



PLANT FACT SHEET

Moringa oleifera Lamarck

GENUS *Moringa* FAMILY Moringaceae

COMMON NAMES Horseradish tree, Drumstick Tree, Moringa

EDIBLE PARTS AND USES

Edible parts: Leaves, Flowers, Fruit, Seeds, Roots, Bark, Pods, Spice, Vegetable

The young tops and leaves are eaten cooked. They are eaten as potherbs or used in soups and curries. They can be dried and stored for later use. The flowers are also used for 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 from the seeds is used in salads.

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.

HABITAT

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 can grow in arid places. It grows in Miombo woodland in Africa. It suits hardiness zones 9-12. In Yunnan.

PRODUCTION

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.

Harvesting and 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. Leaves are best dried in the shade to retain more of their Vitamin A.

NOTES

There are 13 Moringa species. The seeds contain a powerful flocculant useful in clarifying turbid water. The leaves are very high in Vitamin A, C, iron and protein. Chemical composition (after Abdelmuti): Protein (crude) = 15.6% (dry). Fat = 10.1% (dry). Fibre (crude) = 5.1% (dry). Ash = 11.5% (dry). Carbohydrate (soluble): Starch = 5.1% (dry). Sucrose = 5.5% (dry). D-glucose = 1.3% (dry). F-fructose = 1.5% (dry). Amino acids (g [16g N]-1): Aspartic acid = 10.4g. Threonine = 5.3g. Serine = 4.7g. Glutamic acid = 13.3g. Proline = 4.4g. Glycine = 6.4g. Alanine = 7.3g. Valine = 6.8g. Cysteine = 0.8g. Methionine = 1.8g. Isoleucine = 5.6g. Leucine = 10.9g. Tyrosine = 4.7g. Phenylalanine = 6.6g. Lysine = 6.1g. Histidine = 2.4g. Arginine = 6.6g. Minerals: Sulphur = 0.23% (dry). Potassium = 0.14% (dry). Magnesium = 0.69% (dry). Calcium = 3.18% (dry). Na = 0.16% (dry). K = 0.91% (dry). Zinc = 15mg/kg-1 (dry). Iron = 854mg/kg-1 (dry). Manganese = 79mg/kg-1 (dry). Copper = 5mg/kg-1 (dry). Leaves rich in Vitamins A and C. It can be invasive. It has 16.2 mg per 100 g dry weight and 9.0 mg fresh weight of alpha-tocopherol (Vitamin E).

PICTURES



Credit: Food Plants International (Bruce French)



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