

# **In-Depth Guide on Maize Cultivation**

## **1.Introduction**

Maize (*Zea mays*) is a versatile cereal crop grown in the Kharif season for food, fodder, and industrial use. It is widely grown in Karnataka, Andhra Pradesh, and Maharashtra.

## **2.Climate and Soil Requirements**

- Temperature: 21–27°C.
- Rainfall: Requires 50–100 cm of rainfall.
- Soil:
  - Well-drained sandy loam to loam soils.
  - pH: 5.5–7.0.

## **3.Seed Selection and Preparation**

- Varieties:
  - Hybrid: Pioneer 30V92, HM-4.
- Seed Rate: 20–25 kg per hectare.
- Seed Treatment: Treat seeds with Azospirillum and fungicides like Carbendazim.

## **4.Sowing Techniques**

- Time of Sowing: June–July.
- Methods: Ridge and furrow sowing for better drainage.
- Spacing: 60 cm between rows, 20 cm between plants.

## **5.Fertilizer Management**

- Base Fertilizers:
- Nitrogen (120 kg/ha), Phosphorus (60 kg/ha), Potassium (40 kg/ha).
- Application: Split Nitrogen into three doses—basal, knee height, and tasseling stages.

## **6.Irrigation Management**

- Critical Stages: Tasseling, silking, and grain filling.
- Avoid waterlogging during the growing season.

## **7.Pest and Disease Management**

- Pests:
  - Fall Armyworm: Spray Chlorantraniliprole (0.4%).
  - Stem Borers: Apply Carbofuran.
- Diseases:
- Turicum Leaf Blight: Use Mancozeb.

### **8. Weed Control**

- Apply pre-emergence herbicides like Atrazine (0.5 liter/ha).
- Perform intercultural operations or hand weeding.

### **9. Harvesting and Post-Harvest Management**

- Harvesting: When cobs turn dry and grains are hard.
- Threshing: Shelling can be done manually or mechanically.
- Storage: Dry grains to 10–12% moisture before storing.

### **10. Yield and Economics**

- Yield: 5–8 tons per hectare.
- Cost of Cultivation: ₹25,000–₹35,000 per hectare.
- Market Price: ₹1,500–₹2,000 per quintal.