(vi) Coconut (*Cocos nucifera*); Palmae

Climate

T_Max°C	T_Min°C	Optimum °C	Rainfall mm	Altitude m MSL
38 - 40	10 - 15	25 - 30	800 - 2500	up to 600

Tropical and subtropical climate. Withstand water logging. Minimum sunsh be 2000 hours per year.

VARIETIES AND HYBRIDS

Varieties

i. East Coast Tall
ii. West Coast Tall
iii. VPM-3 (Selection from Andaman Ordinary Tall)
iv. ALR (CN -1) (Selection from Arasampatty Tall)
v. ALR (CN-2) (Selection from Tiptur Tall)
vi. COD (Dwarf for tender coconut purpose only)
vii. VPM 4 (Selection from WCT)
viii. ALR 3 (Dwarf for tender nut purpose only and Selection from Kenthali Dwarf)

Hybrids

Tall x Dwarf

(To be grown under well managed conditions)

ix. VHC 2 - ECT X MYD
x. VHC 3 - ECT X MOD
xi. VPM 5 – LCT x CCNT

(Besides, the hybrids of ECT x COD, WCT x COD and WCT x MYD are also produced by the State Department of Agriculture. The dwarf x tall type (COD x WCT) which has to be grown under well-managed conditions with assured irrigation is also produced by State Department of Agriculture).

CROP MANAGEMENT

Soil

Red sandy loam, laterite and alluvial soils are suitable. Heavy, imperfectly drained soil is unsuitable.

Seasons

June-July, December - January. The planting can also be taken up in other seasons wherever irrigation and drainage facilities are available.

Spacing

Adopt a spacing of 25' x 25' (7.5 x 7.5 m) with 175 plants/ha. For planting in field border as a single row, adopt 20' spacing between plants.

Planting

Dig pit size of 3' x 3' x 3'. In the pits, sprinkle Lindane 1.3 % D to prevent white ant damage. Fill the pit to a height of two feet (60 cm) with FYM, red earth and sand mixed in equal proportions. At the center of the pit, remove the soil mixture and plant the seedling after removing all the roots. Press the soil well around the seedling and provide the seedling with shade by using plaited coconut leaves or palmyrah leaves. Keep the pits free from weeds. Remove soil covering the collar region. As the seedlings grow and form stem, fill up the pits gradually by cutting the sides.

Water management

From 5th year onwards, adopt the following irrigation schedule based on pan evaporation for drip irrigation and basin irrigation.

Western region

Months	Normal condition (for best yield)	Moderate water scarcity condition	Severe water scarcity condition
A. Drip irrigation			
February to May	65 lit / day	45 lit/ day	22 lit / day
January, August and September	55 lit / day	35 lit / day	18 lit/day
June and July, October to December	45 lit / day	30 lit/ day	15 lit / day
B. Basin irrigation			
February to May	410 lit / 6 days*		
January, August and September	410 lit /7 days*		
June and July, October to December	410 lit /9 days*		

Eastern region

Months	Normal condition (for best yield)	Moderate water scarcity condition	Severe water scarcity condition
A. Drip irrigation			
March - September	80 lit / day	55 lit / day	27 lit/day
October – February	50 lit / day	35 lit/ day	18 lit /day

B. Basin irrigation		
March – September	410 lit / 5 days*	
October – February	410 lit /8 days*	

* Quantity of water to be applied in the basin. Add 30-40 % of the above quantity of water (135 -165 litres / palm) to meet the conveyance loss.

For drip irrigation, open four pits size of 30 x 30 x 30 cm opposite to each other at one meter distance from the trunk. Place 40 cm long PVC conduit pipe (16 mm) in a slanting position in each pit and place the drippers inside the conduit tube and allow the water to drip 30 cm below the soil surface. Fill the pits with coir pith to prevent evaporation.In the first year, irrigate on alternate days and from the second year to the time of maturity irrigate twice in a week based on the water requirement.

Drought management and soil moisture conservation

Mulching with coconut husks/leaves/coir pith

Apply coconut husks with convex surface facing upwards (100 Nos.) or dried coconut leaves (15 Nos) or coir pith up to a height of 10 cm in the basin of 1.8 m radius around the palms as mulch for soil moisture conservation particularly during summer season.

Burial of coconut husk or coir pith

Husk burial can be done in coconut basins or in the interspaces to overcome drought and button shedding. Bury husks @ 100 Nos. with concave surface facing upwards or 25 kg of coir pith / palm in circular trenches, dug 30 cm width and 60 cm depth at 1.5 metres radius. The husk can be also buried in the trenches at a distance of 3 m from the palm with a size of 45 cm deep and 150 cm width in between two rows of coconut. The soaking of the coconut husk or coir pith as the case may be preserves the monsoon rains.

Manuring

From 5th year onwards, apply 50 kg of FYM or compost or green manure.1.3 kg Urea (560 g N), 2.0 kg Superphosphate (320 g P_2O_5) and 2.0 kg Muriate of potash (1200 g K_2O) in two equal splits during June – July and December – January. Apply manures and fertilizers in circular basins of 1.8 m from the base of the palm, incorporate and irrigate. During 2nd, 3rd and 4th year ¼, ½ and ¾ doses of the above fertilizer schedule should be adopted respectively. Sufficient moisture should be present at the time of manuring. Fertigation may be done at monthly intervals with 75% of the recommended dose of the above fertilizers. Phosphorous may be applied as super phosphate in the basins and incorporated or as DAP through drip when good quality of water is available. TNAU micronutrient mixture is recommended @ 1.0kg / tree/year.

TNAU coconut tonic nutrition

For nut bearing coconut Palm, root feed TNAU coconut tonic @200ml/palm once in six months.

Bio-fertilizer recommendation

At the time of planting, apply 50g of *Azospirillum,* 50 g of Phosphobacteria (or) 50 g of Azophos and 50 g of AM fungi. Mix all the contents with sufficient quantity of FYM or any compost. After planting apply the above biofertilizers once in 6 months/palm near to the feeding roots as that of fertilizer application

Organic recycling

Any one of the green manure crops like Sunnhemp, Wild Indigo, Calapagonium or daincha may be sown and ploughed *in situ* at the time of flowering as a substitute of compost to be applied. Sow Sunnhemp @ 50 g / palm in the basin and incorporate before flowering. Coir pith compost/vermicompost made from coir pith/ Coconut leaves/ other wastes from coconut grove can be applied.

Intercultural operation weed management

The interspace in the coconut garden has to be ploughed twice in a year in June-July and December - January. Intercultural operation is essential to keep weed population under check, to enhance the utilisation of the applied plant nutrients by the coconut trees, to facilitate proper aeration to the roots of coconut, to induce fresh root growth.

Weed management

For the broad-leaved weeds, pre-emergence spraying of Atrazine @1.0 kg / ha for the control of grasses and sedges, post emergence spraying of Glyphosate @ 10 - 15 ml and 20 g Ammonium sulphate + 2 ml Soap solution /litre of water.

Inter cropping

Inter/mixed crops may be selected based on the climatic requirement of the inter/mixed crop, irrigation facilities and soil type. The canopy size, age and spacing of the coconut are also to be considered. Market suitability should be taken into consideration before selecting an intercrop.

Below 7 years of age: Any suitable annual crop for particular soil type and climatic condition may be raised as intercrops upto 5 years after planting depending upon the canopy coverage. Groundnut, Sesamum, Sunflower, Tapioca,Turmeric and Banana can be grown. Avoid crops like Paddy and Sugarcane etc.

7 – 20 years of age: Green manure crops and fodder crops (Napier grass and guinea grass) alone can be grown.

Above 20 years of age (20 years of age has to be adjusted based on the sunlight transmission of above 50% inside the canopy).

The following crops can be grown depending on the soil and climatic suitability.

(i) **Annuals** : Groundnut, Bhendi, Turmeric, Tapioca, Sweetpotato, Sirukizhangu, Elephant foot Yam, Ginger, Pineapple

(ii) **Biennials** : Banana varieties, Poovan and Monthan are suitable.

(iii) **Perennials** : Cocoa*, Pepper* (Panniyur 1 or Panniyur 2 or Panniyur 5 Or Karimunda), Nutmeg* and Vanilla*

*Suitable areas are Pollachi tract of western region and Kanyakumari district. For vanilla, use disease free planting material and maintain high vigilance to maintain a disease free crop.

Multiple cropping system

Coconut + Banana + Sirukizhangu + Bhendi is suitable system for the eastern region. Crops like Banana, Pepper, Cocoa, Nutmeg, vanilla can be tried under multiple cropping system in suitable areas in the western region. In all the systems, apply recommended quantity of water and manures and fertilizers to the intercrops separately.

Crop physiology

Root feeding of TNAU coconut tonic @ 200 ml / palm twice a year at six months interval decreases button shedding and increases the number and size of nuts.

Crop protection

Pest management

Pests	Management strategies
Rhinoceros beetle *Oryctes rhinoceros*	Remove and burn all dead coconut trees in the garden (which are likely to serve as breeding ground) to maintain good sanitation. Collect and destroy the various bio-stages of the beetle from the manure pits (breeding ground of the pest) whenever manure is lifted from the pits. Incorporate the entomopathogen i.e, fungus (*Metarrhizium anisopliae*) in manure pits to check the perpetuation of the pest. Soak castor cake at 1 kg in 5 l of water in small mud pots and keep them in the coconut gardens to attract and kill the adults. Treat the longitudinally split tender coconut stem and green petiole of fronds with fresh toddy and keep them in the garden to attract and trap the beetles. Examine the crowns of tree at every harvest and hook out and kill the adults. For seedlings, apply 3 naphthalene balls/palm weighing 3.5 g each at the base of inter space in leaf sheath in the 3 inner most leaves of the crown once in 45 days. Set up light traps following the first rains in summer and monsoon period to attract and kill the adult beetles. Field release of Baculovirus inoculated adult rhinoceros beetle @ 15/ha reduces the leaf and crown damage caused by this beetle. Apply mixture of either neem seed powder + sand (1:2) @150 g per palm or Neem seed kernel powder + sand (1:2) @150 g per palm in the base of the 3 inner most leaves in the crown Place phorate 10 G 5 g in perforated sachets in two inner most leaf axils for 2 times at 6 months intervals. Set up Rhinolure pheromone trap @ 1 / 2 ha to trap and kill the beetles.
Black headed caterpillar *Opisina arenosella*	The incidence of the pest is noticed from the month of November to May and from August to November after rainfall. The coconut trees of all ages are attacked. Release the larval (*Bethylid, Braconid* and *Ichneumonid*) and pupal (*Eulophid*) on (chalcid) parasitoids and predators periodically from January, to check the build up of the pest during summer. Among the larval parasitoids, the bethylid *Goniozus nephantidis* is the most effective in controlling the pest. The optimum level of release is 1:8 of host-parasitoid ratio. The parasitoi should be released @3000/ha under the coconut trees when the pest is in the 2nd or 3rd instar larval stage. Parasitoid release trap may be used to release the parasitoid at the site of feeding. Parasitoids should not be released in the crown region since they will be killed by

	predators like spiders and reduviid bugs. Remove and burn all affected leaves/leaflets. Spray Malathion 50 EC 0.05% (1ml / lit) to cover the undersurface of the leaves thoroughly in case of severe epidemic outbreak of the pest in young palms. **Root feeding for the control of coconut Black headed caterpillar:** Select a fresh and live root, cut sharply at an angle and insert the root in the insecticidal solution containing Monocrotophos 36 WSC 10 ml + water 10 ml in a 7 x 10 cm polythene bag. Secure the bag tightly to the root with a cotton thread. Twenty four hours later, check whether there is absorption. If there is no absorption select another root. These methods should not be resorted to as a routine practice and it is suggested only for cases of severe epidemic outbreak of the pest and when the survival of the tree is threatened.
Red palm weevil *Rhynchophorus ferrugineus*	Remove and burn all wilting or damaged palms in coconut gardens to prevent further perpetuation of the pest. Avoid injuries on stems of palms as the wounds may serve as oviposition sites for the weevil. Fill all holes in the stem with cement. Avoid the cutting of green leaves. If needed, they should be cut about 120 cm away from the stem. Fill the crown and the axils of top most three leaves with a mixture of fine sand and neem seed powder or neem seed kernel powder (2:1) once in three months to prevent the attack of rhinoceros beetle damage in which the red palm weevil lays eggs. Setting up of attractant traps (mud pots) containing sugarcane molasses 2½ kg or toddy 2½ litres + acetic acid 5 ml + yeast 5 g + longitudinally split tender coconut stem/logs of green petiole of leaves of 30 numbers in one acre to trap adult red palm weevils in large numbers. Install pheromone trap @1/2 ha **Root feeding**: As under black headed caterpillar
Termites *Odontotermes obesus*	Locate termite mounds in or near the coconut nursery or garden and destroy. Swabbing with neem oil 5% once on the base and upto 2 m height of the trunk for effective control. Spray Copper Sulphate 1% or Cashew nut shell oil 80% or spray chlorphyriphos @ 3ml/lit of water, Neem oil 5% or NSKE 20% to preserve plaited coconut leaves from the Termite attack.
Scale insect *Aspidiotus destructor*	Pluck mature nuts and spray Monocrotophos 36 WSC 1 ml/ha. Do not harvest nuts for 45 days after spraying.

Mealy bugs *Pseudococcus longispinus*	Remove leaflets harbouring these insects and destroy them **Spray any one of the following :** Malathion 50 EC 2 ml/lit Dimethoate 30 EC 1 ml/lit Methyl demeton 25 EC 1 ml/lit Phosphamidon 40 SL 1.25 ml/lit Monocrotophos 36 WSC 1 ml / lit Neem oil 30 ml/lit.

Leaf caterpillars *Turnaca acuta* **Nut caterpillar** Nut coreid bug	▪ Collect and destroy the immature stages of the insects by conducting survey and spray Carbaryl 50 WP 2 gm/lit . ▪ Root feeding with Monocrotophos 36 WSC @ 10 ml + 10 ml water at 45 days interval for 3 times for control of leaf caterpillar. ▪ Set up light trap to trap and collect adult moths ▪ Spray Dichlorvas 76 WSC 2 ml / lit.
Slug caterpillar *Contheyla rotunda*	**Spray any one of the following:** ▪ Dichorvos 76 WSC 2 ml/lit ▪ *Bacillus thuringiensis* 2 g/lit, ▪ Triazophos 40 EC 5 ml ▪ Methyl demeton 25 EC 4 ml/lit ▪ Root feeding with Monocrotophos 15 ml + 15 ml of water
Scolytid bark borer beetles *Xyleborus parvulus*	▪ Stem injection through a stove wick soaked in 0.2% Dichlorvos and plugging the hole and repeating the treatment using the same wick and hole a month after.
Eriophyid mite *Aceria guerreronis*	**Manurial and fertilizer recommendation (Soil application/tree/year)** Urea 1.3 kg Superphosphate 2.0 kg Muriate of potash* 3.5kg * Increased quantity is recommended to increase the plant resistance to the mite. Neem cake application @ 5 kg Organic manure (well rotten FYM) @ 50 kg 1. **Micronutrients** (Soil application / tree / year) Borax 50 g Gypsum 1.0 kg Magnesium sulphate 500 g Grow sunnhemp as intercrop twice a year (Seed rate 30 kg / ha)

Spot application of ecofriendly botanicals

Round	Eco-friendly Botanical	Quantity / tree
1	Azadirachtin 1%	5 ml in 1 Lit. of water
2	Neem oil + Teepol	30 ml in 1 Lit. of water
3	Azadirachtin 1%	5 ml in 1 Lit. of water

Method of application

- ✓ The botanicals should be applied in the sequence indicated above at 45 days interval using a one litre hand sprayer. Rocker or Pedal sprayer can be used for spraying small trees.
- ✓ The spray should be applied at the crown region by a climber covering only the top six bunches during non rainy season
- ✓ The bunches must be covered well by the spray fluid and approximately one litre of spray fluid may be required per tree

Precautions and safety measures

- ❖ Spraying should be avoided during windy season to prevent contamination
- ❖ At the time of spraying, protective mask and clothing should be used
- ❖ Wash face and hands cleanly with soap after spraying.

Coconut Rugose spiraling whitefly

The coconut rugose spiraling whitefly was noticed in serious proportion in various district coconut gardens of Tamil Nadu. The insects suck the sap and cause damage in the leaf fronts with copious honey dew secretions on the leaves. It induce development of sooty mould fungus there by leaves become completely black and reduces the photosynthesis rate.

The following TNAU technologies can be adopted to manage the spiraling whitefly,

- ➢ Release of Encarsia guadeloupae @ 100 parasitoids /ac (10 leafbits/ac)
- ➢ Installation of yellow sticky traps (5 ft. x 1.5 ft.) smeared with castor oil @ 5/ ac
- ➢ Release of Chrysoperla zastrowi sillemi eggs @ 500/ac in young palms
- ➢ Pesticide holiday' must be declared to conserve the natural enemies fauna

New invasive pest	
Palm civet *Vivera zibatha*	▪ Poison baiting with ripe banana fruit sandwiched with 0.5 g carbofuran 3 G granules.
Rat *Rattus rattus wroughtoni*	▪ Tree banding with inverted iron cones or Prosophis thorns. Baiting with bromodialone 0.005% at 10 g/tree at crown region twice at an interval of 12 days.

Diseases management

Basal stem rot (*Ganoderma lucidum*)

- Aureofungin-sol @ 2g + Copper Sulphate @ 1g dissolved in 100 ml water or Hexaconazole @ 2 ml with 100 ml of water, applied as root feeding for 3 times at 3 months interval. (The active absorbing root of pencil thickness be selected and a slanting cut is made. The solution is taken in a polythene bag or bottle and the cut end of the root is dipped in the solution)
- Forty liters of 1% Bordeaux mixture should be applied as soil drench around the trunks in a radius of 1.5 meter
- Neem cake @ 5 kg/tree can be applied along with fertilizers and azotobactor @ 200 g / tree

Bud rot (*Phytophthora palmivora*)

- The infected tissues from the crown region should be removed and protected with Bordeaux paste
- Spray 1% Bordeaux mixture or Copper oxychloride @ 0.25 % on crown region as pre-monsoon spray
- Spray Copper oxychloride @ 0.25 % after the onset of monsoon

Stem bleeding (*Ceratocystis paradoxa*)

The bark of the trunk should be removed in the bleeding area and Bordeaux paste should be applied in this area

Preparation of 1% bordeaux mixture

Copper sulphate @ 400g should be dissolved in 20 litres of water and 400 g of lime in another 20 litres of water separately. The copper sulphate solution should be added to the lime solution constantly stirring the mixture. Earthen or wooden vessels alone should be used and metallic containers should not be used. To find out whether the mixture is in correct proportion, a polished knife should be dipped in the mixture for one minute and taken out. If there is reddish brown deposit of copper, additional quantity of lime should be added till there is no deposit in the knife.

Preparation of bordeaux paste:

Take 200 g of copper sulphate and dissolve it in one litre of water and 200 g of lime in one litre of water separately, both are mixed simultaneously in a third vessel and the resultant mixture can be used as a paste.

SPECIAL PROBLEMS IN COCONUT

Rejuvenation of existing garden

The low yield in vast majority of gardens is due to thick population, lack of manuring and irrigation. These gardens could be improved if the following measures are taken.

i. **Thinning of thickly populated gardens**

In the farmer's holdings where thick planting is adopted, many trees give an yield of less than 20 nuts/palm/year. By cutting and removal of these trees, the yield could be increased. Besides, there is saving in the cost of cultivation and increase in net profit. After removal of low yielding trees, the populations should be maintained at 175 palms/ha.

ii. **Ensuring adequate manuring and irrigation**:

The yield can be increased in the existing gardens when manuring + irrigation + cultural practice is adopted as per recommendation.

Pencil point disorder (Micronutrient deficiency)

Because of micronutrient deficiency, the stem will taper towards its tip with lesser number of leaves. The leaf size will be greatly reduced and the leaves will be pale and yellow in colour. Along with the recommended fertilizer dose, 225 g each of Borax, Zinc sulphate, Manganese sulphate, Ferrous sulphate, Copper sulphate and 10 g of Ammonium molybdate may be dissolved in 10 litres of water and poured in the basin of 1.8 m radius. This disorder can be corrected if noticed early. Severely affected palms may be removed and replanted with new seedlings.

Button shedding

Shedding of buttons and premature nuts may be due to any one of the following reasons:

i) Excess acidity or alkalinity
ii) Lack of drainage
iii) Severe drought
iv) Genetic causes
v) Lack of nutrients
vi) Lack of pollination

vii) Hormone deficiency
viii) Pests
ix) Diseases

The following remedial measures are suggested.

Rectification of soil pH

Excess acidity or alkalinity of soil may cause button shedding. If the soil pH is less than 5.5, it is an indication of excess acidity. This could be rectified by adding lime. Increase in alkalinity is indicated by soil pH higher than 8.0. This situation could be rectified by adding gypsum.

Providing adequate drainage facilities

Lack of drainage results in the roots of coconut trees getting suffocated for want of aeration. Shedding of buttons occur under such condition. Drainage channels have to be dug along the contours to drain the excess water during rainy season.

Management of young coconut gardens under waterlogged conditions

(i) A trench between two rows of young Coconut palms should be dug during onset of the monsoon rains. The size of the trench is 3 m width, 30 – 45 cm depth to entire length of field. The soil excavated from the trench should be placed along the rows of palms to make a raised bed.

(ii) Form mound around the young palms to a radius of 1.2 m width with height of 30 – 45 cm.

Genetic causes

In some trees button shedding may persist even after ensuring adequate manuring, irrigation and crop pest and disease management. This is an indication of inherent defect of the mother palm from which the seed material was obtained. This underlines the need for proper choice of superior mother palm for harvesting seed coconut to ensure uniformly good yielding trees.

Lack of nutrition

Button shedding occurs due to inadequate or lack of manuring. The recommended dose of manurial schedules and proper time of application are important to minimise the button shedding. Apply extra 2 kg of muriate of potash with 200 g of Borax/palm over and above the usual dosage of fertilizer to correct the barren nuts in coconut for period of 3 years.

Boron deficiency or crown choke disorder

Apply 200 g of borax/palm/year in two splits.

Lack of pollination

Button shedding also occurs due to lack of pollination. Setting up of beehives @ 15 units/ha may increase the cross pollination in the garden. Further the additional income obtained through honey, increases the net profit per unit area.

Hormone deficiency

The fertilised female flowers i.e., buttons shed in some cases. By spraying 2, 4- D at 30 ppm or NAA 20 ppm (30 mg per litre of water) on the inflorescence one month after opening of the spathe, the setting percentage could be increased.

Pests

Button shedding may happen due to the attack of bug. Spraying of systemic insecticides like Methyldematon 0.025% (1ml/lit) or Dimethoate 0.03% (1ml/lit) may reduce the occurrence.

Diseases

Button shedding also occurs due to disease incidence such as basal stem rot. Adoption of control measures suggested for the disease reduces not only spread of the disease but also prevents shedding of buttons.

Coconut mother palm selection and nursery management

The need for collecting seed materials from high yielding coconut palms is highly essential in a perennial crop like coconut.

The following points may be remembered.

Mother palm selection

1. Select seed gardens, which contain large proportion of high yielding trees with uniformity in yielding ability. Trees growing closer to households, cattle shed, compost pits and other favorable conditions should be avoided.
2. High yielding mother palms giving not less than 100nuts/palm/annum should be chosen for collecting seednuts. Alternate bearers should be avoided. The age of the palm chosen be middle age i.e., from 25 to 40 years. Even trees with 15 years age can be selected, if it is high yielding and has stabilized yield.
3. The mother palm should have straight trunk, spherical or semi spherical crown, high rate of leaf and spathe production, short and stout petiole, more number of female flowers regular bearing habit, non – buckling bunches, high setting

parentage, medium in nut size, high copra out turn and free from pest and diseases. A good regular bearing mother palm produces on an average one leaf and an inflorescence in its axil every month. So, there will be twelve bunches of varying stages of maturity at any one time. Avoid trees producing habitually barren nuts.

4. Harvest seednuts during the months of February - August to get maximum germination and good quality seedlings. Harvest the bunches intended for seednut by lowering them to the ground using a rope to avoid injury to seednuts
5. The seednuts should be round in shape and when tapped by finger should produce metallic sound. Fully ripe nuts develop twelve months after fertilisation.
6. To get more quality seedlings, the seednuts of tall and hybrid are to be air cured for one month followed by sand curing for two months. For dwarf varieties, the air curing should be lesser than one month followed by sand curing for two months.

Nursery management

1. Select nursery area in a well drained plot with coarse texture soil near water source for irrigation. Nursery can be raised in the open space with artificial shade or in the adult coconut garden.
2. Plant seednuts in long and narrow beds at a spacing of 30 x 30 cm either horizontally or vertically in deep trenches with 20-25 cm depth. Five rows of nuts may be planted in each bed accommodating 50 nuts per row.
3. Irrigate the nursery beds once in three days.
4. Keep the nursery free of weeds. To manage the weed problem in coconut nursery, growing sunnhemp 2 times (each harvested at flowering stage) followed by one hand weeding at 6^{th} month was found to be very effective, Besides yielding green manure for manuring the adult coconut palms.
5. Provide shade to the nursery by raising Sesbania or Leucaena on the sides of beds.
6. The seednuts start germination 6 – 8 weeks after planting and germination continues upto six months. Select seedlings that germinate before 5 months after planting. Remove those nuts which do not germinate 5 months after sowing.
7. Regularly survey for pest and diseases
8. Select seedlings 9 to 12 months after planting. Seedlings, which have germinated earlier, having good girth at collar and early splitting of leaflets, should be selected for planting. Do not select the so called Kakkamukku Pillai i.e., seednuts which have just germinated. Eliminate the seedlings which are deformed or having stunted growth.
9. Remove the seedlings from the nursery by lifting with spade. Do not pull out the seedlings by pulling leaves or stem.
10. Select quality seedlings with a minimum of 6 leaves and girth of 10 cm at collar.