

# Malay Apple

**Scientific Name:** *Syzygium malaccense*

**Common Names:** Otaheite cashew, Malay jamun (Hindi), Malaka jamrul (Bengali), Pani jamuk (Assamese)

**Hardiness zones:** USDA 10b+

**Habitat:**

Native of Malaysia, It is commonly cultivated from Java to the Philippines and Vietnam, also in Bengal and South India. (Mediterranean, subtropics, or tropics climate)

**Pests and Diseases:**

Young Malay apple trees are frequently attacked by termites in India. It is reported that sap-feeders, defoliators, miners and borers have been found on the foliage and on dead stems, birds, and fruit fly.

**Hazards:** Seeds grow too easily and can be invasive in the garden

**Description:**

Malay apple perennial evergreen plant also used as ornamental plant, can grow in tropic, Mediterranean or subtropical climate

The Malay apple tree is rather fast-growing, reaching 40 to 60 ft (12-18 m) in height, and has an erect trunk to 15 ft (4.5 m) in circumference and a pyramidal or cylindrical crown. Its evergreen leaves are opposite, short-petioled, elliptic-lanceolate or oblanceolate; soft-leathery, dark-green and fairly glossy on the upper surface, paler beneath; 6 to 18 in (15-45 cm) long, 3 1/2 to 8 in (9-20 cm) wide. The veins are indistinct above, but they and the pale midrib are prominent on the underside. New growth is wine-red at first, changing to pink-buff.

The abundant flowers, only mildly fragrant, and borne on the upper trunk and along leafless portions of mature branches in short-stalked clusters of 2 to 8, are 2 to 3 in (5-7.5 cm) wide, and composed of a funnel-like base topped by 5 thick, green sepals, 4 usually pinkish-purple to dark-red (sometimes white, yellow or orange) petals, and numerous concolorous stamens to 1 1/2 in (4 cm) long tipped with yellow anthers. Though showy, the flowers are hidden by the foliage until they fall and form a lovely carpet on the ground. The flowers can grow in clusters.

The fruit, oblong, obovoid, or bell-shaped, 2 to 4 in (5-10 cm.) long, 1 to 3 in (2.5-7.5 cm) wide at the apex, has thin, smooth, waxy skin, rose-red or crimson or sometimes white with streaks of red or pink, and white, crisp or spongy, juicy flesh of very mild, sweetish flavor. There may be a single oblate or nearly round seed or 2 hemispherical seeds, 5/8 to 3/4 in (1.6-2 cm) in width, light-brown externally, green internally and somewhat meaty in texture. The fruits of some trees are entirely seedless.

It is not possible to grow this plant as a houseplant, but can be grown in containers, flowerpots, or a planter.

### **Varieties:**

Ochse mentions an oblong to pear-shaped, white form called *djamboo pootih*, *djamboo bodas*, or *djamboo kemang*, which, in Java, is less flavorful than the red type. He says that there are many forms because of seedling variation. A large, especially sweet and juicy clone was introduced into the Philippines from Hawaii in 1922.

### **Cultivation:**

The tree grows vigorously on a range of soil types from sand to heavy clay. It tolerates moderately acid soil, reacts unfavorably to highly alkaline situations. In India, it grows best on the banks of ponds, lakes and streams where there is good drainage and no standing water. It is reported to be one of the first trees to spring up in new lava flows in Hawaii.

The Malay apple is strictly tropical, too tender for Florida and California except under very unusual conditions. It is naturalized and cultivated from sea-level to 9,000 ft (2,740 m) in valleys and on mountain slopes of the lowest forest zone of the Hawaiian Islands, and is grown up to 2,000 ft (610 m) in Ceylon and Puerto Rico. The tree needs a humid climate, with an annual rainfall of 60 in (152 cm) or more.

In India, Malay apple trees are spaced 26 to 32 feet (8-10 m) apart in fields prepared and enriched as for any other crop, and thereafter they require little care except for elimination of weeds and periodic fertilization and plentiful irrigation in very dry weather.

In Java, the tree flowers in May and June and the fruits ripen in August and September. The fruiting season is about the same around Castleton Gardens in Jamaica but at the lower level of Kingston it is earlier and ends during the first week of June. In India, the main crop occurs from May to July and there is often a second crop in November and December. The Malay Apple prefers full sun. In Puerto Rico, the tree may flower 2 or 3 times a year, in spring, summer and fall, the blooming season covering 40 to 60 days. The spring and fall flowering seasons produce the biggest crops. Fruits mature in 60 days from the full opening of the flowers and they fall quickly after they become fully ripe and deteriorate rapidly. For marketing, they must be hand-picked to avoid damage and to have longer shelf-life. Pollination is done by bees.

Raw Malay apples possess white, smooth skin. As they ripen, their skin becomes glossy, and their color deepens. Malay apples have a spectrum of colors: Some fruits become pinkish red, while others are fully dark. Some Malay apples are dark red or brownish purple; others have streaks of white or pink. Like bignays, Malay apples do not ripen uniformly on the tree: A single branch houses both white, unripe fruits and luscious, ripe red fruits.

Generally, ripe fruits possess a lovely rose scent. Their taste is crisp, watery, earthy, and slightly sweet; but insipid and uninspiring on the whole. Some Malay apples have an astringent, slightly bitter aftertaste.

*How to Open/Cut:*

To remove from the tree, simply twist the fruit's stem. Malay apples can be eaten like a pear: with skin, and as-is. Most fruits have one or two round seeds in the bottom center of the apple, but other varieties are seedless. The size of the seed varies: some seeds encompass more than half of the fruit, while others are much smaller.

**Propagation:**

Malay apple seeds germinate readily. Many sprout on the ground under the tree. While seed propagation is common, superior types are multiplied by budding onto their own seedlings. Air-layering has been successful and cuttings have been rooted in sand in Hawaii. Seeds are planted no more than 1 1/2 in (4 cm) deep in nurseries or directly in the field. They will germinate in 2 to 4 weeks and, if in nurseries, the seedlings are transplanted to the field when 8 months old. Cuttings are ready for transplanting in 6 weeks after rooting. Planting times are from Spring to Fall. Pruning occurs in the Fall.

**Nutritional Value:**

<b>Food Value Per 100 g of Edible Portion*</b>	
Moisture	90.3-91.6 g
Protein	0.5-0.7 g
Fat	0.1-0.2 g
Fiber	0.6-0.8 g
Ash	0.26-0.39 g
Calcium	5.6-5.9 mg
Phosphorus	11.6-17.9 mg
Iron	0.2-0.82 mg
Carotene	0.003-0.008 mg
(Vitamin A)	3-10 I.U.
Thiamine	15-39 mcg
Riboflavin	20-39 mcg
Niacin	0.21-0.40 mg
Ascorbic Acid	6.5-17.0 mg

\*According to analyses made in Hawaii, El Salvador and Ghana.

**Storage:**

Malay apples do not store well in the refrigerator, as they're susceptible to cold. Keep the fruits on the counter, where they'll keep for three to four days.

**Uses:**

The ripe fruit is eaten raw though many people consider it insipid. It is best stewed with cloves or other flavoring and served with cream as dessert. Asiatic people in Guyana stew the peeled fruit, cooking the skin separately to make a sirup which they add to the cooked fruit. Malayan people may add the petals of the red-flowered hibiscus (*Hibiscus rosa-sinensis* L.) to make the product more colorful. Malay apples are often cooked with acid fruits to the benefit of both. They are sometimes made into sauce or preserves. The slightly unripe fruits are used for making jelly and pickles. To use in recipes, prepare like an apple. Simply cut the fruit into quarters, and use a paring knife to cut away the "core" and seeds from each wedge.



In Puerto Rico, both red and white table wines are made from the Malay apple. The fruits are picked as soon as they are fully colored (not allowed to fall) and immediately dipped in boiling water for one minute to destroy surface bacteria and fungi. The seeds are removed and, for red wine, the fruits are passed through a meat grinder and the resulting juice and pulp weighed. To this material, they add twice the amount of water and 1 1/2 lbs (680 g) of white sugar per gallon, and pour into sterilized barrels with the mouth covered soon with cheesecloth. Yeast is added and a coil inserted to maintain circulation of the water. The barrels are kept in the coolest place possible for 6 months to 1 year, then the wine is filtered. It will be of a pale-rose color so artificial color is added to give it a rich-red hue. In making white wine, the fruits are peeled, the only liquid is the fruit juice, and less sugar is used, only 1 1/4 lbs (565 g) per gallon, so as to limit alcohol formation over a fermenting period of 3 to 6 months.

In Indonesia, the flowers are eaten in salads or are preserved in sirup. Young leaves and shoots, before turning green, are consumed raw with rice or are cooked and eaten as greens.

*Wood:* The timber is reddish, soft to hard, tough and heavy, but inclined to warp. It is difficult to work, but is employed for construction, railway ties, and for fashioning bowls and poi-boards in Hawaii.

### **Malay Apple Recipe Ideas and Uses:**

--**Stew** the fruits with ginger and brown sugar

--Jamaicans make **juice** from the fruit by blending it with water, straining, and then adding ginger and lime to taste.

--Make **wine** from the fruits, as is common in Puerto Rico.

--Thai locals use the sour-tasting **pollen** from the tree for use in **curries** and **salads**. The pollen's gorgeous fuchsia color brightens any dish, and it makes a nice garnish if nothing else. If desired, shake the pollen from tree: if plucked, it might taste too bitter and sour.

--Dip semi-ripe slices in a tamarind sauce, or a savory soy sauce as a **snack**

--Make **pickles** using *unripe* Malay apples. These pickles need not be puckering and sour, either: One recipe from The-Hroost.com recommends boiling apple cider vinegar, cinnamon sticks, cloves and sugar, then pouring the concoction over sliced fruit and covering.

--Stew into **chutney** by soaking the fruit in vinegar overnight, and then boiling the next day. Expect the fruit to become deep purple in the process.

--Create sweet **jams** and **preserves** from *ripe* Malay apples. Preserves will take hours to make based on the fruit's high water content, but can be done with ample patience, sugar, cinnamon, and even a bit of rum. Pour the end product atop **ice creams**, on **sweet breads**, **pancakes**, and **toast**.

--Chop raw pieces of the fruit for use in **salads**. Use any of the fruit mentioned in the flavor complements section below.

--Chop into fine pieces and add to **salsa recipes**. Its crisp, slightly sweet flavors counterbalance tomatoes, onions and peppers beautifully.

--Instead of regular apples, make **caramel Malay apples** instead: Dip the fruit in sticky caramel and roll in chopped almonds. Or, drizzle chocolate sauce over the fruit.

### **Medicinal Uses:**

According to Akana's translation of *Hawaiian Herbs of Medicinal Value*, the astringent bark has been much used in local remedies. It is pounded together with salt, the crushed material is strained through coconut husk fiber, and the juice poured into a deep cut. "The patient must exercise absolute self-control as the liquid bums its way into the flesh and nerves."

In the Molucca, or Spice, Islands, a decoction of the bark is used to treat thrush. Malaysians apply a powder of the dried leaves on a cracked tongue. A preparation of the root is a remedy for itching. The root acts as a diuretic and is given to alleviate edema. The root bark is useful against dysentery, also serves as an emmenagogue and abortifacient. Cambodians take a decoction of the fruit, leaves or seeds as a febrifuge. The juice of crushed leaves is applied as a skin lotion and is added to baths. In Brazil, various parts of the plant are used as remedies for constipation, diabetes, coughs, pulmonary catarrh, headache and other ailments. Seeded fruits, seeds, bark and leaves have shown antibiotic activity and have some effect on blood pressure and respiration.

The roots also treat **dysentery, itching** and **provoke menstruation**. Cambodians use the roots, leaves and seeds to allay **fever**. In Brazil, healers make plant remedies to allay **cough, diabetes, headache, constipation** and **catarrh**. Additionally, a study published in the *Scientific World Journal* mentions its traditional uses as treatment for **high blood pressure, inflammation**, and as an **antimicrobial, diuretic, and carminative**.

The scientific community has discovered the following health benefits:

- According to a study published in *Food Chemistry*, fruits in the Syzygium family (like Malay apple) have compounds with **antidiabetic** potential.
- A study conducted in Malaysia and published in *Food Chemistry* affirms Malay apple's strong **antihyperglycaemic** properties.
- A 2008 study published in *Food Chemistry* found that Malay apples have high antioxidants and polyphenols known to combat **inflammation**
- The *Puerto Rico Health Sciences Journal* found that Malay apple has xanthine oxidase inhibitors, which may assist in the prevention of **cataract** formation.





[https://www.hort.purdue.edu/newcrop/morton/malay\\_apple.html](https://www.hort.purdue.edu/newcrop/morton/malay_apple.html)

<https://www.growplants.org/growing/malay-apple>

<http://theindianvegan.blogspot.com/2012/11/all-about-malay-apple.html>