



## Operational Calendar for Scientific Cultivation of Arecanut in Arunachal Pradesh

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### INTRODUCTION

Arecanut (*Areca catechu* L.) is one of the important dominating commercial crops grown in middle and eastern parts of Arunachal Pradesh e.g. Papumpare, Lower Subansiri, Upper Subansiri, East siang, West siang, Tezu, Lower Dibang valley, Namsai, Tirap, Changlang, Longding etc. In India the total area under arecanut cultivation is 49.66 lakh ha and production is 83.29 Lakh MT (NHB data-2018) meanwhile in Arunachal Pradesh, Arecanut is being grown in an area of 1570 ha with a production of 4380 MT (NHB data- 2018). The national productivity is 1654 Kg/ha while Andhra Pradesh's: 2000, Karnataka's:1900, Meghalaya's:1300, Assam's:747 and Arunachal's: 278 Kg/ha respectively. This is shown that Arunachal Pradesh is far below in concern of per ha productivity. So this is very urgent need to educate farmers about scientific cultivation practices of arecanut to get the maximum returns with support of proper literature. To improve the income of the farmers; a calendar of operations for arecanut is documented here.

### CALENDAR OF OPERATIONS FOR ARECANUT JANUARY –

The following operations are for Nursery-

- Daily watering through hose/sprinkler is essential because winter is dry in Arunachal Pradesh.
- Re-sowing in ingeminated bags should be done.
- Weak seedlings should be removed from nursery.
- The 3 months old saplings should be shifted in polybags from primary nursery.
- Proper shade management.

The following operations are for New Garden-

- Timely Irrigation must apply for better growth.
- The proper shade management also follows to avoid leaf scorching from sun light.

The following operations are for old gardens-

- The 20 liter water/palm/day applied through drip irrigation. Through hose, 170 liter water/week should be applied.
- Mite control measures should be followed by applying Dimethoate @ 1.5 ml/ Litre water.
- Apply Malathian 50 EC ( 250 ml in 100 litre water) if pest is notices.

#### **FEBRUARY –**

The following operations are for Nursery-

- Shade management, rearranging of bags, daily watering & weekly weeding should be followed.

The following operations are for young garden-

- Bunding should be followed because rains start in this month.
- Weeding and removed of extra leaves of palms can be used as mulch to maintain soil moisture and suppress of weed growth.
- Drip irrigation should be continues.

The following operations are for old garden-

- Inflorescence die back should be notices and controlled by spray of Indofil M 45@ 3gm/Liter water and repeated after 15 days.
- The Organic mulches should be applied to maintain soil moisture, aeration, soil porosity.

#### **MARCH-**

The following operations are for Nursery-

- Watering should be done timely.
- Regular supervision of nursery to avoid attack of any pest.

The following operations are for young garden-

- Shade management through intercropping- banana can be followed to improve palms as well as farmers income.
- Application of manure @ 5-6 kg/palm can improve soil fertility level; act as mulch and palm health too.

The following operations are for old garden-

- Watering may be continuing during dry spells.
- Pests like stem and root borer, flies attach in this moth, so daily basis supervision of garden must be followed.

#### **APRIL-**

The following operations are for Nursery-

- Daily watering during dry spells.
- Control of leaf spot disease by spray of Dithane Z-45 @ 3gm/Liter water.

The following operations are for young garden-

- Removal of weeds should be use as mulching for water mangement.
- Regular supervision to avoid any pest attach because this month is vital for fungal as well as insect attack.

The following operations are for old garden-

- Root grub can control by using Chloropyriphos @0.04% suspension during 1<sup>st</sup> week of March (starting of rain) and September last week (ending of rain). Carbofuran @ 20 gm/palm can be applied during April and October months in palm basin.
- Kelthane (Dicofol)@ 2ml/l can be spray on ground to control mites.
- The first dose of fertilizer (mixture of 30 gm Urea + 15 gm P<sub>2</sub>O<sub>5</sub> + 50 gm K<sub>2</sub>O per palm) can apply in basin during the rainy days.

#### **MAY-**

The following operations are for Nursery-

- Watering should be done properly to avoid water stress in saplings.
- Weed management practices should be followed.

The following operations are for young garden-

- Good site selection for plantation.
- The 60 cm<sup>3</sup> size pit should be dug 15 days before planting.
- The pit filled by mixture of half 50 % amount of FYM and 50% top soil.
- The sapling should be planted in middle of the pit followed by mulching and shading practices.

The following operations are for old garden-

- Watering during dry spells and weeding should be followed.
- A mixture of 50 gm Urea + 30 gm P<sub>2</sub>O<sub>5</sub> + 50 gm K<sub>2</sub>O per palm can apply in basin during the rainy days.
- Dried leaves and diseased palm can removed from orchard.
- Carbendazim 1% can spray as prophylactic measure to control fungus growth.

#### JUNE-

The following operations are for Nursery-

- Timely watering should be done properly to avoid water stress in saplings.
- Weed management practices should be followed.
- Maintenance of drainage system to avoid excess water.
- Control of leaf blight disease by spray of Bavistin @ 2gm/l water.

The following operations are for young garden-

- Improvement of drainage system to avoid foot rot disease.
- Banana can be grown as a intercrop to maintain shade.
- Dhaincha can be sown as a green manuring crop.

The following operations are for old garden-

- Adequate drainage can facilitate better growth of palm and can control foot rot too.
- Dried leaves and diseased palm can removed from orchard.

- Carbendazim 1% can spray as prophylactic measure to control fungus diseases.

#### JULY-

The following operations are for Nursery-

- This is heavily rainy month so good drainage can improve palm growth.
- Removal of Weeds should be followed.

The following operations are for young garden-

- Gap filling can be doing for healthy plants.
- The proper surveillance should be follow to avoid any pests.

The following operations are for old garden-

- Drainage must be insuring for better yield.
- Nut splitting can be avoided to spray Borax @ 0.2% twice @ 15 days intervals.
- To control of bud & crown rot disease; mancozeb @ 2gm/l water should be sprayed 3 times @ 10 days interval.

#### AUGUST-

The following operations are for Nursery-

- Proper drainage must be ensuring to avoid any occurrence of disease & pest.
- Weed management practices should be followed.
- Resowing of ungerminated polybags.

The following operations are for young garden-

- Proper drainage must be ensuring to avoid any occurrence of disease & pest.
- Clean cultivation must be followed for good health of palms.

The following operations are for old garden-

- To control spindle bug; Dimethoate @15 ml in 10 l water should be spray. The Phorate grannules (Thimate 10 G) @ 2gm/palm is also effective.
- Carbendazim 1% can spray as prophylactic measure to control fungus diseases.

- Clean cultivation.

### SEPTEMBER-

The following operations are for Nursery-

- The rains amount are minimizing so watering must be done.
- Supervision in orchards and Weeding should be followed.

The following operations are for young garden-

- Shade management should be doing properly to avoid sun scorching.
- Gap filling can be doing for healthy plants.
- The proper surveillance should be follow to avoid any pests.

The following operations are for old garden-

- Inter cultivation of legume crops must be followed to maintain soil fertility.
- The lime @ 1kg/palm should be applied in basin (once in 2 years) 15 days before fertilizer application.
- To control of bud disease; apply mancozeb @ 2gm/l water.

### OCTOBER-

The following operations are for Nursery-

- Watering is essential because rain stopped in this month.
- Shade management also should follow to avoid hot sun light in this month.

The following operations are for young garden-

- Proper drainage must be ensuring to avoid any occurrence of disease & pest.
- Clean cultivation must be followed for good health of palms.

The following operations are for old garden-

- The second dose of fertilizer (mixture of 30 gm Urea + 15 gm P<sub>2</sub>O<sub>5</sub> + 50 gm K<sub>2</sub>O per palm) can apply in basin during the rainy days.
- Proper supervision of garden is essential.
- Clean cultivation.
- Harvesting

### NOVEMBER-

The following operations are for Nursery-

- Watering based on weather.
- Plant protection measures as per need.
- Clean cultivation.

The following operations are for young garden-

- Shade management with extra leaves must be followed.
- Cultivation of legume crops e.g. garden pea, beans to improve soil fertility.

The following operations are for old garden-

- Harvesting.
- Watering because this month is dry.

### DECEMBER-

The following operations are for Nursery-

- Watering is essential because rain stopped in this month.
- Shade management also should follow to avoid hot sun light in this month.

The following operations are for young and old garden-

- Proper drainage must be ensuring to avoid any occurrence of disease & pest.
- Clean cultivation must be followed for good health of palms.