

NNYADP Project Success Stories

Practical Research & Results for NY Farmers, NY Communities

*in Clinton, Essex, Franklin,
Jefferson, Lewis & St. Lawrence Counties*



Emerging Farm-Based Business: Bio-Energy

The federal government wants 36 billion gallons of renewable transportation fuel in production by 2022, with grass as a principal biomass source. Research at the NNY Cornell Willsboro Farm is identifying the best grasses and optimum management for profitable locally-based energy enterprise.

The Northern New York Agricultural Development Program was the first to fund switchgrass field trials that sparked a farm-community entrepreneurial partnership. Left: Tom Lee is seen with Cornell Extension Research Associate Hilary Mayton at Lee's Madrid farm where he grows and process switchgrass into briquettes to heat a 30,000-sq-ft apartment complex in Waddington, NY.

NNYADP Research Economic Value is Vital to NNY Economy

"The State funding that supports on-farm research in Northern NY is vital to assuring its economic value to the regional economy."

— Clinton County dairy farmer Joe Giroux,
NNYADP Co-Chair

NNYADP Research Produces Real-World Results

"Northern New York Agricultural Development Program on-farm trials provide farmers with real-world experiences and data specific to our climate, our soils, and our shorter growing season."

— St. Lawrence County dairy farmer Jon Greenwood,
NNYADP Co-Chair

Emerging Farm-Based Industry: Maple

Opportunity to Grow to \$10 Million/Year

Research shows that Northern NY's maple production sector has the natural and human resources to grow into a more than \$10 million/year industry.

Current Northern New York maple industry revenues are more than \$5.5 million annually.

NNYADP research and outreach have already spurred a 26% increase in the number of taps in the region (2005-2010), adding more than \$1.1 million in farm-gate revenue.



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Practical Problem Solving: Dairy Improving Cow Survival & Health

"Klebsiella mastitis is the most expensive form of mastitis in dairy cows. NNYADP research and extension programs have much improved understanding of this disease. A previously untreatable cow can now effectively be treated with at least a 50% chance of success.

The improved diagnostics of Klebsiella mastitis have resulted in better prevention programs. Given the cost of the disease, we anticipate that 1,000-5,000 cows are saved per year in NNY at a value of \$1 million to 5 million/year to the industry.

Emerging Farm-Based Business: Cold Hardy Grapes & NNY Wines

The Northern NY wine industry is about to blossom with the benefit of Northern New York Agricultural Development Program cold climate grapes research.

At right, grape researcher and grower Richard Lamoy holds one the first batch wines made with grapes grown in research trials at the NNY Willsboro Farm. The wines won six amateur winemaking awards and prompted establishment of a new private vineyard and winery licensed in 2011 in Eastern NNY.

In Western NNY a new wine trail is gaining a young reputation as NY's newest wine region.

NNYADP cold climate grapes research assures the momentum of this burgeoning industry with great potential for positive economic impact on regional farms, agriculture, and NY's tourism industry.



Practical Problem Solving: Crop Production Beetle Be Gone! Restoring NNY Alfalfa Crops

Northern New York Agricultural Development Program research has beat the alfalfa snout beetle (ASB) that destroys entire fields of forage fed to dairy and beef cattle, horses and other livestock. ASB exists in 9 New York counties and in Ontario, Canada (2011).

For the Pecks (left) that success reduced field and forage costs and restored a 25% loss in milk production. This Northern New York success story has been featured in American Agriculturist and other national farm publications.

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Capitalizing on New Markets: Corn Grain and Silage Variety Trials

NNYADP corn variety trial research supports corn grain production worth approximately \$50 million/year to NNY farmers, who spend more than \$3 million annually on corn seed for grain production to feed livestock and sell as a commodity.

Corn silage is, likewise, an approximately \$50 million crop for NNY.

Northern New York Agricultural Development Program-funded variety trials provide critical region-specific and multiple-year data to help farmers select the best hybrids to plant for yield and quality return.

Helping NY's Dairy Industry

**NNYADP research supports development
of dairy production improvements
and long-term reductions in somatic cell counts
with further positive impact
on NY's dairy industry."**

*— Ynte Schukken, Cornell University and
Quality Milk Production Services*

Protecting Our Natural Resources

**"Participating in this Northern New York Ag
Development project
on corn nutrient management
was a win-win that saved me money."**

*— Jefferson County Farm Bureau President
and dairy farmer Mike Kiechle*

Feeding Our Local Economy: Year-Round High Tunnels Research

Northern New York Agricultural Development Program outreach has helped growers understand how to use high tunnel structures to extend their berry and vegetable growing and selling seasons. NNYADP projects have included local planting demonstrations, one-on-one farm visits and telephone consultations, field meetings, road trips to successful operations, and conferences with experienced growers and expert speakers teaching Northern NY farmers about what can be grown in high tunnels in NNY's short growing season, and how to produce strong crops. As a result of NNYADP high tunnel education projects:

- Growers have improved trellising methods and nutrient management to increase tomato crop yields, and have broadened fall crop production
- Fall salad greens trials showed growers how to achieve cost-savings and increase profits with unheated high tunnels
- At least six growers erected new high tunnels
- Growers now know soil and foliar nutrient testing can catch problems before symptoms are visible and correct for imbalances
- NNY Willsboro Farm high tunnel trials of raspberries have shown how well berries can thrive and yield (2-4x more than outdoor plantings) in Northern NY when grown under cover.



***NNYADP high tunnel research has helped
extended growing & selling seasons for
existing & new farms & CSAs.***

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Protecting Our Natural Resources: Crop Nutrient Management

Northern New York Agricultural Development Program research into the complex mechanisms that influence interactions between fertilizer, manure, crops, soil, air and water have made tremendous strides toward reducing inputs and farm costs, and improving agricultural environmental stewardship practices.

Results include:

- conscious decision by NNY farmers to reduce or eliminate phosphorus (P) use
- farmer-use data on potential to reduce nitrogen (N) and potassium (K) use
- savings of 28% use of N fertilizer on six farms
- awareness of how to cut nitrogen use and when not to and reduction of N use with corn crops
- completion of whole farm mass balance evaluations on 43 farms with drastic reduction in K balance and more field-based K management
- 4 field trials showing environmental, soil and crop benefits of shallow incorporation of manure
- increased interest and purchase of BMR sorghum sudangrass as an environmentally-sound alternative crop
- calibration of soil and tissue tests for soil sulfur levels
- overall reduction of production costs without sacrificing crop yields.



Left: NNYADP Co-Chair Jon Greenwood (left) and farmer Ron Robbins congratulate Dr. Quirine Ketterings of Cornell University, for her award-winning agricultural environmental management projects conducted on Northern New York farms.

Feeding Our Local Economy: Small Grains

"The value of projects made possible by the NNYAD Program extends to businesses that depend on local sources of raw product for value-added production which provides jobs and generates dollars to feed the local economy."

— Champlain Valley Milling owner Sam Sherman

Protecting Our Crops and Our Neighbors' Crops: Brown Root Rot

Brown root rot, caused by the fungus *Phoma sclerotoides*, was first identified in New York State in 2003 in Clinton County (right: map of 2004 known BRR sites in Clinton County.). The cold-weather disease damages alfalfa crops, a valuable dairy and livestock feed crop and cash crop. BRR is currently found in New York and the Northeastern U.S., WY, and in areas of Canada. NNYADP research has confirmed areas of BRR by field survey, has helped farmers begin to recognize the disease, and has begun creating management strategies.

