



Northern New York Agricultural Development Program

Practical Research • Real-World Results
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Growing into NNY's \$10 Million Maple Industry Potential

Northern NY's maple industry has an estimated current annual value of more than \$5-6 million with the potential to become a \$10 million industry (*Cornell, Farrell*).

"The Northern New York region has tremendous potential to grow its maple industry."

— *Dr. Joseph Orefice, Director of Forest & Agricultural Operations, Yale University;*
Immediate-Past Director, Uihlein Maple Research Forest, Lake Placid, NY

Research Responds to Climate Impact

Maple producers dealing with the increasing unpredictability of sap flow due to early-winter thaws, extended spring freezes, and exceptionally warm stretches look to NNYADP research at Uihlein Maple Research Forest (Lake Placid) and in regional sugarbushes for insight. Recent NNYADP results provide data to help guide tapping schedules for optimal maple and birch sap production with trials also evaluating different sizes of sap collection equipment for vacuum and sap gain.

Value: Knowing when to tap protects profit opportunity that can be lost tapping too early or after an unexpected mid-winter thaw. Each inch of added vacuum = 5-7% sap gain (avg). NNYADP trials produced data on tapping time impact on sugar content in sap and on end-of-season taphole plugging that can impact production and profit.

New Product Development: Birch Syrup

NNYADP research has responded to producer interest in new product development with birch syrup production trials as a way to extend the short maple production season and add to sales with a niche product.

"I was interested to participate in this NNYADP research as a way to develop an opportunity for extra income. This type of regional research is part of helping landowners discover untapped resources."

— *Joy Herfurth, Brandy Brook Maple Farm, Ellenburg Center, NY*

Extended Value: NNYADP maple-birch tapping project results are presented at regional producer meetings and, in 2019, at the New York State Maple Conference.

Associated Research: Earlier NNYADP research re: maple sap collection practices influenced 2018 trial conclusions in that the using new spouts/tubing allows early-season tapping of maple trees without serious risk of yield reduction, while birch trees should not be tapped early due to the risk of early taphole closure.

NNYADP Initiates Cloning of NY's "Sweetest Trees"

In 2017, NNYADP research in Lake Placid initiating the cloning of sugar maple "sweet trees" showed it may be possible to root cloned seedlings to produce higher-sugar-sap sugar maple trees with top genetic lines. With the success of this groundbreaking NNYADP research, the work now continues longer-term with Cornell University funding.

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January 2019 Maple Update

Meet Uihlein Maple Research Forest Director

Adam D. Wild

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Adam D. Wild is the new director of the Uihlein Maple Research Forest at Lake Placid, NY. In 2019, Wild will serve as Cornell University's NNY Maple Specialist and will be the project leader of an NNYADP project continuing the timing of tapping study to quantify the benefits of re-tapping maple trees within a season. This new research will look at the opportunity to increase production by capturing early sap runs and then re-tapping before the two hole dries up to capture later sap flow events. Other work in 2019 includes analyzing the sap from the original Cornell "Sweet Trees" and evaluating ways to increase flow on 3/16" tubing.



Wild comes to Northern NY by way of the SUNY Cobleskill Plant and Animal Science Department where he was an assistant professor. His research experience includes an investigation into the sugar content of maple sap after N, P or Ca fertilization of trees in New Hampshire's White Mountains, with results published as *"Soil Nutrients Affect Sweetness of Sugar Maple Sap,"* coauthored with Ruth Yanai, in *Forest Ecology and Management*. That work also included sampling the sweetness of sugar maple clones propagated by rooted cuttings in Heiberg Memorial Forest, Tully, NY.

Adam is a graduate of the State University of New York College of Environmental Science and Forestry with a Masters of Science in Forest Ecology and Ecosystem Science. In addition to the maple sugar industry, Adam's areas of study and professorship include dendrology, ecology, botany, and forest soils. He grew up on a small farm in Cattaraugus County.

"It is an honor to be stepping into the role as Director of the Uihlein Maple Research Forest following a long history of great leadership. I am excited to be working on projects to benefit maple producers in the Northern New York region and across the state," says Wild.



*NNY sugar maple clone;
photo: Keith Perry*

NNYADP Research Success Leverages Forward Support

A Northern New York Agricultural Development Program grant launched the inaugural effort to clone Northern NY's sweetest sugar maple trees to enhance syrup production and as potential for starting a new maple nursery industry. This initial research proved high sugar-producing maple plants can be established in tissue culture and clonally propagated (Uihlein Foundation Seed Potato Farm, Lake Placid, NY). Three different plant lines were established and divided.

As an outcome of that NNYADP investment in this work and its success, the Cornell University of College of Agriculture and Life Sciences has committed new support to continue this innovative research in 2019.

*The Northern New York Agricultural Development Program is a farmer-driven research and technical assistance program for NY's six northernmost counties: Clinton, Essex, Franklin, Jefferson, Lewis and St. Lawrence.: www.nnyagdev.org.
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