



Northern NY Agricultural Development Program 2015-Early 2016 Project Report

Developing Amelanchier (Juneberry) into a Novel Fruit Crop for Northern New York

Project Leader(s):

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Collaborator(s):

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Background:

“Thanks to its powerful anti-oxidant properties and to the entrepreneurial efforts of a handful of commercial growers, this under-the-radar berry [*Juneberry*] has garnered a new wave of interest in parts of the U.S. Some think this delicious fruit—it tastes like a mixture of cherries, almonds and grapes—could be on its way to hit the super-fruit jackpot, a market whose juice segment alone will be worth \$10 billion by 2017, predicts research firm Euromonitor International.”
— *Time Magazine Aug 21, 2014*

Juneberries are small, multi-stemmed trees or shrubs that are native to every state except Hawaii. As members of the rose family, Juneberry is closely related to apples and pears, and the fruit is technically a pome. Wild-harvested Juneberry fruit were a favored food and medicine of Native American cultures and early European settlers.

Juneberry has the potential to be a major novel fruit crop in northern New York. Juneberry fruit are sweet and have an antioxidant and nutritional profile equal to or greater than the “superfruits” blueberries, pomegranate, cranberry, and acai. Juneberry is grown commercially in the Canadian plains, where the fruit are marketed as Saskatoon Berry.

To develop Juneberry into a novel fruit crop we continue to focus on three priorities:

1. Build a living collection of Juneberry plants that includes wild collected novel lines that have commercial fruit production potential, along with all the currently available fruit producing cultivars.

2. Evaluate the performance of Juneberry cultivars and promising wild lines in replicated field trials on the Cornell Willsboro Research Farm.
3. Develop a Juneberry establishment/management resource database to support grower entry into the market.

Methods:

Resource and Development

We visited five Juneberry farms in Michigan and three in New York (Rochester region). At each farm we documented the experiences and challenges of establishing, cultivating, harvesting, processing, and marketing Juneberries (Appendix A. Fig. 1-6). The farms ranged in size from 1-5 acres, and were only growing commercially-available *A. alnifolia* cultivars from Canada, including JB30, Smoky, Northline, Martin and Honeywood.

Nursery and Field Trials

We continued to expand and develop the nursery and field trials at the Willsboro Research Farm in northern NY at Willsboro, NY.

- New additions to the nursery included wild-collected seed of *A. alnifolia*, *A. arborea*, and their hybrids, from the upper and lower peninsulas of Michigan.
- 2014 seed collections were cold-stratified, germinated, and potted-up at the SUNY Plattsburgh greenhouse prior to transplanting into the field nursery (Figure 7).
- Two- and three-year-old plants were moved from the field nursery into larger scale replicated field trials at the Willsboro Farm.

Results/Conclusions/Outcomes/Impacts:

The field nursery currently includes several hundred individual plants representing a diversity of commercially-available cultivars and wild collections (Table 1). We estimate that the replicated field trials will require another one to two growing seasons before we can start tallying meaningful yield data.

Table 1. Commercial cultivars and wild collected taxa planted in the Cornell Willsboro Farm nursery.

Commercial Cultivars	Wild Collected Taxa
JB30	<i>A. alnifolia</i>
Thiessen	<i>A. arborea</i>
Smoky	<i>A. canadensis</i>
Martin	<i>A. gaspensis</i>
Northline	<i>A. spicata</i>
Honeywood	<i>A. "erecta"</i>
Fergie	<i>A. alnifolia x arborea</i>
Princess Diana	<i>A. bartramiana x laevis</i>
Lee #8	<i>A. canadensis x arborea</i>
Nelson	
Pembina	
Prince William	
Autumn Brilliance	
Parkhill	
Regent	

Outreach:

Our colleague, Jim Ochterski, coordinated our visit with the western New York growers. Jim manages the www.juneberries.org website that serves as the primary resource for Juneberry production information in the Northeast, and he continues to collaborate with us on this project.

Grower interest in Juneberries is expanding. Project goals were presented at the Willsboro Farm Open House/Field Day, to the SUNY Plattsburgh Agriculture and the Environment class, and to a group of Ukrainian foresters interested in non-traditional uses of forest species.

Next Steps:

1. Continue to move wild collected seed through the stratification and germination process to the nursery, and then from the nursery to the field trials.
2. As it takes some years for perennial crops to develop and mature, the nursery and field plantings need to be maintained, and performance data collected as it becomes available.
3. Update and advance the resource information that growers need to successfully establish, manage, harvest, and market commercial Juneberry orchards.

Acknowledgments

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For More Information:

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APPENDIX A.



Figure 1, left: Juneberry, Cross Farms, Leelanau Township, MI, Summer 2015. Photo: Michael Burgess.
Figure 2, right: Sorter used to separate unripe (immature) from ripe fruit, Cross Farms, Leelanau Township, MI. Photo: Michael Burgess.



Figure 3, left: Blueberry International mechanical harvester adapted for Juneberry harvesting, The Saskatoon Berry Patch, Williamsburg, MI, Summer 2015. Photo: Michael Burgess. Figure 4, left: Hand-picked and sorted ripe Juneberries in walk-in cooler, Cross Farms, Leelanau Township, MI. Photo: Michael Burgess.

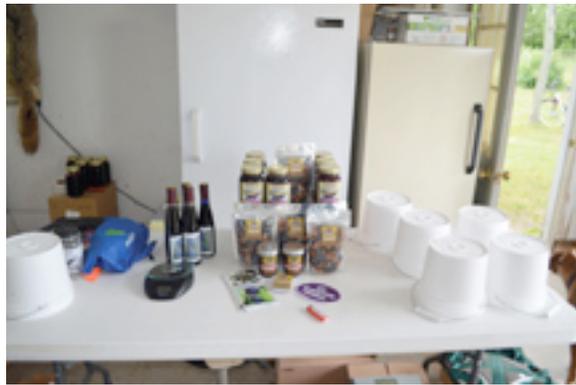


Figure 5, left: Blueberry International mechanical belt sorter, The Saskatoon Berry Patch, Williamsburg, MI, Summer 2015. Photo: Michael Burgess. Figure 6, right: Value-added Juneberry products: wine, syrup, preserves, trail mix, Saskatoon Michigan Farm, Summer 2015. Photo: Michael Burgess.



Figure 7. Wild-collected Juneberry growing in the SUNY Plattsburgh Greenhouse, Plattsburgh, NY, 2015. Photo: Michael Burgess.