

# MEDICINAL PLANTS

## TULSI

Botanical Name: Ocimum sanctum

Common Name: Tulsi Holy basil

Family: Lamiaceae

Part used: Green leaves, stem, & branches, & fruit.

Origin: Tulsi plant native to north middle India and cultivated throughout south east Asian tropics

- ⇒ The aromatic plant are cultivated for their volatile essential oil, pleasant odour and medicinal properties used in perfumery & cosmetics industry.
- ⇒ By origin more than 1000 of years tulsi importance are identify and in indian culture & Tradition. It grown in temple and in Indian houses for worship.

- ⇒ Like India, Africa, Arabia, Australia, Sri Lanka, Pacific islands, Ocimum species used in cultivate.
- In Ayurvedic Tulsi is described as mother medicine of Nature [Queen of Herbs]

### Botanical Character:

- Tulsi is an biennial or perennial shrub of to 1m in height
- Stem is erect, quadrangular, hairy lower is woody.
- The leaves are petiolate, <sup>long tail</sup> decussate, green or purple in colour, hairy.
- volatile essential oil glands are +nt [aromatic in nature]
- Inflorescence is verticillaster
- Flower small, secrete, purplish resin. raceme
- ⇒ Fruit are subglobose or ellipsoid, Nutlets and produce many minute black seeds

Chemical Composition: The plant contain mainly phenols, aldehyde, Tannins, saponin and fats.

- ⇒ The volatile essential oil components are ~~not~~ Eugenol = 71% , Eugenol Methyl ether = 20% , Caribacrol = 3% ,  $\beta$ -Caryophyllan = minor (<1%),  $\alpha$  &  $\beta$ - Pinane = , Na, K, vit-A, C , Iron Ca, Mg, are also +nt

### Cultivation :-

- ⇒ Tulsi is propagated through seeds
- ⇒ In nursery seeds germinate in last of february and transplanting is generally done in middle of April
- ⇒ Tulsi plant require max <sup>rich loam</sup> long soil and poor in laterite saline and alkaline to acidic soil.
- ⇒ Suitable high rainfall humid conditions 25-28°C temp<sup>n</sup> long day and full sunlight
- ⇒ Need plenty of manure in soil and irrigation every 8-12 days
- ⇒ Maturity of plant depends upon the plant species soil and environmental conditions.
- ⇒ During harvesting avoid any contamination the crop is should be harvested at full bloom stage to obtain maximum essential oil yield and better quality oil
- ⇒ 1st harvesting is obtained after 90-95 days of planting and it after harvested at every 65-70 days

Disease : Tulsi plant is found to be infested with few insect species and diseases.

a) Leaf Rolling : Leaf rollers sticking to the undersurface of the leaf fold them backward lengthwise and web them together.

b) Tulsi lace-wings : Cochlochila bullitea

→ The adult and nymph feed on leaves and younger stems.

→ And leaf by their excreta is useless and unsuitable for us. By the feeding the leaves initially get curled and later the whole plant become dry.

Control : Spray Azadirachtin

c) Powdery Mildew : Oidium species

d) Seedling Blight : Rhizoctonia solani

e) Root - Rot : Rhizoctonia bataticola

Control : Well drained soil is better, water logged condition causes root - rot.

: Spraying Vettable Sulphur and Bavastatin (1%)

R.R.L.O.C = 11 , R.R.L.O.C = 12 , R.R.L.O.C = 14

Uses : Tulsi plant is very important in Indian culture for its Holiness and medicinal property.

In Indian culture Tulsi is grown in Temples and home for worship.

⇒ In ayurveda it is considered as a form of alternating medicine so also known as "Queen of Herbs" and Mother Medicine of Nature

⇒ Tulsi contain various economically important essential oils used in perfumery and const. cosmetic industry

⇒ Tulsi species are used as herbs and find diverse uses in the indigenous system of medicine in countries like India, Sri Lanka, Africa, Australia & Pacific Islands

⇒ It contains eugenol acts as pain reliever. ....

⇒ Rosmarinic acid, eucalyptic acid, of tulsi has anti-inflammatory or antiaging properties.

⇒ It posses antioxidant  $\alpha$  &  $\beta$  leucine.

⇒ In ayurveda alternative medicine it is used to cure asthma, Bronchitis and fever. etc

⇒ By studies suggested that Extract of tulsi leaves reduce the stress and anxiety

⇒ By research studies suggested it has cholesterol lowering effects Tulsi reduce the risk of heart disease.