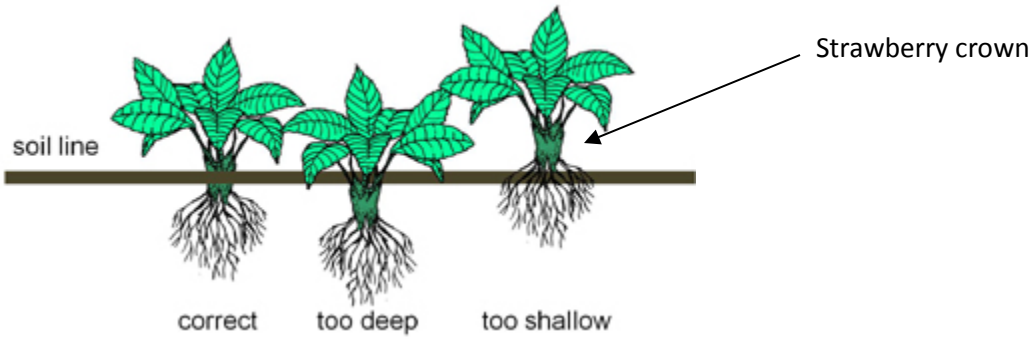
Strawberries are one of the most popular berries worldwide. Strawberries are very adaptable, but they need full sun for the highest yields. They need soil with good internal water drainage and should not be planted where raspberries, other strawberries, tomatoes, peppers, eggplant or potatoes have been grown because of their susceptibility to verticillium wilt. Crowns can be injured by very low winter temperatures without snow cover, so a straw mulch or a floating row cover of appropriate thickness is recommended. Strawberries are Junebearing, bearing fruit in May and June; Day Neutral, bearing fruit from May to September with the majority of the crop in late summer/fall; and everbearing producing berries in the long days throughout summer.

Recommended cultivars:
Junebearing:
Early season - Annapolis, Earliglow
Early midseason - Honeoye, Brunswick
Midseason - Darselect, Allstar, Mesabi, Jewel
Late midseason - Cabot, Eros
Late season – Ovation
Day neutral: Tribute and Tristar
Ever bearing: Ozark Beauty, Mara des Bois

Planting systems: In cold winter areas strawberry plants are best planted in spring. Planting depth is crucial for survival, the entire root system needs to be covered with soil, but not the crown.



Source: www.ext.colostate.edu/mg/gardennotes/763.html

Plant 18-24 inches apart for a matted row system and allow runners to develop daughter plants to fill in between. Rows should be 3-4 feet apart. If some of the runners are removed, the mother plants will be larger and set more and larger fruit. Thinning the runners to about 5 plants per square foot also helps with disease control.

In the hill system, plant 10-18 inches apart and remove all runners. In either system flowers should be removed during the first year. A row system is most often used for Junebearing varieties, whereas day neutral and everbearing varieties are planted in the hill system.
After 3-4 years, depending on whether there is disease present in the planting or general decline, strawberry beds should be rotated to a new area. Healthy runners can be planted or new, preferably certified, plants should be purchased if possible.

Fertilization: The best way to determine fertilizer needs of the plants is by following recommendations based on soil sample results. The recommendations given here are general and should be fine-tuned to the fertility and nutrient holding ability of your particular soil, and the observations of the growth of your plants.

Apply 1pound of 10-10-10 per 100 sq foot prior to planting. Fertilize with the same amount after harvest and renovation. Fertilization before fruiting results in soft fruit. It is important that any granular fertilizer be removed from the leaves by dragging heavy cloth over the plants or washing it off the plants with a hose to avoid damage.

Renovation: Renovation should be done shortly after harvest. If leaf spot disease was a problem, mow about 1 inch above the crowns and rake well to remove old, possibly diseased leaves. For a row system, narrow the rows back down to 6-12 inches wide by spading or rototilling and removing any plants outside the width of the row. Then thin out the remaining plants to 4-6 inches apart or 5-6 plants per square foot – selectively removing older plants. Water the fertilizer in well to encourage new growth. In hill systems, plants should be thinned to the original spacing of 10-18 inches. As a rule of thumb, about half the plants should be removed during renovation. 1 inch of soil is raked over the remaining crowns to encourage growth of new roots.

Watering and Weed Control: Strawberries need 1-1 ½ inches of water per week. Sufficient water during the months of August and September will help ensure the formation of flower buds for the following year. Control of weeds that compete for nutrients by hand weeding or hoeing is especially important during establishment or rejuvenation after renovation of the bed.

Harvest and Storage: Berries take about 30 days after flowering to ripen. They will be uniformly red on all sides and the tip, tasting provides the best guide for picking. Pick every 2-3 days, or even daily in very hot weather, keeping the green caps attached. Picking into wide, shallow containers minimizes bruising and immediate cooling will prolong storage time. One mature strawberry plant can produce 1-2 quarts of berries.

Winter mulching: Mulch plants with straw or floating row cover after several nights of hard frosts, usually in the first half of December in southern Missouri, when they are fully dormant. Straw mulch is applied 4-6 inches deep and should not be matted but full of air spaces. Floating row cover of 1 to 1.25 oz/yd2 thickness can also be used, the lighter row covers are not suitable for winter protection. The row covers are secured at the edges with posts, rocks or tube sand. The edges may also be covered with soil. Mulch can be removed in spring once plants show signs of new growth, and spread back over the plants when freezing temperatures are expected. Mulch can be completely removed after the local frost free date, and straw can be used around the plants to provide a cleaner, drier surface for the developing fruit to rest on.

Diseases and Insects: Several diseases can affect leaves, crowns, roots and finally fruit. Yearly renovation, relocation of the bed to new areas and avoiding overcrowding of plants can help significantly reduce disease development. Planting cultivars that are adapted to local growing conditions and buying certified plants are equally as important. Spotted wing drosophila (SWD) is a new pest in Missouri (2013) that damages ripening fruit. On berries, the most important disease is grey mold caused by the botrytis fungus.

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