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Cornell Cooperative Extension

Southwest NY Dairy, Livestock and Field Crops Program

swnydlfc.cce.cornell.edu

# CROPS COWS & CRITTERS newsletter

A partnership between Cornell University and the CCE Associations of Allegany, Cattaraugus, Chautauqua, Erie and Steuben Counties.



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Photo by Katelyn Miller

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**By law and purpose, Cooperative Extension is dedicated to serving the people on a non-discriminatory basis. Newsletter layout and design by Katelyn Walley-Stoll.**

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**For accommodations or accessibility concerns, please contact our specialists at least one week prior to the scheduled event. If you need information provided in a different format, call 585.-268-7644 ext. 10.**

# Reflections From The 2025 American Dairy Science Association Conference

*By Katie Callero, Dairy Management Specialist, SWNYDLFC*

At the end of June, I had the opportunity to travel to Louisville, Kentucky to present some of my original research to dairy scientists from around the world at the American Dairy Science Association (ADSA) conference. It was a great chance to reconnect with former colleagues and meet some new ones. This was my third time attending ADSA, but my first time since starting my new role with Cornell Cooperative Extension. I have always loved seeing the new and exciting research coming out of different universities, especially how they strive to advance their understanding of cows and technology. While I usually love getting caught up in futuristic technologies and research, this year I focused on more practical and immediately applicable research that I could bring back to the Southwest NY region. I'd like to share a few of the presentations I found particularly valuable.

**Associations Of Oral Temperature With Disease Outcomes And Inflammation In Preweaning Dairy Heifers**

*Presented by: K.R.K. Gottwald – Cornell University*

The study found that oral temperature can indicate inflammation in the calf's body, much like rectal temperature does. While taking a calf's temperature orally may seem like more of a hassle than rectal temperature monitoring, the researchers are hoping this method could be integrated into automated milk feeding systems to allow more frequent monitoring of calf health.

**Effect Of Training Dairy Heifers To An Automated Milking System Before Parturition On Their Adaptation And Performance**

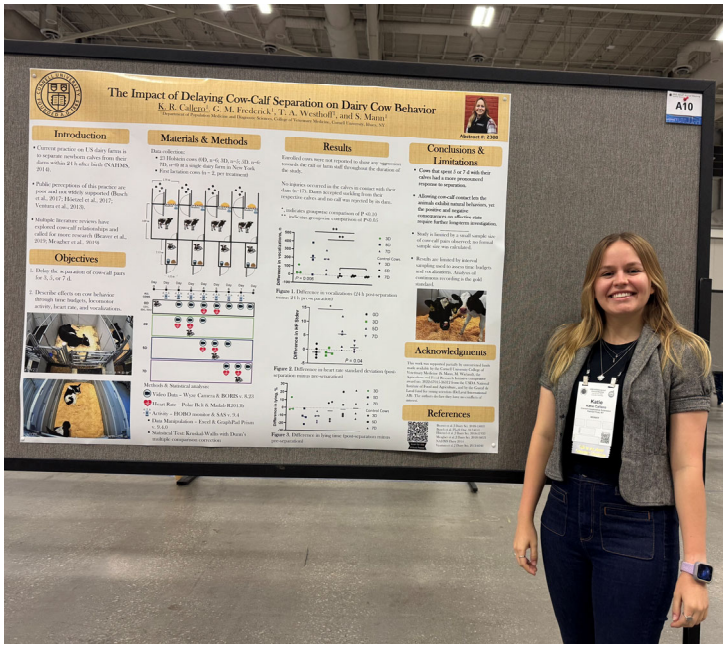
*Presented by: J. E. Brasier – University of Guelph*

A graduate student from the University of Guelph conducted a study and found that pregnant heifers trained to robotic milkers three times a day for four days during the two weeks prior to calving had better outcomes after calving. The trained heifers had easier entry and milk let down, made more visits, had fewer fetching events and produced more milk than the untrained heifers over a 21-day period.

**Extension Education Symposium**

One of the most immediately applicable sessions I attended was a series on dairy extension education. We discussed the importance of connecting with farmers to determine which types of programming are most effective and which topics interest them most. Three different needs assessments from different regional areas were presented, each featuring different types of questions. Seeing these surveys presented inspired me to take a deeper dive into asking similar questions during my farm visits and perhaps even developing a formal survey for the Southwest region. As extension agents, our role is to serve the community, and we stressed the importance of identifying real-time challenges that our local dairy farmers are facing. I enjoyed seeing the different topics that farmers in other states had identified as important. Although climate and crops vary state to state, at the end of the day, we all work with the same cow and share the same goals.

Overall, I made some exciting new connections and strengthened existing ones, with the goal of bringing in new experts in to support webinars and workshops in our area. Presenting my poster on dairy cow behavior in relation to cow-calf separation was also a fitting way to close the chapter on my master's thesis. I am looking forward to incorporating some of what I learned into my farm visits and future programming. This conference was a great reminder to continue learning and to keep building that practical bridge between scientific research and Southwest NY's dairy farms.




**High oral temperature in calves can be an indicator of inflammation.**

**Pregnant heifers trained with robotic milkers before calving produce more milk than untrained heifers for 21 days after calving.**

# IPM Strategies to Protect Corn and Soybean Seed in NY

**Wednesday, July 30th, 11:00 AM - 1:00 PM**

**Zittel's Family Farm**

**7226 Taylor Road, Hamburg, NY 14075**

Beginning in 2029, the implementation of the Birds and Bees Protection Act will restrict the use of neonicitnoid-treated corn, soybean, and wheat seed in New York State. SWNYDLFC is partnering with Cornell IPM to host a field day for growers, crop consultants, certified crop advisors, industry representatives, crop managers, and policymakers. This event will provide timely information on legislation and current research efforts, highlighting preliminary findings from ongoing statewide trials and the introduction of a seed pest risk assessment tool.

This event is free! Lunch will be provided. Please register in advance by visiting **https://tinyurl.com/IPMHamburg**. Contact Katelyn Miller at 716-640-2047 or km753@cornell.edu for questions or concerns.

**1.25 DEC credits in 1a, 4, 10, 21 will be available!**

Cornell IPM
New York State Integrated Pest Management

Cornell Cooperative Extension
Southwest NY Dairy, Livestock and Field Crops Program

*Cornell is an equal opportunity employer. For more information visit hr.cornell.edu/eeeo.*

**Contact Katelyn Miller at 716-640-2047 or km753@cornell.edu for questions or assistance with registration.**

CROPS COWS & CRITTERS newsletter

**This is a free event with DEC credits for pesticide applicators.**

# Rain vs. Herbicides

*By Katelyn Miller, Field Crop & Forage Specialist, SWNYDLFC*

You don't need me to tell you that corn and soybean progress is all over the map throughout New York State. Our spring has made field activities difficult and has added an additional layer of stress to an already hectic time of year. As a result of staggered planting, herbicide application timings have been spread out over a significant portion of time. Regardless of whether your acreage was sprayed a few weeks ago or if applications have not yet been made, herbicide efficacy has likely been impacted by the wet weather.

Weeds and weed control are impacted by wet weather and subsequent flooding conditions for a variety of reasons. Wet weather conditions are stressful for plants, impacting the vigor of crops. This can impact the competitive interactions between our crop and weeds. This stress may cause weeds to not respond well to postemergence herbicides.

Driving on/working wet soils can lead to compaction affecting soil aeration, crop root system development, and future drainage. Avoiding traffic on fields because of these conditions can also cause us to delay or miss timely weed control events, allowing weeds to escape from the optimum spraying window. While not as applicable now with our warm weather, many crops went in during a cool period. This delayed emergence and increases the risk of herbicide crop injury.

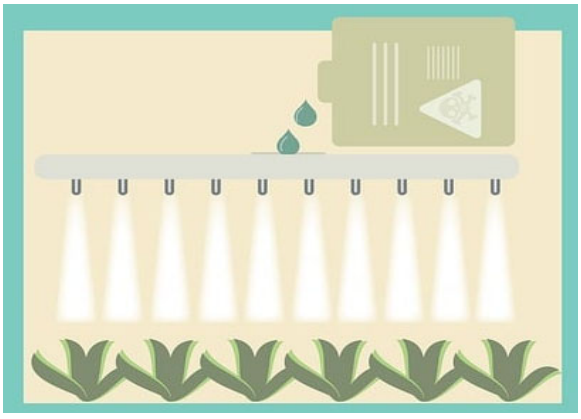
The chemical properties that impact herbicide persistence in the soil include water solubility, soil adsorption, and microbial degradation. The solubility of an herbicide in water helps determine its leaching potential (measured in ppm). Soil adsorption is the ability of herbicide molecules to bind to soil particle surfaces (measured in Koc). Other factors that impact herbicide leaching include soil characteristics, rainfall frequency and intensity, and herbicide concentration. Excessive rainfall can cause increased leaching of residual herbicides with high water solubility and low soil adsorption (think dicamba products like Banvel). Flooding can also physically move herbicide-treated soil, resulting in movement off-site or becoming concentrated in low spots.

Additionally, I've been in some fields where the soils have formed a crust because of the rainfall. Soil crusting and herbicides can interact in ways that affect our crop or herbicide efficacy. When a crop has to push through a soil crust, it creates extra stress from delayed emergence. This slowed emergence could result in increased uptake of an herbicide that exceeds the crops tolerance. If residual herbicides are applied after a crust has formed, they may remain on top of the soil, resulting in limited contact with germinating weeds or off-site movement as mentioned previously.

Some reminders about weed control and herbicides:

- If trying to make postemergence applications between rainfall events, check the product label for rainfast periods.
- Rain events may be associated with fluctuations in soil and air temperature, which can also affect weed vigor and, subsequently, herbicide performance.
- If weed control has failed, you may feel compelled to act rapidly to manage unwanted vegetation. Don't let haste lead to herbicide drift events.
- Weed escapes may be more prevalent sooner, so scouting will help catch escapes.

This spring's wet weather has made weed control more challenging. To manage these conditions, regular field scouting, careful herbicide timing, and attention to product guidelines are essential for minimizing weed escapes.



**Resources**

https://extension.psu.edu/excessive-rainfall-and-herbicides
https://cropwatch.unl.edu/2017/effect-excessive-rainfall-efficacy-residual-herbicides-applied-corn-and-soybean/
https://cals.cornell.edu/weed-science/herbicides/effects-of-flooding-and-wet-conditions-weed-management
https://agcrops.osu.edu/newsletter/corn-newsletter/2025-20/soil-crusting-and-herbicide-carryover

**Contact Katelyn Miller at 716-640-2047 or km753@cornell.edu with questions.**

**Regardless of whether your acreage was sprayed a few weeks ago or if applications have not yet been made, herbicide efficacy has likely been impacted by the wet weather.**

# Dung Beetles Combat Flies; Insecticide Overuse Harms Beetles

*By Kristy Gashler, Cornell University Agriculture Experiment Station*

Anyone who has walked through a barn or cattle pasture in the summer knows that flies are a nuisance and even a health hazard. Face flies can spread diseases like pink eye to cattle, and horn flies – biting flies that live on cows and take up to 20 blood meals per day – in large enough numbers can impact animals' health and growth. But insecticides frequently used to combat these pests may actually be reinforcing the problem by killing dung beetles, which naturally control flies, and potentially harming other beneficial insects.

Researchers with the Cornell Integrated Pest Management program have been working in collaboration with farms across New York state to understand how feed-through pesticides – insecticides added to cattle feed to kill flies – impact dung beetle populations. The researchers are also sharing alternative strategies to control pest species, such as using walk-through fly traps, providing shelter, and recruiting poultry to eat fly larvae.

"These flies can cause major problems for herds. If you're raising steers, you want them to gain weight quickly, and the annoyance, injury and disease that flies can cause in large numbers can affect the animals," said Ken Wise, livestock coordinator for Cornell Integrated Pest Management (IPM). "However, the broad-spectrum use of any insecticide is not an integrated approach to controlling flies. I know it's a pain to do, but if you can estimate the number of flies on your cows and treat the animals only when they need it, you're going to have a lot less insecticide in the environment."

## FEED-THROUGH INSECTICIDES HARM DUNG BEETLES, DON'T CONTROL FACE FLIES

Both flies and dung beetles lay their eggs in manure pats. Larvae eat the manure and then hatch as fully-grown insects. Dung beetles control flies by competing for the same manure for food and shelter. Other species of beneficial beetles that inhabit manure include predators such as rove beetles, hister beetles and water scavenger beetles, which also eat fly larvae. And beetles' benefits go beyond fly control: when they create tunnels in manure pats and in the soil beneath them, they help break down waste more quickly and recycle nutrients back into the soil, helping to increase soil health and fertility.

In the current research, Wise, Bryony Sands, assistant professor at the University of Vermont, and Hannah Tolz, extension support specialist with Cornell IPM, are exploring how two feed-through insecticides impact fly and dung beetle populations. One is a broad-spectrum insecticide and the other is an insect growth regulator (IGR), designed to kill fly maggots before they can hatch from manure pats. Cattle eat feed treated with insecticides; after passing through the animal, the products kill insects that eat or dwell in manure.

While pesticide use is sometimes necessary to protect crops and livestock, overuse of these substances has repeatedly been shown to cause negative unintended consequences in the environment. For example, separate Cornell research has found that wild foraging bees exposed to certain pesticides suffer "reductions in brain function, foraging and nest locating ability, growth, and reproduction."

Initial findings suggest that farms that use feed-through insecticides have "significantly lower" dung beetle populations and beetle species diversity. In addition, the research showed that horn fly numbers rarely exceeded thresholds at which treatment is needed to prevent economic loss. Face fly populations were lowered by insecticides but almost-universally exceeded problematic levels, even at farms using insecticides, suggesting the treatment was not addressing the problem, Wise said.

## IPM METHODS TO HELP CONTROL FLIES

Kate Marsiglio is one of the 19 farmer-collaborators working with Wise, IPM and Cornell Cooperative Extension on the research. For 20 years, she has been operating Stony Creek Farmstead in Walton, NY and raising beef, lamb, chicken, eggs and pork.

Roughly half of the farms involved in the research use feed-through insecticides, and half don't. Marsiglio has never used insecticides to control flies on her cattle, relying instead on rotating animals frequently across her 300-acre farm, and sending chickens in after the cattle have moved.

"The chickens come through and scratch out the cow pies, spread them all out, and then eat the fly larvae. I also love watching wild birds follow our cows: You see birds on their backs, eating insects and creating this great beneficial relationship," she said. "We're trying to add as little unnecessary chemicals into the environment as possible. Because if you feed an entire herd of cattle insecticides, it ends up in their poop and then it passes into our soil and our water."

*Continued on next page...*

**While flies can be a nuisance, waiting to treat them until they've hit a treatment threshold can save money and resistance concerns.**

**Many dung beetles compete with fly larvae for space in the dung pat and can move dung into the soil so that it's not available to flies.**

*...from previous page*

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**Feed through insecticides have been found to be more harmful to the environment than targeted fly control mechanisms like rubbers, dusters, and direct sprays.**

**For a fact sheet of the dung beetles found during these studies, contact Amy Barkley.**

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- When using pesticides, Cornell IPM recommends that farmers:
- Only treat cattle when fly numbers exceed action thresholds. For horn flies, that's 200 per animal,  face flies 10 per animal.
- Use targeted insecticides, such as back rubbers, face rubbers, dusters and direct spray, rather than feed-through products.
- Instead of using across-the-board insecticide treatment, Cornell IPM recommends growers:
    - Provide shelter when fly pressure is high. Horn and face flies are reluctant to go into a darkened enclosure in the summer.
    - Use poultry to control pasture flies in manure pats.

Use mechanical tools like fly traps or walk-through "Bruce Traps" – these are darkened chutes which cattle walk through. Because horn flies dislike enclosed spaces, they fly off, move toward light and are trapped by double-screened walls. These traps "can control 50 to 70 percent of horn flies over time," according to Cornell IPM.

Further research is planned for this summer to understand how differing ingredients in feed-through insecticides impact beetle numbers at farms in New York and Vermont.

"Insecticides in the environment are residual – they stay there for a long time and can potentially cause off-site effects to pollinators, plants, soil and water," Wise said. "We encourage an integrated approach that focuses on prevention and avoids overuse of insecticides."

The research was funded by the Cornell University Agricultural Experiment Station, which distributes competitive funds from the U.S. Department of Agriculture's National Institute for Food and Agriculture. Cornell AES supports an average of 175 researchers annually, whose work focuses on improving agriculture and food security, community wellbeing and environmental protection throughout New York. The research was also supported by New York state's Department of Agriculture and Markets.

Manure pat that has had the majority of effective nutrients for fly larvae moved into the ground by dung beetles. In optimal conditions and with a large enough beetle population, this process can occur within 24 hours. Photo credit: Amy Barkley

Cattle sheltering under trees and huddled close together in an effort to deter flies.  Photo credit: Amy Barkley

**For a list of insecticides available for use in NYS, contact Amy Barkley at amb544@cornell.edu or (716) 640-0844.**

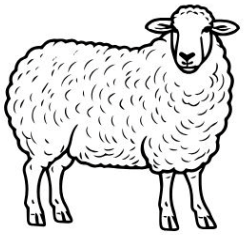
**IPM management strategies can take a few years to become effective to their fullest potentials prior to many years of using insecticides alone.**

# Pasture Walk

## Wednesday, August 20th, 6:00pm - 8:00pm

## Location: Anthony Marco's Farm - Woodhull, NY

Join Cornell Cooperative Extension at one of our region's sheep farms to walk their pastures and explore managing sheep in a frequent rotational grazing system. We'll discuss how evasive grazing techniques and constant rotation leads to better pasture health, greater forage yields, and lighter parasite burdens in sheep and goats. We'll also cover:



Estimating forage production
Evaluate hay samples and how to read their reports
Discuss how soil fertility impacts forage production

The farm tour will be led by Anthony Marco and conversations on the topics above will be led by Katelyn Miller, Field Crops and Forage Specialist and Amy Barkley, Livestock Specialist with the CCE SWNY Dairy, Livestock, and Field Crops Program.

**This event is free to attend**

Register by Friday, August 15th at https://tinyurl.com/WoodhullPastureWalk or by contacting Amy Barkley at amb544@cornell.edu or (716) 640-0844.


**This farm focuses on forage quality and production for grazing.**

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**Questions about either the FAMACHA training or pasture walk? Contact Amy Barkley at 716-640-0844 or amb544@cornell.edu**

# Internal Parasite IPM and FAMACHA Training

## Wednesday, August 13th, 6:00pm - 8:30pm

## Location: Anthony Marco's Farm - Woodhull, NY

Learn about integrated pest management practices that are key to reducing internal parasite loads and dewormer resistance in sheep and goats. When not managed properly, internal parasites can be a costly financial burden to farms. All who take this training will learn about parasites and their lifecycles, strategies to reduce the need for antiparasitic drugs, and ways to use dewormers to reduce resistance issues. Everyone will receive hands-on practice with performing FAMACHA exams and 5-Point Checks to aid in selecting which animals to treat. Students successfully completing this course will receive a FAMACHA card to use on their farm, and will receive a certificate of completion.

Your instructors will be Jess Waltemyer, Cornell's Pro-Livestock Small Ruminant Specialist and Amy Barkley, Livestock Specialist with the CCE SWNY Dairy, Livestock, and Field Crops Program.

## This event is free to attend

Register by Friday, August 8th at https://tinyurl.com/FAMACHAinWoodhull or by contacting Amy Barkley at amb544@cornell.edu or (716) 640-0844


NORTHEAST EXTENSION RISK MANAGEMENT EDUCATION

USDA National Institute of Food and Agriculture
U.S. DEPARTMENT OF AGRICULTURE

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For accommodations, please reach out to Amy Barkley at amb544@cornell.edu or (716) 640-0844.

**Internal parasites are one of the most financially important disease processes in small ruminants.**

**This training reflects the most recent research and recommendations for parasite management.**

2025 Soil Health & Climate Resiliency

# Field Days

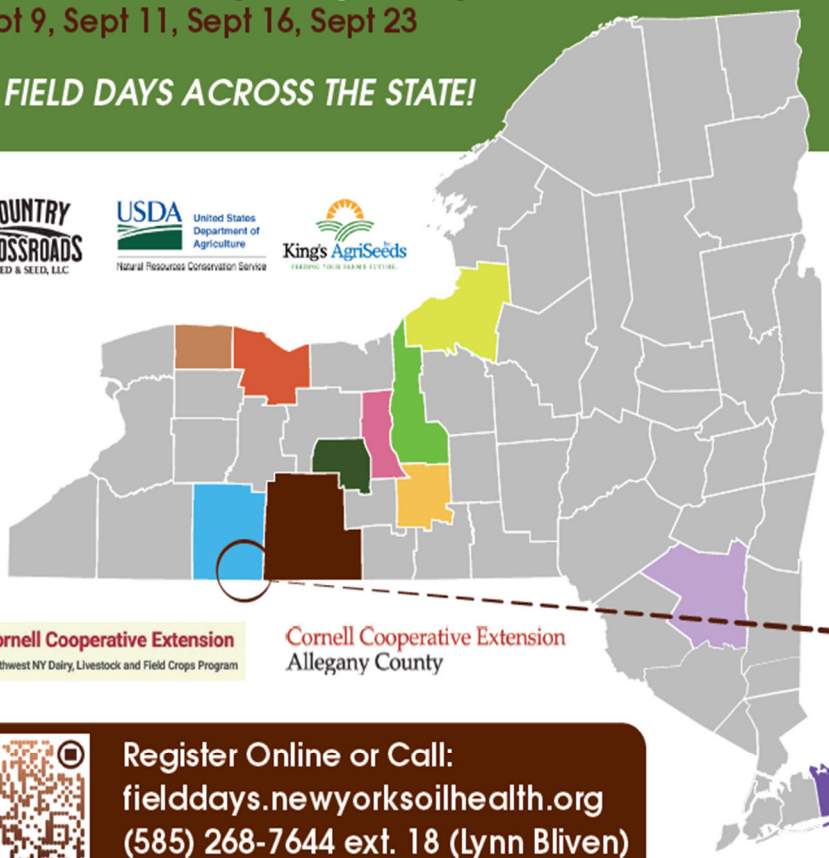
April 24, June 24, July 11, July 16, July 17, July 22, July 24, Aug 7, Aug 13, Aug 15, Sept 9, Sept 11, Sept 16, Sept 23

*14 FIELD DAYS ACROSS THE STATE!*

**Aug. 13 | 10:00 AM - 12:00 PM**

Country Crossroads Feed & Seed
3186 County Route 61
Andover, NY 14806

FREE | LUNCH TO FOLLOW



PRESENTERS:
- Rod Porter, King's AgriSeeds
- Andrea Martinez, PhD Student Cornell University

TOPICS & ACTIVITIES:
- Cover Crop Demonstration Plots
- Cover crops influence on soil organic matter and rhizosphere
- Rainfall simulator, slake test, soil infiltration, quality water movement, tighty whities test

Register Online or Call:
fielddays.newyorksoilhealth.org
(585) 268-7644 ext. 18 (Lynn Bliven)

**FREE TO ATTEND | PRE-REGISTRATION REQUESTED BY AUGUST 6**

Vfdq#TU#Frgh#wr#uhjlvwhu$#

**Registration is coming soon for our upcoming growers meeting, FAMACHA Training, and Pasture Walk!**

**CROPS COWS & CRITTERS newsletter**

**Contact Katelyn Miller at 716-640-2047 or km753@cornell.edu for the seed training and Amy Barkley at 716-640-0844 or amb544@cornell.edu for the small ruminant trainings.**

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