**NEEM**

*Azadirachta indica* A. JUSS.

**Family: MELIACEAE**

Neem is a tall evergreen tree having small bright green leaves. It is up to 100 feet tall. The stem of a neem tree can grow up to a diameter of 2.5-3 m. The bark is rough and can be pale or greyish-black in color. Neem tree bears small white colored flowers and star shaped, with a pleasant smell. The tree generally bears fruits between the age of 3 and 5, and the fruits are edible.

**Common Names**

- Sanskrit: Nimba, Arishta, Ravipriya
- Kannada: Bevina-mara, Bevu, Kahibevu, Nimba, Ollebevu
- English: Neem, Margosa margosa,
- Telugu: Vepa
- Tamil: Vembu
- Malayalam: Veppu

**Distribution:**

This species is probably native to India globally distributed in the Indian subcontinent. Within India, it is commonly found throughout the greater part, and is often cultivated. In Karnataka, in large quantity found in Agumbe, Sandur, Devarayandurga Karpakkapalli.

**Agroclimatic Requirements:**

It grows on a variety of soils, from sandy to clayey including black cotton soils. Neem grows well on flat ground with high sub-soil water level and good drainage. It tolerates temperature ranging from 0°C to over 40°C, altitude variation from sea level to 1500 m and an extremely low annual rainfall down to 130 mm. It also possesses certain amount of drought hardiness. Neem grows well on moist, dry, stony, clayey or shallow soil. It can tolerate a soil pH of 5-10.
**Varieties:** There is no named variety in this crop

**Cultivation:** It can be propagated using seeds.

**Seed Propagation:**

Seeds have a short viability of about two weeks. For obtaining higher germination, seeds are soaked for 24 hours in cold water and the endocarp is removed or the seed coat at the round end is cut off with a sharp knife. De-pulped seeds should be sown in nursery beds made of fine river sand preferably, in lines 15 to 20 cm apart and seeds 2.5 to 5 cm apart, at a depth of 1 to 2 cm and is lightly covered by the soil, the beds are sparingly watered to prevent caking. Germination takes about one to two weeks and 70 to 90 percent seeds germinate.

**Transplanting and aftercare**

Seedlings about 7 to 10 cm tall with tap root of about 15 cm long are transplanted into polybags. Field planting is done after 1 to 2 years at a spacing of 4.5 to 5.5 m. They are usually watered once in a while during summer months for the first 5 to 6 years.

**Irrigation and Interculture:**

Neem requires hardly any irrigation during monsoon. However, light irrigation during the summer season supports good growth of the seedlings. Matured trees do not require any irrigation.

Periodically pruning of the tree once in a year during November – December provides a good frame work and faster growth of the tree.

**Inputs:**

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Materials</th>
<th>Per acre</th>
<th>Per hectare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Number of seedlings (g)</td>
<td>112</td>
<td>280</td>
</tr>
<tr>
<td>2</td>
<td>Farmyard Manure (t)</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>3</td>
<td>Fertilizers (kg)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
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**Plant Protection:**

Major Insect: Thrips, defoliator, Shoot borer and termites

Major Diseases: the plant is not attack by any disease of serious nature
Schedule:

- To control thrips spray dimethoate @ 0.1-0.2 ml per liter of water
- The larvae of shoot borer can be controlled by spraying 0.02% of monocrotophos
- Spray of 0.1-0.2% folithion checks the defoliator
- To control termites’ heptachlor or chlordane, 50EC should be drenched before planting the seedlings and also after planting if the pest is noticed on the stem.

Harvest and Yield:

Scented white flowers appear in abundance on axillary spikes during March-April. Fruits ripen from June to August. Fruits are harvested when the color of the fruit turns from green to bright yellow. Vigorous shaking of the branches is required to collect the ripe fruits.

About 8000-10000 kgs of fresh berries can be harvested from 1ha/yr. Fresh fruits give about 60% dry fruits, which yield 10% kernel and contain on an average 45% fixed oil.

Cost of Cultivation: Approximate cost of cultivation comes around Rs.37,500/- per hectare.

Parts used: All parts

Medicinal uses:

The all parts of Neem are used in the form of juice and decoction to treat fever, intrinsic haemorrhage, bleeding piles, wound, oedema, arthritis, skin diseases, diabetes, eye diseases, leucorrhoea, as, poisons, jaundice, for fumigation, diseases of teeth, heart diseases, as specific digestive and diseases of vagina.

Intake of haritaki (Terminalia chebula) and nimba or nimba and amalaka (Phyllanthus emblica) (40-60 ml) decoction for a month helps to overcome all types of skin diseases.

Decoction of bark, leaves, root, fruit and flowers of neem, aragvadha (Cassia fistula), saptaparna (Alstonia scholaris), murva (Maerua arenaria), kutaja (Holarrhena antidysenterica), katphala (Gmelina arborea) and palasa (Butea monosperma) (40-60 ml) destroys all types of diabetes.

Decoction of neem leaves used to clean the wound. Neem leaf mixed with honey acts as wound cleansing agent. Both of them (10-15 gm) added with ghee promote wound healing. Paste of neem leaves and sesamum mixed with honey cleanses wound, while mixed with ghee it acts as healing agent. The paste of neem leaves (10-15 gm) when given internally decrease pitta and kapha and useful in worm infestation.