July 2011

HG/Vegetables/2011-01pr

Rhubarb in the Garden

Taun Beddes, USU Extension Cache County Horticulture Extension Agent

Summary

- Rhubarb prefers organic, rich, well drained soils, but grows in most Utah soils.
- Stalk color ranges from green to red and is variety dependent.
- Starts (cuttings) are available in early spring as cut pieces of a crown. Purchase cuttings with a large leaf bud on the top surface and undamaged root(s) underneath.
- Plant so that the leaf bud is 1 inch beneath the soil. Space plants 3 feet apart.
- Rhubarb requires regular irrigation.
- Leaf stalks (petiole) should not be harvested for 2 years after planting.
- A plant yields 4 to 12 pounds of stalks annually depending on age, variety and growing conditions.
- Rhubarb can be preserved by freezing or canning.

Introduction

Rhubarb (*Rheum rhabarbarum* L.) has been cultivated for thousands of years and was introduced to North America in the seventeenth century. Rhubarb is an easy to grow, nutritious vegetable that can live in the garden for 10 to 15 years, and deserves more attention.

How to Grow

Soils: Rhubarb prefers organic, rich, well drained soil for best growth. However, most soils are adequate as long as they are well drained. An inexpensive soil test can reveal potential soil problems as well as soil nutrient levels. Visit the

USU analytical lab website at <u>www.usual.usu.edu</u> for further information about soil testing.

Soil Preparation: Before planting, control all perennial weeds and incorporate 2 to 4 inches of well composted organic matter 6 inches deep into the soil where rhubarb is to be planted.

Plants: Rhubarb is almost always purchased as starts (cuttings). Cuttings are taken from healthy crowns and should have at least one leaf bud on top and healthy roots (that may have been trimmed) on the bottom. Cuttings can be purchased online, via mail order or from local garden centers in late winter or early spring. Containerized, established plants are often available from local garden centers in late spring and early summer.



Rhubarb leaves just emerging from the soil in the spring. When first planting new starts, be sure to not cover them with more than 1 inch of soil¹

Recommended Varieties		
Variety	Stalk Color	Comments
Chipman's Canada Red (Canada Red)*	Moderate red	Multiple uses. Color resists fading when processed. High yielding variety.
Crimson Red (Crimson Cherry, Crimson Wine)	Bright Red	Well-balanced, sweet yet tart flavor and stalks are not stringy. Likely to produce flower stalks.
Cherry Wine	Bright red	Moderate vigor. Produces few flower stalks.
Early Sunshine	Intense red	Useful for pie filling. Moderate producer.
MacDonald (MacDonald's Canadian Red, MacDonald Crimson)	Bright pink to bright red	Common, high yielding variety. Useful for pies, freezing and canning.
Valentine	Deep red	Historic variety grown for its classic rhubarb flavor. Color resists fading when processed.
Strawberry	Light red	Moderate vigor. Produces few flower stalks.
Victoria (Large Victoria)	Mostly pink at the bottom that fades to green at the top.	Popular commercial variety due to its sweet taste and excellent yield. Very likely to produce flower stalks that need removal.

^{*} Variety names listed in parentheses are alternate names that the same cultivar may be sold as.

Planting and Spacing: Mature rhubarb plants grow over 3 feet in height and width. Place them where they will not interfere with other crops. In a sunny area, space plants every 3 feet. Plant crowns in early spring (late March to mid-April in Northern Utah). Cover crowns with no more than 1 inch of soil. Firmly press soil above and around crowns and then water well. If more than one row is planted, space rows 4 feet apart.

For container grown plants, cover the top of the root-ball with 1 inch of garden soil. Planting crowns

or established plants excessively deep delays maturity and can result in plant death.

Watering: How often to irrigate rhubarb depends on soil type, sun exposure and outdoor temperatures. For the first 2 to 3 years after planting, irrigate one to two times weekly so water penetrates to the bottom of the root-ball (usually 6 inches to a foot deep). Mulch around plants with straw, grass clippings or bark to conserve soil moisture and reduce weed competition.

Reduce irrigation frequency to once every 1 to 2 weeks after year 3, especially when mulch is applied around the plant. Irrigate so that water penetrates the soil 12 to 18 inches deep. Additional water may be needed during harvest in dry years.

Fertilization: Apply ½ cup of 16-16-16 granular fertilizer around the base of the plant just before leaves begin to emerge in the spring and lightly work into the soil. Do not fertilize during the first year of establishment.

Flowers: Rhubarb occasionally produces flower stalks. Flowering tends to reduce plant vigor and leaf and petiole production. Flower stalks should be removed just as they begin to elongate.



A newly formed rhubarb flower stalk. The tendency to flower is variety dependent 1 .

Dividing Plants: Depending on the variety and overall vigor, divide established plants every 5 to 10 years. In early spring, before new growth begins, dig up the entire crown. Divide the crown so that there is one large bud to each section of crown and root. A healthy, mature crown generally produces 5 to 10 new plants. Replant 3 feet apart in a new area of the garden using planting procedures described above. If divided crowns are not immediately replanted, store by covering with moist media such as potting soil, saw dust, peat moss, or vermiculite at temperatures between 32 to 40° F. Replant before or just as crown pieces begin to grow.

Problems

In Utah, rhubarb is not generally impacted by many pests or diseases, as long as proper plant health is maintained and healthy starts are used. To minimize risk, irrigate and fertilize properly and remove weeds from the growing area.

An insect called the rhubarb curculio may cause minor damage by piercing stalks and feeding on plant juices. Rhubarb will get various root-rot diseases if over-irrigated or grown in wet soils. The disease red leaf has been reported in many states. Leaves turn red and localized rot begins in the roots and then spreads throughout the plant. Other diseases are reported but are less common or are not present in Utah due to our dry climate. For assistance identifying and managing plant problems, contact your local USU Extension office.

Harvesting and Storage

Harvesting: Do not harvest any stalks for the first 2 years. In the third year, stalks can be harvested for 3 to 4 weeks. After the fourth year, harvest stalks for 6 to 10 weeks or until plants begin to lose vigor. Stalks are ready for harvest when the petiole is 10 to 15 inches long. To remove, grasp the stalk just below the leaf and pull upwards and to one side. Leave ½ of stalks at any given time to maintain plant health. Only the stalks are edible, so all leaves should be removed and discarded. Never cut stalks from the base of the plant. This leaves plant tissue potentially open as a disease entry point.

Productivity: Depending on the variety and growing conditions, between 4 to 12 lbs of stalks can be harvested annually per plant.

Storage and Processing: Fresh stalks can be refrigerated for 2 to 4 weeks in plastics sacks. Stalks can also be frozen. Blanch stalks in boiling water for 1 minute. Promptly cool blanched stalks in an ice bath to preserve crispness and color. Pack stalks tightly into containers and freeze with or without sugar.

When canning, 7 pounds of rhubarb is needed to fill nine pint bottles. Cut stalks into ½ to 1 inch pieces and place in a large sauce pan. Add ½ cup of sugar per quart of cut stalks. The added sugar draws out plant juices. Allow this mix to stand until juice appears. Heat to boiling and add the mix to clean canning jars, leaving ½ inch of head space. Boil filled jars in a water bath for 20 minutes at elevations of 1,000 to 6,000 feet and 25 minutes at elevations above 6,000 feet.

Nutrition: Rhubarb is rich in vitamin C and calcium. It has some vitamin A, iron, phosphorus and potassium.

Frequently Asked Questions:

Why are the stalks on my rhubarb so thin? Stalk (petiole) size is influenced by plant health, age, and variety. Over harvesting, poor nutrition, inadequate water, or other stresses (temperature) all affect stalk size. As plants get older and more crowded, stalk size also decreases. Finally, some varieties produce larger or smaller stalks.

Why do you discard the leaves after harvesting the petioles? Rhubarb leaves contain high concentrations of oxalic acid that can make you quite sick and lead to kidney failure. The stalks on the other hand have almost no oxalic acid. Animals are also susceptible to this poisoning so leaves should not be fed to livestock. Discard the leaves into the compost pile or leave in the garden as a mulch.

References

2002. Agrifacts: Rhubarb production in Alberta. Ottawa, Canada. (*Available online at:* http://www1.agric.gov.ab.ca/\$department/deptdocs.nsf/all/agdex5448).

Bratsch, A. and D. Mainville. 2009. Specialty crop profile: Rhubarb. Virginia State University. Petersburg, VA. (*Available online at:* http://pubs.ext.vt.edu/438/438-110/438-110.html).

Pschiedt, J. and C. Ocamb. 2010. 2010 Pacific Northwest plant disease management handbook. Corvallis, OR.

Tompkins, D. 1981. Growing your own vegetables: Rhubarb. USDA Agriculture Information Bulletin #409. Washington, DC. 201-204.

PHOTO CREDITS

¹ Wikicommons

Utah State University is committed to providing an environment free from harassment and other forms of illegal discrimination based on race, color, religion, sex, national origin, age (40 and older), disability, and veteran's status. USU's policy also prohibits discrimination on the basis of sexual orientation in employment and academic related practices and decisions.

Utah State University employees and students cannot, because of race, color, religion, sex, national origin, age, disability, or veteran's status, refuse to hire; discharge; promote; demote; terminate; discriminate in compensation; or discriminate regarding terms, privileges, or conditions of employment, against any person otherwise qualified. Employees and students also cannot discriminate in the classroom, residence halls, or in on/off campus, USU-sponsored events and activities.

This publication is issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Noelle E. Cockett, Vice President for Extension and Agriculture, Utah State University