

PLANTING STRAWBERRIES

Strawberries (*Fragaria ananassa*) are considered an herbaceous perennial. New shoots, leaves, and runners emerge from the crown and root structure each year. Homeowners can plan on four to five years of healthy growth and productive fruiting.

Planting Site

Although strawberries are highly adaptable, good site selection is critical. Strawberries 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.
- 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 or green manure crop other than grass for one year before planting strawberries.

Drainage

Wet soils can lead to root diseases, frost heaving and fruit rots. Raised beds or pyramids offer options if berries are to be grown on heavier, flat soil with slow drainage.

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 the fall before planting with compost or animal manure 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.
 - Reduce pH by incorporating peat moss or sulfur 6-8" into soil before planting.
 - Using ammonium sulfate (21-0-0) as a nitrogen source also lowers the pH. As a rule of thumb, add one-half pound of ammonium sulphate (21-0-0) for each 100 square feet of planting bed.
- 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.
 - Raised beds allow you to modify the soil with compost, peat moss, sand, or other amendments.

Fertilizing

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.

Selecting Cultivars

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.

Hundreds of strawberry cultivars are available. Not all, however, are adapted to growing conditions in the Inland Northwest. The cultivars listed in C133 "Strawberry Cultivars for the Inland Northwest" work well for our climate.

Planting

Plants should be planted just up to the base of the crown.

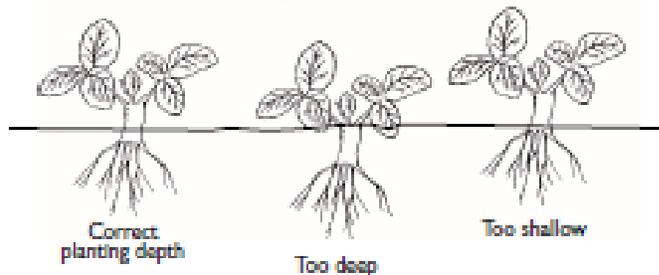


Image from: University of Idaho Cooperative Extension System Bulletin, "Growing Strawberries in the Inland Northwest and Intermountain West"

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

- Trim roots 4 to 5 inches long.
- Dig a hole or trench 6 inches deep.
- Spread roots in a fan with the crown at soil surface.
- Press soil firmly against roots.

Set out potted plants in May - these plants with well-developed root systems will better withstand the stresses of transplanting.

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.

Before a hard freeze, cover over plants with 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 through the first year.
- Water is critical before and during harvest and in late August when flower buds are formed for the next year.
- Avoid over-watering. Waterlogged soils encourage root rots.
- If possible, avoid overhead watering; drip irrigation systems adapt to strawberry culture and conserve water.
 - Overhead watering during harvesting time may encourage fruit rot.

Harvesting

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

SELECTING STRAWBERRY CULTIVARS FOR THE HOME GARDEN

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

JUNE-BEARERS

June-bearers 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. After harvesting, renovate strawberry beds by mowing off the leaves, taking care not to damage the crowns. Renovation stimulates new plant growth and reduces disease problems.

Planting

- Remove all blossoms the year of planting to strengthen plants; allowing the energy to be put into root formation.
- Matted rows are typically used for June-bearing cultivars.

In August side dress with ½ pound of ammonium sulfate (21-0-0) per 100 square feet.

JUNE-BEARING CULTIVARS

Hood Early mid-season, good fresh or for preserves. Poor frozen, resistant to root rots and mildew. Moderately susceptible to viruses. Easy to pick, little fruit rot.

Shuksan Mid-season, ripens a week after Hood. Good fresh or frozen. Moderately resistant to root rot, fruit rot, mildew and viruses.

Benton Late mid-season, ripens 10 days after Hood. Very good fresh, fair frozen. Has a long harvest season. Resistant to root rots, mildew, viruses and fruit rot.

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Rainier Late mid-season, ripens 10 days after Hood. Excellent fresh or frozen and in preserves. Becomes dark quickly in hot weather. Somewhat susceptible to fruit rot. Resistant to root rots, mildew and viruses.

Note: For flavor, Rainier and Shuksan are considered the best.

EVERBEARERS AND DAY-NEUTRALS

Everbearers and day-neutrals have the same general culture. Because day-neutrals set fruit all season long and total yields are higher, their cultivars are replacing everbearers. In very cold areas, day-neutral cultivars offer an option as they bloom over a long period of time.

Everbearers bear fruit twice during the growing season, generally during the spring and in late summer.

Everbearer cultivars

Quinault Reliable, good quality, but soft. Size and yield drops off after the first flush of large fruit.

Ogalalla Very hardy, but small, soft and of fair quality.

Day-neutrals will set fruit the year they are planted. Because these cultivars set flower buds regardless of day length, they set fruit from spring to fall. They produce few runners and can be planted either in short rows or in hills.

Day-neutrals are sensitive to extreme heat so fruit production generally drops during July and August. They are often replaced after 2 fruiting years as vigor and the fruit size declines.

Day-neutral cultivars

Tillicum Very productive, good quality, medium-size berry.

Tribute and Tristar Productive, very good quality, medium-size berry.

Hector Productive, good quality, medium-to-large size berry.

General culture for ever-bearers and day-neutrals

Remove blossoms until June 1 to promote a larger harvest. Keep well-watered through fall. Remove old, weak plants and excess runners each fall.

Fertilizing

Before planting, incorporate 2 pounds of 5-10-5 or 5-10-10 fertilizer or 3/4 pound 21-0-0 ammonium sulfate per 100 square feet into the soil.

Beginning before bloom in April, side dress with one-eighth pound of ammonium sulfate (21-0-0) per 100 square feet per month until mid-August.

Resources

More information on growing strawberries is available

WSU extension booklets:

“Berries for the Inland Northwest” & “Small Fruits for the Home Garden”

Idaho State University publication:

BUL0810 - “Growing Strawberries in the Inland Northwest and Intermountain West”

Online:

<http://berrygrape.org/strawberry/>

<http://smallfarms.wsu.edu/crops/berries/strawberries.html>