

Terminalia arjuna (Roxb.) Wt. & Arn.

Family : Combretaceae
Group : Cardio tonic, Brain tonic
Parts Used : Leaf, Bark
Vernacular Names
English : White murdah, Arjun
Malayalam : Nirmaruthu
Hindi : Arjun
Sanskrit : Arjunah
Bengali : Arjun
Gujarathi : Sadado, Arjunsadada
Kannada : Arjun
Tamil : Attumaruthu



Distribution and habitat: Commonly found in Madhya Pradesh, Bihar and Peninsular India.

Botany: A large evergreen tree with a buttressed trunk and spreading crown with drooping branches, bark smooth, grey outside and flesh-colored inside, flaking off in large flat pieces.

- **Leaves:** Simple, sub-opposite, oblong or elliptic, coriaceous, cordate, shortly acute or obtuse at the apex, pale dull green above, pale brown beneath.

- **Flowers:** White, arranged in paniced spikes with linear bracteoles. Ovoid or ovoid oblong, 2.5-5.0 cm long, nearly glabrous, with 5-7 hard, winged angles, the lines on the wing oblique and curving upward.

Chemical constituents:

- Fruits contain flavanones - arjunone and 5,7,2',4' - tetramethoxy flavone and a chalcone - cerasidin. Other constituents are β -sitosterol, friedelin, methyloleanolate, gallic acid, ellagic acid and arjunic acid.

- Bark has a triterpene arjungenin, tri-terpene glucosides I, II and III. Stem bark contains flavones -luteolin, baicalein and arjunolone characterized as 6, 4' - dihydroxy - 7-methoxy flavone. Stem bark yields oxalic acid and tannins besides complex glycosides.

Properties:

- Bark is alexirtic, styptic, antidysenteric, astringent, antiasthmatic, febrifuge, expectorant, cardi tonic aphrodisiac and diuretic. Stem-bark is CVS and neuro tonic, diuretic and abortifacient.

- Fruit is deobstruent.

Uses:

- The bark is useful in fractures, ulcers, urethrorrhea, leucorrhea, diabetes, vitiated conditions of *pitta*, anemia, fatigue, asthma, bronchitis, tumors, internal and external hemorrhages and hypertension.

- The bark has been considered by the ayurvedic physicians as well as by modern practitioners as a cardiac tonic. It is given as a decoction with milk

- The bark powder is a diuretic and has a general tonic effect in cases of cirrhosis of the liver.

Formulations: *Arjunaghrita*, *Arjunarishta*, *Shankara vati*, *Laksha guggulu*, *Nyagrodhadya ghrita*

Agrotechnology

Climate and soil: It grows on a variety of soils but prefers fertile alluvial loam sandy well-drained soil. It also grows in saline and alkaline soil. It is moderately drought-hardy. However, seedlings are susceptible to drought conditions.

Propagation: It can be propagated by seeds and stump planting. Seeds are soaked in water for 96 hours and kept in heaps covered with moist gunny cloth in the shade, till germination (20 days). This method gives 85 % germination. Seedlings are raised in polythene bags with a potting mixture of farm yard manure, soil and sand in the ratio of 3:2:1 . Three-month seedlings are used for field planting.

Spacing : 5 m x 5 m **Seed requirement per acre**: 0.3 kg

Seedlings required per acre : 160 nos.

Pests and diseases: The young seedlings suffer much from drought and frost. *Polystictus affinis* has been recorded to cause fibrous rot. The trees suffer damage from *Trioza flecheriminor* Crawford. Spraying Bidrin 0.1% and dimethoate 0.2% during the non-breeding season proved to be effective in its control.

