

Annexure xi

Protocol for Palmyrah Cultivation

Selection of nuts and sowing

- The selected seed nuts may be stored in shade for three weeks. Reject shrunken, less weight and bored nuts.
- Heap the selected fruit bunches (plumpy and healthy seed nuts) for 5 to 6 days for automatic detachment from bunches.
- The seeds may be directly sown in situ or raised in nursery for seedling production. For direct sowing, 3 to 4 nuts are planted in pits, half filled with sand or sand and soil mixture.
- Seeds can be sown in mound formed by heaping sand to form a bed 1m width, 30cm height and of convenient length or masonry nursery bed built with bricks of 2m width, 60 cm height and of convenient length. In both the cases, seed nuts are sown at 10 cm apart and covered with 5cm sand.
- The pit is then covered with dried leaves (mulch) to the same depth. Sowing may be taken up with assured irrigation facilities.
- Allow fruits to ferment for easy removal of mesocarp. While removing mesocarp, the fibre adhering to seed nut should be retained which help in absorption of water leading to better germination.

Nursery transplanting / masonry nursery

- One year old seedling is lifted from the nursery and containerized in the polythene bags. Shading the seedling should be provided using plaited coconut or palmyrah fronds.

- Hypothesis is, the seed of single nut turns into female trees, double nuts turns, one female and one male and trinuts, produce two male and one female.
- To maintain male and female ratios, it is better to collect 10 to 15 per cent of double nuts. Considering this, the nuts are sown accordingly for better pollination and fruit set for higher yield.

Climate and Soil

It can come up in dry areas having moderate to low rainfall.

It grows from sea level upto an altitude 750m.

Palmyrah can be grown in soils of all descriptions but found to grow well in deep, sandy and loamy soil.

Manure and Fertilizers

Application of 10 Kg of Farm Yard Manure /pit before planting the nuts (as basal dressing) is advantageous. The dosage may be increased biannually till reaching 60 Kg FYM/pit/year.

After cultivation

After cultivation consists of gap filling, inter ploughing, basin rectification in the intial few years, defoliation and tending.

Gap filling may be carried out using conatinerised seedlings.

One ploughing during summer and another at onset of North East monsoon may be given in the interspaces. Basin rectification before rains helps for efficient collection and storage of rainwater.

Tending means removal of the persisting leaf bases periodically. Inter crops like Cowpea, Moringa, Green gram, Red gram, Bengal gram and semi arid zone fruit crops like Ber, Aonla, Pomegranate, Koranda, west Indian cherry and Guava is recommended.

Growth and yield

The first frond appears in about five months. Production of fronds is slow to begin with. However, the pace picks up as the age advances. The first fan shaped leaves appears only in the second year. It will be 6-7 years before the top of the trunk appears. The palm is a slow grower and grows to a height of 12-18m and comes to flowering in about 13-15 years (irrigated condition) when it can be tapped for padaneer. On an average, 100-200 litres of padaneer can be obtained for a period of 4 months from February-May. However, the padneer and fruit yield are highly variable in individual palms.

Neera (juice)	- 150 litres
Palm jiggery	- 20-25 Kg
Palm candy	- 16 Kg
Matured leaves	- 15 to 25 no's
Coir	- 11Kg
Fibre	- 16-20 Kg
Firewood	- 10 Kg

Tapping

The palmyra is extensively tapped in South India for its sweet sap and toddy. Both male and female palms are tapped. Female palms are reported to yield 33 to 50% more sap than males because duration of female is more than male palms. The tapping season varies from December to June in different localities. For tapping, the inflorescence axis is injured on successive days by beating and crushing to encourage sap flow. Later the tip of the axis is sliced off and the sap oozing out is allowed to collect in containers. Palmyra trees are known as the icon of this district and have a vast cultural, heritage and literary association.

Tapping is a skilled operation. The tapper has to climb palmyrah palm 2-3 times a day. The tappable palm is about 15-20 m or more in height. The height of palms becomes a limiting factor for the tapper to cover more number of palms.

Plant Protection

As in coconut, rhinoceros beetle and black headed caterpillar often cause damage. Similarly, bud rot is often noticed in rainy season. Control measures are similar to those recommended for coconut.

Production technology of Palmyrah

Climate and Soil:

- Dry areas having moderate to low rainfall.
- It grows from sea level upto an altitude 750m.
- Grown in soils of all descriptions but found to grow well in deep, sandy and loamy soil.

Pit size: 60 x 60 x 60cm

Spacing: 3 x 3m

Filling the pits : FYM or compost @ 2 to 3 kg/pit

Seeds: Extract from fully ripened fruits

Sowing: Seeds @ 2 to 4 seeds/pit

Season: Monsoon seasons (or) pot watering

Germination: 105-110 days, goes up to 24 months (85%)

Thinning: After 2 years, one seedling

Manure and Fertilizers: 10 Kg of Farm Yard Manure /pit before planting the nuts. The dosage may be increased biannually till reaching 60 Kg FYM/pit/year

Yield : Padneer – 200 – 400 litres (February-May)