

Cornell Cooperative Extension

Central New York Dairy, Livestock and Field Crops



*Serving Chenango, Fulton, Herkimer, Madison,
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Summer 2020

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Greetings from the CNYDLFC Team!

I hope this newsletter finds all producers and supporters of the CNYDLFC Team in good spirits and good health. It has been a rollercoaster of emotions and events over the last quarter. The move from in-person contact to online platforms was a major shift for everyone. I hope folks have settled into our current normal and feel comfortable in our new system of delivery, for now. Trust me when I say we all yearn for farm and field visits. We miss our producers and hope to have more face-to-face contact as we move into the fall. Our team will let you know when we will have the ability to do so. Call if you have questions.

Our team has been busy with many internal changes while managing all the needs of the region. Field Crops Specialist, Kevin Ganoë, has officially retired as of June 30. Our team will not be the same without Kevin; he has been a driving force in the region and within Extension. We will miss him very much but realize he has a list of interests he would like to pursue and grandchildren to enjoy. Please take a moment to read his farewell in the newsletter.

Finally, we would like to welcome Erik Smith, Ph.D. as Kevin's replacement as our Field Crops Specialist. Erik will take over the reins on August 1. The team is excited to have Erik joining us; please give him a warm CNY welcome when he arrives.

Remember, the team is always here for you; give us a call, schedule a Zoom, maybe even a socially distanced in-person meeting. We will continue to strive to provide up-to-date, time sensitive information to our producers.

All the best for continued health,
Nicole

Summer Checklist for Cows

By Jerry Bertoldo, NWN Dairy, Livestock & Field Crops Team

Originally featured in the July 2017 Issue of Ag Focus

The breeds of cattle common to the Northeast are not well suited for extremes of heat and humidity. Any temperature in excess of 70°F (even with low humidity) requires the adult cow to rid itself of excess metabolic heat. This is particularly the case for dairy animals housed together in confinement. Fans are a start at cooling. Unfortunately, cows do not sweat very much and have a large body mass, so moving air past them does not result in effective cooling as it warms into the 80's. Natural evaporative cooling resulting from sweat evaporation works great for us humans, but has to be artificially applied to cows with sprinkler systems.

Thermal stress affects cow comfort, nutrition, reproduction and immunity. Increased standing time leads to lameness problems while flies, inability to eat when desired or drink fresh, clean water can add another page to the stress playbook. There are many management considerations that have amplified impact at this time. The carryover of the negative impacts on productivity, conception rate, pregnancy retention and hoof health makes this more of a 5 month ordeal rather than a couple of months of bother during the peak of summer.

Here are some things to think about that are real deal breakers during summer heat stress:

- **Are cows able to drink soon after milking?** Cows will seek water and then feed after being milked. A second try later may not result in equivalent intakes.
- **Are calves given free choice water from the start?** Calves lose water during warm weather through increased respiration rates. Calves experiencing some degree of scours tend to dehydrate as well. Pre-weaned calves are capable of consuming 1-3 gallons per day!
- **Do you keep waste feed, manure piles, liquid organic effluence and standing water to a minimum?** Flies reproduce in various organic matter environments. Think about areas that accumulate such materials that should be addressed. Flies aggravate cattle of all ages reducing growth rates as well as being a vector for pink eye disease.
- **Do you refrain from vaccinating when the temperature could reach 85 degrees?** Increased core body temperatures result in poor response to immunization. Early morning is an ideal time to vaccinate cattle on a day that will be hot.
- **Do you restrict the lock up time for cows for breeding, examination or treatment on hot days?** Cows away from feed and water get anxious and compound the stress associated with high temperatures. Lock up areas should have high priority for cooling fans.
- **Do you keep foot bath management to a high standard?** Infectious hoof diseases thrive with moist conditions prevalent during the summer in confined housing. The softening of the hoof contributes to claw wear and potential problems as well.
- **Do you make sure stall grooming and raking is up to snuff?** No matter if you bed with manure solids, shavings or sand more humid weather and higher temperatures will promote faster growth of mastitis organisms when the moisture content increases in the bedding. Even fresh sand becomes contaminated with manure and urine at the back of a stall with normal traffic within a few days.
- **Does the feed stay relatively cool throughout the time it is available?** Feed heats with yeast and mold activity. More frequent feeding rates or addition of feed stabilizers can help. Better forage harvest and storage techniques are even better.
- **Do you check weigh backs, cud chewing rates, individual fat tests and stall utilization?** Heat alters behavior patterns. This includes reduced cud chewing, increased slug feeding, more on feet time and in the extreme bicarb loosing drooling – all leading to poor rumen performance and compromised performance.

Kevin Ganoë's Farewell

By Kevin H. Ganoë, Field Crop Area Specialist



Folks,

Tuesday, June 30, will be my last day on the job because after almost 42 years of extension work I will be retiring. It is hard to believe I am writing the words. But as they say all good things must come to an end and now is the time for me to move on to a new phase of my life.

Cancer surgery four summers ago and the recovery time off gave me a different view of the world and now I want to spend more time with the other things that are important in my life like a granddaughter in Texas and a new one on the way. I have remained cancer free so while in good health it is time to travel to see the kids and work on some projects here at home I have long wanted to start on. People keep asking what will I do with myself in retirement and I keep thinking which thing will I begin with.

I have all of you who have participated in our programs to thank for making this job so rewarding. I can't say that enough. What is special about this position is being able to teach or suggest something that you will use or see benefit from. You choose to participate in extension education making it a two-way street, where you are guiding where we go with the education as a participant. To this day I think the best meetings we held were ones where I could guide discussion among participants, you learned from each other and everyone got their questions answered. If you got the most out of those experiences, then I was successful because I know I got the most out of those sessions. They were fun, thanks to you!

There are so many of you to thank for your help and guidance I hesitate to single anyone out but in this case I hope everyone will understand if I make a couple of exceptions. Dave, Ashley, Mark and Nicole you have been terrific teammates and made life easy for me as team leader so a big thanks to the four of you. And a second big thank you to all the staff at the Herkimer CCE office that supported me over the past twenty-six years. I couldn't have wanted to be any place else.

It was never a chore especially in the summer to pack up the car, leave early and get home late. There was always someone new to meet, some new problem to solve and some new opportunity to help consider. When asked about missing this job I can tell you without hesitation what I will miss the most is simply walking your fields to see what is up. That was special.

I wish the very best in the future for you, your family, and your business.

Kevin



Will Dry Weather Create Forage Shortages this Winter?

By David R. Balbian, Area Dairy Management Specialist

We have seen quite dry conditions in much of our region and much of the state this past spring and into early summer. There has been some recent rain. However, it has been sporadic in nature. Some locations have seen a fair amount of rain (even to the point of some local flooding), while others have seen little precipitation or none at all. We have seen drought stressed corn and regrowth on hay fields (especially late harvested grass) be minimal at best. Late planted corn has really suffered. Some of the worst has been no-till corn into sod after first cutting. Pasture regrowth has also slowed. I always say, "Prepare for the worst and hope for the best." That being said, I put together a list of things to think about now before it is too late for them to be effective.

- **Preserve your haycrop (and corn silage you will be harvesting) well.** With tight forage supplies you can't afford to incur excessive storage losses. Consider lining your bunker silo walls with plastic. It really does reduce spoilage. Be sure it is packed well. This may also be a year when the oxygen barrier silage covers will really help you. Give them a look. Inoculants will have a greater change of payback this year as well.
- **Might you have some 3rd, 4th, or even 5th cutting to harvest late this year?** This may be the year to take all you can get off your fields. There certainly is risk (especially with alfalfa), but you may have little choice. If you go to the Pro-Dairy website and search for Resources for Forage Management in a Drought Situation you'll find some great resources. If you go to the Pro-Dairy website and search for *Resources for Forage Management in a Drought Situation* you'll find some great resources.
- **If you find that you will be short of forage** you need to act NOW to rectify the situation. What can you buy and at what price? The longer you wait the more difficult it will be to find forage to buy. Corn planted that was destined for grain can be diverted to silage. If you have neighbors who grow corn grain, they may be willing to sell it as silage.
- **Line up supplies of forage extenders now.** Feedstuffs such as wet brewers' grain, soy hulls, citrus pulp, beet pulp, wheat midds, cottonseed, and others are ingredients often used to extend forage supplies. The sooner you incorporate a forage extender into the diet the greater the impact will be. They will cost you some money. However, they may be a better bet than trying to secure additional forage when everyone around you is also short on forage. In addition, some of these ingredients may provide a production boost. For some that may not be desirable if your cooperative or handler caps your production output.
- **Determine the inventory you have.** You may want to estimate it now and then recheck it after CS harvest. Your nutritionist should be able to assist you in determining your feed inventory. If you will be short, the sooner you implement a plan to deal with it the better off you will be. A small forage savings plan implemented over a long period of time can really add up.

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Will Dry Weather continued...

- **Don't harvest your corn silage (CS) too soon.** Yields are maximized near 65% moisture, and losses during feeding, storage, and harvesting are minimized. If there is a year to maximize yields, this is it.
- **Harvesting at 34 to 35% dry matter** will also increase the energy concentration in your CS because starch levels will have increased. Use a Koster tester to check dry matters on field samples that you chop up. Work done at Miner Institute has shown that these sample dry matters consistently run about 2 points higher than what your feed out dry matter is. In other words, a dry matter reading you get from your Koster tester that says 34% dry matter will come back 32% dry matter at feed out. You should take that into account when making your harvest decisions.
- **Kernel Processing** is beneficial most years. If you are not kernel processing and you suspect that kernels will be hard, consult with your nutritionist prior to harvest. We do not want to be sending corn kernels out the back of the cow into the manure. If your ration has enough effective fiber from other sources (other than CS) you may be able to chop finer (to break kernels) without any health risks to your herd. BUT, be sure to double check with your nutritionist first.
- **Consider heavier culling.** This may include some youngstock. Be careful! You'll need youngstock to maintain cow numbers and to rebuild the herd. You need to be selective. Those heifers that had respiratory problems as calves are prime candidates. If you go to the Pro-Dairy website and search for *Ten Key Herd Management Opportunities on Dairy Farms During Low Margin Times* you'll find some great resources.

Don't have access to the internet?

It's not a problem.

Call the office at (315) 866-7920 and ask to have any of the above resources mentioned mailed to you.

Replacing Summer Pasture with Feeds for Cows Grazing Pasture

Written By: Dr. Rick Rasby, Professor of Animal Science

Animal Science, University of Nebraska–Lincoln, NE

Managing a cow herd in drought conditions is a challenge. An alternative to dry lotting beef cows in drought conditions or when pasture is expensive or in short supply would be to "substitute" some of the pasture with another feed. This concept means that cows remain in the pasture and another feed is fed as a part of the cow's daily feed consumed.

Substituting Feed for Pasture for Cows Grazing Pasture

There has been very little interest to replace pasture with another feed during the spring/summer while cows are grazing pastures, other than supplementing cows with salt and minerals/vitamins. Rightfully so because the nutrient quality of cool- and warm-season pastures, in most cases, are high enough to meet the energy and protein needs of lactating cows. However, if forage production in a pasture is limited due to drought or availability of pasture is limited due to high price or high demand, replacing pasture with feed may be an economical alternative. Producers considering using feed to replace pasture while cows are still grazing the pasture, should follow these guidelines.

1. They must have the labor and equipment to deliver the feed.
2. To reduce feeding losses, consider feeding in bunks. However, providing the forage replacement on the ground would allow producers to move the cattle around the pasture to improve grazing utilization of the pasture while reducing erosion due to trampling around a single feeding location.
3. It must be cost effective and feeds must be relatively cheap compared to total pasture cost.
4. The feeds used as the substitute for pasture must not have a negative effect on forage digestion because part of the diet is forage from the pasture

The thought process of replacing pasture with feed for cows grazing pasture would be to replace (substitute) some of the forage/pasture daily intake by the cow with an economical feed that doesn't have a negative effect on forage digestion. If this could be done, stocking rate could be increased on the pasture resource which would spread pasture costs over more cows or the available pasture could be "stretched" and used for a longer period of time. In theory, the rumen has a certain capacity, and once filled, cattle will stop eating. So part of the rumen would be filled with feed other than grass from the pasture they are grazing. This management strategy cannot have a detrimental effect on pasture longevity and sustainability.

Harvested forages such as alfalfa, grass hay, summer annuals could be used in a grazing situation to replace grazed forage and not have a negative impact on the total digestibility of the diet. The challenge using harvested forages to replace pasture is that harvested forages are usually expensive, especially in drought conditions. A second challenge is to get cows to eat the harvest forage instead of vegetative grass in the pasture. Cows likely won't consider eating the harvested forage until grass in the pasture is depleted. If there is daily access to a loafing area that the cattle could be gathered and fed the harvested forage before turning them out to pasture, then consumption of the harvested forage may be possible. This practice would take labor and fuel in addition to the feed and equipment to deliver the feed.

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Replacing Summer Pasture continued...

Grains, such as corn, are not a good choice, even if they were cheap as a feed substitute for cows grazing pasture. Data suggest that grains have a negative associative effect on forage digestion. Grains are high in starch and feeds that are high in starch tend to lower the pH of the rumen and make it an acid environment which promotes an increase in microbes that digest grains not forages. The consequence of this is a decrease in forage digestibility.

University of Nebraska researchers have studied supplementing mixtures of wet distillers grains mixed with low quality hay or crop residue in an attempt to replace grazed forage, without removing the cattle from the pasture. Corn distillers byproducts are very palatable and mixing them with low quality forage or crop residues has been shown to increase consumption of low quality roughage and, when fed to cows grazing pasture, will replace pasture consumed. The amount of the pasture replacement has been variable.

One study found that for each pound of the 45:55 ratio of WDGS:grass hay mix consumed by cows the mix replaced 0.22 lb of the grazed forage. This is lower than the targeted goal of 50 percent pasture replacement that was planned. This potentially could have negative impacts on native range health if it were stocked at a rate with cows with an assumed 50% replacement rate. The fiber content of the mix may not have been high enough to provide enough bulk to limit grazed forage intake as desired.

In another study, cow/calf pairs grazed pasture and received either 50:50, 40:60, or 30:70 WDGS:wheat straw supplementation at 50 percent of the estimated dry matter intake. The 30:70 WDGS:wheat straw treatment almost replaced grazed forage on a 1:1 basis. As the amount of WDGS increased in the supplement the amount of replaced grazed forage decreased.

For producers with crop residues in close proximity to their cattle, the 30:70 WDGS:residue combination may be a viable option to reduce grazed forage intake. Studies indicate that a blend of 30:70 WDGS:roughage appears to be the optimum blend to get the most forage replacement. Using this combination of byproduct:forage, producers could plan that for every dry matter pound of the combination fed, between 0.5 to 1.0 pounds of forage in a pasture on a dry matter basis could be replaced.



Guidance for Essential Workers Arriving in NY from U.S. States with Significant Community Spread

By: *Richard Stup, PhD Cornell University*

On June 24, 2020 the NY State Department of Health (NYSDOH) issued Interim Guidance for Quarantine Restrictions on Travelers Arriving in New York State Following Out of State Travel. This was in response to the high rates of COVID-19 infection now occurring in many southern U.S. states. NYSDOH is providing a regularly updated list of the restricted states and it currently includes 16 states. The NYSDOH Guidance requires anyone entering NY from those states to quarantine for 14 days. Some NY agricultural producers source part of their seasonal farm workforce from the southern U.S., especially during the fall harvest when labor demands reach peak. The June 24 NYSDOH Guidance contains the following language specific to long-term, essential workers:

Long Term – for essential workers traveling to New York State for a period of greater than 36 hours, requiring them to stay several days. This includes instances such as an essential worker working on longer projects, fulfilling extended employment obligations, and other longer duration activities.

- Essential workers should seek diagnostic testing for COVID-19 as soon as possible upon arrival (within 24 hours) to ensure they are not positive.
- Essential workers should monitor temperature and signs of symptoms, wear a face covering when in public, maintain social distancing, clean and disinfect workspaces for a minimum of 14 days.
- Essential workers, to the extent possible, are required to avoid extended periods in public, contact with strangers, and large congregated settings for a period of, at least, 7 days.

Note that the first bulleted item above indicates that essential workers should seek diagnostic testing as soon as possible upon arrival. It seems logical that if an essential worker receives a negative result from a COVID-19 diagnostic test then they can discontinue quarantine, we are working to confirm with the state that this is the case but do not have confirmation at the time of this post.

Farm employees continue to be classified as “essential workers,” this means that farm employees can work during their quarantine period. They are required to maintain a strict routine while at work and employers are well-advised to support and reinforce this working quarantine in order to protect others employees. NYSDOH and NYS Dept of Ag and Markets clearly described the working quarantine protocol in the Interim Guidance for Prevention and Response of COVID-19 at Farms issued on May 27, 2020.

Workers who are considered essential personnel, as described in the Department’s Health Advisory: Protocols for Essential Personnel to Return to Work Following COVID-19 Exposure or Infection, who meet quarantine criteria described above, may be allowed to work in accordance with the Department’s Health Advisory and if they:

- Remain asymptomatic.
- Remain in quarantine when not at work. Workers may be quarantined in their own home or at a location designated by the operator that meets LHD (local health department) quarantine requirements.

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Guidance continued...

- If it is difficult to provide for 6 foot separation between essential workers while in quarantine, essential workers may be quarantined in a recreational vehicle, a motel/hotel room, at home in their own room, etc.
- Rely on LHDs and employers to provide essential needs such as healthcare, food, medications, and laundry.
- Undergo temperature monitoring and symptom checks upon arrival to work, and at least every 12 hours thereafter while at work, and self-monitor (i.e. take temperature, assess for symptoms) twice a day when not at work. Operators must have thermometers on site to perform temperature checks.
- Wear a face covering while in the presence of any other individual.
- Immediately stop work and notify their supervisor if they develop ANY symptoms consistent with COVID-19. The LHD may be consulted on next steps as outlined below.
- Testing should be prioritized for essential personnel with symptoms.

COVID-19 diagnostic testing is available for all essential personnel. Contact your local health department for details about how to get the test.

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COVID-19 diagnostic testing is available for all essential personnel. Contact your local health department for details about how to get the test.

Click here for original article.

Erik Smith Appointed as Field Crop Specialist

*By Peter Landre,
State Extension Specialist for Regional Agriculture Programs*

Dear Colleagues,

On behalf of Director Chris Watkins, I am pleased to announce the appointment of Erik Smith to the position of Field Crop Specialist for the Central NY Dairy, Livestock and Field Crops Team, effective August 1. Erik comes to us with more than 15 years of experience conducting agricultural research and educational outreach as a graduate student, postdoc, and extension professional. As a Finger Lakes native with grain and forage crop farmers in his family where he spent time helping out farming, he has a deep connection to New York's agricultural community, and is looking forward to the opportunity to combine his skills and passion into serving farmers in the Central NY region.

Erik earned his B.A. from SUNY Oswego in Biology and his M.S. and Ph.D. from Cornell University in Entomology working with Dr. Brian Nault and Dr. Elson Shields. He conducted post-doctoral research with Dr. Shields on the use of entomopathogenic nematodes (EPN) as biological control agents for soil-borne insect pests of field crops (alfalfa, field corn) and fruit. He then served as an IPM specialist for the Agricultural Veterinary Authority of Singapore and a Research Scientist at the National Institute of Singapore.

Please join me in welcoming Erik to his new role in Extension as Field Crop Specialist for the Central NY Dairy, Livestock and Field Crops Team! Erik's email is eas56@cornell.edu and I will share his phone number when it becomes available.

Sincerely,
Peter Landre



Peter Burritt

Cornell University Summer Intern

Peter Burritt is a rising Junior at Cornell's College of Agriculture and Life Sciences. He is majoring in Agriculture Science, a major designed for students interested in starting a new farm business or taking over the existing family farm.

Peter is 7th generation from his ancestor, Peter Newman, who was a Revolutionary War veteran that received a 500-acre grant in Poland, New York, for his service. His sons split the land, settling in 1816, and Peter Burritt's family has passed it parent/child in direct succession. Peter's grandparents, J. Peter & Barbara Gorham, received a NYS Agriculture Society Century Farm Award in 1971 when it was the Newman-Gorham Farm, an active dairy farm.

It is Peter Burritt's goal to work with his parents, Scot & Lori (Gorham) Burritt, and diversify the farm from the forage crop operation it has been for almost 20 years. There are many plans for the direction that Peter will take his heritage and the family farm into. He is most excited that he will be taking it into its 3rd century of continuous family operations. His education at Cornell CALS has already changed how his parents are planting and harvesting, as they are implementing and experimenting with CALS programs and recommendations.

Peter Burritt is looking forward to completing his Cornell CALS education, then continuing his exposure through Cornell Cooperative Extension and using the tools that he will have developed to diversify the farm operation. The possibilities are very exciting.



Poison Hemlock Lurks in Pasture, Hay Bales

By Michigan State University

“Every summer we have livestock who have gotten into this deadly plant. Hopefully by reading this article we can all be more aware of the toxic plants that some of our fields have”.

– **Ashley McFarland, CNYDLFC Regional Livestock Specialist**



The toxic plant can cause birth defects and death in cattle, sheep, hogs and goats.

Pasture weed identification can be difficult, and in some cases, if you are wrong, it can prove debilitating or even deadly for livestock.

Poison hemlock is one pasture plant often confused with wild carrots. Tim Evans, University of Missouri College of Veterinary Medicine toxicology lead, says consuming poison hemlock early or in hay can cause birth defects or crooked calf disease.

Related: Poisonous plants that can kill cattle

“The thing we need to realize is this plant is extremely toxic,” he says. “The good news is generally when it's in its mature stages, it's generally not very palatable to most livestock. Most of the time, they're not going to go ahead and eat it. Unless for some reason it gets incorporated into hay, then the animal no longer has a choice in the matter, it's going to go ahead and consume it.”

Identifying poison hemlock

When determining whether a plant is poison hemlock or a wild carrot, look at the stem.

Related: Be watchful for toxic blue-green algae in stock ponds.

The first thing you notice about a poison hemlock stem is that it is smooth, says University of Missouri Extension agronomist Gatlin Bunton. “That is the biggest giveaway; there's no hairs on it,” he says. The second is that it has a purple color. Bunton says that to the contrary, the wild carrot stem has many fine hairs and is always green.

Poison hemlock is a biennial, so it grows year after year. The first year of it looks much like a rosette, low to the ground, with a small bush-like plant. By the second year, it is bolting and flowering. “And then is when it gets pretty hard to control,” Bunton says.

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Related: Poisonous plants that can kill cattle.

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Poison Hemlock continued...

CALF CONCERNS: Pregnant beef cows may have already eaten enough poison hemlock to cause problems for their future calf. Crooked calf disease can create problems with limbs, but also cleft palates.

The flowers look similar to wild carrot but are generally smaller. They are a flat-top flower made up of a lot of different smaller flowers. Still, at the flowering stage, it is easier to tell the difference because the purple stem is very visible.

Evans says poison hemlock is toxic, whether livestock graze it in the pasture or farmers bale it and feed it later.

Ingesting hemlock is toxic

Poison hemlock is made up of compounds that act like nicotine, Evans explains. There are two different types of intoxications that can be associated with poison hemlock. One is when livestock have what starts out as tremors and then eventually causes paralysis leading to death. The second has to do with the compounds in the plant, particularly in the early growth stages, being teratogenic, causing birth defects in calves, pigs, sheep and goats.

How an animal reacts depends on how much and when the poison hemlock was ingested. Symptoms include dilation of the pupils, reduced heart rate, coma, trembling, nervousness and difficulty breathing, and can occur as quickly as in two hours.

Evans is more worried about, for instance, cows consuming it in the early growth stage and during their early reproductive stage. For cattle, consuming it during the first 90 days of the first trimester can result in birth defects.

“It doesn’t take much to cause those adverse effects,” he warns. “And at that stage, you might not know there’s a problem if you haven’t seen it and the animals get into it.”

When the offspring are born, they have what Evans calls “multiple congenital contractures,” or what some call crooked calf disease. “You’ll see problems in their limbs; you may see a deformity in the back as well,” Evans explains. Some calves are born with cleft palates.

Whether a calf lives or dies depends on the severity of condition. Evans says those calves with cleft palate are prone to pneumonia, but those with a minor defect, like bowed legs, can live for quite some time. “It may be something the animal can survive,” he says, “but it is certainly not going to thrive.”

Both men agree ridding pastures of the poison hemlock will solve potential problems.

Destroying poison hemlock in pastures

Whenever poison hemlock reaches its second year of growth, it becomes difficult to control, Bunton says. Applying herbicides at the rosette stage are going to yield the best results.

He recommends Grazon P+D, or GrazonNext and including Remedy — that triclopyr component offers good control when looking to a broadcast spray option. For spot treatments, 2, 4-D or glyphosate plus dicamba works. Farmers also can manually remove poison hemlock with a shovel.

It is important to treat poison hemlock before going to seed. Mowing pastures can help, but it does not remove the plant from the field.

“The biggest concern is that we recognize that if there is a small amount in hay that animals get into,” Evans says, “it is a potential risk.”

Are You a Heifer Hoarder?

By David R. Balbian, Area Dairy Management Specialist

You are probably wondering what I mean by that title. By definition, a hoarder is one who collects or hangs onto things they do not necessarily need. A heifer hoarder is someone who raises every heifer calf even though they are not all needed as replacements.

Some people may be raising every heifer to increase herd size from internal growth. Others may want the luxury of deciding which heifers to keep and which ones to sell. They may also want the luxury of being able to cull more marginally profitable cows from the herd because they have a large number of replacement heifers waiting in the wings.

Multiple analysis on the cost to raise a dairy replacement in recent years have predominately come in at a little over \$2,000/head. With a few exceptions over the years, the cost to buy replacement heifers or the price you can expect to receive when selling them has been well below \$2,000/head. That being the case, why do people raise heifers? For most, it is because their own heifers are a known entity. They know the genetics, they know their health history, they know the environment they have been raised in and how they have been fed. They may also not want to deal with sourcing replacement heifers all the time and having to assume the health risks associated with bringing animals in from another environment. A “closed herd” gives some people comfort.

The chart on the next page in Table 1 provides some good guidelines regarding the number of heifers needed to maintain herd size. It is based on a 100-cow herd. As an example, if your annual cull rate is 33% and your culling age for 1st calf heifers is 24 months, you need to maintain 70 heifers to meet your needs. It is quite common on many farms for total heifer numbers to equal

near the number of cows in the herd. If that were true for our example there would be a surplus of 30 heifers on hand or an extra 15 heifers a year that are not needed. They could be sold. However, if they sold for \$1,200 each and it cost you \$2,000 to raise them, you lost \$800/head. That comes out to a loss of \$12,000/year! There certainly are times, although infrequent, when the market for replacements is strong and near breakeven prices are received. Assuming there are enough reasons to raise your own replacements and you are not expanding your herd, how might you manage your replacements to your best economic advantage?

Several considerations come to mind. The first is to look at the genetic potential each heifer has. To look deeper into genetic potential you might want to do some genomic testing on the newborn calves. Of course that requires an investment that some may not want to incur. The next I believe is likely the most valuable for most herds. That is to evaluate how healthy these calves are early in life. Respiratory problems, especially multiple respiratory problems, typically leads to permanent lung damage with resulting poor performance as a milking cow. You should consider culling those calves. For those herds with robotic calf feeders, data generated by these systems can also provide valuable information. Calves that are less competitive and drink at a slow rate tend to be poorer producers once they enter the herd. Again, those calves would be on the cull list.

Continued on next page...

Are You a Heifer Hoarder? continued...

If you are going to reduce the size of your replacement herd, the best time to cull them is early in life. Your daily cost is highest during the pre-weaned period and shortly after weaning when high levels of calf starter are being fed. It really is a matter of not investing more and more money into an animal that is less likely to be productive in the milking herd.

The other issue to consider is your annual need for replacements. If your cull rate is well over the 35% range, you need to ask yourself why. What are the issues that are causing this excessively high cull rate? Cows that are healthy, productive, and stay in the herd for a long time add to the profitability of the dairy. A high percentage of mature cows increases the likelihood that daily per cow milk production will be higher. Younger cows, especially first calf heifers, are still growing and will not be as productive as the older cows.

Number of Heifers Maintained, All Ages, for Various Calving Ages and Replacement Rates									
	Average Herd Size, Milking and Dry Animals							100	
	Non-Completion Rate*, Dairy Replacements							10.00%	
	Cow Replacement Rate, Percentage								
Calving Age Months	20	23	26	29	33	36	39	42	45
18	32	36	41	46	52	57	62	67	71
20	35	40	46	51	58	63	69	74	79
22	39	45	50	56	64	70	75	81	87
24	42	49	55	61	70	76	82	89	95
26	46	53	59	66	75	82	89	96	103
28	49	57	64	71	81	89	96	103	111
30	53	61	69	77	87	95	103	111	119
32	56	65	73	82	93	101	110	118	127

* Non completion rate represents the percent of heifers that start the replacement system that don't enter the dairy herd.

Prepared by: Jason Karszes, Senior Extension Associate, PRO-DAIRY, Cornell University

Table 1

Record Silking/Tasseling Dates for Corn Fields

By Joe Lawrence, Dairy Forage System Specialist - PRO-DAIRY

Tracking Growing Degree Days (GDD's) is an effective way to monitor the progress of a corn crop and in recent years a number of online tools for tracking GDD's have been developed. For the Northeast, the Climate Smart Farming GDD tool from Cornell is a great option. Dr. Kitty O'Neil with the North Country Regional Ag Team prepared an instructional video to use the tool. While this tool was designed to estimate GDD accumulation from planting, you can simply enter in silking/tasseling date in the planting date box to track accumulation from that date.

One approach to predicting corn maturity with GDD's is to monitor GDD's from planting to harvest and some seed brands provide estimates of GDD's needed for different hybrids. For corn, the 86/50 method is used for calculating GDD's, this references a base temperature of 500oF and a maximum of 860oF.

Considerations to keep in mind:

- The numbers provided for a hybrid are often from planting to physiological maturity (black layer) which is past the silage stage. A rough rule of thumb is to subtract 150 GDD's from this number to estimate the number needed for silage harvest.
- Studies have shown a fair amount of variation in the GDD's required from planting to silking, which could be exacerbated by the drastic temperature swings experienced in the spring of 2020.
- Figure 1 below demonstrates the variability of whole plant dry matter with data from the Northeast Corn Silage Consortium for a group of hybrids planted across multiple locations in the northeast.

Continued on next page...

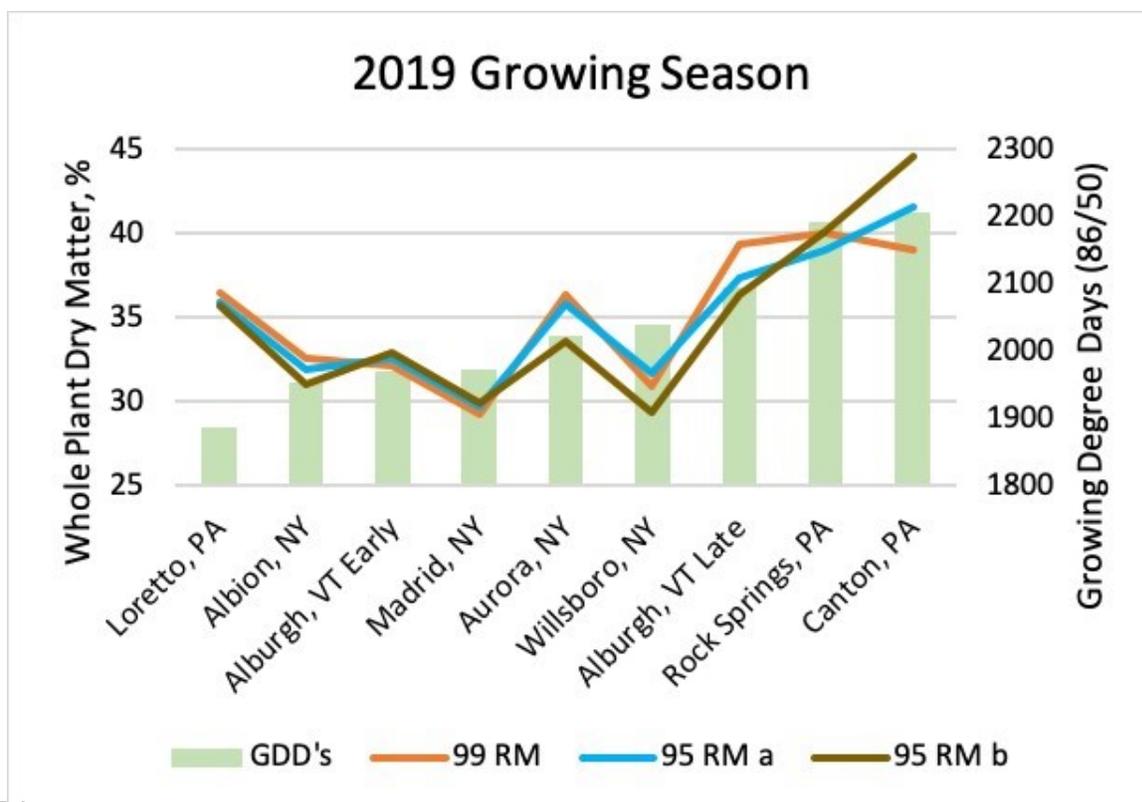


FIGURE 1

Data for three hybrids grown across multiple locations, illustrating the lack of correlations between whole season growing degree days and whole plant dry matter at harvest.

Record Silking continued...

Research in NY by Dr. Bill Cox assessed the number of GDD's required from silking to silage harvest timing in a multi-year study. While there is still some variability in GDD requirements from silking to silage harvest timing, this method offers better results than using full season numbers as it takes out the early season variability of GDD's needed from planted to silking. The average GDD's reported in the study are shown below in Table 1.

This study used 32 percent whole plant dry matter (DM) as the target for silage harvest; however, a better target is 35 percent whole plant DM. Therefore, the GDD targets reported in the study offers a sort of early warning for harvest. Once corn begins the dry down process an average rate of dry down is 0.5 percent per day (with a range of zero to one percent per day) indicating that the crop may reach 35 percent DM approximately 6 days after reaching these GDD targets for 32 percent DM.

When a field reaches these GDD targets, it is a good time sample fields and dry down samples for whole plant DM to further refine harvest timing.

Links to Article Resources:

[Click here for 'Climate Smart Growing Degree Calculator'.](#)

[Click here for 'How to use CS Growing Degree Calculator'.](#)

[Click here for the article website.](#)

Hybrid Relative Maturity	GDD's (86/50)
101-110	800
96-100	750
<96	750 or slight less (extrapolated)

TABLE 1

Approximate Growing Degree Days needed from silking to silage harvest.

Tick IPM #3: Asian Longhorned Tick IPM Webinar

The Asian longhorned tick (ALT) is a threat to companion animals, livestock, and potentially also to wildlife. So far this species in the U.S. has not been found infected with human pathogens.

Field population of ALT were first detected in the U.S., in New Jersey in 2017. Unlike all other U.S. hard ticks, ALT adults are all female (no males) and reproduce by cloning. This means that single individuals if displaced into a new site can generate very large infestations—each female can lay several thousand eggs. The presence of large numbers of ticks may interfere with IPM targeting other more dangerous ticks—such as blacklegged ticks—leading people to panic and overreact.



Unlike blacklegged ticks, ALTs can easily number in the hundreds and even thousands (depending on stage) in any given area and on animals. So far, they have not shown much interest in humans, but there are exceptions. Regardless, it can be alarming to find a few hundred ticks crawling all over your pants—which can still happen even if you are practicing good tick avoidance—or even more all over your legs if you are not.

There is still a lot we don't know about ALTs, so this will be an overview of what we do know about the biology, ecology, and vectorial capacity of this tick species—and how existing approaches for combating native ticks may either work or backfire on this species.

The presenters will also discuss other invasive tick species in the U.S. and the potential for additional ones to become established.

Dr. Dina Fonseca

Dr. Fonseca uses DNA tools to reveal incipient infestations of potentially invasive species, identify which traits are associated with expansion and damage of invasive species in order to optimize management strategies. From 2008–2013 she was the lead PI on a USDA-funded Area-wide cooperative agreement to control invasive day-biting mosquitoes. She has remained committed to the prevention and control of vector-borne pathogens by training better medical entomologists and working with mosquito control professionals. She is a founding member of the WHO/CDC funded Worldwide Insecticide Resistance Network, currently composed of 19 institutions worldwide that provide a unique framework for tracking insecticide resistance in mosquito vectors of arboviruses around the world.

Matt Bickerton

Matt Bickerton is the Public Health Entomologist for Bergen County, NJ, where he manages tick and mosquito surveillance and control efforts. He is also a Ph.D student studying Entomology at Rutgers University, Center for Vector Biology. He is looking at tick populations, particularly the invasive Asian longhorned tick and the blacklegged tick that transmits Lyme and other pathogens. His research interests involve finding strategies to control these pests in public areas.

[Click here to register to watch the recorded webinar on demand.](#)

Tell Us About You!

Please let us know how you would like to receive information from the CNYDLFC Team. Contact us via email at herkimer@cornell.edu or call the CCE Herkimer office at **(315) 866-7920**.

Let us know if you would like to be added to our email list. And, we'd like to know if you would rather receive our information via email only.

If you are you receiving more than one copy, or our correspondence is going to the wrong address, please let us know!

If you are no longer interested in receiving our mailings, please tell us this as well! We'd rather remove you from the list than have you throw our mailings away.

Let us know your area of interest, as we sometimes send targeted mailings. Categories include: Dairy; Field Crops; Livestock focusing on Beef, Goat, Sheep, and Swine; Agri-Business, Financial Management, Farm Labor Issues; or Other: Please tell us what your agriculture focus is. We may need to add other categories.

Resources

Click the organizations below to go to their page.

CNYDLFC Team Website

CNYDLFC Facebook page

NYCAHM

Farm Partners: 1-800-343-7527

NYS Ag and Markets: 1-800-554-4501

COVID-19

Need information? View the following Cornell CALS and CCE Resource Pages Updated Regularly:

General Questions & Links

Food Production, Processing & Safety Questions

Employment & Agricultural Workforce Questions

Cornell Small Farms Resiliency Resources

Financial & Mental Health Resources for Farmers

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