

Pomegranate

Grow

A pomegranate is a red or burgundy fruit. The scientific name for pomegranate is *Punica granatum*, and it is one of two members of the *Punicaceae* family.¹ Pomegranates grow on shrub-like trees and actually start out as flowers that can be pink, white, yellow, orange or red. Then, throughout the ripening process, these flowers mature into the pomegranate we eat.² Pomegranates are best known for their edible seeds and arils. The flavor and color of the seeds actually comes from the gel-like exterior around the seed called the aril.¹⁻²

Fun Fact: Pomegranates are actually berries.¹⁻³

Pomegranates grow best in the coastal region of North Carolina and prefer the warmer temperatures of spring, summer and fall.² They can grow in clay, loamy and sandy soil. However, they prefer well-drained loamy soil with a pH level range of 5.5 to 7.2.⁴ When planting, place the seeds in rows 6 to 12 feet apart. Ensure they have full sun exposure or partial shade. These plants do not grow well in the winter and could die if the ground temperature reaches 10 degrees Fahrenheit or lower. To prevent this, plant the seeds in a container that is protected or a planter that you can bring indoors during cold weather.² Instead of planting seeds, a cutting can be taken and planted, or plants can be purchased from a nursery. Pomegranates take around 5-8 months to grow and mature.¹

Choose

Since pomegranates grow best in the warmer months, their harvesting period is usually from the end of August through early November, depending on when they were planted.⁴ Typically, pomegranates have a dark purple/red peel, but they can vary in color from light yellow to black. The color of the arils can appear white, as well as the common dark purple or red color that is typically seen.¹ To pick for ripeness, choose the fruit that is heavy for its size and does not have any cracks or splits.² The heavier the fruit is, the juicier it will be.³



Store

Whole pomegranates can be kept at room temperature for a few days before spoiling. Spoiling can be prevented by placing the whole fruit in a plastic bag for up to 3 months in the refrigerator.² Seeds and arils can be refrigerated for up to 3 days or frozen in a single layer in plastic bags for up to 6 months.^{2,3}

Fun Fact: A pomegranate contains around 600 seeds!³

Use

To prepare a pomegranate, wash it under running water. Cut off the crown. Then, cut the pomegranate into four sections. Place these sections in a bowl of water. Then, roll the arils out with your fingers. Discard the skin that floated to the top out of the water, and pour the rest of the contents of the bowl into a strainer with holes small enough that the arils will not fall through.³⁻⁴ Some arils can be too hard to crunch, so be careful when chewing.¹

Pomegranates can be consumed fresh or juiced. The juice, which can be sweet or tart in flavor, comes from the arils surrounding the seeds. The arils can be used as a topping for yogurt, in salads, or as a snack. Their flavor also works well in savory dishes.³

Fun Fact: Pomegranates are commonly used in dishes around the holiday season for their festive, red color.³

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Teach

The current scientific name of pomegranates, *Punica granatum*, means “seeded apple” in Latin and was used in the Middle Ages.⁴ While the origin of the pomegranate is unknown, domestication is believed to have happened in Central Asia and Persia 4,000 years ago.^{2,4} Spanish settlers introduced the pomegranate to North America in the 16th century, starting either on the coast of Georgia or in St. Augustine, Florida.⁴ Today, the fruit is commonly grown in India and areas surrounding the Mediterranean. Domestically, most commercially-sold pomegranates are grown in California.²

Fun Fact: Pomegranate trees can produce fruit for up to 15 years!²

Class Activity - Pomegranate Experiment

Materials needed:

- Pomegranates
- Knife, cutting board, strainer, plate, bowl of water, paper towels

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

1. Demonstrate for students how to cut the crown off the pomegranate, divide into sections and remove the arils in a bowl of water. The arils will sink while the rind and membrane float. Use a strainer to remove the rind, membrane and arils. Place the arils on a plate.
2. Give each student some arils. Instruct students to examine the arils and separate the seeds and aril parts from each other. Ask them to taste the arils. Have them draw a picture of and write about the color, texture and taste they observe. Ask them to use descriptive words such as “sour,” “sweet,” “bland,” “crunchy,” etc. instead of simply “good” or “bad.”
3. Divide the class into small groups to compare findings. Have a class discussion about each group’s findings.

Fun Fact: Pomegranates have been considered a royal fruit for their crown and ruby red arils. They are symbols of prosperity and abundance in almost every civilization.⁵

Eat

One pomegranate has 208 calories and is cholesterol free and low in sodium and fat. They are an excellent source of fiber, copper, folate, and vitamins C and K and a good source of potassium, thiamin, riboflavin and vitamin B6. They also contain anthocyanins, which are responsible for giving them their purple and red color.

Insoluble fiber aids digestion. Soluble fiber helps lower blood cholesterol. Copper is part of many enzymes. It helps your body produce energy in all body cells, develop connective tissue, myelin and melanin, and make hemoglobin which is needed to carry oxygen in red blood cells. Our bodies need folate for blood cell, DNA and genetic development. Vitamin C helps form collagen to hold muscles, bones and tissues together, protects us from infections and bruising, aids in healing, keeps our gums healthy, helps our body absorb iron and folate from plants, and acts as an antioxidant to prevent cell damage. Vitamin K helps our body to clot blood and make proteins needed for our blood, bones and kidneys. Potassium is a mineral that helps our muscles contract, controls fluid coming in and out of our cells and helps maintain normal blood pressure. Thiamin and riboflavin help regulate metabolism and produce energy in all cells. Riboflavin also supports cell growth and helps convert tryptophan to niacin. Vitamin B6 helps our body make protein building blocks (amino acids), turn tryptophan into niacin and serotonin (a brain messenger), and make hemoglobin, insulin, and antibodies to fight infection. Anthocyanins act as antioxidants and anti-inflammatory agents.^{1,3,6-7}

Find

For more pomegranate info and resources, visit:

1. University of Florida Institute of Food and Agricultural Sciences Citrus Extension, <https://crec.ifas.ufl.edu>
2. North Carolina State Extension, www.ces.ncsu.edu
3. Fruit and Veggies for Better Health, <https://fruitsandveggies.org>
4. University of Georgia Extension, <https://extension.uga.edu>
5. Pomegranate Council, <https://pomegranates.org/>
6. USDA FoodData Central, <https://fdc.nal.usda.gov/index.html>
7. Academy of Nutrition and Dietetics, www.eatright.org