

Commodity Fact Sheet

Cherries

Information compiled by the California Cherry Board

How Produced – Cherry trees are grafted to rootstock and planted 16-18 feet apart in straight rows. Farmers can typically grow 150 trees per acre. Trees grow best in deep, well-drained, gravelly to sandy loam soils. Pollination is absolutely essential for production. Because the trees are not self-pollinating, at least two varieties of cherry trees are planted every third tree in every third row, or a ratio of approximately 9 to 1. Honey bees are the main pollinator.

After an orchard is planted, it takes approximately six years until it produces its first major crop. Constant attention is given to each tree every step of the way to ensure a healthy orchard. California cherry harvest lasts late April through June.

Traditionally, color change is used to signal maturity. Sweet cherries for fresh consumption are harvested by hand, usually leaving the stem intact. They are harvested at firm-mature stage to reduce bruising. Sweet cherries intended for processing are also hand harvested.

Sweet cherries have extremely short shelf lives, and must be handled gently to reduce bruising and oxidation. Cherries are cooled directly using chilled water—a process called hydrocooling—then sorted based on color and size, and packed in shallow flats. The shelf life of fresh cherries is only a few days at room temperature and about 2 weeks when refrigerated.

History – The sweet cherry originated in Asia Minor, in the fertile area between the Black and Caspian Seas, and was probably carried to Europe by birds. Cultivation began with Greeks, and was increased and expanded by Romans. Trees were planted along roadsides and were valued for their timber as well as their fruit.

Sweet cherries came to the U.S. with English colonists in 1629, and later were introduced to California by Spanish missionaries. In the 1800s, sweet cherries were moved west by pioneers and fur traders to their major sites of production in Washington, Oregon, and California. Cultivars selected at that time still form the base of the industry today.

Varieties – Cherries are members of the Rosaceae family, subfamily Prunoideae, and are distant cousins to peaches, plums, apricots, and almonds. There are a number of sweet cherry varieties grown in California. The most prominent are

Bing, Coral, Brooks, Tulare, Sequoia, Rainier, Chelan, Garnet, and Royal. The Bing variety continues to be the favorite of consumers, with its mahogany-colored skin and sweet, rich flavor. The coral variety has risen in popularity in recent years due to its large size, firm texture, and sweet flavor.



Commodity Value – The U.S. is the second-largest producer of cherries in the world, accounting for more than 10% of world production. Turkey is the leading cherry producer. Washington leads the nation in sweet cherry production followed by California. Sweet cherries rank 32nd among all California commodities. With approximately 850 growers farming more than 44,170 acres, California's sweet cherry crop was valued at \$140 million in 2018.

Top Producing Counties – Cherry orchards in the San Joaquin Valley receive the perfect combination of nutrient-rich soil, abundant sunshine, and mild temperatures needed to produce high-quality fruit. In 2018, San Joaquin County produced nearly 31.8% of the state's total production. Other top-producing counties include Tulare, Fresno, Kern, and Stanislaus.

Nutritional Value – In addition to being a good source of vitamin C, cherries are also high in iron, potassium, dietary fiber, and antioxidants. Anthocyanins found in cherries block inflammatory enzymes, reducing pain. In fact, 20 cherries are 10 times as potent as aspirin and have positive effects on gout and arthritis pain. All in a small package that's low in calories and contains no fat or sodium. Sweet cherries are also considered to be excellent sources of boron. Boron consumption, coupled with calcium and magnesium, has been linked to increased bone health.

For additional information:

California Cherry Board
(916) 441-1063
Website: calcherry.com



Cherry Activity Sheet

Sweet Cherry Pie Recipe

Pastry for a 9" Two Crust Pie

2 cups flour
1/3 cup plus 1 tablespoon butter
1/3 cup plus 1 tablespoon shortening
1 teaspoon salt
4-5 tablespoons cold water

Preheat oven to 425 degrees. Place flour and salt into a medium mixing bowl or into the food processor. Cut in shortening and butter and work with a fork or pastry cutter until mixture is like coarse corn meal. If using a food processor, use the "S" blade, sprinkle in cold water, one tablespoon at a time, mixing until all flour is moistened and forms a ball. Chill until ready to roll out for pie crust.

Filling

1/4 to 1 1/4 cups sugar, to taste
1/4 teaspoon almond extract
8 cups pitted Bing cherries (about 3 1/2 pounds)
1/3 cup flour
2 tablespoons butter

In a large mixing bowl, stir together sugar and flour. Mix well with cherries. Roll pastry out on lightly floured board. Place bottom crust in 9" pie plate. Add cherry mixture. Sprinkle with almond extract and dot with butter. Cover pie with top crust, crimping edges, and adding slits to allow for steam to escape. Cut a piece of aluminum foil about three inches wide and cover the edge of the pie to prevent excessive browning. (Remove foil during the last 15 minutes of baking.) Bake 35-45 minutes or until crust is brown and juices are bubbling.



Lesson Ideas

- Investigate health benefits of cherries. How do cherries help prevent heart disease?
- Design an informative and attractive cherry display for consumers. Include information about shelf life, handling tips, and recipes. Share your display with a local grocery store.
- Calculate how many cherry trees can be planted on one acre if each tree is spaced 16-18 feet apart.
- Compare and contrast the harvesting techniques for sweet and tart cherries intended for processing or fresh consumption.
- Using a map of California, locate the geographical areas where cherries are grown. Study the climate, seasons, and weather patterns of these areas for similarities.
- Determine the chemistry involved in processing maraschino cherries.

Fantastic Facts

1. Cherries are a good source of vitamin C.
2. San Joaquin county leads the state in cherry production.
3. 31.8% of the nation's cherries are grown in San Joaquin county.
4. Bing, Coral, Brooks, Tulare, Sequoia, Rainier, Chelan, Garnet, and Royal are cherry varieties grown in California.
5. Sweet cherries are ranked 32nd of all California commodities.
6. California is home to approximately 850 growers and 22 packers of all California fresh cherry varieties.
7. Honey bees are essential for cherry blossom pollination.
8. Spanish missionaries introduced cherries to California.

Lesson Plan: An American Legend

Introduction: Cherries have an interesting place in our nation's folklore. One of the most enduring legends about George Washington involves him chopping down his father's cherry tree and, when asked about it, using the famous line "I cannot tell a lie, I did it with my little hatchet." Mason Locke Weems has been identified as the storyteller responsible for this legend.

Objective: Students will investigate the origin of legends, read common American legends, and write their own legend about cherries.

California Standards: CC ELA: RL.3-12.2, W.3-12.3, W.3-8.7, SL.3-12.4

Materials: Internet access, encyclopedia, reference books, paper, pencil.

Procedure:

1. The Brothers Grimm defined legend as "folktale historically grounded." In cooperative learning groups, students may use previous knowledge and experiences to brainstorm characteristics common to legends.

2. As a class, have students share and compare their brainstormed ideas, and research the actual etymology and origin of legends
3. Assign each group an American legend to read and examine. Examples of American legends include the story of Johnny Appleseed, Davy Crockett, and Paul Bunyan.
4. Once students read the legend, challenge them to decipher fact from fiction. Each group may report their findings by providing an objective summary for the class.
5. Instruct groups to write their own legend featuring a historical figure, a character trait, and cherries. Students will need to research their historical figure and determine which traits they are renowned for. Encourage students to use creative writing skills to develop this information into a legend.
6. Have writers share their legend in front of the class. As a group, provide feedback for each story and determine how it exemplifies the traits of a great legend.