



Cultivation Notes

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Cranberry – *Vaccinium macrocarpon* Ait.

Family: *Ericaceae*

Cranberry: *a Native Jewel*

By **Linda Lapin**

Cranberries are indispensable for the winter holidays. Tradition brings them to our holiday turkey dinners, and who doesn't have a linen table cloth with at least a little red stain on it from a wayward serving of cranberry sauce? This Rhode Island native berry may be a little smaller than the commercially grown cranberry varieties but is just as tasty when used in sauces, jellies, sweet breads, pies and stuffings.



Cranberry, Vaccinium macrocarpon, grows wild in Rhode Island. Its native range extends from the East Coast to the Central U. S. and Canada, and from Southern Canada in the north to the Appalachians in the south. It is usually found in acid bogs growing in sphagnum along with other ericaceae such as highbush blueberry and black huckleberry. It grows in company with sheep laurel, leatherleaf, pitcher plants, sundews, and saplings of white cedar and red maple. Look for it in the Great Swamp or Diamond Bog.

Cranberry was once called crane berry, because the flower resembles the look of a crane's head and neck with a long sharp beak. Cranes were also observed wading the bogs gobbling up the berries. Other common names are black cranberry, low cranberry, trailing swamp cranberry, bear berry, and bounce berry. (Cranberries really are the best bouncing fruit I know.) A related species is small cranberry (*Vaccinium oxycoccus*), which is even smaller and cuter.

The plant is a low-growing, evergreen perennial with trailing, wiry stems. These stems or runners grow from one to six feet long, and short branches, known as uprights, form from the buds along the runners. The uprights have a vertical (non-trailing) growth habit and form the terminal buds that contain the flowers. Looking like a shooting star, the flower has five reflexed petals and a cluster of stamens. Most of the fruit grows from the flowers on the uprights, with some berries arising from flowers on the runner ends. During the growing season, the leaves are dark green and glossy, turning reddish-brown during the dormant season. Leaves have an oblong/elliptic shape with a blunt tip, are pale beneath and 1/2-inch long. The red fruit is a true berry. It has a soft, parenchymatous, tart pericarp, which encloses four air-filled locules, each containing a few tiny seeds. The 3/4-inch berries are rather large considering that the plant itself is tiny. The name *macrocarpon* means large fruit.

Cranberries need a winter chilling cycle during which they are dormant. Vegetative growth starts in April or May when terminal buds lose their winter color and swell. Then leaf and flower buds begin to grow. By late June, most of the flowers are open and cranberry plantings resemble a pink carpet. From late June to early July, bees pollinate the cranberry flowers, and tiny fruit form. By September, the fruit begins to develop its characteristic red color through the production of anthocyanin pigments. Full fruit maturity occurs approximately 80 days after full bloom.

Cranberries have the status of "super-fruit." They contain high amounts of vitamin C and antioxidants. Researchers have determined that antioxidants have a role in protecting our cells from damage. Proanthocyanidins found in the fruit prevent bacteria adhesion to tissue and are thought to reduce urinary tract infections and reduce bacterial gum disease. Historically the cranberry was primarily used as a food (pemmican), and as a medicine for the treatment of bladder and kidney ailments by Native Americans. The

berries were also used as a fabric and food dye, and as a poultice to treat wounds and blood poisoning. Sailors used the berries as a scurvy preventative.

Do you need a bog to grow a cranberry? According to the UMass Cranberry Station website, cranberry vines grow best out of water and on dry land, contrary to popular thought. What they do need is acid soil and sun. I found cranberries growing along the side of the road forming a healthy ground cover. The town regularly mows there, so there is not a berry to be found. I took some cuttings of the wiry stems, and it is true that they are very easy to root. Come spring, I can plant them in a sphagnum filled wetland where I know that the pH is going to be perfect for their growth, or I can plant them in a sunny garden area, adjust the pH and keep them weeded. It is possible to harvest a pound of berries from a four-foot square plot of cranberry plants.

If fruit production is not important to you, you can grow cranberry as an evergreen ground cover. Keep in mind that cranberries grow in soils with a pH below 5. Shoot for pH 4-4.5. For successful results, think like a bog. A bog provides winter protection from extreme harsh temperatures that would otherwise cause winterkill to the vines or bud kill in the spring. Mulching moderates cold temperatures. A bog is high in humus, which provides the plants with their source of nutrients. A humus-poor soil might require an organic acid fertilizer. Remember to water only with fresh water that is not alkaline. Once established, a light haircut in the spring keeps the plants from getting leggy and encourages thick new growth.

Propagation

Seed: In one study, fresh seed germinated at a 4 percent rate, germinated 56 percent after 1-month cold stratification, and germinated 100 percent after three months cold stratification. Seed is easy to obtain. Cut a cranberry in half along its equator and tap the seed out.

Cuttings: This one of the easiest ericaceous plants to root. Treat softwoods with 1000 ppm IBA talc and place under mist in a peat moss/perlite medium, and rooting should approach 100 percent.

Cooking: Use only berries that bounce, and if making a sauce with sugar, it is done cooking when all the berries pop.

References:

Cullina, William. *Native Trees, Shrubs and Vines A Guide to Using Growing and Propagating North American Woody Plants*. Houghton Mifflin Company, 2002.

Sandler, Hilary A. *Homeowner's Guide to Cranberry Vine Propagation*. Cranberry Station, University of Massachusetts, 2010. PDF file.

Enser, Richard W, and Julie A Lundgren. "Natural Communities of Rhode Island." Dec. 2006. PDF file.

Dirr, Michael, and Charles Witeuser, Jr. *The Reference Manual of Woody Plant Propagation. From Seed To Tissue Culture*. Varsity Press Inc. 1987. *UMass Amherst Cranberry Station*. N.p., n.d. Oct. 2010. < HYPERLINK "<http://livepage.apple.com/>" <http://www.umass.edu/cranberry/> HYPERLINK "<http://livepage.apple.com/>" [cropinfo/howgrow.html](http://livepage.apple.com/cropinfo/howgrow.html)>.

RIWPS Policy — *Never dig plants in the wild or without the written permission of the landowner. Take seeds sparingly.*

Note: Cultivation Note is a regular feature in *WildfloraRI*, the Bulletin of the Rhode Island Wild Plant Society. If you would be interested in writing a future cultivation note article or have suggestions of plants you would like to see included, please contact Dick Fisher at Richard.Fisher2@verizon.net. The previous cultivation note topics are listed on the website and there is an easy to follow set of guidelines for the format of your article. — *WildfloraRI* Editorial Committee.