Noni Plant/Tree

Scientific Name: Morinda citrifolia

Common Names: Great morinda, Indian mulberry, Noni, Beach Mulberry, and Cheese Fruit.

Habitat: Southeast Asia

Description:

Morinda citrifolia is a fruit-bearing tree in the coffee family, Rubiaceae. Its native range extends across Southeast Asia and Australia, and the species is now cultivated throughout the tropics.

Morinda citrifolia is especially attractive to weaver ants, which make nests from the leaves of the tree. These ants protect the plant from some plant-parasitic insects. The smell of the fruit also attracts fruit bats, which aid in dispersing the seeds. A type of fruit fly, Drosophila sechellia, feeds exclusively on these fruits

Noni seeds float and are hydrophobic due to an air chamber and a water resistant seed coat. The seeds are thick and tough and have a cellophane like coating.

Cultivation:

Morinda citrifolia grows in shady forests, as well as on open rocky or sandy shores.[3] It reaches maturity in about 18 months, then yields between 4 and 8 kg (8.8 and 17.6 lb) of fruit every month throughout the year. It is tolerant of saline soils, drought conditions, and soils. It is therefore found in a wide variety of habitats: volcanic terrains, lava-strewn coasts, and clearings or limestone outcrops, as well as in coralline atolls. It can grow up to 9 m (30 ft) tall, and has large, simple, dark green, shiny and deeply veined leaves.

The plant bears flowers and fruits all year round. The fruit is a multiple fruit that has a pungent odor when ripening, and is hence also known as cheese fruit or even vomit fruit. It is oval in shape and reaches 10–18 centimeters (3.9–7.1 in) size. At first green, the fruit turns yellow then almost white as it ripens. It contains many seeds.

It makes a great potted plant with broad deep green leaves and an upright habit.

Wild Nonis grow in forests and produce healthy fruit without the use of fertilizers, but many growers recommend a fertilizer program due to the desire of massive fruit production. By adding different amounts of nutrients at different stages of the life cycle, it will encourage the Noni to produce large amounts of healthy fruit. Fertilize with only small amounts of fertilizer. Chicken manure, macadamia nut husks, and crushed coral are effective organic fertilizers. In some areas it is recommended that a pound of lime per plant yearly will encourage growth.

Propagation:

Noni can be propagated from either seeds or stem cuttings. Seeds have a disadvantage due to the fact that they take 6-12 months or more to germinate while stem cuttings can root within 2 months of being planted.

The fruit of the Noni can store hundreds of seeds. Rip the ripe fruit apart and carefully separated the seeds from the flesh of the fruit. Though the seeds can be planted right after they are extracted from the fruit, most growers will soak the seeds in water until they germinate before planting the seeds in sterilized soil, so the plants don't have to start fighting pathogens and parasites right away. The seeds need a hot, wet environment in order to germinate. It can take up to a year for a seed to germinate, but cranking up the heat will reduce the time it takes for them to germinate. Noni seeds can withstand temperatures up to 38 degrees Centigrade, sometimes higher yet. In nurseries, heating pads are used to heat up the potted seed to create a shorter germination period.

Noni's can survive droughts and are used to hot arid conditions. Once the plants are mature they only need water once or twice a week. If the plant is older, it is recommended to water even less frequently, with each plant getting 10 gallons of water at each watering. Overwatering will cause root rot and accelerate damage from root-knot nematodes.

Uses:

Morinda citrifolia (Noni) has been extensively used in folk medicine by Polynesians for over 2,000 years. It has been reported to have broad therapeutic effects, including anticancer activity,

The strong-smelling fruit has been eaten as a famine food or staple food among some cultures, and has been used in traditional medicine. In the consumer market, it has been introduced as a supplement in various formats, such as capsules, skin products, and juices.

Noni is sometimes called a "starvation fruit", implying it was used by indigenous peoples as emergency food during times of famine. Despite its strong smell and bitter taste, the fruit was nevertheless eaten as a famine food and, in some Pacific Islands, even as a staple food, either raw or cooked.Southeast Asians and Australian Aboringines consume the fruit raw with salt or cook it with curry. The seeds are edible when roasted. In Thai cuisine, the leaves (known as bai-yo) are used as a green vegetable and are the main ingredient of kaeng bai-yo, cooked with coconut milk. The fruit (luk-yo) is added as a salad ingredient to some versions of somtam.

Green fruit, leaves, and root/rhizomes might have been used in Polynesian cultures as a general tonic, in addition to its traditional place in Polynesian culture as a famine food. In traditional Chinese medicine, the roots, known as ba ji tian, have been used for abdominal pain, impotence, and menstral disorders. Although Morinda is considered to have biological properties in traditional medicine, there is no confirmed evidence of clinical efficacy for any intended use.

Morinda bark produces a brownish-purplish dye that may be used for making batik. In Hawaii, yellowish dye is extracted from its roots to dye cloth

Nutrients and Phytochemicals:

Morinda citrifolia fruit powder contains carbohydrates and dietary fibre in moderate amounts. These macronutrients evidently reside in the fruit pulp, as M. Citrifolia juice has sparse nutrient content. The main micronutrients of M. citrifolia pulp powder include vitamin C, niacin (Vitamin B3), iron and potassium. Vitamin A, calcium, and sodium are present in moderate amounts. When M. citrifolia juice alone is analyzed and compared to pulp powder, only vitamin C is retained in an amount (34 mg per 100 gram juice) that is 64% of the content of a raw navel orange (53 mg per 100 g or 89% of the Daily Value). Sodium levels in M. citrifolia juice (about 3% of Dietary Reference Intake) are high compared to an orange, and potassium content is moderate.

Morinda citrifolia fruit contains a number of phytochemicals, including lignans, oligolignans, oligo- and polysaccharides, flavonoids,fatty acids, scopoletin, catechin, betasitostero, damnacanthal, and alkaloids. Although these substances have been studied for bioactivity, current research is insufficient to conclude anything about their effects on human health. These phytochemicals are not unique to M. citrifolia, as they exist in various plants.

https://www.ncbi.nlm.nih.gov/pubmed/11795436

https://en.wikipedia.org/wiki/Morinda_citrifolia

http://bioweb.uwlax.edu/bio203/2011/lomnes_sydn/nutrition.htm