

Sida alnifolia L.

Synonyms: *Sida retusa* L.
Sida rhombifolia L.var. *retusa* (L.) Mast.

Family: Malvaceae

Various Names

Common/Trade names: Cuban jute, Jelly leaf

Sanskrit name: Bala

Hindi name: Sahadeva, Bhiunli

Popular names in the southern region

- *Andaman & Nicobar Islands*: Not recorded
- *Andhra Pradesh* : Gubatada
- *Karnataka* : Cheruparuva
- *Kerala* : Kurunthotti
- *Lakshadweep* : Kurunthotti
- *Puducherry* : Chittamutti
- *Tamil Nadu* : Chittamutti
- *Telangana* : Gubatada



Distribution

Sida alnifolia is distributed in South Asia and South-East Asia. Within India, it has been recorded from most of the states.

Description

Subshrubs to 70 cm tall, strongly branched. Leaves simple, alternate, 1-3 × 0.8-2.5 cm, obovate to elliptic-lanceolate, apex retuse, emarginate, rounded or subacute, base obtuse or rounded, margins irregularly serrate-dentate or crenate. Flowers yellow, axillary, solitary. Fruit to 4 mm long; mericarps 7-10, included in the calyx, with a pair of short obtuse mucro at apex; seeds c. 2 mm long, black.

Uses

Major therapeutic claims are hepatoprotective, antipyretic, and dermatitis. The plant is a popular household remedy for a variety of gastrointestinal disorders, sluggish liver and jaundice. Important drug preparations include Tikta ghrita, Gorochanadi Gulika, and Panchatikta kashayam, Sheerabala etc.

Agro-ecological requirements

The plant can grow in variety of soils, but grows well in well-drained gravelly soil.

Cultivation

Planting-stock production

Seed propagation: The crop can be raised easily through direct sowing of seeds in monsoon season. Seeds get matured during September to November. Seeds are small (62,500 seeds/kg) and they remain viable for one year. For better germination, soak the seeds for 24 hours prior to planting. The seedlings can be raised from seeds in the nursery in March–April. The seeds are shown in poly bags with a potting mix containing soil, sand and farmyard in the ratio 1:1:1. Seedlings of 7-14 days old are transplanted into main field.

Vegetative propagation: *Sida* can also be propagated using tender stem cuttings of 15-20 cm long having 3-4 nodes. Nursery preparation is done in March-April. For this, tender stem cuttings are prepared and placed in polybags containing potting mixture prepared using farmyard manure/vermicompost, top soil and sand in the ratio 1:1:1. The containers are maintained moist. Rooting hormone (IAA or IBA @ 500ppm for 30 seconds) increases the rooting percentage. It will take 20 to 30 days for rooting.

Field planting: For planting, the land is ploughed to a fine tilth and weeds and pebbles are removed. The seedlings are transplanted at a spacing of 75 × 85 cm. The crop is given periodic weeding and hoeing at an interval of 20-30 days.

Manuring/Fertilizer: Farmyard manure/Vermicompost may be applied at the time of planting. Green manure is effective where irrigation facilities are available.

Irrigation: Irrigation may be provided during summer.

Pest and diseases: No serious pests and diseases are reported.



Harvesting & Post-harvest processing

Maximum biomass is obtained in 5-6 months. Good light intensity is essential for good yield and the optimum stage of harvest is 8 months after planting. Plants are uprooted and cut to separate the root portion. Usually basal part of the stem for about 20 cm height are cut along with roots. Harvested roots are washed, cleaned, and dried in shade. The dried produce is packed in gunny bags and stored under dry conditions.

Yield

The dry weight yield of roots is estimated to be 1.0 to 1.5 tonnes/hectare.

Economics of cultivation

Cost of cultivation: ₹ 60,000 per hectare

Market price: Whole plant ₹ 80/kg (as on September 2019)

Quantitative quality standards (acceptable limits)(w/v)

- *Foreign matter*: Not more than 2.0 %
- *Ash*: Not more than 5 %
- *Acid-insoluble ash*: Not more than 1.0 %
- *Ethanol-soluble extractive*: Not less than 3.0 %
- *Water-soluble extractive*: Not less than 8 %

Note: The farmers are advised to adopt suitable cultivation practices so as to meet the quality parameters and standards of the buyers.