

# Tomato

## Grow

A tomato is a vegetable that grows on a plant. Tomato plants can be started from seed but are usually planted by transplants, which can be purchased at a garden center or nursery. They do not tolerate frost. Tomato plants prefer warmth and full sun, 10 hours per day. Tomatoes can be planted mid-April through mid-July. Plant seeds 18 inches apart and ½ inch deep. Place transplants also 18 inches apart and deeper than they come in the pot, up to the first true leaves, to allow the plants to develop roots along the stems. More roots create a stronger plant. Water immediately. Tomatoes need 1-2 inches of water a week. Tomato plants should be staked or caged to help support the heavy fruit.

### **Tons of Tomatoes**

Thousands of varieties of tomatoes are available to grow and eat. Tomatoes are usually round or oval shaped. The varieties are classified into three types: *cherry*, *plum* or *roma*, and *round* or *slicing*. Plant a tomato rainbow—green, red, purple, yellow, orange, and striped.<sup>1,2</sup>

**Fun Fact:** Is the tomato a vegetable or a fruit? Are you a gardener or dietitian? Botanically, the tomato is a fruit. It is a ripened ovary of a plant (seeds inside). Nutritionally, it is considered a vegetable. Tomato seeds can be eaten.<sup>1,2</sup>

## Choose

### **One Tomato, Two Tomato, Three Tomato, Four...**

Did you know that tomatoes come in four sizes—small (2⅝"), medium (2¼"), large (2½") and extra large (2¾")? In foodservice, tomatoes can be ordered by type, variety, size and ripeness. Look for bright, shiny skin and firm flesh. When fully ripened, tomatoes have the best flavor.<sup>3</sup>

Tomatoes can be available year round from sources around the United States.<sup>3</sup> Peak season in North Carolina is mid-May to October.<sup>4</sup>

**Fun Fact:** In *NIX v. HEDDEN*, 149 U.S. 309 (1893), the U.S. Supreme Court ruled the tomato was a vegetable.<sup>5</sup>



## Store

Store tomatoes stem side up at room temperature away from sun and in an area with good air circulation: mature green 55-60°F, light red 50-55°F, firm ripe 44-50°F. Light pink tomatoes will ripen in 3-5 days. Use ripe tomatoes within 3 days. Handle carefully to avoid bruising.

### **To Refrigerate or Not**

Experts differ on tomato refrigeration. Some believe that refrigeration causes loss of flavor. Others recommend refrigerating when ripe.<sup>3</sup>

**Fun Fact:** The average American eats over 90 pounds of tomatoes every year. Think about the tomatoes in your salsa, pasta sauce, pizza sauce and sandwiches.<sup>2</sup>

## Use

Tomatoes can be eaten raw or cooked. They are sold fresh, frozen, canned, juiced or dried. Tomatoes are also used to make ketchup. Canned tomatoes can be whole, diced, crushed or stewed. Before prepping or eating, wash raw tomatoes under clean, running water. Raw tomatoes are great as a snack. Dip them in hummus. Add to salads, sandwiches, wraps or salsa. Tomatoes can be baked, broiled, roasted, stewed, grilled or stir fried. Mix canned or frozen tomatoes in soups or stews. Tomato sauce can be used in a variety of pasta dishes. Top pizza with tomato sauce and fresh or sundried tomatoes.<sup>1,2,3</sup>

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## Teach

### *Tomatoes Did Not Start Out in Italy*

Tomatoes originated in the Andes Mountains in South America, grown by the Maya and Aztec people. Spanish explorers introduced the tomato to Europe in the 1500's.<sup>1</sup>

### *Tomato Types*

*Cherry:* small, round; for salad and garnish

*Roma or Plum:* oblong shaped; an all purpose tomato

*Round:* available in different sizes; an all purpose tomato<sup>3</sup>

Two broad categories of tomatoes exist: determinate and indeterminate. Determinate grow to a set height, based on their variety. The plants flower and set all their fruit within a short period of time. Indeterminate continue to grow and produce fruit over the season.

### *Heirloom vs. Hybrid*

Heirloom vegetables refer to vegetable seeds that have been saved, grown for a time and passed down. Hybrids are produced when plants are cross-bred to yield a new plant with the best features from the parent plants.<sup>2</sup>

**Fun Fact:** The name tomato is derived from the Aztec word "tomati."<sup>1</sup>

### **Class Activity - Tomato, Tomato**

#### **Materials Needed:**

- Variety of raw colorful tomatoes including round or slicing, cherry, grape and roma; heirloom and hybrid
- Variety of tomato products: tomato sauce, tomato paste, tomato juice, sundried tomatoes, ketchup, canned tomatoes (whole, diced, crushed and stewed)

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

1. Have students compare and contrast the tomatoes, including nutrition. Explain the differences to students.
2. Discuss how students may have tried the tomatoes.
3. Have students research the nutrients in and benefits of tomatoes and present their findings.

**Fun Fact:** Tomatoes are one of the most popular fruits and vegetables in the U.S. and the world.<sup>1,6,7</sup>

## Eat

Tomatoes are cholesterol free and low in fat and sodium. One cup of raw tomatoes, sliced or diced, has around 30 calories, and one cup of canned tomatoes has about 40 calories. Tomatoes are an excellent source of vitamins A and C and a good source of potassium, vitamin K, and manganese. They are also rich in lycopene. Vitamin A promotes normal vision, supports the growth and health of cells and tissue, protects us from infection and helps regulate the immune system. Vitamin C protects us from infections and bruising, aids in healing, keeps our gums healthy, helps form collagen to hold muscles, bones and tissues together, helps our body absorb iron and folate from plants, and acts as an antioxidant to prevent cell damage. Potassium helps regulate fluids and mineral balance, maintain normal blood pressure, transmit nerve signals and contract muscles. Vitamin K helps with blood clotting and bone health. Manganese helps form bone and convert carbohydrate, protein and fat into energy. Tomatoes are also a source of fiber. Insoluble fiber aids digestion. Soluble fiber helps lower blood cholesterol. Lycopene, a plant pigment that gives tomatoes their red color, may reduce cancer risk.<sup>1,2,8,9,10</sup>

**Fun Fact:** The tomato plant is a member of the nightshade family. Because of this, the tomato was once believed to be poisonous. The leaves are, but the tomato is not.<sup>6</sup>

## Find

For more tomato info and resources, visit:

1. Nebraska Extension, <http://lancaster.unl.edu/nep/fruitveggie.shtml>
2. North Carolina State Extension, [www.ces.ncsu.edu](http://www.ces.ncsu.edu)
3. U.S. Department of Agriculture, Food and Nutrition Service, [www.fns.usda.gov](http://www.fns.usda.gov)
4. N.C. Department of Agriculture & Consumer Services, [www.ncagr.gov/markets/chart.htm](http://www.ncagr.gov/markets/chart.htm)
5. Find Law®, <http://caselaw.lp.findlaw.com>
6. University of Arizona, <http://cals.arizona.edu/>
7. USDA Economic Research Service, <http://ers.usda.gov>
8. USDA Agricultural Research Service, <http://ndb.nal.usda.gov>
9. Tomato Products Wellness Council, <http://tomatowellness.com>
10. Academy of Nutrition and Dietetics, [www.eatright.org](http://www.eatright.org)