree, Beach Hibiscus,



Scientific name

Hibiscus tiliaceus

Edible portion

Roots, Flowers, Leaves, Bark, Sap, Fruit,

Description

A tree which keeps its leaves throughout the year. It is small and spreading. It grows to 5-9 m tall and spreads to 3-6 m across. The stem is erect and short. The bark is grey and smooth. The branches spread widely. The crown has an open texture. The leaves are light green. They can be round or heart-shaped. They are 12 cm long. They are densely hairy underneath. They have a short pointed tip. The flowers are yellow and have a deep pink/purple centre. They are 12 cm across. They have 5 overlapping petals. The flowers are in the axils of the upper leaves. The fruit is a hairy partly woody capsule. It is 2 cm across and brown and splits open when ripe. It contains several small kidney shaped seeds. There are same named varieties. The plant varies a lot.

Distribution

It grows in warm temperate regions. It can grow in the tropics and subtropics. It suits light soils in an open, sunny position. The soils are best to be well drained but moist. It is damaged by frost. It can tolerate drought and salt spray. It often grows naturally near the seashore. It grows along most tropical coasts in tidal forests. It will grow in soils with pH between 5.0 and 8.5. In Samoa it grows from sea level to 650 m altitude. It does not grow well on atolls. It suits hardiness zones 10-12.

Found in:

Africa, Andamans, Asia, Australia, Bahamas, Bangladesh, Belize, Bhutan, Burma, Cambodia, Cameroon, China, Colombia, Comoros, Congo, Cook Islands, Cuba, Dominica, Ecuador, Equatorial Guinea, Fiji, Gambia, Ghana, Guadeloupe, Guatemala, Guinea-Bissau, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Ivory Coast, Jamaica, Japan, Kenya, Laos, Liberia, Madagascar, Malaysia, Maldives, Martinique, Mauritius, Mexico, Mozambique, Myanmar, New Caledonia, Nigeria, Niue, Norfolk Island, Pacific, Pakistan, Palau, Panama, Papua New Guinea, PNG, Peru, Philippines, Puerto Rico, Reunion, Samoa, Senegal, Seychelles, Sierra Leone, Solomon Islands, South Africa, Southern Africa, Sri Lanka, Suriname, Swaziland, Tahiti

Use

Roots, flowers and young leaves can be eaten. They flowers can be dipped in batter and fried.
The leaves are also fermented into a sauce.
The bark, shoots and sap wood are recorded as eaten in New Caledonia.
The slimy sap and bark are eaten.
The stalks are sucked.

Cultivation

Plants can be grown from seed or cuttings. Seed remain viable after floating in sea water for several months.

Production

It is a fast growing plant. Plants can be heavily pruned and will shoot again.

Nutritional Values

Hibiscus tiliaceus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
flower	78.8	507		5.3		5		

Lamiaceae

Common names

Hyptis, Mint bush,



Scientific name

Hyptis suaveolens

Edible portion

Leaves - tea, Seeds, Leaves, Spice,

Description

A herb which keeps growing from year to year. It grows 70 cm high. It can grow as an annual and can be 3 m high. The stems are rounded in the lower sections and 4-angled higher up. They are hollow. They are hairy. The leaves are produced opposite each other. They have teeth around the edge. They have a strong minty smell when crushed. The leaves are 3-10 cm long by 2-7 cm wide. They have a wavy edge and are rough underneath. The flowers are produced in small clusters in the axils of leaves. The flowers are blue. The fruit are papery brown capsules. The fruit consists of 2 nutlets. They are 3-4 mm long and flattened. They are dark brown.

Distribution

A tropical plant. It grows in dry open locations. It can grow along streams and near roadsides. It can grow up to 1300 m altitude in Papua New Guinea. It grows in seasonally dry climates. In China it grows in open waste places in southern China. In Costa Rica it grows below 1,200 m altitude.

Found in:

Asia, Australia, Bahamas, Central America, Costa Rica, El Salvador, Ghana, Haiti, Hawaii, India, Indochina, Indonesia, Ivory Coast, Jamaica, Malaysia, Mexico*, Nicaragua, Nigeria, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Senegal, Sierra Leone, South America, Taiwan, Thailand, Timor, USA, Vietnam, West Indies*,

Use

The shoot tips are used as food flavouring.
They are also used to make a mint flavoured drink. The seeds are soaked in water and as the seeds soften a slimy coat forms around them and is used as a drink.

Cultivation

The plants grow from seeds.

Production

Nutritional Values

Hyptis suaveolens

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Poaceae

Common names

Blady grass,

Scientific name

Imperata cylindrica

Edible portion

Flowers, Leaves, Root, Manna, Rhizome,

Description

A grass which keeps growing from year to year. It has rhizomes. The stems are smooth. They are hairy at the nodes. The leaves are flat and somewhat erect. They are 50 cm long. The flowers are silvery white panicles. They can be 20 cm long. *Imperata cylindrica* is usually 1 m tall. and *Imperata exaltata* is 2m.

Distribution

It is a tropical plant. They occupy very large areas of open space in the Philippines. Very common and widely distributed. It can stand light frosts. It often grows in sandy habitats and along streams. It can survive frequent burning. It can grow in salty soils. It grows from sea level to 2,100 m above sea level. It needs good light. It suits hardiness zones 8-12.

Found in:

Afghanistan, Africa, Albania, Algeria, Angola, Armenia, Asia, Australia, Azerbaijan, Bangladesh, Benin, Botswana, Burkina Faso, Burma, Burundi, Cambodia, Cameroon, Canary Islands, Central African Republic, Chile, China, Comoros, Congo, Cyprus, Egypt, Equatorial Guinea, Ethiopia, Europe, Fiji, France, Gabon, Gambia, Georgia, Ghana, Greece, Guinea, Guinea-Bissau, India, Indochina, Indonesia, Iran, Iraq, Israel, Italy, Ivory Coast, Japan, Jordan, Kazakhstan, Kenya, Korea, Lesotho, Liberia, Libya, Madagascar, Malawi, Malaysia, Mali, Mauritius, Mediterranean, Morocco, Mozambique, Myanmar, Namibia, Niger, Nigeria, North America, Nepal, New Caledonia, Oman, Pacific, Pakistan, Palestine, Papua New Guinea, PNG

Use

The young unopened flower is eaten raw. They are sometimes eaten as a potherb or fried or put into soups.
The runners contain starch. This is sweet and can be chewed or eaten and has been used for making beer.
The plant is the source of an edible manna.
The rhizomes are mixed with sugar to make a drink.

Cultivation

Plants can be grown from seed or by division of the clump.

Production

Nutritional Values

Imperata cylindrica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Godadi, Godadi bodaga, Botsaka, Potre, Bakereya, Bekar,

Scientific name

Indigofera cordifolia

Edible portion

Seeds, Caution,

Description

A herb. It grows from seeds each year. It lies along the ground and is branched. It grows 30 cm high. The leaves are simple. They are 6-16 mm long and 4-13 mm wide. They are broadly oval and hairy on both sides. There are 4-8 flowers in a head. They are red. The fruit is a pod 4-5 mm long. It is densely hairy. There are 2 seeds.

Distribution

It does best on light sandy soils. It grows in desert areas.

Found in:

Afghanistan, Africa, Asia, Australia, Cape Verde, Chad, East Africa, Eritrea, Ethiopia, India, Indonesia, Mali, Mauritania, Niger, Oman, Pakistan, Saudi Arabia, Socotra, Sudan, Timor, West Africa, Yemen,

Use

Caution: The seeds have been mixed with other seeds to make bread but are poisonous on their own.

Cultivation

Production

Nutritional Values

Indigofera cordifolia

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed	6.1							

Fabaceae

Common names

Flax-leaved indigo, Torki, Bhangra, Tandi, Khode baha, Pandhi, Bekria, Jhinkigali, Nahanigali, Burbura, Daniu, Ameliu, Pandharipale, Torki,

Scientific name

Indigofera linifolia

Edible portion

Roots, Seeds,

Description

A small bushy annual herb. It grows to 50 cm tall. It has a woody base and many branches. The branches have 2 ribs and whitish hairs. The leaves are simple and narrow. They are covered with hairs. Leaves are 1.2-4 cm long and 0.1-0.2 cm wide. Flowers are red and 3 mm long. They occur in small clusters in the axils of leaves. The fruit are pods which are rounded and with a point. They are 1.5-2 mm long. There is one seed.

Distribution

A tropical plant. In Papua New Guinea it is in the lowlands below 100 m altitude. It grows on sandy plains or dunes. It suits seasonally dry tropical regions.

Found in:

Afghanistan, Africa, Asia, Australia, Bangladesh, Bhutan, Burma, Cambodia, Cape Verde, China, East Africa, Eritrea, Ethiopia, India, Indochina, Indonesia, Mauritania, Myanmar, Nepal, New Caledonia, Niger, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Reunion, Saudi Arabia, Sri Lanka, Sudan, Taiwan, Thailand, Timor, Vietnam, Yemen,

Use

The plant is threshed and the seeds ground into flour for bread. In large amounts it can cause swelling of the mouth.

Cultivation

Production

In Australia, flowers and fruit are produced in March to July.

Nutritional Values

Indigofera linifolia

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed	9.3							

Fabaceae

Common names

Indigo,

Scientific name

Indigofera tinctoria

Edible portion

Leaves - dye,

Description

A shrub. It grows 60-120 cm high. The branches are hairy. The leaves are compound and 2-13 cm long. There are 7-13 leaflets and these are 5-26 mm long. The group of flowers are 5-12 cm long. They are pink. The fruit is a pod 2-4 cm long by 2.5 mm wide. There are 10-12 seeds.

Distribution

It is a tropical plant.

Found in:

Africa, Asia, Burma, Haiti, India, Indochina, Jamaica, Malaysia, Myanmar, Pakistan, Philippines, Sri Lanka, Thailand, Timor, West Indies, Zambia,

Use

The leaves are the source of a blue dye sometimes used to counteract the slightly yellow colour of icing sugar.

Cultivation

Production

Nutritional Values

Indigofera tinctoria

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Aila, Polynesian or Tahitian chestnut, Ivi, Kayam, Rata, Otaheite chestnut, Tolok, Gayam, Gatet, Ihi, Mape, I'i, Ifi, Marap, Kurak, Booi,



Scientific name

Inocarpus fagifer

Edible portion

Seeds,

Description

A tree from 9-30 m tall with buttresses at the base of the trunk. The trunk can be 7-90 cm across. The bark is dark grey and gives a red sap when cut. The branches droop downwards. The leaves are long (20 cm), leathery, shiny and feather veined. The leaves have short stalks and are one after the other (alternate) along the branch. The leaves are large and reddish when young and shiny green when adult. The flowers of Aila are not obvious. They are pale yellow and hang loosely on the twigs from the angles where leaves join. They have 5 narrow petals joined in a tube. The flowers smell sweetly. The fruit is irregular or kidney shaped and is a one seeded pod with ridges on the surface. It can be 8-10 cm across and 3 cm thick. The ripe fruit is yellow.

Distribution

A tropical plant. It grows in the lowland primary and secondary forest from sea level up to 390 m altitude. It often grows near rivers and swamps and mostly as a clump of trees. Often they are very close to the water front. It also occurs in the Pacific Islands. It is usually in areas with a rainfall between 1500-4300 mm a year. They do better where there is no distinct dry season. It grows in soils with a pH from 5-14. It can grow in very alkaline soils. It can grow in salty and infertile soils.

Found in:

Asia, Australia, Cook Islands, Fiji, FSM, Guam, Hawaii, Indonesia, Kiribati, Malaysia, Marianas, Marquesas, New Caledonia, New Zealand, Pacific, Papua New Guinea, Philippines, PNG, Ponape, Samoa, Singapore, Society Islands, Solomon Islands, Tonga, French Polynesia - Austral Islands, Timor, Truk, USA, Vanuatu, Yap,

Use

Seeds are cooked and eaten.
The fleshy layer around the seed is eaten after cooking. The nuts are usually roasted although they can be boiled. Soaked nuts can be grated, mixed with coconut milk and roasted in banana leaves. Seeds can be stored by partly fermenting them in pits in the ground. Nuts can be stored for a considerable time but once shelled or cooked will only keep a short time.

Cultivation

Seeds are mostly planted. Seeds are also naturally distributed by bats. Plants can be propagated vegetatively by cuttings of half ripe wood. Seeds are the more common method of production. Seeds store easily for over a month but viability declines fairly rapidly in salt water. Trees prefer swampy ground but they also grow satisfactorily on higher slopes. It is presumed that plants have some salt tolerance as they often grow along the foreshore. A spacing of 5-10 m is probably suitable.

Production

It grows moderately quickly. It can grow 2 m per year. Time to first production of nuts from planting is about 8 years. An average seed weighs 40 g. The yield can be 75 kg of fruit per tree per year. Fruit production occurs throughout the year but has a main season. Uncooked seeds can be stored.

Nutritional Values

Inocarpus fagifer

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
nut	43.0	1008	241	4.5	0	2	3.0	1.3

Common names

Kwila, Johnstone River Teak, Scrub Mahogany, Merbau asam, Merbau changkat, Ipil, Maka, Ifilele, Choyo, Show, Kebuk, Cohu, Faux teck,

Fabaceae



Scientific name

Intsia bijuga

Edible portion

Seeds, Leaves,

Description

A tree which grows along the foreshore. It is 30-50 m tall. The trunk can be 15 m long. It has small buttresses. The trunk can be 60-90 cm across. The bark peels off in circular flakes. The crown is spreading and leaves often fall off. The leaves are divided along the stalk. The leaf is 25 cm long. There are 2 pairs of leaflets. These leaflets are oval and often different on each side of the midrib. They are shiny green. They are 8-14 cm long by 6-11 cm wide. The flower panicle has many flowers densely together and they are at the end of a branch. The petals are often crinkled and can be white or red. The stamens are dark red. The flowers have a pleasant smell. The fruit is a pod which is oblong and flat. It has a short beak. There are veins along the valves. The pod is 14-28 cm long by 4-7 cm wide. There are 2-4 or more seeds which are flat and 2-2.5 cm across.

Distribution

It is a tropical plant. It usually occurs in the lowlands close to the coast. It can tolerate wet soils. It can grow in areas which are occasionally flooded. It is often on limestone. It can grow on atolls. It suits a pH of 6.1 to over 7.4. It can tolerate salty soils. It can tolerate salt spray. It grows on the side of tidal rivers. It is usually in areas with a rainfall of 1500-2300 mm per year. It is drought resistant. It grows best with temperatures around 26-27°C. It cannot tolerate temperatures below 17°C. It grows best in full sun. In Papua New Guinea it grows from sea level to 450 m altitude. In Madagascar it is usually below 50 m altitude.

Found in:

Asia, Australia, Burma, East Africa, Fiji, Guam, India, Indian Ocean Islands, Indochina, Indonesia, Madagascar, Malaysia, Marshall Islands, Myanmar, New Caledonia, Pacific, Palau, Papua New Guinea, PNG, Philippines, Polynesia, Rotuma, Samoa, Solomon Islands, Tanzania, Thailand, Timor, Tonga, Vietnam, Yap,

Use

CAUTION: The fruit are poisonous.
The seeds can be made edible by careful preparation. This includes shelling then soaking them in water for 3-4 days and then boiling them.

Cultivation

Plants are grown from seed. The seed need to be treated to break the hard seed coat.

Production

It grows at a moderate rate. It can grow 1.5 m in a year. It can take 75-80 years to reach maturity.

Nutritional Values

Intsia bijuga

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

Kangkong,

Convolvulaceae



Scientific name

Ipomoea aquatica

Edible portion

Leaves, Vegetable,

Description

Kangkong is a creeping sweet potato like plant. It has hollow stems and can float on water. The leaves are green and are normally not divided like some sweet potato leaves, but the shape and size varies a little between different kinds. The trumpet shaped flower looks like a sweet potato flower and is normally white. The runners develop roots at the nodes and also branch. This branching increases when tips are picked off. Some variation in leaf shape can be observed. Leaf shape is less variable than in the related sweet potato, but narrow and broad leafed kinds occur. White and green stemmed kinds occur. Green stemmed kinds have more cold tolerance than white stemmed.

Distribution

A tropical plant. It grows best in short day stable high temperature, moist conditions. Temperatures need to be above 25°C for satisfactory growth. In equatorial region plants probably grow up to 1000m altitude. Below 23°C the growth rate is too slow for economic production. So production is mainly in the lowland tropics. Optimum pH is between 5.3-6.0. It suits damp places and grows well in swamps. It can grow as a partly floating plant in swamps and lagoons behind the beach along the coast. Kangkong is grown in a number of other tropical countries including Malaysia, Indonesia, Egypt, Fiji and especially Hong Kong and Taiwan. In some of these countries they grow the dry land form in gardens. In Nepal it grows up to 500 m altitude.

Found in:

Africa, Angola, Asia, Australia, Bangladesh, Benin, Botswana, Brazil, Brunei, Burkina Faso, Burma, Burundi, Cambodia, Cameroon, Central Africa, Central African Republic, Central America, Chad, China, Congo, Costa Rica, Dominican Republic, East Africa, Eritrea, Ethiopia, Fiji, Gambia, Ghana, Guinea, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Ivory Coast, Jamaica, Japan, Kenya, Laos, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mauritius, Mozambique, Myanmar, Namibia, Nepal, Nicaragua, Niger, Nigeria, Pacific, Pakistan, Panama, Papua New Guinea, Peru, PNG, Philippines, Senegal, Seychelles, Sierra Leone, Singapore, Solomon Islands, Somalia, Southern Africa, South America, Sri Lanka, Sudan, Suriname

Use

The young tips are cooked and eaten. They can be boiled, steamed, stir-fried, or added to soups, stews or curries. The young stems can be used in pickles.
The young tips can be eaten raw in salads.
The roots are occasionally cooked and eaten.

Cultivation

Dryland kangkong is normally grown from seed. Sometimes seed are pre-soaked for 12-24 hours prior to sowing. Plants can also be grown from cuttings and establishment is rapid. Top cuttings 25-40 cm long can be planted beside a pond.

Production

Young tips can be taken 30 days after planting, and subsequent harvests every 7 to 10 days. Production of new shoots probably declines at flowering. Yields up to 60,000 kg/ha have been recorded in other countries.

Nutritional Values

Ipomoea aquatica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	90.3	126	30	3.9	40	60	4.54	
leaves - boiled	92.9	84		2.1	520	16.0	1.3	0.2

Convolvulaceae



Common names

Sweet potato,

Scientific name

Ipomoea batatas

Edible portion

Tuber, Leaves, Vegetable,

Description

This is a root crop which produces long creeping vines. The leaves are carried singly along the vine. Leaves can vary considerably from divided like fingers on a hand to being entire and rounded or heart shaped. At the end of the vine, trumpet shaped flowers grow. They are purple. Under the ground fattened tubers are produced. There are a large number of varieties which vary in leaf shape and colour, tuber shape, colour, texture and in several other ways.

Distribution

A tropical and subtropical plant. They grow from sea level up to some of the highest gardens at about 2700 m altitude in the tropics. Plants can grow with a wide range of rainfall patterns and in different soils. Plants are killed by frost and can't stand water-logging. Plants grow well with temperatures between 21-26°C. It can grow with a pH between 5.2-6.8. Sweet potato are not tolerant to shading. Under shaded conditions, both foliage growth and storage root production are decreased. Some cultivated varieties can be selected for increased production under mild shade but not heavy shade. The survival of cuttings at planting is also reduced under shaded conditions. Under shaded conditions plant become more climbing and with fewer leaves which are however larger. With increasing shade less tubers are produced and these grow more slowly. Sweet potato tends to be responsive to potassium fertiliser, cultivated varieties are often selected for yield under low fertility conditions. Under

Found in:

Africa, Asia, Australia, Bangladesh, Benin, Brazil, Burkina Faso, Cambodia, Cameroon, Cape Verde, Caribbean, Central Africa, Central America, China, Colombia, Congo, Costa Rica, East Africa, Ecuador, Ethiopia, Fiji, Gabon, Gambia, Ghana, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Ivory Coast, Japan, Liberia, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mauritius, Mediterranean, Mexico, Nepal, New Zealand, Nicaragua, Niger, Nigeria, North America, Pacific, Panama, Papua New Guinea, PNG, Paraguay, Peru, Philippines, Polynesia, Senegal, Sierra Leone, Singapore, Solomon Islands, Somalia, South Africa, Southern Africa, South America, Spain, Sri Lanka, Swaziland

Use

Tubers are boiled or baked. They can be steamed, fried, mashed or dried.
They can be fermented into alcoholic drinks. Caution: Alcohol is a cause of cancer.
They can also be used in pies, cakes, puddings and candies and jams. They can be used in noodles. The chopped and dried tubers can be boiled with rice or ground into flour and mixed with wheat flour to make cakes or bread.
The young leaves are edible.

Cultivation

Vine cuttings are used for planting. In grassland soils it is grown in mounds, ridges or other raised beds. In bush fallow, it is mostly planted in undug loose soils. It needs a sunny position. Tubers won't form if the ground is waterlogged when tubers start to develop. Sweet potato is grown by cuttings of the vine. About 33,000 cuttings are required per hectare. These weigh about 500 kg. Vine lengths of about 30 cm are optimum. As long as the vine is adequately inserted in the soil, the length of vine inserted does not significantly affect yield. Fresh sweet potato seeds germinate relatively easily and lead to continuous production of new cultivars under tropical conditions. Excess nitrogen restricts storage root initiation and therefore excess leaves are produced without significant tuber yield. Dry matter percentage increases with increasing age of the crop. Higher dry matter tubers are normally preferred.
Sweet potato are not tolerant to shading. Under shaded conditions, both foliage growth and storage root production are

Production

The time to maturity ranges from 5 months to 12 months depending on the variety planted and the altitude at which it is being grown. Yields range from 6-23 t/ha.

Nutritional Values

Ipomoea batatas

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Convolvulaceae

Common names

Mile-a-minute, Coast Morning Glory,

Scientific name

Ipomoea cairica

Edible portion

Leaves, Roots,

Description

An annual climbing plant. It climbs to 5 m high. The stems are slender and branching. The leaves are green with lobes divided like fingers on a hand. The leaves are 5-12 cm across and there are 5-7 lobes. These are separate and only slightly united at the base. The leaflets are 3-6 cm long by 1-3 cm wide. Often the lowest lobe has a side lobe. The leafy structures (stipules) at the base of the leaf are also divided like fingers on a hand. The flowers are blue or red and funnel shaped. Flowers can either be single or up to 5 on a stalk. The seed are hairy.

Distribution

It grows in tropical and warm temperate places. It will grow on most well drained soils. It suits hardiness zones 9-12.

Found in:

Africa, Asia, Australia, Benin, Botswana, China, Egypt, Fiji, Hawaii, Madagascar, Malawi, Mozambique, Norfolk Island, Pacific, Pan tropical, Papua New Guinea, PNG, South Africa, Southern Africa, Swaziland, Timor, Tonga, USA, West Africa, Zambia, Zimbabwe,

Use

The tubers can be used as food. They are bitter. Starch is extracted from them.
CAUTION: They may be slightly cancer causing

Cultivation

Plants are grown from seed.

Production

Nutritional Values

Ipomoea cairica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Convolvulaceae

Common names

Native Woodrose, Climbing Morning Glory,



Scientific name

Ipomoea macrantha

Edible portion

Roots, Tubers,

Description

A vigorous climber. The stems twine around objects. The stems come from a thick root tuber. The leaves are 6-12 cm across 4-10 cm wide. They are oval or heart shaped. They can have lobes on the leaf. The leaf stalk is 1-4 cm long. The leaves are dark green and leathery. Between 1-3 flowers occur together in the axils of leaves. The flowers are 6-8 cm across and white. They have a tubular base. The flowers open at night and close next morning. The seed capsule is 3-5 cm across and oval. It is leathery and splits open when mature. The seeds are large and hairy.

Distribution

A tropical plant. It is more common in coastal districts. It needs a well drained soil.

Found in:

Africa, America, Asia, Australia, Fiji, Indonesia, Pacific, Papua New Guinea, PNG, Timor,

Use

The tubers are eaten cooked.

Cultivation

Plants can be grown from seed, cuttings or the tops of tubers.

Production

Nutritional Values

Ipomoea macrantha

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Convolvulaceae

Common names

Scientific name

Ipomoea obscura

Edible portion

Leaves,

Description

A climbing herb. It is a slender trailing plant. The leaf stalks are 1.5 cm long. The leaf blades vary but are long and tapering to the tip with a broadly heart shape base. They are 4 cm long. The flowers occur singly or as a few together in the axils of leaves. The flowers are funnel shaped and 4 cm long. They are pale yellow or white.

Distribution

It is a tropical plant. It grows in the savannah in West Africa.

Found in:

Africa, Asia, Chad, Congo, East Africa, Kenya, Nigeria, Senegal, South Africa, Southern Africa, Swaziland, Timor, Uganda, West Africa, Zambia,

Use

The leaves are cooked and eaten as a relish.

Cultivation

Production

Nutritional Values

Ipomoea obscura

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Convolvulaceae

Common names

Beach Morning glory,



Scientific name

Ipomoea pes-caprae subsp. brasiliensis

Edible portion

Roots, Leaves,

Description

A vine which creeps along the ground. It continues growing from year to year. The stems can be several metres long. They arise from a thick taproot. The vines die back and re-grow. The leaves are smooth and dark green. They are thick and leathery. They are oblong or round. The blade is 5-12 cm long by 4-12 cm wide. It has 2 large lobes. The leaf stalk is 12 cm long. The flowers are large and pink or purple. They are trumpet shaped and darker in the centre. They are 3-6 cm long. Flowers can occur either singly or as several together. The flower stalk is 5-15 cm long. The fruit are smooth round capsules. These are somewhat hard and woody and are 1.5-2 cm across. They have papery bracts around the base. These capsules are brown and split open when ripe. They contain 4 seeds which are hairy.

Distribution

A tropical plant. It grows from tropical to warm temperate regions. It grows naturally on beaches above high tide and on sand dunes. It needs well drained soil and full sunlight. It can grow in coastal locations and can stand light frost.

Found in:

Africa, Asia, Australia, Brazil, Central America, Costa Rica, East Africa, Haiti, India, Indochina, Malaysia, Norfolk Island, Pacific, Pan tropical, Papua New Guinea, PNG, Sierra Leone, South America, Thailand, Timor, Tonga, Zambia,

Use

The roots are cooked and eaten as an emergency food.
Caution: They should not be eaten in large amounts. At some times of the year they can be bitter.

Cultivation

They can be grown from seed or cuttings.

Production

Nutritional Values

Ipomoea pes-caprae subsp. brasiliensis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Convolvulaceae

Common names

Kangkong bulu,



Scientific name

Ipomoea triloba

Edible portion

Leaves,

Description

A creeping and twining herb. It has milky sap. The leaves can be entire or have 3 lobes. The leaf stalks are long. The flowers occur in small clusters in the axils of leaves. The flower is funnel shaped and pink or purple. The fruit is a capsule which opens by 4 valves. There are 4 seeds inside. The seed are 3.5 cm across. They have a smooth dull surface. They are mottled black.

Distribution

A tropical plant. It grows naturally along roadsides and hedges.

Found in:

Asia, Australia, Central America, SE Asia, Indochina, Indonesia, Japan (Ryukyu Islands), Malaysia, New Caledonia, New Guinea, North America, Pacific, Pan tropical, Papua New Guinea, Philippines, PNG, Sri Lanka, Thailand, Timor, Vietnam, West Indies,

Use

Cultivation

Production

Nutritional Values

Ipomoea triloba

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Euphorbiaceae

Common names

Physic nut, Purging nut,



Scientific name

Jatropha curcas

Edible portion

Leaves, Caution, Honey, Seeds,

Description

A high shrub or small tree. It is deciduous and has a thin crown. It is up to 5-8 m high. It has milky sap. The leaves have 3-5 lobes. They are 6 cm long by 15 cm wide. Flowers are separately male and female on the same plant. They are small and yellowish-green. They are at the ends of the branches. The fruit is a yellow capsule. Plants are pollinated by insects. Seeds are black and 2 cm long by 1 cm wide. They are rich in oil.

Distribution

It is native to tropical America. It is a tropical and subtropical plant. It is drought resistant. It sheds its leaves during the dry season making it suitable for arid and semi arid regions. It can grow well in areas with annual rainfalls of 300 to 1,000 mm. It is mostly in lower altitudes below 700 m and with annual temperatures above 20° to 28°C. It needs well drained soils but can grow in poor nutrient soils. It suits hardiness zones 10-12.

Found in:

Africa, Angola, Argentina, Asia, Australia, Bahamas, Belize, Benin, Bermuda, Bolivia, Botswana, Brazil, Burkina Faso, Burundi, Cambodia, Cameroon, Cape Verde, Central Africa, Central African Republic, Central America, Chad, China, Colombia, Comoros, Congo, Costa Rica, Cuba, Dominica, Dominican Republic, East Africa, Ecuador, El Salvador, Eritrea, Ethiopia, Fiji, Gabon, Gambia, Ghana, Guatemala, Guinea, Guinea Bissau, Guyana, Haiti, Honduras, India, Indochina, Indonesia, Ivory Coast, Jamaica, Kenya, Liberia, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mauritius, Mexico*, Mozambique, Namibia, Nepal, Nicaragua, Niger, Nigeria, North America, Pacific, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, PNG

Use

CAUTION: Fruit and seeds are very poisonous. The nut has been reported as being eaten in Mexico after being boiled and roasted. This however is not recommended. Some kinds have less poison and the embryo should be removed.
The young leaves have been reported as being eaten after cooking. They act as a purge.

Cultivation

Plants can be grown from seed or cuttings. Seedlings can be transplanted but it is best to plant cuttings directly where they are to grow. Using cuttings is very easy. Large cuttings should be used. It can be cut back and will re-grow.

Production

Seeds germinate in 10 days. In humid regions near the equator flowering occurs throughout the year. Plants are not affected by daylength. It takes 90 days from flowering to fruit maturity. The tree can continue to produce nuts for 50 years.

Nutritional Values

Jatropha curcas

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Acanthaceae

Common names

Karambal, Kalmashi, Ottu pillu, Poom-pillu, Palkodi, Nerei-poottie, Ghati-pitpapra, Pitpapada,

Scientific name

Justicia procumbens

Edible portion

Leaves, Seeds,

Description

Distribution

A tropical plant.

Found in:

Asia, India, Timor,

Use

Cultivation

Production

Nutritional Values

Justicia procumbens

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Byttneriaceae

Common names

Guest Tree, Kati mahar, Temahai, Timaha, Katimaha, Katimanga, Tangkele, Tangkalo, Hatsakun, Po farang, Bola, Panaitteku, Fu'afu'a,

Scientific name

Kleinhovia hospita

Edible portion

Leaves, Flowers, Stems,

Description

A medium sized tree with a round dense crown and the trunk often has buttresses and suckers at the base. It can grow 3-15 m high. The young twigs are velvety. The leaves are simple, oval and alternate. They are thin and paler beneath. They are hairless but the young ones are finely woolly. The leaves are up to 20 cm long by 15 cm wide. The leaf stalks can be 10 cm long. It produces sprays of pink flowers at the ends of the branches. The flowers are small and finely woolly on the inside. The fruit is a pinkish brown five shouldered capsule. The capsule is like a pliable sheet and hangs down. It is inflated and an irregular oval shape. The seeds are round and brown and roughened with abnormal growths. There are 1 or 2 seeds in each cell.

Distribution

It is a tropical plant. They are common throughout the Philippines in areas of shrub. Trees grow in coastal areas up to about 500 m altitude. They occur near banks of streams and in open country. Seedlings need to be in a sunny position. It suits hardiness zones 9-12.

Found in:

Africa, Asia, Australia, Benin, Brunei, Burma, China, Fiji, Ghana, Haiti, Hawaii, India*, Indochina, Indonesia, Madagascar, Malaysia, Myanmar, Nigeria, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Polynesia, Samoa, Singapore, Solomon Islands, Taiwan, Thailand, Timor, Tonga, Trinidad & Tobago, USA, Vanuatu, Vietnam, West Africa,

Use

The young leaves and flowers are cooked and eaten.
CAUTION The older leaves are also recorded as having medicinal uses. They contain hydrocyanic acid. (This disappears on cooking)

Cultivation

Trees are self sown from seed. They can be grown from fresh seed. They can also be grown from layers or suckers.

Production

Nutritional Values

Kleinhovia hospita

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae



Common names

Lablab bean,

Scientific name

Lablab purpureus

Edible portion

Leaves, Pods, Seeds, Root, Vegetable,

Description

A climbing bean which can have vines 1-5 m long. It keeps growing from year to year. The stems can be smooth or hairy. Leaves are made up of 3 almost triangular leaflets. The leaflets are 5-15 cm long and 3-14 cm wide. The side leaflets are somewhat asymmetrical. Often the plants are flushed purple. The flowering clusters are 5-20 cm long. Flowers are often white but can vary from red to blue. The pods are flattened, pointed and up to 12 cm long and 2 cm wide. They can be green, purple or white. Inside there are 3-5 white or dark seeds. Seed pods have a wavy margin. The seeds are 0.5-1.5 cm long. (This bean is similar to Lima bean but the keel of the flower in not spirally twisted, the pod ends more bluntly with a long thin style at the end and the hilum on the seed is longer.)

Distribution

It is a tropical and subtropical plant. It mostly grows between 750 and 2175 m altitude in the tropics. It is drought resistant and can grow in quite low rainfall areas. Some varieties are short day and some are long day kinds. In Nepal it grows to about 2500 m altitude. It suits hardiness zones 9-12.

Found in:

Africa, Angola, Antigua-Barbuda, Asia, Australia, Bahamas, Bahrain, Bangladesh, Barbados, Benin, Bhutan, Botswana, Brazil, Burkina Faso, Burma, Burundi, Cambodia, Cameroon, Cape Verde, Central Africa, Central African Republic, Central America, Chad, China, Congo, Dominican Republic, East Africa, Egypt, El Salvador, Eritrea, Ethiopia, Fiji, French Guiana, Gabon, Gambia, Ghana, Grenada, Guadeloupe, Guinea, Guinea Bissau, Guyana, Haiti, Hawaii, Himalayas, India, Indochina, Indonesia, Iran, Iraq, Ivory Coast, Jamaica, Kenya, Laos, Liberia, Madagascar, Malawi, Malaysia, Maldives, Mali, Martinique, Mauritania, Mauritius, Mexico, Mozambique, Myanmar, Namibia, Nepal, Nicaragua, Niger, Nigeria, Norfolk Island, Oman

Use

The young pods, ripe seeds and young leaves are edible, cooked.
Flowers can be eaten raw, steamed or added to soups and stews.
Dried seeds can be cooked as a vegetable.
The seeds can also be sprouted then crushed and cooked.
The large starchy root is edible.
CAUTION Many types can be poisonous. They should be boiled and the cooking water thrown away.

Cultivation

Seeds are sown at 30 x 60 cm spacing near stakes or trees. About 20 kg of seed per hectare are required. Fertilising with nitrogen and potash until flowering is recommended. Young pods are ready 4-6 months after planting and seeds 6-8 months. Pods are often harvested over 2 or 3 years. Pollination and seed setting are reduced in cold weather.

Production

Young pods are ready 4-6 months after planting and seeds 6-8 months. Pods are often harvested over 2 or 3 years. Pollination and seed setting are reduced in cold weather.

Nutritional Values

Lablab purpureus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds - dry	10.0	1428		22.8		Tr	9.0	
seeds - young	86.9	209		3.0	14	5.1	0.8	0.4
fresh pods	86.7	203	49	3.9		1	2.4	

Common names

Langsat, Duku,

Meliaceae



Scientific name

Lansium domesticum

Edible portion

Fruit,

Description

An upright slender tree to 12-20 m high. It has sticky sap. The leaves are alternate and simple. Leaves are up to 40 cm long and made up of 5-7 large leaflets. The flowers are yellow in spikes from old wood mostly on the branches. The flowers have 5 petals which join to form a tube. The flowers have a sweet smell. The fruit is 3-5 cm across and divided into 5 segments with 1-2 large seeds. The fruit is borne in long drooping clusters. There can be 25 fruit in a cluster. The fruit is pale yellow when ripe. It develops a brown scurf on the surface as it ripens. The seeds are green and bitter and are not eaten.
Langsats have thin skin, milky juice and are oval and 3.7 cm across. Dukus have thick skin, are round, do not have milky juice and are 5 cm across. They are also sweeter than Langsat.

Distribution

A tropical plant. It is native to Malaysia. It occurs in coastal areas and probably up to 700 m altitude in the tropics. A rich deep well drained soil is needed. It suits humid places and is not suited to places with a distinct dry season. It does well in part shade. It can tolerate lower temperature, rainfall and humidity than rambutan.

Found in:

Asia, Australia, Burma, Cambodia, Central America, China, Hawaii, India, Indochina, Indonesia, Malaysia, Myanmar, Pacific, Papua New Guinea, PNG, Philippines, Puerto Rico, Singapore, South America, Sri Lanka, Suriname, Thailand, Timor, USA, Vietnam,

Use

Fruit is eaten fresh after they fall. They can also be candied, preserved in syrup, or made into wine.
Seedless fruit can be bottled in syrup.
NOTE The stickiness of the juice of the fruit can be removed by dipping it in boiling water.

Cultivation

Trees are mostly grown by seed. Seeds remain viable for about 5 weeks if kept moist. Seeds should be washed and cleaned before planting. Seeds are planted 1 cm deep in a nursery. Germination takes 1- 3 weeks. When seedlings are 15 cm tall they are put into nursery beds for 1-2 years before being planted out in the field. Seedlings do not come into bearing for 12-20 years. They can be grown by budding. Buds should be put onto 4 year old rootstocks of the same species. Buds dry out quickly so should be inserted immediately. Propagation by grafting, marcottage and cuttings is difficult. A spacing of 8-10 m is suitable. Seedlings dry out quickly, so need to be transplanted carefully. Shade is normally provided for the first few years.

Production

Trees are slow growing. Fruit production is seasonal. The season tends to be from December to March. Often trees have large crops every second year. Trees start to produce after 5-8 years but can take
15 years to bear fruit. Fruit will only last about 4 days at normal temperatures. They can be stored at
low temperatures for several weeks.

Nutritional Values

Lansium domesticum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Verbenaceae

Common names

Lantana, English sage bush,

Scientific name

Lantana camara

Edible portion

Fruit, Leaves,

Description

An evergreen shrub. It grows to 3 m high and spreads to 3 m across but under some conditions can be much more spreading and pose problems. The stem is erect and woody at the base. The stem has 4 angles and prickles which curve backwards. The leaves are small and oval. They are 1.5-8.5 cm long by 0.8-6 cm wide. They have a rough surface. The flowers are pale cream and very small. They are arranged in dense heads which are 2.5 cm across. The fruit are berries which turn black when ripe. The ripe fruit are edible. Various cultivated varieties have been produced with attractive coloured flowers. Some of the orange coloured forms are poisonous to animals.

Distribution

It is a tropical and subtropical plant. It is drought resistant but can be damaged by frost. They need a temperature above 10°C. In Nepal they grow to about 1500 m altitude. It needs a well-drained soil. It can grow in full or part sun. It suits hardiness zones 9-12.

Found in:

Africa, Asia, Australia, Bahamas*, Burma, Central America*, China, Cuba*, East Africa, Ethiopia, Guinea-Bissau, Guyana, Haiti, Hawaii, Kenya, India, Indochina, Indonesia, Ivory Coast, Jamaica, Kenya, Lesser Antilles*, Malaysia, Mediterranean, Mexico*, Myanmar, Nepal, Norfolk Island, North America, Pacific, Papua New Guinea, PNG, Philippines, Puerto Rico, Senegal, Sierra Leone, Southern Africa, South America, Spain, Sri Lanka, Swaziland, Thailand, Timor, Tonga, USA, Vietnam, West Africa, West Indies*, Zambia, Zimbabwe,

Use

The ripe fruit are eaten raw.
CAUTION: The fruit are reported as poisonous. The plant contains the alkaloid lantanin.
The leaves are used for flavouring.

Cultivation

Plants can be grown from seed or by cuttings.

Production

Nutritional Values

Lantana camara

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Rubiaceae

Common names

Blue rubi,

Scientific name

Lasianthus strigosus

Edible portion

Fruit,

Description

A shrub. The branches are flattish and dark brown. The leaves are long and sword shaped. There are some hairs on the veins underneath the leaf. The leaf is stiff and with saw-like teeth along the edge. The leaf stalk is short and 4 mm long. The fruit are 1.5 cm long by 1.1 cm wide. They occur singly or in clusters. The outer surface of the fruit is finely hairy. The cut fruit has an offensive smell. There are about 4 seeds inside. They are 5 mm long. The flesh is edible.

Distribution

It is a tropical plant. It grows naturally in the lowland rainforest.

Found in:

Asia, Australia, Indonesia, Pacific, Papua New Guinea, PNG, Sri Lanka, Timor,

Use

Cultivation

Production

In Australia, fruit occurs from March to December.

Nutritional Values

Lasianthus strigosus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Vitaceae

Common names

Kurkurjiwah, Bandicoot berry, Mali-mali, Memali, Kalet, Jolok-jolok, Girang, Kayu tuwa, Tirah, Ki tuwa, Silangkar, Kurkur-jihwa, Dino,



Scientific name

Leea indica

Edible portion

Fruit, Leaves,

Description

A slender shrub. It grows 1-3 m tall and spreads 0.3-1 m wide. The stems are pithy. The young growth is pale green. The leaves are 30-60 cm long. The leaves are compound. They have leaflets along the stalk. The leaves can be divided 2-3 times. The leaflets are 6-25 cm long by 2-5 cm wide. The leaflets are glossy and have teeth along the edge. The leaflets have distinctive veins. The flowers are in groups 10-20 cm across and with many branches. The flowers are 0.4 cm across and green or cream. The fruit are berries 0.5 cm long and black.

Distribution

It is a tropical plant. Plants are sensitive to cold.

Found in:

Asia, Australia, Fiji, Hawaii, India, Indonesia, Malaysia, New Caledonia, Pacific, Polynesia, Timor, USA,

Use

The fruit are eaten.
The tender young leaves are used as a vegetable.

Cultivation

Plants can be grown from seed or cuttings.

Production

Nutritional Values

Leea indica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Poaceae

Common names

Swamp Rice Grass,

Scientific name

Leersia hexandra

Edible portion

Seeds, Cereal,

Description

A grass which keeps growing from year to year. It grows near the edges of water and has floating stems. It forms clumps due to underground stems or rhizomes. The stems stick up like bamboo with supporting roots from the lower stem joints. The leafy stems can be 60 cm high. The stems are hollow. The leaves can be 0.5-20 cm long and 0.3-1 cm wide. They are dull green and sword shaped and taper towards the tip. The leaf sheath is thickened and with dense white bristles at the base. It has rough upward pointing prickles on the higher section. The flower panicles are 5-15 cm long. They are open and with few branches. The small spikes have one flower containing both sexes. The lower flower bract has 5 veins.

Distribution

A tropical and subtropical plant. It grows along the edges of still water. It can cause floating islands on lakes. In Papua New Guinea it grows from sea level top 2,300 m altitude. It occurs all around the world.

Found in:

Africa, Angola, Australia, Burma, Central America*, China, Cuba*, Haiti, India, Jamaica*, Lesser Antilles*, Mexico*, Myanmar, North America, Pacific, Papua New Guinea, PNG, Philippines, Puerto Rico, South Africa, Southern Africa, South America, Swaziland, Timor, Venezuela, West Indies*, widespread tropical, Zambia, Zimbabwe,

Use

Cultivation

It can be grown from rooted sections of stems or rhizomes. Seeds are often not formed.

Production

Nutritional Values

Leersia hexandra

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Sapindaceae

Common names

Chunluhs donkay, Zich tai, Bak-wa, Ritha, Mertajam, Menterajam, Terajam, Terajang, Kelayu, Kelat layu laut, Kelat layu hutan, Kelat

Scientific name

Lepisanthes rubiginosa

Edible portion

Fruit, Leaves,

Description

A shrub 1-3 m tall. It can grow to 10 m tall. It can spread 1-2 m wide. Trunks can occasionally be 35 cm across. The young branches are slightly grooved. They are covered with brown hairs. The leaves are 10-30 cm long and divided. There are 4-18 leaflets. These are 3-24 cm long by 3-6 cm wide. They are oval or oblong and largest towards the tip. They are dark green and leathery. There are brown hairs on both surfaces. The flower panicle is 10-35 cm long and it has many branches. The flowers are 0.6 cm across. They are white. The fruit is a capsule. The fruit are small and purple. They grow in clusters.

Distribution

A tropical plant. It grows in secondary forest. On thin, poor soils it is only a shrub. In Indonesia it grows up to 1200 m altitude. It grows in monsoonal forest. It suits tropical and warm subtropical locations. It suits hardiness zones 10-12.

Found in:

Asia, Australia, Cambodia, China, India, Indochina, Indonesia, Malaysia, Pacific, Papua New Guinea, PNG, Philippines, Thailand, Timor, Vietnam,

Use

The fruit are eaten. It is the aril or layer around the seed which is eaten. The fruit are made into jams and syrups.
The young leaves are eaten as a vegetable.

Cultivation

Plants are grown from fresh seed.

Production

Nutritional Values

Lepisanthes rubiginosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Leucaena,



Scientific name

Leucaena leucocephala

Edible portion

Leaves, Pods, Seeds - coffee,

Description

A small erect tree. It grows to 6-10 m high. It has fine divided leaves. The leaves have 2 rows of leaflets. The leaves are 15 to 25 cm long and the leaflets 8 to 16 cm long. They are a dark dull green on top and dull greyish green underneath. The flowers are white and in round heads. They are in the axils of leaves or on the ends of branches. The pods are flat and 10-15 cm long and 1.8 cm wide with 15-25 seeds inside. It has shiny brown seeds. There are 3 subspecies.

Distribution

It is a tropical plant. It is introduced and common at low and medium altitudes throughout the tropics. It is widespread from sea level up to about 1700 m altitude in the tropics. It is often used as shade for coffee. It is drought resistant. It grows in the Sahel. It can grow on dry and poor soils. It can tolerate salt. It needs well drained soil and full sun. In Nepal it grows to 1400 m altitude. It suits hardiness zones 10-12.

Found in:

Africa, Angola, Argentina, Asia, Australia, Bahamas, Bangladesh, Belize, Benin, Bermuda, Bhutan, Bolivia, Brazil, Burundi, Cambodia, Cape Verde, Central America, Chad, Chile, China, Colombia, Congo, Costa Rica, Cuba, Cyprus, Djibouti, Dominican Republic, East Africa, Ecuador, Egypt, El Salvador, Equatorial Guinea, Ethiopia, Fiji, French Guiana, Ghana, Grenada, Guam, Guatemala, Guinea, Guinea Bissau, Guyana, Haiti, Hawaii, Hispaniola, Honduras, India, Indochina, Indonesia, Ivory Coast, Jamaica, Kenya, Laos, Lebanon, Liberia, Libya, Madagascar, Malawi, Malaysia, Mali, Martinique, Mauritius, Mexico, Mozambique, Nepal, New Caledonia, Nicaragua, Niger, Nigeria, North America, Pacific, Pakistan, Panama

Use

The mature seeds are toasted and ground and used as a coffee substitute. They are also added to stews.
The young leaves are sometimes used as a vegetable.
The tender pods and shoots are cooked as a vegetable.
CAUTION The leaves contain a chemical (mimosine) which causes hair to fall out.

Cultivation

It grows easily from seeds. It also regrows from cut stumps and it can be grown from cuttings. Plants are hard to eliminate and can become a weed problem in dry areas.

Production

It grows very quickly.

Nutritional Values

Leucaena leucocephala

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Sapindaceae

Common names

Litchi, Lychee,



Scientific name

Litchi chinensis

Edible portion

Fruit, Aril,

Description

A medium sized evergreen tree. It grows up to 15 m tall but can be 35 m tall. It has a dense round crown. The trunk is smooth and grey with brittle trunk and branches. The trunk can be 1 m across. Leaves are shiny and light green. The leaves are reddish when young. They are leathery and divided into 4-8 leaflets. The leaflets are oval and taper to the tip. The flowers are pale green and in loosely branched groups at the ends of branches. It bears bunches of rough skinned pinkish fruit 3-4 cm across. These droop in clusters. There are 3 subspecies ssp. *chinensis*, ssp. *philippinensis*, ssp. *javensis*. There are many cultivated varieties.

Distribution

A subtropical plant. It is native to Asia from China to Malaysia. It grows satisfactorily in the humid equatorial lowland areas but does not fruit. For fruiting it needs to be at a higher altitude or latitude because it has a cold temperature chilling requirement. Most varieties need between 100 and 200 hours of standard chilling (0° and 7°C). It needs a deep moist soil and freedom from frost. Trees can stand temperatures down to -2°C when mature. Temperatures below 5°C at flowering upset normal flower opening. Cool dry climates are important. Temperatures between 20-38°C suit good fruiting. Although litchi will grow on a range of soils, well drained soils are best. A pH between 5.5 and 7.5 is suitable. In Brisbane Botanical Gardens. It suits hardiness zones 10-11.

Found in:

Africa, Asia, Australia, Bangladesh, Brazil, Burma, Cambodia, Cameroon, Central Africa, Central America, China*, East Africa, Fiji, Hawaii, India, Indochina, Indonesia, Jamaica, Laos, Madagascar, Malawi, Malaysia, Myanmar, Nepal, New Caledonia, North America, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Reunion, Singapore, South Africa, Southern Africa, South America, Thailand, Timor, Trinidad, USA, Vanuatu, Vietnam, West Indies,

Use

The fleshy pulp around the seeds is eaten. They are eaten fresh, preserved or dried. They are pickled, canned, used in jams. sauces, fruit salads, ice cream and made into wine.
Dried tea leaves are soaked in lychee jucie then dried again to impart a lychee flavour.

Cultivation

Trees are mostly grown from seed but they do not breed true and are slow to produce. Trees can be propagated by aerial layering, grafting or cuttings. Air layering is best. Seeds do not store well (4-5 days), so fresh seed must be sown. Air layers on mature branches in the warmer season are best. Branches of 2 to 2.5 cm across with 45 cm of shoot are suitable for air layers. A spacing between trees of 10-12 m is suitable. Good soil preparation prior to planting enables good early growth. Organic matter dug in over 1 metre square and 30 cm deep 3 months before planting is good. A stick for support of the young plant and shelter are needed at planting. A pH of 5.5 to 6.0 is required. Because it is shallow rooting, cultivation should be avoided and mulching practised. Small amounts of fertiliser added often is the appropriate method. Lychee trees have a high water consumption. Only limited tree training is required. Often no general pruning is required. Plants need adequate water but not waterlogged soil.

Production

Seedling trees take 8-12 years to start fruiting. Vegetatively propagated trees bear in 4-6 years. Fruiting is normally seasonal. It takes 140 days from flowering to fruit maturity. Fruit need to be harvested ripe from the tree. The normal harvesting method is to remove the fruit with a few cm of the stem still attached. Early fruit set is affected by vegetative growth at flowering. Insects (bees) are important for fruit set. Wind breaks are essential because wind at flowering can reduce fruit set. A 20 year old tree can produce 5,000 fruit or 100 kg.

Nutritional Values

Litchi chinensis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit - raw	80.6	286	56	1.1	0	49	0.5	0.1

Lauraceae

Common names

Malek, Wuru lilin, Huru tangkalak, Malai, Maida lakri, Garbijaur, Kukur chita, Garur, Ratun, Maida lakadi, Maeda lakari, Narra alagi,

Scientific name

Litsea glutinosa

Edible portion

Fruit,

Description

A tall shrub. It grows 6-10 m high and 3-5 m across. The young growth is sticky. The leaves are 7-28 cm long by 3-18 cm wide. They are dark green above and paler with white hairs underneath. They are leathery and taper to the tip. The flower groups are 1-4 cm long. There are 6-14 flowers clustered in the axils of the leaves. The flowers are 0.4 cm across and cream or green. They have a scent. The fleshy fruit is 0.8-1 cm long by 0.8-1.1 cm wide. The are black.

Distribution

It is a tropical plant. It northern Australia it grows from sea level to 600 m altitude. They need well drained soil and slight shade.

Found in:

Asia, Australia, China, India, Indochina, Indonesia, Malaysia, Pacific, Papua New Guinea, PNG, Timor,

Use

The sweet pulp under the red skin is eaten.

Cultivation

Plants can be grown from fresh seed. The seed are slow to germinate. This may take 6 months.

Production

Trees begin to bear fruit after 5-6 years.

Nutritional Values

Litsea glutinosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Cucurbitaceae

Common names

Angled loofah, Blustru, Si gua, Sze gwa, Loofah, Dishcloth gourd, Pate ghiraunla, Silk gourd, Torai, Kali, Jhingli, Hoyong, Jhinga, Tokado-



Scientific name

Luffa acutangula

Edible portion

Leaves, Fruits, Vegetable, Seeds, Seeds - oil,

Description

A herb. It is a pumpkin family plant. It is an annual climber with square stems. They have 4 to 7 branched tendrils which attach to objects helping the plant to have a climbing habit. Leaves are pale green, hairy and shallowly five lobed. The leaves have a bad smell when rubbed. Male and female flowers are separate. Male flowers are in clusters, female flowers singly. (Ratio 43:1) Flowers open late in the afternoon and stay open during the night. The flowers are yellow. Fruit can be up to 40 cm long and with 10 long ridges. It is green-brown outside and white inside.

Distribution

A tropical plant. It grows from sea level to 500 m altitude in the hot humid tropics. It won't tolerate excessive rainfall so does best in drier areas or in the dry season in wetter areas. Day temperatures above 25 °C are suitable. Some varieties require short day length. Adding additional nitrogen fertiliser can stimulate female flower formation in short day varieties. In Nepal it grows between 1000-1600 m altitude.

Found in:

Africa, Asia, Australia, Bangladesh, Burma, Cambodia, China, East Africa, Ghana, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Ivory Coast, Japan, Kenya, Madagascar, Malaysia, Mauritius, Mozambique, Myanmar, Nepal, Nigeria, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Russia, Senegal, Sierra Leone, Singapore, Solomon Islands, Southern Africa, South America, Sri Lanka, Tanzania, Thailand, Timor, Togo, Uganda, USA, Vanuatu, Vietnam, West Africa, Yemen,

Use

The immature fruit are cooked and eaten as a vegetable. The ridges are removed with a vegetable peeler. The fruit are boiled, steamed or stir-fried. They can be added to soups, stews and curries.
The leaves are edible. They can be eaten in salads or cooked as a vegetable.
The flower buds are dipped in batter and sauteed.
Mature seeds are roasted, salted and eaten as a snack.

Cultivation

Seeds are sown direct at 40 x 80 cm spacing and need stakes to climb. Because seeds can have a hard coating soaking seed in water for 24 hours before planting can assist. 5 kg of seed per hectare are required. The plant benefits from full sunlight. Good soil fertility is beneficial. The soil needs to be well drained and adequate organic matter helps. Pinching out the growing tips when plants are 1.5 to 2 metres long can promote fruit development. Hand pollination once female flowers develop helps fruit set. This is best done in the evening.

Production

Immature fruit are ready 6-10 weeks after planting. On maturity the fruit become bitter and inedible. Fruit do not store well so are harvested when they are to be used.

Nutritional Values

Luffa acutangula

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Cucurbitaceae

Common names

Smooth loofah, Kabatiti, Vegetable sponge, Ghuraunla, Sze kwa, Meethi-torai, Belustru, Hechima, Petola manis, Patola, Vatakolu, Boap



Scientific name

Luffa cylindrica

Edible portion

Fruit, Leaves, Flowers, Seeds, Seeds-oil, Vegetable,

Description

A pumpkin family plant. It is an annual climber up to 10 m long. The stem is five angled and slightly hairy. The tendrils have 2 or 3 branches. Leaves are 10-20 cm across with five to seven lobes. Male and female flowers are separate and yellow. The male flowers occur as 4 to 20 flowers together while female flowers are solitary in the leaf axils. Flowers open in the early morning. The fruit is fairly smooth and cylindrical and can be 30 - 60 cm long. The seeds are black, flat and smooth and 10-15 mm long.

Distribution

A tropical plant. It grows well in the tropical lowlands but will also grow in more temperate places. It does best with temperatures between 25-30°C. It is better suited to the drier season as too heavy a rainfall during flowering and fruiting is harmful. Soils should be well drained and moderately rich. It grows in areas with an annual rainfall between 1,000-1,800 mm. It suits hardiness zones 9-12.

Found in:

Africa, Asia, Australia, Bangladesh, Burma, Cambodia, Cameroon, China, East Africa, Ethiopia, Fiji, Gambia, Ghana, Guiana, Guinea, Guinea-Bissau, Guyana, Haiti, India, Indochina, Indonesia, Japan, Kenya, Liberia, Malawi, Malaysia, Mali, Mexico, Myanmar, Nepal, Nigeria, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Senegal, Sierra Leone, Solomon Islands, South Africa, Southern Africa, South America, Sri Lanka, Sudan, Taiwan, Thailand, Timor, Togo, Tonga, Uganda, Vanuatu, Vietnam, West Africa, Zambia, Zimbabwe,

Use

The young fruit are eaten as a vegetable. They are skinned and have the centre removed. They can also be sliced and dried for later use. They can be pickled or used in soups, stews and curries.
The seeds yield an edible oil after extraction. The seeds are roasted with salt and eaten as a snack.
The young leaves and flowers are edible. They are blanched by covering to make them white.
CAUTION Older fruit are bitter and fibrous and contain poisonous substances.

Cultivation

Plants are grown from seed. Seed are collected from ripe fruit. Seed are sown 4-5 cm deep and plants are put 1 metre apart. They can be sown in seed boxes and transplanted when 15 cm high. It is best to have a trellis for the plant to climb on or be left to climb over trees. They are often pollinated by insects but can be hand pollinated in the early morning.

Production

Fruit are harvested for sponges when fully mature. Young fruit are ready 2-3 months after planting while fruit mature 4-5 months after planting. For eating, young fruit are used.

Nutritional Values

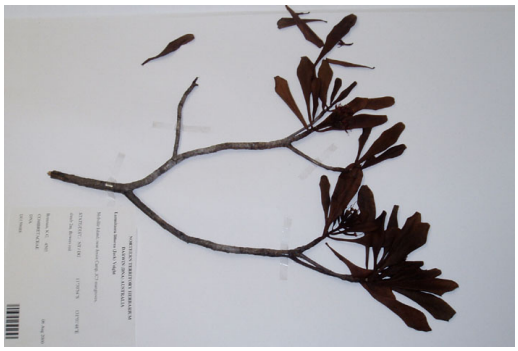
Luffa cylindrica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	94.3	79	19	1.1			0.7	
seeds								

Combretaceae

Common names

Red flowered Black Mangrove,



Scientific name

Lumnitzera littorea

Edible portion

Nectar,

Description

A small tree 3-5 m high. It spreads to 9 m wide. It has slender knee shaped roots allowing air. The bark is rough and dark grey. It has cracks along its length. The leaves are arranged in spirals. They are crowded towards the ends of branches. The leaves are smooth, slightly fleshy and leathery. They are spoon shaped and taper towards the base. The leaves are 2-8 cm long by 1.2-2.5 cm wide. The flowers are red tubes with a strong scent. They are 1.5-2 cm long. Many flowers occur together in flower clusters near the ends of branches. These flower clusters are 2-5 cm long. The fruit are hard and smooth. They are 1 cm long by 0.5 cm wide. They are corky and have a single seed.

Distribution

A tropical plant. It grows on the landward side of the mangroves. It occurs in soft mud where the tide only occasionally reaches.

Found in:

Africa, Australia, Fiji, India, Indonesia, Malaysia, Pacific, Pacific, Papua New Guinea, PNG, Timor, Tonga,

Use

The flowers can be sucked for nectar.

Cultivation

Plants are grown from seed.

Production

In Australia, plants flower June to February and fruit July to November.

Nutritional Values

Lumnitzera littorea

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Combretaceae

Common names

White flowered black mangrove, Duduk, Spring-tide mangrove, Truntum bunga puteh, Duduk laki-laki, Fat, Kripa, Kadivi, Thandara,



Scientific name

Lumnitzera racemosa

Edible portion

Leaves,

Description

A shrub or small tree. It grows to 4-8 m tall and spreads to 1-2 m wide Young plant parts have small hairs. The bark is rough and dark grey and has slight cracks along it. The leaves are often clustered near the ends of branches. They are arranged in spirals. The leaves are oval and 3-6 cm long by 1-2 cm wide. They are rounded at the tip and taper at the base. They are leathery and light green. There is often a notch at the tip of the leaf. The flowering stalks in the axils of leaves are branched and produce 3-7 flowers. The flowers are fleshy and white. The flower lobes are triangular and petals are 4 mm long by 1 mm wide. The fruit is narrow and oval. It is 12 mm long by 4 mm wide. The fruit is fibrous and has a single seed.

Distribution

A tropical plant. It normally grows in mud flats which are flooded by the tide. It is normally near river mouths where fresh water also flows.

Found in:

Africa, Asia, Australia, Bangladesh, East Africa, India, Indochina, Indonesia, Madagascar, Malaysia, SE Asia, Pacific, Papua New Guinea, PNG, Polynesia, South Africa, Southern Africa, Sri Lanka, Thailand, Timor,

Use

The leaves are eaten.

Cultivation

It is grown from seed.

Production

In Australia, plants flower from October to May and fruit from January to June.

Nutritional Values

Lumnitzera racemosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Solanaceae

Common names

Tomato,



Scientific name

Lycopersicon esculentum

Edible portion

Fruit, Spice, Vegetable,

Description

A short lived perennial plant. It is upright but with weak stems. It can grow to 2 m tall with support for the stems. The stems have long hairs. It is bad smelling. The leaves are deeply lobed with an odd number of leaflets. They have irregular teeth around the edge. There are up to 12 star shaped flowers on each raceme. Flowers are yellow. The fruit are round and red when ripe. Yellow coloured fruit also occur. There are many varieties.

Distribution

A warm temperate plant. It grows from sea level to 2400 m altitude in the tropics. It needs to be grown in fertile soil. For best production it requires much water, plenty of sunshine and low night temperatures. For germination it does best between 20-30° C. It is frost susceptible. A pH of 6.0-7.9 is best. In Nepal it grows to 1400 m altitude. It suits hardiness zones 9-12.

Found in:

Africa, Angola, Asia, Australia, Bangladesh, Belgium, Benin, Botswana, Brazil, Britain, Bulgaria, Burkina Faso, Burundi, Cambodia, Cameroon, Central Africa, Central African Republic, Central America, Chad, China, Comoros, Cook Islands, Congo, Costa Rica, East Africa, Ecuador, Egypt, Eritrea, Ethiopia, Europe, Fiji, Finland, France, French Guiana, Gabon, Gambia, Germany, Ghana, Greece, Guam, Guinea, Guinea Bissau, Guyana, Haiti, Kenya, India, Indochina, Indonesia, Italy, Ivory Coast, Jamaica, Japan, Liberia, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mauritius, Mexico, Morocco, Mozambique, Namibia, Nepal, New Zealand, Nicaragua, Niger, Nigeria, North America, Pacific, Pakistan, Papua New Guinea

Use

The fruit are eaten raw or added to salads. They can be cooked, stewed, pureed, stuffed, made into sauces, juice, and used in soups and stews. Unripe fruit are pickled, roasted, fried and dried.
CAUTION Although in a lot of places in Papua New Guinea the leaves are eaten this is probably not a good idea. Leaves and green fruit are poisonous.

Cultivation

Plants are sown from seeds. These are normally sown in a nursery and transplanted. They are transplanted when 40-45 days old or 15 cm high. They are spaced about 60-90 cm apart. Seeds can also be sown directly in the field. They can also be grown from cuttings. To give fewer and larger fruit the side branches of upright types are removed. Upright plant types need to be tied to stakes. Plants are often grafted into stronger rootstocks.

Production

Harvesting commences after about 14 weeks. Yields can be 3-4 kg of fruit per plant.

Nutritional Values

Lycopersicon esculentum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Euphorbiaceae

Common names

Blush Macaranga, Heart Leaf, Tubbig, Brush Macaranga, Hairy Mahang, Binunga, Wenurapi, Venu,



Scientific name

Macaranga tanarius

Edible portion

Bark, Fruit, Leaves - for drink, Seeds,

Description

A small tree. It grows 4-10 m high. It has a spreading bushy habit. Young growth is bright green and slightly hairy. The leaves are alternate and 10 to 25 cm long by 10-15 cm wide. They are broadly oval or shield shaped. The leaf stalk joins the leaf blade in the centre. The leaf stalk is slender and 20 cm long. The leaf is bright green above and pale green underneath. The veins are pale and easy to see. The flower panicles are 4-22 cm long and in the axils of leaves. They hang downwards. The male flowers are longer and more branched. There are broad bracts near the flowers and these have fringes around them. Both male and female flowers are small and green. The fruit is a capsule 0.8 cm long and inflated. They are soft and have teeth around them. The seeds are black and shiny when ripe.

Distribution

A tropical plant. It is native from Malaysia to Australia. It will grow in many types of soil. The soil should be well-drained. It does best in a sunny position. Common and widely distributed in open places and secondary forest throughout the Philippines.

Found in:

Asia, Australia, India, Pacific, Papua New Guinea, PNG, Philippines, Taiwan, Timor,

Use

The bark, leaves and fruit are used in fermenting a drink known as "basi" in the Philippines.
The seeds are roasted and added to sugarcane wine.

Cultivation

Plants are grown from seed. Seed should be planted fresh. Seed germinate easily. Plants can be grown from cuttings. The cuttings should be large.

Production

It is a fast growing plant. In Australia, plants flower in October to December and fruit from January to February.

Nutritional Values

Macaranga tanarius

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Moraceae

Common names

Cockspur thorn, Amali, Damaru, Manda, Mangei, Kamgu, Gou ji, Kederang, Kangu, Tegerang, Kuderang, Ke le,

Scientific name

Maclura cochinchinensis

Edible portion

Fruit, Leaves,

Description

A thorny climbing shrub. It grows 4-10 m long. It has cane like twigs. It forms thickets. It can be erect or spreading. It has spines which are curved. They are about 1 cm thick. The leaves are alternate and oblong. The base is wedge shaped and it tapers to a short tip. They are 7-15 cm long and 3-5 cm wide. The leaf stalk is 6-10 mm long. They are leathery. Broken leaves and twigs ooze milky sap. The male and female flowers are separate on separate plants. The male flowers are 6-10 mm wide. The female flowers are hairy. The fruit is a composite round fruit 2-5 cm across. It has a pattern of squares over the surface and is green but turns yellow-orange when mature. They are hairy. The fruit are edible. There are several very small seeds inside.

Distribution

A tropical plant. It grows in the forest. It can grow on coral soil. In Papua New Guinea it grows from sea level to 1600 m altitude. In Nepal it grows between 600-1200 m altitude. It grows on the outer edge of the forest. It grows near villages in S China. It suits hardiness zones 10-12.

Found in:

Australia, Asia, Asia, Australia, Bhutan, Burma, Cambodia, China, Himalayas, India, Indochina, Indonesia, Japan, Laos, Malaysia, Myanmar, Nepal, Pacific, Papua New Guinea, PNG, Philippines, Sikkim, Sri Lanka, Thailand, Timor, Vietnam,

Use

The ripe fruit are eaten fresh. They are also used for making wine.
The young leaves are eaten raw.

Cultivation

Plants are grown from cuttings.

Production

In Australia, fruit occur from November to May.

Nutritional Values

Maclura cochinchinensis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Euphorbiaceae

Common names

Bol-khing-khang, Kamasi, Red Kamala, Monkey face tree, Red berry, Kambal, Kumila, Sindoor, Rora, Roli, Ruen, Isa isanete,



Scientific name

Mallotus philippensis

Edible portion

Fruit,

Description

A small evergreen tree. It grows 8-12 m high. It has a bushy growth pattern spreading to 4 m wide. The small branches are slender. The young growth has rusty hairs. The leaves are 5-20 cm long by 5-9 cm wide. They are oblong and dark green. The edges of the leaves are irregular and wavy. The leaf tapers to the tip and is wedge shaped at the base. The veins are easy to see. There are a pair of side veins near the base then 5-6 other pairs. There are very small glands underneath the leaf. The leaf stalk is 7 cm long. The flowers occur along stalks 2-10 cm long. These are produced in the axils of the upper leaves. The flowers are small and brown and male and female flowers are separate on the same same plant, or on separate trees. The fruit are capsules 0.6-0.8 cm across. They are covered with red powder. The fruit have 3 lobes.

Distribution

It is a tropical plant. It grows in rainforests. It will grow on a range of soils. It can tolerate moderate frosts. It grows to 1500 m on the edge of the Himalayas. It suits hardiness zones 9-11. Adelaide Botanical Gardens.

Found in:

Asia, Australia, Burma, China, Himalayas, India, Myanmar, Nepal, Pacific, Pakistan, Papua New Guinea, Philippines, PNG, Sri Lanka, Taiwan, Timor,

Use

The unripe fruit are cooked as a vegetable.

Cultivation

Plants can be grown from fresh seed. They can also be grown from hardened young cuttings.

Production

In Australia, fruit are ripe September to February.

Nutritional Values

Mallotus philippensis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Malpighiaceae

Common names

Barbados cherry, Acerola,



Scientific name

Malpighia glabra

Edible portion

Fruit,

Description

A small evergreen tree or shrub. It grows up to 5-7 m high. It often has several trunks. The branches are spreading and often drooping. The leaves are opposite and oval to sword shaped. They are 2-8 cm long by 1-4 cm wide. They can be wavy along the edge. They are dark green and glossy. The leaf stalk is short. The flowers have both sexes. The flowering stalks are short with 3-5 flowers. The flowers are 1-2 cm across. They are pinkish red. The fruit is bright red. It is 1-2 cm across and has several small seeds. The fruit resemble a common cherry. But is has 3 grooves and 3 seeds. The fruit are carried on the outside of the tree. The seeds are triangle shaped.

Distribution

A tropical and subtropical plant. It grows on sandy soils and in drier regions. It is a tropical plant. Rainfall during flowering and fruiting improves fruit quantity and size. They do best in a frost free site. They need a well drained soil. They can tolerate frost and drought. They do best in warm to hot climates with temperatures of 30-32°C. In Brisbane Botanical Gardens. It suits hardiness zones 9-12.

Found in:

Africa, Antilles, Asia, Australia, Barbados, Belize, Brazil, Caribbean, Central America, China, Colombia, Costa Rica, Cuba, Dominican Republic, El Salvador, Fiji, Ghana, Guatemala, Guyana, Haiti, Hawaii, Honduras, India, Jamaica, Madagascar, Malaysia, Mauritius, Mexico*, Nicaragua, North America, Pacific, Pakistan, Panama, Peru, Philippines, Puerto Rico, Senegal, Sierra Leone, Singapore, Solomon Islands, South America, Taiwan, Thailand, Timor, USA (Texas), Venezuela, Vietnam, West Africa, West Indies,

Use

The fruit are eaten fresh or used in juice.
They can be used for wine.
They can be used in jellies, jams and preserves.
The sauce or puree can be used as a topping for cakes, puddings, ice cream or sliced bananas.
Caution: Acerola can produce an allergic reaction similar to that of latex.

Cultivation

They can be grown from hardwood cuttings or budded onto seedlings. They can also be grown by ground layering. Plants can be grown from seed. Seed germinate poorly. A spacing of 3-4 m is suitable.

Production

Trees bear in 3-4 years. They continue for 15 years. Flowering normally follows periods of rainfall. There can be several flowering and fruiting periods per year. Flowers are pollinated by insects. Fruit can ripen in 3-4 weeks. Fruits loose their flavour and nutritional value rapidly after harvest. They should be picked and eaten within a few hours. Individual trees can yield 15-30 kg of fruit per year.

Nutritional Values

Malpighia glabra

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	83.2	163	39	1.8	800	2100	0.8	

Rosaceae

Common names

Apple,



Scientific name

Malus domestica

Edible portion

Fruit,

Description

A small to medium sized deciduous tree. It grows 5-10 m tall. It has a single trunk and branches freely. There can be long shoots and short spurs. Young stems and twigs have a covering. The leaves are oval and 4-13 cm long by 3-7 cm wide. They are rounded at the base. The edges have irregular teeth. The flowers are usually near the ends of branches on spurs. Several flowers occur together. There are 5 white to pink petals. The fruit is usually almost round and over 5 cm across. There are 2 seeds in each cell. They are brown.

Distribution

Temperate. It is grown at altitude in the tropics. In the tropics a short growth cycle requires mild temperatures throughout the year. This is found near the equator at altitudes of 800-1200 m where temperatures are 16-27°C. A rainfall of 1600-3200 mm and a relative humidity of 75-85%. The growing season should have good sunlight while the off season should be overcaste and cool. Most apple varieties require 1,000 hours of chilling at temperatures below 7°C during the dormant season. In the Himalayas this occurs between 1,400-2,800 m altitude. Low chilling varities occur. It suits hardiness zones 3-9.

Found in:

Africa, Argentina, Australia, Brazil, Cameroon, Central Africa, China, East Africa, Ethiopia, Europe, France, Germany, Hawaii, Himalayas, Hungary, India, Indonesia, Iran, Israel, Italy, Japan, Malawi, Mediterranean, North America, Pacific, Pakistan, Philippines, Poland, Russia, South America, Spain, Tajikistan, Tasmania, Thailand, Timor, Turkey, USA,

Use

The fruit are eaten fresh. They are also cooked and used to make juice. The fruit can be sliced and dried.
Caution: Apples seeds contain amygdalin a cyanogenic glucoside.

Cultivation

Plats are grown by seed and by grafting. In the tropics the plants are almost evergreen with little shoot growth and flowers and fruiting can occur throughout the year. To produce consistent fruiting, branches and bent horizontal and tied down. Sometimes leaves are picked off. The importance or cross pollination is less important in the tropics. Apples are normally produce by budding using shoots of good clones. In Indonesia a root stock from wild apple is produced by root suckers or air layering. The dormancy of seeds is broken by putting them in a freezer for 30-150 days.

Production

The fruit ripen 3.5-5 months after flowering. In the tropics flower buds can greatly exceed leaf buds so trees can produce more fruit than the leaves can support. Fruit thinning is then necessary.

Nutritional Values

Malus domestica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	85	235		0.3		10		

Anacardiaceae

Common names

Kemang, Belunu, Jack, Binjai, Banjar, Binglu, Wani, Beluno, Bundo, Bauno, Binnu, Bayuno, Baluno, Bin-yaa,

Scientific name

Mangifera caesia

Edible portion

Fruit, Leaves, Seeds,

Description

The large tree. It reaches a height of 25-45 m. The trunk can be 50-120 cm across. It does not have buttresses. The branches are large and the crown is dome shaped. The bark is greyish-brown. It has slight cracks along its length and the sap causes irritation. The leaves are smooth and pointed at both ends. They are normally 10-12 cm long by 4-6 cm wide. They are shiny above and paler underneath. The leaves are often crowded at the ends of the stout branches. The leaf stalk is stout and flattened and 1-2 cm long. The flowering stalks are at the ends of branches and are 15-40 cm long. The flowers are pale pink and there are many on a stalk. The petals are narrow and 10 mm long and do not curve backwards as in mango. The fruit resembles the common mango. They are 12-15 cm long by 6-7 cm wide. Some fruit are excellent. The skin is yellow-brown and the flesh is yellow-white.

Distribution

A tropical plant. It suits the lowland tropics. They grow in the humid tropics. They are often in areas which are occasionally flooded. It is found in Mindanao and neighbouring islands of Sulu in the Philippines. It suits hardiness zones 11-12.

Found in:

Asia, Brunei, Indochina, Indonesia, Malaysia, Pacific, Papua New Guinea, PNG, Philippines, Singapore, Thailand, Timor,

Use

The fleshy part of the fruit is eaten raw. It is juicy and sweet-sour. They can be pickled.
The seed kernels are pounded with Blackberried nightshade and used as a flavouring.
The young leaves are eaten raw to flavour other food.

Cultivation

Production

Fruit ripen 3 months after flowering.

Nutritional Values

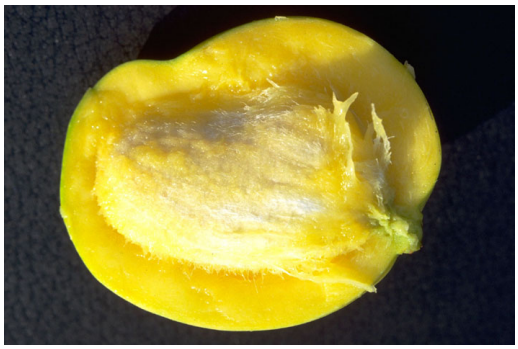
Mangifera caesia

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	86.5	200		1.0		58		

Common names

Anacardiaceae

Mango,



Scientific name

Mangifera indica

Edible portion

Fruit, Seeds, Leaves,

Description

An erect, branched evergreen tree. It can grow to 10-40 m high and is long lived. (Trees grown by vegetative means are smaller and more compact.) Trees spread to 15 m across. It has strong deep roots. The trunk is thick. The bark is greyish-brown. The leaves are simple and shaped like a spear. Some kinds of mangoes have leaves with a wavy edge. They can be 10-30 cm long and 2-10 cm wide. They are arranged in spirals. The leaf stalk is 1-10 cm long and flattened. Leaves are often brightly coloured and brownish-red when young. These tender leaves which are produced in flushes become stiff and dark-green when mature. The flower stalks are at the ends of branches. They are 10-50 cm long and branching. Up to 6,000 flowers can occur on a stalk. Most of these are male and between 1 and 35 % have both male and female flower parts. Fruit are green, yellow or red and 2.5 to 30 cm long. The fruit hang down on long stalks. The outside layer of the seed is hard and fibrous and there is one seed inside. Several embryos can develop from one seed by asexual reproduction. The fruit shape

Distribution

A tropical and subtropical plant. It grows from sea level up to 1300 m altitude in the tropics. It does best in areas below 700 m and with a dry season. Rain and high humidity at flowering reduces fruit set. It thrives best where temperatures are about 25° C but will grow with temperatures between 10 and 42°C. Temperatures of 0°C will damage young trees and flowers. Low temperatures (10-20°C) at flowering time will reduce fruiting. As temperatures get lower due to latitude or altitude, fruit maturity is later and trees become more likely to only have good crops every second year. Mangoes can grow on a range of soils. In wetter areas soils with less clay are better. They can withstand occasional flooding. A soil pH of 5.5 to 6.5 is best. Soils with pH above 7.5 cause plants to develop iron deficiency. It grows in the Sahel. It suits hardiness zones 11-12.

Found in:

Africa, Andamans, Angola, Asia, Australia, Bangladesh, Brazil, Burma, Burundi, Cameroon, Cambodia, Central Africa, Central African Republic, Central America, China, Colombia, Congo, Costa Rica, Cuba, Dominica, East Africa, Ecuador, Equatorial Guinea, Ethiopia, Fiji, FSM, French Guiana, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Guyana, Haiti, Hawaii, Himalayas, Honduras, India, Indochina, Indonesia, Iran, Ivory Coast, Jamaica, Kenya, Kiribati, Laos, Madagascar, Malawi, Malaysia, Maldives, Mali, Marshall Is., Martinique, Mauritius, Mexico, Mozambique, Myanmar, Nepal, New Caledonia, Nicaragua, Nigeria, Niue, North America, Oman, Pacific, Pakistan, Panama, Papua New Guinea, PNG, Peru, Philippines

Use

Ripe fruit are eaten raw. Unripe fruit is pickled.
Seeds can be eaten cooked. They are boiled or roasted. They are made into meal by powdering.
Young leaves can be eaten raw or cooked.
Amchur is made from the dried unripe fruit. This is used in curries, and pickles and chutneys.
The seed kernels are used for famine food in India. They are boiled, roasted or soaked to remove the bitterness.
Cautions: The sap from the trees of fruit may cause skin problems with some people.

Cultivation

Trees are grown by planting fresh seed and they can be transplanted. Mangoes vary in their ability to breed true from seed. When more than one seedling emerges from the seed some of these are asexual and breed true. Clean seed germinate best if they are treated at 50°C for 20 minutes, then planted on their edge with the round bulge upwards and near the soil surface. The husk around the seed should be removed. Seeds germinate in 3-6 weeks. The strongest growing seedlings from this seed are used and the others thrown away. The seedlings from the folds of the seed are vegetative while the seedling from the centre of the seedling near the stalk end may be sexual and show variation from type. Other seeds only produce one seedling and these normally vary and can be different from the parent tree. Plants can be propagated by budding, or by grafting using in-arching. This is not easy. Cuttings grow with care. In wetter places flowers need to be protected with fungicides to enable fruit to form. If organic manure is used this should not be directly in the planting hole nor immediately against the new plant.

Production

often bear better each second year. Rain at flowering reduces fruit setting. Fruiting is at the end of the year. Fruit take 4-5 months to mature. Fruit vary in weight from 200 to 1,000 g. Trees can produce one million flowers but only 500 fruit. Trees last for many years.

Nutritional Values

Mangifera indica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	83.0	253		0.5	1200	30	0.5	0.04
leaves	82.1	226	54	3.9		60	2.8	
seed								
gum								

Anacardiaceae

Common names

Wild mango, Upusuplia, Fo karuku, Koai, Susai, Abudar, Mogari, Asai, Rereke,

Scientific name

Mangifera minor

Edible portion

Fruit,

Description

A large tree often 10-15 m tall but can be up to 30 m tall. The trunk can be 30-120 cm across. It can have buttresses. It has a thick round crown of leaves. Leaves are more narrow than the cultivated mango. They are 10-22 cm long by 3-6 cm wide. The leaves are dark green and shiny on top but paler and smooth underneath. They are papery. The leaf stalk is 1-3 cm long. The flowers occur on the ends of branches in a much branched flower arrangement. These stalks are 30 cm long. The individual flowers are small. The flowers have a scent. Fruit are yellow green and flattened at the sides and with one large seed inside. They are smaller than mango. They can be 6-10 cm long by 4-7 cm wide. The fruit have stringy flesh. It is edible. The stone is very fibrous.

Distribution

A tropical plant. It occurs mainly in the lowlands and foothills below 750 m altitude but grows up to 1900 m altitude. It occurs as scattered individuals. It prefers damp, even wet ground. It is common near the foreshore. They grow in the humid tropics.

Found in:

Asia, Indonesia, Pacific, Papua New Guinea, PNG, Philippines, Solomon Islands, Timor,

Use

The fruit is peeled and eaten.

Cultivation

Trees grow from seed both as wild and cultivated plants.

Production

Nutritional Values

Mangifera minor

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

Cassava, Manioc, Tapioca,

Euphorbiaceae



Scientific name

Manihot esculenta

Edible portion

Root, Leaves, Vegetable,

Description

A plant which can re-grow year after year from the thickened roots. It has several stems. The stems are woody and have some branches. Plants grow up to 2 or 3 metres high. Stalks have distinct scars where leaves have fallen. The leaves tend to be near the ends of branches. The leaves are divided like the fingers on a hand. The leaves have long leaf stalks. The leaves have 3-7 long lobes which can be 20 cm long. These are widest about 1/3 of the distance from the tip and taper towards the base. The colour varies. It produces several long tubers. These can be 50 cm long by 10 cm across. The flowers are on short stalks around a central stalk. They are produced near the ends of branches. The female flowers are near the base of the flower stalk and the male flowers higher up.

Distribution

A tropical plant. Plants grow from sea level up to about 1650 m. In Fiji they grow to 900 m. They can grow in poor soil. They can survive drought. It is native to tropical America. It grows between 25°N and 25°S. It needs a rainfall above 750 mm. It suits hardiness zones 10-12.

Found in:

Africa, Andamans, Argentina, Asia, Australia, Bangladesh, Benin, Brazil, Brunei, Burkina Faso, Cambodia, Central Africa, Central African Republic, Central America, China, Congo, Costa Rica, Cuba, East Africa, Ecuador, Fiji, French Guiana, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Guyana, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Ivory Coast, Japan, Laos, Liberia, Madagascar, Malawi, Malaysia, Mali, Mexico, New Caledonia, Nicaragua, Pacific, Pakistan, Papua New Guinea, PNG, Paraguay, Peru, Philippines, Senegal, Sierra Leone, Singapore, Solomon Islands, Somalia, South Africa, Southern Africa, South America, Sri Lanka, Sudan, Suriname, Swaziland, Taiwan, Thailand, Timor, Togo, Tonga, Uganda, USA

Use

The tubers are eaten after thorough cooking. They are boiled, roasted or made into flour. The starch is used in puddings, soups and dumplings.
Young leaves are edible after cooking.
Seeds are also eaten.
CAUTION Bitter kinds of cassava contain poison but this is destroyed on heating. This kind of cassava should be cooked, sun dried, cooked and cooked again.

Cultivation

Cassava is planted from sections of the stalk. Sections about 15-20 cm long of the more mature woody stem are cut and stuck into the ground. They can be completely buried or put at almost any angle and it affects the growth little. Soon roots form and leaves start to sprout from the stalk. Cassava seeds need a soil temperature of 30°C for their germination. Flower and fruit production is more common under lower temperatures such as in highland or less equatorial conditions.

It is not necessary to dig a hole to plant cassava and on many soils where the soil is loose it can be planted without digging the soil first. Cassava does not suit waterlogged soils and preferably they should not be too shallow or stony.

Cassava can be planted at any time of the year but to get started it needs moisture so is often planted near the

Production

Plants can be harvested after 10 months in the lowlands. There are some faster growing varieties. Yields in the range of 20 -45 t/ha have been recorded for 12-14 month crops.

Nutritional Values

Manihot esculenta

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
tuber	62.8	625		1.4	30	15	0.23	0.48
leaves	82.0	382		7.1	57	275	7.6	

Common names

West Indian Arrowroot,

Marantaceae



Scientific name

Maranta arundinacea

Edible portion

Rhizome, Root, Vegetable,

Description

A perennial plant up to 2 m high with large fleshy underground rhizomes. The stem is erect. There are 4-8 leaves near the base. There are 1-8 leaves on the stem. It has large leaves on long stalks near the base. These stalks can be 3.5-20 cm long. The leaf blade is 12 cm long and the leaf stalk clasps the stem. Flowers are small and white. There can be several on each leafy shoot. They occur on the ends of branches. There are 1-2 bracts under each 2-3 flowers. The rhizomes can be 20 cm long and about 3 cm across. They are covered with fleshy scales. The fruit are capsules which are green and tinged red-brown. They are oval and 7-8 mm long by 4-5 mm wide. The seeds are brown.

Distribution

It is a tropical plant. It grows well in hot humid climates. A temperature of 20-30°C is best. Plants grow from the coast up to 900 m altitude in the tropics. It needs a rainfall of 1500 to 2000 mm yearly. It is cultivated in S China for starch. It needs deep, well drained and slightly acid soil. It suits plant hardiness zones 10-12. Bontoc

Found in:

Africa, Asia, Australia, Bangladesh, Barbados, Brazil, Cambodia, Caribbean, Central Africa, Central America, China, Congo, Costa Rica, Dominica, Ecuador, Fiji, French Guiana, Guatemala, Guyana, Hawaii, India, Indochina, Indonesia, Jamaica, Japan, Malaysia, Mexico, North America, Pacific, Papua New Guinea, Peru, PNG, Philippines, Puerto Rico, Sierra Leone, Singapore, Solomon Islands, South Africa, Southern Africa, South America, Sri Lanka, St Vincent, Suriname, Thailand, Timor, Tonga, USA, Vanuatu, Venezuela, Vietnam, West Africa, West Indies,

Use

The rhizomes are used in soups or sauces. They can be just scraped & boiled.
They can be used for making flour. It is an easily digested starchy flour. It is a good thickener in sauces.
CAUTION It is important to peel off the skin scales or they give a bitter taste to the starch.

Cultivation

Plants are grown from pieces of rhizome or occasionally suckers. A spacing of 1 m x 0.5 m is suitable or can be closer. 3,000 -3500 kg of planting material are required for one hectare. The pieces are planted 6-8 cm deep. It requires a fertile soil. Normally flowers are removed to allow as much storage as possible in the rhizomes.

Production

Rhizomes are ready for harvest after about 11 months. Successive crops are grown in the same site for 5-7 years. Yields of 12.5 t per hectare are average. These produce 8-16% starch.

Nutritional Values

Maranta arundinacea

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
root starch	12.2	1515	362	0.4	0	0	1.2	
root - raw	80.8	272		4.2	2	1.9	2.2	0.6

Chrysobalanaceae

Common names

Sea bean, Liusin



Scientific name

Maranthes corymbosa

Edible portion

Fruit,

Description

A large tree with greyish white thick and rigid branches. They are spreading and often drooping. It grows 8-15 m high and spreads 5-10 m wide. The young shoots have soft white hairs. The leaves are like paper and rounded and long and smooth. They are 7-15 cm long by 3-4 cm wide. There are 2 cup shaped glands on the upper surface near the leaf stalk. The flowers are crowded together on a stalk 10 cm long. The flowers are 1 cm across and cream. The fruit are oblong about 3 cm long and about 0.5 cm thick. They are reddish-purple to black.

Distribution

It is a tropical plant. It suits places with a seasonally dry climate. It needs well drained soil. It is sensitive to frost. It is widely distributed in lowland forest regions throughout the Philippines. It grows in nrothern Australia. In grows in monsoonal rainforests and coastal scrub.

Found in:

Asia, Australia, Indonesia, Malaysia, Micronesia, Pacific, Panama, Papua New Guinea, PNG, Philippines, Singapore, Solomon Islands, Thailand, Timor,

Use

The fruit are eaten raw.

Cultivation

Plants can be grown from fresh seed or cuttings.

Production

Nutritional Values

Maranthes corymbosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Asteraceae

Common names

Scientific name

Melanthera biflora

Edible portion

Spice,

Description

Distribution

A tropical plant.

Found in:

Africa, Asia, Australia, China, Cook Islands, East Africa, Fiji, India, Indonesia, Japan, Kenya, Malaysia, Micronesia, Mozambique, Samoa, Southern Africa, Sri Lanka, Taiwan, Tanzania, Thailand, Timor,

Use

Cultivation

Production

Nutritional Values

Melanthera biflora

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Meliaceae

Common names

Bead tree, Cape lily,



Scientific name

Melia azederach

Edible portion

Fruit (Poisonous), Gum, Leaves,

Description

A moderate sized tree. It grows 6-16 m high. It can spread 3-12 m wide. The trunk is round and the branches spread out widely. The bark is greyish-brown. The bark has long shallow cracks along the length. The leaves are alternate. They are twice divided and bright green. The leaflets are sword shaped and have teeth along the edge. They are 7-8 cm long by 2 cm wide. The leaf base has unequal sides. The flowers are lilac and have a honey scent. The occur in long open clusters in the axils of leaves. These are about 18-20 cm long. The fruit is fleshy and round. It is about 1-1.5 cm across. It is smooth and yellow. There are 4 tiny seeds in a very hard shell.

Distribution

A tropical plant. It is naturalised all over India and in many tropical countries. It can grow from tropical to temperate places. It needs well drained soil. It needs to grow in full sun. It can stand light frosts. It is very drought tolerant. In East Africa it grows from sea level to 2,000 m altitude. It grows in salty soils. In Melbourne Botanical Gardens. In the Cairns Botanical Gardens. It suits hardiness zones 8-12.

Found in:

Africa, Algeria, America, Angola, Arabia, Asia, Australia, Bahamas, Bermuda, Bhutan, Botswana, Brazil, Britain, Burma, Central America, China, Colombia, Congo, Cook Island, Costa Rica, Cuba, Cyprus, Dominican Republic, East Africa, Egypt, El Salvador, Ethiopia, Europe, Fiji, France, Gambia, Germany, Ghana, Greece, Guadeloupe, Guatemala, Guyana, Haiti, Hawaii, Himalayas, India, Indochina, Indonesia, Iran, Iraq, Israel, Italy, Ivory Coast, Jamaica, Japan, Kenya, Laos, Libya, Madagascar, Malawi, Malaysia, Martinique, Mediterranean, Mexico, Mozambique, Myanmar, Namibia, Nauru, Nepal, New Caledonia, Nigeria, Norfolk Island, Pacific, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, PNG, Portugal, Puerto

Use

CAUTION: The fruit are very poisonous. (Six can kill a person)
The berries are eaten.
They are also used for an alcoholic drink. Caution: Alcohol is a cause of cancer.
The young leaves are used in medicine and also recorded as eaten.
A kind of toddy is made by tapping the tree.
Many parts of the tree are dangerously parasitic

Cultivation

Plants are grown from seed. Seed need to be planted fresh. They can also be grown from cuttings. It can be cut back and will re-grow.

Production

It is a fast growing tree.

Nutritional Values

Melia azederach

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	81.9		67	1.3				

Sterculiaceae

Common names

Tampu, Singa, Chapak, Jubut, Lesnu, Senu, Wesnu, Tangkal bintenu, Endilau binchil, Sa dam, Methuri, Al-abada,



Scientific name

Melochia umbellata

Edible portion

Leaves,

Description

A small tree. The leaves are hairy. The flowers are pink.

Distribution

A tropical plant. It grows in hot places.

Found in:

Andamans, Asia, Australia, East Indies, India, Indochina, Malaysia, Mauritius, Timor, Vietnam,

Use

The leaves are mixed with coconut oil cake and maize bran and made into a fermented food.

Cultivation

Production

It grows very fast.

Nutritional Values

Melochia umbellata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Arecaceae

Common names

Sago, Saksak, Rembia, Rumbia, Sagu, Lumbia, Ambulung, Bulu, Bulung, Kersula, Kresula, Rajang bunkoan, Rembulung, Resula,



Scientific name

Metroxylon sagu

Edible portion

Starch, Cabbage, Palm heart, Grubs,

Description

A clumping palm. It can grow up to 10 to 70 m high with a fat trunk (50-75 cm across). A palm can have 18-24 leaves which are 5-7 m long. The leaflets can be up to 100 per leaf and 50-160 cm long by 3-6 cm wide. After about 15 years the palm produces a large flower on top, then the palm dies. The flowering stalk can be 5-7 m long. The palm has suckers near the base. Some kinds have fertile seeds about 2-3 cm across on the flower. There is a complete range from very long thorns to short or no thorns on the leaf bases.

Distribution

A tropical plant. A high water-table is tolerated or required by the plant. Temporary flooding does not appear to affect the crop but permanently flooded sites do not appear to be suitable. Because of the site requirements sago is almost always on locally level ground. The level ground can be a broad flat basin or flood plain or a local depression or stream edge in more dissected terrain. Sago seedlings are hardly harmed, by one rather saline flooding, per fortnight. Sago seedlings can probably withstand a salinity of EC = 10mmho/cm. The maximum altitude is about 1200 m but the optimum is between sea level and 800 m. Sago palms grow well in wet conditions. It can tolerate saline or brackish water. It grows better in well drained than in poorly drained conditions. It grows best with a temperature of about 25°C. It cannot tolerate temperatures below 17°C. It suits hardiness zones 11-12

Found in:

Asia, Australia, Burma, Cambodia, China, Guam, India, Indonesia, Malaysia, Myanmar, Pacific, Palau, Papua New Guinea, PNG, Philippines, Singapore, Solomon Islands, Thailand, Timor, Vietnam,

Use

The bud can be eaten cooked.
Sago starch can be processed from the pith.
The sap can be collected for a drink called “tuba” in the Philippines
Sago grubs are often cultivated and eaten.

Cultivation

Suckers or seedlings are planted in fresh water swamps or along creeks. Once stands are established in swamps, they continue to re-grow from suckers. Plants are thinned by removing some suckers. Some “seeds” will not grow but those that are fertile need to be planted as soon as they form because they loose their viability. Seeds germinate within 3 weeks.
To plant sago, the planting site near a creek or in a damp place, is first cleared of trees and rubbish. Then a sucker of a suitable variety is chosen from an old sago clump. Often the fronds of the sucker are up to 3 m high. It is first checked to see if the sucker is old enough. Suckers ready for planting have a tough woody connection to the base of the old palm. It is also checked to see that fresh roots are being produced from the base of the sucker. A suitable sucker probably has fronds 3-4 m long and is about 1.5 years old. This is chopped through with an axe. The sucker is then simply taken to a new site and planted in a shallow hole 30 cm x 30 cm x 30 cm. If several palms are being planted, they should be about 7 m apart. The

Production

Palms are ready to harvest after about 15 years. In swamps, about 10 to 60 trunks are ready per hectare each year. An average processing rate is 2.2 kg/hr of starch. A single trunk can yield up to 400 kg of sago.
First the sago palm is cut down. Mostly this is men's work. Then the bark is split off the trunk for about one metre along its length. Normally this bark is carefully laid out at the sides propped up by logs so that it both makes a seat for the person to sit on and a mat for the shredded pith of the trunk to fall onto. Sago in the trunk of the palm is all mixed up with the fibres of the plant. So this pith has to be shredded up into small pieces and the starch is then washed out. Special tools are made for pounding up the trunk. They need to be light, strong and with a hard stone (or metal) head. In areas where sago is the main

Nutritional Values

Metroxylon sagu

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
starch trunk	27	1197	286	0.2		0	0.7	
palm heart	91	179	43	1.8	0	2.0	0.2	0.5

Common names

Cave Fern,

Dennstaedtiaceae



Scientific name

Microlepia speluncae

Edible portion

Description

A large fern. It has creeping rhizomes. These are fleshy. It grows 0.7-2 m high. It forms spreading clumps. The fronds are erect and pale green. They are 0.7-2 m long and the stalks are 30-70 cm long. They are pale brown and hairy. The frond blade is 0.7-1.3 m long by 0.6-1 m wide and they are almost a triangle shape. They are divided 2-4 times. They are dull green. The sori or spore bodies are cup shaped.

Distribution

It is a tropical plant. It grows in sheltered spots in the rainforest. It suits hardiness zones 11-12.

Found in:

Africa, Asia, Australia, China, South Africa, Southern Africa, Swaziland, Timor, Worldwide, Zimbabwe,

Use

CAUTION: It is possibly poisonous.

Cultivation

Plants can be grown from spores or by division of the clump. Plants do not like to be disturbed. They are slow to establish after moving.

Production

Nutritional Values

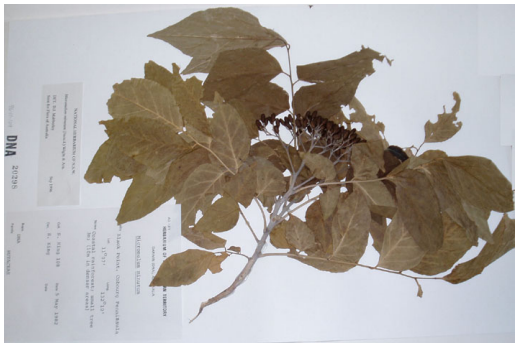
Microlepia speluncae

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Rutaceae

Common names

Hatsakhun, Lime berry, Chemama, Chememar, Cherek-cherek, Cherek puteh, Titimah, Mali-mali, Kayu saga, Jejawi, Talafalu,



Scientific name

Micromelum minutum

Edible portion

Leaves,

Description

A shrub or small tree. It grows 4-6 m high and spreads 2-4 m wide. The small branches have a dense hairy covering. The leaves are divided into leaflets with a leaflet at the end of the stalk. Leaves are 16-49 cm long. There are 7-15 leaflets. They are oblong and uneven at the base. The edges of the leaves are wavy or with rounded teeth. The leaflets are 2-12 cm long by 1.5-7 cm wide. There are a few hairs on the upper surface and densely hairy along the veins on the underneath surface. The flowers are on the ends of branches. They are 3-5 cm long. The flowers are woolly. The petals are 4 mm long and white. They have a bad smell. The fruit is a berry. It is oval and 6-8 mm long and red.

Distribution

A tropical plant. It grows in mixed deciduous or evergreen forests by streams. It needs good drainage. In Samoa it grows from sea level to 300 m altitude and to 900 m altitude in Fiji.

Found in:

Asia, Australia, Fiji, Indochina, Indonesia, Malaysia, Malesia, New Caledonia, Niue, Pacific, Papua New Guinea, PNG, Philippines, Samoa, Thailand, Timor, Tonga, Vanuatu,

Use

The young shoots and leaves are eaten uncooked or blanched.

Cultivation

Plants are grown from fresh seed.

Production

It is relatively slow growing.

Nutritional Values

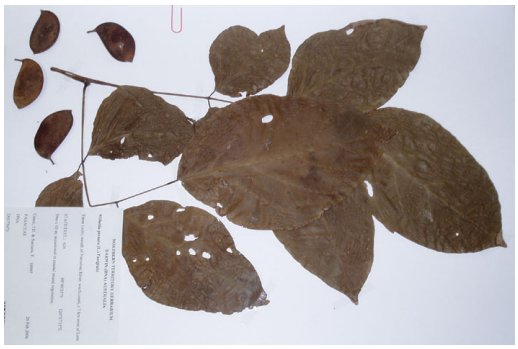
Micromelum minutum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Poona Oil Tree, Pongamia, Karum oil tree, Indian Beech, Karanja, Pongam, Malapari, Pari-pari, Kachang kayu laut, Jadar, Bangkong,



Scientific name

Millettia pinnata

Edible portion

Seeds,

Description

A tree up to 15-25 m high and 45 cm across the trunk. It loses its leaves during the year. The bark is soft and greyish green. It is smooth or covered with rounded swellings. The leaves are alternate and compound with 3 or more leaflets. There is a leaflet at the end. They are smooth and pointed at the tip. They are 7 to 10 cm long. The leaves have a bitter smell when squashed. The flowers are purplish and about 1.5 cm long in racemes. The pods are oval and with one seed. The pod tapers on both sides to sharp points. The seeds are kidney shaped.

Distribution

A tropical plant. It can grow on a wide range of well-drained soils. They are found along the coastal regions from northern Luzon to southern Mindanao in the Philippines. In Samoa it grows from sea level to 100 m altitude. In India it grows along the banks of streams. In the Cairns Botanical Gardens. It is salt tolerant. It suits hardiness zones 9-11.

Found in:

Andaman Islands, Asia, Australia, Bangladesh, Burma, Fiji, Hawaii, India, Indonesia, Malaysia, Myanmar, Nepal, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Samoa, Sri Lanka, Timor, USA,

Use

The seeds are edible cooked.
CAUTION: It is probably poisonous with a toxin which causes vomiting. The seeds have a bitter oil.

Cultivation

Plants are grown from seed.

Production

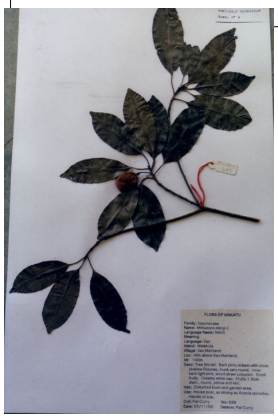
Plants are fast growing.

Nutritional Values

Millettia pinnata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Sapotaceae



Common names

Tanjong, Red Coondoo, Spanish cherry, Mamajen, Bakul, Mailsari, Maulsari, Malshree, Pikul, Moghadum, Poghada, Bunga tanjong, Pokok

Scientific name

Mimusops elengi

Edible portion

Fruit, Seeds - oil,

Description

A large tree. It grows 10-15 m high. It has a tall trunk. The crown is dense and umbrella shaped. It spreads to 5-15 m across. The bark is rough and hard and dark grey. The bark is cracked along its length or forms a checkered pattern. The leaves are produced alternately and are simple. They are smooth and crowded. They are oval and 5-14 cm long by 2.5-6 cm across. They are glossy and dark green on top and paler underneath. The midrib is easy to see. Leaves have a sharp pointed tip. The flowers are star-shaped and cream and hairy. They have a scent. The flowers are 0.5-1 cm long in clusters in the axils of the upper leaves. The fruit are softly hairy. They become smooth and are oval berries. They are 1.3-1.5 cm long by 1-1.2 cm wide. The outer ring of flowers form a spiky cup at the base of the fruit. The fruit are orange-red when ripe. They contain several orange red seeds. The seeds are wedge shaped.

Distribution

A tropical plant. It is native in Asia from India to the Pacific. Plants need well-drained soils. It grows naturally in coastal monsoon vine forests. It is often on sand dunes and cliffs near the beach. In tropical Australia it grows from sea level to 320 m altitude. It is drought resistant. Plants need a sunny position. Plants are damaged by frost. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Bangladesh, Burma, Fiji, Ghana, Hawaii, India*, Indochina, Indonesia, Malaysia*, Mauritius, Mozambique, Myanmar, New Caledonia, North America, Pacific, Pakistan, Panama, Papua New Guinea, PNG, Philippines, Reunion, Southern Africa, Sri Lanka, Tanzania, Thailand, Timor, USA, Vanuatu, Vietnam,

Use

Ripe fruit are eaten raw. They can be used in preserves or pickles.
The kernels yield a fatty oil which can be used for edible purposes. It is used in cooking.
The bark is used in the distillation of *arrack.*

Cultivation

Plants can be grown from seed. The seed should be sown fresh. They germinate in 6-14 days. They can be transplanted when the first true leaf appears. They can stand pruning.

Production

Plants are slow growing. In Australia, plants flower in November to January and fruit from April to June.

Nutritional Values

Mimusops elengi

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	46.6	825		2.9		223		

Poaceae

Common names

Ngula, Keltje,

Scientific name

Mnesithea rottboellioides

Edible portion

Stems, Rhizomes,

Description

A tufted grass. It has underground stems or rhizomes. It keeps growing from year to year. It grows 1-3.5 m high. The flowers are green.

Distribution

A tropical plant. It grows near the sea. It grows on sands, creeks, swamps and around sandstone boulders.

Found in:

Asia, Australia, Timor,

Use

The stems are chewed for the sweet sap.
The rhizomes are eaten.

Cultivation

Production

Nutritional Values

Mnesithea rottboellioides

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Molluginaceae

Common names

Tapak burong, Rumput burong, Rumput belangkas, Bunga karang, Soi nok kao, Ya nok kao, Khet-papara, Julpapra, Jharasa, Verrichatarasi,



Scientific name

Mollugo pentaphylla

Edible portion

Leaves,

Description

A small annual herb. It lies along the ground or curves upwards. It is 10-20 cm high. The stems are 4 angled and branch from near the base. The leaves are wedge shaped and thick and fleshy. They can be arranged alternately, oppositely or in rings or whorls. The lower leaves have stalks while the upper leaves do not have stalks. The flowers are small but in large arrangements. These develop in the axils of leaves. The fruit is a capsule which splits open.

Distribution

A tropical plant. It grows in open sandy places. In Papua New Guinea it grows from sea level to 1,000 m altitude. It grows up to 2,300 m in the Himalayas.

Found in:

Africa, Asia*, Australia, Cameroon, China, Fiji, Himalayas, India, Indochina, Indonesia, Japan, Malaysia, Nepal, Pacific, Pakistan, Papua New Guinea, PNG, New Caledonia, SE Asia, Sri Lanka, Taiwan, Thailand, Timor, Vietnam, West Africa,

Use

It is eaten as a pot herb.

Cultivation

Production

Nutritional Values

Mollugo pentaphylla

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Cucurbitaceae

Common names

Bitter cucumber,



Scientific name

Momordica charantia

Edible portion

Fruit, Leaves, Spice, Vegetable,

Description

A pumpkin family plant. It is a slender annual climber with flowers of both sexes on the one plant. It has simple tendrils and vines can be 4 m long. It has bright green lobed leaves. The leaves are 5 to 12 cm long on thin leaf stalks 3-10 cm long. The flowers have 5 petals, are small, yellow and with a sweet smell. Fruit are green when young and orange when ripe. The fruit have a lumpy appearance, with ridges along its length and when fully ripe burst open. It has bright red covering on the seeds inside. The seeds are 10-16 mm long and 7 to 10 mm wide and pale brown. Considerable variation in the fruit occurs between varieties.

Distribution

A tropical plant. It grows from sea level up to about 500 m and will probably grow to 1000 m altitude in tropical regions. They require a well drained soil preferably rich in organic matter. Seeds do not germinate below 15°C. Plants grow best with temperatures between 18°C and 35°C. In Nepal it grows to about 2100 m altitude. A soil pH of 6.5 is best. It suits hardiness zones 9-12.

Found in:

Africa, Angola, Asia, Australia, Bangladesh, Benin, Brazil, Burkina Faso, Burundi, Cambodia, Cameroon, Central Africa, Central America, Chad, China, Congo, Costa Rica, Cote D'Ivoire, Cuba, East Africa, El Salvador, Ethiopia, Fiji, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Ivory Coast, Kenya, Liberia, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mauritius, Mozambique, Namibia, Nepal, Nicaragua, Nigeria, Pacific, Pakistan, Panama, Papua New Guinea, PNG, Philippines, Reunion, Rwanda, Senegal, Seychelles, Sierra Leone, Singapore, Solomon Islands, Southern Africa, South America, Sri Lanka, Sudan, Taiwan, Tanzania, Thailand, Timor, Togo, Tonga

Use

The young bitter fruit are cooked and eaten. They are boiled, stuffed, fried or pickled. They are used in soups, stews and stir-fried dishes.
The seed mass of the ripe fruit is used as a food flavouring.
The leaves are also cooked and eaten as a flavouring.
The tender shoots and leaves are sometimes eaten.
CAUTION The leaves are considered to cause diarrhoea and vomiting

Cultivation

Plants are grown from seed. For large scale plantings, 6-7 kg of seed are required for planting one hectare. Seeds are planted at 50 cm spacing in the place where the plants are to grow and need a stick to climb up. The seeds are put at 2 cm depth. Often plants are grown on raised beds 2 m apart with 0.5 m between plants. The seed has a hard seed coat and germinates slowly. Soaking seeds for 24 hours before sowing gives a quicker more even germination. Regular watering is required.

Production

Fruit are ready to harvest 45-55 days after planting. Fruit should be harvested when young and tender. Once fruit have begun to change colour to yellow they are past maturity for eating. Early removal of young fruit also ensures continuous fruit setting. This can allow 6-8 successive pickings of fruit. Fruit on the plant are sometimes wrapped in paper to prevent fruit fly damage. Seed well stored can remain viable for 4-5 years. The young bitter fruit are cooked and eaten. The fruit is blanched or soaked in salt water to reduce the bitter taste.

Nutritional Values

Momordica charantia

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed	8.6	2020	483	18.6				
leaves raw	84.7	252	60	5.0	44	170	7.1	0.3
leafy tips-boiled	88.7	146		3.6	173	57	1.0	0.3
fruit	93.6	105		1.2			0.2	
pods-boiled	94.0	79		0.8	11	33	0.40	0.8
pods raw	94.0	71	17	1.0	380	84	0.4	0.8

Common names

Indian mulberry, Noni,

Rubiaceae



Scientific name

Morinda citrifolia

Edible portion

Fruit, Leaves,

Description

A small evergreen tree. It grows 4-10 m tall and spreads 2-6 m wide. The branches are thick and somewhat 4 angled. It has large oval leaves which grow opposite each other along a four sided shiny branch. The leaves have a small leaf like appendage at the base of the leaf stem which is fused into a type of sheath. The leaves are 12.5-31 cm long by 6.2-15 cm wide. The stalks are 0.6-2.5 cm long. The flowers are numerous. They are 1.5 cm across. They grow in clusters in the axils of leaves. The fruit are rounded and small each with two 1-seeded nutlet. The fruit are yellowish white when mature, with warty looking lumps. They are about 6 cm across. The fruit is a little like soursop and has an unpleasant smell when ripe.

Distribution

A tropical plant. They are common along the seashores throughout the Philippines. The trees grow wild in coastal areas and are also planted. They suit dry areas because of high drought tolerance. It is part of the coastal vegetation behind the beach. They can grow on sand and have salt tolerance. Seeds can float easily in salt water. Trees can grow up to about 1500 m altitude in the tropics. They are usually in areas with temperatures between 20-35°C and rainfall of 250-4000 mm per year. Trees cannot stand frost. They can grow in a very wide range of soils. It grows 19° N and S of the equator.

Found in:

Asia, Australia*, Bahamas, Bangladesh, Brazil, Burma, Cambodia, Central America, China, Cook Islands, Costa Rica, Fiji, Futuna, Guam, Haiti, Hawaii, India, Indochina, Indonesia, Kiribati, Kosrae, Madagascar, Malaysia*, Mexico, Myanmar, Nepal, North America, Pacific, Pakistan, Palau, Panama, Papua New Guinea, PNG, Philippines, Samoa, Solomon Islands, South America, Sri Lanka, Suriname, Tahiti, Taiwan, Thailand, Timor, Tokelau, Tonga, USA, Vanuatu, Venezuela, Vietnam, West Indies, Yap,

Use

The young leaves are cooked as a vegetable or pot herb. They are also blanched and eaten raw.
The fruit can be eaten raw or cooked. It is often eaten with salt. Green fruit are curried.
The ripe fruit are made into a drink with sugar and syrup. It is also used in marinades, sauces and dressings.
The seeds are some forms are roasted and eaten.
(Red, yellow and brown non edible dyes are obtained from the root.)

Cultivation

Trees are grown from seeds. Seeds remain viable for at least 6 months. Seeds are planted in a nursery. They germinate in 3 -9 weeks after sowing. Within 6 months trees grow to 1.5 m. Flowering and fruiting start in the third year. Trees last for up to 25 years. Trees can be grown from cuttings.

Production

They have a moderate growth rate. They can grow 0.75-1.5 m per year. Yields of 80,000 kg of fruit per hectare per year are possible.

Nutritional Values

Morinda citrifolia

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	82.0	232	56	2.7	31	44	1.4	1.4
fruit	86.1	160		0.8		56	1.1	

Moringaceae

Common names

Horseradish tree, Drumstick Tree, Moringa,



Scientific name

Moringa oleifera

Edible portion

Leaves, Flowers, Fruit, Seeds, Roots, Bark, Pods,

Description

A small tree up to 9-12 m high. The trunk is 60 cm across. The wood is soft. It has feather-like divided leaves. The tree loses its leaves during the year. The bark is grey and thick. It is corky and peels off in patches. The leaves are pale green and the leaf is divided 3 times. The whole leaf is 30-60 cm long and the leaflets are usually oval and 1-2 cm long. The leaflets are jointed with a gland near the joint. The flowers are pale yellow and contain both sexes. They occur in long sprays 30 cm long. Each flower has 5 petals and of these one is erect and 4 are bent backwards. The flowers are sweet scented. The fruit is a long capsule 30-100 cm long by 2 cm wide. The seed capsules are up to 45 cm long. They are roughly triangular in shape. They split open when dry. There are 9 dark brown seeds inside. The seeds have 3 wings. Some kinds are better for edible fruit than others, while some are selected for leaves. Often the fruiting kinds are grown as annual plants.

Distribution

A tropical and subtropical plant. They suit the dry lowland areas and grow up to 1,350 m altitude in the tropics. It grows in the Sahel. In Nepal it grows up to 1100 m altitude. They are not hardy to frost. They cannot tolerate water-logging. A pH of 6-7.5 is suitable. It suits hardiness zones 9-12.

Found in:

Afghanistan, Africa, Andamans, Angola, Antigua-Barbuda, Asia, Australia, Bahamas, Bangladesh, Belize, Benin, Bermuda, Bhutan, Botswana, Brazil, Burkina Faso, Burma, Burundi, Cambodia, Cameroon, Caribbean, Central Africa, Central African Republic, Central America, Chad, China, Colombia, Comoros, Congo, Costa Rica, Cuba, East Africa, Egypt, Eritrea, Ethiopia, Fiji, French Guiana, Gabon, Gambia, Ghana, Guam, Guatemala, Guinea, Guinea Bissau, Guyana, Haiti, Honduras, India, Indochina, Indonesia, Israel, Ivory Coast, Jamaica, Japan, Kenya, Liberia, Madagascar, Malawi, Malaysia, Maldives, Mali, Mauritania, Mauritius, Mexico, Mozambique, Myanmar, Namibia, Nepal, Nicaragua, Niger, Nigeria, Pacific, Pakistan, Papua

Use

The young tops and leaves are eaten cooked. They are eaten as potherbs or used in soups and curries.
The very young long pods are eaten cooked, especially in curries and soup. They are also pickled.
The young seeds are eaten roasted or fried.
Sometimes the roots are used as a horseradish substitute. A gum from the bark is used as seasoning. The bark is used for tea. The roots, leaves, flowers and fruits are eaten cooked in water and mixed with salt and chili peppers. The oil expressed

Cultivation

It is best to grow plants from 1 metre long cuttings but they can be grown from seed. They can be used as a hedge and pruned regularly to produce more leaves. Properly dried seed can be stored for a long time in sealed containers in a cool place. Normally perennial types are grown from cuttings and annual types are grown from seed.

Production

Trees are fast growing. They can be pruned or topped. With one variety the tree flowers and fruits continuously while with the other variety there are flowers and fruit once per year. The fruit ripens 3 months after flowering. Annual types produce fruit 6 months after planting.

Nutritional Values

Moringa oleifera

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	76.4	302		5.0	197	165	3.6	
flowers	84.2	205	49	3.3			5.2	
leaves boiled	87	189	45	4.7	883	31.0	2.0	0.2
pods - raw	88.2	155		2.1	7	141	0.4	0.5
seed	6.5			46.6				

Moraceae

Common names

Mulberry, White mulberry,



Scientific name

Morus alba

Edible portion

Leaves, Fruit, Flowers, Bark, Leaves - tea, Manna,

Description

A small tree up to 9 m high but it can grow to 20 m tall. Often it is low and spreading. It has dark green toothed leaves. The leaves vary considerably in shape even on the one tree. They can be oval, heart shaped or 3 lobed and 5-15 cm long. The tip is pointed and the leaf is on a stalk 5 cm long. The upper surface is smooth but there can be some hairs on the veins underneath. Male and female flowers occur separately either on the same or separate plants. The flowers are greenish and in spikes which droop down. The fruit is a dark red or black berry but pale kinds also occur. The fruit is about 2 cm long.

Distribution

It is native to N. China. A warm temperate plant. The white mulberry (*Morus alba*) is normally used for silk worms and the black mulberry suits more highland regions. The normal range is 700 to 2200 m altitude in the tropics. In India it grows to 3,300 m altitude. Once established it can tolerate heat and drought. Hobart Botanical Gardens. It is winter hardy and can tolerate salt. It suits hardiness zones 4-10. Arboretum Tasmania.

Found in:

Afghanistan, Africa, Albania, Armenia, Asia, Australia, Azerbaijan, Balkans, Belarus, Bosnia, Brazil, Britain, Bulgaria, Canada, Cambodia, Cameroon, Central Africa, China, Colombia, Congo, Cuba, East Africa, Egypt, Ethiopia, Europe, France, Georgia, Greece, Guatemala, Haiti, Hawaii, Himalayas, India, Indochina, Indonesia, Iran, Iraq, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kyrgystan, Lebanon, Madagascar, Malawi, Malaysia, Maldives, Manchuria, Mauritania, Mauritius, Mediterranean, Mexico, Nepal, North America, Oman, Pacific, Pakistan, Papua New Guinea, PNG, Paraguay, Peru, Philippines, Reunion, Romania, Rwanda, Senegal, Sikkim, Solomon Islands, South Africa, Southern Africa, South America, Swaziland, Switzerland

Use

The fruit is eaten raw or used in juice, stews and tarts. The fruit can be dried and stored. The fruit can be processed for vinegar or wine.
The leaves are edible. They can be put in stews. The leaves can be used for tea.
(Leaves are also used for silk worms.)
The bark can be roasted and ground into a flour. The tree also yields an edible manna.
NOTE - The stain from the fruit can be very troublesome with some varieties of fruit.

Cultivation

Plants can be grown from seed but seed are slow to germinate. If seed are used they should be soaked in cold water for 48 hours. Trees from seeds take a long time to bear. It is better to grow trees from cuttings. Trees can also be grown by grafting. Because trees "bleed" it is best not to do too much pruning but trees can be topped or trained.

Production

Cuttings produce fruit in 3 years while it takes 5-8 years for seedling trees. Fruit is produced seasonally. The fruit season is normally September to December in the southern hemisphere.

Nutritional Values

Morus alba

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	80.2	152		1.3	Tr	10	0.5	0.1

Fabaceae



Common names

Velvet bean,

Scientific name

Mucuna pruriens var utilis

Edible portion

Leaves, Pods, Seeds,

Description

A climbing bean with vines 2-3 m long. The stems are slender and twining. The leaves have 3 leaflets. Leaves are hairy when young but without hairs when older. Leaflets are about 10-18 cm long x 8-15 cm wide. Leaves are dark green above and paler underneath. Flowers are purplish. Pods are 9-14 cm long, hard, curved and covered with soft hairs. There are 4-6 white seeds inside.

Distribution

A tropical plant. A bean of low altitudes. The wild species is used as a cover crop in coconut plantations. It needs a sunny pocation.

Found in:

Africa, Australia, Barbados, Central Africa, Congo, East Africa, Fiji, Guadeloupe, Haiti, Hawaii, Japan, Kenya, Malawi, Mozambique, Pacific, Papua New Guinea, Philippines, PNG, Reunion, Solomon Islands, Sri Lanka, Taiwan, Tanzania, Timor, Uganda, Zambia, Zimbabwe,

Use

The young leaves, young pods and ripe seeds are edible cooked.
The beans are cooked and the water discarded and this is repeated until the beans are not bitter. This probably removes cyanide.

Cultivation

Plants are grown from seed. They can also be grown from cuttings.

Production

Nutritional Values

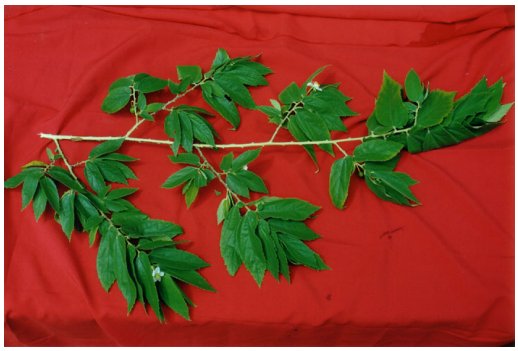
Mucuna pruriens var utilis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Muntingiaceae

Common names

Panama berry,



Scientific name

Muntingia calabura

Edible portion

Fruit, Leaves - tea,

Description

A small tree up to 5-12 m high. The trunk is 15-20 cm across. Branches are wide spreading and almost horizontal. The young shoots are covered with hairs. The leaves are alternate and elliptical. They are 4-5 cm long and 3-4 cm wide. The leaves are unequal at the base. The leaves have teeth along the edge. The leaf is dark green on top and dull below. The flowers are small and white or cream. They occur as one or two in the axils of leaves. The fruit stalk is 1.5 cm long. The fruit are small red berries 1-2 cm across. They have many tiny seeds. The fruit are edible.

Distribution

A tropical plant. It is native to the West Indies and South America. They suit sandy coral soils of low islands. They grow from sea level up to about 1000 m altitude in the tropics. They need a warm, sunny, sheltered position. It suits hardiness zones 10 -12.

Found in:

Asia, Australia, Belize, Bolivia, Brazil, Cambodia, Central America, Colombia*, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Fiji, Guatemala, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Jamaica, Laos, Malaysia, Maldives, Mexico*, Nicaragua, Pacific, Panama, Papua New Guinea, PNG, Peru, Philippines, Puerto Rico, Solomon Islands, South America, Sri Lanka, Tahiti, Thailand, Timor, USA, Vanuatu, Venezuela, Vietnam, West Indies,

Use

The berries are eaten raw. They can be used for jam. They can be used for pies and tarts or added to cereals.
The leaves can be used for tea.

Cultivation

Trees can be grown from seed. They can also be grown from cuttings of half ripe wood. Seed germinate more readily if they have passed through bats. This means the plant often spreads naturally. Seedlings do not tolerate shade.

Production

Trees grow fairly quickly. Fruit is produced in the second year. Trees flower and produce fruit all year round. Fruit ripen in 6 -8 weeks.

Nutritional Values

Muntingia calabura

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	76.3	380		2.1	15	90		

Musaceae

Common names

Banana,



Scientific name

Musa sp (A &/or B genome) cv.

Edible portion

Fruit, Flowers, Vegetable,

Description

These are the main group of cultivated bananas. They can be classed into diploid, triploid and tetraploid kinds with various amounts of the A or B parents. They grow 2-9 m high. They are large non woody herbs with broad long leaves. Most kinds have several suckers. Bananas grow a soft firm false stem from an underground corm. The fruiting stalk eventually emerges from the top of this false stem and normally curves over pointing towards the ground. Fruit occur in clumps or hands along this stem. The male flowers are in a red bud at the end of the flower stalk. The colour of the stem, bracts, bud and fruit varies considerably depending on the variety. The fruit can be 6-35 cm long depending on variety. They can also be 2.5-6 cm across.

Distribution

A tropical and subtropical plant. They grow from sea level up to about 2000 m altitude in the tropics. They are rarely an important food above about 1600 m. In Nepal they grow to about 1800 m altitude. They do best in warm and humid tropical climates. Temperatures need to be above 15°C. The best temperature is 27°C. The maximum temperature is 38°C. Bananas grow best in full sun. For best growth, a rainfall of 200-220 mm per month is needed. A deep friable soil is best. They can tolerate a pH between 4.5-7.5. It suits hardiness zones 10-12.

Found in:

Africa, Amazon, Angola, Asia, Australia, Bangladesh, Belize, Brazil, Brunei, Burma, Burundi, Cambodia, Cameroon, Cape Verde, Central Africa, Central America, China, Colombia, Congo, Cook Islands, Costa Rica, Cuba, Dominica, East Africa, Ecuador, Equatorial French Ethiopia, Guiana, Guam, Guinea, Fiji, Ghana, Grenada, Guadeloupe, Guatemala, Guinea, Guyana, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Ivory Coast, Jamaica, Kiribati, Laos, Libya, Madagascar, Malawi, Malaysia, Martinique, Mexico, Myanmar, Nepal, New Caledonia, New Zealand, Nicaragua, Nigeria, North America, Pacific, Pakistan, Panama, Papua New Guinea, PNG, Peru, Philippines, Rwanda, Samoa, Singapore, Solomon Islands, South

Use

Fruit are eaten raw or cooked depending on variety.
Male buds and flowers are eaten on some varieties. They are cooked as a vegetable.
The central pith of the false stem and the underground rhizome are also sometimes eaten.

Cultivation

They are planted from sword suckers. Diploids need re-planting annually but many triploids can be re-suckered from the base on the same site. Spacing depends on variety. A spacing of 1000-3000 plants per hectare is used depending on variety. Suckers are usually put 30 cm deep.

Production

Time to maturity varies from 6 to 18 months depending on variety and altitude. Triploids have larger bunches than diploids. Tetraploids are very large plants.

Nutritional Values

Musa sp (A &/or B genome) cv.

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit - cooking	65.3	510	110	2.0	113	18.4	0.6	0.1
fruit - sweet	70.7	337		1.1	200	10	0.4	0.2
flower buds	91.3	109	26	1.6			1.0	

Rubiaceae



Common names

Leichhardt tree, Canary Cheesewood, Gempol, Kanluang,

Scientific name

Nauclea orientalis

Edible portion

Fruit, Leaves,

Description

A medium sized evergreen tree. It grows to 10-25 m high and spreads to 3-12 m wide. The stem is erect and branching. The branches are almost horizontal. The bark is brown and flaky with cracks along it. The leaves are produced opposite one another. They are oval and taper to a point. The tip is blunt. The base is rounded. They are 15-38 cm long by 20 cm across. There are 12 pairs of side veins which curve along the edge of the leaf. They have large leafy stipules at the base of the leaf stalk. The flowers are slender and like tubes. The flower clusters are produced at the ends of branches. The fruit are fused into round masses. They are 2-4 cm across. They are fleshy. The seeds are very small.

Distribution

A tropical plant. It grows in warm temperate regions. It can grow in the tropics and subtropics. It does best in well-composted, well-drained soil. It needs an open sunny position. It is damaged by drought and frost. It can stand light frost. It is often along the edges of streams and swamps. It can tolerate occasional flooding. It suits hardiness zones 9-12.

Found in:

Asia, Australia, Fiji, India, Indonesia, Malaysia, Pacific, Papua New Guinea, PNG, Philippines, Timor,

Use

The fruit are eaten. They are bitter. They have a strong smell and bitter, soft pulp.
The young leaves are steamed and eaten with rice.

Cultivation

Plants are grown from seed.

Production

It is fast growing.

Nutritional Values

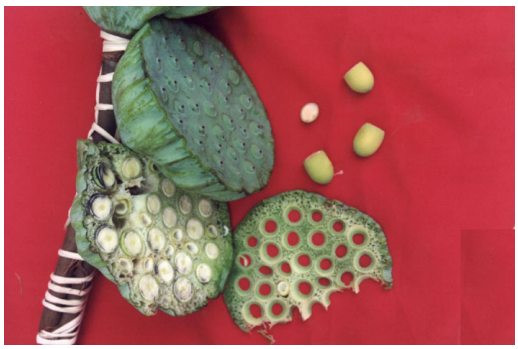
Nauclea orientalis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	77.3			0.8		11	0.6	0.7

Nelumbonaceae

Common names

Lotus root, Indian lotus, Kamal, Kanwal, Lian, Bunga telpok, Teratai, Lin, Sacred Lotus lily, Chhouk, Bua-sai, Ngau, Kamal-kakri, Renkon,



Scientific name

Nelumbo nucifera

Edible portion

Seeds, Tuber, Leaves, Stamens, Rhizomes, Seeds -

Description

A herb which grows in water and continues growing for several years. The rootstock is under water and creeping. The leaf stalk grows 1-2 m high. The leaves can be 20-90 cm across. It has large round leaves which stand out of the water. The stalk joins to the centre of the leaf. It has large attractive pink, red or white flowers which stand out of the water on long stalks. Flowers are pink or white and 15 to 25 cm across. The flower stalk can be longer than the leaf stalk. The mature fruit is a spongy cone shaped structure with several seeds about 1 cm across under the holes in the top. These fruit can be 7-15 cm long. The edible rhizome is submerge in mud.

Distribution

It is a tropical plant but will grow in cooler places. It needs 20-30°C. It needs full sunshine. It can grow in deep water. It does best in fresh water. The pH can range from 5.6-7.5. It suits hardiness zones 9-12. It is common in some parts of the Philippines such as Laguna de bay. It is also reported from Camarines, Mindoro, Cotabato and Davao. It will probably grow up to about 1000 m altitude. It occurs in the Fly and Sepik River areas in Papua New Guinea. It is cultivated in most of China except the very northern areas. It suits hardiness zones 9-12.

Found in:

Africa, Asia, Australia, Azerbaijan, Bangladesh, Bhutan, Burma, Cambodia, China, Egypt, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Iran, Japan, Kenya, Korea, Madagascar, Malaysia, Myanmar, Nepal, North America, Pacific, Pakistan, Palau, Papua New Guinea, PNG, Philippines, Russia, South America, Sri Lanka, Taiwan, Thailand, Timor, USA, Vietnam,

Use

The seeds are eaten raw or roasted. Ripe seeds are prepared by removing the seedcoat and the intensely bitter plumule and then boiled in syrup. Slightly unripe seeds are also eaten raw. The seeds can be used as a coffee substitute.
The white roots or rhizomes are eaten raw with meat. They can also be boiled, pickled, stir-fried or preserved in sugar. It is also the source of starch.
The flower stalks are cooked as a vegetable. They are also eaten raw. The young tender leaves are eaten with a savoury

Cultivation

It can be grown from sections of the root or from seed. Seed germinate between 25-30°C. The hard seed coat needs to be cracked to enable seed to grow. Seed will remain viable for many years. Plants grown from seed vary as seed do not breed true. It needs to be in water at least 30-50 cm deep. Rhizomes with 2-3 segments are used. They are put in the mud at a 30° angle.

Production

Plants grow quickly. Rhizomes are harvested all year round and contain an abundance of starch. Plants grown from seed take 2 years to produce. Plants grown from cuttings can produce the same year.

Nutritional Values

Nelumbo nucifera

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed	38.8	545		8.8	2	3	8.0	0.2
root boiled	81.4	276		1.6	0	27.4	0.9	0.3

Common names

Rambutan,

Sapindaceae



Scientific name

Nephelium lappaceum

Edible portion

Fruit, Seeds,

Description

A medium sized tree up to 12-25 m high. It keeps its leaves throughout the year. Trees spread to 6 m wide. The leaves are alternate with leaflets opposite along the stalk. There are 5-7 pairs of leaflets. Each leaflet can be 20 cm long by 8 cm wide. The leaflet stalks are short and the leaflets are pointed at the tip and rounded at the base. The flowers are very numerous on compound flower arrangements. Seedling trees can produce only female or only male trees. Some kinds have both male and female flowers or both flower parts in the one flower. The fruit are dark red with many prominent projections united at the base. The colour can vary between yellow, green, orange and bright red. Sometimes trees are separately male and female and sometimes seedless fruit is set. Often male and female flowers are separate but on the same tree. The fruit hang in loose clusters of 10-12 and are up to 5 cm long. Normally each fruit contains one large seed. There are several named cultivated varieties.

Distribution

A tropical plant. It suits the humid tropics. It is native to Malaysia. It requires a moist hot climate mostly within 12° of the equator. They extend from sea level up to altitudes of about 500 m in equatorial zones and will grow about 17° from the equator. They do best where the temperature is constant around 28°C or range from 22-30°C and rainfall of 2000 to 5000 mm per year. Low humidity can cause scorching of leaves. Excessive rainfall before flower formation reduces flowering. A dry period of about one month assists flower initiation and areas with two seasonal dry periods can get double crops. A well drained soil is needed. It suits hardiness zones 11-12.

Found in:

Africa, Asia, Australia, Brazil, Burma, Cambodia, Cameroon, Central Africa, Central America, China, Congo, Costa Rica, Ghana, Hawaii, India, Indochina, Indonesia, Laos, Madagascar, Malaysia, Myamar, Pacific, Papua New Guinea, PNG, Philippines, Solomon Islands, South America, Sri Lanka, Tanzania, Thailand, Timor, USA, Vietnam, West Africa,

Use

The fruit are eaten fresh. More sour fruit are eaten stewed.
The seeds are sometimes roasted and eaten.
The seed can be used for oil.

Cultivation

Trees can be grown from fresh seeds. The seeds are short lived so need to be planted fresh, after washing. Germination takes place in 7-10 days. Seedlings are not easy to transplant. Roots are very sensitive to drying out. Selected trees can be propagated by budding or air-layering. Seedling trees vary considerably in quality due to cross pollination. Trees are planted 10 m apart. Planting densities of 80-120 trees per hectare occur. About 1% male flowers are sufficient if enough pollinating insects are present. Some kinds need to have varieties mixed in the garden to get good fruit set. Twice yearly applications of organic manure are often used.

Production

Seedling trees can start to bear after 6 years and vegetative trees after 4 years. Fruiting is seasonal. Flowering occurs during the dry season. The main fruit season is November to March. Fruit mature about 110 days after flowering. Where trees with only female flowers occur, male pollinator trees are needed. Fruit can weigh 20 to 40 g each. Fruit need to be harvested when ripe. A well maintained tree can produce 150 kg of fruit.

Nutritional Values

Nephelium lappaceum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit - raw	82.0	271	64	1.0	0	53	1.9	0.1

Menyanthaceae

Common names

Water snowflake, Floating heart,

Scientific name

Nymphoides indica

Edible portion

Rhizome, Flowers,

Description

A herb which grows in water. It keeps growing from year to year. The roots are attached to the mud. The rhizomes are horizontal. The stem is like a cylinder and unbranched. It grows 1-2 m tall. The leaf stalk is like a cylinder. The leaf blade is 3 -18 cm across. The leaf floats on the water. The leaf is round but with a heart shaped base. There are many flowers which are clustered at the nodes. The flowers are 1-2.5 cm across. They are white but can have a yellow base. The seeds are brown, round and 1-1.5 mm across. The seed coat is smooth. The capsules are oval and with few seeds. The capsules are 3 -5 mm across.

Distribution

A tropical plant. It suits tropical and subtropical locations. It grows in water 2 m deep. It occurs in standing water below 100 -1600 m. in China. Plants are damaged by frost. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Burma, Cambodia, Fiji, Haiti, India, Indochina, Indonesia, Japan, Korea, Malaysia, Myanmar, Nepal, North America, Pacific Islands, Sierra Leone, Singapore, South Africa, Southern Africa, South America, Sri Lanka, Swaziland, Taiwan, Timor, USA, Vietnam, West Indies*, Zambia,

Use

The flowers are eaten raw with fish sauces.
The stalks and flower stalks can be eaten cooked.
The fruit are eaten boiled or used in curries.

Cultivation

Plants can be grown by seed or by division of the runners.

Production

Nutritional Values

Nymphoides indica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Apocynaceae

Common names

Fao, Ginlin,

Scientific name

Ochrosia oppositifolia

Edible portion

Seeds,

Description

A small tree. It grows 8 m high. The leaves are thick and pointed at the base and abruptly pointed at the tip. They are glossy and dark green and usually opposite. The flowers are small and white. They are in attractive crowded cymes. The fruit occur in pairs. They are oval and 8 cm long. They have a thin layer of flesh.

Distribution

A tropical plant. It grows in coastal woodlands. In the Philippines they are found only in Mindanao and Basilan. It occurs in forest along the sea shore. It can grow in salty, sandy and alkaline soils.

Found in:

Asia, Cook Is., Hawaii, India, Malaysia, Pacific, Philippines, Singapore, Timor, Tonga, USA, Vanuatu,

Use

The seed kernels are eaten raw or cooked.
CAUTION: The fruit is poisonous.

Cultivation

Plants are grown from seed.

Production

Nutritional Values

Ochrosia oppositifolia

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Lamiaceae

Common names

Sweet basil,



Scientific name

Ocimum basilicum

Edible portion

Leaves, Seeds, Flower, Herb, Spice, Vegetable,

Description

An erect branched woody shrub. The branches are without hairs and smooth. The leaves are without hair and oblong with a more narrow tip and blunt base. The base of the stems is tinged red. The leaf stalk is 1.5 cm long. The leaf blade is 2.5-5 cm long by 1-2.5 cm wide. The flowers are somewhat purplish with very short stalks. The small nuts are oval and slightly flattened. They are smooth. Plants vary a lot and several varieties have been selected. They can have licorice, cinnamon or lemon flavours and vary in size.

Distribution

A tropical plant. Found at low and medium altitudes throughout the Islands of the Philippines. It suits both the lowlands and the highlands in the tropics. It cannot stand frost. It suits warm and hot climates. It needs some shade in tropical areas. It needs protection from wind. It needs rich moist well drained soil. Soil should be at 25°-30°C for seed to germinate. In Hobart Botanical gardens. It suits hardiness zones 10-12.

Found in:

Africa, Angola, Asia, Australia, Bahamas, Bangladesh, Benin, Bolivia, Botswana, Bulgaria, Burkina Faso, Burma, Burundi, Cambodia, Cameroon, Cape Verde, Central African Republic, Central America, China, Colombia, Comoros, Congo, Cuba, Dominican Republic, Ecuador, Egypt, El Salvador, Equatorial Guinea, Ethiopia, Fiji, Gabon, Gambia, Ghana, Greece, Guatemala, Guinea, Guinea-Bissau, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Iran, Iraq, Italy, Ivory Coast, Jamaica, Japan, Kazakhstan, Kenya, Kiribati, Laos, Liberia, Madagascar, Malaysia, Mali, Mediterranean, Mexico, Mongolia, Morocco, Myanmar, Nepal, New Caledonia, Nicaragua, Nigeria, Pacific, Pakistan, Panama, Papua New Guinea, PNG

Use

The seeds are soaked in water and eaten. They can be eaten alone or used to flavour bread and other foods.
The leaves are used raw or boiled to flavour foods. They are used to flavour tomato sauce, vinegar, soups, salads, omelettes and pesto sauce.
It yields an oil used in flavouring. It flavours sauces, pickles, meats and confectionary.

Cultivation

It is grown from seed. Seed should be sown 2-3 mm deep and covered with a light sand or soil. Seed germinate within 3-5 days. Seedlings are thinned out to 20 cm apart. Seedlings can be transplanted. If top shoots are picked off, a more bushy plant is produced and flowering is delayed.

Production

Nutritional Values

Ocimum basilicum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed	6.4	1051		14.4	938	61.2	42.0	5.8
leaves -fresh	91.0	113		2.5	386	18.0	3.2	0.9

Lamiaceae

Common names

Holy basil, Bush tea leaf, Sacred Basil, Mreahs prow, Sacred balm, Maeng-luk, Sheng luo le, Thai basil, Hsiang tsai, Tarp hao, Basilic



Scientific name

Ocimum tenuiflorum

Edible portion

Leaves for tea, Herb, Seeds, Spice, Flowers,

Description

A small herb. It keeps growing from year to year. It grows to 70-100 cm high. It has a sprawling suckering habit. There are many branches and they are soft and pithy. It is branched. The base is woody. The leaf stalk is 1-2.5 cm long. The leaf blade is oblong and 2.5-5.5 cm long by 1-3 cm wide. It is hairy. The edges can be wavy or have teeth. The flowers are very small and white. They occur among calyxes along an erect stalk at the ends of the plant. The nutlets are brown and oval. They are about 1 mm long by 0.7 mm wide.

Distribution

It needs a sunny sheltered position. Soil should be kept moist. In Asia it grows up to 600 m altitude. In China it grows in dry sandy areas. In Hobart Botanical gardens. It suits hardiness zones 9-10.

Found in:

Andamans, Africa, Asia, Australia, Bangladesh, Burma, Cambodia, China, Cuba, Dominican Republic, East Africa, Ethiopia, Fiji, Hawaii, India, Indochina, Indonesia, Kenya, Laos, Malaysia, Myanmar, Nepal, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Solomon Islands, Sri Lanka, Taiwan, Tanzania, Thailand, Timor, USA, Vanuatu, Vietnam, Tasmania,

Use

The soft seeds when soaked in water give a drink.
The leaves are used for flavouring. They are used to flavour fruit jellies, sweet breads and preserves.
The fresh leaves can be added to salads.
They are also used as a substitute for tea.
The flowers are eaten.

Cultivation

It is grown from seed. Seeds are sown directly.

Production

Leaves suffer cold injury if stored below 12°C after harvest.

Nutritional Values

Ocimum tenuiflorum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Apiaceae

Common names

Water drop wort, Tespong, Saya, Shelum, 'ap'apun, Phak an, Water celery, Selom, Piopo, Pampung, Pangpung, Seladren, Bambung, Pak



Scientific name

Oenanthe javanica

Edible portion

Leaves, Seeds, Spice, Vegetable,

Description

This plant is a hollow stemmed creeping green leafy vegetable. The stem is often up to 100 cm long and normally lies along the ground and turns up near the tip. The leaves are finely divided like carrot tops but the size, shape and colour of the leaves can vary quite a bit, even on the one plant. The leaves often have leaf sheaths which wrap around the stem. The flowers occur at the ends of the branches and are a group of small white flowers. Several kinds occur with different colours and leaf sizes. It mostly grows near water and will float on water.

Distribution

A tropical plant. It mostly occurs between 700 and 2800 m altitude in the tropics. But it also grows down to the coast where it is becoming more popular. It also grows in China, Indonesia and other Asian countries. It grows best between 15° to 25°C. It suits hardiness zones 9-12. Bontoc

Found in:

Asia, Australia, Cambodia, China, Hawaii, India, Indochina, Indonesia, Japan, Korea, Malaysia, North America, Pacific, Papua New Guinea, PNG, Philippines, Taiwan, Thailand, Timor, USA, Vietnam,

Use

The plant is often eaten raw or cooked. They are boiled or steamed.
The leaves are used in soups and salads and with chicken.
CAUTION Although not known to contain the very poisonous oenanthotoxin it contains a hallucinatory drug myristicin.

Cultivation

This plant often grows wild. These self sown plants are not as tasty as the cultivated types but they are eaten. The plant is also grown in gardens. It is planted by using cuttings. Often 5 or 6 cuttings are planted in a hole made with a digging stick. In moist soil the plants establish quickly and easily. It is also possible to grow the plants by seeds, but these are rarely used in Papua New Guinea. The leaves and young tips of the plant are often eaten raw or cooked.

Production

Nutritional Values

Oenanthe javanica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	90.6	117	28	1.8	40	6	3.0	0.5

Olacaceae

Common names

Kaya kil, Tie qing shu,

Scientific name

Olax imbricata

Edible portion

Fruit,

Description

A shrub. Sometimes it is climbing. It is 2-6 m tall. The branches do not have thorns. The leaf stalk is 5-10 mm long. The leaf blade is oval and 5-10 cm long by 2.5-3.5 cm wide. The base is rounded and it tapers to a short tip. There are 6-9 pairs of veins. The flowering racemes are in the axils of leaves. They are 1.5-2.5 cm long. There are 3 petals 8-10 mm long and they are white or yellow. Two petals have 2 lobes. The fruit is fleshy with a hard covering over the seed. It is oval and almost covered with an orange covering. It is 1.5-2 cm across.

Distribution

A tropical plant. It grows in forests including secondary forests belwo 200 m in S China.

Found in:

Asia, Burma, China, India, Indochina, Indonesia, Malaysia, Myanmar, Pacific, Philippines, Sri Lanka, Taiwan, Thailand, Timor,

Use

Cultivation

Production

Nutritional Values

Olax imbricata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Oleaceae

Common names

Native olive, Xian ye mu xi lan, Australian olive, Maulwood,

Scientific name

Olea paniculata

Edible portion

Manna,

Description

A tree. It grows 6-25 m tall and spreads 5-12 m wide. Young growth is shiny. The branches are compressed. The leaf stalk is 1.5-3 cm long. The leaf blade is oval and 8.5-18 cm long by 3.5-6.5 cm wide. They are dark green and shiny above and paler underneath. They are papery. The leaves taper to the tip. The flowers are 0.3-0.4 cm across. They are greenish-white. The flowers are bisexual. The fruit ripens yellow-brown. It is 0.8-1.2 cm long by 0.6-0.8 cm wide.

Distribution

A tropical plant. It grows along streams and in dry rainforests. It needs well drained soil. It can tolerate light frost. In China it grows in moist valleys between 1200-2400 m altitude in S China. It suits hardiness zones 9-12.

Found in:

Australia, Asia, China, India, Indonesia, Kashmir, Lord Howe Island, Malaysia, Nepal, New Caledonia, Pacific, Pakistan, Papua New Guinea, PNG, Sri Lanka, Thailand, Timor,

Use

Cultivation

Plants can be grown from fresh seed.

Production

Plants are quick growing.

Nutritional Values

Olea paniculata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Opiliaceae

Common names

Catkin blooming, Yellow plum, Shan you zi,

Scientific name

Opilia amentacea

Edible portion

Fruit,

Description

A shrub or woody climber. It grows off other trees and plants. It grows to 4-10 m tall and has stems 20 cm across. The bark is rough and light grey. It has furrows along it and is corky. The aerial branches often hang downwards. The leaves are fairly smooth and leathery. They are 5-14 cm long by 2-5 cm wide. The midrib is prominent underneath the leaf. The leaf has a pointed tip. The leaf stalk is 0.3-0.7 cm long. The new leaves are bright shiny green. The base of the leaves is slightly curved backwards. The flowers are very small and yellow green. They are star shaped. They have a sweet scent. Many flowers occur together on short stalks around a central stem. These occur in the axils of leaves and are 2-3.5 cm long. The fruit can occur singly or in clusters. The fruit are oval and fleshy. The flesh is white. They are 1.5-3 cm long by 1.2-1.8 cm wide. They are pale yellow or orange when ripe. The fruit are edible. They have one seed inside. The seed is 21 mm long by 15 mm wide.

Distribution

A tropical plant. It grows in tropical Asia. They occur near the beach in monsoon areas. They are often on sandy soil. They need fresh water so are often near streams. In China it grows in forests and on mountain slopes between 500-800 m altitude in Yunnan in S China.

Found in:

Africa, Angola, Asia, Australia, Burkina Faso, Burma, Burundi, Cambodia, Cameroon, Central African Republic, China, Congo, East Africa, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, India, Indochina, Indonesia, Ivory Coast, Kenya, Laos, Madagascar, Malawi, Malaysia, Mali, Mozambique, Myanmar, Nigeria, Pacific, Papua New Guinea, Philippines, PNG, Rwanda, Senegal, Sierra Leone, Solomon Islands, Southern Africa, Sri Lanka, Sudan, Tanzania, Thailand, Timor, Togo, Uganda, Vietnam, Zambia, Zimbabwe,

Use

The fruit are eaten fresh.
CAUTION. The fruit eaten in large quantities can irritate the lips and tongue.

Cultivation

It can be grown from fresh seed. The seed need to be placed on the ground surface, not buried.

Production

In Australia flowering is August to October and fruiting October to January. It fruits in the wet season.

Nutritional Values

Opilia amentacea

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

Rice,

Poaceae



Scientific name

Oryza sativa

Edible portion

Seeds, Cereal,

Description

An annual grass with hollow stems. The stems can be 30 cm to 150 cm tall. (Floating varieties can be 5 m long.) The nodes are solid and swollen. The stem is protected by a skin layer which can often be high in silicon. A clump of shoots are produced as tillers from buds in the lower leaf axils. The leaves are narrow and hairy. They taper towards the tip. Each stem produces 10-20 leaves and the seeds hang from the flower stalk at the top. Some varieties are glutinous and cling together when cooked.

Distribution

A tropical plant. It grows in tropical and subtropical countries. Plants are grown in both flooded and dryland sites. It will grow over a range of conditions but is normally between sea level and 900 metres altitude in the tropics. Occasionally it is grown up to 1600 m. In Nepal it grows to about 2800 m altitude. It needs a frost free period of over 130 days. It suits hardiness zones 9 -12.

Found in:

Africa, Angola, Asia, Australia, Bangladesh, Benin, Bhutan, Brazil, Brunei, Burkina Faso, Burma, Burundi, Cambodia, Cameroon, Central Africa, Central African Republic, Central America, Chad, China, Colombia, Comoros, Congo, Costa Rica, Cuba, Dominican Republic, East Africa, Ecuador, Egypt, El Salvador, Equatorial Guinea, Ethiopia, Fiji, French Guiana, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Guyana, Haiti, India, Indochina, Indonesia, Iraq, Italy, Ivory Coast, Jamaica, Japan, Kenya, Korea, Liberia, Madagascar, Malawi, Malaysia, Mali, Mauritania, Mauritius, Morocco, Mozambique, Myanmar, Nepal, Nicaragua, Niger, Nigeria, North America, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Puerto Rico, Rwanda

Use

The grains are boiled and eaten after the husks are removed by pounding and winnowing.
It is also made into flour, pasta, cakes, puddings, starch and noodles. Rice paper can be made from the flour. Rice bran mixed with flour can be used for cakes, biscuits, muffins and pancakes.
Rice bran is used for pickling vegetables.
The sprouted seeds are eaten in salads. Young seedlings can be used as a vegetable.

Cultivation

Plants are grown from seed. Seed can be sown direct or in a nursery and transplanted. For dryland crops - 5 to 10 seeds in holes 20 to 25 cm apart. For transplanting 2 or 3 plants as a 20 x 20 cm spacing is suitable. Weed control is a problem in the early stages. Flooding can be used for weed control.

Production

The glumes are removed to produce husked rice. Polishing removes the integument giving polished rice. Rice development takes 90 to 200 days depending on variety.

Nutritional Values

Oryza sativa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed white	11.4	1530	366	6.4		0	1.9	
seed brown	13.5	1480	354	7.6			2.8	
seed white	68.4	544	130	2.7	0	0	1.2	0.49

Hydrocharitaceae

Common names

Pond Lettuce, Santawaa phak, Slab chrawa, Keladi ayer, Chowehan, Echeng, Santawah pak, Kalabua, Mizu-obako, Shui-che-chien,



Scientific name

Ottelia alismoides

Edible portion

Leaves as condiment, Fruit, Flower stalks,

Description

A herb growing in fresh water. It develops tufts and keeps growing from year to year. The clumps are 60 cm wide. The leaves are very variable and have short or long leaf stalks according to the depth of water. The leaf blade of leaves which are under water are long and those which are floating are rounded. The leaves can be 1 m long and the blade 15-20 cm long by 15-20 cm wide. The base of the leaf is heart shaped. The leaves are green to bronze. They have prominent veins. The leafy bract around the flower has 5-10 wings. The flowers are 5-6 cm across and white with darker veins. They have 3 petals. The flowers are on the surface. The fruit are oblong and 2.5 to 4 cm long.

Distribution

It is a tropical and subtropical plant. It can grow in stagnant water. It occurs throughout the Philippines in shallow lakes and slow running streams. It needs bright light and warm water.

Found in:

Africa, Asia, Australia, Cambodia, China, Egypt, Europe, India, Indochina, Indonesia, Italy, Japan, Malaysia, North Africa, Pacific, Pakistan, Papua New Guinea, Philippines, PNG, Solomon Islands, Thailand, Timor,

Use

The fruit are eaten raw.
The leaves and leaf stalks are eaten after cooking.
They are also eaten raw with fish sauce.

Cultivation

Plants can be grown from seed. They are planted on mud or in shallow, warm water. It can also be grown by removing suckers.

Production

Nutritional Values

Ottelia alismoides

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

Fabaceae

Yam bean, Jicama,



Scientific name

Pachyrrhizus erosus

Edible portion

Pods, Tubers, Seeds, Vegetable,

Description

A climbing bean with hairy stems. It can grow up to 6 m tall. The stems are woody at the base. It has a white fleshed tuber. It has a rough sandy coloured skin. The leaves are alternate and made up of 3 leaflets. These leaflets have large teeth. The flowers are violet or white. The pod is 8-15 cm long, curved and hairy. The seeds are almost black. There are 8-11 seeds and they are flattened.

Distribution

A tropical plant. It grows in warm places. It grows in coastal areas in Papua New Guinea and up to about 70 m altitude in the tropics. A well drained soil is needed. A light rich sandy soils is suitable. It cannot tolerate frost. Plants need 11-13 hours of daylight for tubers to form. A pH of 6-7 is suitable. It suits hardiness zones 10-11.

Found in:

Africa, Antigua-Barbuda, Antilles, Argentina, Asia, Australia, Bangladesh, Belize, Bhutan, Brazil, Burma, Cambodia, Cameroon, Central Africa, Central America, China, Congo, Costa Rica, Cuba, Dominica, Dominican Republic, El Salvador, Fiji, French Guiana, Ghana, Guadeloupe, Guam, Guatemala, Guinea, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Jamaica, Japan, Laos, Madagascar, Malaysia, Maldives, Martinique, Mauritius, Mexico*, Myanmar, New Caledonia, Nicaragua, North America, Pacific, Palau, Panama, Papua New Guinea, PNG, Paraguay, Peru, Philippines, Puerto Rico, Reunion, Senegal, Sierra Leone, Singapore, Solomon Islands, South America, Sri Lanka, Tahiti, Taiwan, Tanzania, Thailand, Timor, Trinidad &

Use

The young tuber is eaten either raw or cooked. They can be boiled, stir-fried, roasted, braised or used in soups. It can also be pickled.
The tubers can be a source of starch used in custards and puddings.
The young pods can be eaten. (They must be well cooked.)
CAUTION Old pods and mature seeds can be poisonous.

Cultivation

It is grown from seeds and also grows wild. Seed should be presoaked for 12 hours in warm water to encourage rapid germination. Seed germinate within 2 weeks. Plants can be grown by dividing the root clump and growing plants from the thickened roots. Cuttings will grow. A spacing of 50 cm between plants is suitable. Topping the plant by picking out the growing point and removing the flowers is supposed to help tubers form.

Production

Tubers are ready about 6 months after sowing. Individual tubers can be up to 20 kg weight.

Nutritional Values

Pachyrrhizus erosus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fresh pods	86.0	189		2.6	345		1.3	
tuber - raw	89.0	160	38	1.0	2	20	0.6	0.2
seed	8.1			38.5				

Pandanaceae

Common names

Coastal Pandanus, Beach pandanus, Screwpine, Rumchek, Mogili, Mengkuang laut, Mengkuang duri, Mengkuang layer, Pandan laut,



Scientific name

Pandanus tectorius

Edible portion

Nuts, Leaves, Fruit, Flowers, Spice,

Description

An erect branched shrub 3 to 5 m high. It can be 14 m tall. The trunk has several prop roots. The stems are prickly. The leaves are spirally crowded towards the ends of branches and covered with waxy powder. They are up to 1.5 m long and 3 to 5 cm wide. The edge of the leaf and the midrib have sharp spiny teeth pointing towards the end of the leaf. Male and female flowers occur on separate trees. Male flowers have showy white bracts. The female plants produce woody, pineapple like fruit. The fruit are alone and hang down. They are rounded and 20 cm long. They are composed of 50 to 75 fibrous fleshy fruit with a stone in the centre. They are somewhat angular. There are hundreds of local named varieties.

Distribution

A tropical plant. It grows on the sandy edges of mangroves and along rivers. They are very common along the seashore throughout the islands of the Philippines. They are never found very far inland. It usually grows from sea level to 20 m altitude. In Samoa it grows to 300 m altitude. It usually grows in places with an average annual temperature range of 24-28°C. The rainfall is usually between 1500-4000 mm per year. It can grow in soils with a pH between 6-10. It can grow in salty soils. It suits hardiness zones 11-12.

Found in:

Asia, Australia, Burma, Cambodia, Caroline Is., Fiji, Guam, Hawaii, India, Indochina, Indonesia, Kiribati, Kosrae, Malaysia, Marianas, Marshalls, Micronesia, Myanmar, Nauru, New Caledonia, Pacific, Pakistan, Palau, Papua New Guinea, PNG, Philippines, Samoa, Solomon Islands, Sri Lanka, Taiwan, Thailand, Timor, Tokelau, Tonga, Tuvalu, USA, Vanuatu, Vietnam, Yap,

Use

The fleshy portion of the lower part of the mature fruit is eaten raw. It can be cooked or made into flour.
The seeds are eaten.
CAUTION: The seeds can contain calcium oxalate crystals. These can be removed by cooking and straining. They irritate the mouth.
The tender shoots or terminal buds are eaten as a vegetable. Flowers and pollen are edible.

Cultivation

Plants are normally self sown. They can be grown from seed. The preferred kinds are grown from cuttings. Cuttings of 30-40 cm are suitable. Seeds can float on ocean currents and still germinate after several months.

Production

Plants grow slowly. It produces 8-12 fruit per year.

Nutritional Values

Pandanus tectorius

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	80.0			0.4				

Flacourtiaceae



Common names

Sis, Pangi, Bua keluak, Black nut, Kluwek, Kepayang, Payang, Bauh keluak, Pakem, Puchung, Puchong, Pachung, Kapayang, Simaung,

Scientific name

Pangium edule

Edible portion

Seeds, Leaves (old), Spice, Fruit,

Description

A large tree reaching a height of 25-40 m and about 50-100 cm across the trunk. The crown of the tree can spread to 50 m across. It has buttresses. The branches normally droop over. The leaves are very large and smooth. They can vary between 10 to 60 cm long by 8 to 40 cm across. They can be entire or lobed, pointed at the tip and rounded or heart shaped at the base. Leaves in young trees have 3 lobes. Often leaves are in a spiral arrangement near the ends of branches. Flowers are separate sexes and often on different trees. The flowers are yellowish white and have a faint smell. They are about 4 cm wide. The fruit are large, up to 15 cm long, brown and contain several seeds embedded in yellowish edible pulp. The seeds are about 5 cm long. The fruit has a strong smell.

Distribution

A tropical plant. It is native to SE Asia. It is a plant of the hot humid tropics. They are widely distributed in primary forests and clearings at low and medium altitudes from southern Luzon to Palawan and southern Mindanao in the Philippines. It mostly grows below 300 m altitude but can be up to 1000 m. It is in the lowland and mid altitude rainforests often near creeks. It prefers slightly acidic soils.

Found in:

Andamans, Asia, Guam, Indonesia, Malaysia, Pacific, Papua New Guinea, PNG, Philippines, Singapore, Solomon Islands, Thailand, Timor, Vanuatu, Yap,

Use

The old leaves are eaten after shredding and being cooked.
The fleshy portion around the seeds is eaten raw or cooked.
The seeds are eaten after steeping and roasting in an extensive process to remove poison. Sometimes seeds are buried and fermented for about 40 days. The seeds yield a cooking oil.
CAUTION All parts of the plant can contain large amounts of poison (Prussic acid). This must be thoroughly removed

Cultivation

Plants grow wild and are also cultivated from seeds. Seeds can float for a long time in water.

Production

Trees start to fruit when about 10-15 years old. Trees live for a long time. Fruiting is seasonal and the fruit season tends to be May to August.

Nutritional Values

Pangium edule

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Sa riang, Petai hutan,

Scientific name

Parkia timoriana

Edible portion

Seeds, Leaves, Spice,

Description

A large tree. It grows up to 50 m high and can be 2.5 m across the trunk. There are often buttresses. The bark is smooth and can be finely cracked. The leaves are compound. The first leaf stalk and axis is 18-42 cm long. There is a gland on the leaf stalk 1.5-4 cm from the base. There are 14-32 pairs of branches of the leaf and 52-72 pairs of leaflets. They are slightly S shaped and 6-11 mm long by 1-2 mm wide. The edges of the leaflets overlap. There are stiff white hairs around the edges of the leaflets. The flower stalks have a compound flower cluster. The fruit are pods which are flat and strap shaped. The pods are 20-33 cm long by 3.9-5.5 cm wide. There are 12-19 seeds per pod. They lie horizontally across the pod. They are 1.4-2 cm long. The seed coat is hard and dark brown.

Distribution

A tropical plant. It grows in lowland rainforest and dry evergreen forest. They occur from sea level to 600 m altitude but occasionally up to 1,300 m.

Found in:

Asia, Bangladesh, Brunei, Burma, Dominican Republic, Haiti, Hawaii, India, Indochina, Indonesia, Malaysia, Myanmar, Pacific, Puerto Rico, Thailand, Timor, USA, West Indies,

Use

The seeds are bitter but may be eaten after roasting.
The germinated seeds are eaten.

Cultivation

Production

Nutritional Values

Parkia timoriana

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

Passifloraceae

Purple passionfruit,



Scientific name

Passiflora edulis

Edible portion

Fruit, Seeds - oil,

Description

A vine which continues to grow for several years. The main vine becomes woody. Vines can be 6-7 m long. It climbs by tendrils. The leaves are shaped like the fingers on a hand with three lobes. They are 5-10 cm long. The vine can set flowers at each leaf. The flowers are white and often tinted purple. They are 5 cm across. The fruit are oblong and thickly dotted with purple when ripe. The skin is hard and they have a sweet smell. The flesh is orange. The seed occupy most of the inside with a small amount of flesh. The flesh is edible. The seeds are black. The flowers open in the morning. There are many named cultivated varieties.

Distribution

A subtropical plant. They are cultivated up to 2000 m altitude in the tropics. The purple variety grows in the highlands up to 3000 m. It can stand very light frosts. The yellow one grows in the lowlands. Its normal range is 700 to 2300 m. Often fruit set is poor in wet conditions. Wind breaks are important. Vines can tolerate very light frosts. If frosts are likely wrapping the stems near ground level with insulation paper can help protect the plant. Heavy rain at flowering can reduce fruit set through poor pollination. Soils should be fertile, moist and well drained. Plants cannot tolerate water-logging. A pH in the range 5.5 -6.5 is best. In Nepal they grow between 1200-1700 m altitude. It grows satisfactorily between 20-30°C. It suits hardiness zones 8-11.

Found in:

Africa, Argentina, Asia, Australia, Brazil*, Cameroon, Central Africa, Central America, China, Colombia, Congo, Costa Rica, East Africa, Ecuador, Fiji, Ghana, Hawaii, Honduras, India, Indochina, Indonesia, Japan, Kenya, Laos, Madagascar, Malawi, Malaysia, Nepal, New Zealand, Norfolk Island, Pacific, Papua New Guinea, Paraguay, Peru, PNG, Philippines, Solomon Islands, Somalia, South Africa, Southern Africa, South America, Swaziland, Tasmania, Thailand, Timor, Tonga, Uganda, USA, Vanuatu, Vietnam, West Africa, West Indies, Zambia, Zimbabwe,

Use

The fleshy portion of the fruit is eaten raw.
Passionfruit are also used for flavouring in juices, and with other foods. It is used in sherberts, custards, cakes, sauces, pies, fruit soups, candies and ice cream.
The seeds are edible. They also yield an edible oil.

Cultivation

Plants are grown by seeds or cuttings. Seeds germinate in 15-45 days. Seedlings can be grafted. When the end shoots of the mother plant are the same thickness as the seedling stem, shoot tips 8 cm long can be used. The leaves should be removed from the cutting being used in the graft. An even light and high humidity allows these grafted plants to be ready in a few weeks. Plants are put in a hole 30 cm deep and which has had organic matter added. A spacing of 3-4 m apart is suitable. Plants need a trellis to climb over. Often a trellis 2 m high is used. Normally the side shoots are picked off until the vine reaches the trellis height. Then the tip is picked out to promote branching. Normally later pruning is not done. Putting mulch around the plant helps retain moisture and adds nutrients as well as controlling weeds. Hand pollination can improve fruit set. The fruit turns purple, wrinkles then drops off when ripe. Balanced fertiliser to promote healthy growth is important. Deficiencies of magnesium, iron, zinc, copper and boron can occur in some places. Pruning is important to keep vines

Production

Plants produce after about 12-18 months and keep producing well for 4 or 5 years. Good production is related to keeping the vine growing well by avoiding low temperatures and lack of water. Plants are pollinated by insects, so it is important to not kill these with insecticides. They can also self pollinate. Fruit mature between 60 and 100 days from pollination.

Nutritional Values

Passiflora edulis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	73.3	280		2.8	10	20	1.3	0.1

Passifloraceae

Common names

Passionflower,



Scientific name

Passiflora foetida

Edible portion

Fruit, Leaves, Seeds,

Description

A vine with tendrils. It creeps over the ground. The vine can be 2-10 m long. It has a strong smell. The stems are yellowish and have soft erect hairs. The leaves are 3 lobed and with fine hairs. They are pale green. The leaves are 3-10 cm long and 3-8 cm wide. The base of the leaf is often heart shaped. The flowers occur singly on flower stalks. The flowers are flattish with several rings of structures. They are 5 cm wide. They are white with a purple centre. The fruit is small (2-3 cm across) yellow and with a soft skin. The fruit is enclosed in a green net which dries brown then falls off. The fruit is edible. Seeds are flat.

Distribution

A tropical plant. It is common in the lowlands and occurs up to 1000 m altitude in the tropics. It is drought resistant and can grow on poor soils. In prefers sunny situations. It does best in humid places. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Benin, Brazil, Cambodia, Cameroon, Central America*, China, Cuba, Ecuador, Gambia, Ghana, Guiana, Guinea-Bissau, Guyana, Haiti, Hawaii, India, Indochina, Ivory Coast, Jamaica, Lesser Antilles, Liberia, Madagascar, Malaysia, North America, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Senegal, Sierra Leone, Solomon Islands, South America, Sri Lanka, Suriname, Thailand, Timor, Togo, Tonga, USA, Vanuatu, Vietnam, West Africa, West Indies*,

Use

The ripe fruit are eaten. The seeds are also eaten.
The young stalks and leaves are boiled and eaten in soup in times of food shortage.
CAUTION The unripe fruit and leaves are claimed to be poisonous. They contain cyanide so can be poisonous raw.

Cultivation

Plants are grown from seed. It grows wild in the lowlands. Seeds germinate rapidly.

Production

Fruit occur throughout most of the year.

Nutritional Values

Passiflora foetida

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	64.2	421		4.9		5	8.4	1.1
leaves	86.0	176		6.9		220		

Passifloraceae

Common names

Granadilla,



Scientific name

Passiflora quandrangularis

Edible portion

Fruit, Seeds,

Description

A long creeping vine with square stems. It has fleshy tuberous roots. The vine can be from 5-15 m long. The vine has four wings. The tendrils are pale green and coiled in a spiral. The tendrils are not branched and can be 30 cm long. The leaf stalk is 3 sided and 5-8 cm long. The leafy structures (stipules) at the base of the leaf are sword shaped and 2-5 cm long by 1-2.5 cm wide. The leaves are also large (10-25 cm long and 8-17 cm wide) and green or purple. The flowers occur singly in the axils of the leaves and can be 10-12 cm across. Flowers are white and purple and have red dots on them. The fruit is greenish yellow 12-30 cm long by 10-18 cm wide and with black seeds amongst purple flesh. The aril or layer around the seed is white and edible. The seeds are 1 cm long.

Distribution

A tropical plant. It mainly occurs in the tropical lowlands but grows up to about 1000 m. It suits hot humid lowland areas in the tropics. Fruiting is often best between 200-500 m altitude. They can stand cool temperatures when mature. At 21-26°C seed germinate in 1-2 weeks but at lower temperatures seed can take 10 weeks. It suits hardiness zones 10-12.

Found in:

Africa, Amazon, Asia, Australia, Brazil, Cameroon, Central Africa, Central America, Colombia, Costa Rica, East Africa, Ecuador, Ghana, Guinea-Bissau, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Madagascar, Malawi, Malaysia, Nicaragua, Pacific, Papua New Guinea, PNG, Philippines, Sierra Leone, Solomon Islands, South America, Thailand, Timor, Tonga, Uganda, Vietnam, West Africa, West Indies,

Use

Sometimes unripe fruit is boiled as a vegetable. It can be used in soups. It can be cut in pieces and cooked in butter with pepper and nutmeg.
Otherwise the fruit is eaten ripe. It can be used for juice, fruit salad, pies, jellies, cold drinks sauces and wines.
Sometimes the swollen root is cooked and eaten like a yam.
CAUTION The leaves are poisonous.

Cultivation

Plants are normally grown from cuttings but they can be grown from seed. Cuttings 25- 30 cm long from well matured stems should be used. A spacing of 2-3 m between plants is suitable. It needs a trellis to grow over. It often pays to hand pollinate. Seed germinate in 2-4 weeks. Seedlings can be planted in the field within 4 months.

Production

A vine lasts for 5-6 years. Flowers are produced 9 months from planting. Fruit are ready to harvest 60-80 days from flowering. A vine can produce 16-50 fruit in a season.

Nutritional Values

Passiflora quandrangularis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed & aril	78.4	339		1.9		15	2.9	
flesh only	94.4	170		0.7		15	0.8	

Lythraceae

Common names

Pemphis, Digging Stick Tree, Mentigi, Mintagu, Sentigi, Chantigi, Tien le,

Scientific name

Pemphis acidula

Edible portion

Leaves, Sap, Fruit,

Description

A shrub or small tree. It can grow to 2-10 m high and spread 1.5-6 m wide. The trunk is gnarled and grey. Young growth has grey silky hairs. The bark is brown and flaky. The small branches are angular. The leaves are small, fleshy and oval. They are 1.3-2.5 cm long by 0.3-0.7 cm wide. They are opposite and grey-green. The flowers are small and white. They have 6 papery petals. The flower is almost enclosed in a reddish ring of the outer sepals. The fruit is a capsule 0.7 cm across. It is red.

Distribution

It is a tropical plant. It grows on coastal limestone rocks and on atolls. It is common on the inner margins of mangroves. It occurs on Pacific atolls.

Found in:

Africa, Asia, Australia, Indochina, Indonesia, Kiribati, Malaysia, Pacific, Thailand, Timor, Tonga, Vanuatu,

Use

The fruit are sometimes eaten in Kiribati.
The leaves are acid and eaten raw.

Cultivation

Plants are grown from seed.

Production

Nutritional Values

Pemphis acidula

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Piperaceae



Common names

Greenhouse tea plant,

Scientific name

Peperomia pellucida

Edible portion

Leaves, Leaves - tea, Spice,

Description

A herb 10-30 cm tall. It grows from seed each year. The stems are thick and rounded. They are pale green and fleshy. The leaves have stalks. These are 1-2 cm long. The leaf blades are 0.8-3.5 cm long by 0.6-2.8 cm wide. They are oval and shiny pale green. The base is heart shaped. The flowers are yellow. They are very small and borne on a light green spike. This is produced at the end of a branch or opposite the leaves. The nutlet is round and 0.5 mm across.

Distribution

A tropical plant. It grows in warm regions. It occurs widely in the tropics. It grows in wet and shady places around houses. In Nepal it grows to about 2000 m altitude. It grows in rock crevices and near the base of cliffs. In China it grows from sea level to 200 m altitude.

Found in:

Asia, Africa, Angola, Australia, Benin, Bhutan, Burma, Cambodia, Central America*, China, Congo, Cuba*, Dominican Republic, Ethiopia, Fiji, Haiti, Hawaii, India, Indochina, Indonesia, Japan, Malawi, Malaysia, Mexico, Mozambique, Myanmar, Nepal, Nigeria, North America, Pacific, Pantropical, Papua New Guinea, PNG, Philippines, Puerto Rico, Sao Tome, Senegal, Sierra Leone, South America*, Sudan, Tanzania, Thailand, Timor, USA, Vietnam, West Africa, West Indies, Zambia, Zimbabwe,

Use

The tender leaves and shoots are cooked and eaten as a vegetable.

Cultivation

Plants are grown from seed. It can also be grown by stem cuttings.

Production

Nutritional Values

Peperomia pellucida

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	92.2	105	25	0.5			3.2	

Common names

Avocado, West Indian Avocado,

Lauraceae



Scientific name

Persea americana var. americana

Edible portion

Fruit, Vegetable, Caution,

Description

A small to medium sized tree. It grows 8-10 m high. Trees can grow to 25 m high. The leaf stalk is 1.5-5 cm long. Leaves are entire, oval and 5-40 cm long. Flowers are greenish, small and on the ends of branches. Clusters of flowers may contain 200 -300 flowers. Normally only 1-3 fruit develop from each cluster. The fruit is pear shaped or round. It can be 7-20 cm long. The fruit are greenish-yellow with some red coloration. The fruit has greenish yellow flesh and a large round seed. There are 3 named races - West Indian, Guatemalan and Mexican.

Distribution

A subtropical plant. Trees grow from sea level up to 2250 m altitude in the tropics. It cannot stand water-logging. Branches are easily damaged by wind. It needs to be in a frost free location or where frosts are rare. West Indian varieties thrive in humid, tropical climates and freeze at or near O°C. It does best with neutral or slightly acid soil. West Indian avocadoes can stand some salinity. They need a well aerated soil. Growth is disrupted when soil temperatures are below 13°C. It needs high humidity at flowering and fruit set. It suits hardiness zones 9-11.

Found in:

Africa, Asia, Australia, Belize, Bolivia, Brazil, Cambodia, Cameroon, Caribbean, Central Africa, Central America, China, Costa Rica, Cuba, Dominican Republic, East Africa, Ecuador, Ethiopia, Fiji, Ghana, Guam, Guatemala, Guiana, Guyana, Haiti, Hawaii, Hispaniola, Honduras, India, Indochina, Indonesia, Israel, Madagascar, Malawi, Malaysia, Mauritius, Mexico*, Nicaragua, North America, Pacific, Panama, Papua New Guinea, Peru, PNG, Philippines, Sierra Leone, Solomon Islands, South Africa, Southern Africa, South America, Suriname, Swaziland, Tanzania, Tasmania, Thailand, Timor, Tonga, Uganda, USA, Vanuatu, Venezuela, Vietnam, West Africa, Zambia

Use

The pulp of the fruit is eaten raw or cooked. It is eaten in salads, soups, sandwiches, spreads, ice cream, and also in tortillas and in wine.
The fruit are mixed with sugar and water to make a drink.
Oil is extracted from the flesh. It is used in salad dressing.
The leaves can be used for tea sweetened with sugarcane juice. Toasted leaves are used to season stews and bean dishes.
Caution: Some people are allergic

Cultivation

Plants are often grown from seed. Seeds remain viable for 2-3 weeks. Fresh seed held at 25°C day to 15°C night will germinate in 3 weeks. It is best to propagate vegetatively. Tip cuttings, layers and grafts can be used. Because different types have pollen at different times of day, for best pollination a mixture of trees which have pollen and flowers receptive at different times gives bet fruit set. Although trees will grow in shade, they need sun for fruiting. The leaves do not rot easily and can accumulate under trees. Other plants cannot be grown under avocado trees.

Production

Seedlings grow quickly and continuously in warm, moist conditions. Seedlings bear after 5-8 years. Grafted trees can fruit in 1 -2 years. A good tree produces 400-600 fruit each year. A fruit can weigh 50 g to 1 kg. In the subtropics trees often produce 2 main flushes of fruit per year. From fruit set to maturity can take 6-12 months. Fruit ripen off the tree in 4-14 days.

Nutritional Values

Persea americana var. americana

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	74.4	805		1.8	480	11	0.7	0.4

Polygonaceae

Common names

Watersmart weed, Jankong, Jukut carang, Hairy knotweed,

Scientific name

Persicaria attentuata

Edible portion

Leaves,

Description

A herb which keeps growing from year to year. It can grow in water or dry land. The stems are spreading. They can have long hairs. The sheaths are reddish-brown and 3 cm long. The leaves are 8-20 cm long by 1.5-5 cm wide. They are narrowly oval. The leaves are hairy. The flower spikes are 11 cm long by 1 cm wide. The flowers are about 0.4 cm long and white. The fruit are small nuts. They are dark brown to black.

Distribution

A tropical plant. It grows on the edges of swamps and waterways.

Found in:

Africa, Asia, Australia, Indochina, Indonesia, Pacific, Papua New Guinea, PNG, South Africa, Southern Africa, Swaziland, Timor,

Use

The leaves are used in salads.

Cultivation

Plants can be grown from seed or cuttings.

Production

Nutritional Values

Persicaria attentuata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Polygonaceae

Common names

Smartweed, Joint weed, Knot weed, Khursani jhar,

Scientific name

Persicaria barbata

Edible portion

Leaves,

Description

A herb which can grow in water or on land. It continues growing from year to year. It grows to 0.5-1.2 m tall and spreads 0.6 -2 m across. The stems are erect and creeping. The stem is about 5 mm thick near the base. It can have stiff upward pointing hairs. The plant often branches repeatedly. They are often floating and can be smooth or hairy. They have a sheath which is 2 cm long and pale and lets light through. The short sheath around the stem has hairs. The leaves are 7-20 cm long by 1.5-3 cm wide. They are narrow and oval. They have short stalks. The leaves are green and are hairy on the lower midrib and along the edges. The tip is pointed. The flowers occur in branched flower arrangements at the ends of branches. These are about 10 cm long. The flowers are about 0.2 cm long and greenish white. The fruit is a small glossy black nut.

Distribution

A tropical plant. It is usually beside waterways. A moisture loving plant. It grows from sea level to over 2000 m altitude. In Nepal it grows up to 1200 m altitude. It grows in moist places.

Found in:

Africa, Asia, Australia, Bhutan, China, East Africa, Himalayas, India, Indochina, Indonesia, Japan, Madagascar, Malawi, Malaysia, Nepal, Pacific, Pakistan, Papua New Guinea, PNG, Solomon Islands, Timor, Vietnam,

Use

The leaves have been recorded as eaten in Congo and Madagascar.
Tender shoots and leaves are cooked and eaten in Nepal.

Cultivation

It can be grown from seed or by dividing the clump using sections with roots on the lower parts. It grows naturally in many places.

Production

Nutritional Values

Persicaria barbata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Common bean,



Scientific name

Phaseolus vulgaris

Edible portion

Pods, Seeds, Leaves, Vegetable,

Description

This bean has very many varieties and varies a lot in details. Both short and climbing cultivated varieties of this bean occur. It has a long taproot. Climbing forms can be 2-3 m tall. Bush types are 20-60 cm tall. The leaves are carried one after another along the stem and the leaves have 3 leaflets. The leaf stalk has a groove on the top. The side leaflets are asymmetrical in shape. The leaflets can be 8-15 cm by 5-10 cm. The flowers are in the axils of leaves and have few flowers in a loose form. Flowers are white to purple and pods smooth. Pods are slender and 8-20 cm long by 1-1.5 cm wide. The pods are straight or slightly curved and with a beak at the end. Pods often have 10-12 seeds which are kidney shaped and coloured. There are more than 500 cultivated varieties.

Distribution

A temperate plant. It mostly grows from 700 m to 2000 m altitude in the tropics. In the lowlands it suffers from pest and disease but it can be grown to sea level. It is not suited to the wet tropics. It is shallow rooted and therefore damaged by excess moisture near the roots. About 350 mm of water is enough for a crop life cycle. It is sensitive to frost and to high temperatures. Flowers will not form below 9.5°C and night temperatures above 37°C cause flowers to drop. The best temperature is 15-21°C. It does not suit very acid soils. In Nepal it grows up to 1200 m altitude. It suits hardiness zones 8-11.

Found in:

Afghanistan, Africa, Andes, Angola, Argentina, Asia, Australia, Bangladesh, Benin, Bhutan, Bolivia, Brazil, Burkina Faso, Burundi, Cambodia, Cameroon, Canada, Caribbean, Central Africa, Central African Republic, Central America, Chad, Chile, China, Colombia, Congo, Costa Rica, Dominican Republic, East Africa, Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, Ethiopia, Europe, Fiji, France, French Guiana, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Guatemala, Guyana, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Iran, Iraq, Ivory Coast, Japan, Kenya, Laos, Liberia, Malawi, Madagascar, Malawi, Malaysia, Mali, Marianas, Mauritania, Mauritius, Mexico, Namibia, Nepal, Nicaragua, Niger, Nigeria, Niue, North

Use

The young pods, leaves and mature seeds are edible. The pods are eaten raw in salads and also boiled, steamed, marinated and pickled.
The young seeds are boiled and served as a vegetable.
The dry seeds are soaked in water and boiled until soft. They are also baked and used in soups, dips, casseroles and salads.
The flowers are sauteed and aaded to dishes. Sprouted seeds are also eaten.

Cultivation

Plants are grown from seed. Seed should preferably be planted on raised beds. Climbing types need stakes. Plants are self fertilised. Seeds remain viable for 2 years. Germination is normally good if seed have been well stored. In many places these beans are inter-cropped with other plants. If they are grown on their own, bush types can be spaced at 25 cm by 25 cm. Or they can be put closer together in rows wider apart to make weeding and harvesting easier. For dried beans, once the pods are mature and turning yellow, the whole plants are pulled, then dried and threshed. About 50-75 kg of seed will sow a hectare.
Most French bean varieties are daylength neutral so day length does not affect flowering.

Production

Dwarf kinds take 6-8 weeks to mature and climbing types take 10-12 weeks. Picking starts 2 weeks after flowering. Yields of dried beans of 1,200 kg per hectare are possible.

Nutritional Values

Phaseolus vulgaris

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds dry	10.0	1386		25.0	10	1	8.0	2.8
green pod + seed	77.3	351		6.6	668	25	1.8	1.0
seeds green boiled	80.4	304		5.6		17	1.3	
green fresh pods	88.0	151		2.5	750	27	1.4	0.2
seeds green	92.0	142		3.0		20	0.8	0.2
seeds sprouted	90.7	121		4.2	0	38.7	0.8	0.4

Arecaceae

Common names

Date palm,



Scientific name

Phoenix dactylifera

Edible portion

Fruit, Cabbage, Sap, Palm heart, Flower, Nut-oil,

Description

A tall unbranched evergreen palm. It grows to 30 m high. The trunk can be 30-40 cm across. The trunk is covered with fibres and has the bases of old leaves along it. It produces suckers on the trunk and at the base. The fronds are grey-green. The leaves are 6-7 m long. The leaflets are 20-40 cm long. They are spaced in two irregular rows along each side of the stalk. Male and female flowers are produced on separate trees. The flowers spadices are yellow-brown. The fruit is small, brown and very sweet. It has one grooved seed. The fruit is 2.5-5 cm long. When ripe the fruit is dull yellow and the flesh soft. The skins of the fruit darken when dried. Strands of fruit have 25-35 dates. The fruit are edible.

Distribution

They suit dry subtropical climates. It needs hot, dry arid climates while fruit mature. It can tolerate salty or brackish water. It can also grow in alkaline soils but with reduced yields. In cold temperate regions the palm grows but rarely flowers. It does best in areas with long dry summers and sufficient heat for fruit to ripen. It should not have rain during flowering and fruit set. For best production it needs 3,400 heat units above 10°C for fruit to fully mature. It suits plant hardiness zones 9-12.

Found in:

Africa, Algeria, Arabia, Argentina, Asia, Australia, Bahrain, Brazil, Cameroon, Central Africa, Chad, China, Cyprus, East Africa, Egypt, Egypt - Sinai, Ethiopia, Fiji, Gambia, Hawaii, India, Iran, Iraq, Israel, Jordan, Kenya, Lebanon, Libya, Madagascar, Malawi, Mauritania, Mediterranean, Mexico, Morocco, Nepal, Niger, Nigeria, North Africa, North America, Oman, Pacific, Pakistan, Palestine, Papua New Guinea, PNG, Pakistan, Philippines, Saudi Arabia, Senegal, Seychelles, Somalia, South Africa, Southern Africa, South America, Spain, Sudan, Syria, Taiwan, Tanzania, Timor, Tunisia, Turkey, United Arab Emirates, USA, West Africa, Yemen

Use

The fruit is eaten fresh or dried. They are also used for jams and preserves.
The date stones can be fermented or roasted and used as a coffee substitute. They can be pressed for oil.
Dates are also pressed for juice.
The sap is used for jaggery and sugar.
The male flower can be eaten.
The pollen is eaten

Cultivation

Plants are grown from seed. Seed take 4-5 months to germinate. They begin bearing 5-6 years after planting and reach full production by 15 years. A palm lasts about 80 years. Female plants need to be pollinated before they bear fruit. A single male is sufficient for 50 females. Taking suckers from good producing plants is a more reliable means of growing new plants. A well established palm can give 8-18 good suckers over a 6 year period. These suckers should have some leaves cut off during transplanting. About 10% of plants should be male, for pollination. Selection of a good pollinator tree is important. Fruit thinning is often needed to give good sized fruit. Three to four bunches per tree are sufficient.

Production

Trees take about 6 years before good production. There can be 45-70 kg of fruit per tree. Trees continue to bear for 50 years.

Nutritional Values

Phoenix dactylifera

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit -dry	22.5	1151		2.0	5	0	1.2	0.3
fruit	58.5	598		0.9	50	6	1.3	

Verbenaceae

Common names

Frogfruit, Lippia,

Scientific name

Phyla nodiflora

Edible portion

Leaves - tea, Leaves,

Description

A plant which forms a tight mat. It spreads by runners or stolons. It grows 3-15 cm high. These can be woody near the base. They produce many roots. It can spread 2-5 m wide. The leaves are small and opposite. The are oblong or sword shaped and narrow to a leaf stalk at the base. There can be some teeth near the end of the blade. The leaves can be smooth or covered with hairs. The flowers heads are round or oval and 1.25 cm across. They are on long flowering stalks. The flowers are pink and like clover flowers.

Distribution

It grows in temperate places but will grow in the subtropics and in semi-arid places. It needs well drained soil. It needs to grow in full sun. It can stand heavy frosts. It suits hardiness zones 9-10.

Found in:

Africa, Asia, Australia, Bahamas, Botswana, Central African Republic, Central America*, Cuba*, Dominican Republic, East Africa, Ethiopia, Greece, Haiti, Hawaii, India, Iraq, Italy, Jamaica*, Malawi, Mediterranean, Mexico*, Mozambique, Pacific, Philippines, Somalia, South Africa, Southern Africa, South America*, Spain, Sri Lanka, Sudan, Swaziland, Timor, Turkey, USA, West Indies*, Zambia, Zimbabwe,

Use

The leaves are eaten.
They are also used to brew a herbal tea.

Cultivation

It can be grown by small cuttings.

Production

Nutritional Values

Phyla nodiflora

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Euphorbiaceae

Common names

Kanunung, Fly roost,



Scientific name

Phyllanthus amarus

Edible portion

Fruit,

Description

An annual herb. It grows 10-40 cm high. It almost lies along the ground. It is woody near the base.

Distribution

A tropical plant. It grows in sunny places. In Fiji it grows near sea level and up to 50 m altitude.

Found in:

Africa, Asia, Australia, Cambodia, China, Fiji, Ghana, Haiti, Indochina, Madagascar, Nepal, Pacific, Pakistan, Philippines, Taiwan, Timor,

Use

Cultivation

Production

Nutritional Values

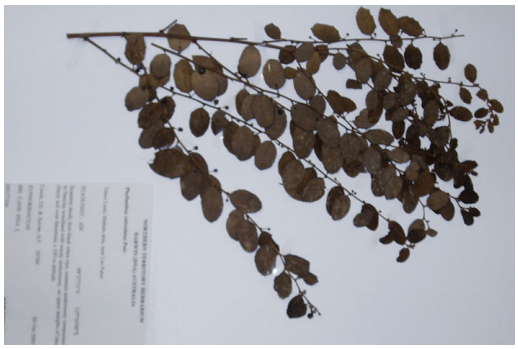
Phyllanthus amarus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Phyllanthaceae

Common names

Potato bush,



Scientific name

Phyllanthus reticulatus

Edible portion

Fruit,

Description

A shrub with many branches. Sometimes it is scrambling or a twiggy tree. It can be 2-8 m high and spread 1.5-3 m wide. The branches hang over. The leaves are oval and 2.5 cm long by 1.5 cm wide. They are arranged to look like a compound leaf. The veins under the leaf are red and net-like. The flowers are very small and in the axils of leaves. They are clustered on short slender branches. Male and female flowers occur together in clusters in the axils of leaves. The fruit is berry-like and reddish but black when mature. They are 4-6 mm across. The seeds are reddish.

Distribution

A tropical plant. It grows in tropical Africa and Asia. It grows in low altitude forest near rivers. In Nepal it grows up to about 800 m altitude. In tropical Australia it grows from sea level to 950 m altitude. In Pakistan it grows in lowland areas, often near the sea and in areas subject to flooding.

Found in:

Africa, Angola, Asia, Australia, Benin, Bhutan, Botswana, Burkina Faso, Cameroon, Chad, China, Congo, East Africa, Gabon, Ghana, Guinea, India, Indochina, Indonesia, Ivory Coast, Kenya, Malaysia, Mali, Mauritania, Mozambique, Namibia, Nepal, Nigeria, Pakistan, Papua New Guinea, PNG, Senegal, Sierra Leone, Somalia, South Africa, Southern Africa, Sri Lanka, Sudan, Swaziland, Tanzania, Thailand, Timor, Uganda, West Africa, Zambia, Zimbabwe,

Use

The ripe fruit are eaten raw.
It is claimed the fruit are poisonous.

Cultivation

Plants are grown from seed. They can also be grown from cuttings of firm young growth.

Production

Nutritional Values

Phyllanthus reticulatus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

Phyllanthaceae

Leaf-Blossum, Cho de, Choi aei,



Scientific name

Phyllanthus urinaria

Edible portion

Leaves,

Description

A herb. It keeps growing from year to year. It grows 10-30 cm high. The flowers are green and cream. The fruit have 6 shallow lobes. The fruit are 2.5 mm across.

Distribution

It is a tropical plant. It grows near river flats and on alluvial soil. In Fiji it grows from sea level up to 1,130 m altitude.

Found in:

Asia, Australia, China, Fiji, Indochina, Madagascar, Nepal, Pacific, Pakistan, Papua New Guinea, PNG, Sri Lanka, Taiwan, Timor, Vietnam,

Use

The leaves are eaten with oil and salt.

Cultivation

Production

Nutritional Values

Phyllanthus urinaria

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Myrtaceae

Common names

Allspice Tree, Pimento,



Scientific name

Pimenta dioica

Edible portion

Fruit, Seeds, Leaves, Spice, Herb, Leaves - tea,

Description

A medium sized tree. It grows 13-15 m tall. It keeps its leaves throughout the year. The bark is silver grey and has an aroma. It peels off in long strips. The wood is hard, durable and close grained. The leaves are dark green, shiny and leathery. They are grouped in clusters at the ends of the secondary branches. The flowers are small and white. The fruit are purple berries. They can be 6.5 cm across. These contain 1 or 2 large seeds. These are the allspice of commerce. Leaves and bark also have the allspice scent. When in flower the trees have a smell or allspice.

Distribution

A tropical plant. It is native to tropical America. It suits humid, lowland woodland and savannah. It can tolerate heat and drought. Mature trees can withstand light frost. It suits hardiness zones 10-12.

Found in:

Africa, Antilles, Australia, Belize, Central America, Costa Rica, Cuba, Dominican Republic, East Africa, El Salvador, Ethiopia, Fiji, Georgia, Ghana, Guatemala, Haiti, Hawaii, Honduras, India, Jamaica, Mexico, Nicaragua, Pacific, Puerto Rico, Reunion, Timor, USA, Venezuela, West Africa, West Indies,

Use

The dry seeds are used to flavour food. The unripe fruit are dried quickly to produce allspice.
The fruit contain an oil used in flavouring.
It is used to flavour meat dishes, pickles, sauces, and stuffings. It can be used in vegetable dishes.
The leaves can be used as a condiment. They can also be used for tea.

Cultivation

Plants are mostly grown from seed. Seed loose their viability quickly. It can also be grown by grafting.

Production

The tree takes 20 year to beging fruiting. The small twigs carrying the berries are cut with clippers. These are dried and cured. They are dried to 10-12% moisture to protect against mould. The red berries are sun dried and become brown. The berry is 3 -6 mm across.

Nutritional Values

Pimenta dioica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed	8.5	1099		6.1	54	39.2	7.1	1.0

Piperaceae

Common names

Betel pepper, Lou ye, Nagavalli, Tambula, Pan, Paan, Tambuli, Videchapana, Nagurvel, Tamalapaku, Nagavalli, Vettilai, Vilayadele,



Scientific name

Piper betle

Edible portion

Leaves, Fruit,

Description

A woody vine which attaches to trees by roots at the nodes on the main vine. The vegetative branches form roots at the nodes but the fruiting branches do not. The stems are 2.5-5 mm thick. The leaf stalk is 2-5 cm long. It has a fine powdery covering. The leaves can be 7-15 cm long and 5-11 cm wide. The leaves are papery or slightly leathery. The flowers are separately male and female. Male spikes are thinner and longer than female. The spikes droop. The fruit is composed of fused parts making a compound fruit.

Distribution

A tropical plant. It occurs in the lowlands and up to about 700 m altitude. It needs a reasonably good rainfall. In the Cairns Botanical Gardens. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Bangladesh, Cambodia, China, East Africa, Fiji, Hawaii, India, Indochina, Indonesia, Madagascar, Malawi, Malaysia, Maldives, Pacific, Papua New Guinea, Philippines, PNG, Solomon Islands, Sri Lanka, Thailand, Timor, USA, Vietnam, West Africa,

Use

It is used as a masticatory with betel nut. The leaves and /or fruit are used. Lime is added to make the mixture more alkaline so that the chemical constituents are activated.
The fresh leaves are used to flavour Chinese dishes and soups.

Cultivation

Plants are grown from cuttings of the main vine. It also grows wild. It needs stakes or a tree to climb. Fruiting branches can be increased by pruning.

Production

Plants can last for 10-12 years.

Nutritional Values

Piper betle

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	81.9	203	49	6.4	59			

Urticaceae

Common names

Native Mulberry, White Nettle, Soga, Fau soga, Koomeroo-Koomeroo,



Scientific name

Pipturus argenteus

Edible portion

Fruit, Bark, Leaves, Seeds,

Description

A small tree up to 4-8 m tall. It spreads 4-8 m across. Young growth is silvery grey. The bark is grey to brown and has rows of small swellings along it. The leaves are alternate. They are 7-26 cm long by 2-8 cm wide. The leaves are green on top and woolly white underneath. They have fine to coarse teeth along the edges. They have a long stalk and 3 prominent veins. The flowers are greenish white. They occur in small round clusters. These form spikes about 6 cm long. They grow on older wood. The fruit are fleshy and like a mulberry. They are 0.6 cm across and white. They are edible.

Distribution

A tropical plant but can grow in temperate areas. It is damaged by frost. It grows in forests and areas that are not too dry. It occurs from the coast up to at least 1600 m altitude in Papua New Guinea. It is frequent on rocky cliffs near the sea in the Pacific.

Found in:

Australia, Burma, Cambodia, Fiji, Indochina, Indonesia, Kiribati, Malaysia, Myanmar, Niue, Pacific, Papua New Guinea, PNG, Philippines, Samoa, Solomon Islands, Sri Lanka, Thailand, Timor, Tokelau, Tonga, Vanuatu,

Use

The bark and leaves are eaten.
The ripe fruit is also recorded as eaten.
The seeds are eaten by children in Tokelau.

Cultivation

It grows wild. Plants can be grown from fresh seed or cuttings of firm semi-hard wood.

Production

It grows quickly.

Nutritional Values

Pipturus argenteus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Nyctaginaceae

Common names

Roro, Ndainga,

Scientific name

Pisonia umbellifera

Edible portion

Leaves

Description

A tree. It grows 5-15 m high. The trunk is 30 cm across.

Distribution

A tropical plant. In Fiji it grows from sea level to 825 m altitude. It can grow in exposed coastal strips or in forest.

Found in:

Fiji, Pacific, Timor, Vanuatu,

Use

Cultivation

Production

Nutritional Values

Pisonia umbellifera

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Pea,



Scientific name

Pisum sativum

Edible portion

Seeds, Pods, Leaves, Vegetable,

Description

A short lived herb plant. A creeping plant with white or pink flowers. Plants can be 30 cm to 150 cm tall. It has a well developed tap root and many slender side roots. The stem is weak and round. Leaves are made up of 1-3 pairs of leaflets and a branched tendril at the end. There are large leaf like stipules at the base of the leaf. The lower half of these stipules has teeth. The flowers occur in the axils of leaves and are either on their own or in 2-3 flowered clusters with equal length stalks. The flowers are pink or purple in varieties grown for dry seeds and usually white in kinds grown for fresh pods. The pods are swollen and green and can have up to 10 seeds inside. Seed shape can vary. Large numbers of varieties have been recorded.

Distribution

A temperate plant. Plants grow best at altitudes over 1000 m in the tropics. They suit a humid climate. Hot dry weather interferes with seed setting. They are frost tolerant except at flowering. A temperate plant. They need temperatures of 13°C to 18°C. They need a pH of 5.5-6.5 and reasonably good fertility. They cannot tolerate waterlogging or very acid soils. They grow to 4,400 m altitude in the Himalayas. It suits hardiness zones 7-9.

Found in:

Afghanistan, Africa, Albania, Algeria, Argentina, Armenia, Asia, Australia, Austria, Azerbaijan, Bangladesh, Belgium, Bhutan, Britain, Bulgaria, Burundi, Canada, Central Africa, Central America, China, Colombia, Congo, Cyprus, Czech Republic, Dominican Republic, East Africa, Egypt, Ethiopia, Europe, Fiji, France, Georgia, Germany, Greece, Greenland, Guatemala, Haiti, Hawaii, India, Indochina, Indonesia, Iran, Iraq, Israel, Italy, Japan, Kenya, Lebanon, Libya, Madagascar, Malawi, Malaysia, Marianas, Mauritius, Mediterranean, Mexico, Moldova, Morocco, Nepal, Netherlands, New Zealand, Nigeria, North America, Norway, Pacific, Pakistan, Papua New Guinea, PNG, Peru, Philippines, Portugal, Romania, Russia, Rwanda, Saudi

Use

Mostly the young seeds are eaten. They can be eaten raw or cooked.
Sometimes the young pods and leaves are eaten. The flowers are eaten in salads. The sprouted seeds are eaten.
The young leaves and buds are cooked as a vegetable.
The dry seeds are eaten. They are used in soups and stews and ground into flour.
Roasted seeds are used as a substitute for coffee.

Cultivation

Plants are grown from seed. Seed can be collected for re-sowing. A spacing about 5 cm apart in rows 25 cm apart is suitable. Seed can be 3-5 cm deep. If rotting is a problem, plants can be supported off the ground. Plants need inoculation with bacteria for good production. For dried peas plants are cut when mature then dried and threshed.

Production

Nutritional Values

Pisum sativum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed - raw	78.5	283		5.8	300	25	1.9	0.7
seed - boiled	80.0	223		5.0	300	15	1.2	0.5
leaves					89			

Fabaceae

Common names

Madras thorn,

Scientific name

Pithecellobium dulce

Edible portion

Fruit, Aril, Pods, Seeds,

Description

A shrub or small tree. It grows up to 10 m tall but can be 15-25 m tall. The trunk can be 50-60 cm across. There are many branches. The branches are spiny. These are in pairs and are 4-10 mm long. The young leaves are usually reddish. The leaves are twice compound with four leaflets. There is a small spine between the leaflets. The flowers are greenish white in rounded dense heads about 1 cm across. The pods are often twisted spirally. They are 10 to 18 cm long and red when ripe. They are about 1 cm wide and contain 6 to 8 black shiny seeds surrounded by a white to red fleshy aril or pulp. The seeds are flattened and 9 mm long by 7 mm wide and 2 mm thick.

Distribution

A tropical plant. It is native to C and S America. Common and widely distributed throughout the Philippines. It suits dry coastal areas probably below 800 m altitude. It can grow in low and medium altitudes and in wet and dry areas. It needs light. It can tolerate drought. It can grow on a range of soil types. Well drained soils are best but it can grow in clay soils. In Nepal it grows to about 700 m altitude.

Found in:

Africa, Asia, Bahamas, Bangladesh, Belize, Bhutan, Brazil, Burma, Burundi, Cambodia, Central America, Chad, China, Colombia, Congo, Costa Rica, Djibouti, Dominican Republic, East Africa, Ecuador, Egypt, El Salvador, Ethiopia, Fiji, French Guiana, Ghana, Guatemala, Guyana, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Iran, Iraq, Jamaica, Kenya, Laos, Madagascar, Malawi, Malaysia, Mauritius, Mexico*, Mozambique, Myanmar, Nepal, New Caledonia, Nicaragua, Nigeria, North America, Pacific, Pakistan, Panama, Papua New Guinea, PNG, Peru, Philippines, Reunion, Saudi Arabia, Seychelles, Sierra Leone, Somalia, Southern Africa, South America, Sri Lanka, Sudan, Suriname, Taiwan, Tanzania, Thailand, Timor, Togo

Use

The fleshy pulp around the seeds in the pods is eaten raw.
The roasted seeds are eaten. They are also mixed with curries.
The seed oil is eaten.
CAUTION It is recorded as causing haematuria.

Cultivation

Plants can be grown by seeds or cuttings. Seed takes 2 weeks to germinate. Plants can be grown by marcottage, grafting or budding. Pods can be harvested by climbing or using long bamboo poles.

Production

Plants grow quickly. They can be pruned and cut back to regrow. Seedling trees take 5-8 years to start producing fruit. Pods ripen 2-3 months after flowering. Pods split open at maturity so they need to be eaten within a few days.

Nutritional Values

Pithecellobium dulce

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit-aril dried	7.8		78	3.0	25 IU	133	0.5	

Anacardiaceae

Common names

Burdekin plum, Tulip plum, Lumba, Woigiek, Injo wato,



Scientific name

Pleiogynium timorense

Edible portion

Fruit, Seeds,

Description

A medium sized deciduous tree. It can grow to 20-45 m high. It spreads 8-15 m wide. It can have buttresses. The bark is hard, grey-brown and cracked. Young growth is usually hairy. The leaves are compound. They are 10-18 cm long. The leaflets are on opposite sides of the stalk. New growth is red-brown. There are 5-11 leaflets and they are 4-10 cm long by 2-6 cm wide. The male flowers are in groups 15 cm long. The female flowers are in groups 5 cm long. The flowers are 0.8 cm across. They are white. The fruit are small and purple. They are 3-4 cm across. They have a thin acid pulp and a large irregular seed. The fruit occur singly or in bunches in the axils of leaves. They contain 5-12 seeds in a woody shell. The flesh is edible. The flesh can be white or purple.

Distribution

A tropical plant. It is native to Malesia and Australia. It grows in open forest and coastal scrub. It suits tropical, subtropical and warm temperate regions. It needs well drained soil and a sunny position. It can tolerate light frost. It can tolerate slightly salty conditions. In Wittunga Botanical Gardens Adelaide.

Found in:

Africa, Asia, Australia, Cook Is., Fiji, India, Indonesia, Malaysia, North America, Pacific, Papua New Guinea, Philippines, PNG, Solomon Islands, Timor, Tonga, USA,

Use

The flesh of the fruit is used to make jam.
The seeds are edible.

Cultivation

Plants are grown from fresh seed. The seeds germinate erratically. It is best to scratch the hard seed coat then soak them in warm water for 24 hours. They can also be grown by cuttings and layering.

Production

Seedling trees take 7 years to produce fruit. Trees can produce large crops. Fruit are usually gathered after they have fallen from the tree. The fruit need to be softened in paper bags in the dark, or by burying for several days.

Nutritional Values

Pleiogynium timorense

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	72.7	298		1.3		6	0.9	1.1

Dracaenaceae

Common names

Native Dracaena, Chang hua long zue shu, Semar, Sudji,

Scientific name

Pleomele angustifolia

Edible portion

Leaves, Shoots,

Description

A tall slender shrub. It forms suckers. It has rhizomes or underground stems. It grows 3-8 m high and spreads 1-2 m wide. It can often be sprawling or climbing. The stems are slender and pithy. They are densely covered with scars from the leaf sheaths. The bark is dark grey. The leaves are 12-40 cm long by 2-3 cm wide. They are strap like. They are green, soft and pointed. They are crowded near the top of a stem. They occur in whorls or rings. The flower panicle is 15-40 cm long. It is at the end of the branch and has many branches. The flowers are 1.5-3 cm long and white. They have a scent. They are like tubes at the base. They have lobes which are narrow and spreading or curve back. The fruit is a berry. It is 1-1.5 cm across and brownish-red. It has a brownish pulp. It contains 1-3 large seeds.

Distribution

It is a tropical plant. It grows in northern Australia. It grows in sheltered rainforests often near the sea. They are very sensitive to cold. It needs a shady position and well drained soil. In China it grows in forests and thickets.

Found in:

Africa, Andaman Islands, Asia, Australia, Bhutan, Burma, Cambodia, China, India, Indochina, Indonesia, Laos, Madagascar, Malaysia, Myanmar, Pacific, Papua New Guinea, PNG, Philippines, Taiwan, Thailand, Timor, Vietnam,

Use

The very young leaves are cooked and eaten.
They are also pounded and mixed with water to give a juice used to colour rice green.
The roasted fruit are eaten.

Cultivation

It can be grown from seed which must be sown fresh. It can also be grown from cuttings which strike easily. As well it can be grown from dividing the basal clump of the plant.

Production

Nutritional Values

Pleomele angustifolia

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Asteraceae

Common names

Luntas, Beluntas, Beluntas paya, Baluntas, Khlu, Kukronda, Munjhu, Rukha, Indian sage, Lontas,



Scientific name

Pluchea indica

Edible portion

Leaves as condiment, Flowers,

Description

A small shrub. It grows 1 m high. The leaves are simple and 1-2.5 cm long by 6-8 mm wide. The flowers occur in a panicle of heads at the ends of branches. The flower heads are 3 mm across. They are mauve. The fruit is a brown nut about 1 mm across.

Distribution

A tropical plant. It often grows in salty locations. It grows around the coast. It is often near sea level and in mangroves.

Found in:

Asia, Australia, China, India, Indonesia, Malaysia, Pacific, Pakistan, Papua New Guinea, PNG, SE Asia, Thailand, Timor,

Use

The leaves are eaten as a vegetable and as a flavouring.
The flowers are also eaten cooked.

Cultivation

Production

Nutritional Values

Pluchea indica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	86.0	176	42	1.8			5.6	

Plumbaginaceae

Common names

Ceylon Leadwort,



Scientific name

Plumbago zeylanica

Edible portion

Caution - poisonous,

Description

A herb. It grows as a shrub to 1-3 m tall. It can spread to 2 m wide. The branches are spreading. The stems are ribbed. The base of the leaf stalk can be ear shaped. The leaf blade is oval. It is 5-8 cm long by 2.5-4 cm wide. They can be larger or smaller. The base is wedge shaped and it tapers to the tip. There are 5-70 flowers in a flower cluster. The flowers are white or pale blue. The fruit is a cylindrical capsule. The seeds are red-brown. They are 7 mm by 1.5 mm.

Distribution

It suits tropical and subtropical locations. It is damaged by frost. It suits shaded sites. It can grow in acid or slightly alkaline soils. It grows between 100-1600 m altitude in S China.

Found in:

Africa, Asia, Australia, Botswana, Burma, China, East Africa, Ethiopia, Fiji, Hawaii, India, Indochina, Indonesia, Malawi, Malaysia, Mozambique, Myanmar, Norfolk Island, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, South Africa, Southern Africa, Sri Lanka, Swaziland, Taiwan, Thailand, Timor, USA, Vietnam, Zambia, Zimbabwe,

Use

CAUTION: It is probably mainly used as a medicine.

Cultivation

Plants can be grown from seed or cuttings of firm young growth.

Production

Nutritional Values

Plumbago zeylanica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Araliaceae

Common names

Scientific name

Polyscias cumingiana

Edible portion

Leaves,

Description

A shrub. It grows 2-5 m high. The leaves are alternate and they are divided into leaflets along the stalk. The leaves are 50 -100 cm long by 6-12 cm wide. There is a sheath base The flowers are in a large branched group at the end of the stalk.

Distribution

A tropical plant. It is usually grown at low altitudes but can be up to 1700 m altitudes.

Found in:

Fiji, Pacific, Papua New Guinea, PNG, Timor, Vanuatu,

Use

Cultivation

Production

Nutritional Values

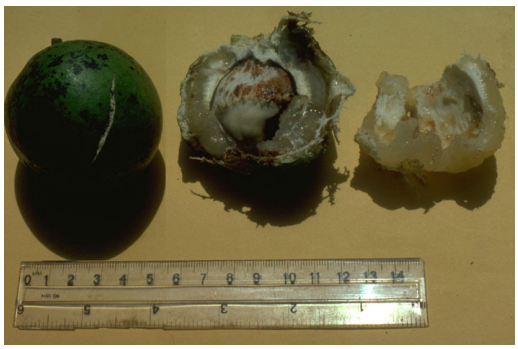
Polyscias cumingiana

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Sapindaceae

Common names

Ton, Kasai, Fijian longan, Dawa, Matoa, Hamwo, Pacific lychee, Asam kuang, Kayu sapi, Leungsir, Langsek anggang, Taun, Tawa, Tava,



Scientific name

Pometia pinnata

Edible portion

Fruit, Seeds, Vegetable,

Description

An evergreen tree. It can grow into quite a large tree up to 40-50 metres high. At the base of the tree there are often large buttresses and the bark is a bright orange brown colour and rough and scaly. The hard timber is widely used. The young leaves and twigs of the tree are bright red. The lowest pair of leaflets are small and clasp the stem like stipules. There are often 5-11 pairs of leaflets along a stalk and the leaflets at the centre are often the largest. The leaflets droop from long stalks. The flowers are produced in clusters on stalks that are up to 50 cm long and grow near the ends of the branches. The flowers are small and yellowish green and do not have any scent. The skin of the ripe fruit peels off like a mandarin. The edible part is a clear layer around the seed, like in a rambutan. An inedible kind also occurs. The fruit is about 6 cm across and the seed about 3 cm across.

Distribution

A tropical plant. It is native from Malaysia to Polynesia. It occurs in lowland and lower montane forest. They occur from sea level to 700 m altitude. They grow along riverbanks and near swamps. (The inedible kind occurs on the ridges and is the more useful timber tree.) In Samoa it grows from sea level to 500 m altitude. It usually grows in areas with an annual rainfall of 1500 -5000 mm. It can grow in soils with a pH from 5 to 8.

Found in:

Andamans, Asia, Australia, Brunei, Burma, Cambodia, China, Cook Islands, Fiji, Hawaii, India, Indochina, Indonesia, Laos, Malaysia, Micronesia, Myanmar, New Caledonia, Niue, Pacific, Papua New Guinea, PNG, Philippines, Samoa, Singapore, Solomon Islands, Sri Lanka, Taiwan, Thailand, Timor, Tonga, Vanuatu, Vietnam, Yap,

Use

The fleshy layer (aril) around the seed is eaten raw.
CAUTION The edible form of ton must be chosen. The actual seeds have been reported to be poisonous.
The seed are roasted and eaten in parts of the Solomons. They are like sour cheese in taste and smell. The seeds can be dried and stored.

Cultivation

Dispersal of self sown trees is probably by bats or fresh water. Trees are produced from seeds. Seedlings are transplanted from a nursery site. The aril around the seed is eaten raw. Roasted seeds are recorded as eaten in other countries.

Ton are planted from seed. Also self sown seedling are transplanted and some trees occur wild in the bush. The seeds are probably spread around by fruit eating bats. It probably takes about 5 years from planting until the trees bear fruit.

Production

Plants grow quickly. Fruiting is distinctly seasonal with a short and clearly defined season, early in the year. There also appears to be a significant fluctuation between years on the amount of fruit set. This does not follow a clearly biennial pattern. In Santa Cruz it has been observed that fruit set does not always follow flowering. The cause is not known. The season is very short and is between November and March.

Nutritional Values

Pometia pinnata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	87	211	50	1.1	3	5	0.5	0.3

Portulacaceae

Common names

Inland pigweed,

Scientific name

Portulaca australis

Edible portion

Root,

Description

Distribution

Found in:

Australia, Timor,

Use

Cultivation

Production

Nutritional Values

Portulaca australis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Potamogetonaceae

Common names

Scientific name

Potamogeton distinctus

Edible portion

Leaves, Stem,

Description

A pond-weed that grows under water.

Distribution

Found in:

Asia, China, Japan, Korea, Timor,

Use

The leaves and stems are cooked and eaten.

Cultivation

Plants can be grown by root division.

Production

Nutritional Values

Potamogeton distinctus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Sapotaceae

Common names

Lucmo, Lucuma,

Scientific name

Pouteria lucuma

Edible portion

Fruit,

Description

A medium sized tree 8-17 m high. It can spread 6-10 m across. It has many branches. The leaves are alternate. They are oblong or sword shaped. They are 25 cm long by 10 cm across. The fruit are round or oval and green. The pulp is bright yellow. There are some named cultivated varieties.

Distribution

A tropical plant. It is subtropical and grows at 3,000 to 3,300 m altitude in Peru. It can tolerate frost and grow in cooler climates. It can adapt to drier conditions. It grows in regions with 1,000-1,800 mm rain per year. The temperatures are 20-22° C.

Found in:

Andes, Bolivia, Chile, Colombia, Ecuador, Hawaii, North America, Peru, South America, Timor, USA,

Use

The fruit are eaten fresh or used to make ice-cream.
They are also used for puddings and cakes.
It can be dried and stored as a flour.

Cultivation

Plants are usually grown from seed.

Production

Fruit are produced around the year. Fruit can weigh 1 kg. The fruit are easily storeable.

Nutritional Values

Pouteria lucuma

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Sapotaceae

Common names

Northern Yellow Boxwood, Black Ash, Yellow Teak, Shan lan, Pokok barat laut, Tuak-tuak, Tawak, Nasi-nasi merah, Ara temenka, Ara

Scientific name

Pouteria obovata

Edible portion

Fruit, Kernel, Nut,

Description

Shrubs or trees which can be up to 40 m tall. The trunk is 50 cm across. The trunk is crooked. It has buttresses. The bark is brown. The small branches are angular. They have rust coloured hairs when young. The leaves are scattered along the twigs. The leaf stalk is 0.5-5 cm long. The leaf blade is oval to sword shaped and 6-24 cm long by 1.5-15 cm wide. They are membranous, papery, or leathery. There are 5-13 pairs of secondary veins. The leaves are rust coloured and hairy on one side and smooth and shiny on the other. Several flowers (1-20) occur on clusters in the axils of leaves. They can be female or of both sexes. The flower petals are 2-3 mm long. They are white to greenish. The fruit are white, yellow, red or blue when fresh. They are round to oval and about 1.5 cm across. It is smooth and with yellow sweet flesh. There are 1-5 seeds inside. The seeds are long and 8-12 mm long by 2-3.5 mm across. They are yellow with a narrow scar.

Distribution

A tropical plant. They grow in thickets at low elevations. It occurs in wet tropical forests. It can grow in cooler conditions. It can grow in poor soil conditions. It grows on rocky and sandy coasts on the landward side of mangroves. In Indonesia it can grow in lowland forest up to 400 m altitude. In the Andes it grows from sea level to 2,700 m altitude.

Found in:

Asia, Australia, Burma, Cambodia, Chile, China, Ecuador, India, Indochina, Indonesia, Japan (Bonin and Ryukyu Islands), Laos, Malaysia, Myanmar, New Guinea, Pacific, Pakistan, Papua New Guinea, Peru, Philippines, PNG, Solomon Islands, South America, Taiwan, Thailand, Timor, Vietnam,

Use

The fruit is eaten fresh.
It is also made into a drink. The fruit are dried and ground into a powder and stirred into milk.

Cultivation

Plants are grown from fresh seed.

Production

Plants can produce in 5 years from seed.

Nutritional Values

Pouteria obovata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Sapotaceae

Common names

Sapote, Mamey sapote,



Scientific name

Pouteria sapota

Edible portion

Fruit, Kernel, Seeds, Nut,

Description

A large tree. It grows 20-45 m tall. The trunk can be 1 m across. There can be buttresses. The branches are thick. There is a dense covering of leaves. The leaves are oval or sword shaped. They are towards the ends of the branches. They are arranged in spirals. The leaf stalk is 2-5 cm long. The leaf blade is 10-30 cm long by 4-10 cm wide. The flowers are small and almost without stalks. They grow in large numbers under branches and along leafless branches. They are in clusters of 6-15 in the axils of fallen leaves. Each flower has 5 true and 5 false stamens. The fruit is large and reddish brown. It has a rough, hard skin. The fruit can be 8-25 cm long. The flesh can be red, orange or greyish. Many varieties occur. They can be long or rounded. The amount of fibre in the flesh varies. The fruit contain one or more seeds. The seeds are large and have a sharp end. They are dark brown and smooth and shiny on one end.

Distribution

A tropical plant. It is native from Mexico to Central America. It does best in tropical climates. It prefers a rainfall above 1900 mm per year. They are susceptible to frost. It cannot tolerate low temperatures. Temperatures between 25°-28°C are best. They cannot tolerate drought. It grows naturally at low elevations in Central America. Trees grow from sea level to 1400 m altitude. A distinct dry season limits the fruiting season. It suits hardiness zones 10-11.

Found in:

Asia, Australia, Belize, Brazil, Cambodia, Central America, Colombia, Costa Rica, Cuba, Dominican Republic, El Salvador, Guatemala, Haiti, Hawaii, Hispaniola, Honduras, Indochina, Indonesia, Malaysia, Mexico*, Nicaragua, North America, Pacific, Panama, Philippines, Puerto Rico, Sierra Leone, South America, Timor, USA, Venezuela, Vietnam, West Africa, West Indies,

Use

The fruit is eaten fresh and raw or in icecream and desserts. Fruit are also dried or preserved. It is added to guava cheese and made into jam.
Unripe fruit are used as a vegetable.
The seeds are ground and made into a confection or a drink.

Cultivation

Trees can be grown from seed. Seeds take 40-70 days to germinate. This can be made quicker by breaking the seed coat. The best varieties are grafted. Shoots for grafting are best selected during the summer dormant period when the tree has no leaves. Plants can be grown by layering.

Production

Trees are slow growing. Grafted trees may bear in 1-4 years. Seedling trees take 8-10 years to fruit. Trees can continue to produce fruit for 100 years. Fruit take about 1 year to mature. A fruit can weigh 2.5 kg.

Nutritional Values

Pouteria sapota

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	65.6	506		1.7	400	29	1.1	
fruit	67.6	392		1.4		23	0.9	

Urticaceae

Common names

Hosskhoyik, Aterno, Atenu, Pathura harjora, Chiple,

Scientific name

Pouzolzia hirta

Edible portion

Leaves, Root,

Description

A small shrub or herb which lies along the ground. It grows to 1.5 m tall. It has many branches. The leaves are opposite and without leaf stalks. The leaves are long and sword shaped and with 3-5 side veins. The flowers are like a ball. The male and female flowers are separate and the flower ball is produced in the axils of leaves. The flowers are pinkish. The fruit is dry. It is enclosed in the outer ring of flower parts.

Distribution

A tropical plant. It is common in wet land. It is often in ditches, creek banks and the edges of ponds. In Nepal it grows between 500-2400 m altitude. It grows in moist, open places.

Found in:

Asia, Australia, India, Indochina, Nepal, Pacific, Papua New Guinea, PNG, Timor, Vietnam,

Use

The leaves are eaten raw or cooked.
The fresh root is chewed.

Cultivation

The plants are grown from seeds or root offshoots.

Production

Nutritional Values

Pouzolzia hirta

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Lamiaceae

Common names

Creek Premna, Mooney do, Ghebboon nellie,



Scientific name

Premna serratifolia

Edible portion

Fruit, Seeds,

Description

A spreading shrub. It grows 2-4 m tall. It can be 12 m tall. The leaves are opposite and large. They are oval and shiny green. They are leathery and have prominent veins. The midrib is raised underneath the leaf. The flowers are in clusters near the ends of branches. They are greenish white. Fruit are small and green. They turn black at maturity.

Distribution

A tropical plant. It occurs in coastal vine thickets and on dunes. It grows from sea level to 500 m altitude in Samoa. In Fiji it is usually below 200 m altitude. Mt Cootha Botanical Gardens.

Found in:

Africa, Andamans, Asia, Australia, East Africa, Fiji, India, Kiribati, Nauru, Niue, Pacific, Papua New Guinea, PNG, Samoa, Timor, Tonga, Tuvalu, Vanuatu,

Use

The seeds are eaten by children in Tuvalu.
The ripe fruit have been eaten with yam in Vanuatu.
The leaves and tender shoots are cooked and eaten as greens.
The fruit is eaten mixed with rice in the Andaman Islands.

Cultivation

Production

Nutritional Values

Premna serratifolia

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Algaroba,

Scientific name

Prosopis pallida

Edible portion

Pods,

Description

A spiny tree or shrub. It grows 4-10 m high. The trunk is twisted. The twigs usually have 1 or 2 straight spines in the axils of leaves. The leaflets are 2-4 times as long as wide. They are rough. The flowers are green or yellow. The pods are smooth. They are 5-25 cm long and about 1 cm wide. They are yellowish-brown. The seeds are brown.

Distribution

A tropical plant. It grows naturally on red alluvial soils and coastal plains.

Found in:

Australia, Central America, Hawaii, Pacific, Puerto Rico, Timor, USA,

Use

The sweet pods are made into syrup used in drinks.

Cultivation

Production

Nutritional Values

Prosopis pallida

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Asparagaceae

Common names

Native Asparagus, Satavari, Asparagus fern, Kuril, Chang ci tian men dong, Satavar, Satabari, Sangga langit, Niesie saub, Skikirie, Me:m sa:



Scientific name

Protasparagus racemosus

Edible portion

Roots, Shoots,

Description

A straggling shrub. The roots and underground stems produce fleshy tubers at their ends. The stems are climbing. It has many branches. It is slender and about 1.5 m high. The shoots are covered with spines which curve backwards. They are 1.5 -2 cm long on the main stem and smaller on the branches. The stem is leaf like and flattened. It normally has ridges or lines along it. They are curved and with a channel beneath. The flowers are small and white. They have a smell and contain both sexes. The fruit is a berry and round.

Distribution

A tropical plant. It occurs throughout Nepal from 300-2200 m high. It grows in dry places. In China it grows in broad leafed forest between 2100-2200 m altitude. It grows in rocky and gravely forests. It is drought tolerant. It is damaged by frost. Mt Cootha Botanical Gardens.

Found in:

Africa, Asia, Australia, Bhutan, Burma, Cambodia, China, East Africa, Ethiopia, India, Indochina, Indonesia, Malaysia, Myanmar, Nepal, Pakistan, Sikkim, Sri Lanka, Sudan, Thailand, Timor,

Use

The young shoots are cooked as a vegetable.
The roots are also eaten as a vegetable. They are candied.

Cultivation

It is grown from seed or by dividing the roots.

Production

Nutritional Values

Protasparagus racemosus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Myrtaceae

Common names

Guava,



Scientific name

Psidium guajava

Edible portion

Fruit, Seeds, Leaves, Seeds - oil,

Description

A small tree or shrub 8-10 m high. It is evergreen. It has smooth bark which is mottled. The bark peels off in smooth flakes. The plant branches close to the ground. The branches are four angled. Trees are shallow rooted. The leaves are opposite, dull green and somewhat hairy. They are oval and somewhat pointed at both ends. They are 15 cm long by 2-5 cm wide. The leaves have short leaf stalks. The flowers are white and showy and borne in loose irregular types of arrangements of one to three flowers. The petals are 1.5 to 2 cm long. Both self and cross pollination occurs due to insects. The flowers grow in the axils of leaves on new growth. The fruit are rounded and 4 to 5 cm long. They are green but turn yellow when ripe. The outer covering is firm and encloses a pink or nearly white sweet smelling edible pulp. This contains many seeds. It better selected varieties both the skin and the seeds are fully edible. Fruit vary from very acid to very sweet.

Distribution

A tropical plant. It is native to C and S America. Guavas thrive in both humid and dry tropical climates. They do best in sunny positions. They grow wild and are also cultivated. In Papua New Guinea it grows well from sea level up to 1600 m and occurs up to 1900 m. In Nepal it grows up to 1400 m altitude. It is killed by frost. They fruit better where there is a cooler season. Temperatures near 30°C give best production. They are very widely distributed in open places and secondary forests throughout the islands of the Philippines and Papua New Guinea and can become weedy under some conditions. They produce better in soils with good organic matter. They prefer a well drained soil but can stand some water-logging. A pH of 5 to 7 is suitable. It can tolerate a pH from 4.6-8.9. Trees cannot tolerate salty conditions. It suits hardiness zones 9-12.

Found in:

Africa, Amazon, Andamans, Angola, Anguilla, Antigua and Barbuda, Argentina, Asia, Australia, Bahamas, Bangladesh, Barbados, Belize, Bolivia, Brazil, Burma, Cambodia, Cameroon, Cape Verde, Central Africa, Central America, China, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, East Africa, Ecuador, El Salvador, Ethiopia, Fiji, French Guiana, Gabon, Galapagos, Ghana, Grenada, Guadeloupe, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Hawaii, Hispaniola, Honduras, India, Indochina, Indonesia, Jamaica, Japan, Kenya, Madagascar, Malawi, Malaysia, Maldives, Mali, Martinique, Mauritania, Mexico, Montserrat, Mozambique, Myanmar, Nepal, Netherlands Antilles, Nicaragua, Norfolk Island, North

Use

The young leaves are eaten raw or cooked.
The fruit are eaten raw.
The fruit can be used for jams and jellies. Half ripe fruit are added to help the jelly set.
The liquid from boiled guava seeds is used to flavour cheese.
The seeds are the source of an edible oil.

Cultivation

They are mostly grown from seeds but seedling trees vary in quality. Seeds remain viable for a year or longer. Seeds germinate in 2-3 weeks but can take 8 weeks. Selected trees can be propagated by budding or grafting. They can also be propagated by layering, root cuttings or stem cuttings if hormones are used. For stem cuttings the tips are used and grown under mist at 28-30°C with bottom heat. Suckers can also be used. Using vegetative methods of propagation enables better fruit kinds to be preserved. In the lowland tropics trees are self sown. As fruit are produced on new season's growth, pruning does not affect fruiting greatly. Trees should be managed to give the maximum number of new vigorous new shoots. Trees can be pruned for shape. Trees can be grown at 2.5 m within rows and 6 m apart between rows.

Production

Seedling trees may begin to bear 2-3 years after transplanting. Pruning back the tips slightly increases fruit production. Fruit taste best if ripened on the tree. Ripening can be hastened by placing them in a brown paper bag with a banana or apple. Mature fruit which have not changed colour can be stored 2-5 weeks at temperatures of 8-10°C and relative humidity of 85 -95%. Mature fruit ripen in 2-3 days at normal temperatures and will keep for 7 days.

Nutritional Values

Psidium guajava

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	77.1	238		1.1	60	184	1.4	0.2

Fabaceae

Common names

Winged bean, Thua phuu, Prapiey chrung, Four angled bean, Manilla bean, Goa bean, Su-ling dou, Kecipir, Shikakumame, Kacang botor,



Scientific name

Psophocarpus tetragonolobus

Edible portion

Seeds, Pods, Leaves, Flowers, Roots, Vegetable,

Description

A climbing perennial bean up to 3 or 4 m tall. It can re-grow each year from the fattened roots. The stems twine around supports or trail over the ground. The leaves have 3 leaflets. The leaf stalks are long. The leaflets are 8-15 cm long. The flowers are blue or white. They occur on the ends of branches from within the axils of leaves. Pods have wavy wings or are roughly square in cross section. They are 6-36 cm long with 5-30 seeds. Seeds can be white, yellow, brown or black. They are bedded in the solid tissues of the pod. The seeds are round smooth and brown with a small hilum. Nodules on the roots are many and large.

Distribution

A tropical plant. The bean grows from sea level up to about 1850 m altitude in the tropics. It normally only produces tubers between 1200 and 1850 m. Because of the effect of daylength it will not produce flowers or pods at places far removed from the equator. Photoperiodism limits pod availability in higher latitudes but this should not be significant in the equatorial latitudes. Winged bean is a short day plant. It needs a daylength less than 12 hours. Winged bean is a plant ideally suited to the tropics including the hot humid lowlands. Papua New Guinea is a centre of diversity for winged beans and they are grown in many areas of the country. They can be seen from sea level up to about 2300 m altitude although they are less common above 1850 metres and normally only produce tubers between 1200 and 1850 m altitude. For maximum seed production winged beans need temperatures between 23°C and 27°C and for tubers the temperatures should be between 18°C and 22°C

Found in:

Africa, Asia, Brazil, Burma, Cambodia, Cameroon, Caribbean, Central Africa, China, Congo, Egypt, Fiji, Ghana, Hawaii, India, Indochina, Indonesia, Ivory Coast, Japan, Laos, Malaysia, Marianas, Mauritius, Myanmar, Nigeria, Pacific, Papua New Guinea, PNG, Philippines, Reunion, Senegal, Sierra Leone, Singapore, Solomon Islands, South America, Sri Lanka, Tahiti, Taiwan, Tanzania, Thailand, Timor, USA, Vanuatu, Vietnam, West Africa, Zambia,

Use

The young pods are edible.
The ripe seeds are edible.
The young leaves are edible.
The flowers are edible.
The root tubers are edible.
The seeds can be used to extract an edible oil.

Cultivation

Seeds are sown at the beginning of the rainy season. Seeds germinate and grow slowly for the first 3 or 5 weeks. For tubers, vines are pruned off at about 1 m high (or left unstaked) and some flowers are removed.
Winged beans are grown for their edible roots, edible leaves, edible flowers, edible pods and edible seeds. The cultivation procedures vary slightly depending on which product is the preferred goal. The two main types of winged bean are short podded ones which are used for tubers and long podded ones which have poor tubers. Tuber production is not as efficient in tropical lowland conditions.

Production is from seed.
Phases of development:-

Production

The first green pods are ready about 10 weeks after sowing. Tubers are ready after 4-8 months. Seed yields of 1.2 tons/ha and tuber yields of 4 tons/ha are possible. A single plant can produce up to 75 pods. Dry bean yields of 45 to 330 g per plant can be produced depending on variety. Tuber yields of 5500 to 12000 kg per hectare have been produced. Seeds can contain a trypsin inhibitor which reduces protein digestibility. This inhibitor is destroyed by soaking seeds then boiling them well. Tubers can also contain this chemical and need to be well cooked.

Nutritional Values

Psophocarpus tetragonolobus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed	8.5	1764	422	41.9	0	Tr	15.0	4.5
roots	57.4	619		11.6	0	0	2.0	1.4
seeds - young	87.0	205		7.0	13.0	18.3	1.5	0.4
leaves	95.0	197		5.0	809	30	6.2	1.3
fresh pods	92.0	105	25	2.1				

Fabaceae

Common names

Scientific name

Psoralea badocana

Edible portion

Root,

Description

A strong smelling shrubby herb. It has ridged woolly hairy stems. It grows 1.2-3 m tall. The leaves are oval or sword shaped and 5-10 cm long by 2-5.5 cm wide. The leaf stalks are 3 cm long. The leaves have softly grey hairs over them. The largest leaves have slightly wavy edges. The flowers are 1 cm across and occur in round heads. 1.5-2.5 cm long. There are normally 3 flowers at each node. The outer ring of sepals of the flower have 2 deep lips. The flowers are blue with a white standard. The fruit is an oval pod 3.5 mm long and 2.5 mm wide. It has a network of veins over it and is compressed. It has one seed.

Distribution

A tropical plant. It grows in tropical places. In Papua New Guinea it grows from sea level to 120 m altitude. It grows naturally in grassland and on sand dunes.

Found in:

Asia, Australia, Pacific, Papua New Guinea, PNG, Philippines, Timor,

Use

Cultivation

Production

Nutritional Values

Psoralea badocana

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Pteridaceae

Common names

Slender brake fern,



Scientific name

Pteris ensiformis

Edible portion

Leaves,

Description

A compact fern. It grows 20-30 cm high and spreads 20-30 cm wide. It has a short creeping rhizome. The fronds are triangle shaped. They are of different lengths. They can be 15-30 cm long. The leaflets at the end are compound with 4-5 pairs of side leaflets cut into 2-6 oval lobes with teeth. Fertile fronds are one and a half times as long as sterile fronds. Some varieties have white or silver markings.

Distribution

A tropical and subtropical plant. It grows in open moist places at low altitudes in the tropics. It grows in damp places including rock crevices and in old stone walls. It suits hardiness zones 10-12.

Found in:

Asia, Australia, Central America, Hawaii, Himalayas, India, Indonesia, Japan, Malaysia, Pacific, Philippines, Polynesia, Singapore, Sri Lanka, Timor, USA, West Indies,

Use

The young fronds are steamed and used as flavouring. They are mixed with other vegetables or put in stews.

Cultivation

Plants can be grown from spores or division.

Production

Nutritional Values

Pteris ensiformis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Burmese Rosewood,



Scientific name

Pterocarpus indicus

Edible portion

Leaves, Flowers,

Description

A medium sized evergreen tree. It grows to 27-30 m high and spreads to 4 m across. The stem is erect and stout. It branches. The trunk is 60-80 cm across. The leaves are compound with an odd number of leaflets. These are oval. The leaves are 20-45 cm long. The leaflets are 6-10 cm long by 3-5 cm wide. It can lose its leaves. The flowers are yellow and woolly. The sepals forming the outer ring of the flowers are brown. The flowers occur as many in a branched flower arrangement. The flowers are bell shaped. The fruit are round pods. These are 5 cm across. They can have 1 or 2 seeds but sometimes 4.

Distribution

A tropical plant. It is native to tropical Asia. It does best in rich, moist, well-drained soils. It needs a protected sunny position. It is damaged by drought and frost. It is often found in coastal swamps along tidal creeks. It usually grows in areas with an annual average temperature of 22-32°C. It can grow in soils with a pH of 4.0-7.4. It suits hardiness zones 11-12.

Found in:

Africa, Asia, Australia, Brunei, Burma, Cambodia, Caribbean, Central Africa, Central America, China, Congo, Cuba, Fiji, Guam, Guyana, Hawaii, India, Indochina, Indonesia*, Jamaica, Japan, Malaysia, Micronesia, Myanmar, North America, Pacific, Palau, Panama, Papua New Guinea, Philippines*, PNG, Puerto Rico, Samoa, Sierra Leone, Singapore, Solomon Islands, Sri Lanka, Taiwan, Tanzania, Thailand, Timor, Trinidad, USA, Vanuatu, Vietnam, West Africa, Yap,

Use

The flowers and very young leaves are eaten.

Cultivation

Plants are grown from seed. The seed need treatment to break the hard seed coat. Woody shoots take root easily. It can be grown by air-layering.

Production

It is fast growing. All trees in one area flower at the same time for just a few days due to the drop in temperature with the first rains.

Nutritional Values

Pterocarpus indicus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

Pomegranate,

Lythraceae



Scientific name

Punica granatum

Edible portion

Fruit, Seeds, Spice,

Description

A shrub. It grows up to 2-6 m tall. It has short thorns. It can grow up to 10 m tall. Usually trees lose their leaves at one season during the year. The trunk is covered by reddish-brown bark. Trees often sucker near the base. The leaves are opposite, entire and 8 cm x 1.5 cm. Leaves narrow towards the base. It has large scarlet flowers. These are at the ends of branches. 1-3 flowers occur together. The fruit is round, leathery skinned and up to 10 cm across. It is yellow brown in colour. Inside there are angular hard seeds in a juicy yellow pulp. The seeds are 10 mm long. There are many named varieties.

Distribution

A Mediterranean climate plant. It is native from SE Europe to the Himalayas. It suits drier subtropical climates. It suits areas with a long hot dry summer and cool winter. A temperature of 35-38°C is best for good fruit development. A humid climate affects fruit formation. They can tolerate some salinity. They have borne fruit in Papua New Guinea at 1620 m altitude. They are mostly coastal up to 500 m in the tropics. Trees are severely damaged by temperatures below -11°C. In Brisbane Botanical Gardens. In Nepal they grow to about 2700 m altitude. It grows in the drier parts of West Africa. It suits hardiness zone 8-11.

Found in:

Afghanistan, Africa, Arabia, Armenia, Asia, Australia, Azerbaijan, Balkans, Bangladesh, Bosnia, Brazil, Cambodia, Cameroon, Caucasus, Central Africa, Central Asia, China, Cuba, Dagestan, East Africa, Egypt, Ethiopia, Europe, Fiji, France, Georgia, Ghana, Greece, Guyana, Haiti, Hawaii, Himalayas, India, Indochina, Indonesia, Iran*, Iraq, Israel, Italy, Japan, Kenya, Lebanon, Madagascar, Malawi, Malaysia, Maldives, Mali, Mauritania, Mediterranean*, Mexico, Nepal, Nigeria, Norfolk Island, North America, Pacific, Pakistan, Palestine, Papua New Guinea, PNG, Philippines, Portugal, Russia, Sierra Leone, Somalia, South Africa, Southern Africa, South America, Spain, Sudan, Switzerland, Syria, Tajikistan, Tanzania, Tasmania, Thailand

Use

The juicy pulp around the seeds is eaten.
The juice can be used for a drink. It provides a red colour.
The seeds are dried with their aril and used in the Indian condiment *Anardana*.
The fruit are used in sauces, soups, meat dishes, salads and other dishes.
The flowers are eaten.

Cultivation

They are easily raised by seed. They are best propagated by layering or grafting but cuttings or root suckers can be used. Cuttings root easily. Cuttings 30 to 50 cm long of one year old wood can be used. Pruning of sucker growth and surplus branches is needed. A spacing of 4-5 m is suitable.

Production

Plants grow quickly. Trees bear after about 2-3 years. Fruiting is seasonal. The season tends to be Dec to May. The tree loses its vigour after about 15 years but trees can live for many years. The pomegranate is self-pollinated as well as cross-pollinated by insects. Cross-pollination increases the fruit set. Fruit matures 5 to 7 months after flowering. Fruit need to be picked when mature to prevent splitting. Fruit do not ripen further after harvesting. Fruit develop a distinctive colour and have a metallic sound when tapped, when they are ripe. A well maintained tree can produce 150-200 fruit in a year.

Nutritional Values

Punica granatum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit - raw	81.0	285		1.0	0	6	0.3	0.1

Brassicaceae

Common names

Chinese radish, Daikon, Loh-bak, Mooli, Lobak, Moo, Labanos, Rabu, Phakkat-hua, Cu cai trang, Lo bok, Muli, Lao bo, Lobak, Oriental



Scientific name

Raphanus sativus var. longipinnatus

Edible portion

Roots, Leaves, Vegetable,

Description

A cabbage family plant like a large radish. It has a large fleshy root and deeply divided leaves. The taproot is long and white. It takes one or two years to complete its life cycle. The stems can be 20-100 cm high. The leaves near the base are long. They are divided and have coarse teeth. The leaves up the stem are simple and narrow. The flowers develop at the top. They are usually white with purple veins. The fruit are pods about 3-8 cm long and 1.25 cm across. They have a long tapering beak. There are 6-12 round seeds. These can be yellow or brown.

Distribution

A temperate plant. It is more common in lowland areas in the tropics. It needs a rich loose fertile soil. It suits hardiness zones 6-9.

Found in:

Asia, Australia, China, East Africa, Fiji, Hawaii, India, Indochina, Indonesia, Japan, Korea, Malawi, Malaysia, Pacific, Papua New Guinea, PNG, Philippines, Singapore, Solomon Islands, Sri Lanka, Tasmania, Thailand, Timor, USA, Vanuatu, Vietnam,

Use

The roots are cooked and eaten. They are used in stir-fried dishes and soups. They can be pickled.
The young leaves can be eaten cooked.
The roots can also be shredded and eaten raw in salads.
The young flowers are stir fried or added to soups.
The young seedlings can be cooked like spinach.

Cultivation

Plants are grown from seeds. A spacing of 15 cm apart in rows is suitable. Often plants are sown more thickly and seedlings are thinned out and eaten. It is possible to save seed from plants.

Production

Plants are ready for harvesting about 50 days after planting.

Nutritional Values

Raphanus sativus var. longipinnatus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Burn moth vine, Mborosan,

Scientific name

Rhynchosia minima var. minima

Edible portion

Root bark, Leaves - tea,

Description

A slender trailing herb. It has a woody rootstock. It has fine hairs. It can lie along the ground. It can be 5 m long. The leaves have 3 leaflets. The leaflets taper to a sharp point at the tip. There are 3 varieties. The flower are 5-10 mm long with a yellow standard. The pods are 20 mm long by 4-5 mm wide. They are narrowed at the base.

Distribution

It is a tropical plant. It grows in open savannah and drier parts of West Africa. It grows between 30-2,440 m above sea level. It grows in areas with an annual rainfall between 1,000-1,270 m above sea level. It can grow in salty soil.

Found in:

Africa, Afghanistan, Angola, Arabia, Argentina, Australia, Bahamas, Barbados, Belize, Bolivia, Botswana, Brazil, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Chile, China, Colombia, Congo, Costa Rica, Cuba, Dominica, Dominican Republic, East Africa, Ecuador, Egypt, El Salvador, Ethiopia, Fiji, French Guiana, Gambia, Ghana, Grenada, Guadeloupe, Guatemala, Guinea, Guyana, Haiti, Honduras, India, Indonesia, Israel, Ivory Coast, Jamaica, Kenya, Lesotho, Malawi, Mali, Martinique, Mexico, Mozambique, Namibia, New Caledonia, Nicaragua, Niger, Nigeria, Oman, Panama, Papua New Guinea, PNG, Paraguay, Peru, Puerto Rico, Rwanda, Samoa, Saudi Arabia, Senegal, Sierra Leone, Somalia, South

Use

The leaves are used for tea and also used as a relish.

Cultivation

Production

Nutritional Values

Rhynchosia minima var. minima

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Euphorbiaceae

Common names

Castor bean, Castor Oil Plant, Jarak, Mahung,

Scientific name

Ricinus communis

Edible portion

Leaves, Oil, CAUTION, POISONOUS, Root,

Description

A small evergreen tree. Often they are grown as annual plants. It grows up to about 6 m high and spreads to 2 m across. The stem is erect, stout and branching. The plant can form suckers. It has leaves with pointy lobes spreading out like fingers on a hand. The leaves are large and glossy. The leaves are on long leaf stalks. The flowers are red and large and woolly. Female flowers are at the top and male flowers lower down. Clusters of flowers produce seed capsules containing 3 spiny seeds. Several different cultivated varieties exist which are chosen for their leaf and flower colour.

Distribution

A tropical plant. It occurs throughout the country of Papua New Guinea up to about 2000 m altitude. It does well in humid areas but needs a well drained soil. It is tolerant to drought and light frost. It needs an open sunny position. It suits hardiness zones 9-12.

Found in:

Africa, Algeria, Argentina, Aruba, Asia, Australia, Bangladesh, Belize, Benin, Botswana, Brazil, Britain, Burkina Faso, Burma, Burundi, Cameroon, Canary Islands, Chile, China, Congo, Costa Rica, Cyprus, East Africa, Egypt, Ethiopia, Europe, Fiji, France, Gabon, Ghana, Guinea, Guinea-Bissau, India, Indochina, Indonesia, Iran, Iraq, Israel, Italy, Ivory Coast, Japan, Jordan, Kenya, Lebanon, Lesotho, Liberia, Libya, Luxemnourg, Malawi, Malaysia, Mali, Mauritania, Mediterranean, Mexico, Morocco, Mozambique, Myanmar, Namibia, New Caledonia, New Zealand, Niger, Nigeria, Norfolk Island, Oman, Pacific, Pakistan, Palestine, Papua New Guinea, PNG, Portugal, Rwanda, Saudi Arabia, Senegal, Seychelles, Sierra Leone, Somalia

Use

People in many PNG villages claim to eat the seeds, cooked. Apparently some less poisonous kinds occur.
The leaves have been recorded as eaten. The roots are also recorded as eaten raw.
CAUTION The plant is normally recorded as deadly poisonous especially seeds, so should never be eaten raw. The poisons are destroyed by heat.
An edible oil has been extracted from the plant. This must be refined before use. It is used for adding butter and nut flavours

Cultivation

It is grown from seed. Often plants are self sown. Seed should be sown directly where the plants are to grow. Seed should be soaked for 24 hours before sowing.

Production

Plants are fast growing. On poor soils plants produce flowers rather than leaves.

Nutritional Values

Ricinus communis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Rosaceae

Common names

Rose-leaf bramble,



Scientific name

Rubus rosifolius

Edible portion

Fruit, Leaves,

Description

A spiny evergreen shrub. It grows to 3 m high and spreads to 3 m across. The stem is trailing and forms suckers. The leaves have 3 to 7 leaflets on opposite sides of the stalk. These are either smooth or hairy with lobed edges. The leaflets are 1-9 cm long. The flowers are white and 3 cm across. The fruit are red and about 1.5 to 2 cm across. They occur on their own or in clusters. They are juicy and tasteless. They have several seeds inside which are very tiny.

Distribution

It is a tropical plant. Plants are resistant to drought and frost. They are common in forests of Luzon, Visayas and Mindanao in the Philippines at low and medium altitudes. They are common in the highlands. In Papua New Guinea, *Rubus rosifolius* grows from 750-2850 m altitude. It suits hardiness zones 9-11.

Found in:

Africa, Asia, Australia, Brazil, Cambodia, Cameroon, Central Africa, Central America, China, East Africa, Ethiopia, Hawaii, Himalayas, India, Indochina, Indonesia, Madagascar, Malawi, Malaysia, Mauritius, Nepal, New Caledonia, Pacific, Papua New Guinea, PNG, Philippines, Polynesia, Puerto Rico, Solomon Islands, South Africa, Southern Africa, South America, Swaziland, Timor, USA, Vanuatu, Vietnam, West Africa, Zambia, Zimbabwe,

Use

The fruit are eaten raw. They can also be stewed with sugar or made into jam.
The young leaves are also eaten.

Cultivation

They both grow wild. They could be grown by division of the root or from cuttings.

Production

Nutritional Values

Rubus rosifolius

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	82.9			1.3		1		0.3

Poaceae

Common names

Long pitpit, Duruka, Losi, Bira, Grerei, Uroro, Eo, Kua, Gari,



Scientific name

Saccharum edule

Edible portion

Flower, Vegetable,

Description

A grass. It is a plant in the sugarcane family grown for the edible unopened flower. Plants grow 2-3 m tall and have thinner canes than sugarcane. It produces suckers near the base so that normally a clump of stalks is produced. At one season of the year it produces a seed head or flower which remains inside the top of the plant and is the part that is eaten. Several cultivated varieties occur which differ in colour, height and season of flowering.

Distribution

A tropical plant. It is common in coastal areas and will grow up to about 1800 m altitude in the tropics. It is commonly grown in old gardens before they return to forest. It is common in coastal areas in Asian and Pacific countries including the Solomon Islands, Vanuatu, and Fiji and also in Indonesia.

Found in:

Asia, Australia, Fiji, India, Pacific, Papua New Guinea, PNG, Philippines, Solomon Islands, Timor, Vanuatu,

Use

The unopened flower is eaten raw or cooked. Often it is cooked in coconut milk. It can be steamed, roasted, fried or added to soups.

Cultivation

It is grown from cuttings of the stalks. In fertile soil, cut plants will re-shoot from the base. The cuttings need adequate moisture at planting. Cuttings about 30 cm long are used. To avoid cuttings drying out they need to be planted soon after cutting.

Coastal pitpit stalks can be planted at any time of the year. It takes 6-9 months from planting till a crop is ready to harvest. But the time of flowering is coastal pitpit is controlled by the sun. Early in the year about February to March most plants develop a thickened clump of leaves at the top. When these are broken off and opened by removing the outside leaves the very fine yellow unopened flower is seen. It is this flower which is eaten.

Production

It takes 6-9 months to maturity. In most cultivars, flowering is seasonal.

Nutritional Values

Saccharum edule

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
flower	89	165	39	4.2	0	14	1.1	1.1

Poaceae

Common names

Sugarcane,



Scientific name

Saccharum officinarum

Edible portion

Sap, Shoots, Flowers,

Description

A tall thick stemmed clumpy grass. It has many nodes. It grows 1-6 m tall. It spreads 100 cm wide. A large number of different cultivated varieties occur. The leaves are long and narrow. They taper to the tip. They are rigid and droop at the tip. The cane varies in thickness, length of nodes, colour etc. The stalks have distinct nodes and the bottom of the leaf is wrapped in a sheath around the stalk. The flower is brownish. It is surrounded by dense silky white hairs.

Distribution

It is a tropical plant. It occurs throughout the country of Papua New Guinea. It needs a temperature over 21°C for sprouting. It is frost sensitive. In Nepal it grows up to about 1400 m altitude. It suits hardiness zones 9-12.

Found in:

Africa, Angola, Asia, Australia, Bangladesh*, Barbados, Belize, Bolivia, Brazil, Burkina Faso, Burma, Cambodia, Cameroon, Caribbean, Central Africa, Central America, China, Colombia, Congo, Costa Rica, Cuba, Dominican Republic, East Africa, Ecuador, El Salvador, Ethiopia, Fiji, French Guiana, Ghana, Guatemala, Guinea, Guyana, Haiti, Hawaii, Hispaniola, Honduras, India, Indochina, Indonesia, Ivory Coast, Jamaica, Japan, Kiribati, Madagascar, Malawi, Malaysia, Maldives, Martinique, Mauritius, Mediterranean, Mexico, Myanmar, Nepal, Nicaragua, Nigeria, North America, Pacific, Pakistan, Papua New Guinea*, PNG, Paraguay, Peru, Philippines, Reunion, Senegal, Sierra Leone, Solomon Islands, South Africa, Southern Africa, South

Use

The stems are chewed.
The flowers can be cooked and eaten before the flower opens.
The stems are the source of cane sugar. This is used as a sweetener in many foods and drinks.

Cultivation

Plants are mostly grown from tops of canes. They can be grown from sections of the stalk or division of the root stock. It requires a good fertility and good rainfall. Plants can be ratooned or cut back if the soil fertility is high. Tall cultivars need staking.

Production

Plants mostly take 14-18 months until they are ready for harvest.

Nutritional Values

Saccharum officinarum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
juice	78.8	343		0.3		2	0.7	
leaves	77.5	314	75	1.8				
stem	82.5	259	62	0.6			1.4	

Poaceae

Common names

Wild pitpit, Kasa, Kans, Kas, Wild sugarcane, Thatch grass, Oi-nu, Lao,

Scientific name

Saccharum spontaneum

Edible portion

Shoots, Rhizome, Seeds,

Description

A strong clumpy perennial grass. The stalks are upright, hard and slightly thickened at the nodes. They can be 4 m high. The leaves are long (150 cm) and narrow (4 cm) with fine teeth on the edge. The flowers at the tip are like feathers.

Distribution

A tropical plant. It grows in the lowlands from sea level up to at least 1650 m. It is often common in areas with a strongly seasonal rainfall and in grassland areas. It grows in areas with a rainfall above 1,500 mm.

Found in:

Afghanistan, Africa, Algeria, Asia, Australia, Burkina Faso, Burma, Cameroon, Chad, China, Congo, Cuba, Cyprus, Egypt, Ethiopia, Ghana, India, Indonesia, Iran, Japan, Kazakhstan, Kenya, Libya, Malawi, Malaysia, Mauritius, Morocco, Myanmar, Nepal, Nigeria, Oman, Pacific, Pakistan, Panama, Papua New Guinea, PNG, Philippines, Portugal, Saudi Arabia, Seychelles, Sierra Leone, Sri Lanka, Sudan, Syria, Taiwan, Tajikistan, Tanzania, Thailand, Timor, Tunisia, Turkmenistan, Uganda, Vietnam, West Africa, Yemen,

Use

The very young flower shoots are eaten raw or cooked.
The peeled rhizome is sweet and is chewed.
Ash from the burnt plant is used as a salt substitute.
The seeds are eaten in Uganda.

Cultivation

Plants are mostly grown by dividing up the old clump.

Production

Nutritional Values

Saccharum spontaneum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Raintree,



Scientific name

Samanea saman

Edible portion

Pod pulp, Leaves, Fruit,

Description

A large tree with a widely spreading crown. It grows up to 25 m tall. It can grow to 60 m high. It has a short thick trunk. The branches spread out horizontally and can be 30 m long. The bark is a distinctive yellow. It loses its leaves during the year. The leaves have leaflets which are evenly in two rows. They are feather like. There are 8 to 12 leaflets in a row. There are 12 to 16 in the upper row. The leaves fold inwards at night and during rain. The leaves can be 35 cm long. The secondary division of the leaf can be 20 cm long and the leaflets 3 cm by 2 cm. The flowers are at the ends of branches and pink. They occur in round heads about 5 cm across. They are on long stalks 10-12 cm long. The fruit are pods. The pods are straight and somewhat fleshy. The pods can be 20 cm long by 2 cm across. The pods are slightly flattened.

Distribution

A tropical plant. It is native to tropical America. Common and widely planted as a shade tree. Trees grow almost wild in some areas and are planted as a street tree in coastal towns. It suits river-side locations in dry areas. It should grow up to about 1800 m altitude in the equatorial tropics. It grows best in the tropical lowlands from sea level to 300 m altitude and with a rainfall of 600-3000 mm per year. It suits hardiness zones 10-12.

Found in:

Africa, Antigua-Barbuda, Asia, Australia, Bangladesh, Barbados, Belize, Benin, Bhutan, Bolivia, Brazil, Burma, Cambodia, Caribbean, Central America, China, Colombia, Congo, Costa Rica, Cuba, Dominica, Dominican Republic, East Africa, Ecuador, El Salvador, Fiji, French Guiana, Gambia, Ghana, Grenada, Guadeloupe, Guam, Guatemala, Guyana, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Jamaica, Kenya, Laos, Madagascar, Malaysia, Maldives, Marianas, Martinique, Mauritius, Mexico, Myanmar, New Caledonia, Nigeria, Pacific, Panama, Papua New Guinea, PNG, Paraguay, Peru, Philippines, Puerto Rico, Reunion, Samoa, Sao Tome & Principe, Seychelles, Sierra Leone, Singapore, Somalia, South

Use

The pulpy layer of the ripe pods is eaten raw.
A drink is also made from the pulp.
Young leaves have been eaten in salads when food is short.

Cultivation

Trees are grown from seeds. They can also be grown from cuttings. Seeds need to put into hot water for 3 minutes then cooled and allowed to soak for 24 hours before sowing. Seed can be stored for 6 months.

Production

It is a quick growing tree.

Nutritional Values

Samanea saman

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Santalaceae

Common names

Sandalwood,

Scientific name

Santalum album

Edible portion

Fruit, Spice, Seeds,

Description

A shrub or small tree. It grows to 3 m high. The leaves are opposite and smooth. They are oval and 2.5-7 cm long by 1.5-4 cm wide. They are light green above and paler underneath. The stalk is about 1 cm long and has a groove. The flowers are small and red or green. They are about 0.5 cm long. The fruit are smooth and round. They are fleshy with a stone inside. The fruit are 0.7-1 cm across. They are shiny red to black when ripe. There is a single seed inside. It normally feeds on the roots of nearby plants for some of its nutrients. It cannot grow on the roots of the Mango family.

Distribution

A tropical plant. It is native to India. It grows in dry rocky mountain slopes. It is a tropical plant. It suits seasonally dry regions. It grows on dunes near the coast. It cannot tolerate frost. Bombay.

Found in:

Asia, Australia, Central America, Cuba, Fiji, Hawaii, India, Indonesia, Malaysia, Pacific, Thailand, Timor, USA,

Use

The bark is sometimes chewed instead of betel nuts.
Sandalwood essence adds a flavour to syrups.
An essential oil from the heartwood and roots is used as flavouring in commercial chewing gum, bakery products, ice cream and candy.

Cultivation

Plants can be grown from fresh seed. They can take 2 months to germinate. The seedlings need to attach to a host plant about one month are germination.

Production

It is slow growing.

Nutritional Values

Santalum album

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
kernel	2.5			23.8				

Euphorbiaceae

Common names

Katuk, Phak waan baan, Sweet leaf, Ngub, Pak-wan, Chekkurmensis, Chekup manis, Changkok manis, So-kun-mu, Kakul, Ruridama no ki,



Scientific name

Sauropus androgynus

Edible portion

Leaves, Fruit, Flowers, Vegetable,

Description

A low growing shrub with small red flowers. It continues to grow from year to year. It grows 0.8-2 m tall. It can grow 6 m tall. It tends to grow upright then falls over due to its weight. It branches little. Compound leaves on the sides of the stems bear flowers along their underside. The fruit are purple. The fruit are about 1 cm across and open and drop their seed at maturity.

Distribution

A tropical plant. It occurs commonly in S E Asia. It can grow in partial shade or full sun. It suits the hot humid lowlands. It will grow in heavy clay soils and will grow in acid soils.

Found in:

Asia, Australia, Cambodia, China, Fiji, Hawaii, India, Indochina, Indonesia, Japan, Malaysia, Pacific, Papua New Guinea, Philippines, PNG, Solomon Islands, Taiwan, Thailand, Timor, USA, Vietnam,

Use

The young tips, young leaves, flowers and small fruit are eaten raw. Older leaves are cooked.
Leaves are often singed before being added to soups.
The fruit can be used to make jam.

Cultivation

It is grown from cuttings. Cuttings grow easily. Pruning encourages more upright shoots. It can also be grown from seed. Seed only remain viable for a few months. It is often grown as a hedge. Cuttings for this are placed 10 cm apart. Adding shade (shade cloth) and fertiliser can be used to force the leaf tips to grow rapidly. Normally bushes are planted about 60 cm apart.

Production

Young leaves can be harvested 4 months after planting. The top 15 cm of young leaf tips are picked. It gives a high yield of leaves. Production continues year round. Shrubs last a long time.

Nutritional Values

Sauropus androgynus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	81.0	244	58	4.8	133	85	2.7	

Goodeniaceae

Common names

Fan flower, Sea Lettuce, Cardwell Cabbage, Half flower, Hailstones, Beach-berry, Naupaka-kahakai, Huahekili, Beach naupaka,



Scientific name

Scaevola taccada

Edible portion

Leaves,

Description

A shrub with many branches. It grows 3 m high. The wood is soft and pale green. The leaves are glossy and oblong. They are thick and leathery. They are rounded at the tip and narrow at the base. They are 5-20 cm long by 4-7 cm wide. The flowers are in the axils of leaves. They are white and paper like and have 5 lobes. These are about 1 cm long. The flowering groups are 2-5 cm long. The fruit is round and 1 cm long. It is white and fleshy.

Distribution

A tropical plant. They occur on tropical seashores. It needs sandy, well-drained soils. It needs full sun. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Burma, East Africa, Fiji, Hawaii, India, Indochina, Kenya, Madagascar, Malaysia, Maldives, Myanmar, Pacific, Pakistan, Samoa, South Africa, Southern Africa, Taiwan, Thailand, Timor, USA, Vanuatu,

Use

Cultivation

Production

Nutritional Values

Scaevola taccada

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Sapindaceae

Common names

Lac tree, Ceylon oak, Kussum, Pong roa, Pongro, Kusum, Kosumba, Puvam, Kosam, Kosano, Kusumb, Koon, Kohan, Peduman, Kosumb,

Scientific name

Schleichera oleosa

Edible portion

Leaves, Fruit, Seeds-oil, Seeds,

Description

A tree 15-25 m tall. It keeps its leaves most of the year. The bark is grey and flaky. The bark is reddish brown inside. The leaves have stalks and are divided into leaflets along the stalk. The leaflets are in 2-4 pairs. They have short leaflets. They are 6-26 cm long by 3-9 cm wide. They are oblong. New leaves are reddish. The flowers have short stalks. They are yellowish. They occur in side stalks with equal stalk length flowers along it. These appear with new purple leaves. Flowers can be male or of both sexes. The fruit is oval and green when ripe. They are 2 cm long and 1.5 cm across. The fruit have blunt prickles. There are 1-2 oily seeds.

Distribution

A tropical plant. It suits moist tropical regions. It grows in wet dense forests. In Nepal it grows up to 300 m altitude. In India they occur all over the country in mixed deciduous forests.

Found in:

Afghanistan, Africa, Asia, Australia, Burma, Cambodia, India, Indonesia, Indochina, Malaysia, Myanmar, Nepal, Pakistan, SE Asia, Sri Lanka, Thailand, Timor, Vietnam, West Africa,

Use

The fruit arillus is used to make some dishes acid.
Seed oil is used for cooking. It needs to be carefully refined. It is then edible.
The ripe fruit are eaten raw. Young fruit are pickled.
The seeds are eaten raw or cooked.
The young leaves and shoots are eaten raw. They are also used in soups or steamed and served with rice or fish.

Cultivation

Plants are grown from seed. Seed should be sown fresh. Seedlings do not transplant well. They can also be grown using root suckers.

Production

Plants grow slowly. In India fruit are available May to July.

Nutritional Values

Schleichera oleosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Cyperaceae

Common names

Scientific name

Scleria scrobiculata

Edible portion

Tips, Fruit,

Description

A sedge. These grow in clumps and have grass like leaves and solid stalks.

Distribution

Found in:

Asia, India, Timor,

Use

The young tops and fruit are eaten.

Cultivation

Production

Nutritional Values

Scleria scrobiculata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Cyperaceae

Common names

Scientific name

Scleria terrestris

Edible portion

Description

A small sedge plant. It keeps growing from year to year. It has a woody underground stem or rhizome. The shoots are in tufts. They can be 60-200 cm tall. They are 3-6 mm thick. The leaves are 4-20 mm wide. The flower panicles are compound and in groups of 4. They are 10-50 cm long.

Distribution

It grows in wet places along the edges of forests. In Taiwan it is at low altitudes.

Found in:

Asia, Australia, India, Japan, Sri Lanka, Taiwan, Timor,

Use

Cultivation

Production

Nutritional Values

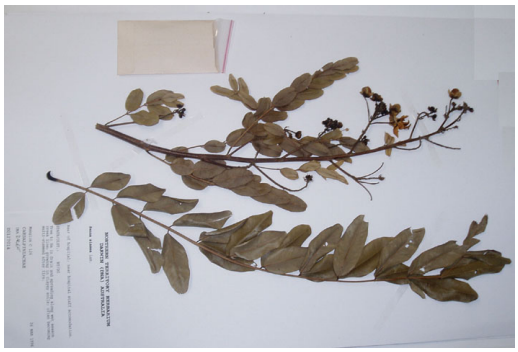
Scleria terrestris

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Cassod Tree,



Scientific name

Senna siamea

Edible portion

Leaves, Flowers, Fruit,

Description

An evergreen tree. It grows to 10 m high and spreads to 4 m across. It can be a small tree or grow up to 30 m high. The stem is erect and slender. The leaves are dark green and 30 cm long. They are divided into 4-14 pairs of leaflets each 3-7.5 cm long by 1.2-2.6 cm wide. The flowers are yellow and arranged in large sprays. These can be 45 cm long. They grow at the end of branches. The fruit are black pods 35 cm long by 1.2-1.6 cm wide and bulging over the seeds. The pods have thickened edges.

Distribution

A tropical plant. It comes from SE tropical Asia and grows in Ethiopia and east Africa. It suits subhumid and arid zones in the tropics. It grows in the Sahel. It needs moist, well drained soils. In East Africa it grows from sea level to 1,600 m altitude. It grows in areas with a rainfall of 700-1500 mm annual average. It is drought and frost tender. It suits hardiness zones 10-11.

Found in:

Africa, Asia, Australia, Benin, Burma, Cambodia, Chad, Congo, East Africa, Ethiopia, Fiji, Ghana, Guyana, Hawaii, India, Indochina, Indonesia, Ivory Coast, Kenya, Malawi, Malaysia, Mali, Mozambique, Myanmar, Niger, Nigeria, Pacific, Papua New Guinea, PNG, Philippines, Sahel, SE Asia, Senegal, South Africa, Southern Africa, Sri Lanka, Swaziland, Tanzania, Thailand, Timor, Uganda, USA, Vietnam, West Africa, Zambia, Zimbabwe,

Use

The leaves are eaten in Thailand after boiling for 1-2 hours and then discarding the water.
The flowers are eaten in curries.
CAUTION: The leaves and seeds are poisonous without treatment

Cultivation

The plants are grown from seed. The seed need to have the hard seed coat broken before planting. The plants can be cut back and will re-grow.

Production

It has a fast growth rate.

Nutritional Values

Senna siamea

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	65.6		114	7.4			5.3	

Fabaceae

Common names

Scientific name

Senna timoriensis

Edible portion

Leaves,

Description

A small tree. It grows 10 m high.

Distribution

It is a tropical plant. It grows on calcareous soils. It grows up to 1,100 m altitude.

Found in:

Asia, Australia, Indonesia, Sri Lanka, Timor,

Use

The young leaves are eaten.

Cultivation

Production

Nutritional Values

Senna timoriensis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Stinking Cassia, Sickle senna, Pamaar, Danghet chhieng, Chakramandi, Tafasa, Rahuri, Takla, Kasoda, Sekto, Kaoal, Thakara,

Scientific name

Senna tora

Edible portion

Seeds, Leaves,

Description

An erect, branched herb or shrub. It usually has a bad smell. It can be 0.3-2 m high. It has a sparse covering of small hairs. The stems do not have hairs. The leaves are compound and alternate. They are 5-6 cm long. The leaflets are in 3 pairs. They are oval and 2.5-5 cm long by 1.5-2.5 cm wide. They are broadly rounded at the top and can be wedge shaped at the base. The leaf stalk does not have a gland but the leaf axis has a gland between the lower two pairs of leaflets. The flowers are in the axils of leaves on branched stalks. The flower clusters are short and 2 flowered. There are 5 yellow petals. The petals are 8-10 mm long. The fruit are pods which are 4 angled. They are 10-15 cm long by 4-6 mm wide. They fall without splitting open to release their seeds. The seeds are dark brown and shiny. They are 5 mm long by 2.7 mm wide. The pit on the seed, covers much of the seed face.

Distribution

A tropical plant. It often grows on the edges of mangrove and coconut plantations. Plants grow near sea level in the tropics. In Nepal it grows to about 1400 m altitude. It grows in rich soil and near river banks. In tropical Queensland it grows from sea level to 300 m altitude.

Found in:

Africa, Arabia, Asia, Australia, Bhutan, Burkina Faso, Burma, Cambodia, China, Fiji, India, Indochina, Indonesia, Laos, Malaysia, Maldives, Mauritius, Myanmar, Nepal, Nicaragua, Oman, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Reunion, Saudi Arabia, Seychelles, Solomon Islands, South America, Sri Lanka, Taiwan, Tanzania, Thailand, Timor, Vietnam,

Use

The ripe seeds are roasted and ground and used for coffee.
The seeds, roasted or cooked in the pod are eaten with rice.
The young leaves are cooked and eaten as a vegetable.
The young stems are cooked in curry.
The seeds are used in the preparation of sweets.

Cultivation

Production

Nutritional Values

Senna tora

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

Sesame,

Pedaliaceae



Scientific name

Sesamum indicum

Edible portion

Seeds, Leaves, Spice, Seeds - oil,

Description

A small upright plant. It is an annual plant. It is erect and much branched. It grows 1-2 m tall. The stem is stout and 4 sided. It is furrowed along its length. It is densely covered with glandular hairs. The leaves are fine and downy. They vary in shape. The lower leaves have long stalks and are spear shaped often with lobes or a toothed edge. The leaf stalks are 3-11 cm long. The leaf blade is 4-20 cm long by 2-10 cm wide. Upper leaves are narrow and oblong. They are 0.5-2.5 cm wide. The flowers are pink and white. They occur in the axils of upper leaves. They occur either on their own or in groups or 2 or 3. They can be white, pink, purplish and with yellow spots and stripes. The fruit can be smooth or rough and there are 2 chambers in the capsule. The fruit are brown or purple. They are oblong and deeply grooved. The seeds are small and oval. They are 3 mm by 1.5 mm and vary in colour from white, yellow, grey, red, brown or black. The fully ripe pods burst open.

Distribution

A tropical plant. It suits the hot dry semi-arid tropics and subtropics. It can tolerate short periods of drought once established. It needs a temperature of 20-24°C in early growth then 27°C for ripening. It grows from sea level to about 1,200 m. It grows in areas with a rainfall from 400 to 1000 mm. Soils need to be well drained. It is very intolerant of water-logging. It cannot stand high humidity. It needs frost free conditions. It needs a dry period for seed drying. It does not like acid soils. In Nepal it grows up to about 2400 m altitude. It grows in open sunny places. It suits hardiness zones 10-12.

Found in:

Afghanistan, Africa, Armenia, Asia, Australia, Bangladesh, Benin, Bhutan, Burkina Faso, Burma, Cambodia, Central Africa, Chad, China, Congo, Cyprus, East Africa, Egypt, Europe, Ethiopia, Fiji, Ghana, Greece, Haiti, Hawaii, Himalayas, India, Indochina, Indonesia, Iran, Iraq, Italy, Ivory Coast, Japan, Kenya, Korea, Liberia, Madagascar, Malawi, Malaysia, Mali, Mexico, Middle East, Mozambique, Myanmar, Nepal, Niger, Nigeria, North America, Pacific, Pakistan, Philippines, Saudi Arabia, Senegal, Sierra Leone, South Korea, South Africa, Southern Africa, Sri Lanka, Sudan, Swaziland, Syria, Taiwan, Tajikistan, Tanzania, Thailand, Timor, Turkey, Uganda, USA, Venezuela, Vietnam, West Africa, Zambia, Zimbabwe

Use

The seed are eaten. They are used in soups or fried or boiled. They are used in tahini and hummus. Seeds are eaten in the form of sweetmeats. Roasted seeds are used in pickles. They are also put on bread.
Oil from the seeds is used in cooking and on salads.
The refuse from the seed after the oil has been extracted is boiled in water and made into soup.

Cultivation

Plants are grown from seed. Seed will not germinate below 21°C. Seed are broadcast on well prepared land. Seed are harrowed in using feet or a light harrow. Plants can be thinned or weeded during early growth to produce a better crop. Seeding rates of 9-11 kg/ha are used. Plants are spaced 2-15 cm apart in rows placed at 20-45 cm apart. Some varieties shatter and lose their seeds very easily.

Production

Yields of 340-500 kg/ha are average. Plants reach maturity in 80-180 days. Crops are harvested as the leaves begind to drop. Plants are cut and stooked or dried in racks. The hull is removed by soaking in water overnight, then partly dried and rubbed against a rough surface.

Nutritional Values

Sesamum indicum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed	4.7	2397	573	17.7	1	0	14.6	7.8
leaves	85.5	188	45	3.4				

Fabaceae

Common names

White pea bush, Swamp corkwood, White dragon tree, Dragon flower tree, Water tree, Swampy corkwood,



Scientific name

Sesbania formosa

Edible portion

Flowers,

Description

An erect slender tree. It grows 10-15 m high. The leaves have leaflets. The whole leaf is 20-40 cm long. It is divided into pairs of oblong leaflets. These are 3-6 cm long by 1-1.5 cm wide. They have a small pointed tip. The flowers are large and white. They are pea flowers. These are 7-12 cm long in groups along stalks with 2-7 flowers. The fruit is a long and smooth pod. It is 40-60 cm long and 0.5 cm wide. These are straight or slightly curved. They hang down. They are cream-brown when ripe. They contain many shiny brown seeds.

Distribution

A tropical plant. It is native to tropical or monsoonal Australia. They grow naturally on black soils on the fringes of flood plains. They will grow on a wide range of well-drained soils.

Found in:

Australia, Timor,

Use

The flowers are edible raw or cooked.

Cultivation

Plants can be grown from seed of cuttings. The seeds should be treated with hot water before planting.

Production

It is a very fast growing plant.

Nutritional Values

Sesbania formosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Sesbania,

Scientific name

Sesbania grandiflora

Edible portion

Flowers, Leaves, Young pods,

Description

A shrub or small tree up to 5-10 m tall. The trunk has rough bark and the branches often droop. The trunk is thick. The branches are hairy when young. The leaves are made up of 41 to 61 leaflets. These are narrow and oblong. They are 2.5-4 cm long by 0.5-1.4 cm wide. They have a sharp point at the tip. The flowers are large and white to red. The flower petals can be 5-10 cm long. They are produced as 2-4 flowers on flowering branches 2-5 cm long. It has long narrow pods with up to 30 -50 small brownish seeds. The seeds with their stalk can be 2.5-4.5 cm long in pods 20-25 cm long by 7-9 mm wide.

Distribution

A tropical plant. It grows in tropical and subtropical climates. It grows in places with an average rainfall of 900-1200 mm and a temperature range of 17-25°C minimum and 25-37°C maximum. It is cultivated in coastal towns. It does well in both dry and moist areas. It probably grows up to about 1500 m altitude in tropical places. It does best in rich moist soils. It needs a sunny location. It is damaged by frost. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Bangladesh, Bhutan, Burma, Cambodia, Cape Verde, Central America, China, Colombia, Djibouti, East Africa, Ethiopia, Fiji, French Guiana, Gabon, Ghana, Guyana, Haiti, Hawaii, India, Indochina, Indonesia*, Jamaica, Japan, Laos, Madagascar, Malawi, Malaysia, Marianas, Martinique, Mauritius, Myanmar, Nepal, Nigeria, North America, Pacific, Pakistan, Panama, Papua New Guinea, PNG, Philippines, Reunion, Seychelles, Senegal, Sierra Leone, Singapore, Somalia, South America, Sri Lanka, Suriname, Taiwan, Tanzania, Thailand, Timor, USA, Venezuela, Vietnam, West Africa, West Indies, Yemen

Use

CAUTION: The seeds are toxic. They are fermented and used.
The leaves and flowers are used as a vegetable. The young pods are also eaten. The young leaves are stripped from the stalks and lightly boiled or steamed or served as a vegetable in curries.
The white flowers that are eaten contain a considerable amount of sugar and iron and are said to taste like mushrooms.
Flowers of the red-flowered variety are bitter and hence, it is only used as an ornamental.

Cultivation

Trees are grown from seed. The seed often need seed treatment to break the hard seed coat. Seeds germinate best with temperatures above 19°C. It can be grown from cuttings.

Production

It is a quick growing tree. Trees flower in their second year. It is short lived.
A tree can provide 6-9 kg of leaves per year. The leaves can be harvested 120-150 days after sowing. Repeat harvests can be made each 30 days.

Nutritional Values

Sesbania grandiflora

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	82.3	323	77	8.7	66	60	4.0	
flowers	89.0	92		1.8	0	59	0.6	
pods								
seeds	10.4			68.2				

Aizoaceae

Common names

Seaside purslane,



Scientific name

Sesuvium portulacastrum

Edible portion

Leaves,

Description

This is a low lying fleshy plant. The stems are reddish at the nodes and 20 to 50 cm long with short upright branches. The stems are thick. The leaves are oblong and narrow. They can be 1-7 cm long by 2-15 mm wide. They are fleshy and glossy green. The flowers are small and pink or red. They are star like and have 5 petals. The occur singly in the axils of leaves. There are several pea shaped seeds. They are 1.5 mm across.

Distribution

A tropical and subtropical plant. It grows on mudflats and sand. It is often associated with mangroves. It occurs in paddy fields. It grows along the sea shore in the Philippines.

Found in:

Africa, Anguilla, Antigua, Asia, Australia, Cambodia, Central America*, Cuba, Dominican Republic, Fiji, Ghana, Grenada, Guinea-Bissau, Haiti, Hawaii, India, Indochina, Indonesia, Jamaica, Malaysia, Mauritania, Mexico, Norfolk Island, Pacific, Papua New Guinea, Philippines, PNG, Senegal, Sierra Leone, South America, Thailand, Timor, Tonga, USA, Vietnam, West Africa,

Use

Young leaves are cooked and eaten. (Because they are salty sometimes the water needs to be changed.)
They are also eaten raw with fish sauces. They are also pickled.

Cultivation

It can be grown from cuttings or seeds.

Production

Nutritional Values

Sesuvium portulacastrum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	89.0	105	25	2.1			6.3	
shoots								

Poaceae

Common names

Foxtail millet, Indian millet,



Scientific name

Setaria italica

Edible portion

Seeds, Cereal,

Description

An annual grass. It grows 1-1.5 m tall. It can be tinged with purple colour. The stalks are upright and the section between the nodes is hollow. It develops tillers from the base. It has along leaf sheath. The leaf blade is 30-45 cm long by 1.2-2.5 cm wide. It has a prominent midrib and tapers towards the tip. The flower is a spike-like branching flower 7.5-25 cm long by 1.2-5 cm wide. The side branches carry 6-12 small spikes each with 1-3 bristles. The mature grain is 2 mm long. There are many named cultivated varieties.

Distribution

A warm temperate plant. It suits regions of low rainfall. It is grown from sea level to 2,000 m altitude. In Nepal it grows to about 1800 m altitude. It can tolerate a wide range of soil conditions. It cannot tolerate waterlogging. It cannot withstand long periods of drought.

Found in:

Afghanistan, Africa, Andamans, Armenia, Asia, Australia, Austria, Azerbaijan, Azores, Bangladesh, Belgium, Britain, Burma, Cambodia, Canada, Central Asia, China, Cyprus, East Africa, Egypt, Europe, France, Georgia, Germany, Greece, Guyana, Hungary, India, Indonesia, Iran, Iraq, Israel, Italy, Jamaica, Japan, Kenya, Korea, Kyrgystan, Laos, Malawi, Malaysia, Manchuria, Mauritius, Mozambique, Myanmar, Nepal, North America, Pacific, Pakistan, Papua New Guinea, Philippines, PNG, Russia, Saudi Arabia, South Africa, Southern Africa, Spain, Switzerland, Syria, Taiwan, Tajikistan, Tanzania, Tasmania, Thailand, Timor, Trinidad & Tobago, Turkmenistan, Ukraine, USA, Vietnam, Yemen, Zimbabwe

Use

It can be cooked and eaten like rice. The seeds can be parched, popped, added to soups and sauces or made into porridge, cakes, puddings, and dumplings.
The sprouted seeds can be used as a vegetable.
The seeds can be used for making beer.
The seeds can also be made into syrup.
CAUTION: If the seeds are infected with ergot, they can cause ergotism.

Cultivation

Plants are grown by seed. Seed can be broadcast or drilled. Pure stands require 8-10 kg/ha of seed. Plants are harvested by cutting off the ears.

Production

It grows quickly. Plants mature in 80-120 days. Flowering occurs over 10-15 days. Plants can be self or cross pollinated. Yields of 800-900 kg/ha are common and straw yields for livestock feed can be up to 2,500 kg/ha.

Nutritional Values

Setaria italica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds	13.5	1425	341	9.5			5.5	

Poaceae

Common names

Rough bristle grass, Whorled Pigeon Grass, Chirchita, Damati, Damatila, Bur, Dorayra, Chick-lenta, Chir chira, Bar chitta, Kulta, Bir

Scientific name

Setaria verticillata

Edible portion

Seeds, Cereal,

Description

An annual grass. It forms tufts. It has many branches. It is 20-100 cm tall. The flower is narrow and like a cylinder shaped. It tapers to a point. The spikelets are in rings and separated especially lower on the flowering stalk. The bristles are barbed in a reflexed direction.

Distribution

It grows in tropical and warm temperate places. It grows on roadsides between 300-1000 m altitude in Taiwan. It is used in western Rajasthan in India. It grows in hot arid places. It grows in areas with a rainfall between 300-1,000 mm. It grows from 60-2,100 m above sea level in tropical countries. It can tolerate shade.

Found in:

Afghanistan, Africa, Albania, Algeria, Angola, Argentina, Armenia, Asia, Australia, Austria, Azerbaijan, Azores, Bahrain, Bangladesh, Belarus, Belgium, Botswana, Brazil, Britain, Bulgaria, Burkina Faso, Burma, Burundi, Cameroon, Canada, Canary Islands, Cape Verde, Central African Republic, Chile, China, Comoros, Congo, Cuba, Cyprus, Czech Republic, East Africa, Ecuador, Egypt, Estonia, Ethiopia, Europe, Finland, France, Gambia, Georgia, Germany, Ghana, Greece, Guatemala, Hawaii, Hungary, India, Indonesia, Iran, Iraq, Italy, Japan, Kazakhstan, Kenya, Kyrgystan, Latvia, Lesotho, Libya, Lithuania, Malawi, Malaysia, Mali, Mauritania, Mauritius, Mexico, Mozambique, Myanmar, Namibia, Nepal, Netherlands, Netherlands Antilles, New

Use

The grains are used as food. They are used in porridge.
They are also used for making an alcoholic drink. Caution: Alcohol is a cause of cancer.

Cultivation

Production

Nutritional Values

Setaria verticillata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Malvaceae

Common names

Spinyhead sida,

Scientific name

Sida acuta

Edible portion

Leaves,

Description

A herb. It grows up to 70 cm high. It has many branches. The leaf stalk is 4-6 mm long. The leaves are sword shaped. They are 2-5 cm long by 0.4-1 cm wide. They have teeth around the edge. The flowers are yellow. They occur in the axils of leaves. They are either singly or in pairs. The fruit is nearly round and 3-5 mm across.

Distribution

It is a tropical plant. It is common in waste places.

Found in:

Africa, Andamans, Asia, Australia, China, East Africa, Fiji, Haiti, India, Indochina, Indonesia, Kenya, Laos, Malawi, Malaysia, Mozambique, Pacific, Papua New Guinea, PNG, South Africa, Southern Africa, Swaziland, Thailand, Timor, Tonga, Vietnam, Zambia, Zimbabwe,

Use

CAUTION: In some places the leaves are used to produce abortions.

Cultivation

Production

Nutritional Values

Sida acuta

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Malvaceae

Common names

Common Sida,

Scientific name

Sida rhombifolia

Edible portion

Leaves, Leaves - tea,

Description

A herb or small shrub. It grows 1-1.5 m tall. It is very hairy. It has many branches. The leaf stalk is 3-5 mm long. The leaf blade is sword shaped and 2.2-4.5 cm long by 0.6-2 cm wide. The flowers occur singly in the axils of leaves. They are yellow and about 1 cm across. The fruit is half round and 6-7 mm across.

Distribution

A tropical plant. It grows along roadsides.

Found in:

Africa, Argentina, Asia, Australia, Azores, Bahamas, Bangladesh, Belize, Bolivia, Brazil, Burma, Burundi, Cambodia, Cameroon, Canary Islands, Cape Verde, Caribbean, Central America*, China, Colombia, Congo, Cook Islands, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Equatorial Guinea, Fiji, French Guiana, Gambia, Ghana, Guadeloupe, Guam, Guinea, Guyana, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Japan, Jamacia*, Kenya, Laos, Lesser Antilles, Liberia, Madagascar, Malawi, Malaysia, Maldives, Mali, Mauritius, Mexico*, Mozambique, Myanmar, New Caledonia, Nicaragua, Niger, Nigeria, Niue, Norfolk Island, North America, Oman, Pacific, Panama, Papua New Guinea, PNG

Use

The leaves are used to make a tea drink.
The leaves are eaten as a vegetable.

Cultivation

Production

Nutritional Values

Sida rhombifolia

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Smilacaceae

Common names

False sarsparilla, Smilax, Native sarsaparilla, Austral Sarsparilla, Greenbrier,



Scientific name

Smilax australis

Edible portion

Fruit,

Description

A climber which scrambles widely. It can grow to many metres high. The stems are wiry and 0.5 cm across. They have some sharp prickly thorns. Plants are separately male and female. The leaves are alternate and smooth. They are broadly oval and leathery. The leaf blade is 5-14.5 cm long by 3.2-9.5 cm wide. Leaves are dark green above and paler underneath. There are 3-5 veins running along the leaf. The flowers are small and cream. They are about 0.3-0.6 cm across. Several occur together in the axils of leaves. The fruit is a smooth berry. It is 0.8-1 cm across. They are purple to black when ripe. There are 1-2 seeds inside.

Distribution

It is a tropical plant. It grows naturally in coastal monsoon vine thickets. It grows above the beach or near streams. In tropical Queensland it grows from sea level to 1300 m altitude. Melbourne Botanical Gardens.

Found in:

Australia, Lord Howe Island, Timor,

Use

The ripe fruit are eaten. They have a slightly hot taste.

Cultivation

Production

Nutritional Values

Smilax australis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Odabrini, Kawale, Kawala, Kaula, Pokok tangki bukit, Nullakashina, Kaola, Masuri sing, Barka,

Scientific name

Smithia sensitiva

Edible portion

Leaves,

Description

An annual herb. It often lies along the ground and curves up at the tips. It is much branched. Stems are 0.2-1.5 m long. The small leafy structures (stipules) at the base of the leaves remains on the plant and has a chaffy texture. The leaves have 3-12 pairs of leaflets. They are only slightly sensitive, curling up, when touched. The leaflets are 0.4-1.5 cm long by 2-3 mm wide. The flowers are yellow. They occur as 2-6 together in the axils of the upper leaves.

Distribution

A tropical plant. It occurs widely in the tropics. In Papua New Guinea plants grow from 4 to 1950 m altitude. They grow naturally along roadsides and near streams and swamps.

Found in:

Asia, Australia, India, Indochina, Indonesia, Malaysia, Pacific, Papua New Guinea, PNG, Taiwan, Timor, Vietnam,

Use

The leaves are eaten as a pot herb.

Cultivation

Production

Plants are common during the monsoon along the edges or rice fields.

Nutritional Values

Smithia sensitiva

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves				7.3				

Solanaceae

Common names

Wild tobacco tree,

Scientific name

Solanum mauritianum

Edible portion

Fruit,

Description

A shrub or small tree. It grows 4 m tall. It has a woolly covering. The leaves are alternate. There are 2 leaf like structures near the base of the leaf. These are 0.5-2 cm long. The leaves are oval to sword shaped and 10-30 cm long by 4.5-14 cm wide. They taper to the tip. There are many flowers together at the tip of the branches or in the axils of leaves. The fruit is a round berry. It is dull yellow and 10-15 mm wide. It is hairy at first. The seeds are 1.5-2 mm long.

Distribution

A tropical plant. It is native to Argentina. It grows on waste ground. In East Africa it grows between 1,500-2,800 m altitude. It suits hardiness zones 10-12.

Found in:

Africa, Argentina, Asia, Australia, Brazil, East Africa, Fiji, Mozambique, Norfolk Island, Pacific, Papua New Guinea, PNG, South Africa, Southern Africa, South America, Swaziland, Timor, Uruguay, Zambia, Zimbabwe,

Use

CAUTION: The fruit are poisonous.

Cultivation

Production

Nutritional Values

Solanum mauritianum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Solanaceae

Common names

Eggplant, Brinjal, Aubergine,



Scientific name

Solanum melongena

Edible portion

Fruit, Leaves, Vegetable,

Description

A perennial shrubby herb up to 1 m tall. It is often grown as an annual. It has a deep taproot and branched side roots. The stem is thick and covered with many woolly hairs. The plant has many branches. Often the plant is spiny. The leaves are large, alternate and simple. They are angular and unequal near the stalk. Leaves can be 20 cm long and wavy along the edge. Leaves are covered with hairs. Flowers are bluish red and 5 cm across. They are either solitary or in small groups opposite the leaves. They have 5 large woolly lobes which continue to surround the base of the fruit. Fruit are white, blue, green or purple. The fruit colour and shape vary. Sometimes the fruit is spiny. Often the fruit are 10 to 20 cm long and 5-8 cm wide. Numerous kidney shaped seeds are in the flesh of the berry.

Distribution

A tropical plant. A plant of the warm tropics. Plants grow from sea level up to 2200 m altitude in the tropics. It suits wet climates but does well in dry climates with irrigation. It needs a long warm growing period. A daily mean temperature of 20-30° C is most suitable. They are frost tender. They need a rich, friable, well tilled soil. In the subtropics they can be grown as a summer crop. In Nepal plants grow to 1500 m altitude. It suits hardiness zones 9-12.

Found in:

Africa, Angola, Asia, Australia, Bangladesh, Brazil, Burkina Faso, Cambodia, Central Africa, China, Congo, East Africa, Egypt, Europe, Fiji, France, Germany, Ghana, Greece, Guinea, Guyana, Haiti, Hawaii, India*, Indochina, Indonesia, Iraq, Italy, Japan, Jordan, Madagascar, Malawi, Malaysia, Mauritius, Nepal, Nigeria, North America, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Senegal, Singapore, Solomon Islands, South Africa, Southern Africa, South America, Spain, Sri Lanka, Sudan, Swaziland Syria, Thailand, Timor, Tonga, Turkey, Uganda, USA, Vanuatu, Vietnam, West Africa, Zambia,

Use

Fruit are mostly fried then eaten. They can also be grilled, baked, stuffed and stewed. They are used in curries. The fruit are also dried and stored.
The leaves although edible are hairy and not good flavour. They are mixed with rice bran and salt in which Japanese radishes are pickled.

Cultivation

Plants are grown from seeds. Seeds germinate slowly. Seed are sown in nursery beds. Seedlings can be transplanted when about 8 cm tall or 4-6 weeks old. Plants need to be about 60-100 cm apart. Because some cross pollination can occur seed crops need to have varieties planted 400 m apart.

Production

Fruit are ready for harvest after 3 months. They continue to yield for 3-4 months.

Nutritional Values

Solanum melongena

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	91.8	117		0.83	6	1.3	0.4	0.2
fruit - fresh	93.4	62		0.7	50	5	0.4	0.3

Solanaceae

Common names

Blackberried nightshade,



Scientific name

Solanum nigrum

Edible portion

Fruit, Leaves, Vegetable,

Description

An erect branched smooth herb. It grows about 60-100 cm high. The stems are green and 3 angled. Leaves are pointed at both ends. The leaves are 1.3-9 cm long by 0.5-6 cm wide. They are oblong and taper to the tip. They can have wavy lobes. The inner ring of petals are white and about 8 mm across. The fruit are black, smooth and round. They hang downwards.

Distribution

They occur in waste places at low and medium altitudes throughout the country. It grows from sea level up to high altitudes such as 2700 m in the tropics. It often comes up self sown after fires. It is grown in most tropical countries as a green leafy vegetable. It occurs between 600-3000 m. in southern China. In Nepal it grows to about 2900 m altitude. It can grow in areas with an annual rainfall below 500 mm. Tasmania Herbarium. Bontoc

Found in:

Afghanistan, Africa, Angola, Asia, Australia, Austria, Balearic Islands, Balkans, Belgium, Benin, Bhutan, Bolivia, Bosnia, Botswana, Bulgaria, Burkina Faso, Burundi, Cameroon, Central Africa, Chad, Chile, China, Colombia, Congo, DRC, Corsica, Costa Rica, Crete, Czech Republic, Denmark, East Africa, Ecuador, Egypt, El Salvador, Ethiopia, Europe, Fiji, Finland, France, Germany, Ghana, Great Britain, Greece, Guatemala, Guinea, Hungary, India, Indochina, Indonesia, Iraq, Israel, Italy, Japan, Kenya, Kuwait, Lesotho, Libya, Madagascar, Malawi, Malaysia, Mali, Mauritius, Mexico, Mongolia, Morocco, Mozambique, Nepal, New Caledonia, New Zealand, Niger, Nigeria, Norway, North America, Oman, Pacific, Pakistan, Papua New Guinea

Use

The ripe fruit are cooked and eaten. They are also used for soup. They can be stewed or made into pies, jams, preserves, puddings, sauces, pastry and a spicy relish.
The leaves and young shoots are eaten cooked.
CAUTION: The fruit can contain the alkaloid Solanine probably when unripe.

Cultivation

It is grown from seed. In the tropical highlands areas it is almost always self sown or encouraged by burning grassland but then weeded and harvested as a normal component of the garden. In coastal areas seeds are sown by broadcasting. Good yields can be obtained under moderate fertility levels. A spacing of 40 cm x 40 cm is suitable. Topping encourages branching. It can be grown from cuttings.
Plants are also grown in nurseries and transplanting.

Production

Seeds germinate about a week after planting. Leaves can be harvested after about 8-10 weeks by cutting off the last 5 cm of each branch. High yields can be obtained. 5-8 harvests over 6-8 weeks are possible.
Solanum nigrum grows rapidly, has high seed production and high viability of seed. This gives it a competitiveness as a weedy species but also means it is one of the first harvested edible greens from a new garden.

Nutritional Values

Solanum nigrum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	87.0	160	38	4.3	70	20	1.0	

Common names

Potato,

Solanaceae



Scientific name

Solanum tuberosum

Edible portion

Tubers, (Leaves), Vegetable, Caution,

Description

A branched annual plant up to 50 cm high. The stems are soft and 4 angled with compound leaves. The leaves are irregular shape and have 6-8 pairs of leaflets as well as small irregular leaflets between the others. It has swollen stem tubers under the ground. The tubers can vary in colour from white to red and purple. The tuber shape can also vary greatly. The flowers are white pink or purple. The fruit is a berry. It is smooth, round and green but often striped.

Distribution

In the tropics they mostly grow at high altitude above 1500 m, but plants are grown between 900 and 2800 m. Tubers form best when soil temperatures are 15.5°C. Tuber formation stops with a soil temperature of 30°C and decreases with temperatures above 20°C. Potatoes should have a mean temperature below 18°C. They are damaged by frost but slightly more frost tolerant than sweet potato. Short daylength helps tuber production. They can grow with a pH of 5.2-6.6. In the Himalayas it grows up to 4,400 m altitude as a summer crop. It suits hardiness zones 7-11.

Found in:

Africa, Albania, Andes, Argentina, Asia, Australia, Austria, Bangladesh, Belarus, Belgium, Bolivia, Brazil, Britain, Burkina Faso, Burma, Central Africa, Central America, Chile, China, Congo, Costa Rica, Cyprus, Czech Republic, Denmark, East Africa, Ecuador, Estonia, Ethiopia, Europe, Fiji, Finland, Germany, Ghana, Haiti, Hawaii, Himalayas, Iceland, India, Indochina, Indonesia, Ireland, Italy, Ivory Coast, Kenya, Madagascar, Malawi, Malaysia, Mali, Mexico, Morocco, Myanmar, Nepal, New Zealand, Nicaragua, Nigeria, North America, Pacific, Pakistan, Papua New Guinea, PNG, Peru, Philippines, Sierra Leone, Somalia, South Africa, Southern Africa, South America, Spain, Swaziland, Tasmania, Timor, Uganda, USA, Vanuatu

Use

The tubers are cooked and eaten. They are also fried, canned and made into starch. The tubers are boiled, baked, roasted, mashed and used in soups, stews, dumplings, pancakes and potato salads.
Potatoes are also use for alcoholic drinks. Caution: Alcohol is a cause of cancer.
The tender leaves are also occasionally eaten.
CAUTION The green tubers and leaves are poisonous. They contain a poisonous alkaloid solanine. Tubers need to be

Cultivation

Plants are grown from tubers. Due to virus diseases it is necessary to get fresh seed tubers each few years. Large tubers can be cut to include a bud or "eye". A seed piece of 40-50 g is suitable. It is best to inter-crop as this stops bacterial wilt spreading. The plant is surrounded by dirt when 20-25 cm tall. Later the tubers need to be kept covered with dirt. Providing extra light (4-5 hours) allows plants to form flowers and true seed to be collected.

Production

The time to maturity is between 17 and 24 weeks. Yields of 5 to 12 tons/ha can be expected. Higher yields can be obtained with good care.

Nutritional Values

Solanum tuberosum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
tuber baked	71.2	456		2.3	0	12.9	1.4	0.3
tuber	77.0	344	82	2.0	25	21	0.8	0.27
leaves	86.1			3.4				

Poaceae

Common names

Sorghum,



Scientific name

Sorghum bicolor

Edible portion

Stems, Seeds, Cereal,

Description

A millet grass. A mature sorghum plant resembles maize. Plants vary in height from 45 cm to 4 m. It is an annual grass with erect solid stems. The stems can be 3 cm across at the base. Under the ground there is a widely branching extensive root system. Prop roots occur near the base. There are a range of different types of sorghum. Some have one main stem while others have many tillers. There are more tillers when plants are widely spaced. The nodes on the stem are slightly thickened. The distance between nodes is shortest near the base of the plant. Short eagerly kinds have 7 leaves while tall late varieties may have 24 leaves. The leaf blade can be 30-135 cm long. Leaves are bluish green and waxy. They have a prominent midrib. The large flower panicle can be 20-40 cm long. The flower occurs at the top of the plant. It can stick upright or bend over. The flower can be open or compact. There are several different varieties. Over 1000 cultivated varieties occur in China.

Distribution

A tropical plant. It suits the savannah zones in the tropics. It tolerates heat and drought. It can recover from drought even as a seedling. It can tolerate water-logging. It can be grown on heavy or light soils. Sorghum needs short daylengths to flower. Many kinds are adapted to specific daylength and rainfall patterns. It suits hardiness zones 9-12.

Found in:

Africa, Arabia, Argentina, Asia, Australia, Bahamas, Bangladesh, Botswana, Burkina Faso, Burma, Central Africa, Central America, Chad, China, Congo, Cuba, East Africa, Egypt, Eritrea, Ethiopia, Fiji, France, Ghana, Guatemala, Haiti, Hungary, India, Indochina, Indonesia, Italy, Jamaica, Kenya, Korea, Lesotho, Malawi, Malaysia, Mauritania, Mexico, Morocco, Myanmar, Nigeria, North America, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Portugal, Puerto Rico, Russia, Sierra Leone, Solomon Islands, Somalia, South Africa, Southern Africa, Sudan, Swaziland, Taiwan, Tanzania, Thailand, Timor, Turkey, Uganda, United States, USA, Vietnam, Virgin Islands, West Africa, West Indies, Zambia, Zimbabwe

Use

The seeds are eaten as a cereal.
Flour is prepared then used for porridge or other dishes. It is used for dumplings, fried cakes and drinks. It cannot be used for bread as it contains no gluten.
The stems of some kinds are sweet and are chewed.
It is used for beer, and vinegar.

Cultivation

Sorghum seeds will germinate soon after harvest. The seeds also store well if kept dry and protected from insects.

Production

Grain is ready for harvest 4-8 weeks after flowering.

Nutritional Values

Sorghum bicolor

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds		1459		11.1				

Chenopodiaceae

Common names

Spinach, Bo cai, Palungo sag, Palak, Isfanaj, Palak shak, Palang, Pinnis, Palaksag, Epinard, Dumpabachhali, Matturbachhali, Horen-so,



Scientific name

Spinacia oleracea

Edible portion

Leaves, Seeds sprouts, Vegetable,

Description

An annual leafy vegetable. It grows 60-90 cm high and spreads 30-45 cm wide. The broad leaves are produced in a clump on short stalks. The leaves at the base are large and leaves on the stalk are smaller. Plants are separately male and female. (So both types are needed if seed is to be produced.) Flowers are greenish in spikes.

Distribution

It is a temperate plant. It does not suit the tropical lowlands and grows best where the temperature varies between 10°C and 20°C or above 2000 m altitude. The kind with very prickly seeds is frost resistant. Plants need a deep well drained soil. It is a cool season, short day plant. In Nepal it grows to about 1400 m altitude. It suits hardiness zones 6-9.

Found in:

Africa, Asia, Australia, Bangladesh, Britain, China, Dominican Republic, East Africa, Ethiopia, Europe, France, Germany, Haiti, India, Indochina, Iran, Iraq, Italy, Malawi, Malaysia, Nepal, North America, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Saudi Arabia, Singapore, South Africa, Southern Africa, Spain, Tasmania, Timor, USA, Vietnam, West Indies,

Use

Leaves are cooked in a small amount of water. They are also used in soups and salads.
Young leaves are eaten raw and older leaves are cooked.
The sprouted seeds can be used in salads.
CAUTION: Spinach can contain oxalates which affects calcium absorption.

Cultivation

It is normally sown directly by seeds. Plants need to be 25 cm apart.

Production

The older leaves are picked off. They can be harvested starting at 8 weeks.

Nutritional Values

Spinacia oleracea

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves - raw	91.6	61		2.9	32	52	2.71	0.5
leaves - boiled	92.9	57		2.4	819	29	2.9	0.8

Verbenaceae

Common names

Brazilian tea,



Scientific name

Stachytarpheta jamaicensis

Edible portion

Leaves, Leaves - tea,

Description

A herb which keeps growing from year to year. The branches curve upwards. It grows to 1.5 m high. The leaves are produced opposite one another on winged stalks. The leaves are oval and 4-10 cm long. They have forward facing teeth. The flowers occur as a spike at the end of the plant. The stalk is thickened and the flowers arise from depressions in it. The flower forms a tube towards its base and is purplish-blue. This stalk thickens more and the fruit are about 3.5 mm long in the depressions. They form 2 nutlets. The inner side of each one is flat.

Distribution

It is a tropical plant. It grows naturally along roadsides. It needs an average to fertile, well-drained soil. It can grow in full or part sun. In Papua New Guinea it is at low altitudes but may be up to 700 m altitude. It suits hardiness zones 9-12.

Found in:

Asia, Australia, Bahamas, Brazil, Caribbean, Central America, Costa Rica, El Salvador, Haiti, Hawaii, Honduras, Guatemala, India, Indonesia, Jamaica, Lesser Antilles*, Malaysia, Mexico, Nicaragua, North America, Pacific, Panama, Papua New Guinea, PNG, Philippines, Puerto Rico, South America, Timor, USA, West Indies*,

Use

The young stem tips are eaten as a flavouring. They are also eaten like spinach.
Dried leaves are sold as Brazilian tea.
CAUTION: It is claimed to cause miscarriages so should be avoided by pregnant women.

Cultivation

Production

Nutritional Values

Stachytarpheta jamaicensis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Menispermaceae

Common names

Tape vine, Snake vine, Bai kon pit, Loi tien, Vanatiktika, Akanadi, Nimuka, Sahasrahalli, Pataki annu, Patavalli, Musakani, Nimukha,

Scientific name

Stephania japonica

Edible portion

Fruit, Leaves,

Description

A rather stout climber. The leaves are simple and the leaf stalk joins the blade away from the edge. Leaves are 4-18 cm long by 4-14 cm wide. The leaf stalks are 3-12 cm long. Plants are separately male and female. There are a group of flowers in the axils of leaves. The flowers have 2-4 petals. They are green, white or yellow. The fruit are fleshy and yellow, orange or red. They are 4-8 mm long and wide. There is one brown seed. It is 3-6 mm long.

Distribution

A tropical plant. It grows in rainforest and vine thickets. In tropical Queensland it grows from sea level to 1040 m altitude.

Found in:

Asia, Australia, China, India, Indonesia, Japan, Malaysia, Pacific, Thailand, Timor,

Use

The fruit is wrapped in leaves and cooked then eaten.
The leaves are squeezed to form a king of jelly.
CAUTION: The tuberous root is poisonous due to picrotoxin.

Cultivation

Production

Nutritional Values

Stephania japonica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Sterculiaceae

Common names

Java olive, Skunk Tree, Poon tree, Wild almond, Hill coconut, Kalumpang, Samraong, Kaju, Jangli badam, Sumrong, Peenaree



Scientific name

Sterculia foetida

Edible portion

Nut, Seeds, Leaves, Roots,

Description

A medium sized tree. It grows to 10-20 m high. The tree has a straight trunk and branches to form a small crown. The bark is brown and flakes off. It loses its leaves during the year. The leaves are crowded at the ends of branches. They are compound and with 7 to 9 leaflets borne in a ring at the end ot the leaf stalk. Each leaflet is 10-18 cm long by 3-5 cm wide. They have a pointed tip. The leaf stalk is 15-24 cm long and grooved. The flowers are strongly scented. They are red, dull yellow or purple. They are 2-4 cm wide in clusters 15-20 cm long and shaped like a pyramid. Male and female flowers are separate. The fruit are large, woody, nearly smooth and oval. They are 7.5-10 cm long and flattened. They turn red when ripe. The ripe fruit splits open showing large black seeds. The seeds are edible.

Distribution

A tropical plant. Plants grow in the tropical lowland in dry woodlands. They are common throughout the islands of the Philippines along the seashores and partly open forests at low and medium altitudes. In Nepal it grows up to 300 m altitude. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Bangladesh, Burma, China, Cambodia, East Africa, Ghana, Hawaii, India, Indochina, Indonesia, Malaysia, Mozambique, Myanmar, Nepal, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Senegal, South Africa, Southern Africa, Sri Lanka, Taiwan, Thailand, Timor, Uganda, USA, Vietnam, West Africa,

Use

The seed kernels are eaten raw. They can also be roasted like chestnuts. They can be soaked to remove the skins before roasting. The seeds can be used for oil.
CAUTION: The seeds eaten in large numbers can cause diarrhoea and headaches. They probably should be cooked well.
Immature seeds are not eaten.
The rootstock of the young plant can be eaten raw.

Cultivation

Plants are grown from seed. It can also be grown from mature cuttings.

Production

It is fast growing.

Nutritional Values

Sterculia foetida

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed				21.0				

Sterculiaceae

Common names

Gorarbar, Peanut tree, Red-fruited Kurrajong, Calool,



Scientific name

Sterculia quadrifida

Edible portion

Seeds,

Description

A small to medium sized tree. It grows up to 5-12-20 m tall. It has an open rounded crown. It is a straggly plant and the smaller stems are thick. The bark is smooth and grey. The leaves are long and heart shaped. They are 9-23 cm long by 5.5 -17.5 cm wide. They are dark green and rough with prominent veins. They are paler and finely hairy underneath. The leaves fall off during the year. The leaf stalk is 4-10 cm long. The flowers are small, greenish-yellow and not easily noticed. They are produced in flower heads towards the ends of branches. The sepals of the flower remain joined forming a tube which is bell-shaped. They are 0.5-1 cm long by 0.5 cm wide. The outer surface is green and hairy. Several flowers occur together in flower arrangements that are 3-10 cm long. The fruit are groups of leathery pods or capsules carried stiffly on the stems. The fruit are 5-8 cm across by 3-4 cm long. The skin is rough velvety and leathery and turns red when ripe. The ripe pods split to show the light shiny inner surface and black seeds. There are 2-8 shiny seeds. The seeds are 1-2 cm long. The seeds are

Distribution

A tropical plant. It grows naturally in coastal monsoon vine thickets and on sand dunes behind the beach. It can be grown on a wide variety of well-drained soils. Melbourne Botanical Gardens. It suits hardiness zones 10-12.

Found in:

Asia, Australia, India, Malesia, Pacific, Papua New Guinea, PNG, Timor,

Use

The seeds are eaten raw. When peeled they have a pleasant peanut like taste. They are also cooked.

Cultivation

Plants are grown from seed.

Production

Young plants are fast growing. In Australia, flowering occurs from February to November and fruiting from April to December.

Nutritional Values

Sterculia quadrifida

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
nut	40.7	1249		12.3		2	2.6	6.5

Podocarpaceae

Common names

Black pine,

Scientific name

Sundacarpus amarus

Edible portion

Fruit, Seeds,

Description

A large tree. It grows 20-40 m tall. The trunk is 1 m across. The crown breaks up into large branches. The young bark is grey and becomes darker with age. It peels off in irregular flakes. The leaves are silvery green. The leaves are alternate and narrow. The leaves are simple and 5-16 cm long. They are smooth. They taper to the tip. They are thin and tough. Male and female flowers are on separate plants. The fruit is a naked seed on a long stalk. It is orange-red. The fruit are 25-35 mm long by 25-30 mm wide. They occur singly or in bunches in the axils of leaves and on the ends of branches. It has a hard brown coat and a thin fleshy layer. The broken shell smells of sweet pine. There is one seed 20-25 mm across and round. The kernel of the seed is edible after prolonged processing.

Distribution

A tropical plant. It grows in mountains between 650-2300 m altitude. It occurs in tropical rainforest in highland regions. It suits hardiness zones 9-12. Arboretum Tasmania.

Found in:

Australia, Indonesia, Malaysia, Pacific, Papua New Guinea, Philippines, PNG, Tasmania, Timor,

Use

The seed is eaten after roasting, crushing and washing.

Cultivation

Production

Nutritional Values

Sundacarpus amarus

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Asteraceae

Common names

Cinderella weed,

Scientific name

Synedrella nodiflora

Edible portion

Leaves,

Description

An annual herb. It has erect stems. It grows to 70 cm-2 m tall. The branches usually divided into two at each branch. The leaves are produced opposite each other and are 10 cm long on slender winged leaf stalks. It has an unpleasant smell. The flowers are yellow. They are in small heads. They can be singly or several together. They are in the axils of leaves. The fruit are flat and 4.5 mm long by 2 mm wide. They have stiff fringed wings.

Distribution

A tropical plant. It now occurs in many countries. It is commonly self sown in cultivated ground. In Papua New Guinea it grows from sea level to about 1,000 m altitude.

Found in:

Africa, Asia, Australia, Benin, Cameroon, Central America, Cuba, Dominican Republic, Fiji, Ghana, Haiti, India, Indonesia, Ivory Coast, Jamaica, Malaysia, Mexico, Nigeria, Pacific, Papua New Guinea, PNG, Puerto Rico, Sierra Leone, South America, Timor, Tonga, West Africa, West Indies,

Use

Young leaves are eaten.

Cultivation

Production

Nutritional Values

Synedrella nodiflora

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Myrtaceae

Common names

Watery rose apple, Jambu air, Bell fruit, Chompoo, Jambu ayer mawar, Jambu ayer, Jambu uwer, Jambu wer, Jambu darsono, Chom pu pa,



Scientific name

Syzygium aqueum

Edible portion

Fruit,

Description

It mostly occurs as just a small shrub with branches near the base. It is 5-8 m tall. But it can occur as a tree up to 10-30 m high with a short crooked trunk. The trunk can be 70 cm across. The twigs are angular and carry simple opposite leaves. The leaves are somewhat narrow and pointed at both ends and they clasp the stem without a stalk. They are stiff. They are from 5 to 23 cm long by 6 cm wide. They have a heart shaped base. The leaves have many oil dots. The flowers are yellowish green. They are about 3 cm across. The flowers occur in many flowered clusters in the angles of leaves. They can also be on the ends of branches and on side shoots from stems. Flowers and fruit are slightly scented. The fruit is a fleshy yellow or red berry which is bell shaped. The fruit is about 3-5 cm across. It has a crater in the end with a long thread in it. The fruit is waxy and crisp and is often seedless. When seeds occur there can be one or more seeds. The fruit is edible.

Distribution

A tropical plant. It occurs in many tropical countries. In grows in lower montaine forest. It grows from sea level to 1600 metres near the equator. It grows well in wet places but needs a well drained soil. They can grow in poor alkaline soils. They are found in Samar in the Philippines growing in areas of shrub and forest at low and medium altitudes. Plants are sensitive to frost. It suits hardiness zones 10-12.

Found in:

Asia, Australia, Bangladesh, Brazil, Burma, Cambodia, China, Hawaii, India, Indochina, Indonesia, Malaysia, Myanmar, Pacific, Papua New Guinea, Philippines, PNG, Singapore, Solomon Islands, South America, Sri Lanka, Thailand, Timor, USA, Vanuatu, Vietnam,

Use

The fruit are eaten raw.
They are also used for drinks or syrup.

Cultivation

Trees can be grown fairly easily from cuttings but can also be grown by air layering or budding. Buds do not always continue to grow successfully. A spacing of 6-8 metres between trees is suitable. Where seeds occur, plants can be grown from fresh seed. Fruit from these plants can be more oily and acidic.

Production

Fruiting is seasonal but there can be 2 or 3 crops a year. In the southern hemisphere flowering is often about October with fruit from October to January. Fruit develop quickly.

Nutritional Values

Syzygium aqueum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	87.0		46	0.6			1.1	

Myrtaceae

Common names

Clove,



Scientific name

Syzygium aromaticum

Edible portion

Flower bud, Spice, Oil,

Description

A tall tree up to 20 m tall with bright red flowers. The trunk is about 30 cm across. It is normally divided into 2 or 3 trunks. The bark is grey and the small branches are very brittle. The leaf stalk has a swollen reddish base and the leaf is about 10 cm x 4 cm. The young leaves are reddish. They became dark green on the upper surface and paler underneath. Flowers are on the ends of branches. Up to 20 small flowers occur together. The fruit are oblong, red and fleshy. They are about 3 cm long with 1 or 2 seeds.

Distribution

A tropical plant. They grow best on small islands near the sea in tropical places. They prefer a place which is warm and humid all year round. It needs temperatures above 10°C but below 38°C. It suits hardiness zones 11-12.

Found in:

Africa, Asia, Australia, Burma, Cambodia, Central America, China, East Africa, Ethiopia, Fiji, Ghana, Grenada, Hawaii, India, Indochina, Indonesia, Jamaica, Kenya, Madagascar, Malaysia, Mali, Mauritius, Myanmar, Nicaragua, Pacific, Papua New Guinea, PNG, Reunion, Sierra Leone, Sri Lanka, Suriname, Tanzania, Thailand, Timor, USA, West Africa, West Indies,

Use

The dried flower buds are used to flavour foods. They are used with ham, sausages, baked apples, mincemeat, pies, preserves, and pickles.
They are the source of an oil used in the food industry to flavour drinks, desserts, chewing gum, bakery products and ice cream.
The fruit pulp is eaten. Dried flowers are also chewed.

Cultivation

They grow easily from fresh seed. Seedling trees can be transplanted when about 15 months old. Vegetative propagation is not easy. They can be grown from cuttings.

Production

Trees start to produce at 6-8 years of age. The flower buds are harvested when light red and dried in the sun. Trees last for 80 years or so.

Nutritional Values

Syzygium aromaticum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
flower bud	6.9	1350		6.0	53	80.8	8.7	1.1

Myrtaceae

Common names

Rose apple, Jambos,



Scientific name

Syzygium jambos

Edible portion

Fruit, Flowers,

Description

An evergreen tree. It grows up to 7.5-15 m tall and with a spread of 4 m. It can be a small shrub. The stem is erect and 20-40 cm across. The branches hang downwards. The bark is greyish-green. The young twigs are either flattened of somewhat square in cross section. The leaves are simple, thick and shiny. The leaves are narrow and pointed (10-20 cm long and 3-4 cm wide). They taper towards both ends. Young leaves are brownish red coloured. The leaves have 16-18 pairs of side veins which join near the edge of the leaf. The leaf stalk is 1 cm long. The flowers are large (4-5 cm) and greenish-white and fluffy. They occur in clusters at the ends of branches. The fruit is rose scented and apple like. They are dull yellow and tinged pink. Fruit are 4 cm across. The fruit have a distinct crown at the end. They contain 1 or 2 large seeds. The seeds are pale brown. The fruit is edible.

Distribution

A tropical plant. It needs adequate moisture and suits the warm moist tropics. It can't stand waterlogging. It prefers a rich well composted soil but will do well on poorer soils. It does best in an open sunny position. It is drought and frost tender. It is often along stream banks. It does well near the sea shore. Young plants need shade and moisture but established trees can tolerate harder conditions. It probably grows up to about 1200 metres above sea level in equatorial regions but near the altitudinal and latitudinal limits it produces no fruit. Trees can grow on a variety of soils. A pH between 5.5 and 7 is recommended. In Nepal it grows between 600-1400 m altitude. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Brazil, Cambodia, Cameroon, Central Africa, Central America, China, East Africa, Fiji, Ghana, Guinea-Bissau, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Jamaica, Madagascar, Malawi, Malaysia, Mozambique, Nepal, North America, Pacific, Papua New Guinea, Philippines, PNG, Sierra Leone, Somalia, Southern Africa, South America, Sri Lanka, Thailand, Timor, Tonga, USA, Vietnam, West Africa, Zimbabwe,

Use

The fruit are eaten raw. They are poor as a dessert fruit but because of the sweet rose smell are often crystallised and used in sweets. They can be used for jams and jellies. (It is good to mix with other fruits as rose apple helps the jam to set.)
The flowers are candied.

Cultivation

Plants can be grown from seed. Seeds germinate well and have no dormancy. Seeds often give rise to more than one seedling. These can be carefully separated when young. As fruit quality varies it is best to preserve better kinds of trees using vegetative propagation methods. Plants can be grafted or budded if needed. Cuttings root fairly easily in sand. Tip cuttings are suitable. Trees need to be 6-8 metres apart.

Production

Trees grow slowly. They start bearing when 4-5 years old. Fruiting is normally seasonal but over a long season. In the northern hemisphere it flowers from April to May and fruit ripen July to August.

Nutritional Values

Syzygium jambos

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	80.4	105		0.6	34	27	0.1	0.1

Myrtaceae

Common names

Malay-apple,



Scientific name

Syzygium malaccense

Edible portion

Fruit,

Description

An evergreen tree 5 to 25 m tall. It spreads out to 4 m across. Trees tend to branch near the base. Leaves are simple, thick and leathery and shiny on both surfaces. They are large and oval. Leaves can be up to 25-30 cm long and 12 cm wide. The leaves have a vein around the edge of the leaf. Flowers are produced on old wood and on the trunk as well as in the angles where leaves join and at the ends of branches. Flowers are purple, crimson or white and 2.5 cm across. They mostly occur in dense clusters giving a brilliant display. The red stamens are often fallen under the tree. The fruit is rounded or oblong and 5 -6 cm across by 6-8 cm long. The fruit has white flesh around a large brown seed. The seed is about 1.3 cm by 1.7 cm. Some kinds are seedless. The skin of the fruit is red or pink with darker stripes. The fruit are edible.

Distribution

A tropical plant. They grow in coastal areas in the tropics and up to 1000 m altitude. It is a rainforest species. They need fertile soil, plenty of moisture, and good drainage. They are sensitive to frost. It does best in an open sunny position. It can tolerate drought but does best where there is an absence of drought. It does not grow on atolls. It will grow with soil pH of 6.1 -7.4. They occur in northeast Queensland in Australia and across Malesia. They have also been introduced into other regions. In the Cairns Botanical Gardens. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Bangladesh, Brazil, Burma, Cambodia, Cameroon, Central Africa, Central America, China, Cook Islands, Costa Rica, Fiji, Ghana, Guam, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Ivory Coast, Jamaica, Kosrae, Malaysia, Maldives, Myanmar, Nicaragua, Niue, Pacific, Panama, Papua New Guinea, PNG, Peru, Palau, Philippines, Samoa, SE Asia, Solomon Islands, South America, Thailand, Timor, Tonga, USA, Vanuatu, Vietnam, West Africa, West Indies, Yap,

Use

The fruit can be eaten fresh or cooked. They are also used in jam and pickles.
The young leaves while still red are eaten.
The flowers have also been recorded as being eaten. They are preserved in syrup or eaten in salads.

Cultivation

Trees are normally grown from seed. Seeds need to be fresh. Where termites are a problem damaging seedlings, growing them in light shade reduces the problem. Plants can be grown by budding, grafting, layering or cuttings. Aerial layering is probably the most common method for vegetative propagation. Budding onto rootstocks of the same species have proven successful, but they are rarely successful if rootstocks of related species are used. A spacing of 10 m between trees is suitable.

Production

Flowering and fruiting is seasonal. In the southern hemisphere flowering is about October to November. Fruit ripen in 2-3 months. The fruit are ripe January to February. The yield can be 21-85 kg per tree per year.

Nutritional Values

Syzygium malaccense

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	91.1	105	25	0.4	0	15	0.4	0.1

Myrtaceae

Common names

Rai jamun, Satin ash,



Scientific name

Syzygium nervosum

Edible portion

Fruit,

Description

A large tree. It grows up to 15-25 m tall. It has a broad crown densely covered with leaves. The bark is slightly rough and mostly flaky. It is dark cream to grey-brown. Larger trees have buttresses. The leaves are produced opposite one another along the stalk and are leathery. They are 10-18 cm long by 4-7 cm wide. The leaves are dark green and shiny on top and pale green underneath. The leaves have a pointed tip, a wavy edge and distinct veins. The leaf stalk is 1 cm long. The leaves have a strong citrus type smell when crushed. The flowers are white or cream coloured. They have many stamens up to 1 cm long and the flowers have a scent. The flowers occur in clusters in the angles of leaves near the ends of branches. The fruit is smooth and round with a hollow at the end. It is 1-1.5 cm across. It is a shiny purple black when ripe. The fruit has one seed. The seed is oval and 0.8 cm across. The fruit is edible.

Distribution

It is a tropical plant. It grows in monsoon forest in the Northern Territory in Australia. It also ocurs Indonesia, Malaysia, Philippines, and other Asian countries. Often trees are near streams or swamps. They need deep well drained soil. It needs plenty of moisture.

Found in:

Asia, Australia, Bangladesh, Burma, China, India, Indochina, Indonesia, Malaysia, Myanmar, Pacific, Philippines, Sri Lanka, Thailand, Timor,

Use

The fruit can be eaten raw.

Cultivation

Plants are grown from fresh seed.

Production

Trees flower in September to November and have ripe fruit December to January (April to May).

Nutritional Values

Syzygium nervosum

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Taccaceae

Common names

Gadung tikus, Tacca,

Scientific name

Tacca palmata

Edible portion

Starch,

Description

A herb which has tubers and is dormant for part of the year. It grows 40 cm high. The leaves are at the base and are divided like fingers on a hand. They have 5 lobes. The leaves are 15-20 cm long. The leaf stalks is 30 cm long. The flowers are black to purple. They are nodding. The 2 main bracts are erect. There are 2 smaller bracts below. There are no threadlike bracts.

Distribution

A tropical plant. It suits seasonally moist and dry climates. It needs a fertile, humus-rich, well-drained soil. It needs a neutral to acid pH. It suits bright shade. It suits hardiness zones 10-12.

Found in:

Asia, Indonesia, Malaysia, Timor,

Use

Cultivation

Production

Nutritional Values

Tacca palmata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

Waterleaf,

Portulacaceae



Scientific name

Talinum triangulare

Edible portion

Leaves, Vegetable,

Description

A small leafy branching herb. It grows up to 35-60 cm high. It can be erect or lie over. The roots are swollen and fleshy. The stems are succulent. The leaves are alternate and have very short stalks and are fairly soft and light green in colour. The leaves can be 7.5 cm long. In the shade they grow larger. The flowers are on a 3 sided stalk at the top of the plant. There is a clump of pale pink flowers with 5 petals. Seeds are very small and black.

Distribution

A tropical plant. It occurs in coastal tropical areas and up to about 1000 m altitude. Due to the C4 pathway optimum growth is achieved with high temperatures, high soil fertility, plenty of sunlight and sufficient moisture. The plant will also grow adequately in poorer conditions including some drought and a little shade.

Found in:

Africa, Asia, Australia, Benin, Bolivia, Brazil, Burundi, Cameroon, Central Africa, Central African Republic, Central America, Congo, Fiji, Ghana, Guinea, Hawaii, India, Indonesia, Ivory Coast, Malaysia, Mexico, Nigeria, North America, Pacific, Papua New Guinea, PNG, Philippines, Senegal, Sierra Leone, Solomon Islands, Sri Lanka, Suriname, Thailand, Timor, Trinidad-Tobago, USA, Venezuela, Vietnam, West Africa, West Indies,

Use

The leaves and tender stems are eaten raw or cooked. They are slightly sour. Steaming the leaves produces less brown discolouration and they are less slimy. Due to oxalates in the leaves, large amounts should not be eaten.

Cultivation

It can be grown from seeds or stem cuttings. There are about 4000 seeds per gram. Seed collection is not easy because the seed capsules split open very easily and the seeds drop out. Also plants don't always produce seeds readily. Growing from seed is easiest by sowing seeds in a small nursery then transplanting the small plants when they are about 5-8 cm high. With very small seeds like these, it is best to mix the seeds with dry sand before sowing. Then a small amount of the seed/sand mixture can be sown and the seeds will not be too close together. Seeds will grow in about 6 days. Often plants once established become self sown from natural seed falling. Alternatively cuttings about 15 cm long of the more mature but not woody stems can be used. The excess leaves should be removed from the cuttings. A spacing of 20 cm is suitable. Plants grow better in fertile soil, but will grow in fairly low fertility soils. They need plenty of moisture.

Production

The leaves and tender stems can keep being produced for up to a year. Older plants can be cut back and allowed to sprout again. Plants start producing 4-6 weeks after planting. Leaf tips may be picked every two weeks for up to a year. Normally the top shoots are picked out first, to let the side shoots grow. A yield of up to 5 kg of edible tips per square metre area of plants over one year can be achieved.

Nutritional Values

Talinum triangulare

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	91.0	105	25	2.4	30	31	5.0	

Fabaceae

Common names

Tamarind,



Scientific name

Tamarindus indica

Edible portion

Fruit, Seeds, Leaves, Flowers, Spice,

Description

A large spreading tree up to 24 m tall. It has a broad dense evergreen crown. In dry areas the tree can lose its leaves. The trunk can be 1 m across. The bark is rough and grey with a checkered pattern. The leaves are carried one after another along the branch. The whole leaf is 6-12 cm long and it is divided into 10-17 pairs of leaflets. These are oblong and without stalks. The whole leaf has a leaf stalk about 15 cm long. The leaflets are 1-2.5 cm long and 4 9 mm wide. They are a dull dark green and with a rounded tip. The flowers are pale yellow with brown markings. The flowers are about 2.5 cm across and hang on long many flowered stalks. The fruit is an oblong thin skinned fleshy capsule. The brown seeds are inside this long rough surfaced, sausage-like fruit. This pod is 6-8 cm long and about 2 cm wide and contracted between the seeds. The pod cracks when mature. It is a legume. The pulp is date like and reddish brown. The seeds are shiny and hard. The pulp of the pods is edible.

Distribution

A tropical plant. The tree is cultivated in a number of coastal towns in the tropics as a street tree. It is probably best grown below 800 m altitude in the tropics. It is drought resistant. It cannot stand water-logging. It does well on coastal dunes above high water level. It suits semi-arid areas. It grows in the Sahel. It must be in frost free locations. In Nepal it grows up to about 1200 m altitude. In Kenya it grows from sea level to 1,600 m altitude. It suits hardiness zones 11-12.

Found in:

Africa, Andamans, Angola, Arabia, Argentina, Asia, Australia, Bahamas, Bahrain, Bangladesh, Belize, Benin, Bhutan, Bolivia, Brazil, Burkina Faso, Burma, Burundi, Cambodia, Cameroon, Cape Verde, Caribbean, Central Africa, Central African Republic, Central America, Chad, China, Colombia, Congo, Costa Rica, Cuba, Djibouti, Dominican Republic, East Africa, Ecuador, Egypt, El Salvador, Equatorial Guinea, Ethiopia, Fiji, French Guiana, Ghana, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Iran, Iraq, Ivory Coast, Jamaica, Kenya, Kiribati, Laos, Liberia, Libya, Madagascar, Malawi, Malaysia, Maldives, Mali, Marianas, Martinique, Mauritania, Mexico, Mozambique, Myanmar, Nepal, New

Use

The pulp of the fruit is edible. It is also used for drinks.
The seeds are also edible, cooked. They can be roasted and ground into flour. The outer skin is removed.
The young leaves, flowers and young pods are also edible. They are eaten in curries.
They are used to make dishes acid. They are used in sauces and chutneys.
The young seedlings are also edible.

Cultivation

It can be grown by seeds or cuttings. It is best to sow seedlings in pots then transplant them but seed can be sown direct. There are about 1400 seeds per kg. Seed should be soaked in hot water or the seed coat nicked before sowing. Seed can be stored for 2 years if kept dry, cool and away from insects. Trees can be topped or cut back and allowed to re-grow. Nothing grows under the trees due to the acidity of the leaves. Trees can be grown by air layering or cuttings.

Production

It grows very slowly. Trees are long lived. Fruiting is seasonal. The season tends to be April to June. It is about 8-9 months from flowering to ripe fruit.
It plants are grown for shoots, they are planted closely.

Nutritional Values

Tamarindus indica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	38.7	995		2.3	20	60	1.1	0.7
flowers	80.0	314	75	2.5			1.4	
leaves	78.0	305	73	3.1			2.0	

Verbenaceae

Common names

Teak,

Scientific name

Tectona grandis

Edible portion

Leaves - colouring, Fruit,

Description

A large tree. It grows 25-50 m tall. The trunk is 1 m across. It can have slight buttresses. It loses some leaves during the year. The leaves are oval and have a rough surface. They can be 60 cm long. The flowers are in large panicles. They are white or pink.

Distribution

It is a tropical plant.

Found in:

Africa, Asia, Australia, Burma, Central America, Costa Rica, Haiti, Hawaii, India, Indonesia, Malaysia, Myanmar, Nigeria, Pacific, Panama, Thailand, Timor, USA, West Africa,

Use

The leaves are added to the water in which unripe jackfruit are boiled to give them a red flavour.
The boiled teakwood shavings are used to colour Easter eggs.
Arack is matured in teak wood to give a distinctive flavour.

Cultivation

Production

Nutritional Values

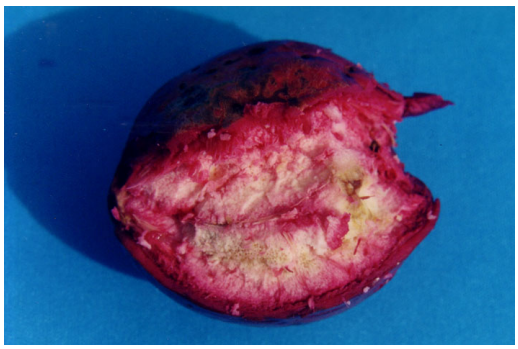
Tectona grandis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Combretaceae

Common names

Java almond, Coastal almond,



Scientific name

Terminalia catappa

Edible portion

Kernel, Nut, Nut-oil, Fruit,

Description

A large tree up to 25-40 m tall. It loses its leaves during the year. The trunk can be straight or twisted. There can be buttresses up to 3 m tall. The branches lie horizontally and come out in layers. The leaves are long, smooth and shiny with an abrupt point at the tip and a rounded base. Leaves tend to be near the ends of branches. Leaves can be 17-29 cm long and 10-15 cm wide. Young leaves have soft hairs. The leaves turn red and fall off twice a year. Flowers are greenish white and in a spike at the end of the branches. The lower flowers on a spike are female, then the others are male. The fruit is about 6 cm long by 3-4 cm wide, thick and flattened with a flange around the edge. The fruit are green and turn red when ripe. The pulp is edible.

Distribution

A tropical plant. This tree occurs on the beach front in most tropical countries in the world. They are sometimes cultivated as a shade tree. The tree is common in lowland areas particularly on sandy or rocky beaches. Seeds are spread by both bats and sea water as well as being planted by people. Trees are common along streets in coastal towns. They will grow from sea level up to about 800 m altitude. It can grow with a soil pH of 4.0-8.5. Plants are frost tender. They can tolerate drought. It grows in areas with a temperature range of 17-32°C. It suits hardiness zones 11-12.

Found in:

Africa, Andamans, Asia, Australia, Bahamas, Bangladesh, Brazil, Burma, Cambodia, Cameroon, Caribbean, Central Africa, Central America, China, Cook Islands, Congo, Costa Rica, Cuba, Dominican Republic, East Africa, Fiji, FSM, Gabon, Ghana, Guiana, Guyana, Haiti, Hawaii, India, Indochina, Indonesia*, Ivory Coast, Kenya, Kiribati, Laos, Lesser Antilles, Liberia, Madagascar, Malawi, Malaysia, Marquesas, Marshall Is., Mexico, Micronesia, Myanmar, Nicaragua, New Caledonia, Nigeria, Niue, North America, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Polynesia, Ponape, Puerto Rico, Samoa, Senegal, Seychelles, Sierra Leone, Singapore, Society Islands, Solomon Islands, Somalia, South America, Sri Lanka

Use

The kernels of the fruit are eaten raw. They are also roasted. They can be chopped and added to cooking mixes.
An edible oil can also be extracted. It is used in cooking.
The fruit have a thin layer of edible flesh.
The mature fruit are fermented into wine.

Cultivation

Plants can be grown from seed. Seeds can be stored dry for a year or more. Seeds germinate freely and most seeds grow.
Insects can badly damage the leaves of young seedlings.

Production

It is fast growing. Nut production is seasonal.

Nutritional Values

Terminalia catappa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
nut dried	4.2	2987		20.0	0	2	6.3	41.0
nut	31	1810	433	15.9	0	4	4.6	4.9

Combretaceae

Common names

Kalumpit, Ganurru,



Scientific name

Terminalia microcarpa

Edible portion

Kernels, Fruit, Nut,

Description

A large tree. It grows 12-30 m high. It loses its leaves during the year. The leaves are smooth and pointed at both ends. The flowers are yellowish white, on slender flower stalks which grow from the axils of leaves. The fruit are about 3 cm across, smooth, dark red and fleshy.

Distribution

It is a tropical plant. It grows naturally in monsoon vine forests. Very common and widely distributed in the forests throughout the islands of the Philippines.

Found in:

Asia, Australia, Indonesia, Malaysia, Pacific, Papua New Guinea, PNG, Philippines*, Timor,

Use

The fruit are eaten raw when ripe or made into jam. There is little flesh but it is very sweet.

Cultivation

The fruit are generally collected from the ground.

Production

Nutritional Values

Terminalia microcarpa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Byttneriaceae

Common names

Cacao,



Scientific name

Theobroma cacao

Edible portion

Seeds, Seeds for chocolate, Herb, Flavouring,

Description

A small evergreen tree. It grows to 15 m tall. Often it is pruned to be only 6 m tall. The trunk is straight for about 90-159 cm above the ground then a fan arrangement of branches develops. The leaves are large and simple. They are in a spiral arrangement around the branch. They are 17-30 cm long and hang down. They are red brown when young. The leaves are wider towards the pointed tip. The leaves are thin but leathery with prominent veins. The flowers are on short shoots like cushions on the trunk and woody branches. The flowers are small, yellow-white and about 1 cm across. A ribbed pod develops. The pods are large about 15-20 cm long by 10 cm across. They are green when young but become yellow or red. The pods have rows of seeds. There are 20-50 oval seeds. These are white at first then become red-brown as they ripen. There is a sweet pulp surrounding the seeds.

Distribution

A tropical plant. It is native from Mexico to Central America. It grows in lowland areas with a rainfall around 2,000 mm annually. It can grow in areas with rainfall between 1,200 and 7,000 mm. Plants do best in acid or neutral soil which is well drained. It has a long tap root which will not develop on rocky or hard soil. Cocoa does not do well on windy sites where there are sudden fluctuations of humidity. Shade trees help provide these conditions. It needs temperatures above 20°C. It suits hardiness zones 11-12.

Found in:

Africa, Amazon, Asia, Australia, Belize, Bolivia, Brazil, Cameroon, Central Africa, Central America, China, Colombia, Congo, Costa Rica, Cuba, Dominican Republic, East Africa, El Salvador, Fiji, French Guiana, Ghana, Grenada, Guatemala, Guyana, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Ivory Coast, Jamaica, Liberia, Mauritius, Mexico, Nicaragua, Nigeria, Pacific, Panama, Papua New Guinea, Peru, Philippines, PNG, Puerto Rico, Sao Tome et Principe, Sierra Leone, Singapore, Solomon Islands, South America, Sri Lanka, Suriname, Timor, Trinidad, Uganda, USA, Vanuatu, Venezuela, Vietnam, West Africa, West Indies, Zambia

Use

The seeds are eaten. The seeds are also processed and used for chocolate. The seeds are fermented for 6 days to remove the flesh then washed and dried.
The pulp in the pod is edible when ripe. It is used in jellies and sweets.

Cultivation

Plants are grown from seed. Seed can be sown in pots in a nursery then transplanted or can be sown directly. Seedlings need shade. Plants can also be grown from cuttings. Cuttings from side branches are used. Cuttings are normally raised in a nursery. Seeds should be removed from the pod and dried but should not be stored for more than 3 months. Seeds germinate in 1 week. Plants should be spaced 3 m apart. Plants can be pruned. Flowers are pollinated by insects.

Production

Some seedling varieties produce within 3-5 years. They continue to produce for 50 years. Fruits mature after 6 months. Seeds are fermented for 1 week and the temperature should not go above 50°C but once the temperature has come down to 35°C they can be sun dried. During drying the moisture content reduces from 50-60% to 6% over about one week.

Nutritional Values

Theobroma cacao

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seed	3.6	1908		12.0	15	3	3.6	

Malvaceae

Common names

Pacific rosewood, Indian tulip tree, Coastal Hibiscus, Frefi, Portia tree, Umbrella tree, False rosewood, Paras pipal, Baru-baru, Bebaru, Po

Scientific name

Thespesia populnea

Edible portion

Leaves, Flowers, Fruit,

Description

An evergreen tree. It grows to 5-10 m high and spreads 2 m across. The stem is erect and branching. It has a compact crown. The outer bark is grey-brown. It is cracked along its length and scaly. The leaves are bluish green and broadly heart shaped. They are 5-15 cm long and 5-10 cm wide and taper to a tip. The leaves are thin and have very small scales on both surfaces. They are on long stalks. The leaves have nectar nearing zones at the bases of the midrib. The flowers are a sulphur-yellow. They have 5 petals and a purple throat. They occur singly. They are bell shaped. Flowers are 5-8 cm across. The flowers are somewhat like Hibiscus. The fruit is a round capsule 2.5 cm across. Sometimes it splits open into 5 valves revealing silky brown seeds. They are oval or triangle shaped and about 9 mm across.

Distribution

It is a tropical plant. It does best in light well-drained soils. It needs an open sunny position. It is damaged by drought and frost. It can tolerate salt spray. It needs a temperature above 13-15°C. They suit the coastal tropics. It does best with a temperature of 20-26°C. It grows along beaches and tidal forests in India. In China it grows on the sea coast in sunny places. It suits hardiness zones 10-12.

Found in:

Africa, Andamans, Asia, Australia, Bangladesh, Cambodia, Caribbean, Central America, China, Cuba, East Africa, Fiji, Ghana, Haiti, Hawaii, India, Indochina, Indonesia, Jamaica, Lesser Antilles, Malaysia, Marianas, Mexico*, Myanmar, Nigeria, Niue, North America, Pacific, Pakistan, Palau, Papua New Guinea, PNG, Philippines, Puerto Rico, Samoa, SE Asia, Solomon Islands, Southern Africa, Sri Lanka, Tahiti, Taiwan, Thailand, Timor, Tonga, USA, Vanuatu, Vietnam, West Africa, West Indies*, Yap, Zimbabwe,

Use

The young leaves and young flower buds are eaten raw, cooked or fried in butter. They are used in soups.
The fruit are eaten preserved.

Cultivation

Plants are grown from seed. The seed can be dried and stored for short periods but it is best to sow fresh seed. Seeds can germinate in 8 days but may take a few weeks. They can also be grown from cuttings.

Production

It is fast growing. It flowers in 2-3 years.

Nutritional Values

Thespesia populnea

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	64.3	598		3.9			4.1	

Boraginaceae

Common names

Silver leaf, Babakoan, Ki bako, Tree heliotrope, Amoloset, Chen, Ebu, Roronibebe, Hunig, Hunek, Hunik, Irin, Kiden, Sesen, Sruhsruh,

Scientific name

Tournefortia argentea

Edible portion

Leaves, Fruit,

Description

A shrub or small crooked tree. It grows 1-6 m high. The bark is light grey and deeply cracked. The leaves are light green and with silky hairs. The leaves are simple and alternate. They are broadly oval and in rings at the tips of the branches. The leaves are 10-30 cm long and 3-12 cm wide. The flowers are small, white and hairy. They occur in groups and have no stalks. The fruit are smooth and green. They are round and 5-8 mm long. There are 2-4 small nutlets that are light brown when dry.

Distribution

A tropical and subtropical plant. It grows along sandy beaches in China. It grows in coastal regions up to 15 m altitude. It is usually in areas with rainfall or 300-5000 mm per year. It can grow in shallow, salty and infertile soils. It grows in areas with an average temperature of 20-32°C. It can be on rocky limestone banks. It needs good drainage. It can grow with soil pH of 6.1 -7.4. It can tolerate windy coastal conditions.

Found in:

Asia, Australia, China, Chuuk, Cook Islands, Fiji, Guam, Hawaii, India, Indian Ocean, Indochina, Indonesia, Japan, Kiribati, Madagascar, Malaysia, Marianas, Marshall islands, Nauru, New Caledonia, Pacific, Philippines, Polynesia, Russia, SW Asia, SE Europe, Singapore, Sri Lanka, Taiwan, Timor, Tokelau, Tonga, USA, Vietnam, Yap,

Use

The leaves are eaten raw. They have the taste of parsley.
They are also used for stuffing when cooking pigs.

Cultivation

Plants can be grown from seed. Seeds are collected from ripe fruit. The flesh is rubbed off and the seeds planted, preferably fresh. Seeds germinate in 2-4 weeks. Seedlings can be planted in the field after 12 months. It can be grown from cuttings or by layering.

Production

It is slow growing.

Nutritional Values

Tournefortia argentea

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Ulmaceae

Common names

Poison Peach,

Scientific name

Trema tomentosa

Edible portion

Description

A shrub with several stems. It grows 4 m high. The stems are covered with stiff hairs. The leaves are alternate. They vary in shape but are oval. They can be 2-13 cm long by 1-5 cm wide. The leaves are rough to touch. The leaves have teeth along the edge and a pointed tip. They are paler underneath. The flowers are green or white. They are on short stalks in the axils of leaves. The male and female flowers are separate on the same plant. The fruit are fleshy and round. They are 3 mm across. They occur in bunches are change from green to black as they mature.

Distribution

A tropical plant. It grows in tropical and subtropical areas.

Found in:

Asia, Australia, Himalayas, India, Pacific Islands, Timor,

Use

CAUTION: Parts of this plant can cause liver damage. Plants vary in their toxicity.

Cultivation

Production

Nutritional Values

Trema tomentosa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Zygophyllaceae

Common names

Caltrops,

Scientific name

Tribulus cistoides

Edible portion

Leaves,

Description

A herb. It keeps growing from year to year. The branches which lie down. They can be 1 m long. The plant has a strong taproot. The stems are hairy. The leaves are produced opposite one another. They are divided along the stalk into 6-8 pairs of leaflets. The leaf and leaflets on one side of the stalk are smaller than on the other side. The leaflets are 9-14 mm long by 3 -5 mm wide. The flowers are single and 25-35 mm across. They are on stalks about 2 cm long. These flowers are produced from one axil of each pair of leaves. The flower has 5 bright yellow petals. The fruit is a round capsule which has 5 parts. These have strong sharp spines.

Distribution

It is a tropical plant. In Papua New Guinea it is common in coastal areas. It grows naturally on sandy loam soils.

Found in:

Africa, Asia, Australia, Central America, Dominican Republic, Europe*, Haiti, Hawaii, India, Jamaica, Lesser Antilles, Mexico, Pacific, Papua New Guinea, PNG, Puerto Rico, South America, Timor, USA, West Indies,

Use

Cultivation

Production

Nutritional Values

Tribulus cistoides

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Cucurbitaceae

Common names

Snake gourd, Jangli chachinda, Sze gwa, Buap-khom, Pepoodel, Chayud pottah, Chichinda, Chirchira, Pare-belut, Hebi-uri, Petola-ular,



Scientific name

Trichosanthes cucumerina var. anguina

Edible portion

Leaves, Fruit, Vegetable,

Description

A pumpkin family plant. It is a climber with tendrils. It grows 2.4-6 m high and spreads 1.5-3 m wide. The vine has furrows along it. The leaves have 3 to 7 lobes and a tooth like edge. The flowers are white. The male flowers are without a bract and the female flowers are produced singly. The flowers have long stalks. The long fruit tend to curve. They can be 1-2 m long. When ripe they turn orange or red, but are grey and green when young.

Distribution

A tropical plant. It is common in the humid tropical lowlands up to 500 m. It does not tolerate dry soil and requires a good moisture reserve in the soil, but is sensitive to water-logging. The optimum temperature for growth is 30-35°C with a minimum of 20°C. It occurs throughout the Philippines at low and medium altitudes up to 1200 m. It suits hardiness zones 10-12.

Found in:

Africa, Asia, Australia, Bangladesh, Benin, Burma, Caribbean, China, Fiji, Ghana, Guinea-Bissau, Guyana, Hawaii, India, Indochina, Indonesia, Iraq, Ivory Coast, Japan, Madagascar, Malaysia, Myanmar, Nepal, Nigeria, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Senegal, Sierra Leone, Solomon Islands, South America, Sri Lanka, Tanzania, Thailand, Timor, USA, Vanuatu, Vietnam, West Africa,

Use

The long immature fruit are eaten cooked. Sometimes a bitter taste occurs but this disappears with boiling. They can be baked, stuffed or used in curries and stews. Fruit are inedible when ripe.
The young leaves are eaten cooked.

Cultivation

Snake gourd is grown from seed. Seed germinate after 10 days. It requires 4-6 kg/ha. Seed can be sown in a nursery and transplanted at the 2 true leaf stage. More commonly plants are sown where they are to grow. A spacing of 60 - 100 cm is suitable. Plants need supports to climb. Often in home gardens this is a natural support such as a house. Plants respond to fertiliser but excessive nitrogen can produce too much vegetative growth. Pruning can improve the female to male flower ratio.

Production

Flowering starts 5 weeks after planting. Male flowers appear first then female flowers 3 days later. Pollination is normally by insects. Harvesting of fruit starts 6-7 weeks after planting and continues for 1 or 2 months. Fruit are picked 12-20 days after fruit set when they are 30-60 cm long. Fruit do not store well but can be stored for 10-14 days at a temperature of 16-17°C and relative humidity of 85-90%.
By the time the fruit turn orange they are too mature to eat.

Nutritional Values

Trichosanthes cucumerina var. anguina

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Moraceae

Common names

Burney vine, Crow ash, Fire Vine, Pok Lak Pam, Niu jin teng,



Scientific name

Trophis scandens

Edible portion

Fruit, Seeds,

Description

A vine or climbing shrub. The young branches are brown. There are short grey hairs when young. The leaves are simple and oval. They are 3-13 cm long by 2-4.5 cm wide. They are slightly sandpapery on the under surface. There are 7-12 pairs of secondary veins on each side of the midrib. The fruit are berries 8 mm long by 5 mm across. The occur in clusters in the axils of leaves. The receptacle can be yellow, pink, red or orange. There is one seed inside. This is 8 mm long. The flesh is edible.

Distribution

It grows in tropical and subtropical locations. It grows in rainforest in Queensland and New South Wales in Australia, as well as in the Northern Territory and Western Australia. In China it grows in scrub on hills in S China.

Found in:

Asia, Australia, China, Indonesia, Malaysia, Pacific, Philippines, Taiwan, Timor, Vietnam,

Use

The fruit are eaten raw or cooked.

Cultivation

It can be grown from fresh seed. It can also be grown from cuttings.

Production

Nutritional Values

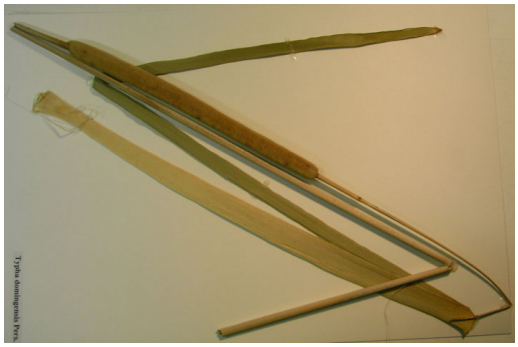
Trophis scandens

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Typhaceae

Common names

Bulrush, Cattail, Narrowleaf Cumbungi, Tabua, Reedmace, Maranda, Wonga, Poorteetch,



Scientific name

Typha domingensis

Edible portion

Leaves, Rhizome, Pollen, Pith,

Description

A tall reed-like plant. It grows in water and keeps growing from year to year. They grow up to 4.5 m high. They form dense thickets around swamps. The leaves are long and blade-like and enclosed in a sheath. They are grass-green. They grow in two opposite rows. The flowers are brown. They are produced in long cylindrical spikes. These look like sausages on spikes. These are up to 20 mm wide. The flowers are usually separated into male (above) and female (below) sections. When mature they turn into a mass of fluff.

Distribution

They grow in stagnant and slow moving water. It needs wet soils and an open sunny position. It is resistant to frost. Tasmanian Herbarium.

Found in:

Africa, Asia, Australia*, Central America, Cuba, Dominican Republic, Ghana, Guinea-Bissau, Haiti, Iraq, Jamaica, New Zealand, North America, Pakistan, Puerto Rico, Senegal, South America*, Tasmania*, Timor, USA, West Africa, West Indies*, Zambia,

Use

The starchy roots or tubers are dug from swamps and pounded then roasted. They also yield starch.
The centre of the stem near the base is also edible. It can be used in soups or salads.
Young flowering spikes can be eaten raw or cooked and served with butter.
The bright yellow pollen can be used like turmeric to colour rice.
The pollen can be steamed to make a pudding. It can be added to bread or cakes.

Cultivation

Plants can be grown by division.

Production

The pollen is shaken from the male flower over a container. The yield of starch flour can be 2500 kg from 0.5 ha of bulrushes.

Nutritional Values

Typha domingensis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
pollen	9.0	1657		11.3		98	21.3	

Malvaceae

Common names

Congo jute,

Scientific name

Urena lobata

Edible portion

Leaves, Seeds, Flowers,

Description

An evergreen shrub or herb. It grows from seed each year. It grows to 2 m high and spreads to 2 m across. The stem is erect, coarse and hairy. It has an open crown. The bark is stringy. Leaves are green and have 3-5 lobes. They are soft, hairy on both sides and 4-8 cm long by 2-8 cm wide. Underneath the leaf is white with prominent veins. The edges of the leaves are finely toothed. Leaves occur at the tops of branches. The leaf stalks are hairy. Flowers occur singly and have petals united forming a tube. Flowers are pink or can be violet with yellow in the middle. The petals are soft. Flowers are 1-4 cm across. The fruit is a rough, spiny, woody, capsule. It is about 1 cm across. It has 5 cells each with one seed. The seed are wedge shaped and 3 mm long. They have a dull surface and are dark brown. There are named varieties.

Distribution

It is a tropical plant. It will grow in most soils and under many conditions. It is damaged by frost and drought. In Papua New Guinea it mostly grows at low altitudes but occurs to 1500 m altitude.

Found in:

Africa, Angola, Asia, Australia, Bangladesh, Benin, Brazil, Brunei, Burma, Burundi, Cambodia, Cameroon, Cape Verde, Central Africa, Chad, China, Comoros, Congo, Cuba, Dominican Republic, East Africa, Ecuador, Equatorial Guinea, Fiji, French Guiana, Gambia, Ghana, Guadeloupe, Guinea, Guinea-Bissau, Guyana, Haiti, Hawaii, Honduras, India, Indochina, Indonesia, Ivory Coast, Jamaica, Japan, Kenya, Laos, Liberia, Madagascar, Malawi, Malaysia, Mali, Martinique, Mauritius, Mozambique, Myanmar, New Caledonia, Niger, Nigeria, Pacific, Pakistan, Papua New Guinea, PNG, Paraguay, Peru, Philippines, Puerto Rico, Reunion, Rwanda, Samoa, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Solomon Islands, South America

Use

The leaves are eaten as a vegetable. They can be dried and used as an adulterant of patchouli leaves.
The seeds can be eaten raw. They are also used in soups or porridge.

Cultivation

Plants can be grown from seed or cuttings.

Production

Nutritional Values

Urena lobata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves	81.8	226	54	3.2				
calyces								
flowers								

Annonaceae

Common names

Susung-Kalabau, Triel sva, Torres strait scrambler, Sweet gum tree,



Scientific name

Uvaria rufa

Edible portion

Fruit,

Description

A climbing shrub. It grows up to 20 m long. The younger parts are covered with hairs. The leaves are alternate and hairy. They are pointed at the tip and heart shaped at the base. They are 8 to 16 cm long. The flowers have a sweet smell. The fruit are borne in rounded clusters. They are oval, hairy and red. They contain two rows of flat semicircular seeds.

Distribution

A tropical plant. They occur from central Luzon to southern Mindanao in the Philippines in small areas of shrub and in forests at low altitudes. It grows in southern China in mountainous sparse forests between 400-1700 m. altitude.

Found in:

Asia, Australia, China, Cambodia, India, Indochina, Indonesia, Laos, Malaysia, Pacific, Philippines, Singapore, Thailand, Timor, Vietnam,

Use

The fruit are eaten raw or cooked as a vegetable.

Cultivation

They are sometimes cultivated.

Production

Nutritional Values

Uvaria rufa

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	90.2	146	35	0.7			0.6	

Ericaceae

Common names

Scientific name

Vaccinium varingifolium

Edible portion

Leaves, Fruit,

Description

A small shrub.

Distribution

A tropical plant. It grows at high altitudes around volcano craters. It grows between 1,800-2,000 m altitude. It can be up to 3,340 m altitude.

Found in:

Asia, Indonesia, Malaysia, Timor,

Use

Cultivation

Production

Nutritional Values

Vaccinium varingifolium

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

Vanilla,

Orchidaceae



Scientific name

Vanilla planifolia

Edible portion

Pods, Seeds, Herb, Spice,

Description

A climbing orchid. The vine is fleshy and climbs by means of roots. It can climb to 10-15 m high. It is 1-2 cm across and flexible but easily broken. There are 5-15 cm between nodes. It is often trained to a lower height to allow easier pollination and harvesting. Aerial roots arise from the stem opposite the leaves. These are white and 2 mm across. They attach to supports. It has long pointed fleshy leaves. They have almost no stalk and can be 8-25 cm long by 2-8 cm wide. The tip of the leaf is pointed and the base is rounded. The flowers are greenish yellow and large and waxy. They occur in groups of up to 30 in the axils of the leaves. The fruit is a long fleshy pod with small black seeds inside.

Distribution

A tropical plant. It needs a warm moist climate. The best temperature is between 21-32°C with an average around 27°C. It will grow up to at least 1300 m altitude. It does best with an evenly distributed rainfall of 2,000-5,000 mm per year. Ideally it should have 2 drier months to allow the flowers to develop. Light shade is necessary. It needs a well drained location and lots of humus and organic matter to grow in. It suits hardiness zones 11-12.

Found in:

Africa, Asia, Australia, Cameroon, Central Africa, Central America, China, Comoros, Costa Rica, East Africa, Fiji, Guatemala, Hawaii, Honduras*, India, Indonesia, Japan, Madagascar, Malaysia, Mexico*, Pacific, Papua New Guinea, PNG, Reunion, Solomon Islands, Sri Lanka, Timor, Tonga, Uganda, USA, Vanuatu, West Africa, West Indies,

Use

The pods are used to flavour foods. The flavour is extracted in alcohol.
They are used to flavour chocolate, ice cream, milk shakes, and sweet dishes.

Cultivation

Plants are grown from cuttings in a layer of rotting plant material and forest debris. It needs a pole to climb and should have light shade. When the vine extends along a branch it is pulled down to promote flowering. The flowers need to be hand pollinated in the early morning. It is most successful on a sunny morning following rain. Using a small match sized stick the pollen is removed by squeezing the flower then putting the pollen onto the sticky stigma. Flowering tends to be seasonal and occur once per year during the drier months. If fertile cross-pollinated seed is required, it is necessary to cross pollinate the plants. (In Mexico small bees in the genus *Melapona* naturally pollinate vanilla)

Production

Fertilised flowers produce pods in 6 weeks. The pods are ready for harvest about 9 months after pollination. This is indicated by the pods turning slightly yellow at the end. The beans are partly dried and allowed to sweat to increase flavour. They are normally sweated for 2-3 weeks then dried. They become dark brown in colour.

Nutritional Values

Vanilla planifolia

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae



Common names

Broad bean,

Scientific name

Vicia faba

Edible portion

Seeds, Leaves, Pods, Vegetable,

Description

An upright plant up to 1 m tall. Plants vary in height from 30 cm to 180 cm. It has a well developed taproot. It has square stems which are hollow. They have wings at the angles. There can be 1-7 branches from near the base of the plant. The leaves have leaflets along the leaf stalk and ending in a short point. There are 2-6 leaflets. These are 5-10 cm long. Flowers occur in the axils of leaves and there are 1-6 flowers on a stalk. The flowers are white with black spots. Pods are large and fat and contain several large beans inside. The pods are 5-10 cm long in field varieties and can be 30 cm long in garden varieties. They are fleshy with a white velvety lining. They become tough and hard at maturity. The seeds can vary a lot in shape and size. They can be flat or rounded and white, green, brown, purple or black. They are 1-2.6 cm long. The hilum along the seeds is prominent.

Distribution

A temperate plant. It is only suitable for the highlands over about 1200 m. in the tropics. It mainly occurs between 1900 and 2700 m altitude in equatorial zones. It is frost tolerant. It is resistant to drought. It can grow with temperatures down to 4°C. In the lowland hot tropics it often flowers but does not set seed. It requires fertile soils. It does best with adequate lime. It needs a pH of 6.4-7.2. It can tolerate some salinity. In Nepal they grow to 1800 m altitude. It suits hardiness zones 8-10.

Found in:

Afghanistan, Africa, Algeria, Argentina, Asia, Australia, Austria, Belgium, Bolivia, Brazil, Britain, Bulgaria, Burma, Canada, Caucasus, Central America, Chad, China, Colombia, Comoros, Costa Rica, Cuba, Czech Republic, Denmark, Dominican Republic, East Africa, Ecuador, Egypt, Eritrea, Ethiopia, Europe, Fiji, Finland, France, Germany, Greece, Guatemala, Haiti, Hungary, Iceland, India, Indochina, Indonesia, Iran, Iraq, Ireland, Israel, Italy, Japan, Kenya, Kuwait, Lebanon, Libya, Madagascar, Mauritius, Mediterranean, Mexico, Morocco, Myanmar, Nepal, Netherlands, New Zealand, North Africa, North America, Norway, Pacific, Pakistan, Palestine, Papua New Guinea, Paraguay, Peru, Philippines, PNG, Poland, Portugal Puerto

Use

It is mostly the young beans that are eaten.
The ripe beans and leaves are also edible. The dried beans can be boiled, ground into flour and added to soups or used for making tofu. Sprouted seeds are cooked and eaten.
The tender pods are eaten as a vegetable.
CAUTION: Some people, mainly of Mediterranean origin can get a disease called Favism from these beans. The beans

Cultivation

The crop is grown from seed. Seeds are sown at 15 to 40 cm spacing. If the seed pod formation is poor, it can be improved by pinching out the tops of the plants when in flower. Hand pollination also helps. Plants are self pollinated but also cross pollinated by insects.

Production

Time to maturity is 12-16 weeks. Yields in the cool tropics vary between 1 and 2 tons per hectare.

Nutritional Values

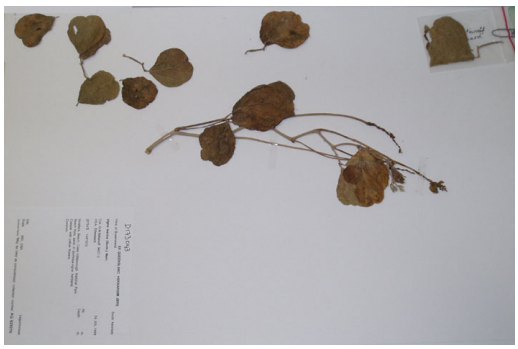
Vicia faba

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
dried seeds	10.0	1448		26.2	130	16	6.7	
fresh seeds raw	76.0	315		7.1	35	140	1.9	0.6
fresh seeds boiled	83.7	259		4.8	27	20	1.5	0.5

Fabaceae

Common names

Dune bean, Kachang laut, Marine vine,



Scientific name

Vigna marina

Edible portion

Root, Leaves, Seeds - drink,

Description

A climbing or scrambling herb. It can grow to several metres long. The stems can be hairy. The leaflets are rounded. They are 3.5-9.5 cm long by 2.5-7.5 cm wide. The leaf stalks are 2-11 cm long. The flowering stems are erect. They can be 4-10 cm long. The flower is yellow but often green when young. The flowers are 1.2 cm long. The fruit are narrow pods which are slightly curved. They are 4-6 cm long and 8-9 mm wide. They are constricted between the seeds. There are 2-6 seeds. The seeds are brown or red. They are oblong and 6-7 mm long by 5-6 mm wide.

Distribution

A tropical plant. It occurs just above high tide mark on sandy beaches. It occurs throughout the tropics.

Found in:

Africa, Asia, Australia, Cameroon, Equatorial Guinea, Fiji, Gabon, India, Indochina, Indonesia, Hawaii, Japan, Kiribati, Liberia, Maldives, Mauritius, Mozambique, Norfolk Island, Pacific, Papua New Guinea, PNG, Philippines, Reunion, Sao Tome & Principe, Seychelles, South Africa, Southern Africa, Taiwan, Tanzania, Timor, Tonga, USA, Vietnam,

Use

The roots can be eaten cooked and probably raw.
The leaves are sometimes eaten with other food.

Cultivation

Production

Nutritional Values

Vigna marina

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Green gram bean, (Mung bean),



Scientific name

Vigna radiata

Edible portion

Root, Seeds, Pods, Leaves, Vegetable,

Description

A herb. It is an upright hairy bean plant which can be 1 m tall. It has many branches. The leaves have 3 leaflets and are dark green. The leaves are on long leaf stalks. There are oval stipules at the base of the leaf. Flowers are pale yellow and small. They occur in bunches of 10-20 on the ends of long hairy flower stalks. Pods are black and straight. They do not have a beak. Pods contain 10-20 seeds which are usually green or golden yellow. They are smaller than black gram. The beans can be black. They have a flat white hilum. There are 2,000 varieties.

Distribution

A tropical and subtropical plant. The plant will grow from sea level up to probably 2000 m in the tropics. It is drought resistant but can't stand water-logging. Plants are damaged by frost. They cannot stand salinity. Rainfall at flowering is detrimental. It requires a deep soil. Both short day and long day kinds occur. It can grow where annual temperatures are from 8°C to 28°C. It can tolerate a pH from 4.3-8.1. In Nepal it grows up to 1000 m altitude. It suits a drier climate. It suits hardiness zones 10 -11.

Found in:

Afghanistan, Africa, Angola, Argentina, Asia, Australia, Bangladesh, Botswana, Burma, Burundi, Cambodia, Cameroon, Caribbean, Central Africa, Central America, China, Congo, East Africa, Egypt, Ethiopia, Fiji, Gambia, Ghana, Guam, Guinea, Guyana, India, Indonesia, Indochina, Iran, Iraq, Japan, Kazakhstan, Kenya, Korea, Laos, Lesotho, Madagascar, Malawi, Malaysia, Mali, Marianas, Mauritius, Mexico, Mozambique, Myanmar, Nepal, Niger, Nigeria, Oman, Pacific, Pakistan, Papua New Guinea, PNG, Peru, Philippines, Rwanda, Senegal, Seychelles, Sierra Leone, Somalia, Solomon Islands, Somalia, South Africa, Southern Africa, South America, Sri Lanka, Sudan, Suriname, Taiwan, Tanzania, Thailand, Timor, Togo, Tonga

Use

Seeds are eaten ripe. They are eaten raw or roasted. They are added to soups and stews. They are also fermented.
Young pods can be eaten.
Young leaves can be eaten.
The seeds can be germinated for sprouts. These are used in salads and stir-fried dishes.
The seeds are ground and also used for starch to make noodles.

Cultivation

Plants are grown from seed. In some areas these are broadcast while for small plots often 2-3 seeds are sown in holes 50-60 cm apart. Seeding rates of 6 to 22 kg per ha are used in different locations. It normally requires phosphorus fertiliser for adequate growth. Seeds germinate in 3-5 days.

Production

Green pods are ready after about 2 months and ripe pods may take another 1-2 months. For ripe beans the whole plant is harvested and dried before threshing. Yields of 450-560 kg/ha of seeds are common.

Nutritional Values

Vigna radiata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds	11.0	1432		22.9	55	4	7.1	
seed cooked		439		7.0	2.4RE	1.0	1.4	
seed sprouted raw	90.4	126		3.0	2	13.2	0.9	0.4

Fabaceae



Common names

Rice bean, Climbing-mountain-bean, Mambi-bean, Oriental-bean, Sanndaek angkat miehs, Kachang sepalit, Kachang enjing, Kachang

Scientific name

Vigna umbellata

Edible portion

Seeds, Leaves, Pods, Sprouted Seeds, Vegetable,

Description

A herb. It is a climbing bean plant with a slender hairy vine. It is twining and an annual plant. It grows from seed each year. It grows to 1.5-3 m long. Stems are hairy. Leaves have 3 leaflets which can vary in shape. They are mostly oval and 3-13 cm long by 1.5-7 cm wide. They taper towards the tip and are rounded at the base. Usually they are hairy. The leaf stalks are 3 -16 cm long. Flowers are about 1.5 cm long in dense cone shaped clusters. These flowering stalks can be 3-10 cm long. The flowers are yellow. The fruit are straight pods about 10 cm long and 5 mm wide. Seeds are small (5-8 mm long) and yellow to brown. The pods split open easily. The seeds can be yellow, green, brown, red, black or mottled.

Distribution

A tropical plant. It grows from 0-1800 m altitude in the tropics. It suits wet climates. It occasionally becomes self sown in coastal grasslands. It needs a sunny potected position. They are drought and frost tender.

Found in:

Africa, Angola, Asia, Australia, Bangladesh, Bhutan, Burma, Cambodia, Cameroon, China, Congo, East Africa, Fiji, Ghana, Haiti, Himalayas, India, Indochina, Indonesia, Japan, Kenya, Laos, Liberia, Madagascar, Malaysia, Mali, Mauritius, Myanmar, Nepal, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Reunion, Sierra Leone, Solomon Islands, Sri Lanka, Taiwan, Tanzania, Thailand, Timor, Vietnam, West Africa, Zambia,

Use

The young pods and ripe seeds are eaten cooked. The dried seeds are boiled and served with rice or used in soups and stews.
The young leaves can be eaten.
The seeds are used in bean sprouts.
(Seeds should be cooked or crushed if fed to pigs.)

Cultivation

It is grown by seeds. Seed collection is easy. Seeds often have a hard skin which must be broken (eg by scraping) before seeds will germinate easily.

Production

Nutritional Values

Vigna umbellata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds	13.0	1373		20.9			10.9	

Common names

Yard long bean, Snake bean,

Fabaceae



Scientific name

Vigna unguiculata subsp. sesquipedalis

Edible portion

Seeds, Leaves, Pods, Vegetable,

Description

A climbing bean with long pods. The vines can be 3 m long. They normally twine around sticks. Dwarf kinds also occur. Leaves have 3 leaflets. The leaflets are oval and side leaflets are at an angle. Leaflets can be 2-16 cm long by 1-12 cm wide. The centre leaflet can have lobes near the base and the side leaflets can have lobes on the outer edge. The leaf stalks can be 2-13 cm long. The flowering stalks are in the axils of leaves. There can be few or several flowers. The flowers can be white, yellow or blue. Flowers are 1-3 cm long by 1-3 cm wide. Pods are long (up to 90 cm) and flexible. The seeds can vary between white to dark brown. They are oblong or kidney shaped. Seeds are 4-12 mm long by 2-6 mm wide. There are many named cultivated varieties.

Distribution

A tropical plant. Plants grow in coastal areas in the tropics from sea level up to about 300 m in equatorial regions. Seeds germinate in moist soil over 22°C. For growth, day temperatures between 25-35°C and night temperatures not below 15°C are required. It suits wet areas and cannot tolerate drought. Plants are day length neutral. They perform best under full sunlight but can tolerate some shade. It has a high water requirement for the full grown crop (6-8 mm per day). It can tolerate a wide range of soils with pH of 5.5-7.5. Seeds show no dormancy. It suits plant hardiness zones 10-11.

Found in:

Africa, Asia, Australia, Cambodia, Central Africa, China, Congo, East Africa, Fiji, Guinea, Guyana, Hawaii, India, Indochina, Indonesia, Japan, Kenya, Malaysia, Pacific, Pakistan, Papua New Guinea, PNG, Philippines, Singapore, Solomon Islands, South America, Sri Lanka, Taiwan, Thailand, Timor, Tonga, Turkey, USA, Vanuatu, Vietnam, West Africa,

Use

Both the young pods and leaves are eaten. They can be steamed, stir-fried and used in other dishes.
The ripe seeds can also be eaten cooked.
The seeds can be sprouted and eaten.

Cultivation

Plants are grown from seed. Seeds germinate quickly (2-3 days) and plants grow rapidly. Flowering occurs after 5 weeks and harvesting of young pods can start 2 weeks later. Plants die after about 3-4 months. A spacing of 60 cm is suitable. Plants need sticks to climb up. Sticks about 2-2.5 m long are suitable. Often 5 or 6 seeds are sown around the one stick. Plants are often topped when growing too vigorously. It only grows as an annual bean so seeds need to be replanted each year. The pods need to be harvested every 2 or 3 days. Diseases get worse if the bean does not have sticks to climb. The damage by bean pod borer is less if snake beans are grown inter-cropped with maize.

Production

Nutritional Values

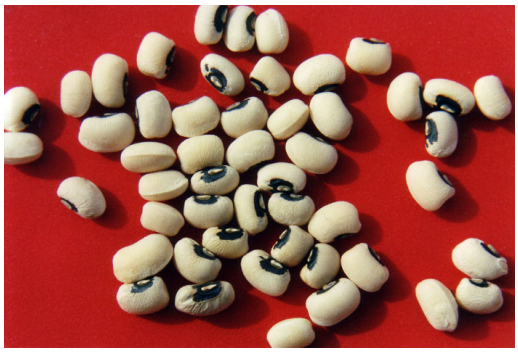
Vigna unguiculata subsp. sesquipedalis

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Fabaceae

Common names

Cowpea,



Scientific name

Vigna unguiculata subsp. unguiculata

Edible portion

Seeds, Leaves, Pods, Tuberous root, Vegetable,

Description

A creeping bean type plant with straight firm pods. Both cover crop types (leafy) and grain types occur. There is a deep tap root and many branches occur from it in the surface of the soil. The root nodules are large and round. They can be 5 mm across. The leaves have 3 leaflets. The end leaflet can be 12-16 cm long. This leaflet is larger than the side leaflets. The side leaflets are assymetrical. The stipules at the base of the leaf are large and with spurs at their base. Flowers occur often in pairs on the end of long flowering shoots. This stalk can be 2 cm to 30 cm long. Only 2-4 flowers in each stalk produce pods. Flowers are white, yellow or blue. They are large and showy. The standard petal is 2-3 cm across. The pods are about 15 cm long. The seeds are white except for a dark scar.

Distribution

It grows in tropical and subtropical climates. It grows from sea level to 1800 metres altitude in the tropics. Plants can stand high temperatures. Some kinds can tolerate drought. They are sensitive to cold and killed by frost. Plants germinate with a temperature between 11.5-15.5°C. The best growth is between 20-35°C. They can grow on a range of soils providing they are well drained. They are a short day plant. They do well in the semiarid tropics. It will not tolerate acid or alkaline soils. It grows in areas with an annual rainfall between 280-410 mm.

Found in:

Afghanistan, Africa, Angola, Asia, Australia, Benin, Botswana, Brazil, Burkina Faso, Burundi, Cambodia, Cameroon, Caribbean, Central Africa, Central America, Chad, China, Comoros, Congo, Djibouti, Dominican Republic, East Africa, El Salvador, Equatorial Guinea, Eritrea, Ethiopia, Fiji, French Guiana, Gambia, Ghana, Guatemala, Guinea, Guinea Bissau, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Iran, Iraq, Ivory Coast, Japan, Kenya, Korea, Laos, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Nepal, Niger, Nigeria, Niue, Pacific, Pakistan, Papua New Guinea, PNG, Peru, Philippines, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Southern

Use

The young leaves, young pods and ripe seeds are all eaten. They can be steamed, boiled, stir-fried etc.
The dried seeds are used in soups and stews. They are ground into flour or fermented.
The seeds are also used for bean sprouts.
Roasted seeds are used as a coffee substitute.

Cultivation

It is grown from seeds. Seed collection is easy. Seeds remain viable for several years if carefully stored. A seeding rate of about 20 kg per ha is suitable and seed are sometimes broadcast then thinned. Cowpeas mostly inbreed giving pure lines.

Production

Nutritional Values

Vigna unguiculata subsp. unguiculata

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds - dry	11.2	1189		23.5		1.5	6.4	
leaves	88.4	143		4.2	712IU	35	4.7	0.3
leaves - boiled	91.3	92		4.7	576IU	18	1.1	0.2

Lamiaceae

Common names

Common blue vitex,

Scientific name

Vitex trifolia

Edible portion

Leaves,

Description

A large shrub. It can be 5 m tall. The stems are covered with soft hairs. The leaves are opposite along the stems. They have 3 leaflets. These can be 1-12 cm long. The leaves are green on the upper surface and greyish green underneath. The flowers are in clusters 18 cm long. The flowers are purple. The fruit are fleshy and 6 mm long. They contain 4 small black seeds.

Distribution

It grows near the coast.

Found in:

Africa, Asia, Cook Islands, East Africa, Indonesia, Malaysia, Pacific, Papua New Guinea, PNG, Samoa, Timor, Tonga,

Use

Cultivation

Production

Nutritional Values

Vitex trifolia

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Vitaceae

Common names

Grapevine, European grape, Tumpeang ba'y chu, Angur, Vigne, Weinrebe, Vino, Vid, Uva,



Scientific name

Vitis vinifera

Edible portion

Flowers, Fruit, Leaves, Oil, Herb, Flavouring,

Description

A woody vine which keeps growing from year to year. It is often pruned to reduce its size. It climbs by coiled tendrils which attach to objects. It has large leaves which are roughly heart shaped. They can be entire or be deeply divided into 3-5 lobes. Leaves can be 20 cm across. The edges of the leaf are sharply and irregularly toothed. The tip of the leaf is pointed and the base is rounded. Sometimes the leaves are hairy. The flowers are small and yellow-green. They occur in clusters which are 5 -20 cm long and beside the leaves. The 5 green petals drop off together to show 5 central stamens and the ovary. These bear clusters of fleshy fruit. The fruit is a berry which is generally oval and juicy. The skin can be yellow or violet-black. They are 1 -4 cm long. The flesh is edible. They contain a few hard seeds. There are 10,000 cultivated varieties.

Distribution

A subtropical plant. It mainly grows in Mediterranean-type climates with hot dry summers and cool rainy winters. It needs shelter from the wind. In Nepal it grows up to 1400 m altitude. A pH of 6.5-7.5 is suitable. It suits hardiness zones 6-9.

Found in:

Africa, Algeria, Argentina, Armenia, Asia, Australia, Azerbaijan, Brazil, Bulgaria, Burma, Cambodia, Chile, China, Cyprus, East Africa, Egypt, Ethiopia, Europe, Fiji, France, Georgia, Germany, Ghana, Greece, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Iran, Iraq, Italy, Jordan, Kazakhstan, Lebanon, Madagascar, Malaysia, Maldives, Mediterranean, Myanmar, Nepal, New Zealand, North America, Pacific, Pakistan, Palestine, Papua New Guinea, PNG, Philippines, Portugal, Romania, Russia, Spain, Solomon Islands, South Africa, Southern Africa, South America, Swaziland, Syria, Tajikistan, Tasmania, Thailand, Timor, Tokelau, Turkey, Uganda, USA, Vietnam, West Africa, Yugoslavia

Use

The fruit are eaten ripe and also used for juice and wines, champagnes and brandies .
Sometimes young slightly acid leaves are eaten.
The dried fruit are eaten as raisins.
The flowering shoots are eaten as a vegetable. They can also be pickled.

Cultivation

They are mostly grown from hardwood cuttings. It needs a trellis for support. It is normally pruned to control the growth. A spacing of 2.4 m by 3 m is suitable. Vines are pruned when they have lost their leaves. Pruning in the first year is designed to form the permanent shape of the plant. Normally it is pruned to allow a single stem with two branches just below the trellis.

Production

Nutritional Values

Vitis vinifera

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit dried	19.2	1184		4.1	7	4.7	3.3	0.7
leaves	73.3	389		5.6	2699	11.1	2.6	0.7
fruit raw	80.6	297		0.7	7	10.8	0.3	0.1

Byttneriaceae

Common names

Tan sai,

Scientific name

Waltheria indica

Edible portion

Fruit,

Description

A herb or shrub. It grows 4 m high. The leaves are simple and 2-10 cm long by 1-4 cm wide. There are white stellate hairs on both sides. The flowers are in groups in the axils of leaves or at the ends of branches. The flowers are 3-4 mm wide. They have 5 yellow or orange petals. The fruit is a capsule. They are brown and 2 mm long and have 1 valve. They are tightly clustered together and are hairy. There is 1 seed.

Distribution

A tropical plant. It grows on sandy shores. It grows in monsoon and vine forests throughout the tropics. In tropical Queensland it grows from sea level to 800 m altitude.

Found in:

Africa, America, Asia, Australia, Barbados, Botswana, Central America*, China, Cuba, Dominican Republic, Fiji, Haiti, India, Jamaica, Lesser Antilles*, Malawi, Malaysia, Mexico*, Mozambique, Pacific, Philippines, Puerto Rico, Senegal, South Africa, Southern Africa, South America, Swaziland, Thailand, Timor, Virgin Islands, West Africa, West Indies*, Zambia, Zimbabwe,

Use

Cultivation

Production

Nutritional Values

Waltheria indica

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Apocynaceae

Common names

Pala Indigo-plant, Hyamaraka, Indrajau, Mitha-indrajau, Runchallo-duhlo, Kala Huda, Sweet Indrajau, Tedlapaala, Amkuda, Jeddapaala,

Scientific name

Wrightia tinctoria

Edible portion

Flowers, Leaves, Seeds, Pods,

Description

A small deciduous tree. It grows 8 m tall. The bark is grey or pale brown and becomes cracked with age. The leaves are in pairs opposite each other. They are pointy at the tip. They can be 15 cm long. The are softly hairy. The leaf stalk is very short. The flowers are white and about 3 cm wide. There are 5 narrow twisted petals. The stamens form a cone at the centre. There are lacy threads around the cone. The flowers have a smell of vanilla. The fruit are a pair of long slender cylinders. They hang down and are joined below at the tip. They are green when young.

Distribution

A tropical plant. It grows in dry deciduous forest. It grows up to 1,200 m altitude in Peninsula India.

Found in:

Asia, Burma, India, Myanmar, Pakistan, Timor,

Use

The flowers are sometimes used as a vegetable.
The juice of the fresh unripe fruit is used to coagulate milk.

Cultivation

Plants can be grown from seed or using cuttings. Root suckers can also be used.

Production

The growth is slow.

Nutritional Values

Wrightia tinctoria

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc

Common names

Chinese taro, Tannia,

Araceae



Scientific name

Xanthosoma sagittifolium

Edible portion

Tubers, Leaves, Vegetable,

Description

A herb up to 2 m tall. It has a short stem. At the top of the stem it produces large leaves. A corm is produced at the base of the plant. It produces about 10 cormels on the underground corm. These are about 15-25 cm long and flask shaped. The get wider towards the tip. Leaves are large and the stalk joins to the edge of the leaf. The leaves stand erect on stout petioles. There is a vein around the edge of the leaf. The leaf stalks can be 1 m long. The leaf blade is oval and 50-75 cm long. The leaf has triangular lobes at the bottom. The flower is produced below the leaves. The large bract around the flower is pale green and about 20 cm long. The bases of this overlap. The closely arranged spike of flowers is about 15 cm long. The smaller female section is at the bottom and the male section is larger and towards the top.

Distribution

A tropical plant. It suits tropical rainforest regions. It grows well in hot, humid tropical areas. It can stand high rainfall. It can tolerate light shade. It does well in regions with an annual average temperature of 26°C. It grows from sea level up to about 2000 m. Soils need to be well drained but should be moist. It needs a well distributed rainfall of 1,400-2,100 mm during the growing season. It does not do well in atoll soils. The best pH if 5.5-6.8.

Found in:

Africa, Amazon, Antilles, Asia, Australia, Benin, Bolivia, Brazil, Cambodia, Cameroon, Central Africa, Central America*, China, Colombia, Congo, Cook Islands, Costa Rica, Cuba, Dominican Republic, East Africa, Ecuador, Fiji, Gabon, Ghana, Grenadines, Guatemala, Guinea, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Jamaica, Malaysia, Mexico, Nicaragua, Nigeria, Norfolk Island, Pacific, Panama, Papua New Guinea, PNG, Peru, Philippines, Puerto Rico, Samoa, Senegal, Sierra Leone, Singapore, Solomon Islands, South America, Suriname, Tanzania, Thailand, Timor, Togo, Tokelau, Tonga, Uganda, USA, Vanuatu, Venezuela, Vietnam, Virgin Islands, West Africa, West Indies, Yap

Use

Cormels are eaten roasted or boiled.
Main corms are often fed to pigs.
Young leaves can be eaten after cooking.

Cultivation

Xanthosoma taro is normally planted by using the top piece of the main central corm or stem. Pieces weighing 1.5 kg are often used. It can also be grown by using the small side corms which may weigh 0.3 kg; or pieces of the corm can be used as long as they have some buds on them. These are often presprouted before planting. To multiply large amounts of planting material and still achieve acceptable yields, the latter method of using sections of the main corm works well. In crop growth, an axillary bud is produced in the axil of each leaf but only some of these develop into cormels. Often 10 or more cormels develop per plant into cormels 15-25 cm long.

The crop duration is about 9 months although crops are often left for 12 months before harvesting. Plants are often planted to make the maximum benefit of natural rainfall. It has been recorded that plants increase in total dry matter production for 6

Production

Harvesting occurs after about 9 months. Cormels can be removed without moving the mother plant. Corms can be stored for a few weeks. They can be stored for 8 weeks at 7°C with a relative humidity of 80%.

Nutritional Values

Xanthosoma sagittifolium

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
root	67.1	559		1.6	5	13.6	0.4	0.5
leaves	90.6	143		2.5	3300	37	2.0	
shoots	89.0	139		3.1		82	0.3	

Olacaceae

Common names

Wild olive, Yellow plum,

Scientific name

Ximenia americana var. america

Edible portion

Fruit, Leaves, Seeds, Oil,

Description

A small tree or spiny shrub about 3-4 m high. It has spines about 1 cm long which are thin and straight. The leaves and branches are without hairs. The leaves are alternate, oval and about 2-4 cm long. The leaves are bluish green. The leaves fold upwards along the midrib. The tip of the leaf can be round or with a notch. The flowers are greenish white, have a smell and are less than 1 cm long. They occur in small branched clusters with a common stalk. The fruit are yellow, egg shaped and 2 cm across. They are thin skinned. They are sour. There is one large seed.

Distribution

A tropical plant. They occur along the back of coasts and seashores from Luzon to Mindanao and Palawan in the Philippines. It occurs in the vegetation near the coastline. The plant occurs in all tropical countries. It is found in savannah in Africa. It is drought resistant. In China it grows in sandy areas behind beaches along the sea shore and mostly below 100 m in S China. In Bolivia it grows up to 900 m altitude. In Kenya it grows between 1,700-1,800 m altitude. It grows in the Sahel. It grows in areas with an annual rainfall between 100-1,270 mm.

Found in:

Africa, Angola, Argentina, Asia, Australia, Bahamas, Belize, Bolivia, Botswana, Brazil, Burma, Cameroon, Central Africa, Central African Republic, Central America, Chad, Colombia, Congo, Costa Rica, Cuba, Dominican Republic, East Africa, Ecuador, El Salvador, Ethiopia, Fiji, French Guiana, Ghana, Guadeloupe, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, India, Indonesia, Ivory Coast, Jamaica, Kenya, Liberia, Malawi, Malaysia, Mali, Martinique, Mexico, Mozambique, Myanmar, Namibia, Nicaragua, Niger, Nigeria, Pacific, Papua New Guinea, PNG, Paraguay, Philippines, Sahel, Samoa, Senegal, Seychelles, Sierra Leone, Solomon Islands, Somalia, South Africa, Southern Africa, South America, Sri Lanka

Use

The fruit are eaten fresh or pickled. They are used for jam and jellies. They are also used to make beer.
The nuts are powdered and mixed with sago to make bread.
The kernels of the nuts are recorded as both edible and purgative. They should only be eaten in small numbers.
CAUTION The leaves have been reported as poisonous. They contain a cyanogenic glycoside.
Young leaves are eaten after cooking.

Cultivation

Plants normally grow wild. The plant often has roots which feed off other plants. Plants can be grown from seed. These can be grown in pots then transplanted or can be sown where they are to grow. As seed do not store well, they should be sown fresh.

Production

Planst are slow growing. They can be pruned as a hedge or cut back and allowed to regrow.

Nutritional Values

Ximenia americana var. america

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	78.6	210		2.7			0.7	0.3
seed								

Poaceae

Common names

Corn, Maize,



Scientific name

Zea mays

Edible portion

Seeds, Leaves, Cereal, Flowers, Vegetable,

Description

A grass. It is an annual plant 2-3 m high. It has a single stem. The stem is solid. It can be 2-3 cm across. Usually there are 14 internodes but this can vary from 8-21. It is a large grass family plant with prop roots near the base. Some forms produce tillers near the base. Seed roots feed the plant initially then casual side roots develop from the lowest node on the plant and continue supplying the plants nutrients. Roots can go sideways for 1 m or downwards for 2-3 m. It is a very variable plant and due to cross pollination variation continues and all forms hybridize. Leaves are produce one after another along opposite sides of the stem and there are between 8 and 21 leaves. The leaf sheath wraps around the stem but opens towards the top of the sheath. The leaf blade is 30-150 cm long and 5-15 cm wide. The leaf blade has a pronounced midrib and is often wavy along the edge. The male flower or tassel is at the top. The female flower is called the ear. It is on a short stalk in the axils of one of the largest leaves about half way down the stem. In the axils of the leaves it produces a large cob wrapped in leaves. The

Distribution

A warm temperate plant. Seeds need a soil temperature more than 10°C to germinate. It grows best at less than 1800 m altitude in the equatorial tropics. It is grown in most areas of Asia. Plants have been grown from sea level to 3,300 m in the Americas. It tends to be in areas too dry for rice but wetter than for millets. Maize must have over 120 days frost free. In Nepal it grows up to 3000 m altitude. It suits hardiness zones 8-10.

Found in:

Africa, Albania, Algeria, Angola, Arabia, Argentina, Asia, Australia, Bahamas, Balkans, Bangladesh, Belize, Benin, Bhutan, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Britain, Burkina Faso, Burma, Burundi, Cambodia, Cameroon, Canada, Cape Verde, Central Africa, Central African Republic, Central America, Chad, Chile, China, Colombia, Comoros, Congo, Costa Rica, Croatia, Cuba, Dominican Republic, East Africa, Egypt, El Salvador, Equatorial Guinea, Eritrea, Ethiopia, Fiji, France, French Guiana, Gabon, Gambia, Georgia, Germany, Ghana, Greece, Guatemala, Guiana, Guinea, Guinea-Bissau, Guyana, Haiti, Hawaii, Honduras, Hungary, India, Indochina, Indonesia, Iran, Italy, Ivory Coast, Jamaica, Kenya, Laos, Liberia

Use

The cobs are eaten cooked. The dried grains can be crushed and used. The meal can be used for breads, cake, soups, stews etc. Pancake like Tortillas from corn have been a staple food in Central America.
Maize is cooked and prepared in many different ways. They are boiled, roasted, dried, steamed and other ways. Corn oil is used in salads and cooking.
Young tassels are cooked and eaten. The pollen is used in soups. The fresh silks are used in tortillas.

Cultivation

It is grown from seeds. It is normal to plant one seed per hole at 1-2 cm depth. A spacing of about 30 cm between plants is suitable. For saving seed, it should be from gardens of over 200 plants and the seed from several cobs mixed to avoid inbreeding depression.

Production

In warm moist soil seeds geminate in 2-3 days after planting. Cobs are harvested when the grains are full and the tassel is just starting to turn brown. This is normally about 50 days after fertilisation. It is sweetest eaten soon after harvesting. Drought and unfavourable weather can result in the silks of the female flowers emerging after the pollen has been shed. This results in poorly pollinated cobs.

Nutritional Values

Zea mays

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
seeds (mature)	10.4	1528		10.0	100	4	4.9	

Common names

Zingiberaceae

Ginger,



Scientific name

Zingiber officinale

Edible portion

Rhizome, Leaves, Herb, Spice, Vegetable,

Description

A perennial herb with swollen underground stems. It can grow 30-100 cm tall. The underground stem or rhizome branches and is horizontal near the soil surface. It is about 1.5-2.5 cm thick. Inside the rhizome is yellow and it is covered with scales forming a circle around it. The leaves are long (30 cm) and narrow (4 cm). Each leafy shoot usually has 8-12 leaves in two vertical lines on opposite sides of them. The leaf blade narrows evenly to the leaf tip. The flower is a cone 6 cm long on a stalk up to 30 cm long. (Flowers are not produced in all locations.)

Distribution

It is a tropical plant. It is mainly grown from sea level up to 1900 m altitude in the tropics but will grow at higher places. It needs a loose fertile soil. It does best with plenty of humus. It requires a rainfall of 1500 mm or more per year. It does best where there is a short dry season and a good hot temperature. It cannot stand water-logging. In Nepal it grows to about 2500 m altitude. It suits hardiness zones 9-12.

Found in:

Africa, Asia, Australia, Bangladesh, Burkina Faso, Burma, Cambodia, Central America, China, Costa Rica, East Africa, Ethiopia, Fiji, Guinea, Guinea-Bissau, Guyana, Hawaii, Haiti, Honduras, India, Indochina, Indonesia, Jamaica, Japan, Kiribati, Malaysia, Myanmar, Nepal, Nicaragua, Pacific, Papua New Guinea, PNG, Philippines, Senegal, Solomon Islands, South America, Sri Lanka, Thailand, Timor, Uganda, USA, Vanuatu, Vietnam, West Africa,

Use

The underground rhizome is eaten raw or in salads.
The young shoots are spicy and can be eaten. These young shoots are eaten as a vegetable. They are also pickled.
The rhizome can be dried and powdered. These old roots are used as a spice. They are preserved in syrup.
Oil of ginger is used as a flavouring.
Ginger is used for drinks.

Cultivation

A portion of the rhizome is planted 5-7 cm below the surface of the soil. Sometimes light shade is used but it can be grown without shade.

Production

It takes 12 months to mature. It is harvested several times. The young shoots are cut when about 7.5 cm high.

Nutritional Values

Zingiber officinale

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
root- dried ground	9.4	1452		9.1	15	7.0	11.5	4.7
root	87.4	192	46	1.6			1.3	

Zingiberaceae

Common names

Wild ginger, Lempuyang gajah, Phtu, Hong qiu jiang, Lempoyang, Katu, Kattinji, Karpooraharidra, Narkachur, Karrallamu, Red pinecone,

Scientific name

Zingiber zerumbet

Edible portion

Rhizomes, Leaves, Flowers,

Description

An upright clumpy plant up to 0.4-1 m high. The rhizome is thick and yellow. The stems are stout. The leaves do not have a leaf stalk. Leaves are broadly sword shaped. The base is narrowed. They taper to the tip. The leaves are shorter and fatter than true ginger. They are 15-40 cm long by 3-8 cm wide. The flower cone is also longer and thinner than true ginger. The flower comes from the rhizome and is cone shaped and 6-15 cm long by 3.5-5 cm wide. The stalk is 10-30 cm long. The sheaths are scale like. The bracts are green when young and red when old. The fruit is a capsule which is 0.8-1.2 cm across. The seeds are black.

Distribution

A tropical plant. It grows in tropical Asia. It occurs in coastal areas in the Philippines. It is most common in damp open forest. It suits seasonally moist and dry climates. It needs a fertile, organically-rich, well-drained soil. It grows in S China. It suits hardiness zones 8-12.

Found in:

Asia, Australia, Burma, Cambodia, China, Fiji, Hawaii, India, Indochina, Indonesia, Japan, Laos, Malaysia, Myanmar, Pacific, Papua New Guinea, PNG, Philippines, Sri Lanka, Thailand, Timor, Tonga, USA, Vanuatu, Vietnam,

Use

The rhizome and leaves are eaten as a vegetable or used as flavouring in cooking.
They are also used in medicine and magic.

Cultivation

It mostly grows wild in regrowth forest.

Production

Nutritional Values

Zingiber zerumbet

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
leaves						19		

Common names

Jujube tree, Indian Jujube,

Rhamnaceae



Scientific name

Ziziphus mauritiana

Edible portion

Fruit, Leaves,

Description

A medium sized tree. It is thorny. It loses many of its leaves during the year. It grows up to 10-12 m high. The bark is grey, brown or pale red. Branches and the under surface of the leaves are densely hairy when young. The thorns arise from the base of the leaves. The leaves are alternate and simple. They are finely toothed. They can be oval or round and 8 cm long by 5 cm wide. The flowers are green and have a scent. They occur as 3-5 flowers together. The flowers are 1-2 cm long and on slender branches. The fruit are small, oval and yellow or brown. They are sweet. They are 2-5 cm long and 2.5 cm wide. The fruit are green when young and turn yellow or brown when ripe. The pulp is fleshy, acid and edible. The fruit have one seed imbedded in the flesh in a hard stone. The fruit wrinkle on drying. Many varieties exist.

Distribution

A tropical plant. It grows well on sandy soils. It can survive droughts. It grows rapidly in dry places such as the Sahel. It can tolerate temperatures up to 44°C as well as periodic frosts once the trees are mature. It does best when the mean annual temperature is 22-30°C. It thrives in hot dry climates. It grows in the Sahel. It needs adequate water during the fruiting season. It can grow at elevations up to 1,000 m in the tropics but does best below 600 m. It grows in areas with rainfalls of 150-900 mm and is most common where rainfalls are 300-500 mm annually. It does not like excessive humidity for fruiting. It will grow on a range of soils but deep sandy loams with a pH of 7 or slightly higher are best. It can tolerate some salinity and waterlogging.

Found in:

Afghanistan, Africa, Angola, Asia, Australia, Bahamas, Barbados, Bhutan, Brazil, Burkina Faso, Burma, Cambodia, Cameroon, Central Africa, Chad, China, Congo, Costa Rica, Cuba, Dominican Republic, East Africa, Ethiopia, Fiji, Gabon, Gambia, Ghana, Grenada, Guadeloupe, Guyana, Haiti, Hawaii, India, Indochina, Indonesia, Iran, Iraq, Ivory Coast, Jamaica, Kenya, Lesser Antilles, Madagascar, Malawi, Malaysia, Maldives, Martinique, Mauritania, Mauritius, Mozambique, Myanmar, Nepal, Netherlands Antilles, Niger, Nigeria, North America, Oman, Pacific, Pakistan, Panama, Philippines, Reunion, Sahel, Senegal, Seychelles, Socotra, Somalia, South Africa, Southern Africa, South America, Sri Lanka, Sudan, Tanzania, Thailand, Timor

Use

The fruit is eaten fresh, dried, in jelly or candied. They can be used in jellies, preserves, chutney, sauces, and drinks.
The unripe fruit are pickled.
Young leaves are cooked and eaten. They are also used in soups.
Seed kernels are eaten. The roasted seeds are used as a coffee substitute.
The fruit are used to make an alcoholic drink. Caution: Alcohol is a cause of cancer.

Cultivation

Plants are grown from seed. The hard seed coat makes them difficult to germinate. The shell can be carefully cracked and seed should be sown fresh. They can be soaked for 50 hours or put in concentrated sulphuric acid for 6 monutes to improve germination. Seed can be sown in plastic bags then transplanted after 18-24 weeks. It does not transplant easily so direct planting is best. Grafting and inarching can be used. It is also budded onto the rootstocks of wild species. Light pruning during the dry dormant season to train the tree is recommended. Regular pruning in the hot dry season encourages new growth. A spacing of 6-12 m is recommended. For larger fruit better varieties are grafted into rootstocks of *Ziziphus nummularia* or *Ziziphus jujuba*.

Production

A budded tree fruits are 4 years and produces for 50 years. Seedling trees take a year longer to fruit. Yields of 80-130 kg of fruit per tree per year occur. Fruit development takes 4-6 months. As fruit does not all ripen at once several harvests are needed. Unripe fruit do not ripen after picking.

Nutritional Values

Ziziphus mauritiana

Edible Part	Moisture	Energy KJ	Energy Kcal	Protein	Provit A	Provit C	Iron	Zinc
fruit	77.0	360		0.8	21	71	0.4	0.4
leaves								