

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

QUARTERLY HIGHLIGHTS

July - September 2021

Are Plant Parasitic Nematodes Robbing Corn Yields in NWNY?

Nematodes are microscopic roundworms that can be found everywhere on earth, from the open ocean to inside our bodies. About 15% of all nematodes are parasitic on plants. Most are not economic but a few can be detrimental to our agricultural crops including corn. It is hard to determine if corn is affected by nematodes because their above and below ground injury symptoms can be confused with other pest symptoms and nematodes cannot be seen with the naked eye. Nematode surveys done in the Midwestern states have identified over 28 different species of nematodes feeding in and on corn roots. About 12 species have been found to be of economic importance in reducing corn yields, some up to 40%. The nematode species present in New York corn fields is not known since they have not been surveyed.

The NWNY Team received a grant from the NY Corn and Soybean Growers Association to survey and identify what nematode species are present in corn fields in nine counties in NWNY. Forty-five corn fields were sampled, five in each county, from July 1 to July 16. Twenty plants were sampled from each



Soil sampling for nematodes in corn. Photo: M. Stanyard / CCE NWNY Team

field between the V4 and V12 growth stage. The soil/root samples were taken using a soil probe and sent to SCN Diagnostics in Columbia, MO for analysis of nematode species and populations present.

Results from this survey found six species of plant parasitic nematodes feeding on corn roots. The common names of these nematodes included the Dagger, Pin, Root Knot, Stunt, Spiral and Lesion nematode. Fortunately for us, none of the really injurious species found in the Midwest were identified in our survey. The Dagger nematode was the most detrimental species identified and it was only found in one sample and in low numbers. Economic thresholds have been established for each of these species. There were six samples that were above the establish economic threshold. Two were for the Lesion nematode and four for the Stunt nematode. Interestingly, thirty-eight of the samples had two or more nematode species present. Eight samples had three nematode species and four samples had four species identified. This is new information for NY corn growers and pest management options including crop rotation, granular insecticides/nematicides and seed treatments will have to be discussed moving forward. Now that we know what nematode species we are dealing with in NWNY, the Team will begin experimenting with management options and possible effects on corn yields.



After a plethora of Zoom meetings and a hiatus of in-person events, the NWNY Team held a pasture walk at a small livestock farm in Livingston County. It was great to get back together outdoors on a beautiful late summer evening. Twenty-one participants toured the farm to learn more about pasture infrastructure, soil health, outwintering practices, cattle handling systems, and marketing.

There is no replacement for on-farm learning and seeing practices in place. The farm owner covered topics as we walked with lots of questions and answers along the way. They raise cattle, pigs, and laying

hens. There was also discussion on the addition of their latest enterprise, a very small cabin to accommodate overnight guests. They are located very close to Letchworth State Park and are hoping that will attract some park visitors.

There was a wide range of expertise with the group, with diverse interests. Those with more experience offered their suggestions and opinions. The networking time is invaluable. Folks stayed around and talked for an hour after the event ended. One participant that has attended several pasture walks over the years said, "I always leave with at least one piece of information to take home with me."



Soil Health Field Day: Improving Soil Health and Resiliency

Understanding agronomic, economic, and environmental considerations underlying soil health practice decisions are key to realizing optimal soil health practice adoption levels. The NWNY Team continued its work with the American Farmland Trust (AFT) and other project collaborators to increase farm business owner, advisor, and non-operating landowner knowledge and implementation of conservation and soil health practices.

American Farmland Trust organized and offered a field day in August at the Mulligan Farm, Livingston County, NY. Team members contributed to this activity by

- Developing economic analysis for the case study farm
- Reporting findings via the AFT Case Study fact sheet for the Mulligan Farm
- Participating in on-farm research with demonstration farms
- Describing how farmers and farmland owners, with emphasis on women landowners, can work together to improve conservation on rented lands, which amount to nearly one-third of crop acres in the Genesee Basin

About 100 farm business owners and their families, advisors, landowners, and other stakeholders in attendance learned

- About navigating the growing availability and diversity of market incentives for ecosystem services
- How implementing soil regenerative practices can increase farm profitability from real-life case studies from local farms
- Benefits of performing in-field health assessments
- Tips to help farmers and farmland owners communicate more effectively to address soil health and conservation in lease agreements for rented lands

To view soil health case studies and videos from four local farms participating in the Genesee River Demonstration Farms Network, go to https://farmland.org/project/genesee-river-demonstration-farms-network/.

Focus on Farm Management: Sharing Dairy Success Stories

We regularly promote research-based dairy industry recommendations and encourage dairy producers to follow best management practices on their farms. Dairy producers often understand best management practice ideals but want to know how they are implemented on other farms. Strengthening skills in key management areas of animal care unlocks paths to higher profitability in today's dairy economy and plays a key role in the long-term success of dairies in our region.

The NWNY Team recently partnered with regional dairy specialists from the South Central and North Country regional teams and was awarded grant funding through the New York Farm Viability Institute to document areas of excellence in the categories of calf management, transition cow management, and cow comfort. Dairy specialists worked with 15 farms across New York State to assess best management practices on each farm, and help each dairy identify and improve an aspect of management in one or more categories. Dairy producers were asked to share their best management practices and processes for improvement with other dairy farmers, via multiple outreach streams. Locally, an on-farm tour highlighting excellent lactating cow comfort and positive changes to fresh cow housing was held on an Ontario County dairy farm. Thirteen regional farmers and allied industry representatives gathered to network and learn from the assessment and

changes made during the project. Similar on-farm tours were held in each of the other participating regions where the focus was calf and heifer care.

Dairy producers from Niagara, Monroe, Livingston, Wyoming, and Ontario counties participated in the grant, and their success stories have been, and will continue to be shared via short video, articles, and podcasts. Their valuable input will give other farms feasible action steps, and encourage them to implement best management practices, and create positive changes on their operations. Additional improvements documented by other farms included new transition calf housing and management protocols to improve calf health, facility and housing upgrades to improve cow comfort, and a new animal grouping strategy to improve transition cow management. Results from this project may be applied to dairies of all marketing systems (conventional, organic, grass-fed), facility types (robotic, freestall, tiestall), and management styles.



Participants of the on-farm tour learn about improvements made to transition cow housing. Photo: M. Quaassdorff / CCE NWNY Team



Forest Watson from Mulligan Farm speaks on how soil health practices have improved their bottom line. Photo: Stephanie Castle, American Farmland Trust