DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

Agriculture and Natural Resources

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Home Gardening Series

Carrots

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Environment

Light – sunny/partial shade
Soil – well-drained, deep
Fertility – rich
pH – 5.8 to 7.5
Temperature – cool
Moisture – moist

Culture

Planting – seed, early spring or late summer
Spacing – 2 x 18 inches
Hardiness – cool-season biennial
Fertilizer – heavy

Carrots – *Daucus carota*

Carrots have been cultivated for more than 2,000 years. They were known to the Greeks and Romans, reaching Europe early during the Christian era. A favorite vegetable of Queen Elizabeth in England, carrots were brought to Virginia in 1609 and to New England in 1629.

Carrots are hardy cool-season biennials grown for their thickened roots. Although carrots can endure summer heat in Arkansas, they grow best when planted in early spring. Carrots are eaten both raw and cooked and can be stored for winter use. They are rich in carotene (a source of vitamin A) and high in sugar.

Cultural Practices

Planting Time

Carrots are usually planted with the other frost-tolerant vegetables from mid-February to early April.

Plow the soil to a depth of 8 to 9 inches to allow full development of the carrot roots. Work the seedbed uniformly to break up clumps and clods that prevent penetration of the roots. Varieties with extremely long roots are not usually recommended for the home garden.

Spacing and Depth of Planting

Plant seed 1/4 to 1/2 inch deep (not more than two to three seeds per inch) in early spring. For later sowing, plant seed 1/2 to 3/4 inch deep when the soil is drier and warmer. Space rows 12 to 18 inches apart. Carrot

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Cultivars

Cultivar	Days to Maturity	Seed/ 100 Ft of Row	Disease Resistance or Tolerance	Remarks
Royal Chantenay	60	1 oz		Good color and quality, hybrid, good yields, blunt-tapered roots.
Danvers Half Long	75	1 oz		Good color and yields, blunt-tapered roots.
Scarlet Nantes	68	1 oz		Good quality, cylindrical roots.
Purple Haze	65	1 oz		Purple carrot, orange core, turns orange when cooked, 2006 All-American selection.
Little Finger	60	1 oz		Baby carrots, 3 1/2" long by 5/8".
Sugarsnax	68	1 oz	ALB, CLB, PRD (T)	Nantes x Imperator type. Tender, sweet roots; very smooth, deep orange, slightly tapered carrot is high in betacarotene; 9 inches.

Abbreviations: ALB: Alternaria Leaf Blight; **CLB**: Cercospora Leaf Blight; **PRD**: Pythium Root Dieback; (**R**): Resistant; (**T**): Tolerant.

seed germinates very slowly, so mark your row by planting a single radish seed every inch or so.

Germination requires up to two weeks or more, and the seedlings may not emerge uniformly. Thin the seedlings when they are about 1 inch tall to no more than three seedlings per inch for the finger carrots, one to two seedlings per inch for carrots that will be harvested young, and one seedling per 1 to 2 inches for larger varieties (Danvers Half Long) that will be harvested mature for canning and freezing.

Care

Carrots germinate best in warm, moist soil. Covering the row with clear polyethylene film warms the soil and conserves moisture. Remove the film when seedlings appear. Sprinkling during late spring and summer months may be necessary to assure germination of successive plantings.

Carrot seedlings are weak and grow slowly while young. It is important to keep weeds down during the first few weeks. Cultivate very shallowly with a knife blade, cultivator or a hoe. Deep cultivation may injure the roots.

Harvesting

Carrots can be harvested or “pulled” when the roots are 1/2 inch or more in diameter. Finger carrots are usually ready for harvest within 50 to 60 days. Other varieties should usually be allowed to grow until they have reached a minimum of 3/4 inch diameter (about 60 to 70 days after planting). They may then be harvested over a three- to four-week period.

Summer-planted carrots may be left in the ground until a killing frost. Some gardeners place straw mulch over the row so that carrots can be harvested throughout the fall.

Cut off the tops of the carrots 1 inch above the root and place in storage at 32 degrees F with high humidity. Carrots may be placed in a refrigerator or buried in sand in an underground cellar. Under proper storage conditions, carrots keep for four to six months.

Frequently Asked Questions

Q. What causes my carrots to turn green on the crown (top) of the root?

A. This condition is call “sunburning.” It causes an off-flavor and dark green pieces in the cooked product. Sunburn can be avoided when the tops are healthy by pulling a small amount of loose soil up the row when the roots start to swell.

Q. Why are my carrots misshaped, with forked and twisted roots?

A. Forking may result from attacks of root-knot nematodes. Twisting results from seeding too thickly and inadequate thinning of seedlings.

Q. I have planted carrots several times with no luck. Why won’t they come up?

A. Do not plant the carrots too deep. Sow the seeds on top of the bed and gently rake them in, covering the seed only 1/4 inch. Germination increases as soil temperatures decrease. Keep planting area moist; don’t crust or harden the soil on top of the bed with direct sprays of water.

Q. What causes my carrots to have fine hairy roots, poor color and a bitter taste?

A. These conditions are caused by a disease known as “aster yellows.”

Q. What causes my home garden carrots to be tasteless, woody and often bitter instead of sweet and tender?

A. These problems are associated with growing and environmental conditions during the maturing period. Carrots grow best and develop highest sugars when temperatures are between 40 and 80 degrees F and are planted in fall for early winter harvest. Carrots are cold hardy but should be planted so they mature before temperatures drop below 20 degrees F as damage or death can occur.

Q. What causes my carrots to be pale yellow instead of the typical orange color?

A. Although there are varietal differences in root color, this problem could be caused by environmental conditions. Carrots maturing under warm temperatures or high moisture conditions often lack good root color and have poor flavor and texture. Plant carrots so they mature under relatively cool temperatures that average less than 80 degree F. Avoid excessive soil moisture.

Q. The foliage of my carrots is infected with brown lesions which cause the leaves to decay.

A. This is a leaf blight of carrots and is caused by two fungi. This condition can be controlled by spraying a fungicide. Begin at the first sign of the disease and repeat at 10- to 14-day intervals. Extended periods of high humidity caused by dews and intermittent rain contribute to the development of leaf blight of carrots. If not controlled, leaf blight reduces yield. Discontinue when weather conditions change.

Q. When I dug my carrots, I found galls or swelling on the roots.

A. They are root knot nematodes. Nematodes are controlled with soil treatments, rotation to a resistant crop and soil solarization.

Q. The foliage on my carrots looks yellow with multiple sprouting at the crown of the root. The roots have numerous small roots on the main root.

A. This is aster yellows, a virus disease of carrots carried by leafhoppers. There is no control for the disease other than a good insect program coupled with removal of the diseased plants once the disease symptoms begin.

Q. My carrots are rotting at the soil line. On close examination, I find the top of the root covered by a white fungal mat.

A. This is southern blight of carrots, a soilborne disease. It can be controlled by combining a good foliage fungicide program and deep burial of organic material so undecomposed leaf tissue is not in the upper zone of the garden soil and rotation.

Q. Once I harvest my carrots and place them in the crisper, they soon deteriorate into a slimy, foul-smelling mess.

A. This is usually associated with bacterial soft rot which enters the carrot at harvesttime through cuts and breaks. Harvest your carrots before the soil temperature rises above 80 degrees F and the bacteria become active. To control, wash carrots thoroughly. Broken or damaged carrots should be consumed immediately. After washing, place them in a crisper and keep them at a cool temperature.

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