

## Package of Practice for Carrot Cultivation

Carrot (*Daucus carota*) is a major root vegetable crop grown extensively across India during the winter season. It is a rich source of Vitamin A, beta-carotene, fiber, and antioxidants, making it a highly nutritious crop with great market demand.

### Ideal Soil for Carrot Cultivation

Carrot can grow well in all types of well-drained, non-saline soils. However, **loamy to sandy-loam soil** is considered ideal. Fields with a hard subsurface layer may lead to malformed roots (forking). Proper soil structure is essential for quality produce.

### Best Time for Sowing

The **optimum sowing time is September**.

Early sowing (July to mid-August) may result in poor germination, white roots, multiple root development, and lower quality.

Sowing can be done **on raised beds or flat beds**, ensuring better root formation.

**Row spacing:** 30 cm

**Plant spacing:** 8–10 cm

### Seed Rate

Use **6–8 kg of seeds per acre** for uniform plant population.

### Land Preparation

Deep ploughing with a soil-turning plough followed by harrowing is recommended.

This helps in breaking the hardpan and improves root development.

Mix well-rotted **farmyard manure (FYM)** and **DAP** before sowing.

Remove previous crop residues and weeds thoroughly.

### Fertilizer Management

Apply **20 tons of FYM per acre** during land preparation.

Use the following chemical fertilizers per acre:

**Nitrogen (N): 24 kg**

**Phosphorus (P<sub>2</sub>O<sub>5</sub>): 12 kg**

### **Potassium (K<sub>2</sub>O): 12 kg**

Apply **half of the nitrogen** and **full dose of phosphorus and potassium** at the time of sowing.

Apply the remaining nitrogen **3–4 weeks after sowing** as top dressing and hill up the soil around the base.

### **Irrigation Schedule**

Carrot requires **5–6 irrigations** during the growing period.

The first irrigation should be done **immediately after sowing**.

Ensure water reaches only up to 3/4th of the ridge height.

Subsequent irrigations should be done depending on weather and soil moisture.

### **Weed Management**

Carrot fields usually face low weed pressure in the early stage.

However, if weed infestation occurs, remove them manually using a hand hoe.

For line-sown crops, perform earthing-up (soil hilling) **3–4 weeks after sowing**.

### **Harvesting**

Carrots are ready for harvest **in 90–95 days** after sowing.

Irrigate the field before harvesting and carefully lift the roots using a spade to avoid cuts and damage, which helps retain market quality.

### **Important Tips & Precautions**

#### **Avoid early sowing (July–August):**

High temperatures may lead to poor germination, multiple roots, white roots, and stunted growth.

#### **Heavy or compacted soils:**

Can cause "forking" or malformed roots. Ensure proper land preparation.

#### **Waterlogged soils or high water tables:**

Lead to fiber formation and white, poor-quality carrots.

#### **Late harvesting:**

Reduces taste and nutritional value. Carrots become woody and fibrous with lower weight.

**Delayed irrigation:**

May cause root cracking, which affects market quality and price.

**Note:**

These recommendations are based on research center findings. Yield may vary due to soil, weather, pest/disease attacks, and crop management.

Farmers are responsible for their crop outcomes. Local agricultural department guidelines may also be followed.