

Package of Practice for Tomato Cultivation

Tomato is a major vegetable crop cultivated throughout the year across India. It is widely used in fresh consumption, processing, and culinary applications. Tomatoes are rich in essential nutrients and are considered highly profitable for farmers due to their market demand and nutritional value.

Agro-Climatic Conditions

Tomatoes thrive best in areas with an average temperature of around **21°C**. A frost-free, warm, and sunny climate promotes proper fruit ripening, vibrant color development, and higher yields. Excessive cold or humidity should be avoided.

Nursery Preparation

Ideal bed size: 60 cm wide, 5–6 meters long, and 20–25 cm high.

Remove clods, stones, and weeds from the bed. Mix well-rotted **FYM (farmyard manure)** and sand into the soil for good texture.

Treat the nursery soil with a solution of **Phytolon** or **Dithane M-45 (2–2.4 g per liter of water)** before sowing.

Make sowing lines 10–15 cm apart and sow the seeds.

Lightly cover the seeds with soil and mulch using straw or sand.

Irrigate twice daily using a gentle shower until germination.

Once seedlings emerge, remove mulch. At the 4–5 leaf stage, apply **Thimet**, and spray **Metasystox or Thiodan (2–2.4 ml/liter) + Dithane M-45 (2–2.4 g/liter)**.

For cold weather, cover beds with polythene tunnels for better germination and remove once seedlings establish.

Ideal Sowing Time

North India:

June–July: For winter crop

November: For spring-summer crop

March: For rainy season crop

Central India and Maharashtra:

May–June, August–September, December–January

Eastern and Southern India:

Tomatoes can be grown year-round depending on climate.

Spacing & Seed Rate

Row spacing: 75 cm

Plant spacing: 60 cm

Seed rate: 100–120 grams per hectare

Fertilizer Application

Mix **15–20 tons of well-decomposed FYM per hectare** at land preparation.

Apply **NPK fertilizers** as per the following schedule (kg/ha):

Stage	Nitrogen (N)	Phosphorus (P)	Potash (K)
At transplanting	40 kg	100 kg	100 kg
20 days after transplant	40 kg	—	—
Before flowering	40 kg	—	—
After first harvest	40 kg	—	—
Total	160 kg	100 kg	100 kg

Note: 40 kg Nitrogen = 87 kg Urea, 100 kg Phosphorus = 217 kg DAP, 100 kg Potash = 166 kg MOP.

Weed Management

For chemical weed control in tomato:

Apply **Pendimethalin (Stomp 30%) @ 3.25 liters/ha** (1 kg active ingredient) **4–5 days after transplanting.**

Plant Protection Measures

Major Insect Pests

Aphids, leafhoppers, jassids:

Apply **Thimet (Phorate) @ 12.5 kg/ha**.

Spray **Endosulfan (Thiodan)** or **Metasystox (Oxydemeton Methyl) @ 2 ml/liter**.

Whitefly:

Spray **Triazophos (Hostathion) @ 2–3 ml/liter**.

Fruit borer:

Remove and destroy affected fruits.

Spray **Quinalphos (Ekalux) @ 2.5–3 ml/liter**, or use **Malathion (3 ml/liter)** or **Carbaryl (3 g/liter)**.

Ash weevil:

15 days after transplanting, apply **Carbofuran 3G @ 20 kg/ha**.

Red spider mites:

Spray **Dicofol (Kelthane) @ 2.7 ml/liter** or **Sulphur @ 3 g/liter**.

Root-knot nematodes:

Apply **Carbofuran (Furadan) 3G @ 20 kg/ha** or **Phorate (Thimet) 10G @ 12.5 kg/ha**.

Major Diseases**Late/early blight:**

Spray **Mancozeb (Dithane M-45) @ 2.4–3 g/liter** of water.

Fusarium wilt:

Practice crop rotation every 4–5 years.

Viral complex:

Manage virus vectors (whiteflies, aphids) effectively.

Use high-quality systemic and contact insecticides from reputable companies for controlling sucking pests and caterpillars.

Disclaimer

All the above recommendations are based on research findings from agricultural institutions. Crop results may vary depending on soil conditions, weather, pest and disease pressure, and farm management. Yield and crop success are subject to the farmer's practices and local conditions. Farmers are advised to consult local agricultural departments for region-specific guidance.