


Common Name:	Neem / Indian lilac	
Binomial Name:	<i>Azadirachta indica</i>	
Origin:	South Asia/India	
Parts Used:	Bark Twigs Leaves Flowers Seeds Fruit	

Neem is a fast-growing tree that can reach a height of 15-20 m (about 50-65 feet), rarely to 35-40 m (115-131 feet). It is evergreen, but in severe drought it may shed most or nearly all of its leaves. The branches are wide spread. The fairly dense crown is roundish or oval and may reach the diameter of 15-20 m in old, free-standing specimens.

Native to India, Myanmar, Bangladesh, Sri Lanka, Malaysia and Pakistan, growing in tropical and semi-tropical regions, the Neem tree is also known as the Indian Lilac and is a member of the mahogany family.

Products made from Neem have proven medicinal properties, being anthelmintic, antifungal, antidiabetic, antibacterial, antiviral, anti-fertility, and sedative. It is considered a major component in Ayurvedic medicine and is particularly prescribed for skin disease.

All parts of the tree (seeds, leaves, flowers and bark) are used for preparing many different medical preparations. Neem oil has been found to be an effective mosquito repellent. Neem derivatives neutralise nearly 500 pests worldwide, including insects, mites, ticks, and nematodes, by affecting their behaviour and physiology. 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 higher animals and most beneficial insects, it is well-suited for pest control in rural areas.

Because the people of India have long known that Neem leaves repel troublesome insects, they place leaves in beds, books, cupboards and closets. In 1964 a German entomologist and his students became involved in Neem research after witnessing a massive locust plague in the Sundan during which billions of locusts devoured the leaves of every tree except the Neem. Since then scientists have learned about the Neem's complex chemical arsenal.

Extract of Neem leaves is thought to be helpful as malaria prophylaxis despite the fact that no comprehensive clinical studies are yet available. In several cases, private initiatives in Senegal were successful in preventing malaria. However, major NGOs such as USAID are not supposed to use Neem tree extracts unless the medical benefit has been proved with clinical studies.

Neem is a source of environment-friendly bio-pesticides. The unique feature of Neem products is that they do not directly kill the pests, but alter the life-processing behaviour in such a manner that the insect can no longer feed, breed or undergo metamorphosis. However, this does not mean that the plant extracts are harmful to all insects. Since, to be effective, the product has to be ingested; only the insects that feed on plant tissues succumb. Those that feed on nectar or other insects, such as butterflies, bees, and ladybugs, do not accumulate significant concentrations of Neem products and are not harmful to birds, bees, warm blooded animals and humans.

The extract of leaves, seeds as well as barks is effective in treating scabies, a transmissible ectoparasite skin infection. It is a great substitute for permethrin. Scabies is not at all resistant to the biochemical properties of Neem, so in prolonged complication of scabies Neem is found to be effective. Human head lice can be cured with the external application of Neem leave juice over the scalp. There is also anecdotal evidence of its effectiveness in treating infestations of head lice in humans. A tea made of boiled Neem leaves, sometimes combined with other herbs such as ginger, is said to be able to be ingested to fight intestinal worms. The oil is also used in sprays to treat flea problems for cats and dogs.



Neem Information Sheet

The Divine Tree

Insects Affected by Neem Products

Mediterranean Fruit Fly	Disrupts growth, toxic
Oriental Fruit Fly	Arrests pupae development, retards growth, toxic to larvae
Face Fly	Retards growth, toxic
Horn Fly	Repels, retards growth, disrupts growth
White Fly	Repels, retards growth, inhibits feeding
House Fly	Inhibits feeding, disrupts molting, repels
Sorghum Shoot Fly	Inhibits feeding
Yellow Fever Mosquito	Kills larvae, disrupts molting
House Mosquito	Toxic to larvae
Flea	Retards growth, repels, inhibits feeding, disrupts growth, eggs fail to hatch
Head Lice	Kills, very sensitive to Neem oil – traditional use in Asia
Spotted Cucumber Beetle	Retards growth, inhibits feeding
Mexican Bean Beetle	Retards growth, inhibits feeding, disrupts molting
Colorado Potato Beetle	Eggs fail to hatch, larvae fail to molt with azadirachtin levels as low as 0.3ppm, inhibits feeding
Flea Beetle	Inhibits feeding
Khapra Beetle	Inhibits feeding, disrupts molting, toxic to larvae
Confused Flour Beetle	Inhibits feeding, disrupts molting, toxic to larvae
Japanese Beetle	Repels, retards growth, inhibits feeding, disrupts growth
Red Flour Beetle	Inhibits feeding, toxic
American Cockroach	Reduces fecundity & molts, reduces number of fertile eggs
Bean Aphid	Reduces fecundity, disrupts molting
Rice Gall Midge	Toxic
Western Thrips	Retards growth
Diamondback Moth	Strongly suppresses larvae & pupae, retards growth, inhibits feeding
Webbing Clothes Moth	Inhibits feeding, disrupts molting
Gypsy Moth	Retards growth, inhibits feeding, disrupts growth
Corn Earworm	Retards growth, inhibits feeding, disrupts molting
Pink Bollworm	Retards growth, inhibits feeding
Fall Armyworm	Retards growth, repels adults, inhibits feeding, disrupts molting, toxic to larvae
Tobacco Budworm	Inhibits feeding
Tobacco Hornworm	Inhibits feeding, disrupts growth, toxic
Cabbage Looper	Inhibits feeding
Leafminer	Retards growth, inhibits feeding, disrupts molting, toxic
Serpentine Leafminer	High pupal mortality, retards growth, inhibits feeding, disrupts molting, toxic to larvae
Brown Planthopper	Inhibits feeding, repellent, disrupts growth, mating failures & sterility
Green Leafhopper	Inhibits feeding
Migratory Locust	Stops feeding, converts gregarious nymphs into solitary forms, reduces fitness, adults cannot fly
House Cricket	Disrupts molting
Large Milkweed Bug	Difficulty in escaping the 'skin' of the last molt, disrupts molting
Mealy Bug	Repels, inhibits feeding
Milkweed Bug	Difficulty in escaping the 'skin' of the last molt, disrupts molting
Fire Ant	Inhibits feeding, disrupts growth
Boll Weevil	Inhibits feeding
Cowpea Weevil	Inhibits feeding, toxic
Rice Weevil	Inhibits feeding, disrupts growth, toxic