

YARD AND GARDEN

Growing Rhubarb in Montana

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Growing vegetables in Montana can be tough, unless you grow rhubarb (*Rheum rhabarbarum*). This hardy perennial tolerates Montana's cold winters and dry climate and is a good source of vitamins C and K, potassium and calcium. It is widely used in desserts, jams and pies.

The genus name for rhubarb, *Rheum*, is derived from Rha, the ancient name for the Volga River, where it grew on the riverbanks. The Chinese cultivated rhubarb for medicine as long ago as 2700 B.C. Marco Polo brought the medicinal plant into Europe and it was commonly grown in Italy by 1608. But it wasn't until 1778 that it was used as a food in tarts and pies. The plant was brought to America about 1790 and was being marketed by 1822.

There are many cultivars of rhubarb. The most widely available are:

'**Canada Red**' This high-quality cultivar has small, thick, tender petioles (leaf stalks). 'Canada Red' does best on slightly warmer sites.

'Crimson Red' Also known as 'Crimson Cherry,' this cultivar forms brightly-colored red stalks with the unique characteristic of being red throughout, under normal localized growing conditions of the Pacific Northwest. 'MacDonald' This cultivar produces pink stalks and is vigorous and upright growing. It is resistant to wilt and root rot.

'Valentine' This old bolt-resistant cultivar produces long, thick, deep-red petioles that retain their color when cooked. It is an excellent choice for home gardens.

'Victoria' This very old Canadian variety is resistant to wilt and root rot.

FIGURE 1. Rhubarb leaf stalks. Photo by Cheryl Moore-Gough, MSU.

Growing Rhubarb

Rhubarb does best on slightly acid soils with a pH between 6.0 and 6.8, but it will tolerate the somewhat more alkaline Montana soils. It will grow in almost any type of soil but is highly productive on fertile, well-drained soils high in organic matter.

You can grow rhubarb from seed but planting roots (crowns) works well, is easy, and is quickly productive. Even garden novices can be successful. Plant rhubarb crowns in spring as early as the ground can be worked. To prepare the planting bed, dig holes two feet deep and two feet wide and give three feet of space from other plants in all directions. Rhubarb plants are heavy feeders, so start right by filling the bottom of each hole with a six-inch layer of compost or wellrotted manure. Mix topsoil that was dug out of each hole with equal amounts of compost or manure and fill the hole with this mixture to a depth of one foot. Place the root piece in each hole so that the top, where the plant buds are located, sits 3-4 inches below the soil surface.

Firm the soil around the roots and fill each hole with the soil mixture until level with the surrounding soil. Water well.

If your soil remains too wet to work in early spring, you can plant rhubarb in the fall when dormancy has set in. If



you cannot depend upon winter snow cover, mulch the fallset crowns to reduce winter heaving.

Use no fertilizer in the planting year. Beginning in the second year, side dress (fertilize) each plant with a half-pound of a complete fertilizer such as 16-16-16 just as the petioles first appear. Continue this practice each spring and in fall when the leaves have died down but before the ground has frozen. Straw around the plants will keep weeds under control.

The plants may begin to form flower stalks in midsummer as a result of warm, long days. Remove these flower stalks as soon as they appear. Letting them fully form will draw nutrients away from the petioles and roots and into unwanted seed heads.

Harvest no crop the year of planting. The plant uses sugars made by the leaves to nourish the roots and enlarge the crown, resulting in an overall stronger plant. If plants are healthy, harvest for a few weeks in the second year by gently pulling the petioles from the crowns. Do not cut them.

Never harvest all the petioles since doing so may deplete the plant of enough nutrients to overwinter the roots. Harvest period should last about 4-6 weeks in subsequent years so long as plants remain vigorous.

The leaf blades of the rhubarb contain poisonous oxalic acid in quantities high enough to cause human fatalities if they are ingested. DO NOT EAT RHUBARB LEAF BLADES. Instead, cut the blades from the petioles and eat only the stalks.

Propagation

After four to six years, rhubarb plants can become crowded and the stalks will grow noticeably thinner. Divide the crowns in the early spring before new shoots emerge or in the fall after the foliage has died down.

Dig the crowns and cut them into sections between the large buds. Leave at least one bud on each crown section. Crown pieces should be as large as possible. Protect the new crowns from drying or freezing if they are not to be planted immediately. Before replanting, discard crown pieces that are damaged or rotted. Plant the new crowns as described above.

Pests

Rhubarb is a hardy perennial that is not usually seriously affected by insect pests or diseases. There are a few, however, of which to be aware.

Fungal and bacterial pathogens can affect rhubarb in Montana. The most common issue recently seen in the Schutter Diagnostic Lab is Rhubarb crown rot, caused by a fungus called *Phytophthora*. Examination of infected crowns reveals a chocolate brown decay accompanied by root cavities. Leaves may turn yellow to red, and collapse. Prevent crown rot by planting in well-drained soil.

Red leaf disease, caused by the bacterium called *Erwinia rhapontici*, is also present in Montana. Infected crowns exhibit much the same symptoms as those with crown rot, but the leaves also turn red. Evidence exists that root and foliage feeding insects can move the bacteria from infected to uninfected plants. Therefore, good insect management will also reduce localized spread.

Several foliar diseases including both powdery and downy mildew, gray mold, and various fungal leaf spots are known to occur on rhubarb. However, due to Montana's general dry climate they are of little or no importance, except for in a few wet intermountain regions.

Virus diseases also attack rhubarb. While not common in Montana, an occasional infection has been observed. Turnip mosaic, a common virus in rhubarb, can be mistaken for Red leaf disease. Its presence has not been verified in Montana but reports of this virus in Canada are common.

Always obtain healthy, disease-free crowns, and plant where no disease was previously observed. Remove and destroy diseased plants as soon as the problem is noticed.

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