

Aronia: A New/Old Berry Crop for the Northeast

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Aronia melanocarpa is a woody, perennial shrub that is native to northeastern United States and southeastern Canada. It grows in full sun and along woodland edges. Aronia is cold hardy to at least USDA Zone 3. Its late blooms usually avoid spring frosts. The plants grow best in well-drained soils with a slightly acid to neutral pH.

Early in the 20th century, aronia was introduced to Eastern Europe, Scandinavia, and Russia where high quality, large fruited cultivars were selected. In recent years, these improved cultivars have been reintroduced to the United States.

A common name for *Aronia melanocarpa* is chokeberry. It is often confused with chokecherry, which is the common name for *Prunus virginiana*. About the only thing that chokeberry and chokecherry have in common are their sound-alike common names. To avoid confusion, aronia rather than chokeberry is the common name most often used for *Aronia melanocarpa*.

Without pruning to restrict their size, aronia plants of cultivars selected for fruit production grow eight feet or taller with 40 or more basal shoots at maturity. Pruning is used to renew the plants and manage their height by heading back to a height of three feet or to ground level at three to five year intervals or by yearly or every other year selective pruning of the tallest shoots.

Minimal or no major disease or insect pests have been reported on aronia plantings in the United States. “My plants have never suffered from any disease and I’ve never seen any pest on the foliage or fruit,” said Jan Riegenbach, syndicated columnist who has grown aronia plants in her trial garden in southwest Iowa for more than 30 years (Riegenbach 2008). Japanese beetles also leave her aronia plants alone (Riegenbach, personal communication, September 5, 2008). In contrast, Japanese beetles have caused minor damage in commercial aronia plantings in Illinois (Teresa Santiago, personal communication, August 11, 2009). Deer can be a problem. Birds usually do not eat the newly ripened fruit but, if not harvested, the fruit will be eaten by birds during the winter (Hardin 1973).

Two years after planting, aronia plants produce about two to ten pounds of berries per bush. By the third year, production is about 15 to 20 pounds per bush. Yields level off at 30 to 40 pounds per plant by the fourth or fifth year (Eldon Everhart personal observations 2006-2011). The violet-black berries are firm, one-quarter inch in diameter, and produced in pendulous, loose clusters of 10 to 15 berries at the ends of shoots. Fruit is harvested in late August or early September by hand or with mechanical harvesters (Trinklein 2007).

Aronia berries are high in tannins which puckers your mouth with a dry sensation. They are also high in sugar (21 to 22 brix) with a pH of 4.5 to 5. They can be eaten fresh or preserved by freezing or drying. Fresh or frozen berries can be used in baked goods or used like any other berry. Many products are made from the berries including aronia wine, juice, tea, syrup, and candy, or they can be used to flavor and color yogurt, sorbet, ice cream, milk, and other products.

Aronia berries are high in vitamins, minerals, and folic acids. They are one of the richest plant sources of proanthocyanins and anthocyanins (Oszmiański and Wojdyło 2005). Aronia berries

have higher antioxidant content than blackberries, blueberries, cranberries, elderberries, grapes, and raspberries, as well as imports such as the goji and acai. Medical research has documented many health benefits of aronia berries. Currently, there is no data in the literature about any unwanted effects of aronia fruits, juice, or extracts (Kulling and Rawel 2008 and 2006).

“Aronia berries top the list of... foods that have been scientifically tested for antioxidant capacity,” said Dr. Xianli Wu, a researcher at the Arkansas Children’s Nutrition Center. “Researchers have looked at how aronia affects cardiovascular disease, colon and breast cancers, liver failure, and obesity,” said Dr. Wu. “I believe aronia berries have a huge potential as a healthy food.” (Sagario 2008) The interest in “eating healthy” has led to the phenomenal worldwide growth in the popularity of aronia berries and products made from them. This in turn is leading to the planting of aronia as a cash crop in the United States (Trinklein 2007).

Aronia is not a new crop. Commercial aronia plantings started in the Soviet Union in the late 1940s, and reached 43,984 acres in 1984 (Kask 1987). It has been grown in Eastern European since the 1950s. According to the Polish Ministry of Agriculture, in 2004 there were 11,119 acres in Poland. A year later the number had grown to 12,355 acres. One Polish company alone sold 40,000 tons of aronia juice (Kampuse and Kampuss 2006). In Europe, new business start-ups, that use aronia berries as an ingredient, have increased from two launches in 1997 to 108 in 2007 (McNally 2008). There is an estimated 200 to 300 acres of aronia berries in the US in 2011 (Eldon Everhart client contact records). “Public interest in eating healthy, antioxidants, and organic products is driving the interest in aronia....” said Charlie Caldwell, an aronia grower in Iowa. He sees the market increasing, as more people learn about the fruit (Sagario 2008).

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