



North Country Ag Advisor

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Photo Credit: L. Ferlito

Cornell Cooperative Extension
North Country Regional Ag Team

CCE North Country Regional Ag Team

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North Country Ag Advisor

Published by the CCE North Country
Regional Ag Team

Layout/Design: Tatum Langworthy

"The North Country Regional Ag Team is a Cornell Cooperative Extension partnership between Cornell University and the CCE Associations in Jefferson, Lewis, St. Lawrence, Franklin, Clinton, and Essex counties."

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Blog: <https://blogs.cornell.edu/northcountryregionalagteam>
YouTube: https://www.youtube.com/@CCE_NCRAT

Our Mission

"The North Country Regional Ag Team aims to improve the productivity and viability of agricultural industries, people and communities in Jefferson, Lewis, St. Lawrence, Franklin, Clinton, and Essex Counties by promoting productive, safe, economically, and environmentally sustainable management practices, and by providing assistance to industry, government, and other agencies in evaluating the impact of public policies affecting the industry."

Field Crops and Soils

Rye Cover Crop Termination

By Michael Hunter

The early, rapid growth of winter cereal rye in the springtime can be challenging to manage before planting corn or soybean. There are different methods of terminating the rye cover crop. It can be killed 2 or more weeks before no-till crop establishment with herbicides, incorporated by tillage, harvested for forage, or flattened with a roller crimper unit.

Tilling rye when it is less than 12 inches tall is a good way to terminate the stand. Plowing or disking rye after it is over 20 inches tall ties up soil nitrogen, takes moisture from the soil, and is sometimes difficult to incorporate into the soil.

In no-till corn, glyphosate (Roundup) is the preferred product of choice for burning down cereal rye. Paraquat (Gramoxone) can also be used to burndown cereal rye before planting corn. Remember, paraquat is a non-selective, contact herbicide and requires good spray coverage for optimum control of the rye. Glyphosate is a translocated, non-selective herbicide that is less dependent on spray coverage. Air temperature before, during, and after glyphosate application can also influence control. Cold nights (<40°F) will reduce glyphosate activity, especially when followed by cool (<55°F) days. Cool weather (below 55°F) will slow the activity of paraquat, as will cloudy, overcast weather, but will not impact overall effectiveness.

The glyphosate rate will depend on the stage of growth of the rye at the time of application. However, in most cases it is only necessary to use the 0.75 pounds acid equivalent rate of glyphosate (22 oz/ac Roundup PowerMax). Glyphosate formulations will contain 3 to 5 pounds acid equivalent per gallon. With glyphosate, include appropriate adjuvants (if required) plus spray grade ammonium sulfate (AMS) at 8.5 to 17 lbs/100 gallons of water.

Paraquat works well on smaller cereal rye before it reaches the boot stage. Add a nonionic surfactant to the spray tank to enhance penetration and total kill. If you will be planting corn and choose to use paraquat,

consider adding atrazine in the tank mix to improve control of the rye. In 2009, research by Bill Curran at Penn State University, found that the additional of 1 quart of atrazine per acre, when used with paraquat, provided 99% control of 8-10 inch tall rye. Only 70% control of the rye was achieved when paraquat was used alone in this study. If you will be planting soybean and choose to use paraquat, consider adding 6 to 8 ounces metribuzin per acre to improve control of the rye.

If you have any questions or would like more information, contact Mike Hunter (315-788-8450; meh27@cornell.edu).



Photo Credit: M. Hunter.



Cornell Cooperative Extension
North Country Regional Ag Team

Cornell CALS PRO-DAIRY & Cornell Cooperative Extension

Hands-on Calving & Dystocia Workshop

Offered in English & Spanish at each site

Knowing the stages of labor and recognizing when a cow needs assistance are important skills. This workshop will educate attendees on those skills and will include a hands-on experience with a life-size model of a cow ready to calve along with her calf. Attendees will be able to practice a variety of dystocia situations.

There are 2 sites in Northern NY, with the same program offered each day (Spanish and English offered at each site).

Topics Covered:

- ♦ *Hands-on demonstration and practice delivering calves with the dystocia model*
- ♦ *Understanding the stages of labor and what calving tools to use and when*
- ♦ *Immediate newborn calf care and management*
- ♦ *Immediate postpartum cow care and management*

Speakers:

- ♦ Robert Lynch, DVM, Cornell PRO-DAIRY
- ♦ Daniela Gonzalez Carranza, DVM, Cornell

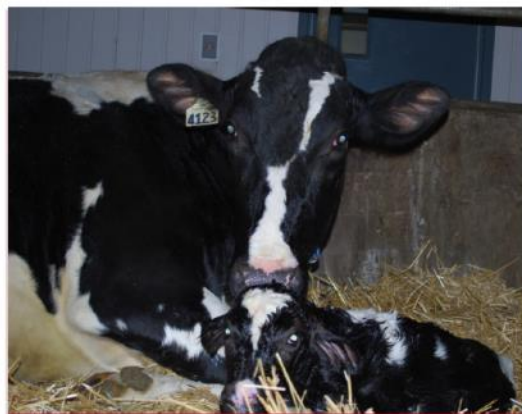
Registration: \$75 per person (includes lunch)

Registration for NNY on March 27 and 28, 2023:

<https://ncrat.cce.cornell.edu/event.php?id=2058>

** Pre-registration is required and registration is limited to the first 7 English and 7 Spanish participants per day. **

Cornell Cooperative Extension is an employer and educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities and provides equal program and employment opportunities. Accommodations for persons with disabilities may be requested by contacting the site registrar 10 days prior to the event.



Dates and Locations:

Northern New York

March 27, 2023

PAPAS Dairy

270 Wheeler Rd, North Bangor, NY

March 28, 2023

Kelly Farms

2221 Kelly Rd, Rensselaer Falls, NY 13680

South West New York

March 17, 2023 - Bath, NY

March 21, 2023 - Ellicottville, NY

Northwest NY

March 22, 2023 - Corfu, NY

March 23, 2023 - Romulus, NY

Central New York

March 24, 2023 - Morrisville, NY

South Central New York

March 15, 2023 - Ithaca, NY

March 16, 2023 - Cayuga Co, NY

Each region will offer separate registrations for their programs.

For more information contact:

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Managing Hay Quality and Harvest for Better Marketing

By Kitty O'Neil and Aaron Gabriel, Cornell University Cooperative Extension

After a season of abundant yields, growers often complain of difficulty marketing and selling their hay. When hay is more scarce, hay sometimes 'sells itself' and growers don't need to work as much at marketing. When hay is plentiful, however, growers cannot depend on buyers doing the work of seeking hay sellers and will need an effective marketing plan. Additionally, a hay grower may need to be flexible and offer something extra, like high nutritional quality, hay low in sugars, or an unusual bale size to capture a certain market or sale. A thorough understanding of the range of hay quality, of nutritional needs of different types of livestock and logistical bale needs for brokers and buyers are necessary to market hay successfully.

In NYS, we grow grass, legume, and mixed grass-legume hay, and we harvest and store it as dry hay, baleage, and haylage. Dry hay is bought and sold routinely, in bales of various sizes and shapes, with baleage and haylage harvested and sold as cash crops much less commonly. We'll focus on dry hay in this article, but many of these ideas would help manage quality and marketability of baleage and haylage as well.

There is more than just color, smell, and texture to hay quality. By understanding hay quality and the needs of livestock, we can thoughtfully market hay and be successful. Today, we recommend using a forage analysis to provide forage quality details. A basic \$25 wet chemistry lab analysis will report percentage dry matter (DM), crude protein (CP), neutral detergent fiber (NDF), NDF digestibility (NDFD), and several other parameters. This analysis provides a great overview of the nutritional quality of any lot of hay and can also be used to formulate animal diets. An excellent online overview of forage quality (Ball *et al.*, 2001) is listed at the end of this article. The nutritional needs of livestock vary greatly depending on species, reproductive status, stage of growth, lactation, and fattening goals (see Table 1 below). Lactating animals need hay high in digestible energy, while non-lactating animals may have lower energy and nutritional demands, just enough for healthy maintenance. Growing lambs and steers need good digestible energy and protein. Horses with metabolic challenges may need hay low in sugars. Those with poor teeth need soft hay. Dry cows need hay low in potassium. Finishing beef animals on grass only requires forage that is very high in digestible energy, but not too high in protein. Animals that consume excess protein (lush pasture, early cut legumes and grasses) waste energy

because the liver works overtime to metabolize and excrete the excess protein. Birdsfoot trefoil has gotten new attention because of its effectiveness in reducing internal parasites in livestock. In this article, we describe some ways that hay quality may be managed to meet specific marketing requirements. Producing forage suitable for each of these situations requires understanding market needs, knowing the factors that affect forage quality, then making management decisions to achieve the right outcomes. Our decisions from plant species and field selection to harvesting and storage all affect hay quality and marketing success.

Plant maturity has the greatest effect on hay quality, which means cutting at the right time is the biggest factor for hitting your quality target. As grasses and legumes develop in the spring from vegetative stages, through stem elongation, to flowering and beyond, the amount of undigestible lignin increases rapidly, and so does fiber (NDF) in general. NDF digestibility and CP content decrease at the same time.

For peak NDF digestibility and overall digestible nutrient content, grass needs to be cut by the late boot stage, just before flowering. Alfalfa and other legumes are at peak quality at the late bud stage, when about 10% of plants have begun flowering. These legumes often flower with the latest grasses in the spring. Mixed grass-legume stands may have plants reaching peak quality at different times and a more sophisticated method is needed to estimate best cutting time – using alfalfa height. Cornell Cooperative Extension Educators and Specialists across the North Country publish a weekly 1st Cutting Alfalfa-Grass Progress Report each spring to help farms evaluate mixed stands and time their first cutting to match quality goals. Make sure you're on our email list to receive those bulletins each spring.

Not all livestock need peak quality hay. Peak quality hay is high in CP and NDFD and possibly sugars and is ideal for high-producing lactating cows, fast-growing livestock, and other animals that require the highest quality forages. Hay quality changes quickly during rapid spring growth, however, with NDFD declining about 1 percentage unit per day. This means there's about a 12-14-day difference between great hay for lactating or young, rapidly growing animals and coarser stuff suitable for overwintering a

Continued Page 6...

Table 1. General dietary and nutritional needs for some different animal classes. Summarized from Ball et al., 2001.

Animal type	NDF, % DM	CP, % DM	Additional notes
Mature animals at maintenance	≤ 70	≥ 8	
Breeding, 'flushing'			+10-20% digestible energy
Last 10% of pregnancy	≤ 50	10-12	
Young, growing, >50% mature weight	55	12	
Young, growing animals, <50% mature weight	30 - 40	16 - 18	
Lactating, nursing adult animals	≤ 55	12 - 14	
High-producing lactating adult animals	25 - 30	16 - 18	Also significant Ca and P requirements. Difficult to achieve with all forage diets
Fattening, finishing animals	≤ 25	8 - 10	Difficult to achieve with all forage

mature, non-lactating animal, if all goes well. Even with the best intentions, harvest timing can be delayed by weather and equipment problems, so it's best to begin mowing a little bit early to get most of it on the desired schedule.

Occasionally, we have a spring where it never stops raining long enough to make dry hay and first cutting for many farms may be delayed until July or even later. In that situation, a dead, brown first cutting with little nutritive value and a higher quality second cutting are combined in one harvest. Once grass plants complete reproductive growth (flowering and seed production), they senesce or die and restart vegetative growth, assuming adequate soil moisture. So, a forage analysis of August 1st-cutting hay may say you have lots of indigestible fiber (old first cutting). However, animals may be able to sort through the coarse stemmy hay and just eat the soft hay in the bale. Though not ideal, for over-wintering mature cattle and horses that are simply maintaining bodyweight and condition, this low quality mature hay may still be suitable, though animals will waste more than usual and the price would reflect this lower value.

Grasses mature at different times in the spring, depending mostly on daylength, influenced a little by heat (speeds it up) and drought (slows it down). Flowering dates from earliest to latest, are typically Kentucky bluegrass > orchardgrass > tall fescue/meadow fescue/bromegrass/perennial ryegrass > reed Canarygrass > timothy. Alfalfa and red clover typically flower with the later grasses. For alfalfa-grass mixtures, lots of farms like to use reed Canarygrass or perennial ryegrass to more closely time the grass and alfalfa maturity.

Plant species has an impact on hay quality. Alfalfa (properly harvested) provides very good nutrition for animals that need it and is a favorite for dairy herds. Alfalfa quality changes

more slowly with plant maturity and can therefore be more forgiving when harvest is delayed, compared with grasses. Alfalfa and alfalfa-grass mixtures have potential for high yields of 20% CP forage with 40% NDF and 40+% NDFD. Alfalfa also often produces better during summer drought than grasses, as it is able to access soil moisture longer in dry soils. Here in the Northeast US, we use many different cool-season grasses for livestock forage – each has characteristics to help it fit different situations and applications. Meadow fescue has received attention over the past several years because it often has the highest NDFD among our cool-season grasses. Its leaf curls a bit when dried, so it can be “wiry” as a dry hay. Like many cool season grasses, it also ‘slumps’ in the summer heat and doesn’t grow well during that time of the year. Perennial and annual ryegrass are high in sugars. The ryegrasses have waxy leaves that cause them to dry a bit slowly, so they may be better suited for baleage than dry hay. Smooth bromegrass holds its quality very well as it reaches maturity.

Like bromegrass, timothy makes a nice leafy hay. Neither of them grow well in summer heat. They are good choices for two-cut systems. Orchardgrass grows the best in summer heat and makes a nice hay. Reed Canarygrass is very leafy, but can have a coarse, unpalatable texture if mowing is delayed and it becomes too mature. Harvesting mature reed Canarygrass as baleage or haylage works best in those scenarios.

Orchardgrass and reed canary grass, with good fertility management can be cut multiple times during the year. Kentucky bluegrass has high forage quality but traditional varieties have low yield. Tall fescue is best suited for haylage. It has a tough stem and leaf texture, but it yields well and

Continued on Page 7...

some varieties have very good NDFD. It is also winter-hardy, and tolerates heavy soils. Only endophyte-free or novel endophyte tall fescue should be planted.

Tall fescue intended for lawn or turf has an endophyte fungus that lives within the plant which produces toxic alkaloid chemicals. These alkaloids can cause abortions, edema, and disrupt body temperature regulation. Horse owners often avoid clover hay, because it is more likely to be dusty, having been difficult to dry in the field. Horse owners also avoid red and ladino clover hay because it can be infected with a *Rhizoctonia* fungus that can cause horse slobbers. We don't use birdsfoot trefoil for hay very often as it is not a high-yielder, but it contains a tannin which has been shown to reduce internal parasites. Sheep and goat owners may prefer this species as they must prioritize management of internal parasites.

Selecting appropriate grass and legume species should be based on soil type, soil pH, intended livestock use, and harvest methods. Grass and legume species have different adaptations to soil drainage and moisture. Reed Canarygrass and meadow fescue tolerate wetter soils than other grasses, with bluegrass, ryegrasses, brome grass, and orchardgrass preferring the most well-drained soils. Timothy and tall fescue are intermediate. In poorly drained soils where only reed Canarygrass is adapted, accept the fact that first cutting may often be delayed and over-mature and secure the appropriate market or use (bedding, low nutritional needs, straw replacement, chopped before feeding). When the best nutrition is needed choose grasses with good fiber digestibility (meadow fescue) and high sugar (ryegrasses). For horses needing low sugar diets, ryegrass is a poor selection. Cornell University's Forage Species Selector Tool (linked at the end of this article) is designed to help choose the best grass and legume species for any field, selected from a map, based on soil type, pH and planned uses. This tool is able to consider each plant species' preferences for soil pH, drainage, and fertility along with best uses and harvest methods to recommend species and species mixtures that will perform best. Additional information is available through the tool about potential yields, seeding rates, and management.

Soil fertility has a big impact on forage quality. For good yield and %CP, grasses require nitrogen (N) from soil organic matter decomposition, fertilizer or manure, or some other amendment. Legumes are able to fix their own N from the atmosphere. We recommend no added N for fields with $\geq 50\%$ legume as the additional N can benefit the grass enough to drive some legume from the stand. All established grass fields should be topdressed with N from 20 to 200 lbs of N per acre per year depending on yield potential, manure history, and how intensively it will be harvested. Nitrogen should be

applied in multiple applications beginning in early spring, at green up just prior to plant demand. When legume content is between 25 and 50% of the stand, 30 to 50 lbs of N per acre is recommended as a topdress application in early spring. Potassium (K) fertilization is important for good alfalfa management, especially for fields with no manure history. Alfalfa persists and overwinters best when soil K is sufficient. However, plentiful K is not a good thing when it comes to producing forage for dry cows. Manured fields should be tested for potassium content when the forage is intended for dry cows. Farms prefer to feed low K forages, if possible, in the 3 weeks prior to calving to reduce risk of hypocalcemia and milk fever. Alfalfa can take up excess soil K and grasses are very efficient at taking up K, so both plant species can have high K content on high K soils, which can occur on fields with a manure history. For grasses, good N fertility without providing high K can result in a forage with low K suitable for dry cows. Also, hay that has been rained on during wilting and drying may lose some K to leaching.

Harvest and storage management greatly impacts forage quality at every step as well. When high quality hay is the goal, care should be taken to preserve all the energy and protein content in the plant at the time of mowing. To retain the most nutrients, mow after a few hours of sunlight in the late morning and dry the hay as fast as possible, preserving leaves and drying quickly. Much attention has been focused on 'wide swath' mowing over the past several years. Leaving hay in a full width swath behind the mower permits maximum respiration and rapid initial drying until moisture content is reduced enough to stop respiration. Grass and legume leaves contain most of the protein, simple carbohydrates, digestible fiber, and minerals in the plant. Fertilizing heavily in the spring can produce a heavy first cutting yield, that it will be hard to dry quickly. Consider baleage if peak quality hay is needed but drying quickly is not feasible.

Conversely, to make hay for metabolically challenged horses, you can intentionally lose or minimize nutrients to make low-sugar hay. If plants are left in a tight windrow for a day before tedding, it will slow the drying process, prolonging respiration and the loss of sugars. Heavier yields/swaths will take longer to dry (and lose more sugar) than a lighter cutting. Another strategy is to mow in the morning after a warm night, to take advantage of naturally low point in plant sugar content. Then leave swaths heavy so as to not rush drying the first day, so more sugars can be respired.

Leaves can be lost by raking, tedding, or baling at high speeds or when the hay is too dry, drier than 35% moisture. Adjust

Continued Page 8...

machinery ground and PTO speeds to work windrows gently and rake before 35% moisture and finish drying forage in a fluffy windrow. Equipment tines set too low will scratch soil into the hay. If your forage analysis shows greater than 10% ash, then you may have contaminated your hay with soil in this way. Soil contamination is especially bad for baleage, since it will introduce *Clostridia* bacteria which will compromise fermentation.

Lastly, consider bale types in your marketing strategy. Large round bales, weighing 400 to 900 lbs are most commonly bought and sold in today's hay market. Many grazing farms are set up to move these bales with a small tractor and feed them on outdoor feeders. Not all farms are equipped to move and feed large round bales, however. Horse farms and farms housing livestock in older stanchion-style dairy barns may need to use small square bales. Some farms are setup to move and feed larger square bales. Hay can be chopped or conditioned at the baler too. Large round bales of medium quality that have been 'rotocut' or macerated may have fewer long stems and less waste than unconditioned bales. Tightly wrapped bales that maintain their shape and structure will be more saleable than those that do not hold up to time and weather. All these features can result in hay that is more, or less, marketable.

We can't control the weather, unfortunately, which is very important for making good dry hay. The ideas here serve more as a list to keep in mind when the opportunity is presented, to take advantage of a window of appropriate weather for making good, marketable hay of some kind, even if it's rained-on low potassium hay for dry cows. Generally, the long cool days of spring result in high fiber digestibility and high sugars. Late-summer hay, with cool temperatures and short days, is usually highly digestible, high in protein, but low in sugars. Use forage analyses to know exactly what you've got and market accordingly.

Additional resources:

1. Ball, D.M., M. Collins, G.D. Lacefield, N.P. Martin, D.A. Mertens, K.E. Olson, D.H. Putnam, D.J. Undersander, and M.W. Wolf. 2001. Understanding Forage Quality. American Farm Bureau Federation Publication 1-01, Park Ridge, IL 20 p. <https://fyi.uwex.edu/forage/files/2017/04/FQ.pdf>
2. Cornell University Forage Species Selector Tool, 2022. <https://forages.org/>.



Photo Credit: BING

“Dairy Technology Tuesdays” Webinar Recording Links

By Lindsay Ferlito

Health Monitoring and Reproductive Management – Dr. Julio Giordano, Cornell University
<https://youtu.be/ozfIMEu205I>

Technology for Housing and Managing Dairy Calves – Dr. Joao Costa, University of Kentucky
<https://youtu.be/3aZtQowexIM>

To Retrofit or Not to Retrofit – Timothy Terry, PRO-DAIRY, Cornell University
<https://youtu.be/ogI0ETi0Z68>

Utilizing Drones to Track Forage Inventory – Harrison Hobart, Alltech
<https://youtu.be/sG-yRNV5vfl>

Looking Ahead: Dairy Technologies of the Future – Dr. Jeffrey Bewley, Holstein USA
https://youtu.be/jf9tO2_H4E

From Robots to Low-Cost Parlors: How Do Ya Milk a Cow? – Dr. Larry Tranel, Iowa State University, and
Parlors, Rotaries, or Robots: What Technologies are for Me? – Dr. Nancy Charlton, DeLaval
https://youtu.be/5-6FyLp_L-c

Integrated Barn Climate Systems – Mark Reynolds, ASAP Interiors
<https://youtu.be/gMLQKmXCuF0>

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Photo Credit: L. Ferlito

New York State Dairy of Distinction Award Application Available Now

Date: March 9, 2023

CONTACT: Marylynn Collins// 315.736.3394 ext. 132// mrm7@cornell.edu

FOR IMMEDIATE RELEASE

Are you a New York State dairy farmer or do you know of one that is interested in applying for the distinguished Dairy of Distinction Award? Applications are now available online by visiting <https://www.dairyofdistinctionawards.com/>. Deadline for applications is April 15, 2023. NY DOD program is appreciative of all its volunteers across the state that help keep this program rolling. We are often looking for district representatives, judges, and individuals to join our board of directors. Retired dairy producers and/or agribusiness are encouraged to get involved in their regions. Reach out to Marylynn with questions or interests in getting involved at mrm7@cornell.edu. If you would prefer a hardcopy of the application, please contact Alex Harrington at ash273@cornell.edu or 315.736.3394 ext.132.

####



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Beginning Farmer Programs
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North Country Hay & Pasture School

March 16th, 21st, and 28th

7-8:30PM



March 16th: Silvopastures as a Strategy to Expand and Enhance Grazing Systems, Speaker: Brett Chedzoy- CCE Schuyler

March 21st: Selecting Forage Species for Your Pasture, Speaker: Kitty O'Neil- CCE NCRAT

March 28th: An Intro to Grazing Solar Arrays, Speaker: Jonathan Barter- American Solar Grazing Association

Join in-person at one of five locations: CCE Clinton, CCE Franklin (at FSA office), CCE Jefferson, CCE Lewis, or CCE St. Lawrence
OR on Zoom



Registration fee: \$10/session

Register for one or all three at this QR code or link:

https://ncrat.cce.cornell.edu/event_preregistration_new.php?id=2059

Cornell Cooperative Extension

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LUNCH AND LEARN

Opportunities and Considerations for Co-digestion of Manure and Food Waste

DATE AND TIME

Wednesday, March 29, 2023
11:30 AM to 1:00 PM

LOCATION

Stauffer Farms

925 County Road 54
North Lawrence, NY 12967

Dairy farmers in the Northern New York region are welcome to attend this event free of charge to learn about the economic feasibility of anaerobic digestion of dairy manure with food waste (co-digestion).

Cornell PRO-DAIRY staff will present their key findings from an economic feasibility case study analysis of co-digestion on an 1,860 lactating cow equivalent-sized dairy farm located in Northern New York.

TOPICS

- Food waste sources and tipping fees
- Biogas generation and utilization options for energy
- Digested effluent storage and nutrient management planning

Brief presentation followed by 30 plus minutes for questions and discussion.
Lunch is included (free)!

SPEAKERS

Lauren Ray

Agricultural Sustainability and
Energy Engineer
Cornell CALS PRO-DAIRY

Angela George

Dairy Environmental Specialist
Cornell CALS PRO-DAIRY

SPONSORED BY

Northern New York Agricultural
Development Program



EVENT COORDINATED BY

Cornell Cooperative Extension
North Country Regional Ag
Team

REGISTER ONLINE (free)

[https://ncrat.cce.cornell.edu
u/event.php?id=2083](https://ncrat.cce.cornell.edu/u/event.php?id=2083)

FOR MORE INFORMATION

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What's Happening in the Ag Community

Check out the CCE NCRAT Website, Blog, and YouTube channel for up-to-date information and content.

Hands-On Calving and Dystocia Workshop, March 27th and 28th, see page 4 for more information.

Hay and Pasture School Sessions starting March 16th, see page 11 for more information.

Lunch and Learn: Opportunities and Considerations for Co-digestion of Manure and Food Waste, March 29th, see page 12 for more information.

Please note that Cornell University Cooperative Extension, nor any **representative thereof, makes any representation of any warranty, express or implied, of any particular result or application of the information provided by** us or regarding any product. If a product or pesticide is involved, it is the sole responsibility of the User to read and follow all product labelling and instructions and to check with the manufacturer or supplier for the most recent information. Nothing contained in this information should be interpreted as an express or implied endorsement of any particular product, or as criticism of unnamed products. The information we provide is not a substitute for pesticide labeling.