



CULTIVATION PRACTICES OF FRUITS

A. MANGO (*Mangifera indica*)

1. Varieties

- Alphonso
- Banganapalli
- Neelum
- Totapuri
- Dashehari

2. Varieties Suitable for Tamil Nadu

- Neelum
- Banganapalli
- Rumani
- Alphonso
- Totapuri

3. Soil

- Deep, well-drained loamy soil
- pH range: 5.5 – 7.5
- Avoid waterlogged and saline soils

4. Season of Planting

- June–July (monsoon season)
- January–February (with irrigation facilities)

5. Planting Material

- Grafted saplings (1–2 years old)
- Healthy and disease-free plants preferred

6. Field Preparation

- Land ploughed and leveled
- Pits of size 1 m × 1 m × 1 m dug and filled with topsoil, FYM, and sand

7. Spacing

- 8 m × 8 m (standard)
- High-density: 5 m × 5 m

8. Planting

- Grafts planted in the center of pits
- Ensure graft union is above soil level
- Firm soil around plant and provide staking

9. Irrigation

- Immediately after planting
- Once in 5–7 days in summer
- Once in 10–15 days in winter
- Avoid waterlogging

10. Intercropping

- Pulses (green gram, black gram)
- Vegetables (cowpea, beans)
- Groundnut

11. Manures and Fertilizers (Kg per tree/year)

- FYM: 20–25 kg
- Nitrogen (N): 1.0 kg
- Phosphorus (P): 0.5 kg
- Potassium (K): 1.0 kg

12. Harvest Season

- March to June (varies with variety)

13. Harvest and Yield

- Fruits harvested at mature stage
- Average yield: 100–200 fruits/tree/year (varies with age and variety)

B. BANANA (*Musa spp.*)

1. Varieties

- Dwarf Cavendish
- Robusta
- Poovan
- Nendran
- Rasthali

2. Varieties Suitable for Tamil Nadu

- Robusta
- Poovan
- Nendran
- Rasthali
- Monthan

3. Soil

- Rich, well-drained loamy soil
- pH range: 6.0 – 7.5
- High organic matter preferred

4. Season of Planting

- Throughout the year (with irrigation)
- Best seasons:
 - February–March
 - September–October

5. Planting Material

- Sword suckers (1–1.5 kg)
- Tissue culture plants (disease-free)

6. Field Preparation

- Deep ploughing and leveling
- Pits of size 60 cm × 60 cm × 60 cm filled with FYM and soil

7. Spacing and Number of Plants as per Banana Varieties

Variety	Spacing (m × m)	Number of Plants per Hectare
Dwarf Cavendish	1.8 × 1.8	3,086 plants
Robusta	1.8 × 1.8	3,086 plants
Poovan	1.8 × 1.8	3,086 plants
Rasthali	2.0 × 2.0	2,500 plants
Nendran	2.0 × 2.0	2,500 plants
Monthan	2.0 × 2.0	2,500 plants
Hill Banana	2.0 × 2.0	2,500 plants
High-density	1.5 m × 1.5 m	4,444 plants

8. Planting

- Plant suckers upright in pits
- Ensure proper soil compaction
- Provide light irrigation after planting

9. Irrigation

- Immediately after planting
- Once in 2–3 days (initial stage)
- Weekly irrigation later
- Drip irrigation recommended

Water Requirement (Litres/plant/day)

Crop Stage	Duration (Days)	Water Requirement (L/plant/day)
Planting to Establishment	1 – 30 days	2 – 4 L
Vegetative Stage	31 – 120 days	5 – 10 L
Grand Growth Stage	121 – 210 days	10 – 15 L
Shooting Stage	211 – 270 days	15 – 20 L
Bunch Development	271 – 330 days	20 – 25 L

10. Intercropping

- Vegetables (onion, garlic)
- Pulses (cowpea)

- Short-duration crops

11. Nutrition Management of Banana (Kg/ha)

Recommended Dose of Fertilizers (per hectare)

Nutrient / Manure	Quantity (Kg/ha)
Farm Yard Manure (FYM)	50,000 – 60,000 kg
Nitrogen (N)	200 – 300 kg
Phosphorus (P ₂ O ₅)	60 – 90 kg
Potassium (K ₂ O)	200 – 300 kg

Application Schedule

Stage	Time of Application	Fertilizer Dose (%)
Basal Dose	At planting	100% FYM + 50% P
Early Growth Stage	1–2 months after planting	25% N + 25% K
Vegetative Stage	3–4 months after planting	25% N + 25% K
Grand Growth Stage	5–6 months after planting	25% N + 25% K
Shooting Stage	7–8 months after planting	25% N + 25% K

12. Harvest Season

- 11–14 months after planting

13 Ripening

Ripen the fruits by keeping a beaker containing 5000 ppm Ethrel + 10 g NaOH pellets in an air tight chamber. (5 ml Ethrel in one lit of water is 5000 ppm).

14. Harvest and Yield

- Harvest when fruits are mature but green
- Average yield: 20–30 kg per bunch
- 40–60 tonnes per hectare

C. SAPOTA (Manilkara zapota)

1. Varieties

- Kalipatti
- Cricket Ball
- CO-1
- CO-2
- Pala
- PKM-1

2. Varieties Suitable for Tamil Nadu

- Kalipatti
- CO-1
- CO-2
- PKM-1
- Cricket Ball

3. Soil

- Deep, well-drained loamy soil
- Can tolerate a wide range of soils including sandy loam
- Ideal pH: 6.0 – 8.0
- Avoid waterlogged conditions

4. Season of Planting

- June–July (monsoon season)
- February–March (with irrigation facilities)

5. Planting Material

- Air-layered plants or grafted plants
- 1–2 years old, healthy and disease-free seedlings

6. Field Preparation

- Land is ploughed and leveled
- Pits of size 60 cm × 60 cm × 60 cm are dug
- Pits filled with topsoil mixed with 20–25 kg FYM

7. Spacing

- 8 m × 8 m (standard spacing)
- High-density: 5 m × 5 m

8. Planting

- Plant saplings at the center of pits
- Ensure proper depth and firm soil around roots
- Provide staking for young plants

9. Irrigation

- Immediately after planting
- Once in 7–10 days during summer
- Once in 15–20 days during winter
- Avoid water stagnation

10. Intercropping

- Pulses (green gram, black gram)
- Vegetables (cowpea, brinjal)
- Groundnut

11. Manures and Fertilizers (Kg per tree/year)

Nutrient / Manure	Quantity (Kg/tree/year)
Farm Yard Manure (FYM)	25 – 30 kg
Nitrogen (N)	0.5 – 1.0 kg
Phosphorus (P)	0.25 – 0.5 kg
Potassium (K)	0.5 – 1.0 kg

- Apply FYM once a year
- Chemical fertilizers should be applied in split doses

12. Harvest Season

- Throughout the year (peak during January–March and May–July)

13. Harvest and Yield

- Fruits harvested when they attain full size and maturity
- Harvesting is done manually
- Average yield: 1500–3000 fruits per tree per year (depending on age and management)

D: GUAVA (*Psidium guajava*)

1. Varieties

- Allahabad Safeda
- Lucknow-49
- Sardar
- L-49
- Red Fleshed

2. Varieties Suitable for Tamil Nadu

- Lucknow-49
- Allahabad Safeda
- Red Fleshed
- Sardar
- L-49

3. Soil

- Well-drained loamy to sandy loam soils
- Tolerates slightly acidic to neutral soil (pH 5.5–7.5)
- Avoid waterlogged soils

4. Season of Planting

- June–July (monsoon season)
- February–March (with irrigation)

5. Planting Material

- Grafted or air-layered saplings
- 1–2 years old healthy plants
- Disease-free and vigorous

6. Field Preparation

- Deep ploughing and leveling of land
- Pits of 60 cm × 60 cm × 60 cm
- Fill pits with topsoil mixed with 15–20 kg FYM

7. Spacing

- 6 m × 6 m (standard)
- High-density planting: 4 m × 4 m

8. Planting

- Plant saplings in center of pits
- Ensure firm soil around roots
- Maintain graft union above soil level
- Provide support if necessary

9. Irrigation

- Immediately after planting
- 7–10 days interval during dry season
- Reduce frequency during rainy season
- Drip irrigation recommended for better water use

10. Intercropping

- Vegetables: tomato, brinjal, okra
- Pulses: black gram, cowpea
- Short-term crops during initial years

11. Manures and Fertilizers (Kg per tree/year)

Nutrient / Manure	Quantity (Kg/tree/year)
Farm Yard Manure (FYM)	20–25 kg

Nutrient / Manure	Quantity (Kg/tree/year)
Nitrogen (N)	0.5–1.0 kg
Phosphorus (P ₂ O ₅)	0.25–0.5 kg
Potassium (K ₂ O)	0.5–1.0 kg

Apply fertilizers in split doses: half before flowering and half after fruit set.

12. Harvest Season

- 3–4 years after planting
- Main harvest: August–October
- Minor harvest: March–May

13. Harvest and Yield

- Fruits picked when mature but firm
- Harvest manually
- Average yield: 40–50 tonnes per hectare per year