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RASPBERRIES

Raspberries are not considered a commercial crop in North Dakota but they can be grown successfully and are important as a small fruit, especially for the home planting. A few growers with large plantings sell the excess fruit on a "pick your own" basis. This eliminates the labor needed for harvest of the fruit. Raspberries are important for sauce, jam and fresh fruit for the family table.

VARIETIES

Many varieties of raspberries are on the market. However, not all of these are adapted to North Dakota conditions. Raspberries are self-fruitful and do not need another variety nearby as a pollinator. Some of the most desirable varieties are described in this circular.

Red Fruited Varieties

Chief This is an early red fruited variety from Minnesota and is one of the most popular in North Dakota today. Chief is a seedling of the variety Latham. The berries are medium to large in size and are a bright red color. The fruit ripens about a week earlier than Latham. The plants are productive and the fruits are easy to pick. Chief is recognized for its hardiness and perhaps is the most suitable variety to be generally grown in North Dakota.

Latham Another red fruited variety of Minnesota origin. Latham has large bright red berries of good quality. The plants are productive. Latham lacks hardiness and when planted in North Dakota it should be given winter protection. In milder climates, Latham is commercially important.

FOR TRIAL

Two varieties suggested for trial plantings are **Boyne** and **Killarney**. These new varieties have not been sufficiently planted to determine their area of adaptation, but appear promising. They are recent introductions from the Morden Experimental Farms, Morden, Manitoba.

Everbearing Varieties

The so-called "everbearing" or "fall bearing" varieties produce fruit on the new growth as well as on the one year old growth. So, if the season here was long enough, a summer crop could be obtained from the one year old growth, and the new growth could produce a fall crop. With North Dakota's short season, only one crop is possible. If the canes are cut off at the ground level each spring, a satisfactory fall crop can be harvested.

Durham This is the best of the fall bearing varieties for North Dakota conditions. It ripens its fruit early enough so most of it will escape the early fall frosts. The old canes are not dependably winter hardy but this is no serious problem since they should be cut off in the early spring.

FOR TRIAL

The variety **September** is suggested for trial plantings. It shows promise as an everbearing variety for North Dakota.

Black Fruited Varieties

Black raspberries are not as popular in North Dakota as the red fruited types. They are not as hardy and should be given some winter protection. In addition to fruit color, the black raspberries differ from the reds in the way they are propagated. New red raspberry plants are produced by suckers. New black raspberry plants are produced by bending over the long willowy canes and covering the tips with soil. A new plant results when the cane tip takes root.

FOR TRIAL

The varieties **Black Hawk** and **Cumberland** are suggested for trial plantings of black raspberries.

CULTURE

Cold winters and hot dry summers are not favorable to raspberry growth and production. Prolonged hot, dry spells may result in a crop failure.

The preferred site for raspberries is a gradual slope facing northeast. It should be protected on the north and west sides.

Another good location is the north side of a row of trees. Plant the row of raspberries far enough away to avoid competition with the trees for moisture and nutrients. Extra accumulations of snow in these areas offer better winter protection and there may be some additional shading in the winter preventing early warmups and unseasonal growth of the raspberry canes.

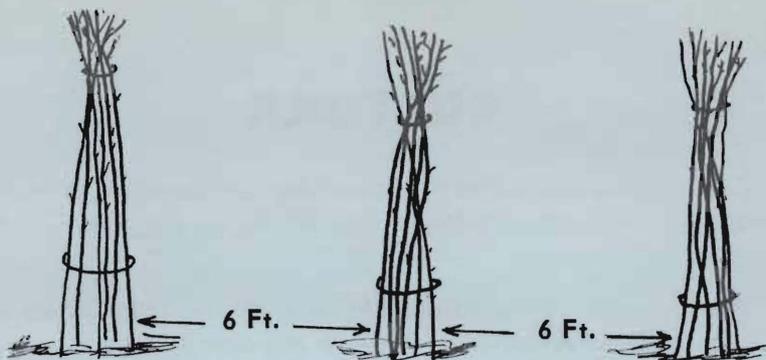
Set raspberry plants in the early spring. Cut the canes to within 6 inches of the ground for best results.

Planting systems commonly used for red raspberries are the hedge row and the hill systems.

With the hedge row system, rows are spaced 6 to 8 feet apart. The plants are set 3 to 4 feet apart within the row. The planting is then cultivated only lengthwise. In the case of red varieties, the suckers will quickly fill in between plants in the row and a solid hedge row results.

With the hill system, which is not used extensively in North Dakota, the plants are spaced 4 by 6 feet. Six to 10 canes are permitted to grow in each hill. A stake is placed in the center of each hill, usually at the beginning of the second year. In the spring the selected canes are cut to 4 feet in height and tied to the stake at 30 and 42 inches from the ground. Allow 6 to 10 replacement canes to develop each season. When properly cared for, a hill system will yield well and is more easily picked than plants in a hedge row.

A third system is the tepee system which resembles the hill system except the stake is not used in the center of the tepee.



TEPEE SYSTEM

PRUNING

Pruning is one of the most important parts of raspberry culture and it is very often neglected or improperly done. Proper pruning of raspberries will make the picking of the fruit easier and the individual fruits will be larger. Also, the shortened canes are not as likely to break under a load of fruit.

In the hedge row system, the spring pruning should consist of thinning the canes to 6 inches apart or 8 to 10 canes per 2 feet of row. Keep in mind the row should be only 18 inches wide. The remaining canes should be tipped or headed back to 3 to 3½ feet tall. This spring pruning should be done in the early spring before any growth takes place.

In the hill or tepee system, the spring pruning consists of selecting 6 to 10 canes and removing all others. The selected canes should be tipped to 3½ to 4 feet in height. At this time the canes should be tied to the stake in the hill system.

In midsummer, after the raspberries have finished fruiting, all canes that bore fruit should be removed. These old canes will die the following winter since the canes of raspberries live only two years. The first year the canes grow from a shoot starting from the root. The second year the cane fruits and dies. These canes that fruited compete with the young canes for moisture and nutrients. They also serve as a harbor for insects and diseases. Burn all the refuse which is removed in pruning.

WINTER PROTECTION

Raspberries grown in exposed or difficult sites and the more tender varieties should be given some winter protection. This can be done successfully by bending the canes over and throwing a shovel of soil on the cane to hold it down on the ground. The bent over canes should then trap snow which gives good protection. This usually results in less winter killing and a better fruiting response the following summer.

INSECTS and DISEASES

Red spider mites are the most common insect pests of raspberries in North Dakota. The mites are tiny sucking insects found under the leaves. The damage appears as small light colored spots on the leaves. There may also be a cupping of the leaves. The recommended control is malathion or aramite.

The most serious diseases of raspberries in North Dakota are virus diseases referred to as mosaics. They cause a cupping of the leaf, mottling of yellow green color, loss of production and loss of quality in the fruit. This may be partially avoided by starting with new plants from a reliable, regularly inspected nursery. Raspberry plants from a neighbor's old "patch" often are infected.

Certain other insects and diseases may cause trouble. Send a sample of insects to the Department of Entomology, N.D.S.U., Fargo, North Dakota, for identification and controls. Send your samples of diseases to the Department of Plant Pathology, N.D.S.U., Fargo, North Dakota.