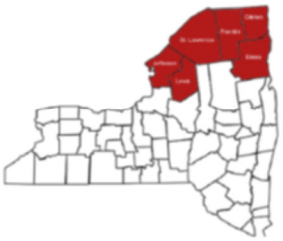

North Country Ag Advisor

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2018 Cow Comfort Conference Speakers and Committee

March 2, 2018
Hay/Pasture School
Farm Credit East, Burrville

March 3, 2018
Hay/Pasture School
Best Western, Canton

March 9, 2018
Hay/Pasture School
Miner Institute

Cornell Cooperative Extension
North Country Regional Ag Team

VOLUME 3 ISSUE 3 March 2018

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North Country Ag Advisor

Cornell Cooperative Extension of
Clinton, Essex, Franklin,
Jefferson, Lewis, and St. Lawrence
Counties

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Layout/Design: Tatum Langworthy

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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

Cheap Weed Control

By Mike Hunter

It is easily understood why corn growers will be looking to reduce production costs for the upcoming growing season. I have spoken to many growers this winter that want to find the cheapest corn herbicide program that they can get away with. This may sound like a good plan now, but in reality, a cheap corn weed control program can be extremely costly if it doesn't work. It is fine to try to do a better job managing herbicide costs as long as you are still able to maintain adequate weed control.

Here are some suggestions to consider when planning your corn weed control program:

- Start with a clean seedbed with either tillage or an effective burndown herbicide.
- Use the right rates for the weeds present in the field. Adjust residual herbicide rates based on soil type and organic matter levels.
- Use an integrated program with soil residual products. Atrazine is one of the most economical herbicides that provides a broad spectrum of control. It will be the foundation of almost all weed control programs for corn.
- Don't cut out your pre-emergence corn herbicide because it "costs too much". Controlling weeds before they start to grow will provide a big return on your investment.
- Whatever herbicide program you choose, be timely with applications:
    - A pre-emergence program will be applied before the corn emerges and post-emergence herbicides will be applied later to small weeds.
    - Never let weeds get taller than the corn at any stage of growth.
    - Make certain that the weeds are controlled before they reach 2 to 4" tall. Taller weeds are much harder to control, require higher herbicide rates, and in some cases it may be necessary to add additional tank mix partners.
    - The critical weed-free period in corn is from V3 to V8. Never allow weeds to compete with corn during these growth stages. Research suggests that if 3 to 4" tall weeds are allowed to grow when corn is in the V3 to V4 growth stage you are losing about 3 bushel of corn per acre per day.
- Scout, scout, scout. Don't forget to closely monitor the effectiveness of your herbicide applications. If there is a weed escape, act quickly to control the weeds to minimize their impact on yield.

Someone once said that weed control is a form of procrastination. What you fail to deal with today will come back to haunt you tomorrow. That is why a truly integrated approach to weed management is essential. I would caution anyone that is going to choose their corn herbicide program based solely on price alone. If you have any questions about your corn weed control program or would like to schedule an appointment to review your current plan, feel free to contact Mike Hunter at 315-788-8450 or meh27@cornell.edu.

Cover Crop Induced Insect Problems

blogs.cornell.edu/whatscroppingup/2018/02/01/cover-crop-induced-insect-problems/

February 1, 2018

Elson Shields, Entomology Department, Cornell University

The increased adoption of cover crops as a soil conservation and soil health building strategy is not without increased risk from insect pest problems. Increased insect pest risk can be managed with a combination of timely killing of the cover crop, pest scouting, and additional timely application of insecticide.

The worst-case scenario for insect risk is to plant into a green cover crop which has been rolled prior to planting and then sprayed with an herbicide to kill it after the crop has been planted. This provides an excellent green bridge for the insects, like black cutworm larvae and armyworm larvae, to move directly onto the newly emerging crop.

Cover Crop Bridging Insects:

Black cutworm: Black cutworm is a long-ranged migrant which overwinters in the southern US. Moths typically arrive in NY during mid-April to early-May on the early weather systems. Moths are attracted to grassy areas, grassy cover crops, grass waterways, and fields with grassy weed problems. Eggs are laid on these plants and larvae begin feeding on these plants. In the situations where producers kill the cover crops or grassy weed areas with herbicide or tillage, the black cutworm larvae continue to feed on the dying plants for 1-2 weeks. When corn seedlings start emerging, the existing larvae then move from the dying plants onto the growing corn. Since black cutworm larvae do not start their cutting behavior until mid-size (L-4), the early larval development on the grassy weeds is a critical association

with the economic association of black cutworm to seedling corn. In the situations where egg are laid on emerging corn, corn development to V6, a stage where black cutworm has difficult cutting occurs before the black cutworm develops to the larval stage where they begin cutting (L4).

Since black cutworm larval development on existing plants in the field prior to the planting and emergence of the corn is a critical component in the development of economic infestations, th management of the green plants prior to corn planting is important. Elimination of the green bridge between the cover crop and/or grassy weed cover at least 2 weeks before the emergence of corn seedling dramatically reduces the risk of a black cutworm infestation in NY corn fields. If the separation between the killing of the cover crop/grassy weeds and the emergence of the corn crop cannot be at least 14 days, the corn seedlings need to be scouted for the presence of foliar feeding, early cutting and the presence of larvae. To the trained eye pre-cutting foliar feeding is very obvious and easily detected.

Armyworm: Armyworm is a long-ranged migrant similar to black cutworm, but often arrives 15-30 days later in NY. It overwinters in the southern US, and the moths emerging in April in the south use the weather systems to move long distances. When the moths arrive, they are attracted to grass hay fields or grassy cover crops. If the eggs are laid in the hay field, larvae will feed on the grass and only move when the field has been stripped, thus the name armyworm. Neighboring corn fields are then attacked by the larger marching larvae. When eggs are laid in a grassy cover crop, the larvae will feed on the cover crop until it is stripped before moving. If corn is emerging in the cover crop, they will simply move onto the young corn plants. Armyworm larvae are totally foliage feeders and do not cut plants like black cutworm. With timely scouting, this insect is easily controlled with an application of foliar insecticide. Usually, the infestation is missed until the field is stripped and the larger larvae ar moving into a neighboring field.

Seed corn maggot: Seed corn maggot (SCM) adults (flies) are attracted to decomposing organic material. This organic matter can range from animal manures to decomposing plant material/killed cover crop. Fresh decomposing organic matter is more attractive to the flies fo egg deposition than composted organic matter; although, SCM will also lay eggs in composte organic matter. Adult flies are present for egg laying from early May until late September. Th highest risk fields for SCM problems would be a green manure crop covered with a thick layer of animal manure prior to planting the crop. High manure application rates without thorough incorporation before planting of large seed crops is a high SCM risk field. Damage from SCM is plant stand reduction, and without insecticide protection, plant stands can be reduced 30%-80%. The primary reason for insecticide treatment (Poncho, Cruiser, etc) on large seed crops (corn, soybeans) is protection against SCM-related plant stand loss. Under extremely heavy SCM pressure, the insecticide seed treatment can be overwhelmed, resulting in corn/soybean stand losses.

To reduce risk from SCM, cover crops should be killed and allowed to turn brown before planting the season's crop. In addition, applications of manure should be subsurface rather than surface applied.

Wireworms: Adult wireworms (click beetles) are attracted to small grains, grass fields, run-out alfalfa fields which are mostly grass, and grass-based cover crops. Adult beetles search out these hosts during the growing season (June-August) and lay eggs. The larvae (wireworms) hatch and feed on a wide array of roots for multiple years. In cropping sequences where grassy/small grain/cover crops are present in the field during the June-August period, wireworms feeding on new seedlings and root crops can become an economic problem. While corn is technically a grass, wireworms do not find corn fields attractive for egg laying. However, small grains are very attractive. Generally, spring planted grains are more attractive than fall planted grains which mature in early summer. In conventional production systems, the insecticide seed treatment generally is effective at reducing the impact of wireworm feeding. However, in the organic production system, there are no effective rescue treatments for wireworm infestations/feeding damage. If grassy cover crops are the only grass in the cropping sequence, timely crop termination before June will reduce the attractiveness to wireworms for egg laying.

White grubs: In NYS, there are two different groups of white grubs which can be problematic. The first group is the native white grubs which have multi-year life cycles and the second group is the invasive annual white grubs (Japanese Beetle, European Chafer). Adults from both groups are attracted to grassy habitats to lay their eggs during mid-June to mid-July. Eggs hatch during August, and the larvae begin to feed on grass roots. In the case of the invasive annual white grubs, the larvae grow quickly and achieve more than 50% of development before winter. In the spring, the larvae resume development and are quite large when the grassy field is rotated to corn or soybeans and the new plants are quite small. Plant death is caused by these large larvae feeding on plant roots faster than the plant can generate roots. Larvae become adults in June and the cycle repeats. In the case of the native multiyear white grubs, the life cycle is similar but larval development requires 2-4 years depending on the species. Subsequent crops following the grassy/cover crop/small grain field are then impacted differently. With annual white grubs, the damage to the subsequent crop is confined to the following year only. In the case of native white grubs, subsequent crops could be impacted up to 4 years with declining damage levels each year.

The following two different cropping scenarios seem to place subsequent crops at higher risk. The most common case is the alfalfa field which has become mostly grass or a grass hay field which is then rotated into a large seed crop like corn or soybeans. The second scenario is the field which has been planted to a grass-based cover crop and not killed during the June-July egg laying period. In most cases, the insecticide seed coating on all corn and some soybean seeds reduce the impact of white grubs on subsequent crops. High white grub populations can overwhelm the insecticide, however.

Slugs: Increasing the organic soil cover with either the use of cover crops or last year's crop waste increases the slug problem. In cool wet springs, which slow plant emergence and growth, damage from slug feeding can be severe. There is a little anecdotal evidence to

suggest the presence of green cover reduces the slug damage because of the surplus of green tissue. In these cases, slugs miss the newly emerging plants and feed on the green cover crop.

http://blogs.cornell.edu/whatscroppingup/2018/02/01/cover-crop-induced-insect-problems/

Reprinted from What's Cropping Up? Vol. 28, No. 1

Northern New York Agricultural Development Program News

Farmers Offered Discount on Biocontrol Nematodes to Protect Alfalfa, Corn Crop

ITHACA, NY. Northern New York farmers interested in protecting their alfalfa crops from the devastating alfalfa snout beetle can take advantage of a discount from the Cornell University laboratory raising the biocontrol nematodes that have been proven to reduce not only populations of snout beetle, but other crop pests as well.

Additionally, rearing these nematodes also represents a business opportunity that Cornell specialists are ready to assist with.

Research funded long-term by the farmer-driven Northern New York Agricultural Development Program (NNYADP) developed the science needed to pioneer the use of native nematodes, tiny insect-attack worms, as a biocontrol to suppress the spread of the destructive insect.

Alfalfa snout beetle is known to exist across the six northernmost counties of New York State, in Oswego, Cayuga, and Wayne counties in NY, and in southeastern Ontario, Canada. The beetle can destroy entire fields of alfalfa in one growing season.

Recent field trials funded by the Northern New York Agricultural Development Program indicate that the biocontrol nematodes are also having an impact on corn rootworm after a field treated with the nematodes is rotated from alfalfa into corn.

Research elsewhere in the state has shown the biocontrol nematodes can reduce white grub and wireworm populations.

Cornell entomologist Dr. Elson Shields and Research Support Specialist Antonio Testa, who developed the protocol for the use and rearing of the biocontrol nematodes, recommend application on alfalfa fields in their seeding year or first production year for best results. Based on recent research trials, application can also be made to corn fields.

The Shields' Lab at Cornell University that has reared the biocontrol nematodes as part of its research mandate is offering a discount for orders placed for delivery by June 16, with an order deadline of April 28, and for any order paid upon delivery. Farmers must contact the lab no later than 45 days prior to a planned application based on their 2018 alfalfa cutting schedule. The cost is $28 per acre before the discount.

The Shields' Lab will only be providing the nematodes through 2021, opening an opportunity for business development to continue to supply the biocontrol nematodes to area farmers. While one nematode rearing business has been developed as a result of this research, others are needed. The Shields' Lab will assist individuals seriously interested in rearing the biocontrol nematodes as a business. Farmers who wish to rear their own biocontrol nematodes may also contact the Shields' Lab for assistance.

It requires three to five years to totally inoculate a farm with nematodes to reduce the snout beetle populations to a manageable level.

For more information, contact Antonio Testa of the Shields' Lab at 607-591-1493, at28@cornell.edu, or call Cornell Cooperative Extension NNY Field Crops Specialists Mike Hunter, 315-788-8602, or Kitty O'Neil, 315-853-1218.

The use of this biocontrol developed in Northern New York is now being trialed in several U.S. states.

Funding for the Northern New York Agricultural Development Program is supported by the New York State Senate and administered by the New York State Department of Agriculture and Markets. Learn more at www.nnyagdev.org.

PRO DAIRY Education & Applied Research

Cornell CALS College of Agriculture and Life Sciences

Herd Manager Training

Who should attend?

The Herd Manager Training is an educational program for farmers, employees, and agri-service people who work directly with dairy cows. It will cover transition cow health monitoring, facilities and environmental impacts of transition cow management, antibiotic stewardship, ethical cull cow handling and decision making, body condition scoring as a monitoring tool, and components of an effective local vet relationship.

Program details:

The Herd Manager Training is a two day program held one week apart from each other. The program will be held in the classroom (morning) and on farm (afternoon) with a combination of presentations, demonstrations, farm walk-throughs, and discussion.

This program is eligible for FSA Borrower Credits.

Topics:

- Transition Cow Health Management
- Transition Cow Facilities
- Health Management Practices
- Facilities Assessment
- Antibiotic Stewardship
- Cull Cow Management
- How to Use Your Local Vet
- BCS During the Transition Period
- Antibiotic Stewardship and Cull Cow Practices

Presenters:

- Jerry Bertoldo, Lindsay Ferlito, and Kimberley Morrill, Regional Dairy Specialists, Cornell Cooperative Extension
- Rob Lynch and Kathy Barrett, Cornell PRO-DAIRY

Registration is $75.00, and includes 2-day program, materials, and lunch.

https://reg.cce.cornell.edu/2018herdmanagertraining_10512

Cornell Cooperative Extension
North Country Regional Ag Team

Locations:

March 12 & 19
10am - 3pm
Mo's Pub and Grill
3357 US-11, Malone,
Local farm in afternoon

March 13 & 20
10am - 3pm
Farm Credit Burrville
25417 NY-12,
Watertown
Local farm in afternoon

Information:

Tatum Langworthy
tlm92@cornell.edu
315-788-8450

New Field Crop Herbicides for 2018

By Mike Hunter

EverpreX (September 2017) is a new herbicide from Dupont, registered for use in corn and soybeans. It is a 7.62 EC formulation of s-metolachlor (same as Cinch). It can be applied pre-emergence and post-emergence for residual weed control of many annual grasses and certain small seeded annual broadleaf weeds. It will not control emerged weeds.

Harness MAX (September 2017) is a new herbicide from Monsanto, registered for use in field corn. It may be applied pre-emergence and post-emergence up to 11" tall corn. It is a premix of Harness (acetochlor) and Callisto (mesotrione). It will provide pre-emergence control of annual grasses and broadleaf weeds as well as post-emergence control of some broadleaf weeds.

ImpactZ (December 2017) is a new herbicide from AMVAC, registered for use on both field corn and sweet corn. ImpactZ is a premix of Impact (topramazone) and atrazine. It can be applied from emergence through 12" tall corn providing post-emergence activity on many annual grass and broadleaf weeds.

Axial XL (January 2018) is a new herbicide from Syngenta, registered for use on both winter and spring wheat and barley. Axial XL is a post-emergence herbicide for the control of *grass* weeds. This herbicide is the first and only currently registered herbicide in New York that will control grasses in spring barley. It will control foxtails (green, yellow and giant), barnyardgrass, Italian ryegrass, and volunteer oat, plus others. It can be tank mixed with many different broadleaf herbicides to provide a one-pass weed control application in wheat and barley. *NOTE: Axial XL is not registered for use in oats. If you have been growing oats and deal with foxtail pressure each year you may want to explore the possibility of switching to spring barley. This will provide the opportunity to control the foxtail with the post-emergence application of Axial XL.*

Cow Comfort Conference Recap: Animal Welfare, Robots and Economics

By Kimberley Morrill

The 2018 Cow Comfort Conference was held February 6th–7th in Syracuse, NY. The first speaker of the conference was Jessica Ziehm, NY Animal Agriculture Coalition. Her talk "Stand Up For What You Stand For" discussed the importance of image and how farming requires a social license to operate. Her talk provided 6 steps to stand up for what you stand for: 1) own your actions, 2) be transparent, 3) be passionate and real, 4) find shared values, 5) listen, and 6) invest in goodwill. It concluded with the statement "don't let someone else tell your story, you may not like the ending". This was a great way to kick off the discussions surrounding cow comfort for the next day.

The morning session also included discussion on Lindsay Ferlito and Betsy Hick's research project evaluating lameness and lying time in tiestalls, and Kim Morrill's discussion on emerging issues in the dairy industry. "Cow Comfort, Through Good Times and Bad" presented by David Darr, President DFA Farm services, started off the afternoon discussion and complimented Jessica's presentation. Darr stated that "things will go wrong - more people are watching what we do and there's more risk to all of our business". He went through examples of animal abuse allegations, and how the farms were able to refute the claims. Key take homes from his talk included: having controls in place (written protocols, trainings, animal identification, record keeping, cameras, and documented herd health plans), and if you think you have an issue, reach out for help before it explodes. Darr also shared that the new focus is labor, which includes worker safety as well as socio-economic well-being.

"How to Create a Culture of Care on Your Dairy", presented by Molly Scoville, Merck Animal Health, focused on the drivers for animal care, both on- and off-farm. Molly dove into creating a culture of care and the Merck Dairy Care 365 program. Dairy Care 365 provides resources on animal care commitments, standard operating procedures, training modules, animal care resources, and local workshops. All of these resources help meet the National FARM Program 3.0 requirements. Day one wrapped up with Curt Gooch, PRO-DAIRY, talking about "Cow Cooling and Ventilation".

The conversation on the second day shifted towards cow comfort in maternity pens and onto robotics. Dr. Katy Proudfoot, The Ohio State University, kicked off the morning with a discussion on "Cow Comfort in the Maternity Pen". Katy's presentation focused on what is the natural behavior of a species, specifically around calving, and what is her preference, i.e. her comfort zone? Cows like to calve separately from the herd, in seclusion if possible. Katy discussed options of using a calving blind in a group pen inside to provide some seclusion. Katy's take home message was: cows like seclusion at calving time and if they have access to a blind they might not calve in it, but they will move their calf into it shortly after birth. Look for more updates on this research as Katy shared that she is working with the Miner Institute in Chazy, NY, to delve further into this topic.

Robots, robots, and more robots were the topics of the last few speakers at the conference. Dr. Trevor DeVries, University of Guelph, talked about "Cow Comfort on Robotic Dairy Farms". Trevor's first discussion point focused on "what are the impediments to successful milking in robotic farms"? The answer was: 1) cows that don't want to go milk (mobility of the cow), and 2) cows that cannot milk when they want to (barn design and management). While both of these issues were discussed, the focus was on mobility. Trevor shared that lame cows are 2.2 times more likely to have to be fetched (someone has to find her and move her to the robot) as compared to sound cows. He also shared that not only are lame cows less likely to visit the robot, they produce less milk (3.5 pounds/day) than sound cows. While this point was specifically tied to robotic facilities, many of the factors that impact lameness hold true for all facility types, and include stalls that are too small, lunge space obstructions, narrow feed alleys, use of mattresses compared to deep bedding, and high stocking densities. Trevor's take away message was that robotic milking presents many opportunities for dairy producers, however, additional challenges may exist and need to be addressed. These challenges include: ensuring the cows have adequate time and the desire to milk voluntarily, good mobility, comfortable stalls and resting surfaces, and good access to the milking units, lying stalls, and feed bunk.

Now that everyone was excited about robotics, Jason Karszes, PRO-DAIRY, presented information on "Milking System Investment". One of Jason's key points was when making an investment decision, we need to compare it to

something. If we only look at one option, what's the right answer? Jason provided 5 ideas for different approaches for investing in milking activities that could decrease issues associated with labor: 1) remodel the current system, 2) automatic milking system, 3) oversized parlor, 4) pay labor more, and 5) become an employer of choice. He also discussed the question "what if the decision doesn't meet the goals or accomplish what is desired"? How should we handle that, can we create an exit plan or a management change to address that? Next, Bruce Dehm, Agricultural Economist from Dehm Associates, LLC, discussed "Whole Farm Financial Comparison of Robotic Milking Farms vs. Parlor Milking Farms". Of the farms analyzed in the benchmark, 14 were robotic herds and 43 milked in parlors. His analysis of the herds showed they had identical costs when looking at a per hundredweight basis, but certain line items of expenses were very different between the two comparisons. Hired labor expense was much lower on robotic herds, as well as purchased forage and livestock supplies. Higher costs on robot herds included feed concentrates, owner draw, utilities, and machine hire and rent. These differences were also observed on a per cow basis. Term debt service was very similar at $2.75 for robots and $2.73 for parlors per cwt. In summary, the practice of substituting capital for labor is not a new idea for our industry. With rising labor costs, low interest rates, and technological improvements within robot systems, the option of farms moving towards robotic milking systems may be a viable one.

The 2018 Cow Comfort Conference covered lots of great topics ranging from challenges facing the dairy industry to investing in the future. In today's industry, producers have to think about cow comfort from several different angles. Dairy farmers, first and foremost, have to constantly strive to keep up with improving cow comfort for their animals, whether it be by paying attention to new research on animal behavior around calving, adapting stalls to growing cow size, or building new facilities to ensure they meet standards. Producers also have to look at cow comfort through the lens of the non-farm audience. Are the things we do as an industry able to be backed up by sound science? Do people know how much farmers care about their land, animals, and way of life? Thirdly, producers have to make changes for their business that make sense in terms of profitability, even if it means making a drastic change like moving towards using robotic milkers. These changes need to be explored on individual operations, and having benchmarks put out by service providers helps to shed light on numbers behind making a switch.

Thank you to the presenters, sponsors, organizing committee, and attendees for making the 2018 Cow Comfort Conference a success! We look forward to building our 2019 program.

2018 Cow Comfort Sponsors: Acumen, Farmer Boy, Finger Lakes Dairy Services, Novus International, ASAP Interiors, DFA, Farm Credit East, Holts Nelson, Merck, Rapp Nutrition, and North Brook Farms.

Does Clinical Mastitis in One Quarter Increase the Risk of Sub-clinical Mastitis in Another Quarter?

By Kimberley Morrill

Mastitis is generally classified as clinical or subclinical based on the degree of inflammation in the mammary gland. Clinical mastitis is characterized by visual abnormalities in the milk (flakes, clots, or watery appearance) and/or udder (hot to the touch, swelling, and sensitivity). Cows with clinical mastitis often show systemic symptoms including fever, dehydration, and going off feed. Subclinical mastitis is when the mammary gland is inflamed and the milk or the cow do not show visual signs of infection. Although milk appears normal, subclinical cows often produce less milk, with a high somatic cell (SCC), and these cows can also be a source of infection for herd mates.

Clinical mastitis is an expensive disease in the dairy industry ($200 to $400 per clinical case). The most common approach to treatment and management of cows with clinical mastitis is to focus efforts on the quarter(s) with abnormal milk and signs of inflammation, disregarding quarters with visibly normal milk. Current recommendations for pathogen-based mastitis treatment protocols focusing on the quarter(s) with abnormal milk result in a decrease in antibiotic use and increase in saleable milk. However, we need to ask ourselves if the clinical infection is just the tip of the iceberg.

Previous research estimates that 67% of cows that have a quarter with clinical mastitis also have a subclinical infection in a different quarter. Treating only the clinical quarter (hopefully) cures the infection, but only in that quarter. The subclinical infection in the other quarter(s) remains untouched. While the cow may self-cure, it's more likely that she will continue to have a high SCC and lowered production. If the quarter does not self-cure, she may develop clinical mastitis in the quarter or be a chronic offender on the high SCC list.

Detecting subclinical mastitis is a challenge as there are no visible abnormalities to the milk. Somatic cell count is the most common method to determine if a mammary gland is infected. A monthly DHI sample analyzed for SCC will provide you with individual cow data, but not individual quarter data. Cow side, a producer can use a CMT paddle to evaluate milk quality at the quarter level and potentially identify subclinical infections prior to them becoming a clinical infection. Additionally, producers can submit milk samples to be analyzed for pathogens. Failure to identify and properly treat subclinical infections can lead to poorer quality milk, lower production, and a loss of income for the producer.

In 2016, the Northern NY Agricultural Development Program (NNYADP) funded a teat dip trial. During this study, 15 clinical events were recorded and all four quarters (clinical and nonclinical) were sampled and submitted to QMPS for microbiological culture. Of the 15 clinical quarters, seven resulted in a positive culture indicating mastitis pathogen presence. Of the 45 clinically "normal" quarters sampled, 19 quarters (45%) had a positive culture result and were classified as having a subclinical infection. Nine of the cows had negative culture results from the clinical quarter and would not have been treated using current pathogen-based treatment recommendations. In addition, 4 cows with a clinical mastitis quarter also had mastitis pathogens in other quarters and would have potentially benefitted from treatment in those subclinical quarters.

If subclinically infected quarters in cows with a case of clinical mastitis have major mastitis pathogens present that would benefit from antibiotic therapy and from reducing the risk of becoming chronically infected, it is important to minimize the risk of infection and determine the most economical approach for the farm to screen for these infections.

We are currently wrapping up a follow-up study, focused on evaluating the risk of subclinical mastitis in quarters of cows with clinical signs of mastitis in another quarter in comparison to animals that do not have clinical mastitis in any quarter (control group). Our hypothesis is that cows with clinical mastitis in one quarter are at a higher risk of subclinical mastitis in otherwise normal quarters when compared to a healthy control group. Additionally, we will be assessing the risk for subclinical quarters to remain chronically infected with a high SCC, which may explain why some cows do not achieve "clinical cure" or low SCC after treatment of clinical quarters. We look forward to analyzing the data and sharing the results with you in the near future.

Cornell University
Cooperative Extension

NNY Hay & Pasture School

- 3 opportunities to attend –
9:30 am to 3:00 pm each day
$25 registration includes program and lunch. Register at least one week in advance for guaranteed lunch.

Friday, March 2, 2018 – Farm Credit East, Rt 12, Burrville

Contact Alyssa Couse - call the CCE of Jefferson County Office @ (315) 788-8450, text @ (315) 523-4223 or email amc557@cornell.edu

Agenda includes: Crossbreeding systems for dairy cows - *Ron Kuck, CCE of Jefferson County*
Evaluating a forage stand – "What should I plant?" - *Kitty O'Neil, Regional Ag Team*
SWCD and NRCS opportunities, Crop Insurance
Pasture seeding options – "How do I plant?" - *Kitty O'Neil, Regional Ag Team*
Forage storage alternatives – more than just dry hay - *Joe Lawrence, Pro-Dairy*

Saturday, March 3, 2018 – Best Western University Inn, 90 E Main St, Canton

Contact Betsy Hodge - call the CCE of St Lawrence County Office @ (315) 379-9192 or email bmf9@cornell.edu

Agenda includes: Choosing livestock for a grazing system - *Betsy Hodge, CCE of St Lawrence County*
Evaluating a forage stand – "What should I plant?" - *Kitty O'Neil, Regional Ag Team*
Crop Insurance, Partial budgets for storage options – *Kelsey O'Shea, Regional Ag Team*
Pasture seeding options – "How do I plant?" - *Kitty O'Neil, Regional Ag Team*
Forage storage alternatives – more than just dry hay - *Joe Lawrence, Pro-Dairy*

Friday, March 9, 2018 – Miner Institute, BERC Auditorium, 586 Ridge Rd, Chazy

Contact Sara Bull - call the CCE of Clinton County Office @ (518) 561-7450 or email slk95@cornell.edu

Agenda includes: Prioritizing Hay Acres - Dynamic Harvesting – *Joe Lawrence, Pro-Dairy*
Evaluating a forage stand – "What should I plant?" - *Kitty O'Neil, Regional Ag Team*
New GPS technology for pastures & hay fields - *Peter Hagar, Clinton County SWCD*
Crop Insurance, Partial budgets for storage options – *Kelsey O'Shea, Regional Ag Team*
Pasture seeding options – "How do I plant?" - *Kitty O'Neil, Regional Ag Team*
Forage storage alternatives – more than just dry hay - *Joe Lawrence, Pro-Dairy*

Sign up online: https://reg.cce.cornell.edu/2018nnyhaypastureschool_10512

Building Strong and Vibrant New York Communities

Equine Operations

Horses can take you places in life-for business or as a career

The horse industry and related businesses generate more than $25 billion—a year in the United States. Here's an event that combines hearing from professionals who *have* made a career of horses, feed and nutrition. This is a great opportunity for businesses already running Equine operations to upskill employees, provide additional qualifications, boost skills and earning potential. If you have a student in the family thinking of a career with horses this event is for them. This training provides classroom and field instruction at Twisted Tree Stables in Watertown.

This Event is **FREE**

February 25th, March 4th, March 11th, March 18th(12-4p)

Topics Include:

- Business Plan Development and Marketing
- Liability Insurance and Business Structures
- Veterinary Perspectives
- Feed and Forages
- Equine Feeding needs
- Taxes and Lending
- Barn Management
- Record Keeping
- Farm Safety
- Personal Perspectives

Please contact Alissa Donnell for more Information

Phone: (315)786-2503 Email: Adonnell@sunyjefferson.edu

St. Lawrence Valley Produce Auction Opens Spring 2018

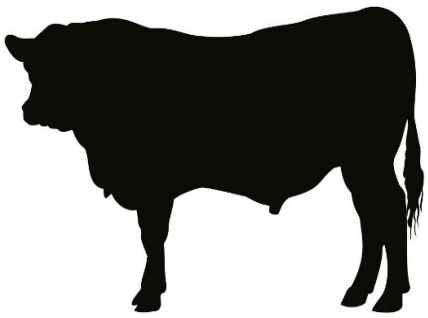
By Lindsey Pashow

A produce auction is an auction where farmers can sell farm products at a fair market price without competing with neighboring producers. It allows the farmer to concentrate on growing a good product and spend less time having to market, since the product is going to be sold at the produce auction. At a produce auction buyers can find a variety of products including flowers, hanging baskets, bedding plants, vegetables, fruit, hay, and straw.

Currently there are seven produce auctions in New York State with the eighth produce auction opening in spring 2018. The eighth produce auction will be located in North Bangor (Franklin County). In October 2016, the first exploratory meeting was held in Franklin County to determine if starting a produce auction in northern NY was of interest. It was determined that a produce auction would be of great benefit to the farmers. An additional meeting was held in December 2016, to establish a Board of Directors that would move forward with finding a location for the auction and start the establishment of the auction. In 2017, the board decided to set up an S-corporation and designate the produce auction the "St. Lawrence Valley Produce Auction". The board and communities have been hard at work clearing the land and building throughout the year.

The St. Lawrence Valley Produce Auction plans to open Tuesday, May 1st, 2018, in time for Mother's Day flower sales. A short video regarding NY State produce auctions can be found online (http://www.cornell.edu/video/new-york-state-produce-auctions). If you would like additional information on being a buyer or selling at the produce auction please contact Lindsey Pashow (CCE Harvest NY) at lep67@cornell.edu or 518-569-3073.

BQA



Chute-Side Training

Beef Quality Assurance (BQA), is a commitment made by beef producers to follow the best practices of animal health, food safety, and animal handling techniques to ensure a safe, wholesome food supply to consumers. Beef producers who get BQA certified are taking the proper steps in ensuring consumers a safe, abundant food supply and are up to date on the best practices of their industry.

Location: **Center Dale Farm**

David and Evelyn Hawthorne
28206 St. Rt. 126
Black River, NY 13612

Time: **Saturday March 3, 2018**

10:00 am – 12:00 pm

- Ron Kuck (CCE Jefferson County) will discuss how to body condition score cows and the impact on calving and reproduction.
- Opportunity to evaluate USDA Feeder Grade frame sizes.
- This is Tier 2 training. For Tier 1, complete training on line at www.bqa.org.
- Please pre-register.
- Dress warmly for the weather.

RSVP: Mellissa Spence - 315-376-5274 or mms427@cornell.edu

Ron Kuck - 315-704-8810

Northern NY Beef Producers Association - Region 7

Not in Tents, Just Intense

By Paul Hetzler, CCE St. Lawrence County

Winter is not the season when people think about tents, except maybe to be glad they don't live in one. I do have friends who love winter camping, and the fact they have never extended an invitation is evidence of how much they value our friendship.

Oddly enough, winter is a crucial time to look for signs of forest-tent caterpillars (FTC). In spite of their name, FTC do not weave a silken tent-like nest as do their close cousins the eastern tent caterpillar (ETC). The tent-less lifestyle of FTC makes it harder to spot outbreaks in spring. Records indicate the population of this native pest spikes at irregular intervals, generally between 6 and 20 years apart, at which time they can cause near-total defoliation at high populations. The damage occurs within 5-6 weeks in May and June. Trees grow a new set of leaves by mid- to late July, but at great cost in terms of lost energy reserves, and afterward they are more vulnerable to other pests and diseases. The problem is compounded by the fact that FTC outbreaks historically last 3 years on average. Successive defoliations are more likely to cause tree mortality.

Foresters and woodlot owners may want to learn more about tent-cats this winter, but maple producers should pay special attention to the situation, as sugar maples (which leaf -out earlier than oaks and ash) are a preferred food for the FTC, possibly their favorite. Since the female FTC moth primarily lays eggs in maples, outbreaks begin early in maple stands.

This past year, parts of northern NY from the Vermont border all the way across to Jefferson and Lewis Counties saw localized but severe outbreaks of forest-tent caterpillars. The New York State Department of Environmental Conservation (NYSDEC) has confirmed that at least 200,000 acres of NNY forest, predominantly sugar maple, were stripped bare. The most troubling aspect of last year's defoliation is that nearly all affected maples failed to grow new leaves, though in a few cases some did to a small degree. This is unprecedented. Foresters agree the phenomenon is related to the 2016 drought, when record-setting low soil moisture damaged tree root systems so badly trees were too weak to push out a new flush of leaves following the 2017 FTC attack. It is normal to assume tree roots dive deep in search of water, but a lack of oxygen at depth limits them. In fact, 90% of tree roots are in the upper 10" of soil, with 98% in the top 18 inches. In long dry spells, tree roots die back, starting with the network of fine absorbing ("feeder") roots.

Maple producers in FTC-affected areas should expect sap-sugar concentrations to be a fraction of a percent this season, in contrast to normal concentrations between 2 and 3 percent. According to Cornell Extension Forester Peter Smallidge, those with reverse-osmosis capability may still get a substantial crop in 2018. Some small producers with FTC damage, however, are opting not to harvest sap this season, partly for financial reasons, but also to spare their maples further stress. Maria MoskaLee, Forest Health Specialist & Field Crew Supervisor with NYSDEC's Forest Health Unit, spot-checked throughout northern NY this fall for FTC egg masses, which is the way to tell how far the pest may have spread, and how severe an outbreak is likely to be. Maria told me that in general, the FTC outbreak will probably be severe again, and that it has spread significantly beyond 2017 boundaries.

Weather is the FTC's biggest enemy. Their eggs survive extreme cold, but winter thaws are bad for them. Foresters have their fingers crossed that this winter's freeze-thaw trend continues. Cool springs are even more deadly for tent-cats. At 55°F and below, their digestive tract shuts down. They are able to feed, but if it remains cool, they will starve to death with full bellies.

Whether or not a woodlot owner or maple producer had any forest-tent caterpillars in 2017, Cornell Cooperative Extension and the NYSDEC want to encourage landowners to look for FTC this winter. Naja Kraus of the NYSDEC has written clear and detailed instructions on surveying for FTC. It is entitled "Forest Tent Caterpillar Egg Mass Sampling," and you can find it at www.dec.ny.gov/docs/lands_forests_pdf/ftc01.pdf
If you do not have access to a computer, call Cornell Cooperative Extension at 315-379-9192 to have a copy mailed.

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CCE North Country Regional Ag Team
203 North Hamilton Street
Watertown, New York 13601

What's Happening in the Ag Community

Franklin County Tiestall Barn Meeting, March 1, 12:30-2:30pm, 159 Taylor Rd, North Bangor, NY, FREE!
Clinton County Tiestall Barn Meeting, March 6, 10am-12pm, 249 Thompson Rd, Mooers, NY, FREE!
Hay/Pasture School, see page 14 for more information.
Herd Manager Training Program, see page 8 for more information.