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.”
Field Crops and Soils

Soybean Cyst Nematode Now Confirmed in Six Additional Counties in New York

By Jaime Cummings and Ken Wise, NYS Integrated Pest Management Program; Mike Hunter, Mike Stanyard, Aaron Gabriel, and Kevin Ganoe, Cornell Cooperative Extension; Michael Dorgan, NYS Dept. of Agriculture and Markets

The soybean cyst nematode (SCN) is considered the number one pest of economic concern of soybeans nationally and globally, potentially causing 10-30% yield loss in the absence of above ground symptoms. In 2017, national estimates reported over 109 million bushels lost to this pest in the U.S. alone. Considering that this pest is confirmed in surrounding states and provinces, and given its potential to spread, statewide survey efforts have been underway since 2013 to determine the presence or absence of the soybean cyst nematode in NY. From 2013-2016, numerous fields in 17 counties were sampled and tested as part of a statewide soybean disease survey led by Cornell’s Field Crops Pathology program, funded by Northern NY Agricultural Development Program and NY Corn and Soybean Growers Association. In 2016, SCN was confirmed in one field in Cayuga County by Cornell’s USDA ARS Nematology lab, albeit at very low levels. Since then, survey efforts have continued, because it is widely assumed that SCN is much more prevalent in NY.

In 2019, the NYS Integrated Pest Management Program was commissioned by NYS Department of Ag and Markets to coordinate a Cooperative Agricultural Pest Survey (CAPS) in soybeans with Cornell Cooperative Extension specialists to maintain vigilance against potentially invasive species. For more information about the CAPS program and this survey effort, please refer to this article. As part of this survey, 25 soil samples were collected from fields in 16 counties across NYS and were submitted for testing at the SCN Diagnostics laboratory. Of those 25 samples, seven of them were positive for SCN in six different counties, confirming our suspicions that this pest is potentially widespread throughout soybean production areas in NY. This brings us to a total of seven counties in NY with at least one field positive for SCN. The counties identified with fields positive in 2019 include Columbia, Dutchess, Jefferson, Monroe, Tompkins, and Wayne (Figure 1).

Thankfully, the egg counts in these positive samples were all below 500 eggs per cup of soil (250 cc of soil). Although that may sound like a lot, these are very low numbers compared to the 10,000-80,000 egg counts that some growers struggle with in other states. This means that we are in a good position to proactively manage for this pest before it gets out of hand and starts causing economic losses.

An integrated management approach will help NY soybean growers stay ahead of the soybean cyst nematode. This involves continued testing efforts to monitor your fields for SCN. Determining if you have the pest is the first step toward management. For detailed information and recommendations on how to collect samples for SCN testing and where to send those samples, please refer to this article. If you get a positive result, keep records of your egg counts for each individual field. Implement the following tactics when managing for this pest:

1. SCN can be moved among fields on soil, whether it be via wind, water, equipment, or boots. Consider improving sanitation of equipment coming from fields with known SCN infestation to avoid spreading it to others.

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2. Crop rotation is the number one tool for managing SCN. Rotating to a non-host crop, such as corn, small grains, alfalfa, forage grasses, and mixes for one year can reduce the nematode population by up to 50%. Continuous soybean production in an infested field can increase nematode populations exponentially since this pest can have up to three life cycles per season in NY.

3. Select and plant soybean varieties with resistance to SCN, and rotate those resistant varieties that you plant. The nematode quickly develops resistance to the resistant varieties when exposed to the same varieties over and over, in the same way that weeds develop resistance to over-used herbicides.

4. Consider nematicidal seed treatments if your SCN populations start causing economic damage (Figure 2). Research has shown that these products are only cost-effective with high SCN population levels that are causing significant damage.

5. Keep testing. Continue to test fields that you get negative results from, and especially continue to test fields that you get positive results from. Keep track of your egg counts in each field to know how your populations are changing, as that may affect your management strategy. It is recommended that as long as egg counts remain below 30,000 eggs per cup of soil, crop rotation with SCN-resistant soybean varieties is the best approach.

That’s just another thing to remember as you plan your crop rotations and weed management strategies.

Keep in mind that testing for SCN can be tricky, since it can be difficult to detect at low population densities, and populations can be quite variable within a field (Figure 3). Focus your testing efforts on fields with unexplained lower yields, or fields with a history of Sudden Death Syndrome (SDS) or Brown Stem Rot. It is well known that there is a strong correlation between the presence of SCN and SDS. If you see patches of SDS in your field, that would be an ideal location to pull soil samples for testing for SCN. For more information on the relationship between SDS and SCN, please refer to this article.

For more information on this pest and recommendations, please visit the Soybean Cyst Nematode Coalition website. There you will find numerous resources explaining the resistance issues with this pest, how and where to test for it, management recommendations, and success stories. Expanded SCN testing efforts will commence in 2020, supported by the NY Corn and Soybean Growers Association. If you suspect SCN in your fields, contact your area Cornell Cooperative Extension specialist for assistance, they may be able to offer you free testing on suspect fields as part of the expanded testing efforts in 2020.

The Pesticide Management Education Program (PMEP) at Cornell University is pleased to announce the availability of the 2020 Cornell Guide for Integrated Field Crop Management.

Written by Cornell University specialists, this publication is designed to offer producers, seed and chemical dealers, and crop consultants practical information on growing and managing field corn, forages, small grains, and soybeans. Topics covered include nutrient management, soil health, variety selection, and common field crop pest concerns. A preview of the Field Crops Guide can be seen online at: https://cropandpestguides.cce.cornell.edu.

Highlighted changes in the 2020 Cornell Field Crops Guide include:
- Revised pesticide options for economically important field crop pests.
- Updated corn, forage, and small grain variety trial and research data.
- Pesticides available for stored grain management.

Cornell Crop and Pest Management Guidelines are available as a print copy, online-only access, or a package combining print and online access. The print edition of the 2020 Field Crops Guide costs $31 plus shipping. Online-only access is $31. A combination of print and online access costs $43.50 plus shipping for the printed book.

Cornell Guidelines can be obtained through your local Cornell Cooperative Extension office or from the Cornell Store at Cornell University. To order from the Cornell Store, call (844) 688-7620 or order online: https://www.cornellstore.com/books/cornell-cooperative-ext-pmep-guidelines.

Kelsey O’Shea at kio3@cornell.edu or 315-955-2795
The transition period is considered to be one of the most challenging times during a cow’s life as she faces various metabolic, physiological, and behavioral stressors. Over the past decade, considerable research has focused on nutritional strategies to help cows overcome the severity of negative energy balance that they experience as they transition from gestation to lactation. Of particular interest to me during my time at the University of Guelph, was the concept of feeding controlled energy dry cow diets. These diets, more commonly referred to as the ‘Goldilocks Diet’, are based on the concept of not too much, and not too little, but just the right amount...of energy that is. Typically, we see large amounts of wheat straw incorporated into the diet to lower the energy density which enables the cow to consume as much as she wants of a low nutrient dense diet. From a physiological standpoint, these diets work great because the cow is limited in body condition gain resulting in improved metabolic health post-calving. However, a downside to these diets is that straw is considered un-palatable to the cow and as a result we see lots of sorting and consumption of an imbalanced diet. The overall objective of my grad research at the University of Guelph, under the supervision of Dr. Trevor DeVries, was to manipulate physical characteristics of these diets to promote consistency in intake, improve metabolic health, reduce feed sorting, and promote overall performance across the transition period. In part 1 of my research, I manipulated the chop length of wheat straw. Straw was either chopped with a 1-inch screen or a 4-inch screen, and incorporated into the diet to make up ~30% of the ration DM. Other ingredients included corn silage and a dry cow pellet. Cows were fed this diet throughout the entire dry period, and after calving all cows were fed the same lactating TMR. In this research, we were able to collect daily intakes, various measures of feeding behavior (including feed sorting), rumen pH, blood metabolites, BW and BCS, rumination time, and milk and component yield. Some of the key take away points for cows fed the short straw diet include:

- **HIGHER** intake across the entire dry period (Figure 1); no difference in intake post-calving
- **LESS** of a drop in intake as cows approached calving
- **LESS** sorting against the long forage particles
- **MORE** stable rumen pH around the time of calving
- **LOWER** blood ketones three weeks post-calving (Figure 2)

In summary, the results from this research indicate that shorter chopped straw was favorable in terms of feeding behavior and metabolic health. In order to maximize intake of these high-straw dry cow diets, the longest forage particles should not make up more than ~5% of the total diet. The success of these diets comes down to perfecting their management and making sure that the diet the cows consume is as close as possible to the diet that is formulated.

![Figure 1. Daily DMI during the transition period](image1.png)

![Figure 2. Blood BHB during the transition period](image2.png)

For more details please check out: https://www.journalofdairyscience.org/article/S0022-0302(19)30932-4/pdf
Dairy Cattle Nutrition: Vitamin and Mineral Series

By Casey Havekes

Each month, for the next several months, I am going to write about one of the key vitamins or minerals that dairy cows require (or benefit from) and describe their role in the ration. **Calcium** is an essential mineral that is required for the basic function of many tissues and physiologic processes (i.e.: it’s required for bone formation, muscle contraction, nerve transmission, blood clotting, and it has a role in the transmission pathway for many hormones). Due to its complex involvement, low calcium levels (hypocalcemia) is referred to as the ‘Gateway Disease’ making it increasingly important to understand its role in transition cow nutrition. Cows are able to balance calcium supply and demand effectively the majority of the time, but it becomes a challenge during the weeks leading up to calving and the first few days following calving. In the weeks leading up to calving, calcium requirements begin to increase due to the synthesis of colostrum and after calving the requirement greatly increases. In fact, in early lactation, a cow’s calcium requirements increase by 65%. In order to meet these demands, cows initiate homeostatic mechanisms to restore blood calcium levels — a process that is facilitated by parathyroid hormone (PTH) and 1,25-dihydroxyvitamin D. When a cow experiences low blood calcium, PTH is stimulated and activates the kidney to release vitamin D and decrease calcium excretion. Vitamin D activation further increases calcium absorption in the small intestine and helps restore blood calcium levels. Several strategies have been put in place to assist the cow’s natural homeostatic processes. One of which involves feeding an anionic diet, or a negative DCAD diet. This strategy results in lower blood pH which promotes an acidic metabolic state and enhances the cow’s natural homeostatic mechanisms for maintaining calcium balance. An alternative solution is to feed a calcium binder to lower calcium levels and force the activation of PTH which will initiate the release of calcium into the blood. Initiating this process in the dry period can help cows adapt to the sudden and dramatic demand for calcium that they experience upon calving. Regardless of method, maintaining proper calcium levels in the dry cow diet is crucial to minimizing milk fever on farm, and I strongly recommend working with your nutritionist if milk fever is a problem on your herd. Stay tuned for next month when I talk about the role of **phosphorous** in the diet.
Northeast Dairy Management Conference

The Northeast Dairy Management Conference “Focus on the Future” will be held March 11 - 12, 2020, at the Holiday Inn, Liverpool, NY.

Previously known as the NEDPA Conference, this biennial conference will continue to offer high-quality programming targeted to progressive dairy farmers in the Northeast. Hosted by Cornell CALS PRO-DAIRY and the Northeast Dairy Producers Association, the mission remains the same – to provide the latest information on current trends and topics in the dairy industry through dynamic and informative sessions designed to re-energize businesses and improve performance.

The “Focus on the Future” theme includes sessions that feature diverse topics including: on-farm technology; protecting your brand; environmental issues updates; and several presentations on navigating changes resulting from the new agricultural labor legislation. In addition to gaining invaluable information for your dairy operations, this conference creates a valuable opportunity to network with other farmers and industry professionals from throughout the Northeast and beyond.

A sneak peak of presenters at the 2020 conference includes: Jay Waldvogel - Dairy Farmers of America; Steve Bodart - Compeer Financial; Phil Plourd - Blimling and Associates; Cheryl Jones - University of Kentucky; Julio Giordano - Cornell University; Chuck Palmer - Michael Best and Friedrich LLP; Emily Stepp - National Milk Producers Federation; Karl Czymmek - Cornell CALS PRO-DAIRY; Chris Wolf - Cornell University; Tom Wall - Dairy Coach LLC; and Rich Stup - Cornell Ag Workforce Development.

Additional conference highlights include sponsored pre-conference presentations, NEDPA annual meeting, exhibitor trade show, Popp Award Presentations, labor panel, and networking dinner.

To learn more: prodairy.cals.cornell.edu/conferences/ne-dairy/
Now Enrolling Herds in a new NNYADP Calf Research Project

“Determining the Enteropathogen Causing Neonatal Diarrhea and Associating it with Antibiotic use on Northern New York Dairy Farms”

Calf scours can be caused by a variety of pathogens including bacteria, viruses, and parasites. However, only bacterial diarrhea will respond to antibiotics, so the goal of this research is to identify the main pathogens causing diarrhea in the North Country and relate it back to antibiotic use on these herds. In order to accomplish this, we will need to collect fecal samples from diarrheic calves prior to them being treated with antibiotics. The overall objective of this project is to determine if there is an opportunity to reduce antibiotic use on NNY dairy farms, and to better understand how to manage diarrheic calves.

How can you help? If you have calves with scours on your farm AND you plan to treat them with antibiotics AND you want to participate in this project, please contact us:

Casey Havekes (all counties); 315-955-2059
Lindsay Ferlito (all counties); 607-592-0290
Sarah Morrison (Clinton County); 518-846-7121 ext. 105

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HOW TO GET A BETTER PRICE FOR YOUR BEEF OR DAIRY ANIMAL IN THE RING AT THE AUCTION BARN

• Come to observe cows and calves in the ring to learn the reasons why and what the buyer will spend for your animals.
• What is the buyer looking for?
• Why do you get a lower price for your animals? How to get more money?
• Reasons to vaccinate.
• What makes a feeder calf, kill calf or no sale calf.
• Why BQA/DACQA is important. Beef Quality Assurance/Dairy Animal Care Quality Assurance.
• Keith Roggie, Glenn Teft and Tom Unger; Buyers and Dr. Mike Baker; Cornell University Beef Specialist will answer all of your questions.

Farmers working for farmers for over 30 years.

OPEN HOUSE-LUNCHEON
Provided by NNY Market
March 28, 2020 11am-1pm
N.N.Y. Farmers Marketing Co-op, Inc.
8204 NY-26 Lowville, NY 13367  315-376-7441

Co-Sponsored by:

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Please contact Cornell Cooperative Extension of Lewis County if you have any special needs.
Modern On-Farm Preparedness
On-Farm and Live Webinars

Webinars can be accessed at the local site or signed in anywhere from a mobile device or computer.

Six consecutive Thursday afternoons: January 23 - February 27. Attend all sessions or individual sessions.

Registration is $10 per session or $50 for all six sessions.

Presenting organizations:
Cornell Cooperative Extension, NY State Cattle Health Assurance Program, American Dairy Association, and New York Center for Agriculture and Health.

NNY Locations:
CCE Jefferson Office, 203 N Hamilton St, Watertown, NY
Miner Institute Conference Room, 1034 Miner Farm Road, Chazy, NY

Registration or questions:
Tatum Langworthy
tlm92@cornell.edu | 315-788-8450
reg.coe.cornell.edu/modernonfarmpreparedness_10512

DATES AND LOCATIONS
Jan 23 - Preparedness for Urgent Situations. Be prepared for a fire, weather emergency or barn damage.
On-Farm: 1 - 4 pm.

Jan 30 - F.A.R.M 4.0 Update. The F.A.R.M program is evolving as farmers implement the program. Learn about how farmers have used and gained benefits and how you can use the FARM program.
Webinar: 1 - 2 pm.

Feb 6 - Activist Preparedness. This session will address several aspects of dealing with activists, including good hiring practices, available resources for support, and a plan of who to contact if something happens on your farm. Learn how to talk about videos taken on another farm and how to prepare your employees for these events.
Webinar: 1 - 2 pm.

Feb 13 - Social Media Preparedness. How to respond to negative comments on farm pages. Resources to tap into and people you can call for effective responses.
On-Farm: 1 - 4 pm.

Feb 20 – Disease Outbreaks and Biosecurity. Do you have a plan in place if there is a disease outbreak on the farm? Dr. Melanie Hemenway, State Veterinarian, will provide concrete steps to deal with disease outbreaks and make biosecurity recommendations for prevention.
Webinar: 1 - 2 pm.

Feb 27 - On Farm Safety-Prevention, Prevention, Prevention. Yet accidents still happen. This session will focus on prevention and also address accident response.
On-Farm: 1 - 4 pm.

prodairy.cals.cornell.edu
What’s Happening in the Ag Community

Silage Truck Workshop, Feb 13th, 6-8pm, CCE Lewis office, Lowville.

Lewis County Shop Meeting, Crops Discussion, Feb 19th, 12:30pm, CCE Lewis office, Lowville.

Jefferson County Shop Meeting, Crops Discussion, Feb 21st, 12:30pm, Gathering Barn, Sackets Harbor.

SAVE THE DATE - Hay & Pasture School, February 27th, Canton.

How to Get a Better Price for Your Beef or Dairy Animal in the Ring at the Auction, March 28th, see page 10 for more information.

Northeast Dairy Management Conference “Focus on the Future”, March 11 - 12, 2020, see page 8 for more information.

Office Hours, see page 5 for more information.

Modern On-Farm Preparedness Program, 6-part series starting January 23, 2020, see page 11 for more information.

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