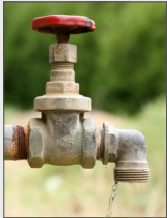


A partnership between Cornell University and CCE Associations in these ten counties:
Genesee, Livingston, Monroe, Niagara, Ontario, Orleans, Seneca, Wayne, Wyoming & Yates.



QUARTERLY HIGHLIGHTS July - September 2019

Improving Water Quality Stewardship on Small Dairies



With the increasing presence of harmful algal blooms in our lakes, the pressure on all farms to be environmentally responsible for their manure and fertilizer applications has never been greater. In NY, livestock farms with over 300 cows (or equivalent units)

have to follow a strict nutrient management plan under the Concentrated Animal Feeding Operation (CAFO). The purpose of this plan is budget, supply, and conserve nutrients for plant protection while minimizing agricultural nonpoint source pollution of surface and groundwater (CODE 590). Educational programming on nutrient management for smaller non-CAFO dairies is lacking but necessary to avoid water quality issues.

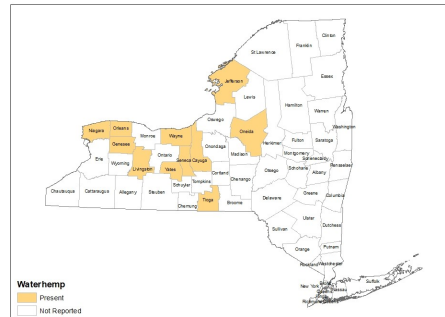
This summer, the NWNYS Team partnered with Yates County Soil & Water Conservation District (YSWCD) to host two farm walks to assess what would be regulated if small farms fell under CAFO rules. There are 315 small dairy farms in Yates County which provides a perfect opportunity for nutrient management and water quality programming. Topics covered were manure management, including winter and wet weather spreading guidelines, barnyards, milkhouse waste water, silage leachate, and pasture management.

These sessions were meant to be informative and interactive. We walked through each of these farms talking about the regulatory topics and the various practices that farms would need to adopt to meet today's NYS DEC regulations for larger farms. This stayed very informal with local farmers and neighbors talking, interacting, and working out potential solutions with each other.

These were very informative discussions with 49 adults and 20 young people participating. As a result of these meetings, the Yates SWCD technician has had participants reach out for guidance to make farmstead improvements. This is a move in the right direction that needs to continue or small farms may find themselves faced with regulations and fines that could put them out of business.

Helping Growers Solve the Glyphosate Resistant Weed Puzzle

Known Waterhemp Locations



Current as of Sept 26, 2019

Of the three glyphosate resistant weeds currently in NY, tall waterhemp has become our focal point for a couple of reasons other than its herbicide resistance. Seeds can be carried into the state through various avenues, it emerges all season long, produces hundreds of thousands of seeds per plant and has quickly established populations in eleven counties.

The active ingredient, glyphosate, has been a staple for weed control for glyphosate-resistant corn and soybean acres. Now that this herbicide mode of action is ineffective in managing weeds like tall waterhemp, what chemistries should growers be using to prevent yield loss?

We did not know what area of the country these seeds originated or to what herbicide modes of action they could be resistant. There are waterhemp populations in the Midwest resistant to five different modes of action. We collected seed from five different counties to test for other possible resistances. Bryan Brown, from the NYS IPM Program, grew these seeds in the greenhouse and sprayed each population with five different classes of herbicides. These populations were found to be resistant to three of those classes. This was very helpful in our recommendations on what **not** to use for control.

Additional fieldwork was necessary to test herbicide efficacy. This summer, the team collaborated with the NYS IPM Program, Bayer Chemical and Cornell Cooperative Extension on a waterhemp test plot in a growers' field in Seneca County. We tested 16 different herbicide programs in soybean and 12 programs in corn. A field day was held on July 23 with a walking tour of the treatments to demonstrate which program and timing was the most effective in managing waterhemp. This provided invaluable information for effective herbicide programs next year. Funding for this program was made possible through a grant from the NYS Farm Viability Institute and will continue with more detailed herbicide research next year.



2019 Waterhemp Field Tour held in Seneca County.

Corn Silage Pre-Harvest Workshops Prepare Farmers for a Successful Harvest in a Challenging Year

Due to a wet spring, corn in many areas of our region was planted late or at two different timings up to 1.5 months apart. This created a challenging corn silage harvest that required careful planning and technical skill from crop teams and farmers.

From early to mid-September, four dairy farms in Wyoming, Orleans, Ontario and Yates counties hosted over 50 farmers and crop team employees from eight counties, to discuss harvest strategies and learn about best management practices for the 2019 corn silage harvest season. Attendees learned about proper calibration and uses of precision yield monitoring systems and new near-infrared technology, as well as compared differences in chopper processing heads. Harvest and marketing options for immature and frosted corn silage were also covered, with abundant farmer to farmer discussion sharing valuable experiences and ideas.

Workshops held in mid-September also offered dry matter testing of representative samples of fields that were estimated to be the closest to harvest time. Participants brought samples from their own fields, and learned how to use a Koster Tester to determine the moisture level in their corn plants. Monitoring moisture helps farmers determine when to harvest their corn silage for optimal fermentation and nutrient quality in the bunker or silo, leading to better cow health, milk production, and profitability on the farm.

Participants left the workshop better prepared for the challenging 2019 corn silage harvest, aware of the considerations unique to this year, and armed with the skills to monitor their own fields and incoming corn silage for proper harvest timing and quality.



Corn Silage Pre-Harvest Workshop held in Wyoming County. Margaret Quaassdorff, Dairy Specialist demonstrating how to determine corn silage particle size distribution.

Farmers and Farmland Owners Learn about the Value of Soil Regenerative Practices

Soil health continues to be an essential topic among farmers, farmland owners, conservation agencies, ag consultants, and advisory/ program committees that help direct the work of the NWNV program. A 2017-2018 survey across 180+ New York farms showed the majority are aware of the many benefits cover crops offer but also revealed many barriers to the adoption including seed, termination, equipment costs and implementing conservation practices on rented land. In response, a field day was developed to address these barriers and support the education and expansion of cover crop adoption in commodity crop production while capturing the soil regenerative benefits.

The field day was part of the "Landowners and Farmers Working Together for Clean Water in the Great Lakes" project, a collaboration between Cornell Cooperative Extensions' NWNV team, American Farmland Trust, Genesee River Watershed Coalition of Soil and Water Conservation Districts, IPM Institute and Utah State University. This project was funded by the Great Lakes Protection Fund.

On August 29, 80 attendees consisting of farmers and farmland owners participated in a soil health field day held in Livingston County, to share practical, field-tested demonstrations of advanced soil regenerative practices targeted to dairy, field and specialty crop farmers. Primarily producer lead, John Macauley, along with several other experienced cover crop farmers, discussed their experience with cover crop mixtures, specifically: 1, 3, 5, and 11 different species using winter-hardy or winter-killed species versus a check (no cover crop). In addition to this, participants learned:

- How cover cropping can regenerate the soil and increase farm profitability from real-life case studies from local crop and vegetable farms
- How farms evaluate optimal cover crop seed mixtures to minimize cost while maximizing beneficial impacts on soil health and farm productivity
- How to participate in the 'Genesee River Coalition of Soil and Water Conservation Districts' interseeder program through a live planting demonstration in corn
- How farmers and farmland owners can partner together to improve conservation on rented lands

Through reflective evaluations, farmers and farmland owners expressed increased interest in research support of the economic assessment of practical, field-tested demonstrations of advanced soil health practices on local farms in western New York.



Soil Health Field Day 2019 held in Livingston County.