

# CARROTS Science Page

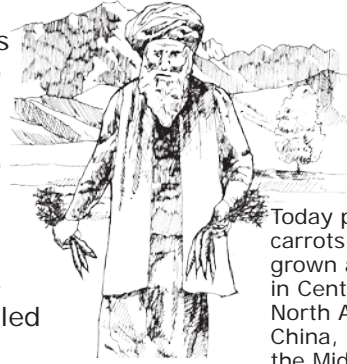
## DID YOU KNOW?

The first carrots were not orange. In the 1500s, the Dutch bred purple carrots with yellow carrots to develop the first orange carrots.



## ORIGINS

White carrots are native to Europe and red carrots are native to Asia. Yellow and purple carrots are native to the area now called Afghanistan.



Today purple carrots are still grown and eaten in Central Asia, North Africa, China, India, and the Middle East.

## CLASSIFYING CARROTS



## SPECIES

*carota*

This comes from the Greek word karotan, meaning carrot.



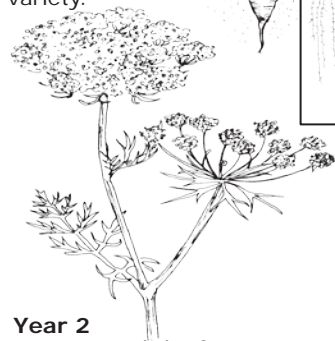
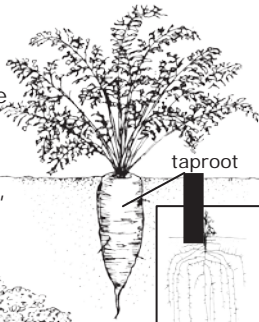
Carrots come in all shapes, sizes, and colors.

## THE CARROT PLANT

The carrot plant lives for two years.

### Year 1

During the first year, the root grows. It is ready to harvest in 70-150 days, depending upon the variety.



### Year 2

If not picked the first year, the root over winters. The next year, the carrot plant uses the stored food in the root to send up a flower stalk. Flowering wild carrot has small white roots and is common along roadsides in much of the U.S.

## GROWING AND HARVESTING CARROTS

Plant carrots in spring in cooler climates and in fall in hotter climates. Prepare the soil well! Most varieties like deep, loose, well-drained soil. If planted in heavy soil, carrots may produce forked roots.



My carrots are all forked! I guess my soil is too heavy for this variety.

Sprinkle the seeds in rows spaced about 12 to 18 in. (30-46 cm) apart. After they come up, thin them to one inch (2.5 cm) apart. When the tops grow thicker, thin to about 2-3 in. (7-8 cm) apart.



To get nice carrots, I have to thin out the seedlings so they will have room to grow.

Harvest carrots when they are at least finger size. The smaller carrots are juicier and more tender.

## NUTRITIONAL VALUE

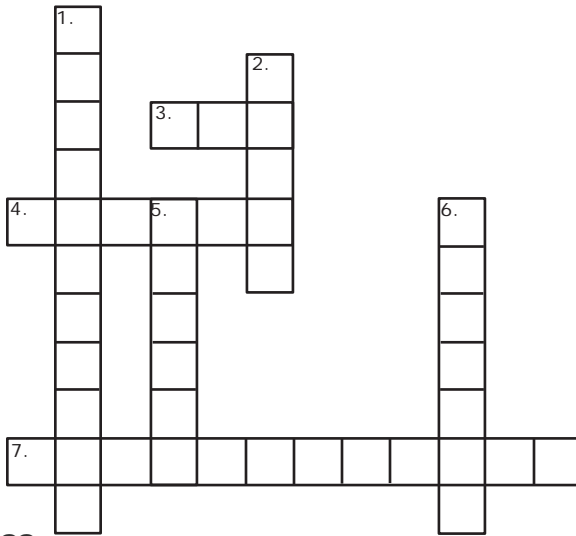
Carrots have more beta-carotene, from which the body makes vitamin A, than any other vegetable. Plant breeders have developed carrot varieties that have about 75% more beta-carotene than the carrot varieties that existed 25 years ago.



A person who does not have enough vitamin A cannot see well in the dark. If left untreated, the person may become blind. Each year an estimated 350,000 children, mostly living in developing countries, go blind because their bodies lack vitamin A.



## CROSSWORD PUZZLE



### Across

- Carrots live for \_\_\_\_ years.
- Genus name for carrots.
- Orange carrots have more \_\_\_\_ than any other vegetable.

### Down

- Purple and yellow carrots are from \_\_\_\_.
- Carrots should be planted in \_\_\_\_ soil.
- Species name for carrots.
- Carrots belong to this family.



## QUOTE

"What did the carrot say to the wheat?  
Lettuce rest, I'm feeling beet."

*Shel Silverstein*

Down: 1. Afghanistan; 2. loose; 5. carrot; 6. Apiaceae.  
Across: 3. two; 4. Daucus; 7. beta-carotene.



## SPOTLIGHT ON RESEARCH

### A Rainbow of Carrots

Today, most people around the world eat orange carrots, but that was not always true. A thousand years ago, people in Afghanistan ate yellow and purple carrots, and Europeans ate yellow ones. In India people still prefer red carrots.

People all over the world may soon be eating a rainbow of colorful carrots, thanks in large part to scientists at the University of Wisconsin. For several years, they have been cross breeding carrots from all over the world to develop new carrot varieties that come in many different colors. These new varieties make very colorful dishes, but that is not the main reason they are being developed.

You may have heard that one way to get enough nutrients is to eat vegetables with different colors. In the case of carrots, this is true. Nutritionists have discovered that each different color variety of carrot contains a different nutrient that your body needs. For example, orange carrots are high in beta carotene, which you need for healthy eyes and seeing in the dark. Red carrots are high in lycopene, which protects you against heart disease and some cancers. Purple carrots contain powerful antioxidants that grab and hold harmful chemicals in your body that can cause aging and disease. Yellow carrots are high in lutein, which prevents eye diseases.

If you see these new colorful carrots in your food market, give them a try! They make surprisingly colorful and tasty dishes, and they are good for you, too!

Source: Peabody, Erin. "New Carrots Offer Colorful Surprises - and Health Benefits." U.S. D.A. Agricultural Research Service. November 15, 2004. <<http://www.ars.usda.gov/is/pr/2004/041115/htm>>



## MORROCAN CARROT SALAD

**Yield: 5-6 servings**

Carrot salad is a traditional dish in North Africa and the Middle East. In Israel it is eaten at the Jewish New Year. It is a symbol of a sweet and fruitful year to come.

### Ingredients

- \* 1 pound (0.9 kg) carrots, grated
- \* 1/4 cup (60 ml) vegetable oil
- \* 3 to 4 tablespoons (45-60 ml) fresh lemon juice
- \* 1/4 cup (60 ml) chopped fresh parsley
- \* 2 to 4 cloves garlic, finely chopped
- \* 1/2 teaspoon (2.5 ml) ground cumin
- \* 1/4 teaspoon (1.25 ml) ground cinnamon
- \* 1 teaspoon (5 ml) sweet paprika
- \* Pinch of salt
- \* 1/4 to 1/2 teaspoon (2 ml) cayenne (optional)

### Instructions

In a large bowl, mix together all the ingredients. Cover and let marinate in the refrigerator for at least 2 hours or up to 2 days.