Growing Raspberries in South Dakota

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growing
RASPBERRIES
in
South Dakota
Raspberries are one of the popular small fruits that can be grown successfully in South Dakota. They are an important source of vitamin C and are valued especially by the home gardener for jam and fresh fruit. Growers of larger plantings may sell part of their fruit on a “pick your own” basis to eliminate much harvest labor.

Red raspberries are commonly grown throughout the state. They bear red fruit, have erect canes, and are propagated by suckers which come from the roots of the parent plant.

Black raspberries or blackcaps are planted less widely. They bear black fruit, have erect canes which root at the tips in the fall, and are propagated by the plants formed at the tips of the rooted canes.

Purple raspberries are not suggested for planting in South Dakota. They bear purple fruit and are hybrids of red and black raspberries. They produce canes which arch and root at the tips as do the black raspberries.

Planting Conditions

Site
A protected site is necessary for the raspberry planting to produce best results and good yields. The fruit is easily hurt by hot, drying winds. Successful growers will choose a site that is protected from both summer and winter winds. Avoid poorly drained soil. The best site is a gently rolling slope facing north or east. Soil erosion can be reduced and water conserved if the planting is made on the contour. In a small home garden plants usually are set in rows or hills on level ground.

Moisture
Raspberries can utilize 1 ½ to 2 inches of moisture a week during the growing season. In most years some form of irrigation will be necessary to assure high yields. Avoid irrigating late in the fall, since this will prevent canes from maturing properly.

Soil
Raspberries may be grown on several soil types, but a sandy loam high in organic matter is best. It can be worked easily and absorbs and holds moisture.

Fall plowing is better than spring plowing for preparation of the raspberry planting. Plowing 6 to 8 inches deep, followed by disking in the spring, will give good planting conditions.

Fertilizing
Organic matter is important in the soil under raspberry plants. If a mulch is used to add organic matter it should be accompanied by an application of nitrogen fertilizer. Ammonium nitrate (30-0-0) is used most commonly. Apply at the rate of 2 to 3 pounds per 100 feet of row or ¼ cup per hill. For a general application, a complete fertilizer such as 12-12-12 often is used; apply this before growth starts in spring, at the rate of 4 to 5 pounds per 100 feet of row or ½ cup per hill.

Selecting Plants

Hardy, disease-free raspberry plants may be purchased from reliable nurseries where inspections are made and certified stock is sold. For best results use vigorous stock. Raspberries sometimes are sold by grade—order only the best. A good plant will have many small roots attached to a 5- or 6-inch piece of the main root.

Planting Method

Plant raspberries either in a hill or in a hedge-row arrangement.

Hill system
Set raspberry plants in rows 6 feet apart and either 6 or 4 feet apart within rows. (Spacing will depend on cultivating equipment to be used.) In this type of planting arrangement canes are confined to an area 18 inches in diameter. Working about the plants is easy with this system.

Hedge-row system
In this system plants are set in rows 8 feet apart and are spaced 2 feet apart within the row. Each plant will send up a number of suckers from its roots. These develop into canes to form a solid hedge row which should be restricted to a width of 15 inches.

Training Methods

There are four methods of training raspberries: 1) the staked-hill system; 2) the teepee-hill system; 3) the supported hedge-row system; and 4) the unsupported hedge-row system.

Staked-hill system
In this system a 6- to 7-foot stake is driven into the center of each hill. Each spring mature canes are fastened securely to the stake by tying them about 3 inches and 15 inches from the top of the stake. Tips of the canes are cut off even with the top of the stake—about 5 to 6 feet above the ground (Figure 1).
**Teepee-hill system**

No stakes are required in this system. Instead, 5 to 7 mature canes are tied securely together about 3 feet and 3½ feet above the ground. Tips of the canes are cut off at a height of 4 feet (Figure 2).

**Supported hedge-row system**

In this system mature canes are supported between two wires strung between posts at a height of about 3½ feet. Each spring the canes are placed between wires, and the wires are tied together at close intervals with cord. Tips of canes are cut off 4 feet above the ground (Figure 3).

**Unsupported hedge-row system**

This training method consists merely of cutting tips of mature canes to a height of 3 feet above the ground. No support is provided (Figure 4). Unsupported canes easily break or bend to the ground if not pruned back to about 3 feet.

**Cultivation**

Cultivation controls weeds, aids in the control of insects, and prevents the spread of plants between rows, which in turn helps prevent disease. When a planting becomes a raspberry “patch” with canes permitted to grow “wild,” air circulation is poor. Such plantings are susceptible to disease and insect problems, and picking becomes difficult.

Practice shallow cultivation; deep cultivation will damage roots. Start cultivation early in the spring and continue until fruit is well set. Avoid late-summer cultivations.

**Pruning**

There are two times when red raspberries need pruning. The raspberry is a perennial plant but the canes live only 2 years. On most raspberries fruit is produced on the small side branches of canes during the second year. In July, soon after the fruit is harvested, remove all canes which bore fruit, for they will not bear again. The following spring thin out the new canes.

If the hill system is used, leave only 6 to 8 canes per hill. Confine the canes in each hill to an area about 18 inches in diameter.

If the hedge-row system is used, limit the row to a width of 15 inches. Thin out remaining canes so they will be about 8 inches apart. This means that only 2 or 3 canes per foot of row will be left after pruning.

In everbearing raspberries the canes bear fruit in late summer and fall the first year. Adapted cultivars will start to bear in August and produce until hard frosts occur. These canes will produce another crop the following July. The canes should be removed immediately after the July crop in the second year for the canes will die at the end of the second growing season. Their removal allows space for new canes to grow. Everbearing raspberries are usually grown in the hedge-row system. The new canes should be thinned, leaving only 2 or 3 canes per foot of row.

Black raspberries require one main pruning after harvest. Remove all canes that have borne fruit, cutting them off at ground level. In summer when new shoots are 24 inches high, pinch out the tip to encourage side branches.

**Winter Protection**

Plant raspberries where they will be protected from winter winds. This will reduce winter drying of the canes. Winter injury can be reduced further by using recommended cultivars and good cultural practices. Some growers bend canes and cover them with soil in the late fall to prevent excessive drying and to help canes remain dormant. If dormancy is broken by mild winter temperatures, freeze injury can occur.
Diseases

Anthracnose is a serious fungus disease which attacks red raspberries. It may be observed in spring on the new growth of stems where it forms small, purplish, slightly raised spots. The spots gradually take on a lighter color, and splits develop in the bark. Under certain conditions the disease can become serious. If the disease does appear, remove all infected parts of the plants and spray with an approved fungicide. Spraying may have to be repeated two or three times during the growing season.

Virus diseases also can become a problem in raspberry planting. Purchasing disease-free plants, controlling insects, and following good cultural practices will minimize virus problems. Avoid planting red and black raspberries within 350 to 400 feet of one another to help prevent the transfer of virus.

Insects

Raspberries are relatively free of severe insect problems. Plant lice or aphids can injure raspberry leaves by causing them to curl, resulting in a slow-down of normal growth. Other possible insects include raspberry cane maggot, red-necked cane borer, raspberry crown borer, raspberry cane borer, raspberry sawfly, mites, raspberry fruit worm, and picnic or sap beetles. If any of these occur, use an approved insecticide according to the product label instructions.

Recommended Cultivars

Summer-bearing red raspberries

Boyne is a summer-bearing cultivar developed at the Morden Research Farm in Manitoba. The medium-sized fruit is good for processing and freezing. The plant is winter hardy and very productive. Latham is a summer-bearing cultivar developed at the Minnesota Fruit Breeding Farm. It is hardy, vigorous and produces well.

Fall-bearing red raspberries

Fall Red is a vigorous fall-bearing cultivar. The fruit is medium-sized and of good quality. The plant suckers readily to produce many canes. It produces a good summer crop and starts producing the fall crop in early August. It is very productive. September is a high-quality fall-bearing red raspberry. The fall crop frequently matures so late that it is killed by frost before harvest time. This cultivar may lack hardiness. Plant only in more favored areas of the Black Hills and southeastern South Dakota.

Black raspberries

John Robertson is a high-quality black raspberry selected by John Robertson, pioneer horticulturist from Fall River County, South Dakota, and introduced by South Dakota State University. This cultivar is quite hardy and should do well in most areas of the state—particularly the Black Hills and southeastern areas. Black Hawk is a good-quality black raspberry developed at Iowa State University. It bears in early July and has firm, glossy-black fruit. It is suggested for the same areas of South Dakota as the John Robertson cultivar.

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