



Refreshing Raspberries

for home-grown goodness

Revised by **Esther E. McGinnis**, Extension Horticulturist

No other summer fruit grown in North Dakota can provide the exquisite flavor, high nutritive value and sheer delight of raspberries. They are high in fiber and vitamin C, and are a great source of antioxidants.

While not all locations in North Dakota are suited to growing this bramble, modifications to the microclimate via tree plantings or buildings can allow you to establish a few plants. Just 100 feet of a well-tended row of red raspberries will yield 50 to 75 quarts of this irresistible fruit.

While protection from temperature extremes is important in growing raspberries, plantings should be at least 50 feet from shade trees or windbreaks. If any wild raspberries are within 200 feet of the intended planting, they should be removed because they usually contain viral diseases that can spread to the new planting.

Sites where potatoes, tomatoes or strawberries were grown should be avoided because of the possibility of verticillium wilt infection. Check also to be sure that the area is free of invasive weeds such as Canada thistle, quackgrass or field bindweed (creeping jenny). While herbicides exist to remove these and just about any other weed species, problems will be greatly reduced if the site is free of the worst weeds before you plant raspberries.

Red-fruited Varieties

- **Boyne** – This summer-bearing variety is excellent for home gardens. The tender, glossy, dark red, medium-large fruit is good for processing and freezing. Canes are moderately vigorous, sturdy, winter hardy and very productive.
- **Killarney** – Killarney is reliably hardy but slightly less vigorous and productive than Boyne under North Dakota conditions. The large berries have excellent quality fresh or frozen.
- **Latham** – This summer-bearing variety yields attractive, light, red fruit that turns dark when overripe. The large, round, moderately firm, mild-flavored berries are of good quality. Plants are vigorous, upright and productive.

Purple-fruited Varieties

Purple-fruited raspberries possess a growth habit similar to the red types, with a fruit flavor of black raspberries. Plant only in Zone 4 areas of the state and provide winter protection.
Here is a recommended variety to plant:

- **Royalty** – This is a cross between a red and black raspberry. It matures late in the season, and is very flavorful and productive. A trellis will be necessary.

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 method of propagation. 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.
Here is a recommended variety:

- **Jewel** – This is one of the hardiest black-fruited varieties. It is for Zone 4 only.

Everbearing Varieties

The so-called “everbearing” or “fall-bearing” varieties produce fruit on the new growth as well as on the year-old growth. A summer crop can be obtained from the year-old growth, and the new growth could produce a sparse, late-fall crop. This late-fall crop may not always ripen before the first fall frost.

For best yields, mow the canes off at ground level each spring to forgo the summer crop in favor of a larger and slightly earlier fall crop.

Trial Planting

The varieties Polana, Autumn Britten and Anne are suggested for trial plantings in Zone 4 only. Anne is a yellow raspberry.

Planting

Set raspberry plants in early spring. Cut the canes to within 6 inches of the ground for best results. Spacing for raspberry plants depends on the system of training you plan to use and on the type of cultivating equipment you own.

Raspberry plants can be set in hills and cultivated on all four sides or set in rows and cultivated on two sides. For planting in hills, space the plants far enough apart each way so you can cultivate between them. (Check the plants in each direction).

For planting in hedgerows, space the rows far enough apart to cultivate with available equipment. Set plants 3 to 4 feet apart within the row. If you plan to cultivate with a garden tractor, 6 feet is the minimum distance between rows. The use of farm tractors requires greater distances between rows for cultivation.

General Pest Controls: IPM (Integrated Pest Management)

Sanitation practices will help limit pest problems and dependence on pesticide use.

These practices include:

- Using mechanical cultivation to limit weed populations at their youngest stage
- Removing the fruit-bearing canes as soon as they finish bearing
- Regularly monitoring the planting for pest buildup and possible predator controls
- Spraying with a lime-sulfur dormant spray just before bud break in the spring. This acts as an excellent sanitizer, helping control anthracnose, cane and spur blight, mites and scales.

Weed Control

Raspberry plantings should be cultivated thoroughly and frequently. If weeds and grasses get a start, they are difficult to control.

Approved herbicides can be used for weed control in raspberry plantings. The use of herbicides supplements cultivation and does not replace it.

Herbicides are most useful in controlling weeds within rows or hills, where hand hoeing otherwise would be necessary. The areas between rows and hills should be cultivated regularly even though herbicides are used near the raspberry plants.

Pruning

Pruning is one of the most important parts of raspberry culture and it very often is neglected or done improperly. Proper pruning of raspberries makes fruit picking easier and the individual fruits will be larger.

In the hedgerow system, pruning should consist of thinning the canes to 6 inches apart or eight to 10 canes per 2 feet of row. Keep in mind that the row should be only 18 inches wide. The remaining canes should be tipped or headed back to 3 to 3½ feet tall because shortened canes are less likely to break under a load of fruit. This pruning should be done in the early spring before any growth takes place.

In the hill system, spring pruning consists of selecting six 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 summer-bearing raspberries have finished fruiting, all canes that bore fruit should be removed. These old canes will die the following winter because the canes of summer-bearing raspberries live only two years.

The first year, each cane grows as a shoot starting from the root. The second year, each cane fruits and dies. These canes that fruited compete with the young canes for moisture and nutrients. They also harbor insects and diseases. Destroy or bury all the refuse removed in pruning.

Fall-bearing raspberries are different and set fruit on first-year canes. Usually the canes are pruned back to the ground annually during early spring to encourage a single fall crop. Thin canes as advised in previous paragraphs.

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 canes to hold them down on the ground. The bent-over canes should trap snow, which gives good protection. This usually results in less winter kill and better fruiting 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. You also may see a cupping of the leaves.

Recently, a devastating new pest called spotted wing drosophila was discovered in North Dakota. This pest lays its eggs in firm raspberries that are just starting to turn colors. The eggs hatch and the larvae begin to consume the interior of the fruit.

As spotted wing drosophila spreads throughout North Dakota, insecticide applications and other management practices may become necessary. Refer to NDSU publication E1715, "Integrated Pest Management of Spotted Wing Drosophila in North Dakota," for information on insect identification and treatment options.

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

This publication was authored by Ron Smith, retired NDSU Extension horticulturist.

For more information on this and other topics, see www.ag.ndsu.edu

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1.5M-4-06; 2-M-4-10; 500-3-14; 500-3-16