

## In-Depth Guide on Zaid Vegetables

### Carrot Cultivation

#### 1. Introduction

Carrot (*Daucus carota*) is a cool-season root vegetable rich in vitamins and widely consumed fresh, cooked, or processed. It is primarily grown in Haryana, Punjab, Uttar Pradesh, and Karnataka.

#### 2. Climate and Soil Requirements

- Temperature: Thrives at 15–20°C during growth.
- Rainfall: Prefers 30–40 cm of well-distributed rainfall.
- Soil:
  - Deep, loose, well-drained sandy loam.
  - Soil pH: 6.0–7.5.

#### 3. Seed Selection and Preparation

- Varieties:
  - Pusa Kesar: Ideal for red carrots.
  - Nantes: Suitable for table purposes.
- Seed Rate: 4–5 kg per hectare.
- Seed Treatment: Treat seeds with Captan or Thiram (2 g/kg).

#### 4. Sowing Techniques

- Time of Sowing: October to November.
- Method: Line sowing on raised beds.
- Depth and Spacing:
  - Sow seeds 1–1.5 cm deep.
  - Maintain 30 cm row spacing and 5–8 cm plant spacing.

#### 5. Fertilizer Management

- Base Fertilizers:
  - Nitrogen (N): 50 kg/ha.
  - Phosphorus (P): 60 kg/ha.
  - Potassium (K): 40 kg/ha.
- Application: Apply half N and full P and K during sowing; rest of N at 30 days.

#### 6. Irrigation Management

- Irrigate every 7–10 days in light soils and 10–12 days in heavy soils.

## **7. Pest and Disease Management**

- Pests:
  - Root Fly: Spray Malathion (0.05%).
- Diseases:
  - Leaf Blight: Use Mancozeb (0.25%).

## **8. Weed Control**

- Use pre-emergence herbicide Pendimethalin (1 liter/ha).
- Perform light hoeing 20–25 days after sowing.

## **9. Harvesting and Post-Harvest Management**

- Harvesting:
  - Harvest 90–120 days after sowing when roots reach desired size.
- Post-Harvest: Clean roots and store at 0–5°C for longer shelf life.

## **10. Yield and Economics**

- Yield: 20–30 tons per hectare.
- Cost of Cultivation: ₹50,000–₹70,000 per hectare.
- Market Price: ₹10–₹20 per kg.