CARROTS

Designed By:

CropmanagerApp

Table of Contents

Carrots are widely grown due to their carotene composition (vitamin A) which prevents night blindness.

Varieties

Nantes and chantenay are the most widely grown varieties.

Nantes: have good yield and quality roots, long, cylindrical orange in color, with few and brittle leaves.

Chantenay: shorter roots, thick at the top, dark orange in color.

Soil requirements

Carrots grow best in well drained, sandy loamy soils with a friable texture, these favor root development. Carrots do not grow well in acidic soils below pH of 5. A pH of 6.5-7.0 is ideal for carrot production.

Climatic conditions

Carrots are moderately hardy and also tolerate high temperatures; seedlings are sensitive to extreme temperatures. Recommended temperatures are between 16 and 21 degrees Celsius. Rainfall necessary for growth should be between 700 and 800mm

Planting

Seed bed preparation

Carrots need finely prepared soil for good root development and proper germination, fields should be ploughed at a depth of 30cm and properly leveled. Seedbed dimensions can be about 1mwide, 10m length and 20cm height. About 40cm wide furrows are used between beds for irrigation

Seed sowing

Carrots are planted by direct seeding in the seedbed at a rate of about 5kg/ha. seeds are often mixed with sand for easy handling and spacing, seeds are always slow to germinate and seedlings are often weak. Seedbed is covered with grass and watered, grass is removed after germination. sowing is done when rain falls.

Fertilization

Carrots are heavy feeders of soil nutrients mainly potassium. A yield of 100 q (quintal) utilizes about 37 kg of K, 12kg of N, and 8kg of P from the soil used, yields that follow carrots are mainly low. Mainly nutrient application will depend on soil fertility. 175 DAP is recommended per hectare. For less fertile areas one may apply 40-50q/ha of decomposed manure before ploughing, then 100kg/ha DAP at planting and 50kg of urea at first cultivation, fresh manure may lead to branching of leaves so decomposed manure is most desired.

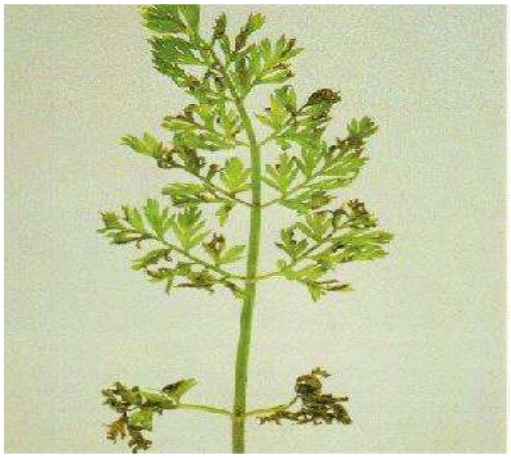
Weed control

Carrots grow very slowly for the first few weeks thus cannot compete with weeds. Repeated shallow cultivation might be necessary to keep down the weeds. Roots are within a depth of 5cm so deep cultivation might be injurious to the plants. To avoid greening on might need to keep the root tops covered with soil.

Diseases

Carrots can be attacked by fungi, bacteria and nematode diseases, these cause poor plant growth and reduced yield and quality. The most fatal carrot diseases are **Alternaria leaf bright** and **Powdery mildew**.

Alternaria Leaf Blight



Symptoms

- Greenish brown, irregularly shaped leaf spots.
- Stem infection, loose of foliage.

Management

- Use disease free seeds.
- Avoid excess irrigation.
- Crop rotation with non host plant species
- Spray with available fungicides say Agrolaxyl, Ridomil.

Powdery mildew

Symptoms

- Patches of white, fluffy fungus appear first on lower leaves then spread.
- Fungus covers leaves with white substance and powdery spores.
- Loss of foliage, poor seed quality, and low yields.

Management

- Crop rotation with non host crops.
- Avoid excess irrigation
- Removal of alternate hosts and carrot residues from the field.
- Spray with locally available sulfur fungicides like Bayleton.

Harvesting

Carrots are harvested when roots are mature about 3.5-5.5cm in diameter or 90-120 days after sowing. Avoid harvesting immature or overly mature roots. Immature roots have a light color and low carotene content; over-mature roots become tough with hard centre core. Harvesting is done by lifting carrots with hand if soil is wet or dug with forked hoe and pulled with hand if soil is dry care is taken not to injure the roots, expected yields go up to 150q/ha under proper management.