

North Country Ag Advisor

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Cornell Cooperative Extension North Country Regional Ag Team

VOLUME 5 ISSUE 3

CCE North Country Regional Ag Team

Kitty O'Neil, PhD Field Crops & Soils 315-854-1218 kao32@cornell.edu

Casey Havekes Dairy Management 315-955-2059 cdh238@cornell.edu

Kelsey O'Shea Ag Business Management 315-955-2795 kio3@cornell.edu Michael Hunter Field Crops & Soils 315-788-8450 meh27@cornell.edu

Lindsay Ferlito Dairy Management 607-592-0290 Ic636@cornell.edu

Tatum Langworthy Sr. Admin Assistant 315-788-8450 tlm92@cornell.edu

CCE Harvest NY

Lindsey Pashow Ag Business and Marketing 518-569-3073 lep67@cornell.edu

CCE County Ag Educators

Betsy Hodge (St. Lawrence) 315-379-9192 bmf9@cornell.edu

Billy Bullock (St. Lawrence) 315-379-9192 wrb93@cornell.edu Carly Summers (Essex) 518-962-4810 cfs82@cornell.edu

Jessica Prosper (Franklin) 518-483-7403 jlr15@cornell.edu

Mellissa Spence (Lewis) 315-376-5270 mms427@cornell.edu

Robin Wendell-Zabielowicz (Lewis) 315-376-5270 rw583@cornell.edu

North Country Ag Advisor

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

"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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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 The NYS Hemp Industry – 2020 Update By Kitty O'Neil

The hemp scene in NYS is a big, awkward, 4-year old. To date, the hemp industry has been a rapidly changing system of growers, processors, buyers, customers, researchers, and regulatory agents – each with growing pains. As a whole, the NYS hemp industry is administered and regulated by the Plants and Natural Resources Division of Ag & Markets, and they've done an excellent job of quickly translating dynamic political progress into order, regulations, and guidance. Hemp first became a legal research crop in the US as a result of the 2014 Farm Bill. NYS changed its rules to permit hemp more widely in 2016. The 2018 Farm Bill made further improvements by removing hemp from the list of federally controlled substances and providing a framework for states to begin handling hemp as an agricultural commodity.

First, a bit about hemp, the plant. Industrial hemp (Cannabis sativa, L., ≤0.3% THC) is a very close relative of marijuana (>0.3% THC). It's an annual, herbaceous, flowering plant native to eastern Asia, but is found worldwide. Wild types are even found in NYS. Humans have utilized cannabis for many purposes throughout our history - its fiber, seeds, oils, and psychoactive properties. Thousands of years of selective breeding has produced varieties with widely different traits which are suited for different parts of the world and for distinct uses. Many varieties of hemp are dioecious - with distinct male and female individual plants. Other varieties are monoecious, meaning one plant has both male and female flowers. Differences between male and female plants and flowers are important - male plants are often smaller and their flowers do not produce grain. Because of this impact on growth and yield, some varieties have been developed to be 'all female' with just a few male plants for pollination. For high CBD yield, unpollinated, bushy, widely spaced female plants with many flowers are desired, while grain and fiber hemp crops include both male and female plants and are planted much more densely, producing tall slender plants. Pollination of a CBD crop reduces CBD yield, so attention to male plants, wild plants, and neighboring crops is necessary because hemp is wind-pollinated. Seed set on grain crops is typically indeterminate, meaning that seeds continue to develop and mature over an extended period of time resulting in both mature and immature seeds on the same seed head at time of grain harvest. Typically, hemp is a shortday plant, meaning flowering is triggered when hours of daylight shorten to a critical point regardless of plant size, though some autoflowering, or day-neutral, varieties are available.

Recommended cultivation practices for hemp production vary

as widely as the preceding details, therefore the best place to start with hemp production is with a buyer contract. We always recommend starting with a contract before planting any hemp because there is not a reliable open market for hemp. Processors and buyers can specify their requirements – whether biomass for CBD extraction, or partially dried stems for



fiber processing, or dried grain for food uses - and the grower can then backwards-plan site selection, growing methods and sourcing seeds, equipment, and correct input materials. Hemp prefers fertile, well-drained soils with pH 6.5 to 7. A good hemp crop needs high fertility, similar to wheat or corn. Seeding rates range from 1500 to 1.2 million seeds per acre. Many insect pests and pathogens cause problems for hemp. Some common pests are armyworm, Japanese beetles, European corn borer, Sclerotinia white mold, Botrytis gray mold, and Fusarium. Hemp also attracts unique and new pests. Currently, 86 pesticides are approved for hemp in NYS, all are unrestricted, and most are fungicides and insecticides. There are ZERO selective herbicides on the list. For all types of hemp, beginning with a weed-free field is recommended, which requires good weed management for 2-3 years prior to a hemp crop. If planted in a timely manner, hemp can suppress weeds well, however weeds are often problematic for late-planted crops or in weedy fields. To look up approved products for hemp in NYS, access the NYSPAD database compiled on the NYS DEC website. The link is listed at the end of this article.

Harvesting methods are also specific to the type of crop grown and its intended use. Specifically tuned or designed grain combines, mowers, chopping heads, balers, grain dryers, and other equipment are commonly used. CBD crops are often manually cut, transported, and dried in open sheds or by large fans. Harvesting methods and timing as well as storage and drying requirements and methods may be specified by processors or buyers and should be very carefully researched before planting a hemp crop. Many hemp buyers *Continued on next page...* Before buying seed or planting any hemp in NYS, a permit application must be submitted to and approved by NYS Ag & Markets Plants and Natural Resources Division. A link to this application information is included at the end of this article. This Ag & Markets website is also the best access to up-todate changes to the NYS Industrial Hemp program, which has changed frequently as the federal laws and application submission rates have changed. Currently, applications are being accepted for growing hemp for any purpose. The application and agreement is called a 'Research Partner Agreement' under the present system. Once your application is submitted, along with \$500, and approved, your permit allows hemp production, per the details in your agreement, for 3 years. Your agreement will list background checks, inspection, testing, auditing, and reporting requirements. Provisions for sub-contracting may or may not be

available. A list of 617 already-permitted growers and processors is also available on the Ag & Markets Industrial Hemp website and is also linked below. This list may be a good way to start to find a potential buyer for any planned hemp crop.

The NYS hemp industry is a rapidly growing network of growers, processors, manufacturers, and markets. Like any new and not-yet-matured industry, it is unstable, unbalanced, and beset with risks. In 2017 and 2018, processors competed aggressively to purchase raw hemp materials from growers. In 2019, raw hemp production far outpaced processing capacity and many Northeast growers are still left with unsold biomass. Many fields were not even harvested in 2019. The hemp industry surely offers opportunity for NY farmers and entrepreneurs, but be aware and cautious. Attend some of the many conferences and workshops offered on hemp methods and regulations around the state and learn everything you can. Line up a buyer contract and apply for a permit before any farming begins. Lastly, Cornell is actively researching many aspects of all types of hemp production and processing and shares results on a website listed below. Among the info available at the Cornell website are variety trial results, economic and cost-of-production analyses for different types of hemp, hemp industry news, and upcoming events around the state.

Additional resources:

- Smart, L. and M. Ullrich. 2019. Beginning Hemp? Keys to Successful Production in New York State. <u>https://cpb-use1.wpmucdn.com/blogs.cornell.edu/dist/a/7491/</u> <u>files/2019/08/Beginning-hemp.pdf</u>
- NYS DEC Bureau of Pesticides Management Information Portal <u>http://www.dec.ny.gov/nyspad/products?2</u> Click the 'Advanced Search' button then select 'Hemp (Industrial)' on the list under Pesticide Use and click 'Search' button.
- New York State Department of Agriculture and Markets, Plants & Natural Resources Division, Industrial Hemp website. <u>https://agriculture.ny.gov/industrial-hemp</u>
- New York State Department of Agriculture and Markets, Plants & Natural Resources Division, List of Authorized Research Partner Growers, Processors and Grower-Processors. <u>https://agriculture.ny.gov/system/files/documents/2020/02/authorized_research_partners.pdf</u>
- 5. Cornell University Hemp Research Projects, Results, News and Events. <u>https://hemp.cals.cornell.edu/resources/our-research/</u>



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JEFFERSON COUNTY ECONOMIC DEVELOPMENT

Thursday March 19th, 2020 7pm and Friday March 20th, 2020 9am - 2pm

Jefferson County Agricultural Development Conference

Our featured speaker is The Farm Babe!

Michelle Miller, also known as The Farm Babe, is an online influencer, columnist, popular keynote speaker and farmer from Iowa. She will be speaking on Thursday, March 19 at Sturtz Theater on the Jefferson Community College campus, and during the Ag Conference on Friday, March 20 at the Hilton Garden Inn, Watertown. She and her boyfriend operate a 2,200 acre crop, sheep and beef farm. Miller is known as a dedicated agricultural "myth buster" with over 120,000 followers and an average social media reach of 3 million monthly views. She has been featured in Forbes magazine and was recently a guest on Dr. Drew.



Visit www.agricultureevents.com or call 315-782-5865 for more information on this free event.

800 Starbuck Avenue Watertown NY 13601 315-782-5865 coordinator@comefarmwithus.com



abbreviation 'ATP' stands for adenosine tri**phosphate**, which means that phosphorus

role of ATP in energetic processes. The

Phosphorous is required in the dairy cow diet for bone

transport, and nutrient synthesis. Furthermore, think back to

about mitochondria being the powerhouse of the cell and the

your high school biology classes where you were taught all

remineralization or growth, milk secretion, fatty acid

Vitamin and Mineral Focus - Phosphorus

airy

By Casey Havekes

also has a huge role in energy transactions. Rumen microorganisms also require phosphorus for cellulose digestion. Needless to say, adequate levels of phosphorus in the diet is important for cow health and performance; however, overfeeding can have a negative environmental impact. Phosphorus deficiencies

are common in cattle grazing on phosphorusdeficient soils, or cattle consuming excessively mature forages. It becomes difficult to determine if a cow is phosphorus-deficient because the cow will often present with other nutritional deficiencies (such as protein and energy), and because milk phosphorus levels will remain in the normal range despite low blood phosphorus levels. In extreme cases, growing animals will develop rickets disease, however this is very uncommon and is the result of extreme deficiencies. On the other hand, overfeeding phosphorus is not only a poor economical strategy, but it also can result in excessive phosphorus being excreted in the manure and ending up on the fields. Despite some claims that increased phosphorus can promote reproductive success, the research does not support these claims and actually reports no apparent benefit of providing excessive phosphorus to cows. The results of several studies reported that phosphorus in the range of 0.32% to 0.42% is sufficient to meet a cow's needs throughout her entire lactation. Below is a chart taken from Utah State University Extension that provides a good visual representation of the result of providing excessive phosphorus levels. In most cases, dietary supplementation is not needed and the phosphorus from feed ingredients and salivary action is sufficient to meet the cow's needs – this is good news since phosphorus is one of the most expensive mineral elements! That being said, one consideration for these recommendations is to think about the bioavailability of the phosphorus. The cow's ability to absorb phosphorus is dependent on the feed source and unfortunately, we can't assign one value to all feeds. It's also important to note that salivary phosphorus supplies more phosphorus to the small intestine than dietary phosphorus - which means that

ensuring healthy chewing and rumination behaviors is a very easy and cost-effective strategy to providing adequate phosphorus to the cow. Overall, phosphorus is an essential mineral for health and performance, but careful consideration is needed to ensure excessive levels aren't being provided.

Table 4. Fecal excretion of P with different dietary P levels (modified from Powell and Satter, 2008).

Amount of P fed and excreted by one lactating cow producing 20,000 lbs milk in 305 days, and the amount of land required to effectively use manure P.

Dietary P	Manure P	Land area needed to recycle manure P	Increase in land area needed
%	(lbs/lactation)	(acres)	%
0.35	34.8	1.3	Base
0.40	42.3	1.6	23
0.48	54.5	2.0	53
0.55	60.0	2.4	83

Source: Utah State University Cooperative Extension. 2010. Phosphorus in dairy cattle diets.



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Growing Great People: Training Skills for Dairy Farmers Become an Effective On-The-Job Trainer

Effective trainings contribute to success of employees and the farm business. With training employees learn how to effectively complete their task and why it is important to the farm. When employees have the knowledge, skills, and attitude needed to do the job right and understand why it should be done this way it:

- saves time and avoids problems
- makes people feel important and involved, which keeps them engaged and reduces employee turnover



Expectations

Develop your training skills in this hands-on workshop that includes brief presentations and interactive learning following a system of:

TELL: Describe the procedure and why it is important

SHOW: Demonstrate the procedure and emphasize key points

DO: Allow the learner to try and answer any questions

REVIEW: Are the steps in the procedure done correctly?

After the workshop you will be able to:

- 1. Plan for organized and effective trainings
- 2. Train in a way that works for most people
- 3. Measure and follow up to make sure learning happened

Trainings are conducted simultaneously in English and Spanish. Activity groups will be in single language or multi-lingual as needed.

> These workshops are supported by a grant from the New York Farm Viability Institute.





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LOCATION & REGISTRATION

COST PER PERSON is \$20 and includes lunch

BRING A STANDARD OPERATING PROCEDURE (SOP) FROM YOUR FARM

TUESDAY, APRIL 14 NORTHERN NY

Offered in English Only LOCATION: Best Western Canton 90 E Main St, Canton, 13617 TIME: 12:00 PM - 4:00 PM TO REGISTER Call: Tatum L.Langworthy 315-788-8450 ext. 222

WEDNESDAY, APRIL 15

SOUTHCENTRAL NY Offered in English and Spanish LOCATION: NYS Grange 100 Grange PI, Cortland, 13045 TIME: 11:30 AM - 3:30 PM

TO REGISTER Online: scnydfc.cce.cornell.edu/ event.php?id=1113 Call: Donette | 607-391-2662 Email: dg576@cornell.edu

THURSDAY, APRIL 16 NORTHWEST NY

Offered in English and Spanish LOCATION: CCE Ontario County 480 North Main St, Canandaigua, 14424 TIME: 12:00 PM - 4:00 PM

TO REGISTER

Online: nwnyteam.cce.cornell.edu/ event.php?id=1110 Call: Brandie Waite | 585-343-3040 ext. 138

Email: bls238@cornell.edu

TUESDAY, APRIL 21 CENTRAL NY

Offered in English and Spanish LOCATION: CCE Schoharie County 173 South Grand Street, Cobleskill 12043 TIME: 10:30 AM – 2:30 PM TO REGISTER

Online: cnydfc.cce.cornell.edu/ event.php?id=1114

agworkforce.cals.cornell.edu

Meeting the Continuing Education Requirement of FARM Program Version 4.0

By Lindsay Ferlito

Version 4.0 of the National Dairy FARM Program is now in effect from January 1, 2020, to December 31, 2022. One of the changes to this version is the requirement of training and continuing education for employees as well as family member employees and owners. Version 4.0 requires continuing education in animal care and handling for those with animal care responsibilities, and job-specific training for the following topics if they apply:

- Stockmanship
- Pre-weaned calf care
- Non-ambulatory animals
- Euthanasia
- Determining if animals are fit to transport

If this requirement is not met for non-family member employees, it will trigger a Mandatory Corrective Action Plan (must be corrected in less than 9 months); and if it is not met for family employees and owners, it will trigger a Continuous Improvement Plan (must be improved upon within 3 years). While this new standard includes more paperwork, chances are you and your employees are already meeting the continuing education requirements; you just need to document it. Continuing education can be achieved in many ways, and most don't require you or your employees to leave the farm. Below is a list of some examples of potential training and continuing education opportunities:

- Working with industry specialists on-farm (veterinarian, Quality Milk Production Services, Cornell Cooperative Extension, etc...)
- Dairy industry meetings
- Job shadowing with experienced employees and management
- Formal education (degree programs)
- Reading articles (CCE newsletters, Hoard's Dairyman, Progressive Dairy, etc...)
- Watching webinars and training videos
- National Dairy FARM Program training videos <u>https://www.youtube.com/channel/UC3N-BiUEYIdTTFtFhTQdEQg</u>
- Merck Dairy Care 365
 <u>https://www.merck-animal-health-usa.com/dairy-care-365</u>
- Cornell PRO-DAIRY webinars <u>https://prodairy.cals.cornell.edu/webinars/</u>
- Participating in the New York State Cattle Health Assurance Program (NYSCHAP)

The FARM Program provides a template to help you record training and continuing education for each person and it can be found at <u>https://nationaldairyfarm.com/producer-resources/resource-library/</u>. For help understanding the updates to FARM 4.0, for paperwork review, or a barn walk-through, contact Regional Dairy Specialist Lindsay Ferlito (<u>lc636@cornell.edu</u>, 607-592-0290).



Northern New York Agriculture Development Program 2019 Project Report: Determining the prevalence of *Salmonella* Dublin and its potential economic impact on NNY Dairy Farms.



PROJECT LEADERS:

- Lindsay Ferlito, Regional Dairy Specialist, Cornell University Cooperative Extension North Country Regional Ag Team, 7395 East Road, Lowville, NY 13367, 607-592-0290, Ic636@cornell.edu
- Dr. Paul Virkler, Quality Milk Production Services, SUNY Canton, Canton, NY 13619, 607-229-5985, pdv3@cornell.edu

BACKGROUND:

Salmonella Dublin is a host-adapted bacteria that has the ability to greatly impact dairy cattle in the six northern counties of New York State, where dairying is a major economic engine for local communities and for the state. It generally shows up in young animals, specifically calves 6-8 weeks old, and it usually presents like pneumonia with calves having respiratory symptoms and a fever. In some cases, animals will have diarrhea, but this usually only occurs once the disease has progressed and the animal is critical.

Historically, *Salmonella* Dublin has only been considered a problem in western U.S. states, but over the last few decades it has crept across the country with more outbreaks being reported in the Northeast US and Eastern Canada. The Cornell University Animal Health Diagnostic Center has been working to better understand the prevalence and impact of *Salmonella* Dublin across NY state. The current strain of *Salmonella* Dublin was first detected in NY in 2006. Since then, more than 140 cases have been documented on dairy, veal, and beef farms statewide. While the disease tends to be more prevalent on larger herd dairies, it can show up in herds of all types and sizes. Previous testing has indicated that multiple herds in Northern NY are already infected.

Salmonella Dublin is a very challenging disease; it is easily transmitted, hard to treat, and costly. The disease can be spread via fecal-oral, air, saliva and nasal discharge, and through colostrum and raw milk. Seemingly healthy adult cattle can be Salmonella Dublin positive and carriers that are actively shedding the disease. Making this disease even more frightening for dairy farmers is its ability to spread between species. Farm workers and family members can also become infected with Salmonella Dublin, making them very ill. Once infected, the disease is difficult to treat as it is multi-drug resistant and it is suggested that 75% of the strains are resistant to at least one antibiotic. Lastly, the economic losses as a result of *Salmonella* Dublin can be devastating. Treatment costs, calf losses, abortions, and reduced milk production can add up quickly and one study (Nielsen et al., 2012 and 2013) indicated potential losses of up to \$350 per stall in the first year following infection.

It is important for NNY dairy farmers to be aware of this disease, including its risk factors and challenges, and to determine if it is present in their herd. The goal of this project was to determine the prevalence of *Salmonella* Dublin on dairy farms in Northern NY, and to understand the potential economic impacts it could have for individual farmers in this region.

METHODS:

Dairy farms across the six-county region were contacted in various ways to enroll in this study, including in-person farm visits, phone calls, a newsletter article in the North Country Ag Advisor, through local CCE County staff, and through herd veterinarians. From these methods, a total of 27 dairy farms across five counties were enrolled and agreed to have bulk tank samples taken to test for the prevalence of *Salmonella* Dublin. These herds included both tie stall and freestall dairies, ranging from approximately 80 to more than 3,000 milking cows per herd. While the original goal was to have more participating farms, the project leaders were happy with this group as it included five counties and was a relatively representative sub-set of NNY dairy farms.

Herds were enrolled and agreed to have their data shared with their herd veterinarian. Over the course of six months, four separate bulk tank milk samples were taken from each herd. Before each sample was taken, a letter was sent to each farm notifying them of the sampling date. A Quality Milk Production Services technician then visited each farm to collect the bulk tank sample. All samples were shipped to the Cornell Animal Health Diagnostic Center in Ithaca, NY, for analysis. The test that was performed is an ELISA (enzymelinked immunosorbent assay)-based test that measures the presence of antibodies to *Salmonella* Dublin in the milk sample. After each round of testing, the participating dairies *Continued on next page...* and their herd veterinarian were sent a copy of their results. After all four samples were taken, the results from all farms were compiled using Microsoft Excel. The results were analyzed to show the prevalence of testing positive as well as the frequency of positive tests over the four samples.

RESULTS:

Overall, only two of the 27 herds tested positive for *Salmonella* Dublin during the bulk tank sampling (Figure 1). Of these two herds, one tested positive only once (and had three negatives), and the other tested positive in all four bulk tank samples (Figure 2).



Figure 1. The number of herds testing positive and negative for *Salmonella* Dublin.



Figure 2. The number of times herds tested positive for *Salmonella* Dublin.

Both of the herds that tested positive were not surprised as they have tested positive in the past with their own sampling via bulk tank or individual animal blood tests. Also, it should be noted that both herds that tested positive reported that they had used a vaccine specific for *Salmonella* Dublin in nonlactating heifers. Due to the fact that the test we used was an antibody detection test, it is possible that the bulk tank positive test was only picking up vaccine-induced antibodies. Unfortunately, there is no easy way to distinguish between antibodies due to natural exposure versus from a vaccine.

CONCLUSIONS:

The goal of this project was to determine the prevalence of *Salmonella* Dublin on dairy farms in Northern NY and the potential economic losses associated with this disease. Overall, it was promising to see that only 7% of the dairies that participated in this project tested positive for *Salmonella* Dublin. Further, during the course of this project, neither of these two positive herds experienced an outbreak that required additional testing or resources. This was most likely due to the fact that both of these farms had previously worked with their herd veterinarian and had a solid management plan in place to limit the spread of *Salmonella* Dublin within their herds.

While having more than 27 herds participate would have been ideal, the herds that did participate made up a representative sample across five of the six NNY counties. Taking bulk tank samples is a relatively simple and cheap way for dairies to continually monitor for *Salmonella* Dublin on their farms. This project reinforces that farms need to take four bulk tank samples to more accurately determine if they have a positive (compared to only doing a one-off sample).

The finding of 7% positive herds in this study is higher than a previous study in NY state by Cummings et al. (2018) that found only 1% positive. However, while the previous study tested all herds in NY (more than 4,000), only one bulk tank sample was taken in 2013, which may have only picked up 35% of the actual cases. Another reason for the higher number in the current study is likely due to the further spread of the disease across NY state due to increased herd consolidation and animal and personnel movement between herds. Also, as noted earlier, it is possible that these herds tested positive on this round of bulk tank samples solely due to vaccine-induced antibodies secondary to previous management strategies to deal with an outbreak of *Salmonella* Dublin.

The bulk tank ELISA is solely a screening test. For the two positive herds, the implications are neutral since they already knew that they had the disease thus they started vaccinating. With the bulk tank ELISA we cannot prove if it is a false positive or a true positive since this test does not differentiate between disease-induced antibodies and vaccine-induced antibodies. Even if all the individual cows contributing to the tank were ELISA-tested the data could not prove if the bulk tank result is a true positive or a false positive since cows could have antibodies either from disease or vaccine. Treatment would not be initiated based on a screening test rather the herd veterinarian submitting samples for culturing to confirm an issue.

There is a half-life of antibodies either from disease or vaccine, but the challenge when you are discussing this on the bulk tank-level is that cows will be at different stages of the decline of antibodies and they start at different levels based on factors at the time of either disease or vaccine administration. Cattle that are true carrier animals will maintain a titer level for a much longer period of time. Dairy producers should not overlook the fact that ELISA is an antibody screening test with limitations in herds that are using a vaccine against Salmonella Dublin in older heifers or lactating cows.

During herd enrollment, several dairies indicated they had never heard of the Salmonella Dublin disease and were unaware of what warning signs to look for and what resources are available. This project was successful in raising awareness with local dairies about Salmonella Dublin as well as the risk factors for disease transmission. Also, the outreach efforts helped extend the reach of this project by sharing this information with a larger audience across NNY. After a presentation during one of the outreach programs, a producer commented, "I'm so glad you presented on Salmonella Dublin because it scares me!" During the outreach presentations, the study data was shared as well as some best management practices to reduce the risk of an outbreak including: good cleaning practices in the maternity and calf barn, good quality feeds and adequate nutrition for calves, good biosecurity on the farm and aim for a closed herd, and ensure employees wash their hands after handling calves.

Given that so few herds tested positive, economic impacts from *Salmonella* Dublin in NNY as a whole are most likely currently small. Previous research from Denmark, however, indicates that once the disease becomes more common on herds, the impacts could be devastating. Financial loss can be attributed to both reduced income (reduced milk production and calf death) as well as increased costs (treatment costs, carcass disposal, and abortions). Using modeling to show the outcomes under different scenarios, Nielsen et al. (2012) concluded that the greatest losses would be during the first year after the herd was infected, and the losses could be felt for up to ten years. Further, they indicated that poorly managed herds would see larger economic losses compared to herds that were well managed with a range in gross margin losses from \$50 to \$350 per stall on herds in the first year. Dublin, and the farm managers are currently working with their management teams and herd veterinarians to manage this challenging disease. While the prevalence is presumed currently low on NNY dairies, continued education and vigilant monitoring for this disease in calves and other presentations is needed to help producers better understand and successfully manage *Salmonella* Dublin.

ACKNOWLEDGEMENTS:

Thank you to the Northern New York Agriculture Development Program for funding this project, to the collaborating staff from the CCE County Associations and Quality Milk Production Services, and the participating producers across NNY.



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In conclusion, only two herds tested positive to Salmonella

Farm Business Labor Changes as of January 1, 2020

By Kelsey O'Shea

There are many labor changes that took effect January 1, 2020. Cornell Cooperative Extension has compiled this list of resources that includes a summary of the changes in addition to links to the required forms or rules. For the NYS list of changes you can review this Document and use this Checklist to make sure you are compliant.

NYSDOL Pay Notice and Work Agreement:

Employers are required to provide information contained in this form to all employees at the time of hiring and 7 days prior to reducing an employee's wages.

- Form LS309
- Form LS309S (Spanish)

Day of Rest:

Employers must offer at least one day (24 consecutive hours) of rest in every calendar week. The employer must designate, and notify the worker in advance of, their day of rest. Employees can voluntarily work on the day of rest, but the employer must pay the overtime rate. Employers must keep a weekly record of hours and days worked.

Mandated Overtime Above 60 hours of Work:

On January 1, 2020, New York farms will be required to pay overtime wages (1.5 times the 'regular rate of pay') for nearly all employees that work over 60 hours a week. -This Cornell Cooperative Extension Bulletin will help you evaluate the various methods for your farm to manage the potential increases in labor costs caused by this change. -This Cornell Spreadsheet will aid you in tracking and calculating the correct overtime rate and pay amount.

Disability Benefits and Paid Family Leave:

Farm employers, owners and operators are required to provide disability benefits and NY Paid Family Leave coverage to eligible farm laborers. -Here is the List of Approved Carriers by NYS

Workers' Compensation:

Employers are required to provide workers' compensation coverage for their employees regardless of annual payroll. All posters must be displayed in English and Spanish. Employers can get these posters from their insurance carrier, or, if self-insured, from the Workers' Compensation Board by emailing Certificates@wcb.ny.gov.

New notice requirements for farm contractors: Employers should be aware, and make sure their farm contractors are aware, that upon receiving notice of an injury or illness, farm contractors must notify the employer, owner, or operator of the farm where the injury occurred. - Here is Information on Insurance Companies

Right to Organize (Labor Unions):

The new law permitting farm employee unions is a state law and will be administered by the NY Public Employee Relations Board (PERB). The new law has a clause in it that says: "It shall be an unfair labor practice for an agricultural employer to discourage union organization or to discourage an employee from participating in a union organizing drive, engaging in protected concerted activity, or otherwise exercising the rights guaranteed under this article." It remains to be seen how strictly the state will interpret and enforce this clause.

- Here is a summary of <u>"What you can say to your</u> employees"

Additional Resources:

Ag Workforce Development NYS Sexual Harassment Prevention "Big Changes to NYS Farm Employment Laws"

Dairy Farming Abroad: Part 1

By Kelsey O'Shea

This past January I accompanied forty-nine freshman and sophomore students from Cornell University to Italy to guide them through agriculture in another country. The trip included ten days of visiting over fifteen production farming operations and eight processing facilities along with many historical sites. The goal of the trip for the students was to gain an understanding of both farming and the food system in Italy and then to critically compare this to what we see in the United States. I will be writing a three-part series covering various aspects of this trip; in this installment I will cover what we saw for dairy farming practices and production. In the second installment I will cover what we observed for processing and marketing, and in the third installment I will cover the other agricultural industries we toured besides dairy.

While in Italy we covered from the Cremona region all the way to Rome touring dairy farms. The size of farms we saw ranged from 100 cow dairies to a dairy with over a thousand cows and both organic, called biologica, and conventional. On average, most of the farms were somewhere between 200-500 cows. This was particularly interesting to me because in the Northeast that size range presents some challenges. There are those here that would indicate that with that dairy size you are "too big to be small and too small to be big." This usually means that farms of that size cannot take advantage of economies of scale, but are subject to higher levels of labor and regulation. Most of the farms we toured in Italy as well had participated in a biogas project, meaning that they had a digester to produce energy on the farm site. This was very

financially advantageous to farmers overall, and many had indicated that they were going to increase their project investment.

Another interesting part of the dairy farming in Italy is that many send their milk to be made into Parmigiano-Reggiano Cheese. In order to do this, the farmers are not allowed to feed fermented feeds, so no silage or haylage. This means that cows diets are grass hay, grains, supplements, and grass in the summer. Although, in the Crema region, many farms did use fermented feeds. This is quite different than what were see in the Northeast where most dairy farms are using fermented feeds readily. In addition, they can only milk two times a day and the milk must get to the plant within 6 hours after milking. From an industry or structural standpoint there were many differences between here and Italy. Unlike here, farmers do not usually belong to cooperatives that ship and sell their milk to various processors based on (to some degree) day to day needs. Instead they will belong to a consortium related to the type of product that they will ultimately be making. In the case of Parmigiano-Reggiano, the farmers work with their processors directly and both work with the Parmigiano-Reggiano consortium directly to determine milk produced, products made, etc... This also meant that the consortium institutes a quota for farmers, meaning if they want to expand or produce more milk, they will have to purchase quota in units of 100 liters at 70 Euros. Farmers seemed to be mixed on their appetite to expand and purchase more quota; some didn't see it as a hindrance or obstacle, while others did.

Overall, a primary concern that farmers had similar to here was generational transfer. Some farms had a next generation, but had done little to structure the actual transfer, while others were concerned because they did not have a next generation. In Italy the birth rates have been low for years, meaning there are physically less people and then considering the smaller percentage in agriculture this is a concern. Italy remains a global agricultural player in that they produce several higher quality products that are readily exported. It is important for them to be able to continue those businesses and maintain that income. While dairy farms there have similar production and business challenges to the US, they have many differences in the processing and marketing that I will cover in my next installment.

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*2015 SNL Financial Report. Based on statutory data.

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2	Risk N FOF	Anagement F	Programs PERS NY	
Beek	eepers in New York st	ate have several optic	ons for risk manageme	nt programs:
You are covered	Low Levels of	Seduced Revenue	ColonyLoss	Reduced Honey
tor: Program name:	Apiculture Crop Insurance (API)	Whole Farm Revenue Protection (WFRP) Insurance	Emergency Assistance for Livestock, Honeybees, and Farm-raised Fish Program (ELAP)	Noninsured Crop Disaster Assistance Program (NAP)
Approx. cost to protect 10 colonies:	\$59*	Depends on revenue	No cost	\$325**
What (min.) triggers a payment?***	10-30% lower rainfall than average	15-50% insured revenue losses	22% colony losses (due to colony collapse or natural disaster)	35-50% yield losses
How much is the payment for?	(% of insured lost rainfall) x 60-150% of \$120 per hive	(% of insured lost revenue) x total expected revenue	Pays up to \$140/ colony, \$258/hive, and 60-90% of replacement feed costs	(% of insured lost yield) x 55% OR 100% of market price
Benefits for beginning farmers:	Reduced premiums, fees waived	Reduced premiums, fees waived	Increased payments for losses	Reduced premiums fees waived
Deadline:	Enroll by November 15	Enroll by March 15	After a disaster, apply within 30 days and before Nov. 1	2019CY: Enroll in buy-up by May 24, 2019 2020CY: Enroll by Dec. 1, 2019
Coverage offered by:	Private crop insurance agent	Private crop insurance agent	Farm Service Agency (FSA)	Farm Service Agency (FSA)
Reporting:	Payments sent automatically (no reporting)	Report lost revenue within 72 hours	Report colony losses within 30 days	Report lost yield within 15 days

***Based on selected coverage level

Cornell University delivers crop insurance education in New York State in partnership with the USDA Risk Management Agency. Diversity and Inclusion are a part of Cornell University's heritage. We are an employer and educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.

Apiculture Crop Insurance (API)

Dry weather conditions can limit your bees' forage intake and honey output. If rainfall** levels are low, you receive a payment to help you continue production.

How Rainfall is Measured

When you enroll in API, you receive an automatic payment when rainfall levels drop below a given percent of average levels. The USDA Risk Management Agency (RMA) which implements the program uses a grid system of approximately 17 x 17 square mile sections to track rainfall levels. You receive a payment based on the average rainfall in your section of the grid, referred to as your "grid." Find your grid at <u>http://cli.re/6QxJdP</u>

What to Insure

<u>Colonies:</u> You do not need to insure all the colonies in your operation to benefit from API insurance. The industry standard is to insure at least 66% of colonies to ensure a minimum base of productive colonies.

<u>Months:</u> Producers may choose which months to insure with a minimum of two, twomonth intervals. Most beekeepers insure enough intervals to cover the entire year.

<u>Coverage levels</u>: You can purchase coverage at levels from 70-90%. "Coverage level" refers to the percentage of average rainfall that triggers a payment. Most beekeepers choose 90%. At this level, if rainfall in your grid is below 90% of the average rainfall, you receive an automatic payment. The value of your payment depends on the productivity level you select, from 60-150% of base values. (NY base values for 2019 are \$120/colony.)

Reporting

No reporting is necessary. Payments are mailed automatically based on the rainfall in your grid.

Cost Sharing

To make crop insurance affordable for farmers, the federal government pays for a portion of your premium costs. This support covers up to 59% of your premium.

Enrollment

The deadline is November 15. To enroll, contact a crop insurance agent. Find an agent using the Agent Locator tool at <u>http://cli.re/gzPVWy</u>

Learn More

Find crop insurance information at agriskmanagement.cornell.edu

**The term "rainfall" includes all forms of precipitation.

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

What's Happening in the Ag Community

How to Get a Better Price for Your Beef or Dairy Animal in the Ring at the Auction, March 28th, 11am-1pm, NNY Farmers Marketing Coop, Lowville, NY.

Northeast Dairy Management Conference "Focus on the Future", March 11 - 12, 2020, Syracuse, NY.

QMPS Milk Quality Program, March 19, 2020, 10am-2pm, Miner Institute.

Jefferson County Agriculture Development Conference, March 19-20, 2020, see page 5 for more information.

Cornell Herd Health Conference, April 6-7, 2020, Syracuse, NY.

Growing Great People: Training Skills for Dairy Farmers, April 14, see page 7 for more information.

Dairy Cattle Welfare Symposium, May 27-28, 2020, Syracuse, NY.

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