

Commodity Fact Sheet

Cherries

Information compiled by the California Cherry Advisory Board

How Produced – Cherry trees are grafted to rootstock and planted 20-25 feet apart in straight rows. Farmers can typically grow 100 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 May through June.

Traditionally, color change is used to signal maturity. However, “fruit removal force” has been used more recently, and is more reliable. This is based on the progressive ease of removing the fruit from the pedicel, or stem, starting about two weeks before maturity. Growers use a special pull gauge, which pulls the fruit from the pedicel and registers the force required to remove the fruit.

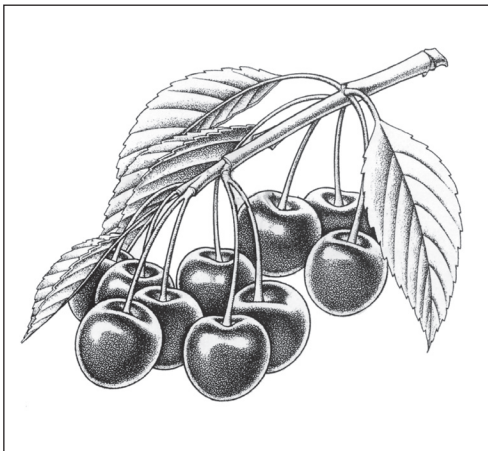
Sweet cherries for fresh consumption are harvested by hand, usually leaving the pedicels intact. They are harvested at firm-mature stage to reduce bruising. Sweets intended for processing are hand harvested also, but without pedicels.

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 hydro-cooling—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. California sweet cherry varieties include Bing and Rainier. The Bing variety has red or mahogany-colored skin and flesh. The stone is relatively small, while the fruit itself is crisp, firm and juicy. Consumers enjoy its sweet, rich flavor, which is the reason that it's the dominant variety. The Rainier variety is recognizable by its golden and pink blushed skin color. It's a finely textured variety with firm, clear flesh and colorless juice. The Rainier offers consumers a sweet, delicate flavor.



Commodity Value – The U.S. is the second-largest producer of cherries in the world, accounting for more than 10 percent of world production. Turkey

is the leading cherry producer. Washington led the nation in sweet cherry production followed by California. Sweet cherries rank 25th among all California commodities. With approximately 600 growers farming more than 30,000 acres, California's sweet cherry crop was valued at \$155 million in 2007.

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 2007, San Joaquin County produced nearly 62 percent of the state's total production. Other top producing counties include Fresno, Stanislaus, Tulare, Kern, Kings, San Benito, Santa Clara, and Sacramento.

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 delicious 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 Advisory Board
P.O. Box 877
Lodi, CA 95241
(209) 368-0685
Fax: (209) 368-4309
Website: calcherry.com



Cherry Activity Sheet

Sweet Cherry Pie Recipe

Pastry for a 9" Two Crust Pie

2 cups flour
½ cup plus 1 tablespoon butter
½ 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

¾ to 1¼ cups sugar, to taste
¼ teaspoon almond extract
8 cups pitted Bing cherries (about 3½ pounds)
½ 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?
- Visit a grocery store and identify the different varieties available (fresh, frozen, dried, and canned). Determine where each variety is grown.
- 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 20-25 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. True or false? Cherries are a good source of vitamin C.
2. Which county leads the state in cherry production?
3. What percent of the nation's total production is in San Joaquin county?
4. Name two cherry varieties grown in California.
5. Of all California commodities, where do sweet cherries rank?
6. How many Bing cherry growers call California home?
7. How can you differentiate California Bing cherries from other varieties?
8. What insect is essential for cherry blossom pollination?
9. Who introduced cherries to California?

1) True 2) San Joaquin 3) 62 percent 4) Bing and Rainier 5) 25th 6) 600 7) Red/mahogany-colored skin and flesh, small stone, sweet flavor, and a crisp, firm and juicy flesh. 8) Honey bees 9) Spanish missionaries

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 his 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. In this lesson plan, students will investigate the origin of legend, read common American legends and write their own legend about cherries.

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 brain-

stormed 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 summarizing their legend 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.

