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Marudhamaram – Cultivation practices of *Terminalia arjuna*

Koduru Bhagya Laxmi[1] and Posham Raghuram[2]
[1]Ph.D Scholar, Department of Plantation, Spices, Medicinal and Aromatic Crops, Sri Konda Laxman Telangana State Horticultural University, Mulugu.
[2]M.Sc, Department of Sericulture, Kakatiya University, Warangal

SUMMARY

Terminalia arjuna grown as Avenue tree. The economic part is bark. Bark is useful in treatment of high blood pressure and ulcers. Arjuna is large deciduous tree grown throughout the India. Propagation takes place through seeds. Life span is above 50 years. Arjuna is used as an erosion control, fodder crop, shade or shelter purpose. Leaves are fed for *Antherea mylitta* to get tasar silk..

INTRODUCTION

A tree found throughout the greater part of India, also grown as an avenue tree. It is called as thellamaddi in Telugu and kumbuk in sinhala, marudhamaram in tamil. Bark is used as a cardio- protective and cardio-tonic in angina and poor circulation, as a diuretic in cirrhosis of liver, for hypertension. Externally for skin diseases, leukoderma and herpes.

Chemicals Composition: Bark contains acids like arjunolic acid and termic acid, glycosides like arjunetin, arjunosides I-N, and strong anti-oxidants, flavones, tannins, digomeric, paroanthocyanidin.

Morphology: Arjuna is a large deciduous tree with spreading canopy and drooping branches. It attains a height of upto 35m. Its bark is thick, grey to pinkish green, smooth, thin coming off in irregular sheets. Leaves are usually sub opposite, 10-15cm long and 4-7cm broad and base is rounded. Flowers are sessile and occur in simple or panicled spikes. Calyx is glabrous and has five short triangular lobes. The fruit is somewhat star shaped.

Distribution: The species is common in mixed dry deciduous tropical forests throughout the greater part of India. It is common Avenue tree in many cities such as Delhi.

Soil and climate: The tree prefers alluvial loamy which are loose, moist fertile and have good drainage and water holding capacity. River bank soils, streams and ravines are it's natural habitat. The plant also survives in open sunny and low rainfall areas.

Propagation: Propagation takes place through seeds. The seeds can collected in early summer from trees that are more than six year old. Ripe fruits are collected in March either by lopping the branches or from the ground previously swept clean. The seeds are viable for atleast one year when stored in sealed tins.

Nursery: Seeds are sown in nursery beds in early summer, usually just after collection. Germination commences in 8-12 days and is completed in 7-8 weeks, Germinated seeds may be transplanted in polybags with clay, manure and sand in equal ratio. 4-10 kg seeds required 1 ha plantation at a spacing of 6m×6m.

Planting: Preparatory tillage is done in the field which should be levelled and pits of size 45×45×45cm are dug at a spacing of 6m×6m. About 10 kg FYM and NPK @75:50:30gm are added per pit and thoroughly mixed with soil as basal dose.

Transplanting: About 10 months old saplings are transplanted in the field in pits in July-Aug at a spacing of 6m×6m. In all about 280-300 saplings are required/ha.

Irrigation: Irrigation is recommended at 15 days intervals in the summer seasons for young plantations.

Harvest: The Arjun tree starts flowering from 6th year onwards. Bark is repeatedly scraped in winter season. The bark is removed from well grown trees preferably 10th year onwards in spiral or vertical strips of not more than 5 cm width and 25 cm in length. Bark is red in color.

Yield: 500 kg dried bark can be obtained from 1 ha of plantation every year from the 10th year.

Impact: *Terminalia Arjuna* is an agroforestry species, often intercropped with coconut and citrus. It is an excellent shade tree, especially in coffee plantations. It is widely planted for raising tasar silkworm and livestock fodder in India where leaves are heavily lopped. The leaves contain 9-11%crude protein and 14-20%crude fibre. Arjun is usually used in agro and social forestry for reclamation of saline, alkaline soils and deep ravines as well as in sand dune afforestation programmes with casuarina species. It is also planted near Wells as roots of *Terminalia arjuna* are believed to purify and cool the water in the wells.

CONCLUSION

Terminalia arjuna is a widespread medicinal plant used in the pharmacological system of medicine to care for various degenerative diseases. The Arjuna tree bark has anti inflammatory properties and very effective in treatment of asthama. Arjuna leaves are used for rearing tasar silkworms.

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