

RANUNCULACEAE

Coptis teeta Wall.

Common English names: Gold thread

Vernacular names: Assam. - Mishmi tita; Arabic - Mamira-chini; Hindi: Mamira; Sanskrit - Supita; Tam.: Pitarohini.

Trade name: Gold thread.

Distribution: INDIA: Arunachal Pradesh; TIBET and NEPAL.

Habitat: It grows in open forests in temperate regions and in moist, shady places in humus soil.

Population status / Cause for RET: It is a rare species, confined to Arunachal Pradesh in India. Presently, it is



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vulnerable in the wild. A number of factors contribute to the endangerment of this plant species in the wild. It is occurring in a very smaller area in the eastern Himalayan regions of India where its habitat is rapidly declining due to deforestation, overexploitation for its medicinal purposes. Further, the reproductive success of this herb is slow.

Description: Small, stemless perennial evergreen herbs. Rhizome oblique to horizontal with persistent fibrous roots, bitter, yellowish brown externally, golden-yellow internally. Leaves 5 – 6 cm long, lamina 3-lobed, pinnatifid, glabrous; petioles very long, 8 – 20 cm long; Inflorescence paniced; flowers small, 1 – few-flowered, white or yellowish. Fruit a follicle, many-seeded. Seeds black.

Fl. & Fr.: February - April.

Parts used commercially: Rhizomes, used in Ayurveda, Siddha and Unani medicine.

Medicinal properties and uses: This plant is bitter, cooling and a potent bacterostatic herb. The dried rhizomes of this plant constitute the raw drug. The raw drug contains major active compounds *berberine* and *coptine*. In action, the drug is antidiabetic, bitter tonic, carminative, expectorant, febrifuge, ophthalmic and stomachic. It is used for the treatment of various types of fevers, debility after fever, dysentery, nausea, jaundice, flatulence and visceral obstruction, haemorrhages (either from dysentery or from haemoptysis), conjunctivitis, nervous diseases, eye troubles, appetiser, constipation, indigestion, dyspepsia, asthma and cough. It is also reported to relieve toothache. It is a very much useful in malarial fever. It is used as general all-round tonic.

Substitutes and adulterants: The rootstock of *Geranium wallichianum* D. Don ex Sweet (Geraniaceae) is used as a substitute for *Coptis teeta*. The root of *Thalictrum filiosum* DC. (Ranunculaceae) is also used as a substitute and adulterant to *C. teeta*. Since the roots of the species of the genus *Swertia* resemble rhizomes/roots of *C. teeta*, in appearance, they are adulterated with this species.

Cultivation practices: This plant is cultivated in a small scale with the aim to conserve it in its natural habitat. Arunachal Pradesh Forest department has taken up cultivation of this plant in small pockets of Dibang Valley and Lohit districts. The local people have also taken up cultivation of this plant species in some places of Arunachal Pradesh. Outside Arunachal Pradesh, it is reported to be cultivated on small scale in certain areas of adjoining districts of Nagaland.

It does not grow in all types of climate and soil. It does well in temperate areas covered with snow during winter. It prefers well drained peaty sandy loam soil. It is propagated by rhizomes and seeds. Viability of the seeds of this plant is short. It can be raised through nursery beds, which can be prepared with two parts of soil rich in leafy mould and one part of sandy soil. Seeds can be dispersed over nursery bed from May to September. It germinates in 30 - 35 days. It is a slow growing herb. The seedlings can be transplanted in the field after one year at a minimum spacing of 25 x 25 cm during April - May. If the soil is hard, rhizome will not develop well. Since, the plant is generally cultivated in moist area, watering is not required. Collection of rhizomes is done from September onwards before snow fall. The rhizomes are dried in the Sun for a week and then sold in the market. Well-dried rhizomes can be stored and used for a maximum of twenty years.

Commercial / Ex-Im data: This plant is having demand in the market from a very long time. There is a very good market for this rhizome until today. It is sold mostly in local, regional and national markets. It is fetching around Rs. 600 to Rs. 700 per kg in local markets, Tezu (headquarters of Lohit district) and Roing (census town in lower Dibang valley district) of Arunachal Pradesh. While in Kolkata market, the price was around Rs. 1200 to 1500 per kg. However, due to ban imposed by the Government of India on its export, the prices fell down to Rs. 200 to 300 per kg at local markets. The materials are reported to be exported to Japan and South Eastern countries.

Legal: Included in Negative List of Exports.

References: Selvam, A.B.D. (2012). Pharmacognosy of Negative Listed Plants. Pp. 26-36.