

# AGRI-FACTS

Practical Information for Alberta's Agriculture Industry

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## Raspberries in Alberta

Raspberries are one of the easiest and most rewarding fruits to grow in the home garden. They will produce a generous crop within the third year of planting with relatively minimal work. An 8 m row will supply plenty of fruit for eating fresh and preserving for a family of four.

Many acres of raspberries are being produced commercially in Alberta, but this factsheet will focus on home garden raspberry production.

### Location

Raspberries can be grown anywhere in the province. It is slightly more difficult to grow them in the chinook belt of southern Alberta.

A loam soil with high organic matter content is the ideal place to plant raspberries. The site should have good air circulation for disease prevention. Wind protection is necessary as the wind tends to dehydrate plants and soil, as well as breaking off the canes where they join the crown.

Avoid planting south of east-west shelterbelts or fences as this placement can cause the development of heat traps during the winter months. Frost pockets tend to form in depressions, so these sites should also be avoided.

### Preparing the soil

Good soil preparation is essential for a long-term raspberry crop. Apply organic matter (peat moss or well-rotted manure) the year prior to planting. Summer fallowing the planting site the season before planting helps control persistent weeds and aids in the incorporation of added organic matter.

### Nutrition

In the early spring before planting, incorporate a commercial fertilizer such as 16-20-0 or 20-10-10 to the planting area. The application rate depends on a soil analysis, but generally, 400 mL (use a liquid measuring cup) of fertilizer per 8 m of a 60 cm wide row is adequate.

In the year following planting, and in subsequent years, a side dressing of 27-14-0 or 34-0-0 fertilizer at the same rate as for planting can be applied on each side of the row in the spring, prior to mid-May.

Every three to four years, apply 16-20-0, 20-10-10 or 23-24-0 at the rate of 400 mL to 8m of a 60 cm wide row instead of the 27-14-0 or 34-0-0. The application should be completed before mid-May.

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### Planting stock

A raspberry planting is only as good as the plant material used in the plantation. Purchase only good quality, certified, disease-free plants.

### Planting

Raspberries break their dormancy early, so plant them as early as possible. Set the rows 3 to 4 m apart and the plants 60 to 100 cm apart within the row. Spacing between the rows can be varied depending on the space available.

It is important to keep the roots moist while planting, because exposure to the sun or wind quickly dries out the tender roots. This is the main cause for failures in establishing new plantings. Prevent drying by keeping the plants wrapped in moist burlap during the planting operation.

Set raspberries slightly deeper in the ground than their original growing depth. Water them immediately to remove air pockets around the roots. Cut the canes back to a height of 13 to 15 cm to promote early root establishment and to encourage the production of vigorous new canes. Keep the soil evenly moist during the plants' establishment.

## Maintenance

Regular cultivation controls weeds, improves soil aeration, permits better water penetration and limits the width of the row. Keep the row to about 45 cm wide with cultivation. To help prevent root injury, do not cultivate deeper than 5 cm. Ripe fruit may be damaged or lost if cultivation is done during the ripening period.

Insufficient soil moisture is one of the main factors that will reduce fruit yield. Raspberries require ample water because of their shallow root system. Generally, 2.5 to 3.5 cm of water per week from blossoming to the end of harvest is necessary to ensure a good quality fruit yield.

## Pruning and training

Red raspberries have a perennial root system and biennial canes. The new shoots, or suckers, are sent up every year. In the first year, suckers complete their physical growth, go dormant for the winter, and in the following year, these canes bear fruit and die.

If diseases are present, it is important to remove and burn fruit-bearing canes in late summer as soon as harvest is over. If diseases are not present, the old canes can be left standing until spring and then removed. They provide extra winter protection by acting as a snow fence, trapping snow, which serves as an excellent natural mulching material.

Each spring, cut off all dead material, weak canes and any surplus strong canes at ground level. Leave nine to ten sturdy canes per metre, with canes being no closer than 15 cm apart. Canes with winter tip injury can be headed back to live wood in the spring. New tall canes should not be cut back after July 1, because this will cause an increase of soft lush growth, which does not harden-off properly for winter.

Supporting the canes will help keep the fruit clean. Supports may be made by placing fence posts down the center of the row and running a 15-gauge wire down on each side of the post at a height of 60 to 90 cm. The canes will then grow up between the wires. Cross arms may be nailed to the posts if further support is necessary.

## Harvesting

Raspberries are ready for harvest when the berry separates easily from the receptacle. They should be well colored but firm. Remove berries from the bushes without crushing, and carefully place them in baskets. Small baskets are preferable, because berries at the bottom of larger containers tend to be crushed. Pick berries three or four times a week.

To avoid fruit quality deterioration, do not pick during the heat of the day. Always try to put the picked berries in the shade. Remove these berries from the raspberry patch and cool them as soon as possible.

## Winter protection

Raspberry plantings frequently suffer from winter injury. Alternating warm and cold periods in the late winter and early spring can result in severe cane losses.

In southern Alberta, extremely dry winter conditions, without appreciable snow cover, tend to cause cane desiccation. In northern Alberta, winter losses are usually the result of a failure to mature in the fall. Cessation of growth and hardening off are genetically controlled, but precautions can be taken to lessen the degree of winter injury.

The following precautions may prevent winter injury:

- do not trim the new canes back after July 1
- grow hardy varieties
- do not over-fertilize with nitrogen
- choose a site well sheltered from prevailing winds
- reduce soil moisture by withholding water from the middle of August until late fall
- water-in well in late fall, after leaf drop

In some rural districts where there is usually little snow cover, it may be advisable to provide winter cover by bending the canes over and covering the tips with soil. Once the leaves have fallen from the canes, the plants can be bent over. The easiest way to do this is for two people to work together; one pushes the canes over with a fork until the tips are touching the ground, and the other shovels soil on the cane tips to hold them down. Later, a shallow layer of soil may be plowed over them, although this is often unnecessary. Uncover the canes in spring towards the end of April. Use a fork to free them.

In southern Alberta, where snow cover is usually not maintained throughout the winter, cover the whole plant. Do that by bending over the canes and covering them with straw. A treatment with thiram will help deter mice. Lift the canes in April.

Take care when bending the canes and burying either the tips or the entire plant as this practice can damage the plants.

## Recommended varieties

Florican varieties are summer bearing.

*Boyne*: Early to mid-season, medium sized, medium to dark red, rather tart fruit. Very hardy, productive, moderately vigorous, suckers freely. Canes upright, very spiny, little branching. Susceptible to verticillium wilt.

*Festival*: Mid-season, medium to light red fruit, fair productivity. Good flavor, fairly good for freezing, only fair for canning. Canes very short, hardy, fairly resistant to mildew.

*Killarney*: Mid-season, very productive, medium to light red, bright, firm not crumbly fruit. Fair flavor, not acid, fair for freezing, poor for canning (tends to brown). Canes are strong, spiny, hardy. Susceptible to mildew.

*Honeyqueen*: Yellow-fruited variety. Hardy and quite productive and good sized fruit, berries somewhat soft. Mild, entirely different flavor than reds.

Primocane varieties are fall bearing and produce fruit on the current season's growth. Production generally begins in mid to late August. Areas with warm summers and long warm falls are ideal for primocane raspberries. All the canes are cut to the ground in March or April each year.

*Red River*: Medium red berries, canes sparsely spined, earliest cultivar.

*Double Delight*: Small, medium-red firm fruit, early.

*Summit*: Small to medium size, medium-red color fruit, canes have a few scattered spines.

*Autumn Bliss*: Large, oval conical, dark red berries, canes spiny and erect.

*Fall brook*: Large, bright-red sweet fruit, spiny canes.

Black and purple raspberries are not generally hardy under Alberta conditions. Cultivars worthy of trial if a sufficient micro-climate can be provided: Wyoming (purple raspberry) and Lowden Black (black raspberry).

For information on commercial production of raspberries in Alberta, contact

Lloyd Hausher  
Provincial Fruit Specialist  
CDC South Brooks  
(403) 362-1309