



# Champaign County Juvenile Detention Center Master Gardener Community Garden

## Strawberries Lesson

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### Time

15 – 30 minutes

### Overview

The strawberry is the most popular berry grown in the garden in the United States. This lesson explores the strawberry plant.

### Objectives

Students will:

- Learn how to plant, care for, and harvest strawberries.
- Discover the history and fun facts about strawberries.
- Learn the nutritional value of strawberries and how to prepare them in tasty ways.

### Supplies

- Strawberries

### Snack

- Strawberry shortcake
- Strawberry milkshake

### Activity

Weeding, fertilizing, harvesting, and renovating strawberries

### Sources

<http://www.urbanext.illinois.edu/fruit>

# Strawberries

**DO:** Begin by introducing yourself and the other Master Gardeners by first names.

**SAY:** Good afternoon. We are a group of Master Gardeners of Champaign County here to provide a gardening program today at JDC. In the fall and winter months we come every other week to give a lesson on plants, eating right, and taking care of the planet. In the spring and summer we work together with you to plant and maintain a vegetable and flower garden in the outside rec area. (depending on time... I became interested in gardening because... Does anyone else have gardening experience or a relative who gardens?)

Today's lesson will be... I am... with other volunteers... (introduce themselves).  
(Participants may introduce themselves also.)

Today we are going to talk about the most popular garden berry in the United States, the strawberry.

Strawberries are among the most widely grown fruit in the home garden. The strawberry, a member of the rose family, is unique in that it is the only fruit with seeds on the outside rather than the inside. The wide distribution of wild strawberries is largely from seeds sown by birds. It seems that when birds eat the wild berries the seeds pass through them intact and in reasonably good condition. The germinating seeds respond to light rather than moisture and therefore need no covering of earth to start growing.

## Growing Strawberries

### Types

June bearing or spring bearing, everbearing, and day neutral are the three types of strawberries grown in Illinois. Fruits of day neutral plants and everbearers are usually smaller than June-bearers fruit.

**June bearing** strawberries produce a crop during a two-to-three week period in the spring. June-bearers produce flowers, fruits and runners. They are classified into early, mid-season and late varieties.

**Everbearing** strawberries produce three periods of flowers and fruit during the spring, summer and fall. Everbearers do not produce many runners.

**Day neutral** strawberries will produce fruit throughout the growing season. These strawberries produce just a few runners.

Everbearing and day neutral strawberries are great for gardeners who have limited space. They can be grown in terraced beds, barrels or pyramids. They can also be used as an edging plant or a groundcover.

## **When to Plant**

Strawberries should be planted in spring as soon as the soil can be worked. This is usually in March or April allowing the plants to become well established before the hot weather arrives.

Plant at a depth so the tops of the roots are just covered by soil, as seventy percent of a strawberry's roots are located in the top three inches of soil. Within a month or so strawberry plants will start producing runners that produce the new daughter plants. Plant strawberries in rows or hills.

## **Care**

Strawberries prefer a well-drained soil, high in organic matter. They need full sun for the highest yields, at least 6 hours per day. Do not plant strawberries where peppers, tomatoes, eggplant and potatoes have been grown. These plants could harbor *verticillium wilt*, a serious strawberry disease. Strawberries need about one inch of water per week during the growing season.

Weed control is necessary when growing strawberries. Methods include carefully hoeing, cultivating, and mulching. Cultivate frequently but shallow to avoid damaging roots. Usually herbicides are not suggested for small gardens. If using an herbicide, make sure it is labeled for use on strawberries.

Strawberries are best fertilized about early August in northern Illinois and earlier in other parts of the state. Avoid excess nitrogen fertilizer, especially in spring.

Mulching is suggested in late fall to protect strawberry plants for the winter. Straw can be used as mulch. Severe cold and frost heaving are two potential problems mulching can help prevent. Apply straw to the planting in late fall to a depth of 3 to 4 inches over the planting. Gradually rake straw between the rows as weather warms in spring, but be ready to cover plants if a late frost occurs.

For the first season, remove flowers as they appear on strawberry plants. This helps develop more runners and a better crop in future years.

Strawberry plantings will need to be renovated periodically to keep them productive. Immediately after harvest, mow down all the foliage with a power mower so leaves are cut about one inch above the crowns. Rake away all the foliage and debris and remove it from the site to avoid any disease problems. Then spread a balanced fertilizer.

Using a cultivator, narrow the row of plants to 6 to 12 inches wide. Remove any weeds. If the weather is dry, irrigate the plantings. Make sure to start the renovation process within 7 to 10 days after harvest has finished.

## **Harvesting**

Use strawberries as soon after harvesting or purchasing as possible. Refrigerator storage does not improve the quality of fresh strawberries. Berries should not be left at room

temperature for more than a few hours. Warm temperatures cause a browning effect in strawberries.

Store unwashed berries loosely covered with plastic wrap in the coldest part of your refrigerator for two to three days at most. Do not wash berries until ready to use. Strawberries also lose heat-sensitive Vitamin C during browning, heating and cooking.

### **Selecting Commercial Berries at the Grocery**

Look for bright red berries with fresh green caps on. When you remove the caps you tear cells in the berries, activating an enzyme that destroys Vitamin C.

Visually check each package, making sure there are no signs of mold growth. If one berry is molded, mold spores will have traveled throughout the entire package. Research has linked mold to some forms of cancer, always avoid moldy berries.

### **Insects and Diseases**

#### **Insects**

The most common root-feeding pests of strawberries in Illinois include the strawberry crown borer, the strawberry root weevil, and white grubs.

The foliage-feeding pests of strawberries in Illinois include leafrollers the strawberry rootworm and two types of mite species

The common flower and fruit-feeding pests of strawberries in Illinois are the strawberry clipper, the tarnished plant bug, the strawberry sap beetle and slugs.

There are also fungal diseases that can affect strawberries.

#### **Nutritional Value**

Ounce for ounce, strawberries have more Vitamin C than citrus fruit. Eight strawberries will provide 140 percent of the recommended daily intake of Vitamin C for kids. One cup of strawberries is only 55 calories.

#### **History and Lore**

"Doubtless God could have made a better berry, but doubtless God never did."

- Dr. William Butler, 17th Century English Writer

Dr. Butler is referring to the strawberry. Strawberries are the best of the berries. The delicate heart-shaped berry has always connoted purity, passion and healing. It has been used in stories, literature and paintings through the ages.

The American Indians were already eating strawberries when the Colonists arrived. The crushed berries were mixed with cornmeal and baked into strawberry bread. After trying this bread, Colonists developed their own version of the recipe and Strawberry Shortcake was created.

The strawberry was a symbol for Venus, the Goddess of Love, because of its heart shapes and red color.

Many medicinal uses were claimed for the wild strawberry, its leaves and root.

The ancient Romans believed that the berries alleviated symptoms of melancholy, fainting, all inflammations, fevers, throat infections, kidney stones, halitosis, attacks of gout, and diseases of the blood, liver and spleen.

### **Fun Strawberry Facts**

- Ninety-four per cent of United States households consume strawberries.
- Americans eat 3.4 pounds of fresh strawberries each year plus another 1.8 pounds frozen per capita. Although strawberries are available in many forms—frozen, jam and jelly, and ice cream— nothing compares to the taste of a fresh vine ripened strawberry
- Over 53 percent of seven to nine year olds picked strawberries as their favorite fruit.
- Strawberries are a member of the rose family.
- The flavor of a strawberry is influenced by weather, the variety and stage of ripeness when harvested.
- On average, there are 200 seeds in a strawberry.
- Strawberries are grown in every state in the United States and every province of Canada.
- California produces 75 percent of the nation's strawberry crops. If all the strawberries produced in California in one year were laid berry to berry, they would go around the world 15 times.
- California produces an amazing one billion pounds of strawberries each year.
- Florida is second in production. The Florida season runs from December to May and peaks during March and April.
- Strawberries are delicate, requiring gentle handling to prevent bruising. With today's shipping technology, strawberries are available year round, but at a cost. Commercial growers have produced resilient hybrid berries known for their shipping quality.