



Northern New York Agricultural Development Program

Farmer-Driven Research • Real-World Results • Practical Application

Co-Chairs:

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Research news/reports/updates: www.nnyagdev.org • RSS • Email/Text



Farmer-Driven Field Crops Research for NNY

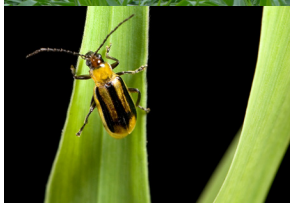
The Northern NY corn crop, vital to the dairy industry, has an estimated value of \$100+ million. Alfalfa is estimated at \$135/ton DM for milk production. Soybeans are now a \$6+ million crop annually. Recent NNYADP research has evaluated summer oats and sorghum for NNY climate tolerance and conservation benefits. Recent project summaries follow; see details at www.nnyagdev.org.



Corn Yield Potential Research Update

NNY farmers are sharing yield monitor data to learn how advances in corn breeding and production practices are impacting crop yield and if associated Cornell nitrogen application guidelines need updating. Over the 3-year study to date, 1/3 of fields tested yielded <90% of yield potential; 26% yielded >110% of expected harvest.

"The farmers and farm advisers in NNY were the frontrunners in the database re-evaluation that started in 2013. . . We now have a great opportunity to more quickly and more widely obtain real-field data." — Dr. Quirine M. Ketterings, Cornell University



BMR vs. Non-BMR Corn for NNY

NNYADP-funded field trials are producing the 1st data on BMR corn performance in NNY. In early field trials, BMR hybrids indicated a distinct advantage in fiber digestibility and, thus, milk production potential. Continuing trials are evaluating yield, digestibility, % dry matter, acidity, starch, silage fermentation and post-harvest quality.

Double Cropping for Nutrient Efficiency and Forage Production

Two crops, same acreage: can NNY farms grow winter rye in their cornfields? Two years of early field trials suggest that the rye cover crop reduces nitrogen and phosphorus losses in field surface runoff, and may be a good fit for farms looking to increase hay forage production, reduce soil erosion and improve soil health.



NNY Farm Pest Biocontrol Now Sought Across U.S.

Watch for 3rd Year Results of NNY Alfalfa Winter Survival Trials in 2018!

Farmers in New Mexico, Texas, Ohio and Michigan want to know more about the use of nematodes developed in NNY for controlling alfalfa snout beetle and its potential to manage other field crop and fruit pests. Long-term commitment by the NNYADP provided Cornell entomologist Elson Shields the time needed to develop the science behind this cost-effective, one-application treatment protecting NNY alfalfa crops.



Emerging Pest in NNY: Western Bean Cutworm (WBC)

NNY farms had the highest 2016 trap counts for WBC, a field & sweet corn pest creating risk of mold/pathogens impact on feed quality, animal health & milk production. Field trials showed one corn seed trait succeeded, one failed to manage the pest.



To receive NNYADP dairy & crops project results/notices: text 315-408-2841 or email Subject Line: NNYADP Dairy/Crops Results to karalynn@gisco.net

Funding for the Northern New York Agricultural Development Program is supported by the New York State Senate and administered by the NYS Department of Agriculture and Markets

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NNYADP Research Responds to NNY Climate Challenges for Dairy and Crop Farmers

The Northern NY dairy industry has an estimated \$486.9 million value. Research selected by Northern New York Agricultural Development Program farmers responds to priority needs and looks to capitalize on emerging opportunities to sustain and strengthen dairy as a vital economic engine for the local and state economies. Summaries of recent projects follow. Details are posted at www.nnyagdev.org.



Best Practices to Reduce Costly Heat Stress in Cows

Heat stress costs NYS' dairy industry an estimated \$23 million/year in decreased milk production/components and animal health/reproductivity. With an NNYADP grant, Miner Institute evaluated heat abatement systems for keeping cows healthy & comfortable and maintaining milk yield on hot days. Best practices learned at Miner and on Clinton & Franklin County dairy farms were presented at the 2018 American Dairy Science Association.

"The higher producing cows appear to be more sensitive to heat stress. Providing maximum heat abatement measures over stalls and feed alleys helped keep the cows more comfortable, hold production steadier, and maintain milk fat percentage."

— Miner Institute Director of Research Katie Ballard



Nutritional Strategy for Managing Heat Stress in Calves

Heat stress accounts for ~\$253,000/year losses of young (birth-1 yr) dairy animals across New York State. The NNYADP funded a study with calves 2-57 days old, evaluating how nutrition can help reduce heat stress, increase feed efficiency, and provide for proper growth and immune response in young dairy animals.

Preventing Winter Illness in Calves

Respiratory illness in calves can negatively impact weight gain, age at first calving, 1st lactation milk production and farm revenue/costs. A Nov 2016-Jan 2017 study with 426 calves across 27 NNY dairy farms identified cold weather factors and recommendations for dairy calf managers. The impact of on-farm changes is being evaluated in the winter of 2017-18.

"Knowing the factors that have the greatest opportunity to enhance calf health through the winter helps farmers manage for seasonal challenges by taking the necessary steps to improve respiratory health."

— NNY Dairy Specialist Kimberley Morrill, Ph.D.

Reducing Risk of Winter-Related Mastitis

Evaluation of 2 types of udder applications to reduce chapping and prevent mastitis in dairy cows in winter indicated a powdered treatment significantly increased risk of *Staph* (63%) & *Strep* (223%) infections vs. traditional iodine solution.

NNY Water Quality & Fiber Digestion in Dairy Cows

Water quality is critical for healthy productive cows. Research re: mineral, pH, sulfates, water hardness, bacteria, etc. in water at 18 NNY dairy farms showed conventional corn silage digestibility significantly decreased as magnesium levels in water samples rose, while sodium increase was linked to a moderate rise in digestibility of some forages.



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