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Strawberries for the home garden**Harrison Hughes, James E. Ells and Gary Schweitemann¹****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 require at least eight hours of full sunlight each day of the growing season to produce at their maximum capability. Locate them 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 and 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 of organic matter, a pound of nitrogen (N), a pound of phosphate (P_2O_5) and a pound of iron chelate per 1,000 square feet before planting. In general, do not add fresh manure in excess of four bushels, or decayed manure in excess of eight bushels. Raw organic matter such as straw and sawdust, should have 1/4 to 1/2 pound of nitrogen added to each bushel 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, Kent Honeoye, Rechief, Delite, and Bloomiden. Everbearing strawberries typically have two 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 and Ozark Beauty. Ogallala and Fort Laramie are recommended for Colorado home gardeners as they are more hardy.

Day neutral varieties were introduced into the market recently. These are similar to everbearers, but flower and fruit more consistently over the summer. Day neutral varieties recommended include Tribute, Tristar and Fern.

Planting and Culture

There are two systems used for strawberry culture – the matted row, which is used with June

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bearing strawberries, and the hill system, used with everbearing or day neutral varieties.

In the matted row system, the plants are planted 2 feet apart in rows 4 feet apart. These plants are allowed to produce runners to fill in the row. A pathway 1-1/2 feet wide is maintained between rows. Runners that root in this pathway, or closer than 5 inches to an established runner, are removed or relocated.

With the hill system, plants are planted 1 foot apart in three rows that also are 1 foot apart. A distance of 3 feet is allowed between each set of three rows. All runners are removed as they develop.

Certified plants are preferred over noncertified plants, since they are inspected for freedom from insects and disease. Unpack plants and plant right away or heel in a trench as a temporary location until they can be set out in the garden.

Transplant in the afternoon to reduce wilting. Discard plants with dark roots, or that look unhealthy. 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, remove the spade with the other, and press the soil firmly around the roots to eliminate air pockets. Much stooping can be avoided if two people are involved in this operation. Water each plant individually at planting rather than sprinkling the plants when finished, since this could mud wilted leaves into the soil.

After planting, keep weeds down by hoeing. If the planting is large enough, consider a herbicide such as Dacthal. Apply this compound according to label instructions.

Remove the first blossoms that form on a new planting at least once on the hill system and twice on the matted row system. This diverts the resources of the plant into producing a strong plant, and in the case of the matted row system, more runners. Stronger plants bear more fruit than those 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, fertilize the crop with 1 pound of actual nitrogen per 1,000 square feet, which may be obtained from 5 pounds of a 21-0-0 formulation. If the fertilizer is broadcast, drag the foliage with a sack to dislodge the fertilizer and then water. Repeat this process again in September. Nitrogen applied before fruiting results in soft fruit and therefore is not recommended.

Generally, keep a strawberry bed for three years. Remove 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, plant a new bed 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, order new plants in time for planting a bed in the spring, preferably in a different location.

Keep the soil damp until the first fall frost, then withhold water to help harden off the plants for winter. A final November watering helps 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. Use Sevin 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. Do not spray plants when in flower because pollinating insects may be harmed.

Disease problems occur less frequently than insect problems. Usually, the disease is 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, spray the plants 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, pick even the rotted fruit. If berries are consumed or preserved immediately, harvest only red-ripe fruit. The cap should remain with the plant. If the fruit will not be used for a few days, harvest the berries while still pink. 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. Apply this straw mulch about December 1. At this time, sufficient cold weather occurs to inhibit growth, and the soil is cold. Distribute over the plants to a depth of 1 to 2 inches and hold in place with weighted boards or piles of soil. This mulch prevents 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.

Leave the mulch on as long as possible to restrain plant growth in the spring. Early spring growth produces early flowers subject to damage by adverse weather. Therefore, check the plants under the mulch in March for new growth. When growth begins, part the mulch to allow sunlight to reach the foliage. As the plants continue to grow, gradually remove the mulch, leaving as much as possible as a soil mulch to keep the fruit off the ground. Rake the mulch back over the plants to protect in the case of a late spring frost. Remove soon after the frost is over.