

MAHOGANY

Name: Mahogany

Scientific name: *Swietenia macrophylla*



Large deciduous tree up to 30-40 m tall with grey to greyish-brown branches. Light-demanding species prefer relatively high light intensity.

Origin & Suitable Area: Tamil Nadu, Kerala, Karnataka, West Bengal, Odisha, Bihar, Maharashtra, Madhya Pradesh, Andhra Pradesh.

Site Selection: Mahogany trees thrive in tropical and subtropical regions with well-drained soil and ample sunlight. Select a site with suitable climatic conditions and adequate space for tree growth.

Seed Selection and Planting: Mahogany trees can be propagated from seeds or seedlings. Plant seeds or seedlings in prepared soil during the rainy season for optimal growth.

Seedlings per Acre: approximately 680 seedlings per acre.

Spacing: Adequate spacing is crucial for proper growth and development of mahogany trees. Spacing can vary depending on the species and desired outcome but typically ranges from 8 to 12 feet apart.

Maintenance: Regular watering, weeding, and pest control are necessary during the initial years of growth. Pruning may be required to shape the trees and remove diseased or damaged branches.

Harvesting: Mahogany trees are typically harvested when they reach maturity, which can take anywhere from 15 to 25 years depending on the species and growth conditions. Harvesting involves felling the trees and processing the logs for timber.

Harvesting rotation: In natural forest, rotation is 100-120 years, in artificial regeneration it is 70-80 years and in coppice regeneration, it is 40-60 years.

Climate and soil: Mostly occurs in monsoon climate, under tropical and sub-tropical conditions. Sandy loam soil, 6-7 pH not exceeding 8.5 & well drained.

Pit size: 1.5 feet (Length) x 1.5 (Width) x 1.5 (Height)

Pit cost: Rs. 35/pit (Price varies with soil type)

Spacing: 10 feet x 10 feet

Seedlings requirement: 430/Acre.

Seedling Cost: Price varies with height and bag size of seedlings.

Soil type: Rich, Deep, and Well-Drained Soils with sufficient moisture available in most of the year.

Planting: It is done in the monsoon period which has high success. Square or line planting is done in 45-60 cm³ size pits for seedlings and stump planting, 15 cm diameter holes and 30 cm depth are prepared.

Plant protection

1. **Predominant pest:** Redsanders Stem borer

Management practice: Dip cotton in 5% Dichlorvos with 2 ml/ltr of water keep it in stem borer position and seal it with clay soil.

2. **Predominant disease:** Leaf blight (*Rhizoctonia solani*) and fungal on fruits (*Alternaria* sp)

Nutrition management: Farm Yard Manure: Minimum 2 Kgs. (Rs. 3/seedling) Azospirillum & Phosphobacteria: 50 ml (or) 50 g/seedling VAM: 50 g (Rs. 3 each/seedling) Total: Rs.12/seedling

Thinning: 80-100 trees will remain / acre.

Intercropping: Crops can be cultivated until the canopy closes.

Temperature Range: 12°-36°C

Rainfall: 800-3200 mm rainfall regime & also grows well in rainfall more than 3,500 mm.

Irrigation:

- Drip irrigation. During the early stage, weekly thrice with a minimum of 3-4 liters/seedling. Irrigation shortens harvesting time. After 8 years, no irrigation is needed.
- Stop irrigation completely after 8 years. Under extraordinary conditions, artificial stress induction occurs.

Pruning: Branches are to be removed periodically without affecting the main stem. After 25-30 feet, no pruning is needed.

Clear Bole -Height: 35-40 feet & Girth: 1.50-2.00 m CFT (Cubic feet): 18-25 CFT/Tree. Age: 15-20 yrs.

Approximate Price: Rs. 1800-2500 per CFT (The price of one tree varies from Rs.27000-45000)

Cost of cultivation: Maximum Rs. 5-10 lakhs/acre

Net profit: Rs. 22-35 lakhs (Farm Gate Price) (Price increases 5-6% every year)

Uses: Flooring and Home Construction, Plywood, Furniture.