

Strawberries

Information compiled by the California Strawberry Commission

How Produced – Strawberries thrive along California’s coast because western ocean exposure and Pacific winds insulate the fields from extreme temperatures and weather, providing the ideal conditions for growing strawberries almost year-round. Strawberry plants are grown in stock nurseries and then transplanted into fields where they grow for another three months before they begin producing fruit. Strawberries are grown all year long in California, with the peak strawberry season occurring in April, May, and June when volume rises from about a million trays per week to seven million trays. That is about 60 million pounds per week.

All strawberries are picked, sorted and packed in the field by hand. Trays of strawberries are then rushed to shipping facilities where they are cooled to 32°F. Within 24 hours of harvest, fresh market strawberries are loaded on refrigerated trucks for delivery across the country. This unique and sophisticated distribution system ensures this highly perishable fruit reaches consumers in fresh-from-the-field condition.

History – This luscious fruit can be traced back as far as the Romans, and perhaps even the Greeks. Medieval stonemasons carved strawberry designs on alters and around the tops of pillars in churches and cathedrals, symbolizing perfection and righteousness. During the same time period, strawberries were served at important state occasions and festivals to ensure peace and prosperity.

The most common explanation for how the strawberry got its name is that children in the nineteenth century threaded the berries into straw and offered them for sale. Fresh strawberries began to flourish in California in the 1950s due to improved cultural technologies.

California strawberry growers are leading research in ways to conserve water, protect the soil and reduce fertilizer and pesticide use. One of the first agricultural groups to adopt drip irrigation technology to conserve water, they continue to invest millions of dollars in non-chemical farming methods. Progressive and sustainable farming practices include innovative integrated pest management (IPM) strategies that work with nature to control pests, advance irrigation management practices, and develop new strawberry varieties.

Varieties – Different varieties are suited to particular climates and growing regions. Southern California varieties are adapted for warmer temperatures and shorter daylight hours for early fruit production. Northern varieties have been selected for a longer production cycle, which extends through the fall. For more than 50 years, commercial varieties have been developed by pomologists at the University of California. Successes include the development of new commercial strawberry varieties now grown throughout the world and precedent-setting solutions to disease and pest control.

Commodity Value – Strawberries are among the top five most frequently consumed fruits, and consumption is steadily increasing. One in five families report eating

more strawberries in the past year than previous years. In 2013, strawberries produced in California accounted for 88 percent of the U.S. strawberry production. Nearly 40,000 acres are devoted to strawberry production in California. Canada, Mexico, and Japan are primary export markets for fresh and frozen California strawberries. Today, strawberries represent a \$2.6 billion industry in California.

Top Producing Counties – California produces 88 percent of the nation’s fresh and frozen strawberries, harvesting more than two billion pounds of fruit annually. The leading counties in strawberry production include Santa Barbara, Orange, Ventura, San Diego, Monterey, Santa Cruz, Fresno, and San Luis Obispo.

Nutritional Value – California strawberries are an excellent source of antioxidants including vitamin C, and are a source of potassium, folate and fiber. One serving of strawberries has only 45 calories and 140 percent of the recommended daily allowance of vitamin C. Strawberries are naturally low in sugar and research has found that eating eight strawberries a day may improve memory, and reduce the risk of heart disease and some cancers.

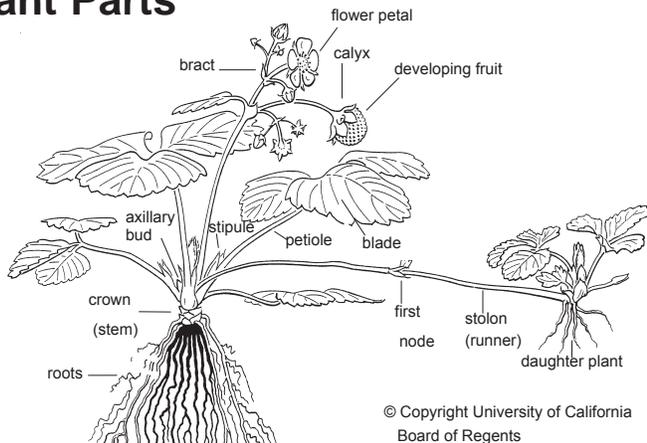
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Strawberry Activity Sheet

Plant Parts



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Growing Season and Peak Production

		JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEP	OCT	NOV	DEC
CENTRAL COAST and SANTA MARIA VALLEY*	Winter Plantings (short-day)												
	Winter Plantings (day-neutral)												
	Summer Plantings												
	Second Year												
SOUTHERN CALIFORNIA and OXNARD PLAIN**	Winter Plantings												
	Summer Plantings												

* Strawberries are also grown in the San Joaquin and Central Valleys

Lesson Ideas

- Create a map of California highlighting the major counties where strawberries are grown.
- Estimate the number of seeds on a strawberry and devise a simple method for determining the number of seeds.
- Calculate the surface area and volume of a strawberry.
- Discuss different pests that affect strawberry production and methods for controlling these pests.
- Devise a method of estimating the quantity of strawberries produced on an acre of land.
- Write a paper entitled, "California—The Strawberry Capitol of the United States." Use www.calstrawberry.com for your research.
- Discuss the advantages and disadvantages of hand and machine harvesting. Invent a machine to harvest strawberries.
- Analyze the economic impact export markets have on the California strawberry industry.

Fantastic Facts

1. How many seeds are on the average strawberry?
2. Are strawberries harvested by machine or by hand?
3. How are strawberries typically propagated?
4. What percent of the recommended daily allowance for vitamin C does one serving of strawberries contain?
5. Do strawberries ripen after picking?
6. How many U.S. states have a town named Strawberry?
7. How many pounds of strawberries can be picked in California in one week during peak production?
8. How many tons of strawberries can an average acre of California farmland produce?
9. Are strawberries annual or perennial plants?
10. What percentage of the strawberries produced in the U.S. are grown in California?

1) 200 2) By hand 3) Vegetative reproduction 4) 140 percent for one serving of eight medium-sized strawberries 5) No 6) 3: Arkansas, Arizona and California 7) 50 million pounds 8) 21-27 tons 9) They are perennials, but are often planted annually 10) 87 percent

Lesson Plan: Make Your Own Strawberry Leather

Introduction: Strawberries can be used to make several tasty and nutritious snack foods. This lesson uses strawberries to teach students measuring, shaping, food processing and food safety skills.

Materials: Strawberries (1½ cups per group of 4 students), light corn syrup, lemon juice, jelly roll pan, blender or food processor, plastic wrap.

Procedure:

1. Place 1½ cups of clean strawberries in a blender or food processor and process until smooth.
2. Stir in ½ teaspoon lemon juice and 1½ teaspoons light corn syrup.

3. Line a jelly roll pan with heavy-duty plastic wrap, taping the plastic wrap to the corners of the pan with masking tape.
4. Pour the strawberry mixture into the pan, spreading evenly. **Leave at least a one-inch margin on each side.**
5. Dry in an oven at 150°F for seven to eight hours or until the surface is dry and no longer sticky.
6. Remove the leather and plastic wrap from the pan while still warm (hands must be clean and dry) and roll up in a jelly roll fashion. Cut into logs and store in plastic wrap for a maximum of five days. Have the students take their strawberry leather home or enjoy it as a class snack.

