

In-Depth Guide on Moong (Green Gram) Cultivation

1.Introduction

Moong (*Vigna radiata*) is a high-protein pulse crop grown in the Kharif season, especially in states like Rajasthan, Maharashtra, and Madhya Pradesh. It is used for food, fodder, and in the preparation of various dishes.

2.Climate and Soil Requirements

- Temperature: 25–35°C for optimal growth.
- Rainfall: Requires 50–75 cm of rainfall, preferring moderate moisture.
- Soil:
 - Well-drained sandy loam soils.
 - pH: 6.0–7.5.

3.Seed Selection and Preparation

- Varieties: Pusa 9531, Pusa 91, M-2 (for higher yields).
- Seed Rate: 15–20 kg per hectare.
- Seed Treatment: Treat seeds with Rhizobium culture and Carboxin (2 g/kg) for protection against seed-borne diseases.

4.Sowing Techniques

- Time of Sowing: June–July (coincides with the onset of monsoon).
- Methods:
 - Line sowing ensures proper spacing.
 - Broadcasting is suitable for small fields.
- Depth and Spacing:
 - Sow seeds 2–3 cm deep.
 - Maintain row spacing of 30–45 cm and plant spacing of 15–20 cm.

5.Fertilizer Management

- Base Fertilizers:
 - Nitrogen (N): 20 kg/ha (as Moong is a legume and fixes nitrogen).
 - Phosphorus (P): 40 kg/ha.
 - Potassium (K): 20 kg/ha (if soil test indicates deficiency).
- Application:
 - Apply all phosphorus and potassium at the time of sowing.
 - Apply nitrogen during the flowering stage if necessary.

6.Irrigation Management

- Critical Stages:
 - Germination: Ensure soil moisture during this stage.
 - Flowering and Pod Development: Ensure adequate water supply.
- Avoid: Over-watering, as it may lead to fungal diseases.

7.Pest and Disease Management

- Pests:
 - Jassids: Spray with Imidacloprid (0.02%).
 - Pod Borers: Use synthetic pyrethroids (0.05%).
- Diseases:
 - Powdery Mildew: Apply Sulphur (0.2%).
 - Yellow Mosaic Virus: Use resistant varieties and control insect vectors.

8.Weed Control

- Methods:
 - Use pre-emergence herbicide Pendimethalin (1 liter/ha) to control weeds.
 - Hand weeding is effective for small fields, especially 25–30 days after sowing.

9.Harvesting and Post-Harvest Management

- Harvesting:
 - Harvest when pods are fully mature, and the plant starts turning yellow (approximately 90–100 days after sowing).
- Avoid delays to prevent shattering.
- Threshing: Use a threshing machine or manual methods to separate seeds.
- Storage: Store in moisture-free, airtight containers. Ensure proper fumigation to prevent pest infestations.

10.Yield and Economics

- Yield: 600–800 kg per hectare, depending on management practices.
- Cost of Cultivation: ₹12,000–₹18,000 per hectare.
- Market Price: ₹5,000–₹6,500 per quintal, varies by region.