COCONUT FARMING

SOIL REQUIREMENTS: -

1. Coconut trees can grow in a wide range of soil types, including sandy, loamy, and clay soils. However, they prefer soils that are well-drained, deep, and rich in organic matter.

2.Coconut trees prefer slightly acidic to neutral soil, with a pH range of 5.5 to 7.5. Soil that is too acidic or too alkaline can affect the tree's growth and nutrient uptake.

3. Coconut trees require adequate levels of nutrients for optimal growth and yield. Nitrogen, phosphorus, potassium, and magnesium are essential nutrients for coconut trees. Soil testing can help determine the nutrient status of the soil and the appropriate fertilizers to use.

4. Coconut trees require well-drained soil with good water-holding capacity. They can tolerate periodic flooding and drought conditions but are sensitive to waterlogging.

5. Coconut trees grow best in soils that are medium-textured, with good drainage and aeration. They can tolerate heavy clay soils if they are well-drained.

CLIMATE & TEMPARATURE: -

Climate: Coconut trees thrive in warm and humid tropical climates with plenty of sunshine and moderate rainfall. They are typically found in regions with average temperatures between 20 to 28 degrees Celsius (68 to 82 degrees Fahrenheit), and annual rainfall between 1500 to 2500 millimetres (59 to 98 inches). Here are some climate and temperature requirements for coconut farming:

Temperature: Coconut trees grow best in warm temperatures between 20 to 28 degrees Celsius (68 to 82 degrees Fahrenheit). Temperatures below 15 degrees Celsius (59 degrees Fahrenheit) can stunt growth and reduce yield. Extreme temperatures above 35 degrees Celsius (95 degrees Fahrenheit) can also stress the tree and reduce yield.

VARIETIES OF COCONUTS: -

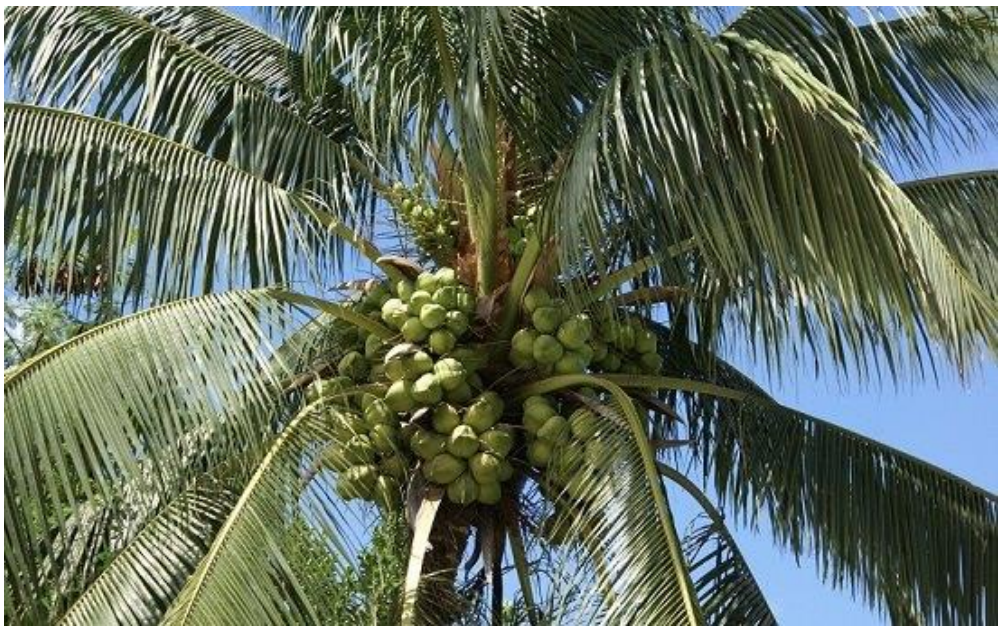
1.Chowghat Green Dwarf: - It is one of the famous dwarf varieties of coconut in India, suitable for cultivation in southern states like Tamil Nadu, Kerala, and Karnataka. It takes only 3-4 years to produce fruits, with an oil content of around 66-68 %. The characteristic feature of this variety is a ***'beak,'*** which is visible when the fruits are mature.

2. Kera Sankara: - This hybrid variety is a cross between *Lakshadweep Ordinary Tall* and *Chowghat Orange Dwarf*. It

contains 68-72 % of oil content and was released by CPCRI, Kerala, in 1991.The tree produces higher yields than both its parent varieties. It is suitable for cultivation in states like Tamil Nadu, Karnataka, and Kerala. In addition to that, you can cultivate it easily in both irrigated and rainfed conditions.

3. Chandra Lakshya: - A hybrid cross between ***Lakshadweep Ordinary*** and ***Chowghat Orange Dwarf***, this variety was released by CPCRI, Kerala, in 1985. These tree fruits are suitable for high-scale cultivation in Kerala and Karnataka.The special feature of this quality is that it performs well in moist conditions. The oil content in the variety is 69-72%.

4. East Coast Tall: - Another tall variety of coconut with 65-68 % of oil content. It is suitable for growing in the coastal region of West Bengal, Pondicherry, Andhra Pradesh, Bihar, Madhya Pradesh, and Tamil Nadu.This coconut grows well in well-draining, alluvial or red loam soil and starts bearing fruit at 6-8 years old.



PLANTING SESSION & MATERIAL: -

Coconut farming requires careful planning and selection of planting materials to ensure optimal growth and yield. Here are some guidelines for planting and materials needed for coconut farming:

1. Choose a site with well-drained soil, good sunlight exposure, and adequate rainfall. Coconut trees require plenty of space, so allow at least 7 meters (23 feet) between each tree.

2.Select healthy and disease-free coconut seedlings or sprouted nuts for planting. Mature nuts that have sprouted are ideal as they have a higher survival rate. You can also use seedlings grown from polybags or nurseries.

3.Dig a hole that is at least 60 cm (2 feet) deep and wide. Plant the seedling or sprouted nut horizontally, with the sprout pointing upwards and just below the soil surface. Fill the hole with soil and compact it around the seedling to ensure stability.

4.Mulch the area around the newly planted coconut tree with organic materials such as dried leaves, grass, or wood chips to retain moisture, reduce weed growth, and improve soil fertility.

5.Irrigate the newly planted coconut trees regularly, especially during the dry season, to ensure adequate moisture for root development and growth.

6.Fertilize the coconut trees regularly with balanced fertilizers containing nitrogen, phosphorus, and potassium. Apply fertilizers in split doses, with the first application after six months of planting and subsequent applications every six months.

7.Monitor the coconut trees regularly for pests and diseases and take appropriate measures to control them.

PLANTING METHOD: -

Direct seeding: This involves planting mature coconuts directly in the field. The nuts are placed in a shallow trench, sprout side up, and covered with soil. This method is less common as it has a lower success rate compared to other planting methods.

Transplanting: This involves transplanting seedlings that have been raised in a nursery or grown from sprouted nuts. The seedlings are usually planted in the field when they are 8-12 months old and have developed a strong root system.

Pit planting: In this method, a pit is dug in the planting site and filled with compost, organic matter, and topsoil. The seedling is then planted in the centre of the pit and covered with soil.

Scooped planting: This method involves digging a hole and scooping out a portion of the soil to create a depression. The seedling is then planted in the depression, and the soil is mounded around it.

Triangle planting: This is a planting technique used to maximize land use and improve the yield of coconut trees. In this method, three seedlings are planted in a triangular pattern, with each seedling at the apex of an equilateral triangle.

FERTILIZERS: -

Coconut trees need to be fertilized, which has the highest potassium, followed by nitrogen, phosphorus, and chlorine, but care must be taken to balance the fertilizer. 1000: 500: 2000 gm NPK/palm/year is recommended for hybrid Coconut in coastal areas.

1. Firstly, apply enough basic fertilizer and use urea as basic fertilizer. Fertilizer has a strong effect and can accelerate the physical growth of plants. Then we use only organic fertilizer.

2. In the early stages, we should properly increase the use of inorganic chemical fertilizers with high nitrogen content to promote the germination and differentiation of Coconut trees and improve flowering rate.

3. During the flowering period of the Coconut trees, we use more phosphate fertilizer increase the flowering rate, prevent the flowers and fruits from falling, and improve the production and quality of the Coconut.

4. During the full growth of the Coconut, in the later period, we use potassium fertilizer to promote the propagation of the Coconut and to improve the taste and thickness of the fruit.

PESTS AND DISEASES OF COCONUTS: -

Coconut mites: These are small, spider-like pests that infest the leaves and cause discoloration and stunted growth. Mites can be controlled by regular pruning, removal of infested leaves, and application of acaricides.

Coconut Rhinoceros Beetle: These beetles can cause significant damage to young coconut trees by burrowing into the trunk and feeding on the sap. Infested trees can be treated with insecticides, or the beetle population can be controlled by the use of pheromone traps.

Coconut Leaf Beetle: These beetles feed on the leaves and can cause defoliation, resulting in reduced yield. Infested trees can be treated with

insecticides, or the beetle population can be controlled using pheromone traps.

Bud rot: This is a fungal disease that attacks the growing point of the coconut tree and can cause death. Infected trees should be removed and destroyed to prevent the spread of the disease.

Root wilt: This is a disease caused by a soil-borne pathogen that attacks the roots and can cause wilting and death of the tree. Infected trees should be removed and destroyed, and crop rotation and soil management should be implemented to prevent the spread of the disease.

Leaf spots: These are fungal diseases that cause yellow or brown spots on the leaves and can lead to defoliation. Infected leaves should be removed and destroyed, and fungicides can be applied to control the disease.

Coconut scale insects: These pests attack the trunk and leaves, causing damage to the tree's growth and fruit production. They can be controlled by spraying with insecticides or using biological control methods.

HARVESTING OF COCONUTS: -

- Coconut trees take a long time to mature, and the harvesting time can vary depending on the variety and the growing conditions. Generally, coconuts are ready for harvesting between 5-8 years after planting. Here are the steps involved in harvesting coconuts:
- Identification of mature coconuts: Coconuts are ready for harvesting when they are fully mature, and the husk has turned

brown. The nut should be heavy and have a distinct sound when shaken.