



## Agroforestry Facts Hebbevu



<b>Botanical Name</b>	<b><i>Melia dubia</i> Cav.</b>
Name in English	Malabar Neem
Name in Kannada	Hebbevu
Family	Meliaceae
Seeds Collection	The drupes should be graded in water to remove floating seeds prior to sowing.
Seeds Processing & Treatment	Poor germination observed in Melia. However, as high as 60% germination without any pre-treatment also noticed. For these seeds should be graded in water to remove floating seeds prior to sowing. Seeds have to be stored for 20-25 days in the gunny bags and use it for cultivation.
Nursery	It is best to sow seeds during March – April. Cleaned and dried seeds should be sown in the open raised nursery beds, in drilled lines, 5 cm apart. Seeds do not germinate in sand. They have to be sown in soil: farm yard manure medium in the ratio 2:1 A 1:1 ratio can also be adopted. About 6-7 kg of dried drupes containing about 1500 numbers are required for one standard nursery bed. The seeds sown need to be watered regularly, twice a day. At places where daytime temperature is not very high, or where nursery beds are in shade, the bed should be

	<p>covered with a tarpaulin sheet to retain temperature in the medium. Germination occurs within 90 days.</p> <p><b>Vegetative propagation:</b> Juvenile stem cuttings and coppice shoots respond well to 1000 – 2000 ppm IBA (liquid formulation). Coppice from older trees responds better to rooting. Pencil thick cuttings need to be taken for propagation. Thin shoots are easily susceptible to root rot. The shoots can be placed on sand medium and watered twice a day. A provision for drainage is a must as water logging destroys the shoots. Season also plays a major role in the rooting of cuttings. Drier seasons are conducive for rooting. About 75% rooting can be obtained.</p> <p><b>Note:</b> The species is very sensitive to transplantation and hence care must be taken while prickling seedlings from bed or transplanting rooted shoots to bags.</p>
Plantation Management	<p>The trees grow well in sandy loam, red and lateritic soils with an annual rainfall of 800 mm and above. Growth is enhanced with the application of fertilizers. Regular irrigation is required for fast growth of the trees. Initial growth is hastened with daily watering and application of fertilizers once in three months for the first three years. Under rainfed conditions, the growth is slow (almost 100 % less). The tree branches at 8-10 m from ground. Pruning every six months controls branching. The bole is straight, round, without any knots and without any buttress.</p> <p>Melia is a good agroforestry species and supports a variety of crops throughout its cultivation period. Ground nut, chilli, turmeric, black gram, papaya, banana, melon, sugarcane, as inter crops are being successfully cultivated. The species performs exceedingly well when planted on bunds, attaining the harvestable size within four years.</p>
Model/Spacing	6m x 4m, 5m x 5m are ideal but 8m x 8m will be the best
Pests, diseases and Management	<p>A sporadic pest feeding on plant sap. Adults are carmine red colour mites occurring underneath the leaves. Presence of chlorotic spots which coalesce into pale patches indicates the presence of mite infestation. There will be extensive webbing underneath the leaves. Leaves start drying from the edges and slowly wither away. Occurrence in June to November.</p> <p><b>Management:</b> infested leaves can be hand plucked and destroyed if the pest is at low to medium level. Application of 10% Neem oil and soap solution emulsion pointed towards the underside of the leaves can reduce the population level. 2.5 ml of Dicofol per liter of water</p>

	can be applied during severe infestation. Application of Derrimax 0.3 ml/lit of water can also control the mites.
Plant Rotation	<i>Melia dubia</i> can be adopted as short rotation tree cultivation tree in most situations
Yield	10-12 years old tree fetches 14 cubic feet
Uses	It is a good secondary timber and the most preferred species for plywood industry. The wood is also used for packing cases, ceiling planks, building purposes, agricultural implements, pencils, match boxes, splints, catamarans, musical instruments and tea boxes as the wood is anti-termite by itself. Thus, the species has a ready and assured market due to its multipurpose utilities. The species is also highly adaptable. The species is in high demand by the plywood industries.
Buyers /Industries	Plywood and Panel industries, Plywood Industry Tajpuria, Hunsur Plywood Industry
Harvesting	It takes 8-10 years for optimum growth
Economic Returns	Rs. 79,652/- to 3,36,260/- per ha
Current Market Rate	Rs. 400 - 425 per cubic feet or Rs 5600 - 5950/- per tree