**Areca nut**

a. **Name of crop** – Areca nut

b. **Common names** – Sarota (Hindi); Supari (Marathi)

c. **Scientific name** - Areca catechu (LINN.)

d. **Family** - Palmae

e. **Mostly grown in** : Tropical Pacific, Asia, and parts of east Africa

f. **Importance** – Areca catechu is grown for its commercially important seed crop, the areca nut. The seed contains alkaloids such as arecaine and arecoline, which when chewed is intoxicating and is also slightly addictive.

g. **Cultivation** – The outermost row of plants on the southern and south-western sides can be protected by covering the exposed to with areca leaves or leaf sheaths or by growing tall and quick growing shade trees.

h. **Soil and climate**

a. **Soil**: - It is grown in soils such as laterite, red loam and alluvial soils. The soil should be deep and well drained.

**climate**: - The palm is essentially a tropical crop which grows best in warm humid climate.

b. **Season of planting** : June – December is found to be the optimum. In the square system of planting at a spacing of 2.7m x 2.7m, the north south line should be deflected at angle of 35° towards west.

C. **Varieties** : Varieties in Konkan region: Swarnamangala (VTL-12), shrivardhan kota, Vittal Areca Hybrid- 1 (VTLAH-1)

   (Hybrid between Hirehalii Dwarf x Sumangala )

Varieties in UKSS region: Local

d. **Methods of cultivation** - Arecanut is propagated only by seeds. There are four steps in selection and raising of arecanut seedlings viz., selection of mother palms, selection of seed nuts, germination and raising the seedlings and selection of seedlings.

   **Selection of mother palm**

The criteria for the selection of mother palm are; early bearing, regular bearing habit, large number of leaves on the crown, shorter internodes and high fruit set.
Selection of seedlings

Twelve to eighteen-month-old seedlings are to be selected and transplanted in the main field. Seedlings with maximum number of leaves (five or above), minimum height and maximum girth are to be selected for planting. The selected seedlings should be removed with a ball of earth adhering to the roots for planting.

Nursery bed preparation: The nuts should be sown immediately after the harvest in soil or sand and watered daily to get early and good germination.

- The beds may be mulched lightly using areca leaf or paddy straw.
- After six months in primary nursery, the seedlings are to be transplanted to secondary nursery beds of 150 cm width, 15 cm height and convenient length.

e. Seed rate – 7-8 kg.p/ha.

f. Spacing: - spacing of 2.7 X 2.7 m

Pit formation: 90 cm x 90 cm x 90 cm

g. Land preparation- Pit field with 5-6 pot farmyard manure

h. Sowing / planting: Dwarf and compact seedlings with more number of leaves should be selected. Seedlings of 1 - 2 years age are planted in pits of about 90 cm x 90 cm x 90 cm at a spacing of 2.75 m either way and covered with soil to the collar level and pressed around. Provide shade during summer months. Growing Banana or other crops in advance may also provide shade.

i. Fertilizer Management :- Annual application of 100 g N (220 g urea), 40 g P2O5 (200 g rock phosphate) and 140 g K2O (235 g muriate of potash)

- in addition to 12 kg each of green leaf and compost per palm per year is recommended.
- The fertilizers are to be applied in two split doses.
- One third of the fertilizer is applied in May - June and two third along with the organics during September-October.
- Fertilizers are applied in basins around the palm dug to a depth of 15-20 cm and 0.5-1.0 m radius leaving 20 cm from the base of the palm.
- After application, the soil is rolled up and covered with organic matter and soil.
i. Interculture operations:

  a. Water management: Irrigation frequency of once in **7-8 days** during November-December,
  once in 6 days during January-February and once in **4-5 days** during March-May.
  The quantity of water to be applied is about **200 lit per palm**/irrigation for Vital conditions.
  About **20 litres** of water **per day** per palm is to be given through **drip irrigation**.
  Three to Five drippers/ micro tubes should be placed in the basin at 50 - 60 cm away from the trunk.

b. Crop protection –

Pest:

1. Spindle bug, *Carvalhoia arecae*

Symptom of the damage

- Sap sucking bug – damage the unopened spindle leaf
- Inhabit the inner most leaf axils, usually below the spindle.
- Suck the sap from tender leaflets and spindle
- Severe infestation - blackish brown linear lesions on the spindle leaf
- Stunted growth and twisted
- Leaves become dried and shed

Identification of the pest

- Nymphs – light violet brown, greenish yellow with border of the body
- Adult - brightly coloured red and black.

Management

- Spray application of dimethoate 0.05%
- Filling the inner most leaf axils
  - phorate 10% G (10g/palm)

2. Root grub, *Leucopholis burmeisteri*

Symptom of damage

- Grubs feed on growing roots
- Infested palms show a sickly appearance
- Yellowing of leaves
- Tapering of stem and reduction in yield.
Management

- Collection and destruction of adult beetles
- Digging and forking of the soil
- Addition of organic amendments and anti-feedants (neem, pongamia and oilcake)
- Application of phorate (Thimet 10G) @ 15g per palm give effective control
- Soil application of phorate around the plant twice a year
  - Before onset of southeast monsoon (May)
- After the monsoon (Sep-October)
- In severely infected gardens, the soil should be drenched with eco-friendly insecticides

4. Inflorescence caterpillar, *Tirathaba mundella*

Symptom of damage

- Caterpillars feed on the inflorescences (tender female flowers) and rachillae
- Webbing and feeding the inflorescence
- Spatha opening is delayed.
- Yellowing of spadices,
- Presence of small holes with frass and drying on the spathe

Management

- Infected spadices may be forced open and sprayed with malathion 0.05%

d. Weed management :
  - Deep hoeing is recommended during the first year to check weed growth.
  - Weeding should be done on regular basis especially around the plants.

e. Intercropping: Areca nut is cultivated with Banana, pepper, cocoa, elephant foot yam, citrus, betel vine, pineapple etc. were found suitable for inter/mixed cropping in areca nut.

f. Harvesting & post harvest processing:
  - Fruit harvest after colour becomes Reddish yellow.
  - Harvesting is done between Octobers to January.

Harvesting season is usually from September till January in three phases. The dried arecanut is non perishable agriculture product and it can be stored for any length of the time.

Yield : 3 to 5 kg/ cuba /annum of dried nut.

g. Post harvest processing – Mostly production used in the “Pooja”, and also remaining used in the cutted supari.

h. Market availability: Local Market and large market also available in the India. Road transport by trucks is the most popular mode of transport due to easy approach from orchards to the market. Marketing of the produce is mainly controlled by intermediaries like wholesalers and commission agents.