

Azadirachta indica A. Juss:

(Neem / Nim)
Provincial Tree of Sindh

Sindh Government declared Neem as 'Provincial Tree' through a notification No. SO (C-IV) SGA &CD/4-20/2010, issued on 22 April 2010. The initiative signifies the efforts and commitment of the Government of Sindh to conserve natural forests of the Province.

The proposal was jointly initiated by the Indus for All I Programme, WWF - Pakistan and the Sindh Forest Department.

Botanical name

Azadirachta indica A. Juss.

Synonyms

Azadirachta indica, *Azadirachta indica* ADR, *Melia azadirachta* Linn, *Antelaea azadirachta* (L.) Adelbert

Common names

Neem, Nim, Neem tree, Divine tree

Family

Meliaceae

Main attributes

The neem tree is noted for its drought resistance. It has high medicinal value. It is also a source of good timber. It is one of the very few shade-giving trees that thrive in the drought prone areas.

Description

It is a fast growing evergreen tree with very dense crown. The tree height is about 15 - 20 meters. The tree is evergreen but in severe drought condition it may shed most or all of its leaves. The trunk is relatively short, straight and may reach a diameter of 1.2 m. The bark is whitish-grey to reddish-brown in color.

Distribution

The tree is native to India, Bangladesh and Pakistan, also found in Malaysia and China. It grows in tropical and semi tropical regions. The plant is widely cultivated in Sindh.

Uses

The fruits are edible, all parts are medicinally valuable. The neem oil is used in preparation of cosmetics (soaps, shampoo and creams), leaves are used as pesticide and the neem gum as a bulking agent and for the preparation of special purpose food for diabetics. Slender neem branches chewed in order to clean one's teeth. A decoction prepared from roots is ingested to relieve fever in traditional Indian medicine. Neem leaf paste is applied to the skin to treat acne and also used in other diseases such as measles, small pox, chicken pox, prickly heat disorders and sweat rash.

It brings other environmental benefits such as flood control and reduced soil erosion. It helps in restoring and maintaining soil fertility which makes it highly suitable in agro-forestry. It is a source of good timber, being durable and termite resistant; neem wood is used in making fence posts, poles for house construction, furniture etc. It is a good source of fire wood and fuels. As a source of shade, it is excellent for parks, roadsides, etc



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Flowers of *Azadirachta indica* A. Juss



People resting under a Neem tree in a rural area of Sindh

Use as pesticide

The neem tree contains promising pest-control substances found effective against many economically important pests. Neem does not normally kill pests right away; rather it repels them and affects their growth. As neem products are cheap and non-toxic to humans, animals, they are well-suited for pest control in rural areas. For these reasons neem is considered as “eco- friendly” pesticide, the best substitute to hazardous pesticides.

Yield

Full grown neem trees yield between 10 to 100 tons of dried biomass per hectare, depending on rainfall, site characteristics, spacing, ecotype or genotype. Leaves comprise about 50% of the biomass; fruits and wood constitute one-quarter each. Improved management of neem stands can yield harvests of about 12.5 cubic meter (40 tons) of high quality solid wood per hectare.

A neem tree normally starts fruiting after 3-5 years. In about 10 years it becomes fully productive. Under favourable conditions fresh fruit yield per fully grown tree is about 50 kg per year.

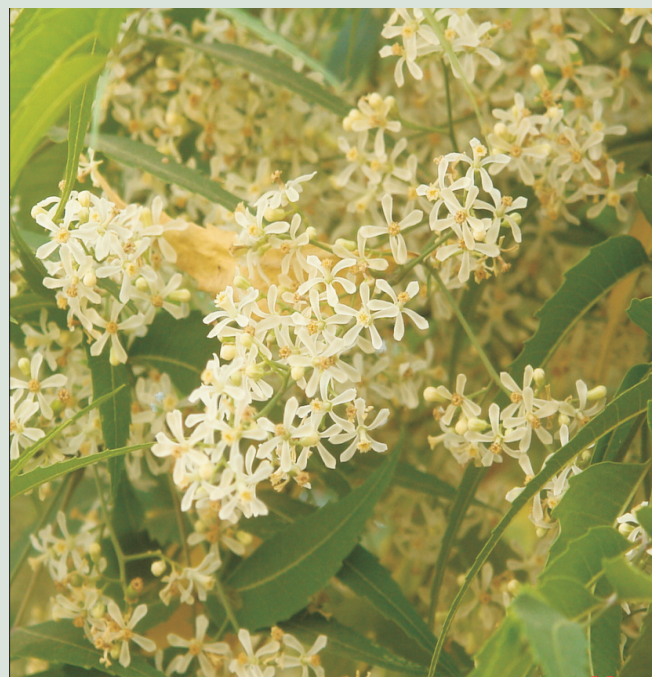
Environmental Requirements

Temperature:

It is a typical tropical to subtropical tree and exists at annual mean temperatures between 21-32 °C. It can tolerate high to very high temperatures and does not tolerate temperature below 4 °C.

Rainfall:

The neem tree is drought resistant. Normally it thrives in areas with sub-arid to sub-humid conditions, with an annual rainfall between 400 and 1200 mm.



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It can grow in regions with an annual rainfall below 400 mm, but in such cases it depends largely on ground water levels.

Soil:

Neem can grow in many different types of soil, but it thrives best on well drained deep and sandy soils.

Establishment

The most common propagation method is to grow neem trees from seed. There have been trials using cuttings, suckers, roots and tissue culture, and it all works, but planting seed is the easiest and the most common method. As long as the seed is fresh it germinates readily in about a week.

Neem trees develop a very deep and strong tap root. Leaving them in pots or polythene bags for too long will lead to stunted and distorted roots, and it is also very easy to damage roots when the tree is planted out.

Neem trees grow slowly during their first year, but they reach maturity fast. A neem tree can be expected to live 150 to 200 years.

Sources:

- National Research Council (1992), *Neem: a tree for solving global problems*, report of an ad-hoc panel of the Board on Science and Technology for International Development National Academy Press, Washington, DC.
- Hearne, DA (1975), *Trees for Darwin and northern Australia*, Department of Agriculture, Forestry and Timber Bureau, Australian Government Publishing Service, Canberra.

Website reviewed:

1. <http://www.absoluteastronomy.com/topics/Neem>
2. <http://www.discoverneem.com/growing-neem-trees.html>
3. <http://www.svlele.com/neem.htm>

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