MANGO FARMING

SOIL REQUIREMENTS: -

- Mangoes grow well in well-drained, loamy soils with a pH range of 6.0 to 7.5.
- Mango trees have deep roots that can reach up to 6 meters in depth. Therefore, the soil should be deep enough to accommodate the roots.
- Mango trees require fertile soil with adequate nutrients, especially nitrogen, phosphorus, and potassium.
- Mangoes require a moderate amount of soil moisture. Too much water can cause root rot, while too little water can result in reduced fruit quality and quantity.
- The soil texture should be such that it allows for proper drainage while retaining sufficient moisture for plant growth.
- The soil should have a high organic matter content, which helps improve soil fertility, water retention, and nutrient availability.
- Mangoes are sensitive to high levels of soil salinity, which can affect plant growth and fruit quality. Therefore, it is essential to ensure that the soil is not too salty.

CLIMATE & TEMPARATURE: -

Temperature: Mangoes require warm temperatures between 25°C to 35°C for optimal growth and fruit production. Temperatures below 10°C can cause severe damage to the mango tree and affect fruit quality.

Humidity: Mangoes prefer a high humidity level between 60 to 70 percent during the growing season. Dry air can cause water stress and affect fruit quality.

Rainfall: Mangoes require a well-distributed annual rainfall between 750 to 2500 mm. Excessive rainfall during the flowering season can affect pollination and fruit set.

Sunshine: Mangoes require abundant sunshine for good growth and fruit production. A minimum of 6 to 8 hours of sunlight per day is necessary for proper fruit development.

Altitude: Mangoes are generally grown at altitudes below 1000 meters above sea level. High altitude areas may experience cooler temperatures, which can affect fruit quality.

VARAITIES OF MANGOES:

1.Alphonso Mangoes:

- Alphonso Mangoes are Internationally loved for their sunshine yellow appearance and delightful taste. Named after Afonso de Albuquerque, this voluptuous king of the mangoes is one of the most consumed varieties of mangoes in India among mango lovers.

2. Kesar Mangoes:

- Kesar mangoes owe their name to their saffron appearance and heavenly taste. This variety, highly renowned for their distinct sweet flavour, is the 'Queen of Mangoes'.

3. Safadi Mangoes:

- Safadi or Banginapalli or Benishan Mango is a popular fruit in several regions in Andhra Pradesh; especially in Banganpalle town, which is evident from its name. Often called as ‘The King of Mangoes in South India’, this fruit is significantly larger than other varieties of mangoes commonly sold mid-season in the market and on average weighs about 350 - 400 grams. Exhibiting meaty texture, the thin and firm skin of this mango is sweet in taste and lacks fibre. Moreover, Safadi Mango is known to be rich in Vitamin A and C so it is good for health.

PLANTING SESSION & MATERIAL: -

- Mangoes can be propagated from seeds or vegetative parts such as stem cuttings, air layers, or grafts. Grafted seedlings are commonly used as planting materials as they have a better chance of producing high-quality fruit than seed-grown trees.
- Mango trees require enough space for proper growth and development. The recommended spacing for planting mangoes is 10 to 15 meters between trees in each direction.

- Before planting, the land should be prepared by clearing weeds, tilling the soil, and incorporating organic matter to improve soil fertility.
- Mango trees should be planted in the center of the planting hole, and the soil should be firmed around the roots to ensure good contact with the soil. The planting hole should be deep enough to accommodate the roots and should be filled with a mixture of topsoil and compost.
- Newly planted mango trees require adequate irrigation to establish good root growth. A regular supply of water should be provided until the trees are well established.

PLANTING METHOD: -

Collect scion wood: The first step in grafting is to collect healthy scion wood from a mature mango tree. Scion wood should be selected from the current season's growth, and it should be free from diseases and pests.

Prepare rootstock: The next step is to prepare the rootstock by selecting a healthy seedling with a stem diameter of around 1 m. The seedling should be cut down to a height of around 20-25 cm above the ground.

Make a T-shaped cut: Make a T-shaped cut on the rootstock stem with a sharp knife, making a vertical cut of about 2-3 cm down the center of the stem, followed by a horizontal cut of about 2-3 cm at the top of the vertical cut.

Prepare scion wood: Trim the scion wood to about 10-15 cm in length and cut it at a 45-degree angle, making sure it matches the diameter of the T-shaped cut on the rootstock stem.

Insert the scion wood: Gently insert the scion wood into the T-shaped cut on the rootstock stem, making sure the cambium layers of the scion wood and the rootstock are in contact.

Seal the graft union: Wrap the graft union with a grafting tape or plastic wrap to prevent air and moisture from entering the wound.

Care for the grafted tree: Place the grafted tree in a well-drained location and water it regularly to keep the soil moist. Protect the young tree from pests and diseases and provide shade if necessary.

FERTILIZERS: -

- Nitrogen (N): Nitrogen is an essential nutrient for mango trees, and it promotes vegetative growth and the development of new leaves. Nitrogen fertilizers can be applied in split doses during the growing season, starting from the onset of the rainy season until the end of the vegetative growth phase.
- Phosphorus (P): Phosphorus is important for root growth and fruit development. Phosphorus fertilizers can be applied at the time of planting and during the early stages of growth.
- Potassium (K): Potassium is necessary for the development of fruits and their size, sweetness, and color. Potassium fertilizers can be applied during the fruit development phase.
- Micronutrients: Mango trees also require micronutrients such as iron, zinc, and manganese, which are essential for proper growth and fruit production. Micronutrient deficiencies can be corrected by applying chelated micronutrient fertilizers or foliar sprays.

PESTS AND DISEASES: -

Mango Fruit Fly: The mango fruit fly is a common pest that can cause damage to mangoes by laying eggs in the fruit, which then hatch into maggots. This can lead to the fruit dropping prematurely and reduced fruit quality.

Mango Hopper: Mango hoppers are small insects that suck sap from the leaves, resulting in leaf curling and reduced photosynthesis, which can lead to poor fruit development.

Anthracnose: Anthracnose is a fungal disease that can cause dark spots on leaves, stems, and fruit. This can lead to fruit drop and reduced yield.

Powdery Mildew: Powdery mildew is a fungal disease that can cause white powdery growth on leaves, flowers, and fruit. This can lead to reduced photosynthesis and poor fruit development.

Bacterial Black Spot: Bacterial black spot is a bacterial disease that can cause black spots on leaves, flowers, and fruit. This can lead to defoliation and reduced fruit production.

Mango Malformation: Mango malformation is a viral disease that can cause abnormal growth of flowers and leaves, leading to reduced fruit production.

Mango Sudden Decline: Mango sudden decline is a disease that causes the rapid decline and death of mango trees. It is caused by a combination of factors, including root rot, nematode infestation, and fungal infections.

HARVESTING OF MANGOES: -

- Mangoes are typically harvested when they are fully ripe and have developed their characteristic flavour and aroma. The harvesting time of mangoes varies depending on the variety, location, and weather conditions.
- It is important to note that different varieties of mangoes have different ripening times and requirements. It is recommended to consult with local experts or agricultural extension officers for specific guidance on mango harvesting in your area.