

# HORTICULTURE

## PACKAGE OF PRACTICES FOR CULTIVATION OF SAFED MUSLI



Safed musli

Recent years have seen a major spurt in the demand of medicinal plants not only within the country but also for its export. More and more number of farmers are entering into this most potential sector. The National Research Centre for Medicinal and Aromatic Plants (NRCMAP), Anand has developed package of practices for cultivation of Safed musli.

Safed musli (*Chlorophytum borivilianum*) is an important medicinal plant. The stem is a condensed disc from which a whirl of long and sessile leaves originate. Roots are fleshy and fasciculated and are medicinally important as it contains saponins, used for preparation of many Ayurvedic tonics. The roots fetch an attractive market price (presently Rs 600–1,000 per kg of dry peeled fleshy roots).

### CLIMATE

It can be cultivated in areas having 500 to 1000 mm rainfall. Moderate atmospheric humidity is also desirable for its foliar growth and development. The plant is very susceptible to water logging.

### SOIL

The crop requires sandy loam soil with better drainage condition. It can also be cultivated in black cotton soil, under proper drainage conditions. Sloppy land is good for its cultivation, provided frequent irrigation facility is available.

### LAND PREPARATION

It should be grown in well pulverised soils. The field should be ploughed twice or thrice, harrowed once or twice and well levelled. The whole field should be subdivided in plots of suitable size, considering the slope to facilitate drainage of excess water.

## PLANTING MATERIAL

It is recommended to plant about 2.22 lakh plants per hectare, which could be from about 600–1000 kg of sprouted plants. Quantity of planting material varies because of size of roots and sprouting percentage. Two to three roots with sprouted stem disc should be used for planting.

## PLANTING TIME AND METHOD

Best planting time is just after onset of first rain in the season. Normally planting should be done between mid May to mid June, depending upon the onset of first rain. Undertake planting on ridges 30 cm apart and plant to plant distance of 15 cm.

## VARIETIES

So far there is no released variety available for cultivation. However, some good selections are available in the private sector. The AICRP on Medicinal and Aromatic Plants, Anand has developed a few very promising selections.

## MANURING

Apply 10–15 tonnes of FYM or farm compost per hectare to improve soil productivity and water holding capacity for good root development. Green manuring may also be undertaken to add organic matter and to improve soil structure.

## INTERCULTURAL OPERATIONS

Frequent weeding (3–4 times) is recommended in the first two months after sowing/planting. Hoeing and earthing -up should be done after every weeding. Provide appropriate drainage to cope with heavy rainfall.

## IRRIGATION

If rainfall is well distributed, there is no need of supplemental irrigation. However, in general about 6–8 irrigations are needed. No heavy irrigation is needed and water should not be allowed to stagnate in the field.

## HARVESTING AND PROCESSING

Plants start withering after four to four and a half months from planting. However, harvesting should be done during November-December. Give time gap for maturation of roots. Apply light irrigation before digging of roots and its harvesting in December to January, if the material is to be used as a planting material. Yield varies from 2,000 to 6,000 kg per hectare depending upon the soil type, its fertility, moisture holding capacity, and management etc.

For sale as a raw material for drugs, the peeling of skin should be done immediately after harvest by mechanically scraping with a knife. Thereafter, it is dried in the sun. For use as planting material, store in sand in a cool place or in the soil under trees.

## ECONOMICS

The approximate cost of cultivation of one hectare is about Rs 6 lakh. If the produce is sold as a raw material in the first year, there is every likelihood of a loss. Therefore, it is recommended that the first year production be again used as a planting material and area is increased. During the second year, the sale of produce can give about 100% net profit. The profitability is likely to increase manifolds, if the grower sells it as a planting material.

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**Caution:** Cultivation of medicinal plants is undertaken by first assuring its market. The growers may like to establish buy back arrangements to minimize the risk of distress selling.

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