



Northern NY Agricultural Development Program 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 in Time Magazine, August 21, 2014.

Juneberries are small multi-stemmed trees or shrubs that are native to every state except Hawaii. As a member of the rose family, Juneberry is closely (*Amelanchier*) 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 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 the Saskatoon berry.

Juneberry has the potential to be a major novel fruit crop in Northern New York. With funding from the farmer-driven Northern New York Agricultural Development Program,

a Juneberry research nursery was established at the Willsboro Research Farm in Willsboro, NY. This nursery represents a living collection of Amelanchier that includes commercially-available cultivars, wild-collected cultivars, and the North American diploid Amelanchier species. This collection is the most taxonomically diverse collection of North American Juneberry species and fruit cultivars in the world..

To develop Juneberry into a novel fruit crop for Northern New York, 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.

Progress Update:

Juneberry Nursery at Willsboro

We continued to expand and develop the Juneberry collection at the Willsboro Research Farm.

- Juneberry seed collected during the 2015 field season were cold stratified, germinated, and potted up at the SUNY Plattsburgh greenhouse prior to transplanting into the Willsboro Farm field nursery.
- The field nursery currently includes several hundred individual plants representing a diversity of commercially available cultivars and wild collections.
- Juneberry plants grown from wild seed collected in 2013 and 2014 will be ready for transplanting into on-farm field trials in spring 2017.

Willsboro Research Farm Variety Trials

- The two replicated field trials established at the Willsboro Research Farm were maintained (irrigated, weeded, and monitored for pest or disease incidence) during the 2016 field season.
- We expect the 2017 field season to provide our first meaningful fruit yield.
- Trial entries were evaluated for flowering times, plant heights, and disease incidence.
- In trial A1601 the six varieties that are most commonly planted for commercial fruit production: *Theissen*, *Martin*, *Honeywood*, *JB30*, *Smoky*, and *Northline* exhibited the most growth and had the tallest mean heights at the end of the 2016 growing season (Figure 1).
- Three of the arborescent varieties: *Autumn Brilliance*, *Princess Dianna*, and *Prince William* in trial A1602 exhibited vigorous growth, while *Fergie* did not (Figure 2).

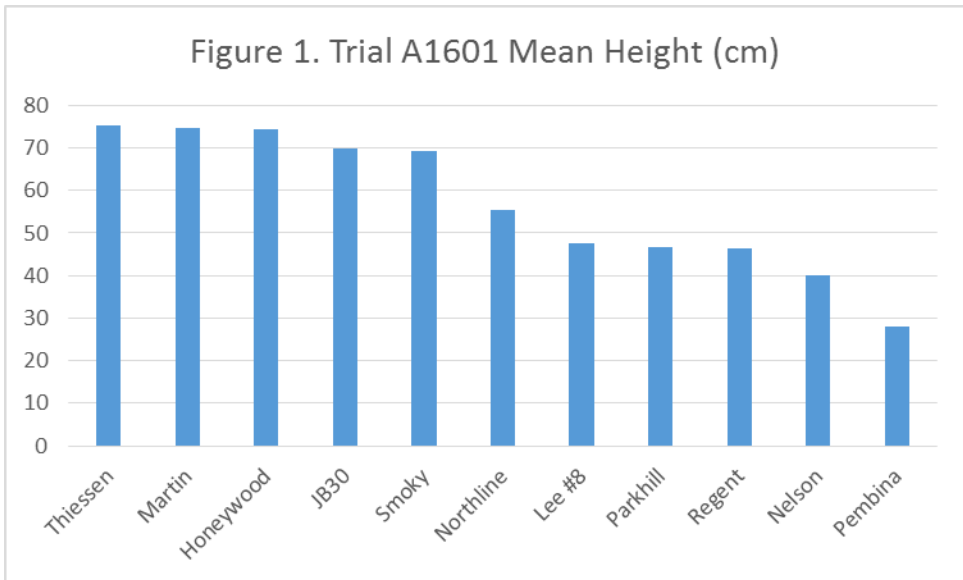


Figure 1. Mean height of six most-commonly-planted-for-commercial-production varieties of Juneberry, Trail A1601, Willsboro Research Farm Juneberry Nursery, Willsboro, NY, 2016.

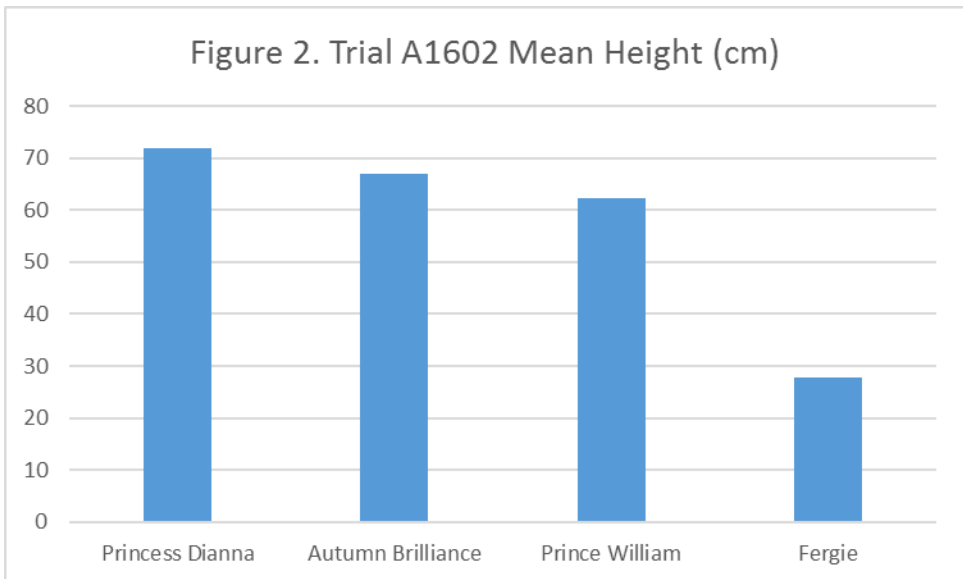


Figure 2. Mean height of three arborescent varieties of Juneberry, Trail A1601, Willsboro Research Farm Juneberry Nursery, Willsboro, NY, 2016.

Outreach

Our colleague Jim Ochterski continues to manage the www.juneberries.org website that serves as the primary resource center 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 2016 Willsboro Farm Open House/Field Day, to the SUNY Plattsburgh Agriculture and the Environment class, and to area market growers.

Next Steps:

1. Continue to move collected wild seed through the stratification and germination process to the nursery, and then from the nursery to the field trials.
2. Establish field trials of promising Juneberry varieties on commercial farms in Northern New York.
3. Maintain established variety trials and collect performance data including growth habit, flowering and fruiting times, disease incidence and susceptibility, and fruit yield.
4. Identify optimal Juneberry pruning strategies.
5. Evaluate in-row mulch material options for Juneberry plantings.
6. Update and advance the resource information that growers need to successfully establish, manage, harvest, and market commercial Juneberry orchards.

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For More Information:

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