## Cynanchum annularium (Roxb.) Liede & Khanum

Synonyms : Holostemma ada-kodien Schult., Holostemma rheedi Wall.,

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Family : Apocynaceae

**Group** : Galactogogue, Rejuvenatives, Eye diseases, Aphrodisiac/spermatogenesis

Parts Used : Root , Flower

## Vernacular Names

English: HolostemmaMalayalam: AdapathiyanHindi: ChhirvelSanskrit: JivanthiGujarathi: KhiravelTamil: Palay kirai

Telungu : Palagurugu.

**Distribution and Habitat:** It is seen in Tropical Himalaya, Sikkim, West Peninsula of India, Sri Lanka;Myanmar. **Botany:** Handsome glabrous twining shrub, roots thick, irregularly twisted; Stem glabrous, laticiferous.

• *Leaves*: Simple, opposite, cordate, petioles long, lamina cordiform to oblong, chartaceous, puberlous, penni-nerved'

• *Inflorescence*: Cymes axillary, umbellate, few flowered; Flowers purple in axillary umbellate cymes.

• *Fruit*: Follicle short, thick, smooth, acute.

**Properties:** Cooling, digestive, alternate, aphrodisiac, emollient, expectorant, galactagogue, ophthalmic, refrigerant, sweet and tonic.

**Chemical constituents:** Bark:  $\alpha$ -amyrin,  $\beta$ -sitosterol, lupeol, alanine, aspartic acid, glycine, serine, threonine, and valine.

**Uses:** Eye troubles, blood vomiting, decaying, burning sensation, removes deranged bile, fever, constipation and cough.

Formulations: Vidaryadiganam, Dhanwandharam taila, Balarishta.

## Agro technology:

**Soil and Climate:** Prefers a tropical climate with high rainfall and relative humidity. Soil should be light and porous permitting root development.

**Propagations:** Vegetatively by stem cuttings, mainly by seeds.

Irrigation: Regular irrigation is to be given till flowering.

**Manures and Fertilizers:** Application of 20 t /ha of farm yard manure , 100 kg/ ha bone meal, 500 kg /ha of neem cake, 2 kg/ha each of Trichoderma and AM fungi sustain good growth of plants. Wherever growth of plant is slow this can be supplemented with NPK, each @ 50 kg /ha split application spreading to second year is necessary.

**Plant protection**: Fungal diseases like leaf spot and leaf blight are commonly seen. It can be controlled by spraying 1% Bordeaux mixture. Leaf eating caterpillars are common which can be controlled by manual picking.

*Harvesting:* Harvesting can be done at the end of the second year when the vines start drying up. Roots are collected by deep digging and cleaned thoroughly in water.

**Processing:** The tubers are cut in to pieces of 10 cm length and dried in sun before sale.



