

Muskmelon:

1. Climate & Soil Requirements

Climate

- Warm & dry climate is best
- Ideal temperature: **25–35°C**
- Needs full sunlight
- Too much humidity causes fruit rot and poor sweetness

Soil

- Sandy loam to loam soil
- Well-drained soil is essential
- Ideal pH: **6.0–7.5**
- High organic matter improves sweetness (TSS).

2. Field Preparation

- 2–3 deep ploughings
- Make fine tilth and good drainage
- Form **raised beds** or **ridges & furrows**
- Add **10–15 tons/acre FYM** (well-decomposed)

3. Seed Rate & Sowing

Seed Rate

- **400–600 g/acre** (variety-based)

Seed Treatment

- Carbendazim or Captan **2 g/kg seed**
- Trichoderma **4 g/kg** (organic)

Sowing Method

- Direct sowing in pits or on raised beds
- Sow **2–3 seeds per pit**, later keep **1 healthy plant**

Spacing

- Row spacing: **6 ft (180 cm)**
- Plant spacing: **1.5–2 ft (45–60 cm)**

Season of Sowing

- **North India:**
 - Feb–March (spring)
 - June–July (monsoon)
- **South India:**
 - Jan–March
 - Sept–Dec

4. Manure & Fertilizer Requirement (per acre)

Recommended Dose

- **N – 40–50 kg**
- **P₂O₅ – 24 kg**
- **K₂O – 30–40 kg**

Application Schedule

Basal Dose:

- 50% Nitrogen + Full Phosphorus + Full Potash

Top Dressing:

- Remaining 50% N at **25–30 days** after sowing

Micronutrients

- **Boron (Borax 3–4 kg/acre)** → improves fruit setting
- **Calcium + Magnesium sprays** → better sweetness & firmness
- **Potassium** helps improve sugar content (TSS).

5. Irrigation Management

Initial Stage

- First irrigation right after sowing
- Next irrigation after **5–6 days** for germination

Vegetative Stage

- Irrigate every **6–7 days**

Flowering & Fruiting

- Irrigate every **3–4 days**
- Drip irrigation is best

Important Note

- **Stop irrigation 7–10 days before harvesting**
→ increases sugar and improves sweetness

6. Intercultural Operations

Weeding

- First at 20 days
- Second at 35–40 days

Training

- Allow vines to spread
- Turn a little soil around nodes to promote root formation (more fruits)

Mulching

- Plastic mulch or straw mulch
- Helps avoid fruit rot
- Keeps fruits clean

7. Pest & Disease Management

Major Pests

1. Fruit Fly

Control:

- Bait traps (jaggery + vinegar + Malathion)
- Cover young fruits with paper bags (effective)

2. Aphids / Whitefly

Control:

- Imidacloprid **0.3 ml/L**
- Neem oil **3 ml/L**

3. Red Mites

Control:

- Wettable Sulphur **2 g/L**

- **Major Diseases**

- **1. Powdery Mildew**

- White powder on leaves

✓ Control: Wettable Sulphur **2 g/L**

- **2. Downy Mildew**

- Yellow patches

✓ Control: Metalaxyl + Mancozeb **2 g/L**

- **3. Fusarium Wilt**

- Plant wilting

✓ Control: Trichoderma soil application

✓ Ensure good drainage

8. Harvesting

Maturity Duration

- **65–85 days** after sowing (variety-based)

Signs of Maturity

- Fruit aroma increases
- Netting (网纹) appears fully on rind (in netted varieties)
- Fruit easily detaches from vine ("slip stage")
- Colour turns yellowish in some varieties

Harvesting Method

- Cut fruits with a small stalk
- Handle gently to avoid bruising

9. Expected Yield

- **80–120 quintal/acre** (OP varieties)
- **120–180 quintal/acre** (Hybrids with drip + mulch)

