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# Strawberries for the home garden

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## Quick Facts

Strawberries are classified as June bearing, everbearing or day neutral. They should receive full sun at least eight hours each day of the growing season. They are adapted to nearly all areas of Colorado, even high elevations. Strawberry beds generally are kept for three years.

Strawberries are the most popular home garden fruit. They take up very little space, are relatively problem free and are one of the first crops to be harvested from the garden in the spring. Using the proper variety and culture, home grown strawberries can be enjoyed by nearly any gardener in Colorado up to an elevation of 10,000 feet (3048 meters).

Strawberries require at least eight hours of full sunlight each day of the growing season to produce at their maximum capability. They should be located in an area that does not interfere with the annual spading of the garden. When strawberries are planted after sod, grubs, which have been feeding undetected on the sod roots, divert their attention to the strawberry roots. Since the strawberry roots are fewer in number, a sizable grub population may cause severe damage. After a year out of sod, the grub population is reduced so that strawberries may be planted safely.

The gardener generally has no choice in regard to soil type; however, a sandy loam soil with a southern exposure is ideal. Since strawberries like a loose, moderately fertile soil, it is well to work in four bushels (.14 cubic meter) of organic matter, a pound (.45 kilogram) of nitrogen (N), a pound (.45 k) of phosphate (P<sub>2</sub>O<sub>5</sub>) and a pound (.45 k) of iron chelate per 1,000 square feet (90 sq m) before planting. In general, fresh manure should not be added in excess of four bushels (.14 cu m), decayed manure should not be added in excess of eight bushels (.28 cu m), and raw organic matter such as straw and sawdust, should have ¼ to ½ pound (113 to 228 grams) of nitrogen added to each bushel (.04 cu m) in excess of four.

## Varieties

Strawberry varieties are classified as June bearing, everbearing or day neutral. Recommended June bearers (one crop) for this area are Guardian, Rechief, Marlate, Robinson, Fairfax, Catskill, Redstar and Empire. Everbearing strawberries typically have 2 main bearing crops each year with small amounts of fruit produced between the main crop in June and a lighter crop in late summer or early fall. For Colorado, everbearing strawberries are recommended for the home gardener because they tend to be hardier and if a late spring frost kills the first flowers the home gardener will still get a crop in late summer or fall. Some of the more common everbearing varieties are: Ogallala, Fort Laramie, Ozark Beauty, Superfection, Quinault, Geneva, Gem and Red Rich. Ogallala and Fort Laramie are recommended for Colorado home gardeners as they are relatively more hardy.

## Planting and Culture

There are two systems used for strawberry culture—the matted row, which generally is used with June bearing strawberries, and the hill system, which generally is used with everbearing varieties.

In the matted row system, the plants are planted two feet (.6 m) apart in rows that are four feet (1.2m) apart. These plants are allowed to produce runners to fill in the row. A pathway 1½ feet (.5 m) wide is maintained between rows. Runners that root in this pathway, or closer than five inches (12.7 centimeters) to an established runner, are removed or relocated.

With the hill system, plants are planted one foot (.3 m) apart in three rows that also are one foot (.3 m) apart. A distance of three feet (.9 m) is allowed between each set of three rows. All runners are removed as they develop.

Certified plants are to be preferred over non-certified plants, since they have been inspected for freedom from insects and disease. Plants should be unpacked and planted right away or

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heeled in a trench as a temporary location until they can be set out in the garden.

Transplanting should be done in the afternoon to reduce wilting. Plants with dark roots, or which otherwise look unhealthy should be discarded. Remove flower buds, runners and damaged leaves before planting. The usual planting method is to drive a spade into the soil, push the handle away to open up the soil, fan out the roots of the plant, and place the plant in the opening so that the soil level is even with the crown. While the plant is held with one hand, the spade is removed with the other, and the soil pressed firmly around the roots to eliminate air pockets. Much stooping can be avoided if two people are involved in this operation. Each plant should be watered individually at planting rather than sprinkling the plants when finished, since this could mud wilted leaves into the soil.

After planting, the weeds should be kept down by hoeing. If the planting is large enough, a herbicide may be considered, such as Dacthal, Dymid or Enide. These compounds must be applied according to label instructions.

The first blossoms that form on a new planting should be removed at least once on the hill system and twice on the matted row system. This is to divert the resources of the plant into producing a strong plant, and in the case of the matted row system, more runners. After such a plant is produced it will bear more fruit than if it had been allowed to fruit in the beginning. Later in the season there will be some fruit to enjoy on the everbearers or day neutral varieties.

About July 1, the crop should be fertilized with a pound (.45 k) of actual nitrogen per 1,000 square feet (90 sq m) which may be obtained from five pounds (2.3 k) of a 21-0-0 formulation. If the fertilizer is broadcast, the foliage first should be dragged with a sack to dislodge the fertilizer and then watered. This process should be repeated again in September. Nitrogen applied before fruiting results in soft fruit and therefore, is not recommended.

Generally, a strawberry bed is kept for three years. It may be removed as soon as it ceases to bear in the fall or it may remain until spring. If the matted row system is used and the plants are still insect and disease free, a new bed may be planted in late August by carefully removing good healthy rooted runners and using them for planting the new bed. If the hill system is used where no runners are permitted, or if the plants are not healthy, new plants should be ordered in time for planting a bed in the spring, preferably in a different location.

The soil should be kept damp until the first fall frost, then water should be withheld to help harden off the plants for winter. A final November watering will help prevent winter kill by desiccation.

## Insects and Disease

Strawberries are remarkably free from most insects and disease in Colorado. Occasionally, an insect problem will arise, such as crownborers, leaf hoppers, aphid, earwigs, slugs or tarnished

plant bug. When faced with such a situation, control measures are in order. Malathion is a good standard home insecticide and it may be used to control aphids, leaf hoppers and quite a few other sucking and chewing insects. Sevin may be used to control earwigs and beetles. Crownborers live in the soil and must be controlled with a soil-applied insecticide. Slugs are controlled with commercially prepared baits available at most garden centers. Plants should not be sprayed when in flower because pollinating insects may be harmed.

Disease problems occur less frequently than insect problems. Usually, the disease can be controlled by removing the diseased plant or plant part. However, if it is widespread, other measures must be taken. In the case of systemic diseases, such as yellows (virus) or red stele (vascular), nothing can be done except to remove diseased plants. However, if a fungus develops on the foliage, the plants may be sprayed with a fungicide, such as Captan. (Bacterial diseases on strawberries are not important in Colorado).

## Harvesting and Mulching

Strawberries should be picked every other day during the peak of the season. Since it is poor practice to let fruit rot on the vine, even the rotted fruit should be picked. If berries are to be consumed or preserved immediately, only red-ripe fruit should be harvested and the cap should remain with the plant. If the fruit will not be used for a few days, the berries should be harvested while still pink, and the caps should remain with the fruit.

Strawberries should have some protection during the winter months if they are to survive. This protection generally is in the form of a straw mulch. This straw mulch should be applied about Dec. 1. At this time, sufficient cold weather has occurred to inhibit growth, and the soil is cold.

The straw is distributed over the plants to a depth of one to two inches (2.5-5.1 cm) and held in place with weighted boards or piles of soil. One function of this mulch is to prevent the plant from losing moisture to desiccating winter winds. The other function is to prevent root damage caused by alternate freezing and thawing of the ground.

Other mulching material may be used provided it does not mat down over the strawberry plants when wet, thus cutting off their air supply, and provided it has insulating qualities that will tend to keep the ground cold.

The mulch should be left on as long as possible to restrain plant growth in the spring. Early spring growth produces early flowers, which are subject to damage by adverse weather. Therefore, the plants under the mulch should be checked in March for new growth. When growth begins, the mulch should be parted to allow sunlight to reach the foliage. As the plants continue to grow, the mulch is gradually removed, leaving as much as possible as a soil mulch to keep the fruit off the ground. The mulch may be raked back over the plants to protect in the case of a late spring frost. It should be removed soon after the frost is over.