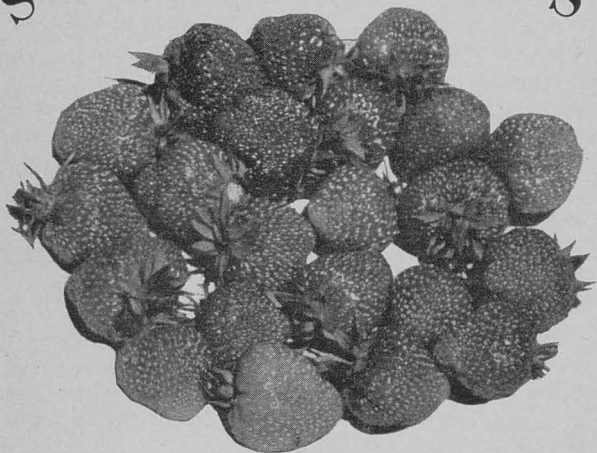


STRAWBERRIES



FOR MINNESOTA

L. C. SNYDER



Strawberries are grown on more farms and in more town and city gardens than any other fruit. The popularity of the strawberry is due to its excellent quality for freezing, canning, and preserving as well as for eating fresh. In this folder we will discuss both June-bearing and ever-bearing strawberries.

University of Minnesota
Agricultural Extension Service
U.S. Department of Agriculture

June-Bearing Varieties

Select Good Varieties

The variety you select will depend on a number of things such as use, soil type, and area of the state. Here are some varieties to consider:

Dunlap is probably the most popular home garden variety. Its quality is very good when used soon after harvest. It is rather soft to be shipped long distances.

Premier is the leading commercial variety. It produces large, bright-colored berries that hold up well in shipping. Its quality is good.

Sparkle has shown promise in our tests. Its yields have been equal to Premier and its fruits are a brighter red color and more attractive.

Robinson is a late-maturing variety that is becoming popular in northern Minnesota where late spring frosts often kill the flowers of early varieties. It produces large, attractive fruits that ripen a little later than Dunlap or Premier.

Beaver is a popular variety on light, sandy soils.

Prepare the Soil

Strawberries can be grown on almost any soil type if it is properly prepared. A rich sandy loam is best, but even a clay or sandy soil will produce good berries if sufficient organic matter is added.

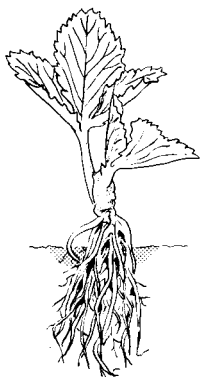
Select a site that is comparatively level and yet well drained. Both air and water drainage are important. If at all possible, locate the strawberry planting where it can be watered during dry spells.

The planting can be made along one edge of the vegetable garden or between young fruit trees. The soil should be in a cultivated crop the year before planting to avoid a severe infestation of white grubs since these insects lay their eggs in weedy or grassy places. This practice also reduces competition from weeds.

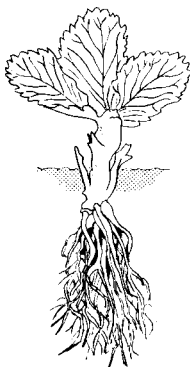
Before planting, plow or spade under a liberal application of up to 80 tons per acre of well-rotted manure and work the ground thoroughly. On a small area this would be about 6 to 8 bushels for 100 square feet. This manure not only will improve the physical texture of the soil but also will increase its water-holding capacity and improve its fertility.

On soil of low fertility, the addition of a complete commercial fertilizer may be advisable. Where a high analysis fertilizer is used, 300 to 500 pounds per acre is recommended. This would be about a pound for each 25 feet of row.

Too Shallow



Proper Depth



Too Deep



Plant at proper depth

Plant Early in Spring

Plant strawberries as early in the spring as the ground can be worked. Get your plants from a reliable nursery. Place your order early so the plants will arrive at the proper time for planting.

If you have a good variety and are merely enlarging your planting, it is entirely satisfactory to transplant healthy young plants from your old planting. If you are setting out many plants and prefer to grow your own, grow several rows for this purpose rather than take the plants from a fruiting row.

The rows should be spaced 3 to 4 feet apart and the plants spaced 18 to 30 inches apart in the row depending on the vigor of the variety.

The depth at which the plants are set is very important. If set too deep, the crown rots or fails to send out runner plants. If planted too shallow, the exposed crown dries out. Always plant so the crown is just level with the soil line.

Open a slit in the ground with a spade and spread the roots out in this opening. Remove the spade and firm the soil about the roots. A little practice will enable you to do a good job of planting with the plants set at the proper depth.

Keep the roots moist at all times. If the roots are long and straggly, they may be trimmed with a sharp knife or scissors. The plants may also benefit from the removal of some of the outer leaves.

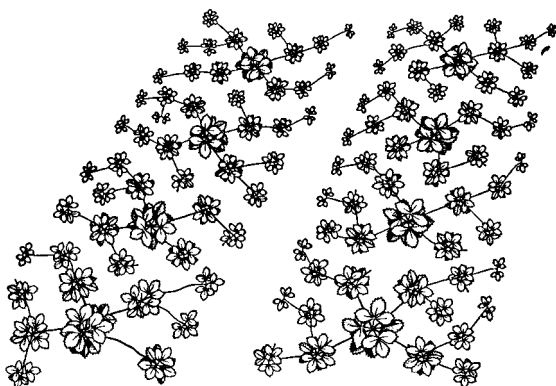
Plant in the evening or on a cloudy day, if possible. If the soil is dry, scrape away the dry surface soil before making the opening with your spade. This will prevent dry, powdery dirt from falling in around the roots.

Continue Care in Summer

Keep strawberries cleanly cultivated particularly during the first year. Promptly hoe out or kill with a 2,4-D weed killer any weeds that come up in the row. Strawberries are surprisingly resistant to 2,4-D injury. Do not use it, however, when the strawberries are in bloom or fruiting. Use 2,4-D according to manufacturer's directions and be careful to keep the spray away from flowers or vegetables.

Remove any flowers that form after planting. Allowing these flowers to develop will impair the plant-forming capacity of the parent plant.

Matted row system—Keep the rows narrow, about 18 inches wide. Within this 18-inch row, space the runner plants as they form so that the daughter plants are about 8 inches apart. Remove late runners that form, since they will produce few fruits and will seriously reduce the crop the following spring by shading and competing for moisture. Failure to thin out these surplus runner plants is one of the most important causes of small crops and deformed berries.



The matted row system

Protect Berries in Winter

The strawberry blossom buds for the spring crop are formed in the fall. Exposing these buds to temperatures as low as 20° F. will seriously reduce yields of high-quality berries. For this reason mulch the plants before severe weather. Before applying the mulch, however, wait until the plants have been subjected to a few good frosts to aid in hardening them off. The time to apply the mulch will vary with the season and the part of the state. Normally about November 1 will be right in the Twin City area.

Use straw free from weed or grain seed or marsh hay for mulching. Apply the mulch to a depth of 2 to 3 inches over the rows. If the area is subject to

blowing, it may be necessary to hold the straw down with boards, branches, or corn stalks.

Leave the mulch on as late in the spring as possible to hold back the bloom until after frost. Frequent checks will determine how late the mulch can be left on safely. If the leaves of the strawberry plants start to turn yellow, remove the mulch at once.

In removing the mulch, lift the straw from over the rows and place in the picking aisles. Some of the finer materials in the mulch should be left in the row. The plants will push up through a light covering, and the berries will be kept clean during the picking season. If late spring frost threatens when the plants are in bloom, use the mulch in the picking aisles to cover the plants and thus protect them from frost.

Since the mulch covers the space between the rows, no cultivation is needed during the second season until after the harvest period. If weeds come up through the mulch, pull them at once.

Harvest Berries Promptly

Pick your berries as soon as they are ripe to prevent soft and spoiled fruit. In the home garden, allow the fruit to become uniformly red since the sugar content is higher and the flavor better on garden-ripened fruit. Pick every other day during the peak of the season to get the maximum production. Pick the berries carefully and handle with care to prevent bruising.

Birds are often a nuisance during the ripening period since they, too, are fond of ripe berries. Locating the patch away from trees where birds nest will reduce this trouble. Shiny objects, such as strips of aluminum foil, help, but young robins soon get used to such objects. For small patches in town, it may be necessary to cover the entire planting with course netting or chicken wire.



Mulch protects plants in winter and keeps weeds down in summer

Keep Berries Watered

Strawberries demand a continuous moisture supply throughout their development. A dry period following planting will seriously reduce plant increase and development, while a dry spell during harvest greatly reduces the yields. If at all possible, locate the planting where it can be watered as needed.

Renovation Is Necessary

Some growers prefer to start a new planting of strawberries each spring and abandon the patch after harvesting the first crop. Others like to carry the planting over for a second and even a third crop. If a planting is to be carried over, it must be thoroughly renovated immediately after the crop is harvested.

Mow the plants down to the ground with a scythe or mower. Rake the leaves and mulch and remove them from the patch. These can be placed in a compost pile or used for mulch around fruit trees.

Next, cultivate or plow between the rows, leaving a narrow band of plants about 8 inches wide. Remove the old plants with a hoe, leaving only strong, vigorous young plants. A sidedressing of a complete fertilizer applied at the rate of 1 pound per 25 feet of row will generally prove beneficial.

If the weather is dry, a thorough watering at this time will speed new growth. Continue to cultivate throughout the remainder of the season and space the runner plants as recommended for the first season.

Everbearing Varieties

Select Good Varieties

Everbearing strawberries are especially susceptible to injury from cyclamen mites. This pest must be controlled if you are to be successful with everbearers.

There are several good everbearing strawberry varieties grown in Minnesota. These include:

Gem is still widely grown and is adapted to a wide variety of soils and conditions.

Evermore does well in northern and western parts of the state.

Superfection looks very promising. It is reported to be a seedling of the Gem which it resembles.

Red Rich seems to be well adapted in most parts of the state. The plants are vigorous and highly productive. The berries are excellent for eating, preserving, and freezing. Cyclamen mite control is necessary for the successful culture of this variety.

Planting and Care Important

Everbearers need the same site selection and soil preparation as June-bearing varieties. They can be grown in the matted row, as described for June-bearers, or in the hill system. We recommend the hill system for everbearers since it produces a large fall crop of clean berries the first year.

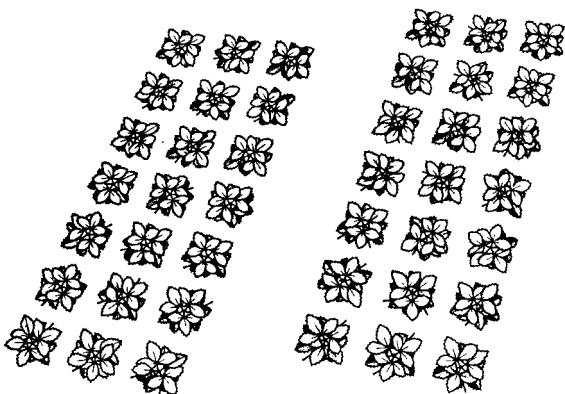
Hill system—in this multiple-row arrangement, 3 or 4 rows are planted close together with a picking aisle on either side. The plants are spaced somewhat according to variety. Varieties like Gem and Evermore can be planted a foot apart each way, while a vigorous variety like Red Rich needs at least 15 to 18 inches between plants. Keep all the runners cut off and the first crop of blossoms removed. The blossoms for the fall crop should start in late June or early July. Allow these to develop.

Keep the planting clean and free from weeds. About the middle of July put a mulch between the plants. Ground corncobs or sawdust is excellent. Apply to a depth of about 1 inch. The purpose of this mulch is to conserve moisture, to control weeds, and to keep the berries clean.

By the first of August the first berries should be ripe. By picking twice a week a continuous supply of berries should be available until frost. While picking the fruit, pick off runners that have formed.

With this system of culture, grow everbearers as an annual crop with a new planting started each spring. To have a supply of plants, grow a nursery row each year where runners are allowed to develop.

The plants can be mulched and carried over for a spring crop the following season although this spring crop will seldom be equal to that of a good June-bearing variety.



The hill system

Although strawberries are subject to a number of leaf diseases, insect pests, and mites, they often can be grown without an elaborate spray program. Following a good cultural program should largely take care of leaf diseases. For insect pests and cyclamen mite, see Extension Pamphlet 184, "Fruit Spray Schedule." For further information, see Extension Folder 191, "Cultural and Chemical Weed Control in Minnesota," and its summary supplement, Extension Folder 191T. Copies can be obtained from your local county agent or from the Bulletin Room, University of Minnesota, Institute of Agriculture, St. Paul 1.

Strawberry Growing Tips

- 1 Select adapted varieties.
- 2 Plant early on weed-free soil.
- 3 Limit the width of the row by cultivation.
- 4 Mulch for winter protection.
- 5 Water during dry periods.
- 6 Handle berries carefully.

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