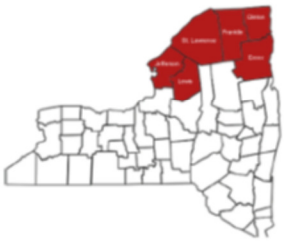

North Country Ag Advisor

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Cornell Cooperative Extension

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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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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."

NNY Western Bean Cutworm 2018 Report

By Mike Hunter

The purpose of the western bean cutworm (WBC) traps is to monitor moth presence and determine the peak flight. We cannot use trap counts to determine when a field should be sprayed with an insecticide. Traps help us identify fields at risk and when scouting should take place. Management of the WBC is based on egg masses and/or small larva found on the corn plants. It is also important to note that trap counts do not correlate to the amount of WBC damage to expect in the corn field. In fact, in 2016, we monitored a site that only caught 190 WBC moths for the entire season and that particular field had 18.8% of the ears with WBC feeding damage.

Northern NY was again the hotspot in the state in 2018, with 22 of the highest 25 WBC moth trap catches statewide. The expansion of the WBC traps in eastern NNY fields shows that the range of the WBC is expanding *or* it has gone undetected with such few monitoring traps deployed in previous seasons. Field surveys this summer in Clinton County documented corn fields with nearly 20% of the ears infested with WBC larva. These observations suggest that WBC populations are reaching levels that will require future management of this insect pest.

There were 118 WBC traps located in 45 NYS counties in 2018. Forty five WBC traps were monitored weekly in corn fields in NNY (Table 1). The 45 WBC traps in NNY averaged 644 moths per trap which is actually lower than the 2017 average of 876 moths. Despite a drop in the average number of moths caught, we continue to have large population densities of western bean cutworm in NNY every year.

Western bean cutworm populations continue to increase in certain areas across the state each year. This is a corn pest that needs to be monitored closely to prevent corn yield and quality losses in the future. The WBC trap network will continue in 2019, as we learn more about this pest and continue to develop best management strategies.

We would like to thank Joe Lawrence, PRO-DAIRY; Jessica Prosper, CCE Franklin County; Sara Bull, CCE Clinton County; Carly Summers, CCE Essex County; Mike Davis, Willsboro Research Farm; Amy Ivy, CCE ENY Commercial Horticulture Program; Mike Kiechle, Jefferson County dairy farmer; and Glen Yousey, Seedway, for their assistance with weekly reporting of WBC trap catches.

Table 1. NNY 2018 WBC trap counts

County	Location	Total
Clinton	Chazy	308
Clinton	Peru	599
Clinton	Beekmantown	670
Clinton	Chazy	1344
Clinton	Champlain	673
Clinton	Mooers	230
Clinton	Ellenburgh	156
Clinton	Peru	273
Clinton	Plattsburgh	585
Essex	Willsboro	91
Essex	Willsboro	178
Essex	Westport	279
Franklin	Moira	1750
Franklin	Westville	856
Franklin	Chateaugay	769
Franklin	Malone	1136
Franklin	Bombay	840
Franklin	West Bangor	1600
Jefferson	Calcium	582
Jefferson	Cape Vincent	87
Jefferson	Ellisburg	564
Jefferson	Hounsfield	1036
Jefferson	Pamelia	376
Jefferson	Philadelphia	185
Jefferson	Plessis	215
Jefferson	Rutland	443
Jefferson	Ellisburg	1703
Jefferson	Plessis	215
Jefferson	Watertown	133
Lewis	Croghan	623
Lewis	Denmark	1107
Lewis	Harrisburg	953
Lewis	Lowville	620
Lewis	New Bremen	393
Lewis	Turin	1203
Lewis	Martinsburg	1097
St. Lawrence	Colton	206
St. Lawrence	Edwards	377
St. Lawrence	Hammond	461
St. Lawrence	South Colton	212
St.Lawrence	Huevelton	227
St.Lawrence	Lawrence	2964
St.Lawrence	Madrid	385
St.Lawrence	Massena	89
St.Lawrence	Waddington	189

Western Bean Cutworm in New York State

By Ken Wise, Cornell University Livestock and Field Crops IPM Educator, and Mike Hunter

Western bean cutworm (*Striacosta albicosta*) (WBC) was first discovered in New York State in 2009. It has been expanding its range from its origin in the high plains area of the US over the last 20 years. WBC is an insect pest of corn and dry beans, and can cause significant yield and quality losses to field corn grain. In parts of the Corn Belt, it has become a pest causing significant economic losses in field corn. WBC is a Lepidopteran Noctuidae moth species that lays eggs on the upper surface of the leaf just before tasseling (Fig. 1).

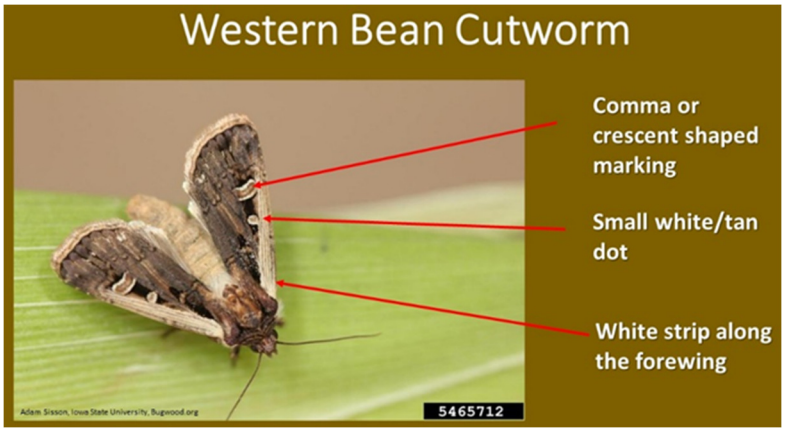

Figure 1: Identification of a western bean cutworm moth (Photo by Adam Sisson, Iowa State University, Bugwood.org)

Once eggs are laid on leaves, they appear white and will turn tan, and then a purplish color before hatching (Fig. 2). The first instar larvae will eat their egg shells before finding other food and an area of protection from predators or parasitoids. The small larvae will move to the whorl and/or leaf axil, and they will eat pollen, tassels and silks (Fig. 3). By the fourth instar, the larvae will bore into the corn ear and feed on kernels of corn (Fig. 4). One difference between WBC and other species of corn ears pest (European corn borer, corn ear worm), is that you can find multiple WBC larvae in one ear. Other species are cannibalistic, and allow only one larvae to enter the ear, while WBC does not mind if there are several per ear. One to several larvae per ear can really affect corn yield. Once the larvae reach the sixth instar, they drop from the plant to the soil surface, where they burrow into the soil and create a chamber where they will overwinter in a pre-pupa stage (Fig. 5). They will finish the pupation in late spring and early summer, and emerge from the soil from mid-July through mid-August with peak flights during the last week in July to the first week in August (Fig. 6).

Figure 2: Eggs are white when first laid (left) and then turn purplish before hatching (Photo by Mike Hunter, CCE)

Figure 3: First instar western bean cutworm larvae (photo by Mike Hunter, CCE)

Figure 4: Mature western bean cutworm larvae (Photo by Ken Wise, NYS IPM)

Figure 5: Soil chambers created by western bean cutworm larvae (Photo by Keith Waldron, NYS IPM)

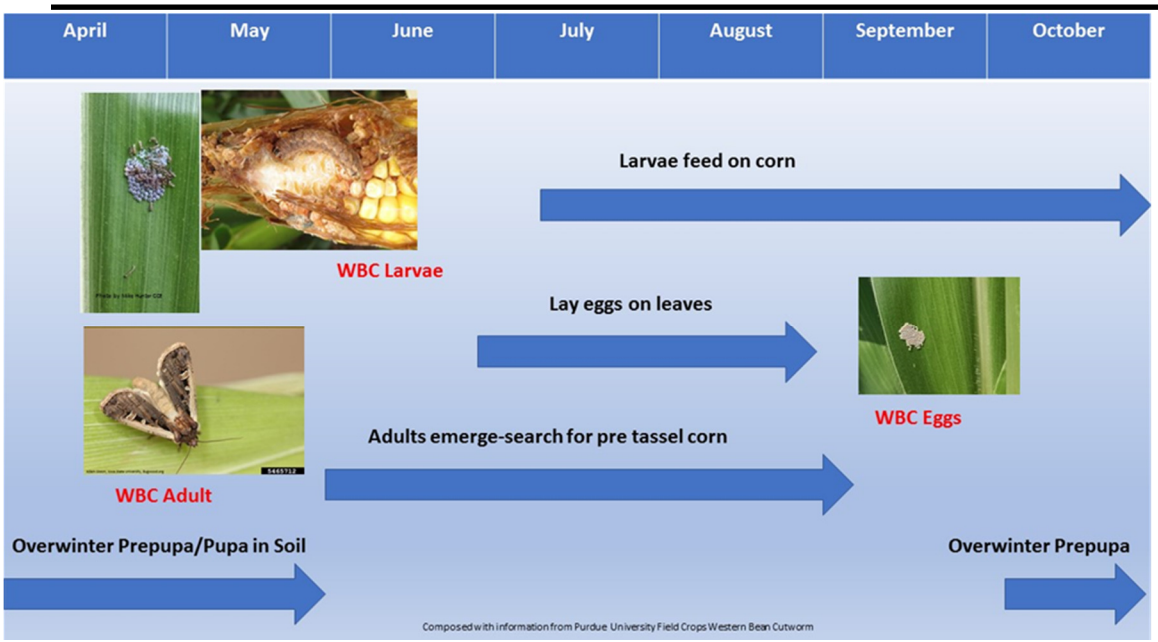

Figure 6: Western bean cutworm lifecycle

Since the discovery of western bean cutworm in New York in 2009, we have monitored its progression across the state. In 2010, we developed a WBC pheromone trap monitoring network. This network of Cornell Cooperative Extension Educators, crop consultants, and agricultural professionals placed bucket pheromone traps in fields to capture moths each year from late June through August. A female WBC pheromone lure is placed in the trap which attracts and catches only the male WBC moths. Each week the number of moths are counted and reported by the location of the trap. These traps are deployed to monitor moth presence and determine the peak flight. Traps help identify fields at risk and when scouting should take place, but we cannot use trap counts to determine when a field should be sprayed with an insecticide. Since 2010, the population of WBC in New York has increased exponentially. We started with 19 volunteers and 44 traps in 29 counties, and in 2018, we had 50 volunteers and 118 traps in 45 counties.

Table 1. 2010-2018 New York western bean cutworm collection data summary (includes traps in field corn, sweet corn, and dry beans)

	2010	2011	2012	2013	2014	2015	2016	2017	2018
No. Counties	29	37	44	39	41	39	40	40	45
No. Traps	54	67	88	89	96	91	101	101	118
Avg. No. WBC/Trap	13	23	42	66	117	266	193	361	333
Range in Totals	0 - 99	0 - 165	0 - 344	0 – 853	0 – 1019	0 – 1688	0 – 1662	0-2464	0-2964
Peak Flight	2-Aug	2-Aug	25-Jul	21 to 28-Jul	3-Aug	2-Aug	31-Jul	8-Aug	1-Aug

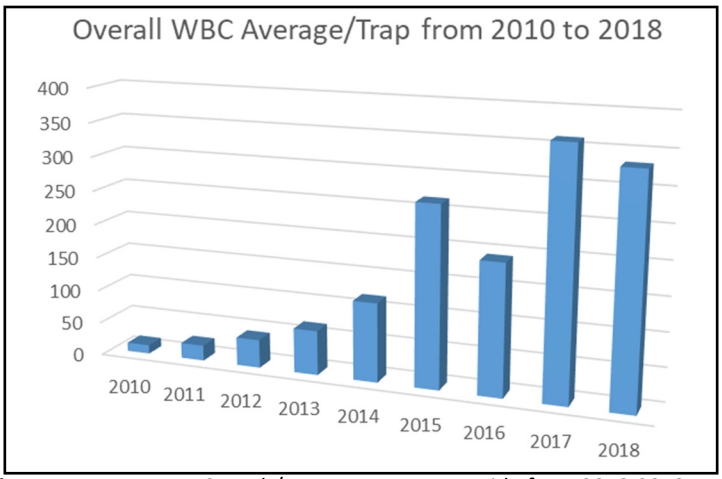

Figure 7: Average WBC moth/trap captures statewide from 2010-2018

The total number of WBC moths captured per trap in New York by year are depicted in Table 1. In 2010 there were less than 15 moths caught per trap, with a high of 99. In 2018, we had 118 traps that caught 39,290 moths with an average of 333 moths per trap. Some traps in Northern NY had 1000 to almost 3000 moths in a single trap. Northern NY is the hot spot for WBC, and the number of moths caught in this region of the state far exceeds the rest. Figure 8 shows total season trap catches for all trap locations across NYS.

When looking at the average number of moths caught per trap, 67% of the traps caught more than 100 moths and only 15% caught less than 20 moths (Fig. 7). Jefferson County had a single

seasonal trap accumulation of 2964 moths. The range of trap counts were 0 to 2964. While the average came down just a bit from 361/trap in 2017 to 333 /trap in 2018, we had many more traps in areas of the state that do not have the same pest population densities of Northern NY. This brought the average number of moths/trap down for the first time since 2016. In 2016, we also had drought conditions that might have reduced the population of WBC. WBC populations in NNY continue to increase and to be some of the highest in the state. Widespread, high WBC populations in many areas of Northern NY have resulted in some corn fields being treated with insecticides to manage this pest. The need to closely monitor this pest to prevent corn yield and quality losses is expected to continue..

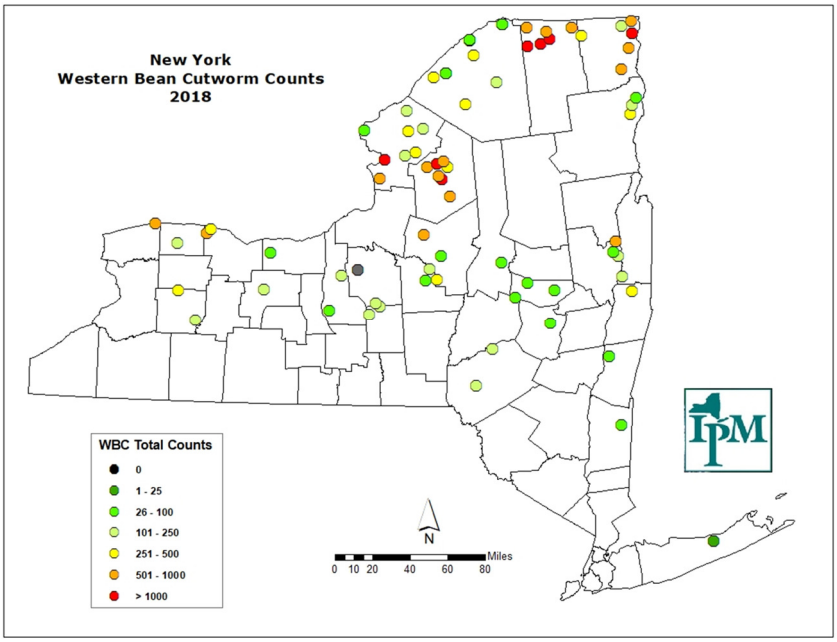

Figure 8: 2018 Whole season Western Bean Cutworm trap catches across NYS. NNY is a hotspot.

A very important aspect of managing WBC is knowing when peak flight occurs (Fig. 9). From 2010 to present, the peak flight has ranged from the last week in July to the first week in August. By knowing the peak flight, you know when most of the moths will be laying eggs in pre-tassel corn because the female moths prefer to lay eggs on this stage of corn growth. This peak flight time is when we should be vigilant about scouting for WBC egg masses and small larva.

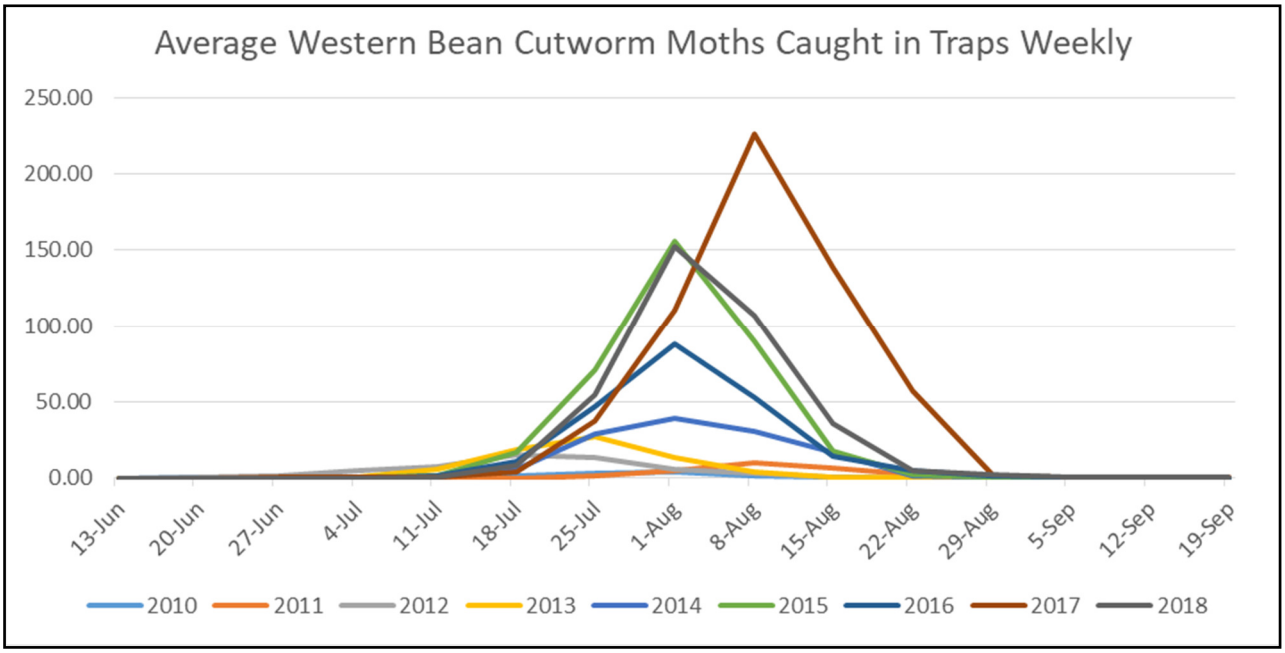

Figure 9: Average western bean cutworm moths caught in traps weekly (includes traps in field corn, sweet corn, and dry beans)

While WBC damage to corn ears can be significant and may have detrimental effects on corn grain yield and quality, the economic impact on corn silage is less well understood. For corn silage growers, determining whether or not this pest significantly impacts the yield or quality of the forage is critical to their decision making for managing this pest. Scouting corn at the pre-tassel stage of growth is an important aspect of managing this pest. The economic threshold is 5% of plants having egg masses and small larvae. The 5% is an accumulated threshold, meaning that if in week one 3% of the plants have egg masses and the following week there are 2% more, this equals a cumulative 5%. Current strategies available for control of WBC in corn are the use of foliar insecticides or selecting transgenic corn hybrids with the Vip3A trait. Foliar insecticide treatments are effective but can be difficult to correctly time applications. If a field is found to be over threshold for WBC, an insecticide should be applied only if fresh silks are present. If no tassel is present there is no reason to spray an insecticide because it would be too early and the larva will not survive. Once the larva make their way into the ear tip it is too late to spray as the insecticide will not come into contact with the larva. Currently, only corn hybrids with the Vip3A trait will provide control against WBC. There have been reports from Michigan, Indiana, Ohio, and Ontario, Canada, suggesting varying levels of control of WBC with the Bt corn trait containing the Cry1F protein. Based on 2016-2018 on farm research trials in Northern and Western NY, it was determined that incomplete control from the Cry1F trait was confirmed.

Acknowledgements:
Thank you to Jaime Cumming (NYS IPM) and Marion Zuefle (NYS IPM) for editing and providing additional data for the article.

2018 New York WBC Pheromone Trap Monitoring Network: Thanks to cooperating growers for allowing us to use their fields for sample sites. Special thanks to the following individuals for their enthusiasm, dedication, excellent data collection, and maintenance of the WBC trap network: Adam Abers, Brian Boerman**,** Chuck Bornt, Elizabeth Buck, Sara Bull, Paul Cerosaletti, Mike Davis, Janice Degni, Dale Dewing, Natasha Field, Cassidy Fletcher, Jennifer Fimbel, Aaron Gabriel, Kevin Ganoe, Jeffrey Gardner, Don Gasiewicz, John Gibbons, Ethan Grundberg, Mike Kiechle, Ariel Kirk, Jeff Kubeka, George Krul, Christy Hoepting, Mike Hunter, Amy Ivy, Joe Lawrence, Jodi Lynn Letham, Jen Masters, Laura McDermott, Carol MacNeil, Sam Meigs, Stephanie Melancher, Sandy Menasha, Jeff Miller, Anne Mills, Eric Nixon, Kitty O'Neil, Jessica Prosper, Bruce Reed, Teresa Rusinek, Erik Kocho-Schellenberg, Jack Steele, Abby Seaman, Keith Slocum, Paul Stackowski, Mike Stanyard, Dan Steward, Crystal Stewart, Allie Strun, Linda Underwood, Katherine Vail, Ken Wise, Anastasia Yakaboski, Glenn Yousey, Marion Zuefle, and WNYCMA. The WBC Bt corn trials were made possible with support from both the New York Corn Growers Association and the Northern New York Agricultural Development Program.

FARM Program Launches Fourth Silo: FARM Workforce Development

Press Release: October 2, 2018

Link: http://www.nmpf.org/files/files/FARM-Launches-Workforce-Development%20100218_Final.pdf

The National Dairy Farmers Assuring Responsible Management (FARM) Program announced the launch of its fourth program area, FARM Workforce Development. The initiative provides U.S. dairy farm owners and managers with educational tools that offer best management practices in the area of human resources -- including hiring, training and supervision -- and worker health and safety.

FARM Workforce Development was created by stakeholders from the entire dairy value chain to provide educational materials on the most pressing concerns for the dairy sector. The human resources part of the program focuses on how to best attract, invest in, and retain a professional, high-quality, engaged workforce.

The safety part outlines how farms can further cultivate and demonstrate a continuous commitment to on-farm safety. For the safety portion of the initiative, FARM is collaborating with the Idaho Dairymen's Assn. (IDA) to develop a best-in-class safety resource for dairy farm owners and managers. IDA's Dairy Workforce Training & Safety Program Oversight Board includes representation from dairy farm employees to provide the worker's perspective for development of the safety manual.

According to FARM Program management, these new educational resources will help farmers who want to broaden their understanding and implementation of human resources tools and safety practices for their employees.

"By making these tools available, we will further demonstrate the dairy industry's existing commitment to continuous improvement in human resources and worker safety," Emily Yeiser Stepp, senior director of the FARM Program, said. "This new component of the FARM Program offers educational materials tailored to the needs of U.S. dairy farms of all sizes."

The FARM Program began developing its newest component last year, gathering expert and stakeholder input through its Workforce Development Task Force. Farmers, cooperative staff, academics, and other subject matter experts – divided into working groups – have reviewed, recommended, and provided counsel on the program area's resources. This reliance on stakeholder input ensures that the Workforce Development materials are technically robust and relevant to today's dairy industry. The educational resources will provide farm owners with resources that can assist in increasing worker engagement, reducing employee turnover, and enhancing the safety of dairy farming. Some of those resources will include:

- state-by-state and federal legal fact sheets that summarize state laws and regulations on a variety of human resources issues for dairy farms, including wages, benefits, payroll, youth employment and more;
- the "FARM Human Resources Reference Manual" that contains a self-assessment and templates, including a sample employee handbook
- The "FARM Safety Reference Manual" that provides dairy owners and managers with an overview of safety management best practices, legal considerations, and more.

"Dairy farm employees are dedicated to high-quality animal care and producing nutritious milk. Farm owners and managers share that dedication and strive to create work environments that attract and retain employees," said Nicole Ayache, National Milk Producers Federation director of sustainability initiatives and FARM Workforce Development team leader. "Until now, they didn't always have access to the proper resources to advance their farm's [human resources] and safety management goals. It only made sense to bring those goals into the FARM Program's spirit of continuous improvement to enhance the safe, secure and thriving work environments on our dairy farms."

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Cornell Cooperative Extension

How to Obtain a Pesticide Applicator license

10am-1pm CCE Clinton Office

6064 Route 22 Suite 5, Plattsburgh

When: Tuesday, November 27th

What: Receive an overview of the application and testing process and materials needed to get a private or commercial NYSDEC pesticide applicator license. Cornell Extension and NYSDEC specialists will be on hand to present information and field questions from participants. For those who want to sign up and pay for the test, that will also be available.

Registration link:

https://reg.cce.cornell.edu/NovPesticide_209

Questions? Call CCE Clinton County at 518-561-7450

Winterizing Your Calf Program; It's More than Milk Replacer

By Kimberley Morrill

Didn't I just write an article about heat stress? Welcome to the Northeast where we are wearing a hoodie (or 2) and toque in the morning and shorts and a t-shirt in the afternoon. As the temperature begins to drop, we need to think about being pro-active for the winter months. It's time to winterize our calf management protocols and look at more than just what we are feeding them.

Calving pen: Calves should be born into a clean, dry calving pen. As temperatures drop, calves should be thoroughly dried off and receive a calf jacket before being moved.

Feeding program:

- Warm colostrum – ASAP. The focus is usually on the IgG and other "goodies" in colostrum, and these become even more valuable in the winter months. Calves have very little body fat and need the energy in colostrum to stay warm. Feeding warm colostrum allows for the energy to be used to stay warm, and not to warm up the colostrum. Similar to any other time, high quality colostrum should be fed ASAP after birth.
- Milk or milk replacer.
    - Calories. The calf needs calories to meet the energy demands of thermogenesis. When the temperature drops below 60^{0}F calves need more energy! Calves have less than 5% body fat and do not have a functioning rumen to help keep them warm. If you do not increase the energy in their diet, they will use the energy to stay warm and will not grow.
    - To improve health, growth, and stay warm you want to feed adequate amounts of milk or milk replacer to meet the energy demands of the calf (Table 1).

Table 1. Maintenance Requirements for Pre-weaned calves

Temp. °F	**60[a]**	50	32	15	5
Body weight, lb	**Mcal ME/d**				
30	**1.31**	1.45	1.72	2.00	2.14
40	**1.62**	1.80	2.14	2.48	2.65
50	**1.92**	2.12	2.53	2.93	3.13
60	**2.20**	2.43	2.90	3.36	3.59
70	**2.47**	2.73	3.25	3.77	4.03

[a]Lower critical temperature for calves less than 21 d age.

- Milk should be warm when fed, so the calf does not have to use energy to warm the milk while digesting it.
- During extreme cold (when temperatures drop below zero) a third feeding of milk/milk replacer may be needed to get enough energy into the calves.

Water: Even when it's cold out calves still need water. Decreased water consumption leads to decreased feed intake and dehydration. While providing calves with water in the cold months can be a challenge, it's still important. If you are worried about frozen buckets, offer calves warm water shortly after feeding milk/milk replacer. Leave the water with the calf for 30 to 60 minutes and then collect the bucket.

Jackets: As the temperature drops, provide each calf with a clean and dry calf jacket. This helps the calf stay warm and allows more energy from feed to go towards growth. If you have a limited number of calf jackets, prioritize newborn calves, calves under 3 weeks of age, and sick calves. Jackets should be washed between calves and removed and washed if they become soiled.

Housing: Provide enough clean and dry bedding so the calves can nest; shavings and straw are a great option for winter time bedding. Avoid bedding calves with sand in the colder months as it absorbs the cold, and can lead to sick calves. In addition to bedding, calves should be housed in a manner that they are protected from the elements. This includes wind, snow, and rain.

The calf feeder: Don't forget about this person (or people). Make sure you are listening to their concerns. They should be made aware of changes to protocols and asked for their input and feedback when changes are made. Make sure the person has been trained to identify a sick calf, or even an "off-calf". Train them on not just the importance of their job, but why they are being asked to do what is in the protocol. When it is -20 and windy, feeding calves in hutches is a rough job - a little appreciation can go a long way. Provide hats, gloves, hot chocolate, coffee, or donuts on occasion. Thank them.

Heat stress: Yes, You Can Still be Dealing with the Aftermath in the Winter Months

By Kimberley Morrill

Heat stress, heat stress, heat stress. I think that was the hot topic this summer and every dairy farmer had to deal with it, whether it was with the lactating cows, dry cows, calves, or people. I had more phone calls this summer about heat stroke in calves, than for the past 7 years combined. While we may be enjoying the cooler fall temperatures (the cows are too), we are still overcoming challenges related to this summer's heat.

As August came to a close and September rolled in, we had one last round of heat. For some cows (and calves), this was too much. I had many farms report that the last bout of heat was the hardest. It was shorter in duration then that in early July, but the cows took a hard hit, and many didn't recover. This led to phone calls asking "what's going on", "why this time"? Cows are like humans; they can only handle so much stress before they crash. Heat stress is an additional stressor to the animal. When multiple stressors are present (overcrowding in pens and at the feed-bunk, social changes, routine changes, feed changes…), it leads to compounding negative results. For some cows, the last bout of heat stress was the tipping point. Many farms chose to dry cows off early, while some had to cull cows and others decided the best option was euthanasia. This unplanned change in inventory (both lactating and youngstock) can have longer term implications as it changes the herd makeup. Farmers are now looking at having an overcrowded dry cow pen, decreased overall milk production, and a potential need to purchase animals due to animals that were culled or euthanized. Additionally, many farmers are still dealing with the lasting consequences of heat stress, especially when it comes to calves.

Calves: "Weird bugs" was the phase a farmer used to describe what was affecting his calves. "It's like pneumonia, but it's not, and we can't stay ahead of it". While we can plan to be proactive for next summer, we need to be reactive now.

- Identify calves that were born during the summer, particularly those born during the heat waves.
- Identify calves that have been treated for pneumonia – this should be done for all calves. This can be as simple as making a notch on the eartag. If you keep records on DC305, it's very simple to add pneumonia as an event.
- Monitor growth rates. Are the calves born during heat stress keeping up?
  - ◊ While knowing average daily gains would be great, not all farms routinely weigh calves. It's important to have an estimate as to how big the calves should be at weaning, at different pen moves, and ages.
  - ◊ If heat stressed calves are not keeping up with cohorts they should be evaluated for potential culling.
- Identify poor "do-ers". While there is no definition for an "off-calf", it's a phrase that is used a lot. Many farmers can think of at least one animal that "looked off" this past summer.
  - ◊ Keep track of your "off-calf". She might not have had pneumonia (or another diagnosable condition), but heat stress both in-utero and after birth can lead to a compromised immune system.
- Now evaluate and cull some animals. Is that "off-calf" smaller than her cohorts? Has a calf been treated for respiratory issues 2 or 3 times? While no one likes selling heifer calves, if they are compromised and at risk of not becoming a productive cow, they should be culled earlier rather than later.

Lactating Cows: Reproduction. Heat detection, conception rate, and pregnancy all took a hit this summer and many are still recovering. From a reactive standpoint, there is not a lot we can do to fix this. We can be more stringent on heat detection, focus on a synch program, but all of these practices will take time to show an effect on heat detection, pregnancy, and conception rate and we are potentially left with a hole in our inventory.

Inventory: For some farms, the losses were minimal, and for some they were large. It's always important to keep a tabs on your herd inventory. Not just how many animals you have, but

…Continued on page 12

how many animals across stages of lactation, how many cows and heifers are due each month? Are you going to be able to meet your herd goals, or do you need to purchase some animals? Herd projections can be done on DC305, and there are many herd inventory calculators available online.

While we are being reactive this fall and winter taking care of animals and making some hard decisions, we can also be pro-active now for next year. While working on your 2019 operating budget, have discussions about purchasing more fans, curtains, or sprinklers. Look at your inventory projections and determine if any pens will be overcrowded next June through August. Should you depopulate or can you move animals to a different pen? What group of animals was hardest hit on your farm, and what changes could be made before next year? Should you make a management decision not to breed cows in November so you don't have calves born in August? Should you invest in an activity monitoring system? These are all potential topics to review and have some discussion on at a profit team meeting, with your industry consultants, or Extension specialists.

Office Hours

Cornell Cooperative Extension
North Country Regional Ag Team

The Farm Business Management Specialist will be hosting regular "Office Hours" in each county! These give farmers a chance to bring their questions on any of the following topics:

- Accounting
- Financial Statements
- Budgeting
- Business Plans
- Decision Making
- Employee Hiring
- Employee Handbooks
- Human Resources
- Diversification
- Regulation
- Grant Applications
- Project Evaluation
- Book Keeping Systems
- Farm Transition Planning
- Retirement Strategies

Please note that all office hours are from 10AM to 3PM. It is not necessary to make an appointment, however, you can by contacting:

Kelsey O'Shea at kio3@cornell.edu or 315-955-2795

Clinton County
Dates: Oct 3rd, Nov 7th, & Dec 5th
Location: CCE Office
6064 NY-22 Suite 5,
Plattsburgh, NY 12901

Essex County
Dates: Oct 4th, Nov 6th, & Dec 6th
Location: Hub on the Hill
545 Middle Road
Essex, NY 12936

Jefferson County
Dates: Oct 9th, Nov 13th, & Dec 11th
Location: CCE Office
203 N Hamilton St
Watertown, NY 13601

Lewis County
Dates: Oct 10th, Nov 14th, & Dec 12th
Location: CCE Office
5274 Outer Stowe St
Lowville, NY 13367

Franklin County
Dates: Oct 17th, Nov 15th, & Dec 19th
Location: CCE Office
355 W Main St #150
Malone, NY 12953

St Lawrence County
Dates: Oct 18th, Nov 16th, & Dec 20th
Location: CCE Office
2043B NY-68,
Canton, NY 13617

Should you Bring a Righty or a Lefty from the Bullpen?

By Rick Grant, Miner Institute and submitted by Ron Kuck

Reprinted from the October 2018 Miner Institute Farm Report

Sidedness in behavior – known scientifically as laterality – is commonly observed with dairy cows. Cattle express laterality naturally when choosing which side to lie down on or which side of the milking parlor to enter. Over the years we've realized that this preference for one side over the other actually reflects cerebral specialization of the left and right hemispheres. For instance, the right hemisphere of the brain handles fear and anxiety (i.e., negative emotions); the left hemisphere processes positive emotions and longer -term memories.

Because of this relationship between laterality and the very different functions of the right and left hemispheres of the brain, behaviorists believe that expression of a side preference is related to the cow's emotional state and what they perceive as stressful or even threatening in a given situation.

A study on laterality led by Australian researchers caught my attention in the latest issue of Applied Animal Behaviour Science (2018. 207:8-19). They assessed the emotional state and level of stress in dairy cows using a "forced lateralization test." This sounds complicated, but essentially the cows were asked to decide which side of a person to pass on when walking down a barn lane. The person was someone they had never seen before. They stood in the middle of a return lane where cows exited the parlor following the afternoon milking. The lane was 14.1 ft wide and about 77 ft long.

Here's how they interpreted the choice made by the cows: If a cow passed the novel person on the right side, viewing them with their left eye, which is connected to the right brain, that indicated that the cow was more susceptible to stress and anxiety based on the known biology. Of course, the opposite would be true of cows passing the person on the left side. Previous research shows that most cows, and especially subordinate ones, preferentially use their left eye to view a situation or person that they see as a threat.

So what did they observe during the forced laterality test? Cows that passed on the right side, using their left eye to view the novel person, were more likely than those that used the left side to be anxious and raise or tuck their tail, sniff the ground, and walk more slowly. In addition, the cows that passed on the right side were more likely to pass by without turning to look at the person, they typically passed in single file, and were more likely to defecate. In contrast, cows that passed on the left looked at the person as they passed and were more likely to pass in pairs rather than one at a time. They appeared less anxious and stressed.

Interestingly, higher-producing cows were more likely to pass on the right-side. It's not known exactly why this happens, but it may be that cows stressed with higher milk production levels are more anxious and prefer to view the unknown person with their left eye (which is connected to the right hemisphere of the brain that processes fear and anxiety).

The decision to choose one side over the other to pass the novel person in the barn alley appears to be repeatable and consistent, and is in fact a coping strategy that allows cows to most effectively deal with an environmental stressor or source of anxiety. The researchers also assessed ear positioning as an indicator of anxiety or stress, but they concluded it was too variable to be useful on farm.

The results of this study showed that cows passing an unknown person on the right side are more likely to be anxious and are more likely to be higher-producing cows. More work is needed on the role of laterality in dairy cow behavior and how it signals her degree of comfort with her surroundings. But it seems safe to conclude that monitoring on which side a cow routinely passes an unknown person or some other source of stress or anxiety could be useful on-farm to detect anxious or stressed cows. In the future, we may want to know if our cows are lefties.

Crop Insurance
FARMER SUCCESS STORY

Don't shy away from Crop Insurance because it's too complicated.

BINGHAMTON, NY– Apple Hills has been in the Green family for over 150 years. The farm was mainly dairy in the early 1900s. During WWII, they grew and packed their own apples and packed for other producers as well. They also started making their own cider. They stopped milking cows completely in the 1960s and became strictly fruit growers. Dave and his wife, Joy Green Johnson, have been part of the management team for the last 15 years. About 5 years ago, they became sole owners and stopped all wholesaling. They now operate a 30-acre, U-pick fruit farm and a farm market, where they also serve breakfast and lunch. Their fruit crops are primarily apples, as well as strawberries, raspberries, blueberries, and a few acres of sweet cherries. They have a terrific farm webpage: http://www.applehills.com/.

Dave noted that previous generations didn't seem to have a need for crop insurance. They had a cider mill and he never remembers anyone saying they got wiped out by the weather. Then, in 1998, they had their first hail storm. "We bit the cost," he said. "We were still making cider then, but took quite a loss." Two years later, in 2000, the farm got hit with hail again, and they still had no crop insurance. At that point, their bankers told them they had to get crop insurance. "We were kind of made to do it, but it's been a godsend, because **we wouldn't be in business since then if we didn't have it,**" he said.

The farm has had a crop insurance claim in about 6 of the past 13 years. "Basically every other year, we've had a hail problem." Dave explained. "If you add that up, the amount of loss, we would be out of business without the insurance. No doubt about it, we would be out of business without it."

The farm is at 1600 ft. elevation and is usually 2 weeks behind everyone else. They didn't have the same temperatures that plagued other parts of the State in 2012. "On the other hand," Dave said, "other years, we have problems that other parts of the state don't have."

David Johnson, Apple Hills Farm, Geneva, NY

They insure apples, their main crop, with multi-peril buy-up. They cover the rest of their fruit crops with NAP (the USDA Non-insured Assistance Program). Dave describes NAP as paying for some expenses and considers it better than nothing. With hail every other year, NAP payments have added up for the farm and has worked out in their favor.

Dave's advice to other farmers is not to shy away from crop insurance because it's too complicated. In their case, the bank made a suggestion and, "Our agent has been a blessing," he said. "Yes it is complicated, but **ask around for the best agent you can get. I felt very comfortable with my agent.**"

When it comes to what it costs, Dave is emphatic. "**The amount of dollars you talk about paying out is nothing compared to what you can lose,**" he said.

USDA
Risk Management Agency
This institution is an equal opportunity provider.

The New York State Department of Agriculture and Markets has partnered with USDA Risk Management Agency (RMA) to provide crop insurance education to New York State farmers. For more information, please visit the NYS Crop Insurance Education website at www.agriculture.ny.gov/AP/CropInsurance.html or call 518-457-4531. The RMA website is: www.rma.usda.gov. To find a crop insurance agent, ask a neighbor for a recommendation, contact your local Farm Service Agency (FSA) office or use the USDA RMA crop insurance agent locator tool on the web at www.rma.usda.gov/tools/agent.html

Academy *for* Dairy Executives

Cornell Cooperative Extension
North Country Regional Ag Team

This educational program is designed to provide progressive young dairy executives and agri-service personnel the opportunity to increase their knowledge and understanding of the fast changing farming industry and provide the leadership & management skills necessary to run a successful farm. Attendance at all 3 sessions is highly recommended.

Topics Covered:

- Business Management & Communication
- Building Effective Management Teams
- Financial Assessment
- Budgeting and Decision Making
- Strategic Planning & Business Risk Management
- Community Relations
- Employee Engagement & Management
- And more…..

Session I
Date: Dec 12th-13th
Location: Lake Placid, NY

Session II
Date: Jan 30th-31st
Location: Canton, NY

Session III
Date: Mar 27th-28th
Location: Clayton, NY

Registration:

This program does require a complete application to be submitted.
Applications must be submitted by **October 26th, 2018**

Applications are available online:
https://prodairy.cals.cornell.edu/conferences/academy

For assistance with applications contact:
Caroline Potter at cjh42@cornell.edu or 315-683-9268
For questions on the program contact:
Kelsey O'Shea at kio3@cornell.edu or 315-955-2785

To apply use the code and complete the application.

Other

2018 Feed Dealer Seminars

The Feed Dealer Seminars are specifically targeted for nutritionists, veterinarians, crop and management consultants, extension educators, and dairy producers with specific interest in nutrition-oriented topics. They are designed to blend the latest concepts in feeding and other management aspects of dairies with field level application. They have been conducted annually as a road show with multiple sites in New York for many years with an additional Vermont location held during the past several years in collaboration with the Northeast Agribusiness and Feed Alliance.

Locations: Held at 6 sites in New York and 1 in Vermont

Speakers:

- Dr. Tom Overton, Professor of Dairy Management and Director, PRO-DAIRY program, Cornell University
- Dr. Kristan Reed, Ph.D., Assistant Professor of Dairy Cattle Nutrition and Northeast Agribusiness and Feed Alliance Partners Sesquicentennial Faculty Fellow

Topics:

- Maximizing milk fat on the dairy
- RuMUNations on nitrogen efficiency (aka, Strategies for assessing and improving nitrogen efficiency through the entire lactation)

Date	Time	Location	Contacts
Dec 10 (Mon)	6 PM to 9 PM	Chamber of Commerce, 37 Church St., Cortland, NY	Betsy Hicks or Stephanie Vitarelli (607) 391-2662
Dec 11 (Tues)	8 AM to 11 AM	Quality Inn (formerly Holiday Inn), Oneonta, NY	Paul Cerosaletti or April Lucas – (607) 865-7090
Dec 11 (Tues)	1:00 to 4:00 PM	Cornell Cooperative Extension Office, Ballston Spa, NY	Dave Balbian – (518) 312-3592
Dec 12 (Wed)	10:30 AM to 2:30 PM	Langevin House Vermont Technical College Randolph, VT	Sue VanAmburgh – (518) 783-1322
Dec 12 (Wed)	6:30 to 9 PM	Miner Institute, Chazy, NY	Wanda Emerich – (518) 846-7121 ext 117
Dec 13 (Thurs)	Noon to 3 PM	Ramada Inn, Watertown, NY	Tatum Langworthy – (315) 788-8450
Dec 14 (Fri)	11 AM to 2 PM	Cornell Cooperative Extension, Batavia, NY	Linda Risewick – (585) 343-3040 ext. 138

Cornell CALS
College of Agriculture and Life Sciences

Cargill Beef Plant Supplies Rawlings Sporting Goods Company

Excerpt from Press Release: July 27, 2016
Link: https://www.cargill.com/story/play-ball

The average lifespan of a baseball in a major league game is seven pitches. When that ball hits a bat or the dirt, it's done—relegated to batting practice or sent off to a minor league team.

When it comes to baseball leather, not just any hide will do. "Baseball leather is aniline tanned; in other words, we don't put any sort of finish on it," said Mike York, general manager of Tennessee Tanning. "What you see on the baseball is actually the cow hide. We don't cover up any imperfections, so it has to be perfect." Located in the heart of dairy country, Cargill's Wyalusing plant is well situated to provide those perfect hides.

"Holstein dairy cows are traditionally the best for leather because they have thinner hides," said York. "And we try to get our Holsteins from as far north as we can, where the winters are longer and the summers are shorter." Shorter summers means fewer opportunities for bug bites or other imperfections on the hide. "We are held to pretty tight specs by Major League Baseball," York said, explaining that there are different grades of baseballs, but those used in the major league are the highest grade.

For Cargill, supplying hides for leather is part of its philosophy that in animal agriculture, no part of the animal should go to waste. Wyalusing processes an average of 250,000 tons of beef annually, and the beef by-product business ensures that all parts of the beef cattle are put to good use. The same goes for dairy cows that reach the end of their productivity.

"We believe that this shows the ultimate respect for the animal, and ensures that we are getting the most out of the production process," said Dan Schaefer, vice president of Cargill's beef by-product business.

Welcome to the New Farm Business Management Educator for Lewis and Jefferson Counties

Robin Wendell-Zabielowicz has joined Cornell Cooperative Extension as the Farm Business Management Educator in Lewis and Jefferson Counties. She will work with producers on a variety of topics including business planning, financial records, budgeting, labor issues, farm transfers, and estate planning. Robin's professional career has spanned over 25 years, most of which was spent overseas in Poland where she worked in pharmaceuticals, road safety, consulting, and e-commerce for companies including Pfizer, 3M, and Ernst & Young. Her experience includes sales and marketing management, strategic planning and business development, business analytics, organizational effectiveness, and Six Sigma. Since relocating to Lowville, she has been successful as an e-commerce entrepreneur and as Business Process Associate with Kraft Heinz. She holds an MBA from Thunderbird School of Global Management (Glendale, AZ), and a Bachelor's degree in International Relations from Bucknell University (Lewisburg, PA). Her education also includes study and work abroad in Denmark and Russia.

Contact Robin at rw583@cornell.edu.

Welcome to the New Dairy and Livestock Educator for Jefferson County

Jake Ledoux recently joined CCE Jefferson County as a Dairy and Livestock Educator. He is looking forward to working with all producers that raise two or four legged livestock. Jake comes from a family livestock operation where he is involved with all aspects of production of registered Berkshire pigs and Red Angus cattle. Jake recently graduated from Cornell with a degree in Interdisciplinary Studies and he has a strong interest in helping producers achieve efficiencies in livestock and dairy production as well as assisting them in marketing their animals.

Contact Jake at jtl224@cornell.edu.

Would you like to receive a paper version of the North country Ag Advisor?

Subscribe to the paper version of the North Country Ag Advisor for the low cost of $15/year. Return this filled out form along with a check or money order for $15 to Tatum Langworthy, Cornell Cooperative Extension, North Country Regional Ag Team, 203 North Hamilton Street, Watertown, NY, 13601. We'll send you the newsletter each month. Subscriptions expire a year to date.

Name: _____

Farm name: _____

Street address: _____

City: _____ State: _____

Zip code: _____ Phone number: _____

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

What's Happening in the Ag Community

2018 Academy of Dairy Executives, see page 15 for more information.
2018 Feed Dealer Seminars, see page 16 for more information.
Farm Business Specialist Office Hours, see page 12 for more information.
How to obtain a Pesticide Applicator License, see page 9 for more information.