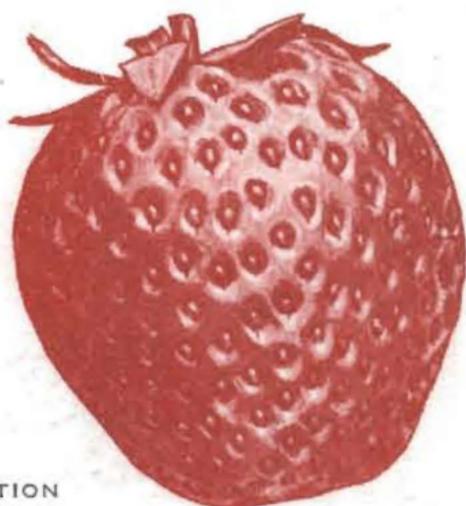


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Strawberries

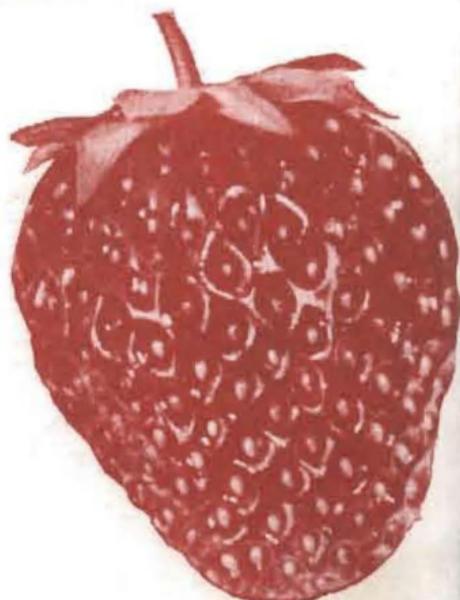


SUPERFECTION

TRUMPETER

Robert G. Askew
Extension Horticulturist

Neal S. Holland
Experiment Station



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NORTH DAKOTA STATE UNIVERSITY
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STRAWBERRIES

STRAWBERRIES are one of the most prized fruits used in North Dakota homes. The information in this circular will serve as a guide in the production of strawberries for home use.

TYPES AND VARIETIES

EVERBEARING strawberries produce a crop in late June and early July with a second crop starting in late summer and continuing until freeze-up if the conditions are favorable.

Many varieties of strawberries are available, but some of them are unsatisfactory for North Dakota conditions. The following EVERBEARING VARIETIES are recommended for general planting.

Gem - (Superfection) This variety usually performs well under North Dakota conditions. The berries are rounded, tart and light red. It produces ample runners for an everbearer.

Ogallala - A newer variety that has become popular with home gardeners. The berries are large and of good quality. Ogallala is productive.

JUNE BEARING varieties produce their entire crop in late June and early July. Both types of strawberries are capable of producing similar yields. The recommended varieties are:

Dunlap - Sometimes referred to as Senator Dunlap. This variety produces fruits of medium size with a rich red color.

Trumpeter - This vigorous variety produces fruit of very large size and good quality. The crop may be harvested in a couple of pickings.

CULTURE

WATERING Normal rainfall in North Dakota is not quite enough for highest production. Supplemental water is usually needed. Strawberries respond to the addition of water through some form of irrigation.

SITE AND SOIL The site for a strawberry planting should be well drained and preferably on loamy soil. However, satisfactory crops may be produced on heavy clay or light sandy soils. Practice shallow cultivation to avoid root injury. Manures, especially well-rotted manures, are good fertilizers for strawberries. Apply $\frac{1}{2}$ bushel per square yard before plants are set. The response of strawberries to commercial fertilizers may vary because of wide soil differences. For general use of fertilizers, follow rates under row applications -see Circular A-294 "Lawn and Garden Fertilizers".

TIME TO PLANT Strawberries are usually best planted in early spring. They may be planted in late summer (before August 15th) providing there is enough soil moisture to get the plants established before winter. When planted in late summer, it is advisable to remove about 75 per cent of the leaves to prevent plants from drying out because of water loss from leaves.



Figure 1. Prune plants just before they are set out. (A) Remove portion of roots as well as 75 per cent of the leaves.

PLANTING STOCK Use only vigorous young plants when starting a new patch. Young plants can be distinguished from old ones by their light colored roots. Unthrifty, old strawberry plantings may be diseased, therefore, buying healthy plants from a reputable dealer is highly recommended. Proper depth of planting is important as shown in Fig. 2. Water plants after setting.

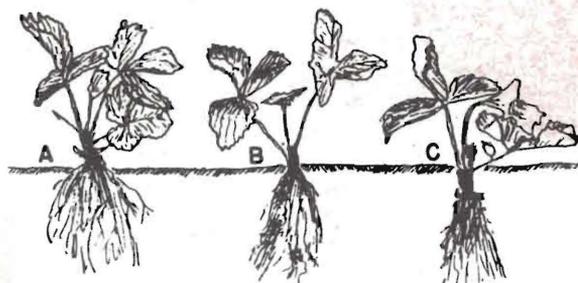
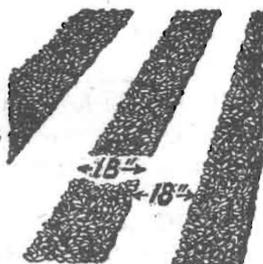


Figure 2. Strawberry plants should be set carefully at the proper depth. (A) Too shallow (B) Correct (C) Too deep.

PLANTING SYSTEMS

MATTED-ROW SYSTEM is most commonly used in home gardens. Rows are spaced 3-4 feet apart, and plants set 18-30 inches apart in the row. Allow runners to form a mat 15-18 inches wide, with plants 4-6 inches apart. Many home gardeners allow the plants to grow too close together; this results in small and inferior berries.



THE HILL SYSTEM is sometimes used to obtain large berries of exceptional quality. It requires more hand work than the matted-row system. Space double rows 2-3 feet apart, with plants 12-15 inches apart in the rows. Remove the runners as they appear.

REMOVE BLOOMS With spring planted everbearing varieties, keep the blossoms removed until July 15, then allow them to bloom and produce a crop. The production of fruit on newly set plants restricts vegetative growth and results in poor yields. Do not allow June bearing sorts to produce a crop the same season as planted.

WEED CONTROL Hand hoeing and shallow cultivation are necessary for weed control. Chemical weed control has been successful in strawberries. Be sure to follow directions for time and rate of application for approved chemicals. Early runners should be allowed to root while later ones should be removed. Many home gardeners allow plants to become too thick (4-6 inch spacing between plants) in a matted row. Strawberries are probably the worst "weed" in many home patches. Small berries, poor quality and more disease problems are the result.

WINTER PROTECTION - MULCHING

When the ground is frozen in the fall, cover your strawberries with a 4-inch layer of clean straw or marsh hay. Soybean straw is very satisfactory. It is frequently free of weed seeds and it is not inclined to pack down. Do not depend on snow for winter protection. When the plants begin growth in the spring, remove the mulch. Allow part of the mulch to remain between the rows to help keep down weeds and also to conserve moisture. A mulch under the berries keeps them from becoming soiled.

Under ordinary conditions, don't expect your strawberry beds to bear more than two seasons in succession. Start new beds from the old (as long as your planting is healthy), using the young plants.

Don't attempt bed renewal unless the plants are vigorous and relatively free from weeds, insects, and diseases.

Renewing is accomplished in the matted-row system by narrowing the rows with a plow, cultivator, or hoe to a strip 8-10 inches wide. Thin out the plants, leaving only the most healthy and vigorous. Then proceed as with a new planting.

Many insect, disease, and weed problems can be avoided by fruiting a bed only two seasons, and then starting a new one.

DISEASES AND INSECTS

Strawberry diseases are not a serious problem in North Dakota. Winter injury may be confused with or complicated by certain types of root diseases. However, adequate mulch protection and moisture and good drainage usually prevent these troubles. Virus diseases are responsible for reducing yields. Destroy any bed suspected of having virus infection and make a new planting with healthy stock.

In most plantings preventive measures are more effective than spraying for control of strawberry pests. Sanitary measures such as mowing and burning of leaves after berry harvest, clean tillage, removal of weeds and rubbish bordering the planting; coupled with the use of healthy planting stock and short rotations, are practical things that you can do to prevent insect and disease problems in your strawberry bed. (Refer to Circular A-299 "Fruit Insect and Disease Control Guide for the Home Gardener").

For diagnosis of problems, send a sample of insects to the Department of Entomology, N.D.S.U., Fargo, North Dakota, 58102 for identification and controls. Send your samples of disease to the Department of Plant Pathology, N.D.S.U., Fargo, North Dakota, 58102.