GUGGAL

Commiphora wightii (Arn.) Bhandari syn. Commiphora mukul

Family – Burseraceae

It is a shrub or small tree reaching upto 3 to 4 m. high. Leaves sessile, alternate, 1-3 foliate. Plants are dimorphic, Flowers small in fascicles. Fruits are ovoid, drupe.

Regional Names

English	Indian Bedellium
Bengali	Guggul
Gujarati	Indian Gugguru
Hindi	Guggulu, Guggal
Malayalam	Gulgulu, Guggalu
Marathi	Guggala
Kannada	Guggal
Tamil	Maishakshi, Gukkal
Telugu	Guggal

Distribution: Found in Karnataka, Rajasthan, Deccan and Gujarat.

Part Used: Olio gum resin

Properties & Uses

The gum is bitter, acrid, astringent, thermogenic, aromatic, expectorant, digestive, anthelmintic, anti-inflammatory, anodyne, antiseptic, nervine tonic, aphrodisiac, alterative, stimulant, liver tonic, antispasmodic, emmenagogue, haemostatic, diuretic, rejuvenating, general tonic, and is useful in gout, scrofula, sciatica, facial paralysis diplegia, cough, asthma, bronchitis, pectoral and hepatic, disorders, otorrhoea, epilepsy, fever, stangury, hemorrhoids, dysmenorrhoea, amenorrhea, wounds and ulcers, cardiac disorders, coronary thrombosis, anemia, stomatopathy, pharyngopathy, spermatorrhoea, diabetes, skin diseases etc.

Cultivation & Propagation

Soil and Climate

It can be cultivated in sandy to silt-loam or rocky soils, poor in inorganic matter but rich in several other minerals. The growth is vigorous in the soils, which have moisture-retaining capacity.

Nursery Raising and Planting

The plants are best raised from stem cuttings of semi-wood (old) branch. Woody stem of one meter in length and l10mm thickness is selected and the cut end is planted in a well-manure nursery bed during June-July. The bed should be given light irrigation periodically. The cuttings initiate sprouting in l0-15 days and grow into green sprout in next 10-12 months. These rooted plants are suitable for planting in the field during next rainy season. The cuttings give 80-94 % sprouting.

Seed germination is very poor (5%) but seedlings produce healthier plants, which withstand high velocity wind.

Thinning and Weeding

The plantation does not require much weeding and hoeing. But soil around the' bushes should be pulverised twice in a year to increase the growth.

Manure/Fertilizer

Application of 5 kg FYM per plant per year is sufficient.

Irrigation

Requires moderate irrigation. Even limited irrigation during summer, enhances the rate of growth.

Harvesting/Post Harvesting Operation

Plants attain normal height and girth after 8-10 years of growth when they are ready for tapping of the gum by shallow incision on the bark between December and March.

Chemical Constituents

Guggulsterol, Myricyl alcohol, cembrene etc.

Active Constituents

Gum resin shows different pharmacological properties and clinical applications: Astringent, expectorant, aphrodisiac, demulcent, carminative, alterative, antispasmodic, emmengogue, to enrich blood, against snake bite and scorpion sting. Anti fertility effect. Plant has use in Arthritis also.

Yield

Approximately 500-800 g gums are obtained per plant.

Substltutes/Adulterants

Guggal is often adulterated with the oliogum resin of Boswellia serrata or sometimes with resin of pinus sp. However *Boswellia* gum can be identified with its whitish colour and

powdery appearance externally. Pinus resin is stickier and is generally in the form of paste at normal temperature.

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1. Scientific name of guggal is _____
2. Guggal belongs to the family _____
3. Economic part of guggal _____
4. Chemical constituent of guggal _____
5. Common adulterant used in guggal is _____