

Sida alnifolia L.

(Kurunthotti / Bala / Sida hemp)

Seed germination & nursery practices



Regional-cum-Facilitation Centre (Southern Region)

National Medicinal Plants Board

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***Sida alnifolia* L.**

Synonym: *S. rhombifolia* ssp. *alnifolia*

Family: *Malvaceae*

Common name: *Sida hemp*

Local name: *Kurunthotti /Bala*

Description: Woody sub-shrubs up to 150 cm tall, with strong branching. Leaves simple, alternate, obovate to elliptic-lanceolate; apex rounded or subacute; margins irregularly serrate to dentate.

Uses: *Sida alnifolia* roots are traditionally used for asthma, high blood pressure, urinary issues, leprosy, and skin diseases. They appear in Ayurvedic products like Bala oil, Balarishta, Sudarshan churna, and Chyavanprash, valued for easing joint pain, boosting immunity, enhancing strength, and supporting overall wellness.

Distribution: Found in moist deciduous forests. It grows well in plains, especially in damp climates.

Flowering and fruiting: October to December. Fruit is a multi-valved capsule with single seeded fruitlets having 4-6 mm diameter. Seeds mature 4-5 months after flowering. Seeds brown, 7-8 in each fruit, 1.2-2 mm size, flattened, trigonous with two erect minutely barbed awns.

Seed collection: Seeds should be collected during December-February, prior to dehisce valve of brown-coloured fruits.

Seed extraction and processing: Extract the seeds by sun-drying the fruits until they naturally release the seeds. Remove all non-seed materials to obtain clean seeds, then dry them in the shade until their moisture content falls below 10%.



Seed weight: There are about 4.12–4.21 lakh seeds per kilogram at 7.82% moisture content.

Seed dormancy and pre-treatment:

The seeds exhibit dormancy, and year-old seeds tend to be more viable than fresh ones. For better germination, the most effective pre-sowing treatment is to soak the seeds in boiled water for 5–10 minutes and then keep them in normal water for 24 hours.



Seed viability and germination:

Sow pre-treated seeds in trays filled with vermiculite or broadcast them on nursery beds after mixing with sand (1:2), and maintain consistent moisture. Germination starts in 3–5 days and continues up to 8–10 days. Three-year-old seeds soaked in boiled water for 5 minutes show up to 99% germination, compared with 43% in fresh seeds soaked for 10 minutes and only 1–2% in untreated seeds. Germination is epigeal seeds soaking for 10 minutes against 1 – 2% in seeds without any treatment. Germination is epigeal.



Seed storage: The seeds are orthodox and can be stored for more than three years in airtight containers kept in cool, dry conditions (around 16°C and 45 ± 5% RH).

Nursery practices: Sow seeds on raised beds (12 m × 1.2 m × 0.3 m) during March–April, using about 2 kg of seeds per bed. Germination begins within a week and continues up to two weeks. Transplant seedlings to suitable containers when they develop 2–3 leaves, and keep them under shade until they are well established.



Cultivation practices: One to two-month-old seedlings can be planted during June–July, though juvenile 2–3-week-old seedlings may also be transplanted if adequate irrigation is available. Transplant seedlings on raised beds ($12 \times 1.2 \times 0.5$ m) in small pits with 10×10 cm spacing, after enriching the beds with FYM and bone meal. Proper irrigation and periodic weeding help improve productivity. The crop is ready for harvest from November to January.



Further information:

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