Strawberries are a popular fruit in home gardens. With proper care in the choice of varieties, planting site, and necessary culture, the results can be pleasant and rewarding. A limited space can produce a good supply of quality fruit for fresh use or for making delicious jams, syrups, and frozen or canned products. It is possible to produce ½ to 1¼ lb of fruit per linear foot of row.

There are no climbing strawberries; however, some varieties produce runners that fruit when placed upright on a trellis or are allowed to cascade down from hanging pots or other elevated positions. Such varieties may be tried for the novelty effect or esthetic value. Fruit quality may be lacking in such types.

Preparation for Planting

Site

Select an area exposed to full sunlight. Avoid heavily shaded, cold, or wet areas and sites where roots of other plants may be competitive. The area should have good air circulation and not be a pocket for cold and frost.

Do not use a site with a known history of diseases or pests that attack strawberries. Persistent pests such as root weevil, nematode, and the garden symphilid are frequent problems. Several root rot fungi may also persist in garden soils.

Specifically avoid sites previously used to grow tomatoes, eggplant, and noncertified raspberry, blackberry, and blackberry plants. Such plants are often hosts for verticillium wilt, a disease caused by a soil-borne fungus that also attacks the strawberry.

In preparing planting sites that have perennial broad leaved weeds or grasses, use Roundup (glyphosate) as a systemic weed killer prior to tillage preparation of the planting bed. Use according to label instructions. Allow 10 days to 2 weeks after treatment before tilling.

In addition to natural planting sites, constructed plantingers, planting beds, and various plant containers including hanging pots may be used. Many of these fit into the general landscape and provide an esthetic as well as productive function.

Soil

A well-drained loam soil high in organic matter will hold moisture well and assure optimum conditions for root growth. Avoid heavy clay soils. Sandy soils require more frequent watering and closer attention to fertilizer needs. Strawberries will tolerate a wide range of soil types. If planting sites are limited, it is often worthwhile to modify undesirable soils: Add sand to lighten heavy soils or add peat, humus, loam, or other amendments to sandy soils to improve water and nutrient holding capacities.

If drainage is a problem, use downhill beds or built-up beds which will make the general soil level so that plants may then be set on the ridge.

Organic matter may be added to the soil in the summer or fall before planting. Manures, crop refuse, compost, or other raw or partially decomposed organic matter should be mixed thoroughly into the soil. In the spring, decomposed organic matter may be used by applying an inch or two of material over the row and working it in. Take care to use only those organic materials free of pests and diseases. If large amounts of crop refuse or nondecomposed straw or sawdust manure are incorporated into the soil, supply extra nitrogen to aid in the decomposition process. Use 2 1/2 lb of ammonium nitrate over 100 square feet of row where 3 to 4 inches of dry organic matter is used for incorporation into the soil.

Before planting, the soil should be well tilled, weeds removed, and dirt clods broken. If soil becomes dry, moisten it well before planting.

Fertilizer

Before planting, apply a 6-10-4 fertilizer (6% nitrogen, 10% phosphoric acid, and 4% potash) or a 5-10-5 fertilizer at a rate of 2 1/2 lb dry material per 100 feet of row. Spread the fertilizer uniformly over a 1 foot x 100 feet area, or the equivalent, and work it into the upper 6 inches of soil. Apply fertilizer of a different ratio on an equivalent basis. If manure is used for improving soil structure and fertility, reduce the commercial fertilizer by one-half.

Additional nitrogen fertilizer may be added 6 weeks after planting if plant growth is weak and plants are light green. Broadcast ammonium nitrate at 1/2 lb per 100 feet of row when foliage is dry. Remove fertilizer from plants by brushing and sprinkling with water. Make a similar application of nitrogen in late July or early August. The soil must be dry, irrigation may be necessary to carry fertilizer into the soil and prevent toxic concentrations from forming.

For established plants, apply fertilizer annually following harvest. Broadcast 1 lb of 16-16-16 or equivalent over 100 feet of row. Follow with brushing and watering procedures. Excess fertility can reduce cropping. Often rich garden soils are sufficiently fertile and do not require fertilizer amendments. If plants remain a healthy dark green with adequate growth and productivity, fertilizer is not recommended.

Varieties

The strawberry is a perennial plant that should bear fruit at least once every season. For the home gardener, two major types are distinguished: June bearers that fruit only in late spring or summer and everbearing varieties that produce in the normal June season and follow with a second

remedy is to mound and shape the rows 6 to 8 inches above the general soil level so that plants may then be set on the ridge.
crop later in summer or fall. In areas where late spring frosts may eliminate the June crop, everbearers will usually come through with a summer or fall crop.

It is strongly recommended that only certified plants be used in establishing the planting. Noncertified plants can carry disease and pest problems that are ruinous.

Strawberry varieties perform best in the area where they originate or in areas of a similar climatic environment. The following varieties are recommended for Oregon climates.

**Western Oregon**


**Eastern Oregon**

- **June bearers:** May be grown in the lower-altitude, long-season areas. Totem, Northwest, Shuksan, Shasta, Hood, Tipea, and Benton. Others for trial: Rainier and Olympus.

- **Everbearing varieties:** Recommended for the high-altitude, short-season areas. Fort Laramie, Ogallala, Quinault, Gem, and Streamliner. For trial: Hecker and Brighten.

**Central Oregon**

- **June bearers:** These varieties may be grown in the warmer areas which have a longer growing season. Use varieties recommended or suggested for eastern Oregon.

- **Everbearing varieties:** For colder, short-season areas, use everbearers recommended for eastern Oregon.

**Planting**

Plant in the spring after the danger of severe freeze or frost has passed. Plants should be received just before planting. If planting is delayed, store plants at 30° F (1.1° C). Keep plants moist prior to planting and plant in a damp, well-tilled soil. Use only plants with solid healthy looking crowns and light colored roots. Make an opening in newly tilled soil and set the plant in the soil at a depth where the topmost root is just below the soil surface (see figure). Roots should be spread out and downward in fan fashion. Press the soil firmly against roots to make close contact and avoid air pockets. Be prepared to supply water as needed during the establishment period.
develop and set plants to produce a matted row 18 inches wide. The remaining 1½ to 2 feet between rows is kept clear.

The hill system is preferred for everbearers but is also frequently used for June bearers. Plants are spaced 12 to 15 inches apart with rows 2½ to 3 feet apart. All runners are kept removed by cutting at timely intervals during the growing season.

For the home gardener, space available, convenience, facilities, and equipment for care may govern planting arrangements. However, plants should not be set closer than 12 inches in order to assure adequate air flow and not restrict harvest.

Black polyethylene film may be of use to the home gardener as a method to conserve moisture, control weeds, and keep berries clean. Place the plastic over the prepared planting bed. Edges of plastic should overlap and be held down by placing soil on top to prevent disturbance by wind. Cut an X-slot in the plastic and plant through the slot. Perforations can be made in nonperforated plastic to admit moisture.

Increased plant density, raised planting beds, use of plastic mulch and trickle watering systems are cultural techniques that can substantially increase production.

Care of Plantings

Immediately after planting and through the growing season, sprinkle or trickle enough water to assure good growth. Keep the planting area well tilled and free of weeds to encourage the setting of runner plants for the matted row system.

Blossoms on newly set June bearing varieties should be kept removed throughout the first growing season. For everbearing types, blossoms may be allowed to develop after July for plants established in the spring. This will provide fruit for late summer or early fall. Blossom removal encourages vegetative growth and root development during the establishment period.

Pick fruit when ripe to prevent overripe or damaged fruit from becoming a source of contamination that may affect good fruit and to avoid loss to birds.

After the harvest period, old plant material should be removed by hand or mowed off just above the crown by a rotary mower. Remove the plant debris and burn it. Reduce the matted row to a strip 6 to 10 inches wide by thinning old and weak plants and leaving 1-year-old vigorous plants. The renovated strip is cared for as a new planting and a new matted row is encouraged. Plants grown in the hill system are renovated and cut back to just above the crown, removing old and dead plant parts and runners.

Pest Control

Weeds compete with strawberry plants for water, nutrients, and light. They also are host plants for insects and diseases. Eliminate weeds by hand hoeing or use black polyethylene film as a method of control. Chemical herbicides may be used for larger plantings. Recommended chemicals and directions for use may be obtained from manufacturers’ labels, county Extension sources, and knowledgeable Master Gardeners.

Insects may cause damage to strawberry plants. Larvae of several species of root weevil cause serious damage by feeding on the roots and crowns. Plants become weakened and eventually die. The adult beetle that develops from the larvae emerges from the soil and feeds on the edges of leaves, causing a notched appearance. Malathion used at rates recommended on the label is of use in controlling the adult form. Control of adults will help decrease infestations of larvae in the following season. Paradan can be used by professional applicators for control of larvae in commercial fields but it is not recommended for use by the home gardener.

Spittlebugs, detected by the frothy “spittle” material on the stems and leaves, are controlled by a spray or dust of diazinon or malathion. Apply the chemical when the first buds open, before the nymphs cause damage by sucking juices from young leaves and stems. Malformed fruit results from damage caused by this insect.

The strawberry aphid is a small yellow-green insect and is a principal agent for spreading virus disease in the strawberry plant. Diazinon and malathion are recommended for control.

Strawberry leaves rolled or folded together and held by a silklike web are evidence of strawberry leaf roller. Larvae feed on the leaf surface and cause withering of leaves and fruit. Apply Malathion at any time up to 3 days before harvest, following manufacturer’s directions.

Birds are often the cause of serious losses of fruit. You can protect your plants by covering them with small meshed plastic netting or by using sound and visual scare devices.