Guggul

*Commiphora wightii* (Arn.)

**Family:** Burseraceae

It is a slow growing, highly branched, spiny shrub or a small tree with crooked branches ending in sharp spines. It is a desert plant adjusted to grow in difficult soil and moisture conditions. The plant remains leafless during winter season that is from October to March. New leaves sprout during April, are short lived and do not fall until September. A short spell of rainfall initiates leaf formation. Guggal, an oleo-gum resin of pale brown or dull green color, exuds from bark during winter season.

**Common names**

English: Myrrh

Sanskrit: Guggulu

Kannada: Guggul

Hindi: Guggal

**Distribution**

Guggal in a xerophytes and grow naturally in and rocking zones of India i.e Gujarat, Karnataka, Madhya Pradesh and also in Pakistan

**Agroclimatic requirements**

The plant grows very well in warm dry climatic and heme suitable dry regions. Sandy or sandy loam soils are best for cultivation. The plant susceptible to frost hence such situation to be avoided

**Varieties**

Marusudha in the variety received from CIMAP. The germplasm from Nakoda in Rajsathan also gives a good yield.

**Cultivation:**

It can be propagated by seeds and vegetatively through stem cuttings. The seed germination is erratic and also very poor (5%) due to the presence of hard seed coat. the seeds are mechanically
scarified with sand paper and are kept under running water for 24hrs. seedlings may be raised in polythene bags and are planted in the main field

Semi-hardwood cuttings of about 15-20cm length are taken and planted in well prepared nursery beds. The beds are irrigated lightly after planting and regularly thereafter. 10-12 months old seedlings are to be planted in the main field.

Inputs

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Materials</th>
<th>Per acre</th>
<th>Per hectare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No. of plants</td>
<td>1000</td>
<td>2500</td>
</tr>
<tr>
<td>2</td>
<td>Farm Yard Manure (t)</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Fertilizers</td>
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Planting

Land is prepared well in advance of rainy seasons by 2-3 ploughings and make field into plots of convenient size. Dig the plots of size 0.5 x 0.5 x 0.5 m (0.5 cm³) with a spacing of 3x3m. Pits are filled with FYM and top soil.

The rooted cutting is planted in the pits during the raining season. As the plant grows they are trained properly by cutting the side branches.

Irrigation and Interculture:

Light irrigation during the summer season is required for good growth of plants. One weeding and one hoeing is needed in early growth of the crop. But the soil is stirred up around the plants (bushes) two times per year.

Plant Protection:

Major Insects: leaf eating caterpillar, white fly and termites

Major disease: Leaf spot and bacterial disease leaf blight

Schedule:

1. During land preparation the pits are filled with FYM and top soil mixed with Chloropyriphos .5ml per litre of water to prevent termites
2. To control leaf eating caterpillar and white fly spray 0.2% metocid aqueous solution.
3. To control diseases spray the crop with Blitox 4g with 0.1g of agromycin in 1 litre of water
Harvesting:

The plant should be allowed to grow for at least five to six years before commencing incision of thick branches for extracting oleo-gum resin. The oleo-gum resin is tapped during winter, from November – February, by making a 7-10 cm long incision in the main stem near the base. The cut part is completely covered with resin in about a month’s time. The exuded gum secreted is collected every week up to one month after which further exudation of gum stops.

Yield: from 10 year old plant, about 700-900 g of gum resin may be obtained. This intrun may give an yield of about 700-900 kg of gum resign per hectare.

Part used: Oleo-gum-resin

Medicinal uses:

Guggul Oleo-gum-resin helps in reducing high cholesterol, because it lowers harmful low-density lipoproteins while elevating the beneficial high-density lipoproteins. It helps prevent blood platelet aggregation and breaks up already formed blood clots. Thus, it helps prevent heart disease and stroke. Guggul is also widely promoted as a weight loss agent that supposedly enhances thyroid function. Guggul stimulates the activity of white blood cells in the body, contributing to the build-up of the immune system. Guggul also helps eliminate and expel dead tissues, wastes, and toxins from the body. Inhalation of fumes of burnt Guggul has been known to relieve coughing and lung congestion, soothe mucous membranes and alleviate other respiratory problems. It is used in rheumatism, nervous diseases, scrofulous affections, urinary disorders and skin diseases.

Important preparations of Guggul are Yogaraja guggul, Trayodasanga guggul, Vatari rasa, Kaisora guggul, Sadanga guggul, Amrita guggul and Kanchanara guggul.