

Aronia Berry Production: A Promising Crop for Northeast Growers

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Black chokeberry (*Aronia melanocarpa*), a native Northeast shrub, shows promise as a nutraceutical crop for small fruit producers. The market for functional foods is on the rise. *Aronia* is the focus of our research and outreach project, “Aronia Berries: a Profitable Nutraceutical Crop for the Northeast,” supported by a grant from Northeast SARE. This project encourages development of a Northeast aronia industry through these three efforts:

1. WEBSITE: <http://umaine.edu/agriculture/home/aronia/>

Our website provides a place where we can communicate with growers, share research results, and announce field days and other events about aronia. Log on and click on the link to complete our online form; we’ll send you project updates, and information about our 2012 field days in Connecticut and Maine. And, we’ll consult one-on-one if you’re interested in growing aronia.

2. GROWER COLLABORATORS:

In late summer 2010, one-acre plots of aronia were installed at two locations: Maple Lane Farms, Preston, CT, where Allyn Brown grows 100 acres of black currants; and Western Maine Nurseries, Fryeburg, ME, where Rick Eastman grows tree seedlings and liners. These plantings provide places where cultural procedures are being verified for New England conditions, and where potential growers can attend field days and become familiar with the crop.

3. RESEARCH:

Dr. Mark Brand is researching aronia to more clearly characterize its genetics, and identify which aronias are best for Northeast production. His results to date include the following:

- A replicated evaluation planting of over 150 accessions of black, red and purple aronia has been established. Accessions have been collected from AL, CT, CE, FL, IN, MA, MD, ME, MI, NY, NC, NH, OH, PA, TN, TX, VA, VT, WI, WV and Canada.
- Many of the accessions have been shared with the National Plant Germplasm System of USDA, since *Aronia* is one of their priority genera.
- All red chokeberries appear to be tetraploids. Purple chokeberries are mostly tetraploid, and are rarely triploids. Black chokeberries in New England are diploid or tetraploid, while those from the Midwest and Appalachian Mountains are only tetraploid.
- Aronia plant habit can be highly variable with plants ranging from ground covers to tall and leggy shrubs up to 20' in height.
- Wild chokeberries vary considerably in fruit size, color, ripening date and flavor.
- Biochemical analysis has found considerable variation in antioxidant and phenolic composition of wild black chokeberry.
- Exactly what differentiates the red, purple and black species remains unclear and must be confirmed with genetic analysis that is underway now.
- Polyploid aronias all appear to reproduce from unfertilized (apomictic) seeds.
- Genetic testing of the popular aronia cultivars ‘Viking’ and ‘Nero’ indicates that they are probably hybrids between *Aronia melanocarpa* and *Sorbus aucuparia* (Mountain Ash).