

ARECANUT (*Areca catechu* L.)

Arecanut is an important economic crop, which has been in cultivation for a long period of time. It is primarily grown in Assam, Tripura and Meghalaya.

Cultivars

The cultivar, which is grown continuously in an area for quite long period of time and gets acclimatized to local growing conditions, is considered to be as local culti var. Some of the local cultivars are South Kanara, Tirthahalli, Sree Vardhan, Mohitnagar, Kahikuchi, Cachar etc. The details of some of the cultivars are given below:



Variety	Growth habit	Shape and size of nut	Chaliyield (kg/palm)
KahikuchiLocal	Tall	Oval medium	2
Cachar Local	Tall	Round small	2
Mangala	Semi tall	Round, small	3
Sumangala	Tall	Oval, medium	3.2
Sreemangala	Tall	Round, bold	3.2

Soil and Climate

Even though it can be cultivated in different types of soil; laterite red loam and alluvial soil are most suited. It can tolerate more than 4500 mm annual rainfall but it is difficult to grow below 950 mm annual rainfall. Arecanut palm can tolerate very high as well as low temperature but susceptible to frost. It grows within the temperature range of 16-36 °C.

Selection of mother palm and seed collection

Healthy and regular fruit bearing palms of ten years old should be selected as mother palm. Fully ripened nuts weighing more than 35g should be selected as seed nut. Such nuts may be kept in shade for about one week before sowing in the nursery bed. Nuts are sown in the primary nursery bed at 5 cm apart in beds with their stalk ends pointing upwards, Partial shade should be provided in the nursery and they are to be watered regularly. Sprouts of three months old are transplanted at a spacing of 30 x 30 cm in the secondary nursery with the onset of monsoon. Polythene bags (25 x 15cm, 150 gauge) provided with 3-4 holes at bottom with a potting mixture (Top soil: Farmyard manure: Sand at 7: 3: 2) can also be used to raise seedlings in the secondary nursery.

Seedling selection

Twelve to eighteen months old seedlings having more than five leaves, bold base and

minimum height should be used for transplanting to the main field.

Planting

The site-selected for the main field should have well drainage and irrigation facilities. Planting is to be done by digging pits at a spacing of 2.7m x 2.7m. The pit size should be 90 cm x 90 cm x 90 cm and should be filled up to 60 cm height with top soil, FYM/compost and sand. In Assam condition, planting can be done during May-June in well-drained soil. But in moistened clayey soil, planting should be done in August-September,

Manure and Fertilizer

The following are the manure/fertilizer recommendation per palm/year.

Organic manure-12kg, N-100g (Urea 218g), P₂O₅-40g (SSP 250g) and K₂O-140g (MOP 230g).

Full dose of organic manure should be applied every year. However, for 1-2 years old seedlings, only 1/3rd and 2/3rd of the recommended fertilizer doses respectively are to be applied. From third year onwards, full dose of fertilizer may be applied. Under rain fed conditions, 1/3rd of the recommended dose may be applied during April-May and 2/3rd in September-October. Under irrigated conditions, the fertilizer applications can be made in February-March.

High-density multispecies cropping system

First yielding of arecanut starts from 5 to 6 years after planting and attains stability in yield 1 to 2 years later. Banana, betel vine, black pepper, ginger, turmeric are some of the crops that can be grown in arecanut inter spaces. Banana and black pepper along with arecanut have been established as highly profitable cropping system. For high-density multispecies cropping system, arecanut should be planted in proper rows and at right spacing of 2.7m x 2.7m. Banana may be planted simultaneously with arecanut in the center of four palms. After 3-4 years, entire banana crops should be replanted. When arecanut palm attains the age of 6-8 years, two pepper cuttings can be planted on the northern side of the palm at 75 cm distance from the base.

Diseases

Bud rot: The basal portion of the spindle leaf becomes yellowish and then turns into brownish color. At a later stage, the spindle leaf droops and rotting occurs at the base. Infected parts of the palms emit disagreeable odor and the crown leaves turn yellowish and fall off.

Remove and clean the infected tissues completely and treat the wound with 10 % Bordeaux paste. Spray Bordeaux mixture (1 %) to the crown of healthy palms, which are in the vicinity of the affected palm.

Ganoderma wilt or Anaberoga: *Ganoderma* disease is found more prevalent in the areas having water logging and poor drainage conditions. The affected palm shows yellowing of outer whorls of leaves, which gradually extends to the inner whorl. The leaves become gradually dry and droop around the crown. Brownish patches develop at the base of the infected palm and sometimes, sticky ooze comes out from such areas. Infected roots become brittle, turn into blackish color and dry and can be easily broken to pieces. At later stages, fruiting bodies may develop at the base of the infected palm.

Infected palms should be isolated by digging a trench around the plant at a distance of 90 cm from the base. Drench the root zone of the affected palm with 0.3% Tridemorph

(Calixin) (30ml/10 L of water) @ 10-15 L per palm and also root feed of Tridemorph (Calixin) 1.5% (125 L/palm). Apply 2-4 kg Neem cake per palm at quarterly interval.

Harvesting and Processing

Harvesting of nuts at the correct stage is very important for obtaining a produce of better quality. For chali (dehusked dry nut) preparation, only ripe nuts are to be harvested. After harvesting, the ripe nuts should be sun dried for about 40-45 days. It is essential to spread the nuts evenly in a single layer for uniform drying.