Cornell Cooperative Extension
North Country Regional Ag Team

The North Country Regional Ag Team is a Cornell Cooperative Extension partnership between Cornell University and the CCE Associations in Jefferson, Lewis, St. Lawrence, Franklin, Clinton, and Essex counties.

Quarterly Report

April - June 2021

On-Farm Research Herbicide Trials Help Soybean Growers Manage Resistant Marestail

Glyphosate resistant (GR) soybeans made postemergence weed control relatively easy with a single application. The use of postemergence (POST) glyphosate in GR soybeans has been the primary weed control program used by many Northern NY soybean growers. While this system seemed to simplify weed management, relying on total postemergence programs can be difficult to manage if not properly implemented.

Photo credit: M. Hunter.

In recent years, multiple resistant horseweed (a.k.a marestail) has been found in New York State and has quickly become a troublesome weed for many growers, including those in NNY. The first confirmed populations of resistant marestail in NNY were found during the 2019 growing season.

The spread of multiple resistant marestail moving across the state, including NNY, is forcing many growers to change their current herbicide programs. This has led to a renewed interest and need to use soil residual herbicides for improved soybean weed control. It was determined that on-farm research trials that evaluate herbicide programs for the control of multiple resistant marestail would provide timely, research-based information for growers, agribusinesses, and crop consultants. In New York, prior to 2020, there were no known soybean herbicide trials that evaluated the control of multiple resistant marestail. To address this need, Cornell Cooperative Extension Regional Field Crop Specialists began evaluating different herbicides that could be effective at providing control of multiple resistant marestail in soybeans.

In 2020 and 2021, replicated soybean herbicide trials were conducted on a farm near Watertown, New York, in Jefferson County (2020), and a farm near Heuvelton, NY, in St. Lawrence County (2021). Both on-farm research trials included 13 different herbicide programs consisting of preemergence (PRE) herbicide used alone and in tank mixes. The marestail populations at each of these sites were confirmed to be resistant to both Group 9 (i.e. glyphosate, Roundup) and Group 2 (i.e. Classic, FirstRate) herbicides.

This research was very impactful to North Country farmers as it suggests that many traditional herbicide programs are not effective for the control of multiple resistant marestail. Soybean growers will need to use preemergence herbicide programs for the control of multiple resistant marestail in glyphostate tolerant (Roundup Ready) or conventional soybeans. Growers could also consider planting Xtend, XtendFlex, Enlist, or Liberty Link soybeans to allow for effective postemergence control options if necessary. The results of the trials have been shared in newsletter articles, blogs, and social media, as well as presented at Extension and industry hosted crop meetings throughout the year. The on-farm trial in 2021 was funded by the Northern New York Agricultural Development Program.

Authored by:
Lindsay Ferlito, Mike Hunter, Casey Havekes, Kitty O'Neil, and Nicole Tommell

Layout/design by:
Tatum Langworthy

Benchmarking Calf Growth and Performance on Northern New York Dairy Herds

The pre-weaning period is a vulnerable time for dairy calves and as a result, optimizing growth and health can be a challenge for dairy producers. According to several 2019 Agricultural Needs Assessment surveys distributed by CCE across the North Country, dairy producers identified a common theme that is limiting their calves' success; "You can't manage what you can't measure." Several dairy producers across the North Country *think* that their calves are growing and performing well, but have no way of quantifying this information and have no way of comparing their performance to industry gold standards. With this information, the CCE NCRAT Dairy Specialists organized a peer-to-peer discussion group consisting of 8 farms across the North Country. The discussion group was funded through the Cornell Dairy Advancement Program, which required the group to meet on three separate occasions and to meet three specific milestone goals. Early on it was emphasized that the goal of the discussion group was not to be a competition, nor was it designed to rank the 8 participating farms, but rather to encourage discussion, and for participants to learn from one another. The more specific objectives of the group were to: 1) measure transfer of passive immunity (TPI) among newborn calves, and 2) calculate average daily gain (ADG) across the pre-weaning period.

For the first objective, blood samples were taken from a subset of newborn calves on each participating farm to test for TPI. The values were categorized according to industry gold standards which states that more than 40% of calves within a herd should achieve excellent TPI, ~30% should achieve good TPI, ~20% should achieve fair TPI, and less than 10% should achieve poor TPI. As a result of collecting this information, individual participating farms have continued to work with the CCE NCRAT Dairy Specialists to improve their colostrum management protocols. For example, one farm made changes to their colostrum management protocols and asked that TPI levels continue to be monitored for new calves entering the herd under the new management strategies. Following these changes, this farm is now achieving 100% of sampled calves in the "Excellent" category.

For the second objective, calves were weighed within 3 days of birth and again at weaning to calculate ADG. The results from this objective were very eye opening for the participating farms. One farm made changes to their nutrition plan halfway through the discussion group after learning their calves were not growing adequately, and they have continued to work with the Dairy Specialists to promote the growth and success of their calves. Additionally, despite already having good results, another farm has asked to keep tracking their calves' growth as they transition from feeding milk replacer to whole milk.

Photo credit: L. Ferlito.

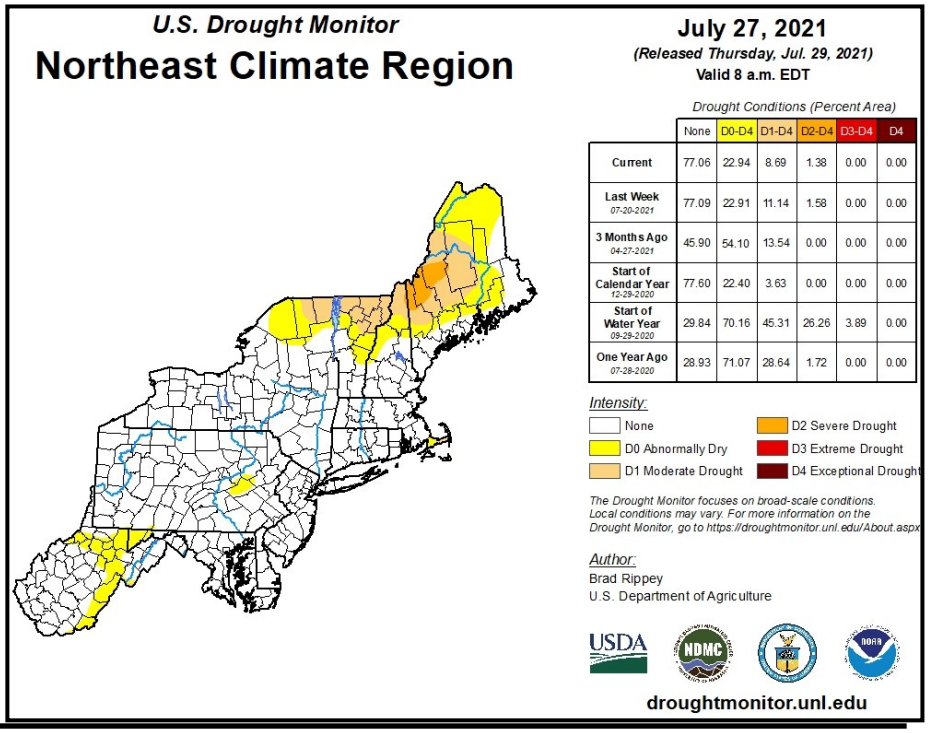
The results from this discussion group sparked great discussion amongst the participants, with one calf manager saying, "*the info is really rich, and we can use it to make improvements on our farm. I'm interested in what the other farmers are doing and this feedback from them is helpful*". This project a is a good example of how peer-to-peer discussion groups and benchmarking can be beneficial for dairy farmers as participating farms were motivated to implement changes to their feeding and management strategies to achieve better calf growth and performance. Further, this is a great example of how CCE NCRAT Dairy Specialists work one-on-one, as well as in a group setting, with producers across the North Country on calf management.

Focused and Sustained CCE Support for NNY Farms Through the 2020-21 Drought

The 2020 growing season began with Abnormally Dry conditions, an official designation by the USDA Drought Mitigation Center, and the dry conditions have not been relieved thus far into the 2021 growing season, 15 months later. This persistent dry weather has been officially designated Abnormally Dry or Moderate Drought for some or all the North Country's 7 counties since May 19, 2020, through the winter and spring, and into the summer. As of mid-July 2021, the majority of the North Country remains officially dry. This dry weather has made farming in NNY extremely difficult over the past year, and help has been needed. Most farms in the North Country involve feeding livestock, so forage production is a basic requirement for viability. Inadequate soil moisture made normal forage production impossible, so CCE Specialists and teams focused on this important challenge with a multi-faceted approach.

- CCE NCRAT updated the region about weather and soil moisture status regularly, beginning in May 2020, and provided weather summaries for NNY locations as well as forecasts and predictions from National Weather Service, National Oceanic and Atmospheric Administration, and others through newsletter articles, Ear to the Ground bulletins, blog posts, and one-on-one conversations.
- CCE NCRAT updated and re-shared previous guidance regarding crop management through drought stress through many channels, including the CCE NCRAT Facebook page, blog, newsletter, and bulletins. Additional new materials were developed, emphasizing both the short-term and long-term impacts of drought stress on annual and perennial forage crops and the need to try not to compound additional stresses. Emphasis was on optimizing harvest and storage methods as well as reducing feed-out waste. One factsheet on emergency annual forage options was updated, further reviewed, and published as an official factsheet in the Cornell Nutrient Management Spear Program's series for statewide use.
- Information was shared about pasture forage and hay shortages and also about farms with hay to sell across the North Country through word-of-mouth, free newsletter classified ads, and by using the NYS Forage Exchange website.
- CCE NCRAT winter programming focused on reviewing the 2020 drought season in terms of reduced yields and likely damage to grass and legume stands and what that would mean for the 2021 crop. Updates were also shared on soil moisture status, because the dry conditions were never relieved over the winter and early spring.
- Spring and summer 2021 brought reduced grass and legume stand vigor, so emphasis this season has been on continuing to avoid compounding stresses, on pasture and hay field restoration, and managing new weed challenges in those lower-yielding fields.

The dry/drought conditions continue to date and so have CCE NCRAT's efforts to assist North Country farms to adapt and manage their farms and fields for best possible outcomes.



Producer Sees Improvements in Calf Health and Performance after Help Designing a New Calf Barn

Whether it's help understanding the latest industry recommendations or finding a local farm they can tour to look at their system, North Country dairy producers regularly request guidance from CCE when remodeling and designing new facilities. Last summer, a local North Country farmer reached out to the CCE NCRAT Dairy Specialists for input when he was designing his new calf barn. The Specialists offered advice and guidance on a variety of aspects including overall barn design, ventilation, bedding, and pen size. Additionally, the Specialists showed the producer pictures and diagrams from existing barns as examples. After the barn was under construction, the Dairy Specialists provided more recommendations on how to achieve adequate 4-season ventilation through the use of positive pressure tubes.

Photo credit: C. Havekes.

The barn was built this past winter with the first calves entering at the end of the year, and by the spring it was obvious the barn was worth the investment. The farmer had only positive things to say about it. He went from a high level of morbidity and mortality to not losing any calves this spring and summer and having extra heifers to sell, which gives him the option to be selective in which animals he chooses to raise. Further, he said the calves are clean and growing like crazy, with the calves coming out of the new barn measuring the same size as calves that are 2-3 months older from the previous calf housing. After seeing such a positive outcome, the producer is now looking at remodeling the existing barn for weaned heifers as that has become a bottleneck. As a follow-up to this successful project, the Dairy Specialists will continue to work with this producer to ensure the barn is working well, and help with any future questions he has.

Farm Financial Management Tuesdays – Lunch and Learn for Risk Management

There is a continual need to provide producers with timely information on farm business topics including risk management. The CCE Farm Business Management Team expanded on their winter risk management programming to incorporate additional opportunities for producers during the spring. Each week in April, producers had the opportunity to learn about assessing capital investment decisions, transfer planning, insurance, and liability protection. Each session was one hour in length and provided opportunities for questions.

The first session on Assessing Capital Investment Decisions was presented by Dayton Maxwell, CAAHA Program, and Liz Higgins, Eastern NY Horticulture Program. This webinar focused on identifying ways to maximize capital purchases for the farm business while assessing whether the business cash flow can handle the purchase. A focus on cash flow with decisions surrounding need versus want and how that purchase can create opportunity were a focal point.

The second session focused on topics for a successful farm transfer. Gabriel Gurley from NY FarmNet visited with participants on the how to maintain business viability while transitioning the farm to the entering members. A significant amount of time was spent on identifying the challenges and the activities important for success.

Insurance and Liability Protection was the final installment of Risk Management series. Nicole Tommell of the CNYDLFC (and temporarily part-time with CCE NCRAT) visited with participants on various types of insurances offered to farm producers. From basic liability to Workman's Compensation, the meeting described each type and how to sift through what was most needed and important. Minimizing the insurance bill, but maximizing coverage was the focus of the program.

Overall the program was a success, and provided valuable information to help producers make important decisions about their farm businesses.

Our Mission

"The North Country Regional Ag Team aims to improve the productivity and viability of agricultural industries, people, and communities in Jefferson, Lewis, St. Lawrence, Franklin, Clinton, and Essex Counties by promoting productive, safe, economically, and environmentally sustainable management practices and by providing assistance to industry, government, and other agencies in evaluating the impact of public policies affecting the industry."

Contact us directly through our website: http://ncrat.cce.cornell.edu/

Cornell Cooperative Extension provides equal program and employment opportunities. NYS College of Agriculture and Life Sciences, NYS College of Human Ecology, and NYS College of Veterinary Medicine at Cornell University, Cooperative Extension associates, county governing bodies, and U.S.D.A. cooperating.