

Alpinia galanga Sw.

Synonyms : *Alpinia virdifolia* Griff. *Maranta galanga* L. *Amomum galanga* (L.) Lour.

Family : Zingiberaceae

Group : Anti-arthritic/anti-rheumatic/anti-inflammatory

Parts Used : Rhizome

Vernacular Names

English : Greater galangal, Java galangal or Siamese ginger

Malayalam : Aratta

Hindi : Kulainjam

Sanskrit : Sugandhamul Rasna

Bengali : Kulainjan

Kannada : Dumarasmi

Tamil : Arattai



Distribution and habitat: In Eastern Himalayas and South-West India. This is very common in West Bengal, Bihar, Assam, Kerala and Karnataka and throughout the Western Ghats and is cultivated in these places. They are also found in countries like Sri Lanka and Malaya.

Botany: Perennial herb, about 2 m high with lower portion covered with smooth leaf sheaths.

- **Leaves** : Broadly lanceolate, 30-60 cm long and 10-15 cm broad.
- **Flowers** : Erect, terminal panicles, composed of numerous spreading dichotomous branches each with two to six, pale greenish-white faintly fragrant flowers.
- **Fruits** : 1.25 cm long, oblong, constricted in middle or even pear shaped, three sided and deep orange red in colour.
- **Seeds** : Ash coloured, three angled, finely striated towards the hilum. Both the seeds and rhizomes have pungent aroma.

Chemical constituents:

- The rhizome contains tannins and flavonoids, some of which have been identified as kaempferide, galangin and alpinin.
- Rhizomes yield essential oil containing methyl cinnamate, cineole and d-pinene and sesquiterpenoids.
- Fresh rhizome contains 18 monoterpenoids of which α -pinene, β -pinene and limonene as major compounds and 17 oxygen containing monoterpenoids with cineol, terpinen-4-ol and α -terpineol as minor compounds.

Uses: Bronchial infections, rheumatoid arthritis, inflammations, stomatopathy, pharyngopathy, cough, asthma, hiccup, dyspepsia, stomachalgia, obesity, diabetes, cephalalgia, tubercular glands and intermittent fevers.

Agrotechnology

Propagation: Rhizomes. Rainfed crop is planted with the onset of monsoon in May - June. Irrigated crop can be planted any time. Take small pits on the seedbed and plant 5 cm long rhizome bits. Cover rhizome with FYM and mulch the seedbed with leaves or straw. The optimum spacing is 30x20 cm under good fertility and 40x30 cm under poor fertility conditions. Fresh healthy disease free rhizome bits with at least one shoot is used for planting. Seed rate is 1000 - 1500 kg/ha.

Manuring: Incorporate FYM at 10-15t/ha at the time of bed formation. Apply fertilisers at 100:50:50 kg NPK/ha/year in 2-3 split doses. Application of biofertiliser Azospirillum at 10 kg/ha and cow pea green manuring in situ are beneficial for the crop.

Harvesting: Though the crop can be harvested after 18 months, the optimum stage of harvest for obtaining maximum rhizome and oil yield is 36- 42 months after planting. Cut and remove the shoot portion and carefully dig out the rhizomes and roots. Harvesting is very arduous due to strong and extensive root ramification. Separate the roots, clean the rhizomes and cut into 5 cm long pieces which are dried in sun for 3-5 days to 10% moisture for marketing. The average yield of rhizome is 23 t/ha, which on drying gives 25% recovery. The fresh rhizomes on steam distillation for 3-5 hours give 0.22 % essential oil. The oil recovery on dry weight basis is 0.93%. Root is also a significant contributor of essential oil.

