

Centella asiatica (Linn.) Urban

Syn. *Hydrocotyle asiatica* Linn.

Fam. Apiaceae

Ayurvedic name	Mandookparni
Unani name	Khulakudi, Brahmi
Hindi name	Brahmi
English name	Asiatic Pennywort, Indian Pennywort, Gotu Kola
Trade name	Brahmi
Parts used	Whole Plant, Mainly Leaves



Centella asiatica

Morphological Characteristics

The plant is a small trailing herb. It is the only species of *Centella* found in India. Stem is glabrous, pink striated and rooting at nodes. Leaves are fleshy, orbicular to reniform and dentate. Petiole is long, smooth on upper surface and hairy below.

Floral Characteristics

Flowers are pink and white in fascicled umbels. The fruits are oblong, dull brown, laterally compressed, pericarp hard, thickened and woody white.

Distribution

The plant occurs in marshy places throughout the country in tropical and subtropical regions.

Climate and Soil

Plant naturally grows over moist, fertile, loose, sandy loam and clayey soil. Thrives best in monsoon periods in well drained beds.

Propagation Material

The plant is propagated by rooted suckers and seeds.

Agro-technique⁷

Nursery Technique

- **Raising Propagules:** The plants grow well under shade and can tolerate heavy shade. One-node stem cuttings can be planted. The root develops from the nodes.
- **Propagule Rate and Pretreatment:** 300 kg rooted suckers are needed to plant one hectare land. No specific pretreatment is required.

Planting in the Field

- **Land Preparation and Fertilizer Application:** The field should be prepared well by giving one ploughing and two harrowings, followed by planting. Manure (FYM) at the rate of 20 t/ha should be mixed thoroughly with the soil at the time of field preparation. NPK fertilizers @ 100:50:50 kg/ha in 4 split doses are given.
- **Transplanting and Optimum Spacing:** The planting can be done in February-March at a spacing of 45X45 cm with irrigation. It is an irrigated crop.
- **Intercropping System:** The plant can be grown as pure crop in orchards of Mango and other trees.
- **Interculture and Maintenance Practices:** There is a profuse growth of weeds in the beds; hence it requires continuous hoeing and weeding. During monsoon months, it is essential to prevent water logging in the beds.
- **Irrigation Practices:** During dry months fortnightly irrigation is needed and needs drainage during rainy season.
- **Disease and Pest Control:** No disease, pests or any other physiological disorder was observed in the experimental plantation.

Harvest Management

- **Crop Maturity and Harvesting:** The crop matures in 90 days period after planting. It is harvested through hand-cutting at fully grown leaf stage. The leaves are harvested in sunny weather to facilitate drying.
- **Post-harvest Management:** Unwanted material is sorted out from the crop before the harvested material is dried in shade.
- **Chemical Constituents:** Asiatic acid, asiaticoside, madecassic acid, brahmic acid,

⁷ Agro-technique study carried out by Institute of Minerals and Materials Technology (IMMT) Bhubaneswar – 751013, Orissa.



thankunside, centellose. Total triterpinoids are in leaves and they are approximately 1.0% of leaves.

- **Yield and Cost of Cultivation:** As a pure crop, 10-12 t/ha/years yield is obtained by 3 harvests in a year. After second year, the yield begins to decline, needing fresh planting. Rs. 40000/- is the cost of cultivation for one hectare.

Therapeutic Uses

The whole plant has therapeutic values. It is used as nervine tonic, for improving memory and mental disorders. It is anti-leprosy, diuretic, stomachic and used in insomnia, asthma, abdominal disorders and fever. Decoction of the plant is given in the treatment of leprosy.



Centella asiatica in field

