



## GROWING STRAWBERRIES in the INLAND NORTHWEST

Strawberries are an excellent crop for home gardeners. With proper care, homeowners can plan on four to five years of healthy growth and productive fruiting, beginning one year after planting. An initial planting of 100 plants should provide enough fruit for a family of four, with surplus for freezing or making preserves.

### Types of Strawberry Plants

There are three types of cultivated strawberries: June-bearing, everbearing, and day-neutral.

#### *June-bearing*

June-bearing plants are among the most productive of strawberries. They have a main crop of berries in June or July and produce lots of runners from which new plants are started within the strawberry bed. June-Bearers form flower buds in the fall and bear one heavy crop the next spring or early summer.

#### *Ever-bearing*

Ever-bearing types produce two crops, one in early summer and the second in early fall. Ever-bearing and Day-neutral plants have the same general culture.

#### *Day-neutral*

Day-neutral plants produce fruit throughout most of the growing season. Because day-neutral plants bear fruit all summer long when the temperatures are between 40°F-90°F, total yields are higher. Day Neutral cultivars are replacing everbearers in very cold areas.

#### *Woodland strawberry*

The woodland strawberry (*Fragaria vesca*) is a day neutral strawberry species. You might also see it called alpine strawberry, fraises des bois, wild strawberry or European strawberry. The plants produce small, sweet fruit with maybe two to three berries per plant per week. Many of these plants are grown from seed. They tolerate shadier sites and can be planted in the front of perennial beds, walkways or in containers.

Visit our website at <https://extension.wsu.edu/spokane/master-gardener-program/home-lawn-and-garden/>  
e-mail your garden questions to: [mastergardener@spokanecounty.org](mailto:mastergardener@spokanecounty.org)

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## Planting Site

Although strawberries are highly adaptable, good site selection is critical. Strawberries need full sun to produce maximum fruit and require a minimum of six hours of full sun for consistent production of high-quality fruit.

- Avoid planting in a known frost pocket. Strawberries bloom early and blossoms may be damaged by frost in areas where a freeze can occur during mid-to late April through early May.
- Strawberry plants are highly susceptible to Verticillium wilt and should not be grown in areas previously planted with potatoes, tomatoes, eggplants, peppers or black raspberries.
- Lawns and other turf areas can be infested with grubs that damage strawberries. When planting into an area that has previously planted in turf, cultivate the planting area and grow a rotation of a green [Cover Crop](#) other than grass for one year before planting strawberries.

## Soil

Getting a site ready for strawberry planting may take up to two years depending upon its present condition. Before considering planting, a [soil test](#) will help you find out if you need to add any nutrients to your soil.

Strawberries grow best in loamy sandy soil at least 12 inches deep, but they can be grown in almost any well drained soil that contains organic matter. If possible, prepare the soil with compost or animal manure the fall before planting and consider planting a cover crop for both weed control and organic matter.

- Optimum pH for strawberries is 5.0 to 6.5; however, most varieties will tolerate a pH as high as 7.5.
- Well-drained soil is required; wet soils can lead to root diseases, frost heaving and fruit rots in strawberry plants.
- Raised beds or soil ridges will improve soil drainage on flat sites. Raised beds can be as simple as mounds of soil or may be enclosed in untreated landscape timbers or stones making an attractive site.

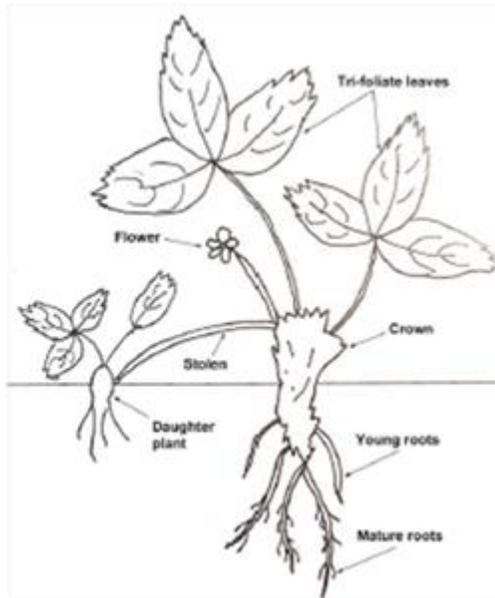
## Selecting Cultivars

Hundreds of strawberry cultivars are available. Not all, however, are adapted to growing conditions in the Inland Northwest. The cultivars listed in our fact sheet "[Strawberry Cultivars for the Inland Northwest](#)" work well for our climate.

Use certified virus-free stock which can yield 50 to 75 percent more fruit than virus infected plants. Resist the temptation to plant runners from your own or a neighbor's healthy-appearing plants. Pests and diseases can quickly build up in home plantings.

### Strawberry Plant Anatomy

Illustration: Charles Brun



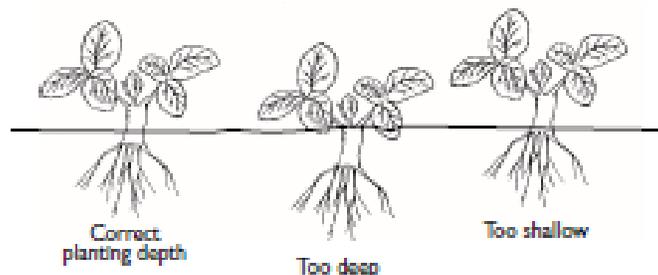
### Planting and first season care

Strawberries should be planted in the spring as soon as the soil is dry enough to be prepared. Before planting, incorporate 2 pounds of 5-10-5 or 5-10-10 fertilizer or  $\frac{3}{4}$  pound 21-0-0 ammonium sulfate per 100 square feet into the soil.

Plant dormant stock (normally purchased bare-root in bundles of 25) late March to April

- Trim roots 4 to 5 inches long.
- Dig a hole or trench 6 inches deep.
- Spread roots in a fan and deep enough to bring the soil halfway up the crown.
- Press soil firmly against roots.

Set out potted plants in May after last frost date. These plants with well-developed root systems will better withstand the stresses of transplanting. Prior to planting, make sure that the soil in the pot comes up to only halfway up the crown. If the crown is covered (planted too deeply), remove soil until only halfway up the crown. If the crown is above the soil (planted too shallowly), make sure to adjust the soil level when you plant. Plant strawberries in holes wide enough to accept the plant from the pot. Check planting level to assure that the soil remains only halfway up the crown.



*Image from: University of Idaho Cooperative Extension System Bulletin, "Growing Strawberries in the Inland Northwest and Intermountain West"*

### *Planting Method*

There are many methods of row planting that work well for strawberries, the most common method in the Inland Northwest is the matted row system:

- June-bearing plants are set 15-24" apart with rows 3 to 4 feet apart.
- Day-neutral cultivars, because they produce few runners, can be planted 8-12" apart, both within and between rows. Consider convenient harvesting when deciding upon row separation.



### *Flowering & Runners*

After planting, for June-bearing plants, pinch off any flower buds that appear. This will mean that you will not have a crop the first year. After planting, for Day-neutral plants, pinch off buds which appear early in the season. You can allow flowering in late summer for a fall crop.

This allows your strawberry plants to produce leaves and roots so when the flowers are pollinated and begin to produce fruit there is enough energy in the plant to develop large, juicy strawberries.

As runners begin to appear on June-bearing plants, place them where you want plants to fill in and gently press the end into the soil. This will encourage the daughter plant to root where you want it to. If the plants are running too much, simply cut the excess runners off with a scissors or pruning shears. Remove all runners from Day-neutral plants to keep aisles clear and improve fruit quality.

### **Mulching**

Summer mulching with two to three inches of straw or four to five inches of pine needles along the rows during the summer conserves moisture and prevents many weeds. Check occasionally to be sure soil isn't becoming waterlogged.

After strawberry plants have entered dormancy due to cold temperatures and the temperatures are staying below 40°F, cover over plants with about 4 to 6 inches of pine needles or straw to protect plants from drying winds and help prevent soil heaving.

- Take winter cover mulch off **early** in the spring before new growth begins.
- Be prepared to cover plants if an unexpected hard frost is forecast.
- If plants have heaved out of the ground during winter, firm them back into the ground and replace soil over the exposed roots.

## Watering

Water soon after planting and keep the soil evenly moist, but not waterlogged. Water plants regularly to insure optimum growth if rainfall is insufficient. One to two inches of water per week is ideal. If possible, avoid overhead watering; [drip irrigation systems](#) adapt to strawberry culture and conserve water.

- Water is critical before and during harvest.
- Water June-bearing plants in late August when flower buds are formed for the next year.
- Continue watering until first frost.

## Weed Control

Weed control is difficult in strawberry plantings, but is essential for good yields of quality berries. For home gardens, mulching and hand weeding are the methods of choice.

## Pests and Diseases

Damage from insects and diseases can look very similar, and gardeners need to be able to identify pests and the damage that they cause in order to choose the best way to manage them. Your county Extension office can assist you.

### *Diseases*

Strawberries tend to have many different diseases that target them. Disease can affect the fruit, leaves, stolons, and the roots of the plant. Viral diseases are an important factor limiting the life span of strawberries. If your plants begin showing signs of leaf malformation or discoloring, contact the Extension office in your county.

### *Insects*

Insect pests on strawberries are those that may eat the leaves, fruits, and flowers.

- The most common [root-feeding pests](#) of strawberries are the strawberry root weevil and white grubs.
- The [foliage-feeding pests](#) of strawberries include leafrollers (strawberry leafroller and others) and the strawberry rootworm.
- The common [flower and fruit-feeding pests](#) of strawberries are the tarnished plant bug and slugs.

Because pesticide regulations and registrations change frequently, specific pesticide recommendations are not included in this publication. For up-to-date information on materials registered for pests and diseases in your area, contact the Extension office in your county. Always follow label directions.

## Renovating

Strawberry beds can usually be carried over for three to five years or more if the plants are vigorous, beds are kept weed-free, and the planting is properly renewed or renovated every year.

June-bearing beds should be renovated shortly after harvest.

- First, mow all the leaves off the strawberries about 1½ inches above the crowns.
- Fertilize by broadcasting 2 pounds of 10-10-10 or organic equivalents per 100 square feet.
- Next, narrow the plant rows to strips ten or twelve inches wide spade and spread a light layer of soil (½ to 1 inch thick) over the remaining plants, being careful not bury the crowns.

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- If necessary, thin the remaining plants, leaving only the most vigorous and healthy.
- Irrigate the planting well, wetting the soil to a depth of six inches.

During the summer, runner plants will emerge and should be placed to fill out the row to the desired two-foot width, like the planting year.

Day-neutral strawberries beds can be carried over if they are healthy and weed-free. Yields from day-neutral tend to decline dramatically in successive years. For plantings to be used another season, mulch the beds in the late fall as described in the mulching section. Remove the mulch in the spring and pinch blossoms for the first four weeks to improve later yields. If allowed to fruit, the plants will bear a heavy early crop followed by a smaller summer and fall crop. Fertilize in the spring with 2pounds of 10-10-10 or its equivalent per 100 square feet.

### Harvesting

Strawberries ripen from the tip towards the leafy stem end. Look through the plants daily once you see the red color developing and harvest ripe fruit.

- Harvest berries in early morning if possible. Picking berries when they are wet hastens fruit rot.
- After picking, cool the berries to 34° to 36° F as quickly as possible by placing them in the refrigerator immediately.
- Do not wash the berries before refrigerating, wait until just before you would like to use them.
- With optimum conditions, fresh strawberries have a shelf life of about seven days.

### References

WSU Publication EM103E, [Growing Small Fruits for the Home Garden](#)

Oregon State University Publication, EM9234, [Strawberry Nutrient Management Guide for Oregon and Washington](#)

University of Idaho Publication, BUL0810, [Growing Strawberries in the Inland Northwest and Intermountain West](#)