Vegetable

Lettuce

Grow

Lettuces are from the flowering plant family *Asteracae*. Lettuce is a fairly hardy, cool-weather vegetable that does best when the average temperature is 60-70°F. In North Carolina, lettuce can be grown in the spring or fall. In the mountains (above 3,000 feet elevation), it may be grown mid-summer. Seeds can be directly sown as soon as the ground can be worked. Plant seeds ½ inch deep in single rows, 8 inches apart. The lettuce plant starts out with a short stem called a rosette. The rosette lengthens and branches when the plant blooms. When harvesting, you can dig up the whole plant, remove just the outer leaves, or cut the plant an inch above the soil surface. Make sure to harvest the entire lettuce head before it begins to "bolt" or grow very tall and produce seeds. This results in a very bitter and inedible lettuce.[1-4]

Fun Fact: There are five different types of lettuce: cos, crisphead, leaf, butterhead, and stem.[1-3]

Lettuce Rejoice!

There are hundreds of varieties of lettuce greens. Some examples within each type of lettuce are: butterhead (Bibb, Boston), cos (Romaine), crisphead (Iceberg), loose leaf (Green leaf, Red leaf) and stem (Celtuce). Lettuce is the second most popular vegetable in the United States behind potatoes. Romaine is the second most popular lettuce variety, but contains 5 times more nutrients then the most popular iceberg lettuce.[1,3]

Fun Fact: Romaine is the preferred lettuce for Caesar Salad. The salad is allegedly named after the restaurant where it was first served, *Caesar's* in Tijuana, Mexico.[5]

Choose

Green means go!

Choose lettuce that is closely bunched with fresh-looking green leaves. Large, even-shaped heads with broad, fairly loose leaves are considered to be the best. Avoid leaves that are yellowing, browning, wilting, or have blemishes and small holes.[4,5,6]

Store

Immediately store lettuce in a tightly covered container in the coldest part of the refrigerator (32-36°F, >95% relative humidity). Store lettuce uncut and untrimmed, with outer leaves in place. Some fruits and vegetables, like apples, pears and tomatoes, produce ethylene gas. Ethylene gas can cause produce to ripen quickly. Store lettuce away from ethylene producing fruits and vegetables. Lettuce is best used within 1-2 days. Depending on lettuce type, it may be stored for up to one week if refrigerated.[6]

Fun Fact: Romaine is also called cos lettuce because it is said to have originated on the Greek island of Kos in the Aegean Sea.[1] Iceberg got its name because California growers shipped it covered with ice in the 1920s.[3]

Use

Lettuce is usually eaten raw in salads or added to wraps or sandwiches, but it can also be sautéed, roasted, braised, or even pan-fried. When ready to use, wash raw lettuce well under clean, running water. Pat dry with clean paper towels. A salad spinner can also help dry the leaves. Do not cook lettuce in aluminum or copper cookware. The aluminum and copper react with sulfur compounds in the lettuce to create unpleasant odors and flavors. It also destroys vitamin C, folic acid, and vitamin E.[5]

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Lettuce

Teach

Classroom Activity

Plants need water, air, and nutrients to grow. Nutrients are dissolved in water and taken up by the plant roots. The most important nutrients are nitrogen, phosphorous, and potassium. Traditionally, plants get nutrients from the soil, but it is possible to grow plants without soil. This can be helpful when soil is not available or it is scarce—in urban areas, places where soil has been depleted of nutrients, and even outer space. One method used to grow plants without soil is called *hydroponics,* growing plants by floating their roots in nutrient enhanced water. For a detailed lesson plan, see #7 in the resource list.

Materials Needed:

- 1 black, heavy duty garbage bag
- Styrofoam ice chest with deep lid cover
- 6 Styrofoam cups
- 6 gallons distilled water
- Perlite (found at hardware stores or plant nurseries)
- Sphagnum moss
- Lettuce seedlings
- Pen and craft knife
- Nutrient mix
- Additional water

Steps:

1. Line the ice chest with the garbage bag. Fill with water.
2. Using the cups as a template, trace 6 evenly-spaced circles on the chest cover. Cut out circles ¼ inch smaller than the lid circles.
3. Cut small holes in the bottom of each cup. Place moss in the cups and top with perlite. Fill to just under the rim of the cup.
4. Insert seedlings into the perlite. Place the lid upside down on the chest. Place cups in the holes of the lid.
5. Each day add water combined with nutrient mix, ensuring the container water level is not too high.
6. As the plants grow, harvest leaves as desired.[7]

Fun Fact: Lettuce is one of the oldest vegetables. Egyptian tomb paintings and written accounts date back to 79 A.D.[3]

Eat

Lovable Lettuce

One cup of raw, shredded lettuce offers the following calories: Green or Red leaf 4-5, Butterhead 7, Romaine 8, and Iceberg 10. Lettuce is 95% water, but it still packs a ton of nutrients. Lettuce is low in fat and sodium. It is an excellent source of vitamin A (Butterhead, Green leaf, Red leaf, Romaine) and vitamin K (Butterhead, Green leaf, Iceberg, Red leaf, Romaine). It is a good source of folate (Butterhead, Romaine). It is also a source of manganese, lutein and zeaxanthin.

Vitamin A supports the growth and health of cells and tissue, promotes normal vision, protects us from infection and helps regulate the immune system. Vitamin K helps our body clot blood and make proteins needed for our blood, bones, and kidneys. Folate is needed for blood cell, DNA, and genetic development. Manganese helps the body form bones and plays a vital role in converting carbohydrates, protein, and fat into energy. Lutein and zeaxanthin promote normal vision. Soluble fiber helps lower blood cholesterol. Insoluble fiber aids digestion.[8-9]

Fun Fact: Romaine lettuce was named by the Romans who believed it had healthful properties. In fact, the Emperor Caesar Augustus put up a statue praising lettuce because he believed it cured him from an illness.[7]

Find

For more lettuce facts and resources, visit:

1. North Carolina Cooperative Extension, www.ces.ncsu.edu
2. N.C. Department of Agriculture & Consumer Services, www.ncagr.gov
3. California Harvest of the Month, http://harvestofthemonth.cdph.ca.gov
4. University of Georgia, Center for Food Safety, www.ugacfs.org/producesafety
5. Fruits & Veggies More Matters®, www.fruitsveggiesmorematters.org
6. U.S. Department of Agriculture, Food and Nutrition Service, www.fns.usda.gov
7. Oklahoma Ag in the Classroom, http://oklahoma4h.okstate.edu/aitc/lessons/
8. USDA Food Composition Databases, http://ndb.nal.usda.gov
9. Academy of Nutrition and Dietetics, www.eatright.org

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