

Cucumber:

1. Climate & Soil Requirements

Climate

- Warm-season crop
- Ideal temperature: **20–30°C**
- Sensitive to frost and extreme heat (>35°C).

Soil

- Well-drained **loam or sandy loam soil**
- pH: **6.0–7.0**
- Rich organic matter improves yield and fruit size.

2. Field Preparation

- 2–3 ploughings for fine tilth
- Prepare **raised beds or ridges & furrows**
- Add **15–20 tons/acre FYM** (well-decomposed)

Good drainage is essential to avoid root rot.

3. Seed Rate & Sowing

Seed Rate

- **1–1.5 kg/acre**

Seed Treatment

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

Sowing Method

- Direct sowing in field
- **Spacing:**
 - Row: **6 ft (180 cm)**
 - Plant: **1–1.5 ft (45–60 cm)**

- Seed depth: **2–3 cm**
- On raised beds, 2 rows per bed

Season of Sowing

- **North India:** Feb–April & June–July
- **South India:** Almost year-round

4. Manure & Fertilizer Requirement (per acre)

Recommended Dose

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

Application Schedule

Basal (Before Sowing):

- 50% Nitrogen + Full Phosphorus + Full Potash

Top Dressing:

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

Micronutrients

- **Boron (Borax 3–4 kg/acre)** → Improves flowering & fruit shape
- **Calcium nitrate sprays** → Prevents fruit tip burn

5. Irrigation Management

- First irrigation immediately after sowing
- Then irrigate every **5–6 days**
- During flowering & fruiting: irrigation every **3–4 days**

Drip irrigation + mulching gives highest yield.

6. Intercultural Operations

Weeding

- First weeding at 15–20 days
- Then after 35–40 days

Training / Trellising

- Use **bamboo/rope/net trellis** to lift vines
- Reduces disease & increases straight fruits

Mulching

- Improves moisture, reduces weeds, prevents rotten fruits

7. Pest & Disease Management

Major Pests

1. Fruit Fly

Control:

- Bait traps: jaggery + vinegar + Malathion
- Remove damaged fruits

2. Aphids & Whiteflies

Control:

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

3. Red Mites

Control:

- Wettable sulphur **2 g/L**
- Avoid water stress

Major Diseases

1. Downy Mildew

- Yellow patches on leaves

Control:

- Metalaxyl + Mancozeb @ **2 g/L**

2. Powdery Mildew

- White powder on leaves

Control:

- Wettable Sulphur **2 g/L**

3. Fusarium Wilt

Control:

- Trichoderma soil application
- Crop rotation

8. Harvesting

First Harvest

- **45–55 days** after sowing (variety dependent)

Harvesting Frequency

- Every **2–3 days** for best quality

Signs of Good Quality Fruit

- Uniform green color
- Tender
- No yellowing
- Correct size (market preference)

9. Yield

- **80–120 quintal/acre** (open-pollinated)
- **150–200 quintal/acre** (hybrid varieties with trellis + drip)