

In-Depth Guide on Gram (Chickpea) Cultivation

1.Introduction

Gram (*Cicer arietinum*) is a vital pulse crop in India, grown for its high protein content. It's typically grown in the Rabi season, especially in states like Madhya Pradesh, Rajasthan, and Uttar Pradesh.

2.Climate and Soil Requirements

- Temperature: 20–30°C is ideal for Gram cultivation.
- Rainfall: Requires moderate rainfall (40–60 cm) or irrigation in dry regions.
- Soil: Well-drained loamy or sandy soils with a pH of 6.0–7.5.

3.Seed Selection and Preparation

- Varieties: Pusa 256, JG 11.
- Seed Rate: 60–70 kg per hectare.
- Seed Treatment: Treat seeds with Rhizobium culture and fungicide (Carbendazim or Thiram) to prevent diseases.

4.Sowing Techniques

- Time of Sowing: October to November.
- Methods: Line sowing for good aeration and yield.
- Depth and Spacing: Sow 3–5 cm deep, with 30 cm row spacing and 10 cm plant spacing.

5.Fertilizer Management

- Base Fertilizers: Nitrogen (25 kg/ha), Phosphorus (50 kg/ha), Potassium (25 kg/ha).
- Application: Apply full Phosphorus and Potassium at sowing; top dress with Nitrogen during flowering.

6.Irrigation Management

- Critical Stages: Irrigate during flowering and pod formation stages.
- Avoid excessive irrigation as Gram is drought-tolerant.

7.Pest and Disease Management

- Pests: Aphids, pod borers, and gram caterpillars. Use insecticides like Dimethoate and Endosulfan.
- Diseases: Wilt, dry root rot. Use seed treatment with Trichoderma or Carbendazim.

8. Weed Control

- Methods: Use pre-emergence herbicides like Pendimethalin, or hand weeding at 25–30 days.

9. Harvesting and Post-Harvest Management

- Harvesting: 120–150 days after sowing when plants turn yellow and pods are dry.
- Threshing: Manual or mechanical threshing to separate seeds.
- Storage: Store in cool, dry conditions to prevent pest attacks.

10. Yield and Economics

- Yield: 1.0–1.5 tons per hectare.
- Cost of Cultivation: ₹15,000–₹20,000 per hectare.
- Market Price: ₹35–₹50 per kg.