

3. Onion Cultivation

1. Introduction

Onion (*Allium cepa*) is a versatile crop grown for bulbs and green shoots, extensively used in cooking. It is primarily cultivated in Maharashtra, Karnataka, Gujarat, and Tamil Nadu.

2. Climate and Soil Requirements

- Temperature: Thrives at 12–25°C.
- Rainfall: Requires 70–100 cm during the growing period.
- Soil:
 - Well-drained sandy loam or clay loam soil.
 - Soil pH: 6.0–7.5.

3. Seed Selection and Preparation

- Varieties:
 - Pusa Red: Suitable for kharif.
 - Arka Kalyan: High-yielding variety.
- Seed Rate: 8–10 kg per hectare.
- Seed Treatment: Treat with Captan or Thiram (2 g/kg).

4. Sowing Techniques

- Time of Sowing:
 - Kharif: May–June.
 - Rabi: October–November.
- Method: Transplant seedlings at 6–8 weeks.
- Spacing: Maintain 15 cm row spacing and 10 cm plant spacing.

5. Fertilizer Management

- Base Fertilizers:
 - Nitrogen (N): 100 kg/ha.
 - Phosphorus (P): 50 kg/ha.
 - Potassium (K): 50 kg/ha.
- Application: Apply half N and full P and K at transplanting; rest N in two splits during bulb formation.

6. Irrigation Management

- Light irrigation every 7–10 days, reducing water during bulb maturity.

7. Pest and Disease Management

- Pests:
 - Thrips: Spray Spinosad (0.02%).
- Diseases:
 - Purple Blotch: Use Mancozeb (0.3%).

8. Weed Control

- Use Pendimethalin (1 liter/ha) as pre-emergence herbicide.

9. Harvesting and Post-Harvest Management

- Harvesting:
 - Bulbs are harvested 3–4 months after sowing when tops dry.
- Post-Harvest: Cure bulbs for 10–15 days before storage.

10. Yield and Economics

- Yield: 20–25 tons per hectare.
- Cost of Cultivation: ₹80,000–₹1,20,000 per hectare.
- Market Price: ₹10–₹20 per kg.