Pests and diseases

No incidence of serious pests and diseases is noticed under island conditions in the crop; however, at times hard scales are noticed in nursery and young plantations. The scales could reduce the vitality of the plants and spray of neem oil (0.5%) on leaves should be followed at fortnightly intervals.

Harvesting and yield

Grafted plants come to bearing within 4-5 years of planting, while seedling plants take 8-9 years under island conditions. Harvesting season coincides with monsoon in the islands. Variety Dweep Agrim starts maturing early in the season i.e. April end onwards. Fully ripe fruits should be harvested from the trees using a pole. Alternatively, freshly fallen fruits could also be collected from the ground. Weed mat proves advantageous in such cases as it reduces soiling of the fruits. Harvested fruits should be washed with tap water and cut using stainless steel knife. Pulp and seed should be removed and rind should be cut into small pieces to facilitate quicker drying. Considering the rainy season in the islands during harvesting period, oven drying at 55-60 °C is recommended. This method reduces the moisture content in the produce drastically and the dried produce could then be packed in food grade packaging bags of 90-100 micron thickness. Fresh fruit yield of 130-170 kg/tree/year could be obtained, which upon drying using oven, would yield about 7-10 kg of final produce.

Freshly harvested fruits and cutting of fruit rind for drying

Packing of mechanically dehydrated Malabar Tamarind rind for marketing

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Cultivation Hints for Malabar Tamarind- A Promising Crop for the Bay Islands

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Malabar tamarind (*Garcinia gummi-gutta*, Clusiaceae)

Introduction

Malabar tamarind is botanically close to the locally grown *kau phal* of the Andaman Islands. Considering the wide diversity of *Garcinia* species in the islands, Malabar tamarind was introduced here. The species was tested for years under island conditions and was found to perform well, thereby opening avenues for its cultivation in the islands. The dried rind of the fruit is conventionally employed as an acidulant in the state of Kerala, especially for non-vegetarian preparations. Rind being a rich source of hydroxycitric acid- an anti-obesity compound, the crop is gaining popularity for cultivation in the mainland. Promotion of its cultivation in the islands could help in diversifying the island agriculture.

Selection of site

The species is versatile, hardy and could be cultivated under both open as well as intercropping system. Well drained soils are preferred for its cultivation.

Selection of Varieties

After perennial evaluation under island conditions, ICAR-CIARI has identified two selections namely, Dweep Agrim and Deeep Vishal. Dweep Agrim is characterized by thinner rind (about 5 mm), medium sized fruits and closely arranged shallow ridges. Dweep Vishal is a large fruited, thick peeled and heavy yielder selection.

Dweep Agrim

Dweep Vishal

Method of propagation

Malabar tamarind is dioecious in nature and hence, use of seedlings for planting should be discouraged. Use of seedlings does not ensure fruitfulness in the trees, increases the time taken for fruiting (8-12 years) and the plants turn huge requiring more area for cultivation. Softwood and approach grafting methods have been observed to be successful for mass multiplication of Malabar tamarind in the islands. For both the methods, rootstock of 1-1.5 years age is required. Successful grafts of minimum one year age should be used for planting.

Soft wood grafting in Malabar Tamarind

Planting method and spacing

Grafted plants could be planted 5-6 m apart on both the sides. Pits of about 45 cm × 45 m × 45 cm size should be dug out, added with 6-8 kg of well decomposed farmyard manure and filled with top soil. At the time of planting, planting holes of polybag size should be scooped in the center of the pit and root balls of the grafts should be placed carefully inside the hole. Care should be taken to ensure that the graft union is placed at least 4 inches above the soil. Soil around the plant should be pressed firmly and irrigation should be provided immediately after planting to ensure better field establishment. In case of intercropping in coconut, one plant at the center of four coconut palms could be planted following the same method.

Aftercare

Grafted plants should be covered with shade net (50%) from all the sides to avoid direct exposure to the sunlight. Sprouts appearing below the graft union must be removed periodically to avoid failure of grafts. Application of life saving irrigation especially during January to May is desirable under island conditions. Farmyard manure (about 5 kg/plant) should be applied twice during June and October by opening the basins around the plant. The quantity should be increased to 20-25 kg/plant for grown up plants. Use of weed mat (about 130 gsm) in interspaces is advocated as it could reduce the weed incidence as well as manpower required for crop management.