

Growing Rhubarb in the Alaska Garden

Rhubarb is a member of the buckwheat (polygonaceae) family and is sometimes known as “pieplant.” It is a large, leafy-green plant with thick, celerylike stalks (petioles) that range in color from all red to all green, with shades of red and green mixed in between. The roots are orange-tinted brown, woody and fibrous. While the stalks are edible, the leaves are somewhat poisonous because they contain oxalic acid. Rhubarb originated in Central Asia and the Chinese have used the roots for medicinal purposes for millennia.

Rhubarb is a cool-weather perennial that thrives in the northern states, where it gets cold enough to force the rhubarb into dormancy. It shows the best growth in early spring, before the weather becomes too warm, and is one of the first crops ready for eating. Rhubarb contains vitamin A, vitamin C, thiamin, riboflavin, niacin, potassium, phosphorus and high-quality dietary fiber.

Varieties

Plant taxonomists currently recognize about 67 species of rhubarb. There are many cultivated varieties of culinary rhubarb (primarily *Rheum x hybridum*), but the most popular varieties are Crimson Cherry, Crimson Red, Crimson Wine, Valentine, Cherry Red, Victoria, Strawberry, German Wine, Canada Red, Riverside Giant, MacDonald and Chipman. The deep red foliage of the ornamental rhubarb (*Rheum palmatum*), also called Chinese rhubarb or Turkey rhubarb, makes it a striking landscape perennial, but the stalks should not be consumed.

Consumers often choose the varieties to purchase based on the color of their stalks; but unfortunately, the stalk color does not remain constant year to year. Starter rhubarb plants are usually available at various local nurseries and greenhouses. If a local source of crowns (or whole plants) cannot be found, there are several businesses online willing to ship to Alaska. A partial list is included at the end of this document.



Propagation

The best way to propagate rhubarb is by splitting the crown of an older, already established plant (see the section on splitting rhubarb below). Rhubarb seed is also available, but the resulting seedlings are much more variable than the vegetatively propagated varieties.

Splitting Rhubarb

How frequently rhubarb should be split

Rhubarb crowns should be split at least every four to five years, or whenever the plant begins to produce many small stalks rather than fewer large stalks. Rhubarb splitting and subsequent planting can be done in either the spring, when foliage is not fully mature, or in the fall, after foliage has been removed. If the roots are not planted immediately, be sure to protect the exposed roots from freezing or excessive drying. As in all forms of plant propagation, it is very important to only use healthy plant material. Do not use diseased plants for propagation.

Springtime splitting is preferred over fall splitting since the plant will have the growing season to rebuild roots and root reserves in preparation for winter. When splitting rhubarb in the spring, it is important to divide the crown before the leaves develop. This will provide the leaves that do develop a full growing season to resupply the crown with enough reserves for winter survival.

If the crowns have to be divided in the fall, the splitting should be done late enough in the season that the leaves will not have time to regrow (mid- to late September), but before freezing temperatures shut the plant down for the winter. Splitting a plant too early in the fall encourages the plant to produce new leaves, but without sufficient time to establish those leaves and allow them to replenish root reserves, the plant may not survive the winter. Waiting too long may allow the ground to freeze and prevent the plant roots from being dug up until the following spring.

How to split rhubarb

Begin the splitting process by digging all around the plant. Try to avoid damaging the crown with the shovel; simply focus on digging a trench around the plant (at least as wide as the width of the shovel). How far down to dig depends on the age of the plant, as the crowns of older plants will have settled deeper. Do not be overly concerned about severing the longer roots with the shovel since only the knots of roots and buds that make up the crown are essential for propagation.

Once the soil around the plant is removed, the crown should be exposed. When splitting the crown, it is important to pay attention to the number of buds on each piece, as well as the amount of root mass attached to each piece. Rhubarb buds usually grow with natural separations among them. So, as much as possible use these natural

weak points when dividing the crown. Each piece should have one to two healthy buds and at least a 2-inch cross section of storage root for each “eye” (or large bud). Pieces with more than 2 cubic inches of storage root can be planted without any negative effects; however, additional storage root mass will not positively affect the plant either. The crown can be divided with a shovel or an axe. Saws do not work for splitting rhubarb crowns because they cause extensive root damage during the cutting process.

Planting

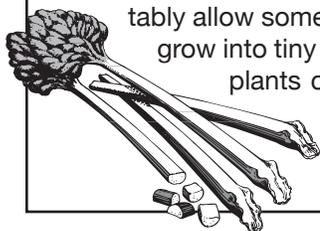
Rhubarb does best in well-drained, loamy soil in a location that gets full sun throughout the day. Rhubarb is fairly tolerant of acidic soil conditions with an acceptable pH range from 5.0 to 6.8. If soil tests indicate that the production site would benefit from liming, add and incorporate the lime prior to planting. As with any perennial, it is best to invest the effort in soil preparation prior to planting because there will not be a chance to enhance the soil for the next several years. The additional effort taken prior to planting will pay off over the next four to five years.

There are two ways of approaching soil enhancement. The first way is to backfill the planting hole with amended soil, such as a soil-compost mixture. While this method is recommended in many rhubarb publications, it has some disadvantages. By amending only the backfill soil, both water movement and growth issues can occur. A sharp boundary exists around the edge of the planting hole because the soil inside the planting area is different in texture and nutrients and is even less hard-packed than the soil surrounding the hole. This boundary can cause too much water to collect around the base of the plant, which could lead to root rot, and can also discourage the plant roots from exploring areas outside of the original planting area during growth. A better strategy for soil preparation is to amend the entire future rhubarb patch and till the area as deeply as possible. This method will enhance the soil directly around the plant, as well as beyond the planting hole, and eliminate the boundary effects.

Begin planting rhubarb by digging a hole large enough to fit the entire root mass as well as backfill. Many rhubarb publications recommend a hole 10 to 14 inches in diameter. Place the rhubarb piece in the soil and position the eyes of the crown upwards at 1 to 2 inches below the level of the soil. Backfill quality soil into the planting hole, maintaining the appropriate position for the rhubarb piece. Keeping the soil slightly mounded 1 to 2 inches above the top of the crown should work fine; otherwise, simply leave the top of the crown uncovered at ground level. Burying the crown too deeply causes the edible portion of the plant to take longer to surface. Do not pack the soil around the plant too tightly because hard-packed

Rhubarb from seed

It is possible to propagate rhubarb by planting the seeds produced by the plant, but this method requires a tremendous amount of care, and the resulting plant may not retain characteristics of the parent plant. Rhubarb is open-pollinated and rarely self-pollinated (except in controlled conditions), so there is very little control over characteristics of the plants produced by seed. Allowing the flower stalks on a rhubarb plant to go to seed, however, does inevitably allow some of the seed to germinate and grow into tiny plants. These “weed rhubarb” plants can be removed from the garden or transplanted with the hope they will survive to become healthy adult plants.



soil will impede drainage and encourage root rot. Finally, water the rhubarb well after planting, especially if there are any stalks still attached to the crown (these stalks may not survive).

Spacing

Rhubarb plants reward spacing. For most situations consider 3 to 4 feet between plants within a row and keep the rows 3 to 4 feet apart. For some of the very large varieties, 5 feet between plants may be optimal. New rhubarb crowns placed in good soil on a well-drained site with compost added to the planting hole can often exceed 4 feet in diameter in the season of planting.

Care

Once established, rhubarb is fairly drought tolerant. The plants tend to store water in their massive, fibrous root system. In cool, damp or rainy weather rhubarb should need little additional watering. When the weather is hot and dry, however, rhubarb will need adequate irrigation to keep the quality of the foliage up. Apply enough water to wet the soil at least 3 to 6 inches below the surface. Longer but less frequent irrigation will move the water deeper into the soil profile. Rhubarb harvests much of its water from 12 to 18 inches deep, so the moisture level at that depth is often more important than the moisture level at the soil surface. Pay attention to the foliage of the plants. If the leaves or stalks seem limp or wilting, the rhubarb is not getting enough water. Because of their big storage roots, it is important to irrigate rhubarb before the leaves show drought symptoms. By the time the leaves are wilting, the roots have already become dry and plant productivity has decreased.

Young plants and new transplants tend to be more susceptible to diseases such as root rot and fungal attacks. Pesticides and fungal treatments can be used to decrease this risk. Contact your local Extension office for appropriate recommendations.

Fertilization throughout the growing season is optional. As long as the soil is well drained and high in organic matter, the rhubarb should thrive. Compost is an excellent source of nutrients for the plant, but a conventional fertilizer high in phosphorus and potassium would also provide good nutrition.

A number of states have developed fertilizer guidelines for production fields of rhubarb where high stalk production is the goal. In general, these rates are about 120 pounds of actual nitrogen, 80 pounds of actual phosphorus and 100 pounds of actual potassium per acre (or 0.28 pounds actual N, 0.18 pounds actual P and 0.23 pounds actual K per 100 square feet) every year. On a smaller

Preparing and Cooking Rhubarb

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After rhubarb has been harvested, cut off the leaves and add them to the compost pile or discard. Wash the stalks well, using a vegetable brush if necessary. Avoid using woody or wilted stalks. Arrange the stalks parallel on a cutting board and slice with a sharp knife into lengths according to the recipe or desired use.

Recipes generally call for pounds, cups or number of stalks. One pound of rhubarb makes about 4 cups, or 1 quart, of cut-up rhubarb. Four stalks of rhubarb equals approximately 2 cups of diced rhubarb.

Sweetening rhubarb is a matter of personal preference. Depending on the recipe, sugar, honey, fruit juice, other fruit or other sweetener can be used.

Storing rhubarb: Freshly harvested rhubarb can be refrigerated for a few days. Beyond that, it needs to be used or preserved using a different preservation method. For information on canning, freezing and drying, see Extension publication FNH-00064, *Rhubarb Recipes*.

Basic rhubarb sauce: Cut enough cleaned rhubarb into one-inch pieces to equal 1 quart. Stew the rhubarb in ½ cup of water for 5 minutes or until rhubarb is tender. Fruit juice can be substituted for all or some of the water. Add sweetener if desired. Raisins can be added for variety and to sweeten the sauce. Spices such as mace, nutmeg or cinnamon can be used. Rhubarb sauce makes a good ice cream topping or a sauce on chicken, pork or fish.

Rhubarb vinaigrette: In a small saucepan heat ¼ cup honey and 1 cup of water over medium heat. When the mixture starts to boil, add 2 cups diced rhubarb and boil for 5 minutes, stirring often. Add ¼ cup red wine vinegar and the zest of one lemon and simmer 10 more minutes. Remove from heat and let cool for a few minutes. Add ¼ cup extra-virgin olive oil. Season the vinaigrette with salt and pepper if desired. Thin with water if too thick. Serve warm or cold over salad greens.

Main dish recipe: In a skillet, heat 3 tablespoons olive oil. Add ½ cup fine bread crumbs and 2 large cloves of garlic, peeled and minced. Sauté until bread crumbs are golden brown. Remove bread crumb mixture from the pan and set aside. Add 2 tablespoons oil to the pan and add 1 pound Swiss chard, ribs removed and chopped, and 1½ cups rhubarb cut in ¼-inch pieces. Sauté until chard is wilted and the rhubarb is soft, about 5 minutes. Add 1 pound halibut, broiled and flaked, and heat thoroughly. Add bread crumbs. Sprinkle on ½ teaspoon hot red pepper flakes. Serve over pasta. Season to taste with salt and pepper, if desired. Yield: 4 servings

For more recipes, refer to the Extension publication FNH-00064, *Rhubarb Recipes*.

garden scale, $\frac{3}{4}$ cup of 10-10-10 or $\frac{1}{2}$ cup of 16-16-16 per plant may be adequate as an annual application. Applying the material in a ring around the outside of the stalks will maximize the nutrient benefit to the plant roots. If maximum stalk production is not the goal in the garden, these rates can be decreased quite a bit for simple plant survival.

Flowering

Midway through the summer, fully mature rhubarb plants form flowering stalks. There are a few ways to deal with these. Some individuals like the flowering stalks and allow them to produce seed while others remove the stalks by cutting them near the base. Whether or not to leave the flowering stalks is up to each individual; however, many sources recommend that the stalks be cut down to keep the plant's energy focused on producing quality, edible stalks rather than producing seed. Plants stressed by aging, poor nutrition and drought flower heavily. To keep the plants healthy and vigorous, dig, split and replant the stand every four to five years.

Harvest

Do not harvest stalks from first-year transplants. Yields of subsequent seasons will be higher if all of the energy produced by the first-year foliage is allowed to go back into the root system. During the second and following seasons the stalks can be harvested whenever desired. Allowing them to increase in thickness and height will improve quality and provide a greater mass when harvested. Generally, rhubarb can be harvested throughout the first half of summer whenever desired. Harvesting stalks later in the summer takes away some of the plant's nutrient storage abilities, which can affect its survival through the winter. Using August 31 as a final harvest date will ensure that plants have adequate time to prepare for winter. It is

also important not to harvest more than half of the stalks on any individual plant throughout the summer, as the plant may weaken and die. After the first killing frost, all stalks can be removed if desired without negatively affecting the plant.

Harvest the stalks by simply pulling them with a twisting motion from the base, like removing a stalk of celery from a bunch, or else by cutting them right above the base. Remove the leaves and discard them since they are not safe to eat (but they do make a great addition to the compost pile). The stalks on the outer part of the plant are older stalks, while the stalks near the center are newer stalks. Older stalks tend to be larger than younger stalks. In general, it doesn't matter which stalks are harvested for eating, though most individuals will develop their own preferences for older or newer stalks through experimentation.

For more information

There is a great wealth of information available from the Rhubarb Compendium website:

www.rhubarbinfo.com

Some online vendors of rhubarb crowns are willing to ship to Alaska:

www.gardenharvestsupply.com

www.hartmansplantcompany.com

www.millernurseries.com

www.noursefarms.com

www.territorialseed.com

And, for the adventurous gardener who would like to try starting rhubarb from seed, there is some available at:

www.victoryseeds.com

www.uaf.edu/ces or 1-877-520-5211

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