

Cucumber

Grow

Cucumbers are vegetables that are members of the plant family *Cucurbitaceae*, which also includes squashes and melons. Cucumber plants grow in two forms: vine or bush. Vines grow along the ground or up a trellis. Bush cucumbers grow on a compact plant. Cucumbers have two basic types—those that are eaten fresh (known as the slicing variety) and those grown for pickling. Cucumbers can be grown in a variety of shapes and sizes, from 1" long to greenhouse varieties that can reach 20" or longer. Many cucumbers that we eat are grown in greenhouses. These tend to be milder in flavor and have less seeds than field-grown varieties.¹⁻³

Fun Fact: Cucumbers likely originated in India 3,000 years ago before spreading to Africa and Southeast Asia.²⁻³

Cucumbers are very sensitive to cold and will not germinate until soil temperatures reach at least 60°F. Cucumbers can be started from seeds indoors and then transplanted to the ground no earlier than 2 weeks after the last frost date. Seedlings should be planted 12 inches apart and thinned to 1.5 feet apart once reaching 4 inches tall. If space is limited, use a trellis for vining varieties. Trellising also produces a higher yield and improved fruit quality. Full sun and well-drained, loamy soil is preferred.²

Fun Fact: English cucumbers are called “burpless” because their lack of seeds eliminate gas build-up that affects some people.¹

Choose

Cucumbers are available year round. Peak season is June to October. In warm summer soil, cucumbers can grow and ripen in 6 weeks. Slicing cucumbers can be harvested when they are about 6 to 8 inches long. Pickling varieties can be harvested when they are 2 inches long. Cucumbers come in many shapes and sizes depending on the varietal. Generally, smaller cucumbers contain fewer and tinier seeds. Popular varieties are Ashley, Cherokee 7, Gemini, Palomar, Poinsett, and Straight 8. Look for firm cucumbers with a shiny or waxy surface. Be mindful of wrinkles or soft spots. At least two-thirds of the cucumber should be dark green.¹⁻⁴



Fun Fact: Did you know that after harvesting, wax can be applied to a cucumber's skin to extend its shelf life? The wax helps seal in moisture. Because cucumbers are 96% water they have a tendency to dry out very easily.^{3,4}

Store

Store cucumbers at 50-55°F, 85-95% relative humidity. If the temperature is too high, cucumbers will ripen rapidly and turn yellow. If the temperature is too low, cucumbers develop pitting and tissue collapse. Freezing cucumbers is not recommended. For best results, aim to use within two days.⁵

Fun Fact: “Cool as a cucumber” isn’t just a funny saying. The inner temperature of a cucumber can be up to 20 degrees cooler than the outside air due to its water content.³

Use

Cucumbers are best eaten raw and added to cold salads, sandwiches, wraps, dressings, spreads or dips. They can also be served with hummus, salsa or a lowfat dressing for a dip. Cucumbers should be washed under clean, running water and patted dry with clean paper towels before eating. If the skin is waxed, a vegetable peeler or small, sharp knife can be used to remove the skin. Slice or chop cucumbers as desired.

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Teach

Field planted cucumbers are monoecious, having the stamens and pistils in separate flowers on the same plant. Greenhouse cucumbers are gynoecious, having only female flowers; these cucumbers do not have seeds.²

Class Activity - Pickling, Processing and Preserving

Many raw fruits and vegetables can be made into other products just like cucumbers can be made into pickles. This activity will help students understand the steps involved in pickling and also introduce them to other ways raw fruits and vegetables can be processed or preserved.

Materials Needed:

- Variety of cucumbers, slicing, pickling and seedless
- Cucumbers, sliced (enough for one per student)
- Sliced dill pickles (enough for one per student)
- Small cups or plates for each student (Place cucumber and pickle samples on to distribute to each student.)

Steps: *Use food safety steps. Wash hands and produce.

1. Have students examine the varieties of cucumbers and record their observations.
2. Then, provide each student with a slice of cucumber and a slice of pickle in a cup or on a plate.
3. Ask students to sample the cucumber and pickle, then describe how they taste, including any similarities or differences.
4. Discuss the pickling process, outlining the steps involved.
5. As a class, make a list of vegetables that can be pickled.
6. Then, divide the class into 4 groups. Assign groups to either grapes, tomatoes, potatoes, or corn.
7. Ask each group to write down a list of items they could find in the market or grocery store that were once one of these fruits or vegetables.
8. Have groups investigate how one finished product is made (i.e., how spaghetti sauce is made from tomatoes).
9. Ask the groups to take turns reporting their findings to their classmates.⁶

Fun Fact: Pickling cucumbers are grown in 30 states, with North Carolina being one of the top producers.⁶

Eat

Cucumbers are Cool

One cup of raw cucumber, with the peel, has about 16 calories. Cucumbers are a source of vitamin C, potassium, fiber, lutein and zeaxanthin. They are cholesterol free and low in fat and sodium. Because their water content is so high, cucumbers can help you stay hydrated.^{3-4,7-9}

Fun Fact: Cucumbers can come in white, yellow, and even orange colors. "Lemon" cucumbers are small, round, and yellow and closely resemble the fruit.²

Vitamin C helps form collagen to hold muscles, bones and tissues together, keeps our gums healthy, protects us from infections and bruising, aids in healing, helps our body absorb iron and folate from plants, and acts as an antioxidant to prevent cell damage. Potassium helps to regulate fluid and mineral balance, maintain normal blood pressure, transmit nerve signals and contract muscles. Soluble fiber helps lower blood cholesterol. Insoluble fiber, found primarily in cucumber skin, aids digestion. Lutein and zeaxanthin may help maintain vision.⁹

Fun Fact: The somewhat bitter taste in cucumbers comes from a group of chemicals called *cucurbitacins*. Cucumbers have been selected over time so that these bitter compounds are not very strong.²

Find

For more cucumber facts and resources, visit:

1. North Carolina Department of Agriculture & Consumer Services, www.ncagr.gov
2. N.C. State Extension, www.ces.ncsu.edu
3. Minnesota Cooperative Extension, www.extension.umn.edu
4. Washington State Department of Agriculture, Farm to School Toolkit, www.wafarmtoschool.org
5. U.S. Department of Agriculture, Food and Nutrition Service, www.fns.usda.gov
6. Pickle Packers International, Inc., <http://ilovepickles.org>
7. USDA Food Composition Databases, <http://ndb.nal.usda.gov>
8. Produce for Better Health Foundation, <https://fruitsandveggies.org>
9. Academy of Nutrition and Dietetics, www.eatright.org