

# Horse Gram Cultivation Guide

## Introduction

Horse gram (*Macrotyloma uniflorum*) is a drought-tolerant pulse crop primarily grown in dry and semi-arid regions. It is rich in protein, iron, and dietary fiber, making it an important component of traditional diets. Horse gram is used for human consumption, livestock fodder, and soil enrichment due to its nitrogen-fixing ability.

## Steps of Cultivation

### 1. Variety Selection

- Choose high-yielding and drought-resistant varieties.
- Popular varieties include CRIDA-18R, Paiyur 2, PHG 9, and CO 1.

### 2. Soil Preparation

- Prefers well-drained sandy loam or light red soil with a pH of 5.5–7.5.
- Requires minimal soil preparation; plowing once or twice is sufficient.
- Organic manure or compost application improves soil fertility.

### 3. Sowing and Spacing

- Best sown at the beginning of the monsoon (June–July for Kharif season, September–October for Rabi season).
- Seed rate: 20–25 kg per hectare.
- Spacing: 25–30 cm between rows and 10–15 cm between plants.

### 4. Irrigation and Water Management

- Requires very little irrigation and grows well under rainfed conditions.
- Supplemental irrigation is required during prolonged dry spells.
- Avoid excessive watering, as it is highly tolerant to drought but susceptible to waterlogging.

### 5. Fertilization and Nutrient Management

- Requires minimal fertilization; phosphorus and potassium application based on soil tests is recommended.
- Organic fertilizers like farmyard manure enhance soil structure and nutrient availability.
- Nitrogen-fixing bacteria (*Rhizobium*) can be used to improve growth.

### 6. Weeding and Pest Control

- Regular weeding is necessary during the early stages to prevent competition.
- **Common pests:** Aphids, pod borers, and leafhoppers. Neem-based pesticides and biological controls are effective.

- **Common diseases:** Leaf spot, rust, and powdery mildew. Crop rotation and fungicide application help manage diseases.

## 7. Harvesting and Yield

- Horse gram is ready for harvest 100–120 days after sowing.
- Harvest when pods mature and turn brown.
- The average yield is 8–12 quintals per hectare under optimal conditions.

## Conclusion

Horse gram is an excellent choice for farmers in dry regions due to its resilience and nutritional benefits. Its ability to fix nitrogen improves soil fertility, making it a valuable crop for crop rotation and sustainable agriculture. Proper crop management ensures better yields and profitability.

