

ORANGE FARMING



SOIL REQUIREMENTS: -

- It requires well-drained soil with a pH range between 6.0 to 7.5. The soil should be deep, fertile, and rich in organic matter. The ideal soil type for orange farming is sandy loam, which Oranges provides good aeration and drainage.
- Before planting, it's essential to prepare the soil by removing weeds and debris and loosening the soil to a depth of at least 30 cm. Soil testing should also be done to determine the nutrient content and pH level of the soil.
- If the soil is deficient in nutrients, organic matter or fertilizers should be added to improve soil fertility. Nitrogen, phosphorus, and potassium are the essential nutrients required by orange trees, and they should be added in the right proportions.
- It's also important to maintain proper soil moisture by irrigating the trees regularly, especially during the dry season. Mulching can also help to conserve soil moisture and suppress weed growth.
- Proper soil management is essential to ensure healthy growth and high yield of orange trees.

CLIMATE & TEMPARATURE: -

- Oranges are grown in a subtropical to a tropical climate and thrive in warm to hot temperatures. The ideal temperature range for orange farming is between 15°C to 38°C (59°F to 100.4°F), with an optimum range of 21°C to 32°C (69.8°F to 89.6°F).
- Orange trees are sensitive to frost, and temperatures below -2°C (28.4°F) can cause severe damage to the tree and fruit. Therefore, orange farming is not suitable in areas with a high risk of frost.
- Oranges require a minimum of 6-8 hours of direct sunlight per day to thrive. The sunlight helps in photosynthesis, which is essential for the growth and development of the tree and fruit.
- High humidity can also be detrimental to orange farming as it can increase the incidence of diseases such as citrus canker and fruit rot. Therefore, orange farming is best suited in areas with moderate to low humidity.
- In summary, the ideal climate for orange farming is warm to hot temperatures, with minimum temperatures above freezing, moderate to low humidity, and ample sunlight.

PLANTING SESSION & MATERIAL: -

The materials required for orange farming may include:

- Orange seedlings or grafted trees
- Soil amendments such as compost, manure, and fertilizers
- Irrigation systems such as drip, sprinkler, or flood irrigation
- Mulch to conserve soil moisture and suppress weed growth
- Pruning tools such as hand pruners and loppers for tree maintenance
- Pesticides and fungicides to control pests and diseases
- Netting to protect the fruit from birds and other animals
- Harvesting equipment such as picking poles and fruit bins
- Transportation equipment for moving the fruit from the farm to the market or processing plant
- Protective clothing such as gloves, boots, and hats for personal safety during farming activities.

PESTS AND DISEASES: -

Citrus psyllid: This insect is a vector for a disease called citrus greening or Huanglongbing (HLB), which can kill the tree. The psyllid feeds on the tree's leaves and stems, causing deformation and yellowing.

Citrus rust mite: This pest damages the leaves and fruit of the tree, causing premature fruit drop and reducing the fruit quality.

Citrus thrips: These insects feed on the tree's leaves, buds, and fruit, causing deformation and discoloration. They can also spread viruses that cause severe damage to the tree.

Fruit fly: This pest attacks the fruit of the tree, causing the fruit to rot and drop prematurely.

Phytophthora root rot: This disease is caused by a fungus that attacks the roots of the tree, causing the tree to decline and die.

Citrus canker: This bacterial disease causes raised lesions on the leaves, stems, and fruit of the tree, leading to premature fruit drop and tree decline.

Alternaria brown spot: This fungal disease causes brown spots on the fruit, leading to reduced fruit quality and yield.

FERTILIZERS: -

Some commonly used fertilizers for orange farming include:

- Nitrogen fertilizers: These fertilizers are essential for vegetative growth and fruit development. Examples include urea, ammonium sulphate, and calcium nitrate.
- Phosphorus fertilizers: These fertilizers are essential for root development, flower formation, and fruit set. Examples include triple superphosphate and diammonium phosphate.
- Potassium fertilizers: These fertilizers are essential for fruit development, stress tolerance, and disease resistance. Examples include potassium chloride and potassium sulphate.
- In addition to the primary nutrients, orange trees also require secondary and micronutrients, such as calcium, magnesium, Sulphur, and zinc. These nutrients can be supplied using fertilizers or organic amendments such as compost or manure.

PLANTING METHOD: -

Site selection: The first step in planting orange trees is to select a suitable site. Orange trees require well-drained soil, access to sunlight, and protection from strong winds. The soil should be deep and fertile, with a pH between 6.0 and 7.5.

Tree selection: Select healthy and disease-free orange tree seedlings from a reputable nursery. Choose a variety that is adapted to the local climate and soil conditions.

Planting hole preparation: Dig a hole that is twice as wide and as deep as the root ball of the seedling. Loosen the soil around the hole to facilitate root growth.

Tree planting: Place the seedling in the centre of the hole and backfill with soil, making sure that the root collar (where the roots meet the trunk) is at ground level. Tamp down the soil to remove any air pockets and water the tree thoroughly.

Mulching: Apply a layer of organic mulch such as wood chips or straw around the base of the tree. This helps to retain moisture and control weeds.

Irrigation: Orange trees require regular and consistent irrigation, especially during the first few years of growth. Water deeply and infrequently to encourage deep root growth.

Fertilization: Apply fertilizer according to the nutrient requirements of the orange trees. Nitrogen fertilizers can be applied in split doses during the growing season.

Pruning: Prune the trees to remove dead or damaged branches and to shape the tree for optimal fruit production.

HARVESTING OF ORANGES: -

- Harvesting of oranges is an important activity in orange farming, as it determines the quality and yield of the fruit. Oranges should be harvested at the right time to ensure optimal flavour, texture, and colour.

- The time of harvesting depends on the variety and the climate. Generally, oranges are harvested when they reach the desired size, colour, and sugar content. For most varieties, this occurs between December and April.
- Harvesting of oranges can be done manually or by using mechanical harvesters. Manual harvesting involves picking the fruit by hand or using picking poles, while mechanical harvesting involves using machines that shake the tree or use a conveyor belt to collect the fruit.
- When harvesting oranges, care should be taken not to damage the fruit or the tree. Oranges should be handled gently to avoid bruising or puncturing, which can reduce the quality and shelf life of the fruit. It's also important to wear protective clothing such as gloves and boots to avoid injury from thorns or other hazards.
- After harvesting, the oranges should be sorted and graded based on their size, color, and quality. The fruit should be packed carefully to avoid damage during transport, and they should be stored in a cool, dry place to extend their shelf life.