

RASPBERRIES

VARIETIES

CULTURE

PRUNING

WINTER PROTECTION

INSECTS AND DISEASES

Harry A. Graves
Extension Horticulturist
and
Neal S. Holland
Asst. in Horticulture
Experiment Station

NDSU LIBRARIES

NDAC Extension Service, Fargo

NORTH DAKOTA AGRICULTURAL COLLEGE

Case
S
544.3
.N9
A8
no.38

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 problem which is necessary for harvest of the fruit. Raspberries are an important source of sauce, jam and fresh fruit for the family table.

VARIETIES

There are many varieties of raspberries on the market, however, many of them are not adapted to our conditions. Raspberries are self-fruitful and do not need another variety nearby as a pollinator. Some of the most desirable varieties are described below.

RED FRUITED VARIETIES

CHIEF This is an early red fruited variety from Minnesota and is one of the most popular varieties 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. It is recognized for its hardiness and is perhaps 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. It lacks hardiness and when planted in North Dakota it should be given winter protection. In milder climates, Latham is commercially important.

RUDDY This is an introduction from the North Dakota Agricultural Experiment Station. It is hardy and productive. The fruit tends to be small and the berries crumble easily. It has a purple cast and a flavor of its own which resembles that of the black raspberry. This variety makes excellent jams and sauces.

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 our season were long enough, we could get a summer crop from the one year old growth and the new growth could produce a fall crop. With our short season we can get only one crop. If the canes are cut off at the ground level each spring we can get a satisfactory fall crop.

DURHAM - This is the best of the fall bearing varieties for our conditions as 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.

BLACK FRUITED VARIETIES

Black raspberries are not as popular in North Dakota as the red fruited types. As a rule 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 willowly canes and covering the tips with soil. A new plant results when the cane tip takes root.

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 the planting of raspberries is a gradual slope facing northeast. It should have protection on the north and west sides.

Another good location is on 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.

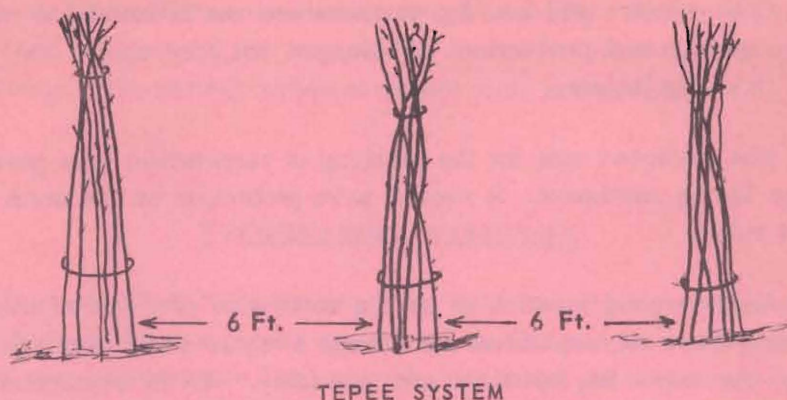
Set raspberry plants in the early spring. Cut the canes to within 6 inches of the ground for best results.

Two planting systems commonly used for red raspberries are the hedge row and the hill system.

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. All other plants are kept down. 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 is like the hill system except the stake is not used in the center of the tepee.



PRUNING

This 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 down 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 mid-summer after the raspberries have finished fruiting, a cleanup should be carried out. This involves the removal of all canes that bore fruit. 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 variety Ruddy is resistant to the most common kinds of spider mites. 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 our raspberries 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.