

In-Depth Guide on Chilli Cultivation

1.Introduction

Chili (*Capsicum annuum*) is one of the most important spice crops grown in India. It is a Kharif crop in regions with high humidity and temperature, widely grown in Andhra Pradesh, Tamil Nadu, and Karnataka.

2. Climate and Soil Requirements

- Temperature: 25–30°C is optimal for growth.
- Rainfall: Requires 75–100 cm rainfall; excess water can cause diseases.
- Soil:
 - Well-drained loamy soils with good organic content.
 - Soil pH: 6.0–7.0.

3. Seed Selection and Preparation

- Varieties:
 - Teja: Known for high pungency and yield.
 - Byadgi: Grown mainly in Karnataka, famous for its color and flavor.
- Seed Rate: 5–7 kg per hectare.
- Seed Treatment: Treat seeds with Captan or Carbendazim (2 g/kg) for disease control.

4. Sowing Techniques

- Time of Sowing: June–July, ideally during the onset of monsoon.
- Methods:
 - Transplanting seedlings is preferred.
 - Row spacing should be 45 cm, and plant spacing 30 cm.
- Depth and Spacing: Sow seeds 1 cm deep.

5. Fertilizer Management

- Base Fertilizers:
 - Nitrogen (N): 80–100 kg/ha.
 - Phosphorus (P): 40–60 kg/ha.
 - Potassium (K): 50–60 kg/ha.
- Application:
 - Apply full phosphorus and potassium during sowing.
 - Split nitrogen into two doses: at planting and at flowering.

6. Irrigation Management

- Critical Stages:
 - Flowering and fruiting stages are critical for water supply.
 - Irrigation Method: Drip irrigation is ideal to avoid waterlogging.

7. Pest and Disease Management

- Pests:
 - Aphids and Thrips: Spray with Dimethoate.
 - Fruit borer: Use synthetic pyrethroids.
- Diseases:
 - Leaf curl disease: Spray with systemic fungicides like Mancozeb.
 - Anthracnose: Use fungicides like Chlorothalonil.

8. Weed Control

- Pre-emergence herbicide: Apply Pendimethalin (1.5 liters/ha).
- Manual Weeding: Hand weeding at 20–30 days.

9. Harvesting and Post-Harvest Management

- Harvesting:
 - Harvest when the fruits are fully mature, turning red.
 - Pluck the fruits carefully to avoid bruising.
- Drying: Sun-dry the harvested chilies for preservation.
- Storage: Store dried chilies in a dry, cool place to prevent fungal growth.

10. Yield and Economics

- Yield: 2–3 tons per hectare.
- Cost of Cultivation: ₹25,000–₹30,000 per hectare.
- Market Price: ₹80–₹120 per kg (depending on quality).