## Cornell University Cooperative Extension SCNY DAIRY & FIELD CROPS TEAM

BROOME - CHEMUNG - CORTLAND - ONONDAGA - TIOGA - TOMPKINS

January 2019

**Newsletter** 

# 2019 Winter Crop Meeting

## **Topics & Speakers:**

- Know Your Yields! Importance of Accurate Yield Record for (Nitrogen) Management of Corn Dr. Quirine Ketterings and Karl Czymmek Cornell Nutrient Management SPEAR Program & PRODAIRY
- Evaluating Progress in Alfalfa and Grass Quality Management Dr. Jerry Cherney Crops and Soil Section in the School

of Integrative Plant Science, Cornell University

- **Crop Insurance Update: Dairy Revenue Protection** *Fay Benson, Extension Educator*
- 2018 Silage Variety Trial Results Janice Degni, Extension Field Crops Specialist
- No-Till Farmer Panel
- Corn Insert Management Updates: CRW, WBC & Nematodes Dr. Elson Shields Dept. of Entomology, Cornell University

#### **Cost: \$30/Includes Lunch**

#### **Registration Information:**

Call Shannon at 607.391.2662 Or email srm242@cornell.edu Or online at http://scnydfc.cce.cornell.edu

Questions? Call Janice @ (607) 391-2672

## Tuesday, January 29

Clarion Inn (Formerly the Ramada Inn) 2310 N. Triphammer Road Ithaca

> 9:30 am: Registration & Trade Show

> > 10:00 am - 3:30 pm: Speakers Program

#### CCA & 1.5 DEC

#### **RECERTIFICATION CREDITS**

#### **INSIDE THIS ISSUE:**

Contact Information	2
Dairy Day	3
Ag Labor Roadshow II	4
Dairy Farm Business Summary	4
Seven Steps to Preventing Sexual Harassment	5
Quick Peek-2019 Corn and Soybean Budgets	6
Footbath Quick Check	7
2019 NYCO Winter Meetings	8
QuickBooks for Farmers Workshop	9
Focus on Risk for Dairy Farmers	10
Dairy Managers Training	10
Dairy Manager Discussion Group Meetings	11
Corn Silage Trial Reports	11
Cropping Notes	12
Bedded Pack Barns	14
Deadline December 28 for Research Permits for Industrial Hemp Production	15

We are pleased to provide you with this information as part of the Cooperative Extension Dairy and Field Crops Program serving Broome, Cortland, Chemung, Onondaga, Tioga and Tompkins Counties. Anytime we may be of assistance to you, please do not hesitate to call or visit our office. Visit our website: http://scnydfc.cce.cornell.edu and like us on Facebook: https:// www.facebook.com/SCNYDairyandFieldCropsTeam.

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We put knowledge to work in pursuit of economic vitality, ecological sustainability, and social well-being. We bring local experience and research-based solutions together, helping our families and our community thrive in a rapidly changing world. Building Strong and Vibrant New York Communities

> "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"



- That newer isn't always better and that there is something inherently good in hard work.
- That friends who feel like family are the best kinds of friends and that nothing matters more than family.
- That today is a gift and that every day miracles are scattered about if only we have eyes to see them. •
- In seeking the balance between hustle and rest and striving to be passionate about both: a leisurely first cup of coffee to start the day mindfully and then at day's end not clocking out from a job till you're proud.
- That failure needn't be a negative thing; rather, we learn from our mistakes and fail smarter next time.
- In doing work that we love and, in choosing that, nudging others toward doing what they love.
- In courage, in cartwheeling past our comfort zones and trying something a little bit scary every day.
- That it's time for the pendulum of trend to swing back to the basics.
- In subtle beauty, the kind that doesn't deteriorate with age or wear.
- And all heroic pursuits large or small, we believe there may be none greater than a live well loved.

#### **Credo of Gatherings Magazine**

FayFrom all of us at South Central Dairy and Field CropsShannonBest wishes for a happy, healthy, safe and prosperous 2019ShannonMary Kate

Betsy Abbie

# Dairy Day Uncovering Opportunities for your Dairy

**Thursday, February 7, 2019** -Arts & Home Center Building, NY State Fairgrounds, Syracuse

Friday, February 8, 2019 -Owego Treadway Inn, 1100 NY-17C, Owego

9:30 Registration, Presentations 10am-3pm Cost \$30 per person, includes lunch & handouts



## **Speakers and Topics:**

**John Winchell, Alltech** - *Mycotoxins as the Cow Sees Them* - Producers know that mycotoxins can be harmful to their herd's health and productivity, but what exactly happens when a cow consumes mycotoxins? John will show evidence and discuss why paying attention to this detail can benefit your herd.

**Dr Andy Novakovic, Cornell University** - Mega Trends in Consumer Markets for Dairy Foods - Dairy farmers know that fluid milk consumption is declining, but good news abounds in other areas of dairy products. Dr Novakovic will discuss trends in consumer purchases at the grocery and how this can affect dairy as a whole.

**Belinda S Thompson, DVM, Cornell University** - *The Opportunity to Avoid or Control Salmonella Dublin in your Dairy* - The Who, What, Where, and Why of Salmonella Dublin will be discussed, along with case studies, best practices for control and methods of testing.

**Dr Kristan Reed, Cornell University** - *Nitrogen Utilization Across Lactation* - Dairy cattle need protein as a part of their daily requirement, but how does this change as she moves from a fresh cow to peak production and later? Dr Reed will discuss nitrogen efficiency and opportunities to take advantage of these differences across lactation.

**Dr Amy Vasquez, Cornell University** - *On Farm Culture Opportunities (Feb 7 only)* - Attendees will learn about the advantages of culturing mastitis cases and whether on-farm culture is appropriate for their farms. They'll gain insight on this diagnostic tool and how it is used to make treatment decisions. Additionally, discussion on how to establish an on-farm laboratory including sample collection, supplies and labor needed, costs of materials, techniques for quality control monitoring, and programs/documents available for guidance and proficiency will be covered. Additional opportunities for rapid diagnosis of mastitis pathogens available to farms will be explored.

Dr Paula Ospina, Cornell University - Bulk Tanks and Milk Quality (Feb 8 only) - Attendees will learn

about mastitis pathogens commonly identified in bulk tanks and how this is related to milk quality, focused primarily on bulk tank somatic cell count and subclinical mastitis. We will also discuss how certain bacteria counts can help us identify problems with system cleaning. Lastly, we will use the combination of bulk tank pathogens and milk quality data to discuss clinical and subclinical mastitis management strategies.

#### Registration Information:

Call Shannon at 607.391.2662 or srm242@cornell.edu, or register online with a credit card at: https://scnydfc.cce.cornell.edu/events.php

Questions?? Contact Betsy Hicks at 607.391.2673 or bjh246@cornell.edu



If you have employees, then you need to be at the New York Labor Road Show II. Experts from farms, private Industry and the university will focus on critical topics that affect all farm employers including: employee housing, onboarding, sexual harassment prevention, employee engagement, safety, wage and hour laws, and worker care.

#### Featured Speaker: Attorney Michael Sciotti

Mikes' practice includes jury trials, investigations, labor audits, supervisory and employee training and claims under federal and state labor laws. He is a frequent speaker and author of articles regarding labor and employment issues. Mike is admitted to practice in New York and the district of Columbia. He is a member of the New York State Bar Association's labor Law Section: Equal Opportunity Law as well as the Committee on Legislation.

#### **Featured Topics:**

- Better Farm-Provided Employee Housing Management and Compliance
- Onboarding New Employees
- Sexual Harassment Prevention Policies and Training for NY Employers
- Everyone Needs a Voice: Building Great Employee Relations
- Dairy Safety and compliance Update
- Federal and State Wage and Hour laws



#### Christmas Cows by Go-Graph

#### .....

#### **Recruiting Participants for the Dairy Farm Business Summary**

Starting in January 2019, our Farm Business Management Specialist, Mary Kate Wheeler, will be working with a limited number of farms to complete the Dairy Farm Business Summary (DFBS). This program benefits individual farms by providing a detailed analysis of production and financial records. DFBS reports can be used to track farm business performance over time within your operation, as well as comparing the performance of your operation to a sample of other similar farms.

To participate in the DFBS for 2018 we are looking for farms with the following characteristics:

- Decent financial and production records balance sheets, income and expense records, depreciation schedules from your IRS tax returns, labor records, and production records for milk and crops.
- Not currently enrolled in the DFBS or a similar benchmarking program.
- Desire to use financial analysis to evaluate changes and improve decision making over time.
- Willing to meet with our Business Management Specialist two or three times between mid-January and mid-March to complete data entry.
- Willing to meet once after the summary is generated to review and discuss results.
- Interest in participating for multiple years to track changes over time on the farm.

Please contact Mary Kate Wheeler by email (mkw87@cornell.edu) or by phone (509-294-6073) to sign up. There is no charge to enroll, and participation is limited to 10 farms in 2018.

#### **Seven Steps to Preventing Sexual Harassment**

Adapted from "Stop Sexual Harassment" by Richard Stup, from the Cornell Agricultural Workforce

#### 1. Put your policy in place now.

All New York employers are required to have a written sexual harassment prevention policy in place beginning October 9, 2018. Your policy must meet or exceed all of New York's requirements in the model policy. Most farms don't currently have a policy so it's OK to just use the state's model policy.

#### 2. Provide the policy in writing to employees.

A policy isn't worth much unless employees know about it. The new law requires employers to provide employees with a written copy of the sexual harassment policy. Print copies and provide to your employees or inform employees and give them electronic access to your new policy.

#### 3. Provide the "Combat Harassment Complaint Form."

Scroll down the state's website to find the model complaint form, also in PDF and Word format. Incorporate this form into your handbook right after the sexual harassment policy or print copies and provide it to your employees.

#### 4. Use the Sexual Harassment Prevention Poster.

Customize and post the "Sexual Harassment Prevention Poster" in your break room or office. This is optional but it is a good practice.

#### 5. Train everyone at hiring and annually.

Just giving employees a policy isn't good enough. Training is needed to be sure that employees understand sexual harassment and how they can prevent and report it. Training is also important to send the message that the employer takes sexual harassment seriously and will not tolerate it. You should plan to conduct sexual harassment prevention training each year for all employees. New employees should have a brief review of your sexual harassment policy within a week of their start date.

## 6. Act immediately when there is a complaint of sexual harassment or management becomes aware of a harassing situation.

No employee should have to work in a stressful and threatening environment caused by sexual harassment. Management needs to take action immediately in response to a complaint of harassment.

#### 7. Document every action you take.

As an employer, it is wise to begin documenting all of your employee-related actions. You should keep a paper or electronic file (or both) for each employee and diligently record all significant actions or events that take place.

### **RESOURCES FOR EMPLOYERS**

Model Sexual Harassment Policy and other resources from the NYS Department of Labor

https://www.ny.gov/combating-sexual-harassmentworkplace/employers

#### Sexual Harassment Prevention Poster

https://www.ny.gov/sites/ny.gov/files/atoms/files/ SexualHarassmentPreventionPoster.docx

How to Handle Sexual Harassment Complaints: A Primer for Small Businesses

https://www.insureon.com/blog/post/2018/01/09/how-to -handle-sexual-harassment-complaints.aspx

"Stop Sexual Harassment," Cornell Agricultural Workforce Development

https://agworkforce.cals.cornell.edu/regulations/sexualharassment-prevention

#### Cont'd from Footbath Quick Check pg. 7

A reassessment after changes are implemented can clue you in to any improvements. This can be combined with your hoof trimmer's assessment to give you a clearer picture of foot health.

Not sure if your footbath location is up to snuff? I'll gladly come out to watch how cows use it and we'll troubleshoot ways to improve if needed.

Unsure of where to start? Call your Extension Dairy Educator to troubleshoot! +

We are quickly coming upon the time when crop budgets for 2019 will be formulated. Purdue University recently released their initial crop budgets for 2019. The results indicate that it will be another challenging year for crop producers. They also suggest that, at least for the Eastern Corn Belt, corn and soybean profit potential may be closer than one might initially think.

#### The Budgets

Purdue's crop budgets allow one to calculate contribution margins at the individual crop level as well as an overall return. We have shown the budgets for continuous corn, rotation corn, and rotation soybeans in Table 1. The Purdue budgets have shown a strong, strong preference for rotation corn and soybeans in almost every year that we can remember. This is driven by a yield penalty for continuous

corn as well as slightly higher estimated costs for continuous corn. Usually, we just talk about the comparison between the returns of rotation corn and rotation soybeans. However, we thought it would be useful to include all three of the alternatives below.

We have highlighted a couple of important lines (contribution margin and net profit) in bold. There are a few things to note. First, it is clear by looking at the contribution margin and net profit lines that the budget again strongly favors rotation The extent that you feel comfortable with the yield assumptions associated with continuous corn versus rotation corn will drive how strongly you agree with that conclusion. Under these assumptions, continuous corn has a \$56 per acre disadvantage to rotation corn and an \$83 per acre disadvantage to soybeans.

Table 1. Summary of the Purdue Crop Budgets for Average Quality Indiana Farmland.

	Continuous Corn	Rotation Corn	Rotation Soybeans
Yield	164	174	54
Price	\$3.80	\$3.80	\$9.20
Basis	\$-0.25	\$-0.25	\$-0.35
Revenue	\$623	\$661	\$497
Total Variable Costs	\$453	\$435	\$244
Contribution Margin	\$170	\$226	\$253
Total Fixed Costs	\$424	\$416	\$416
Net Profit	-\$263	-\$177	-\$177
Return to land	-\$55	\$32	\$32

Perhaps the most surprising result is that the budget actually shows rotation beans having the highest contribution margin of the three alternatives again in 2019. Beans have held an advantage in these comparisons since 2013. In order to bring the contribution margin to parity, one would have to drop the cash soybean price by \$0.50 to \$8.70 per bushel while holding **Wrapping it Up** corn prices constant.

One factor that is supporting soybeans in this budget is the soybean basis assumption. The Purdue budget left basis unchanged from previous years. The extent to which basis in the current year is similar to other years will probably have a large impact on planting decisions. In many regions of the country, the basis has deteriorated significantly and could have a large impact on the budgeted profitability of soybeans.

#### **Losses Mount**

The second key result of the budget is the overall negative profitability outlook. The net economic profitability shows the potential for very large economic losses in 2019. This is the 6<sup>th</sup> year in a row that the net earnings with these budgets have been negative. Of the six years, 2019 is forecast to be the second worse, trailing only 2016 when budgeted losses were \$183 per acre. The cumulative sum of the budgeted losses for those six years -\$927 per acre! While actual outcomes may have been better than budget, it is not surprising that working capital in the sector has continued to decline.

The last line in the table shows the return to farmland. This is calculated by subtracting all the costs except farmland from revenue. As one can see the returns to farmland are very small. At present cash rents, the returns are clearly not sufficient to cover other cash costs and rents. Rents would have to fall substantially to create profitability. If the situation doesn't improve, one would think that cash rents will continue to come under downward pressure.

It is interesting to see that, at least in areas with similar basis patterns and yield relationships, soybeans will probably con-tinue to be popular in 2019. This is in spite of the price de-cline from previous years. In the Purdue budget, the corn yield is 3.2 times bean yield and the soybean basis is only \$0.10 lower than corn. To find areas that beans are less attractive one would look for regions where corn yields are higher relative to soybeans and/or basis is less favorable. Given current prices, it is likely that reduced bean acres will have to come from those regions as the budgets are currently doing little to discourage bean acres in places like Indiana.

It is important to remember that these are budgeted not actual returns. In recent years large yields have helped to offset some of the projected losses. In addition, market facilitation payments cushioned some of the blow of lower soybean prices in 2018. However, for those that have not had high yields, the outcomes may have been even worse than budgeted.

It is clear that the potential profit situation for 2019 looks rather bleak at this point. However, it is early in the outlook. It will likely take market price appreciation to improve the budg-et outlook for 2019. The projected loss for 2019 comes on the back of 6 years of reduced profitability. The cash flow planning and budgeting process will likely not be a fun exercise this winter. Unless the price situation improves, the financial situation on many farms will continue to decline. \*

## Footbath Quick Check

#### Betsy Hicks, Area Dairy Specialist

Skimping on foot health is never a winning strategy, even in the wintertime. Lameness is a costly disease, and maintaining • foot baths to stay ahead of pathogens such as hairy heel wart is a good preventative measure. Below is a list of areas you might want to spot-check to ensure your program is working as well as it should.

- Footbath volume and concentration: The University of Wisconsin has a handy spreadsheet you can download to do the math for you. Take the measurements of your footbath – length, width and depth you fill it to – and it will determine the gallons of liquid in your bath. Further down the sheet are listed common chemicals used in footbaths, with associated concentrations. Taking your dimensions into consideration, it lists the pounds per bath for solid chemicals or quarts per bath for liquid chemicals to add to the volume of water. This sheet can be found at: https://fyi.uwex.edu/dairy/files/2015/07/Copy-of-Footbath -Dose-Calculator.xlsx . If you can't access it, call me up and I'll help you determine the correct amounts.
- Now that you know the proper amount of chemical to add, when is the last time you checked your weight or volume of chemical that is added? A 50-gallon bath filled to 3% concentration of Copper sulfate takes 12 lbs per bath. If a bag of chemical is lasting you ten baths, I guarantee you're not reaching that 3% concentration. Grab your scale and a bucket and measure out exactly the amount you should be adding, and make a line on the bucket as a guideline for the next person.
- Schedule for foot baths: Do you have one? Work with your hoof trimmer or veterinarian to better understand where your foot issues occur. If you need to control hairy heel wart, running a treatment bath on sequential days may be your best option. If heel warts are still an issue, running a soap bath a day or two days prior to your treatment bath can help get feet really clean so that treatment can reach the hoof where it can work. Putting a set schedule into place so you can analyze what your results are will help you improve foot health.
- Hygiene scoring: Still not sure what schedule you need? Incorporate hygiene scores into your thought process. Dr. Nigel Cook of UW Madison states: "The more manure contamination on cows' lower legs, the more frequently we must footbath. While some dairies with excellent hygiene may use a footbath only once a week, others must footbath 5 to 7 days per week." His scoring system utilizes a 1 to 4 score, with a 1 being clean and a 4 being very dirty. See <u>https://www.vetmed.wisc.edu/dms/fapm/</u> <u>publicats/press/hw\_footbath.pdf</u> for more of his thoughts on footbath alternatives. Your dairy extension educator

can come out to score cows if you need help.

- Protocol for filling baths: Now that you have most of the details worked out for what the bath entails, write them down! If you have employees that fill the bath, grab their attention for fifteen minutes and do a quick training on those details. Take this opportunity to make sure they have all the tools they need to get the task done the way you want it done and get feedback to make sure they understand the "why" behind any changes.
- Positioning of footbath: footbaths should be positioned in such a way that cows will receive a minimum of 2 dunks per foot and cannot bypass the path when in use. An 8-foot bath may achieve this with a high front curb to slow the cow down as she steps over it, but a 10-foot or 12-foot bath is better. Plywood sides can be utilized to minimize the liquid sloshing out of the bath as cows move through it.



One of the best footbaths I've seen recently utilizes a piece of plywood mounted to a length of metal tubing that attached to gate latches on either end of the bath. If a cow goes down into the bath, the metal tubing can simply be popped out of the gate latches, and the cow can be reached with unrestricted access. This bath is close to 12 feet long, utilizes a narrow width, but accommodates for the barrel of the cow with sloping sides. It is situated in the return lane of the parlor, and has a means to bypass the bath when not in use, with an alley wide enough to fit a skidsteer through. The area is well lit, not slippery, and has a slight slope to aid in cleaning the bath, with a manure scrape area close by so that cows aren't walking through manure laden footbath liquid after cleaning.

Locomotion Scoring can be done before any changes to give you a baseline for how the herd is moving right now.

Continued on bottom pg. 5



2019 Dates: January 8, February 12, March 12 10:00 am Jordan Hall, 630 West North Street Cornell AgriTech (formerly the Ag Experiment Station)

Geneva, NY

Hundreds of farmers, agribusiness representatives and educators attend the annual winter meetings of New York Certified Organic.

For more information Contact Fay Benson,

607-391-2699, afb3@cornell.edu.



Geneva, N.Y. New York Certified Organic (NYCO) begins its 26<sup>th</sup> year as an organic field crop and dairy discussion group. The meetings bring together grain and dairy farmers to hear guest speakers on topics of organic crops and dairy production.

## January 8, 2019 Speakers & Presentations

#### Presentation by:

## Tomasz B. Falkowski, Ph.D of the Cornell University Horticulture Department

He and his colleagues have developed a project that would empower farmers to do farm research on their farms, modeled after the Practical Farmers of Iowa. NYCO farmers will be able to make contact with the project personnel to assess research projects they would like to do on their farms.

#### **Farmer Panel:**

## Mike and Karen Hooper of Memphis, N.Y., and Ben and Kate Whittemore of Candor, N.Y.

Will share their experience with bedded pack barns, which have been of interest to smaller dairies and beef operations as a way to provide their animals with the highest comfort and produce carbon-rich manure matter that provides nutrients for a healthier soil.

The Hoopers' composting bedded pack barn has two Lely robots to milk their 110 cows. The Whittemores built their composting bedded pack in 2010 for 85 cows. As they expanded in cow numbers they found it beneficial to remove the bedded pack and install free stalls.

#### Fay Benson, Cornell Small Dairy Specialist:

Will review bedded pack design concerns and resources he has collected over the years. Benson is an educator with the Cornell University South Central NY Regional Team, project manager for the NY Organic Dairy Program, and coordinator of the NY Soil Health Trailer.

There is no cost or need to register to attend the NYCO meetings; participants are asked to bring a dish to pass at the potluck lunch. Round table discussions after lunch provide farmers the opportunity to ask questions and hear from the combined experience of the group. These sessions help advance organic production in New York and have been helpful to new and transitioning farmers as well as long-time organic producers. Producers, educators and agribusiness representatives are encouraged to mark calendars for the January 8, February 12, and March 12, 2019 NYCO meetings. Information on past NYCO meetings is online at

http://blogs.cornell.edu/organicdairyinitiative/.

## South Central NY Dairy and Field Crops Team partners with SCORE Syracuse to offer a QuickBooks for Farmers Workshop in January

In Collaboration with Mary Kate Wheeler, Farm Business Management Specialist



**In 2017,** the U.S. Secretary of Agriculture signed a Memorandum of Understanding with leaders from SCORE, our country's largest network of volunteer business mentors. SCORE matches small business owners and entrepreneurs from all sectors of the economy with expert business mentors to provide advice and guidance. The agreement between USDA and SCORE is designed to expand business support for farmers and agricultural businesses.

**Following SCORE's** commitment to working with the agricultural community, our South Central NY Dairy and Field Crops Team established a partnership with SCORE Syracuse, a local chapter that serves Onondaga, Oswego, Cortland and Madison Counties. Through this collaboration, SCORE educators will adapt their existing QuickBooks training to meet the needs of farm businesses.

**QuickBooks** is the most used bookkeeping software for small businesses, and it can help to improve the efficiency and accuracy of record keeping. The software produces a variety of financial statements to be used for analysis and for preparing tax returns. With QuickBooks, farm managers can easily compare their current financial performance to prior periods, existing budgets, and industry statistics.

**In the upcoming workshop,** farmers will learn how to set up QuickBooks for their farm business from the ground up. The class is appropriate for farm operators and office staff who have no QuickBooks experience and are considering adopting the software. It is also a great fit for farms that are already using QuickBooks and would like to be sure they are getting the most out of the software.

#### The four-part workshop will cover:

Basic accounting concepts and reports How to set up a chart of accounts to fit your farm operation Invoicing and cash receipts Recording and paying purchases and expenses Reconciling accounts Production and analysis of financial statements

All in a small group setting with other farm operations, allowing plenty of time for interaction and questions. Laptops with Quickbooks 2018 will be provided. Students who complete the workshop may schedule free individual follow-up sessions with a SCORE business mentor.

The workshop will be held from 10am - 12pm on January 9, 16, 23 and 30 at the Cortland County Chamber of Commerce. The cost is \$95 for the 4-part series, and up to 2 individuals per farm may attend. Veterans may register for free courtesy of a grant from M&T Bank. For additional information, or to register:

http://events.r20.constantcontact.com/register/event?llr=mqwp6ucab&oeidk=a07eftx0905ddbea767

#### Focus on Risk for Dairy Farmers:

Webinar Presentation from Cornell University Crop Insurance and Risk Management and Education Program and Pro Dairy

#### January 24<sup>th</sup> at 12:30 PM Go to *https://prodairy.cals.cornell.edu/webinars/* to join

New York's Dairy Farmers deal with risks all the time. Risks such as weather, labor, environmental, etc. Most farmers would agree that their largest risk is milk price. This has certainly been the case for the past four years. The USDA's Farm Service Agency (FSA) has developed tools to help dairy farmers deal with milk price risks with varying success such as the Milk Income Loss Contract program (MILC), Dairy Margin Protection Plan (DMPP), and the improved DMPP of this year. USDA's Risk Management Agency (RMA) has also had tools to help dairy farmers not as popular since there needs to be communication between a crop insurance agent and the farm and there is usually a higher cost associated with these policies but the protection is also higher.

On Thursday January 24<sup>th</sup> at 12:30, this webinar will feature dairy farmer Ron Robbins of North Harbor Dairy in Sackets Harbor, NY, and Ed Gallagher, President of DFA Risk Management.

Ron has used many tools to manage milk price risks on his dairy over the years including those from FSA and RMA and also buying contracts on the Chicago Mercantile Exchange. During the webinar he will relay some of these experiences and which tools he uses now for his farm's milk protection.

Ed Gallagher will review RMA's new "Dairy Revenue Protection" policy. This is a new policy developed with the help of the American Farm Bureau. It is closer to the crop insurances offered for field crops and has helped that industry manage risks for a number of years.

Fay Benson, who works with Cornell University Crop Insurance and Risk Management and Education Program will host the webinar and indicate where more information can be found on the Dairy Revenue Protection Policy.

For more information on the Webinar contact Kathryn Barrett, Sr. Extension Associate-Dairy Education PRODAIRY, 607-229-4357



## DAIRY MANAGERS TRAINING

#### Communication with People & Animals, Cattle Handling, Facilities, Heifers & More

Wednesday, March 6 & Wednesday, March 13, 2019 Locations to be Determined! Stay Tuned! 9:30 Registration, 10am-3pm training, \$50 per person, covers training, lunch and materials both days



- Week 1 Communication with People, Erica Leubner, NYFarmNet Communication with Animals and Cattle Handling - Curt Pate, 1 hour in classroom, 2 hours in freestall
- Week 2 Facility Management for Profitability, *Betsy Hicks, CCE* Heifer Management & Facilities, *Steve Chuta, Zoetis* Partial Budgets

Farm Walkthrough of Heifer Facilities

RSVP to Shannon at 607.391.2662 or srm242@cornell.edu, Questions?? Betsy Hicks, bjh246@cornell.edu or 607.391.2673



## Dairy Manager Discussion Group Winter Meetings

## Herd Genetics: Genomics, Crossbreeding & Strategies

Cost: \$10 for each date to cover lunch

Time: each date starts at noon for lunch, with discussion 1-3pm

**Registration Information:** requested for correct lunch head count, 2 days prior. Contact Shannon at 607.391.2662 or *srm242@cornell.edu or online at https://scnydfc*.cce.cornell.edu/ events.php **Questions??** Contact Betsy Hicks at 607.391.2673 or bjh246@cornell.edu





Thursday, January 17th - 37 Church St, Cortland Dr Michele Barrett, Zoetis - Strategies for Optimizing Herd Genetics



*Thursday, February 14th* - Empire Livestock, Dryden (note location) Ken Krutz, Empire Livestock - Beef Crossbred Calves at the Sale Barn Claire Mulligan, ABS - InFocus: The Blue Tags



*Thursday, March 21st* - 37 Church St, Cortland Mike Baker, Cornell University - Dairy Beef, All Questions Answered Meghan Bradley, Genex - CalfMath

Christmas Cows by Go-Graph



## Check out the Cornell Corn Silage Variety Trial Reports: for 2017/2018

2018 Corn Silage Hybrid Testing Results: <u>https://scs.cals.cornell.edu/sites/scs.cals.cornell.edu/files/shared/documents/</u> <u>NY\_VT%20Corn%20Silage%20Hybrid%20Evaluation%20Report\_11.19.2018.pdf</u>

Forage Trial Results (grass, alfalfa, clover, bft): https://plbrgen.cals.cornell.edu/research-extension/forage-project/ny-forage-yield-results/

Small Grains Cultivar Testing: https://plbrgen.cals.cornell.edu/research-extension/small-grains/cultivar-testing/

Penn State Resources:

**Forage Variety Trials:** <u>https://extension.psu.edu/forage-variety-trials-reports</u> **2018 Soybean Variety Trials:** <u>https://extension.psu.edu/2018-soybean-variety-trials</u>

2018 Barley and Winter Wheat Perfomance Trials: https://extension.psu.edu/2018-barley-and-winter-wheat-performance-trials

#### **Cropping Notes** Janice Degni, Area Extension Field Crops Specialist

With winter settling in and harvest behind us, it's a good time to reflect on the past growing season and to consider what went well and what adjustments could be made for future improvements in yield, quality, or harvest timing. Since margins in all enterprises currently are slim to non-existent, it's critical to look for any changes that would help to reduce expenses or increase output.

Spring planting was delayed until May and circumstances caused some corn to be planted well into June. Experience and observation have taught me that July-planted corn results in a disaster. Alternatives to corn should be considered after mid-June. Of course, an alternative summer forage comes with a compromise in terms of yield or energy or both, but the corn crop itself is compromised when it is planted late. [The sidebar shows revealing data from a Wisconsin study.] Waiting for the corn to reach maturity before a killing frost can cause headaches. We had plenty of growing degree days this year to push the crop along, but the excess moisture from August on created challenging conditions for harvest. Nobody likes to slog around in the mud. It's hard on the equipment and hard on the nerves of the people fighting through the mud. We can't predict the weather, but we can try to hedge our situation with planning. Hybrid maturity and flow of field demands when spring arrives are two critical areas to address.

A lightbulb went off in my head this fall when I was listening to the news about the impending hurricane season. We will need to consider the fall hurricane season in our cropping plans, especially its impact on harvest. As the world's oceans warm, the Atlantic fall hurricane season is predicted to start earlier and for storms to carry much more moisture, leading to greater precipitation fallout. The greater strength and intensity of Caribbean and Atlantic hurricanes increases the likelihood of them impacting us, as we experienced this year. We have certainly experienced an increase of both severe floods from rivers cresting their banks and flash floods in the last decade. This fall our soils were already saturated or on the edge of saturation before the Hurricane fallout arrived, creating conditions that were ripe for rivers overtopping their banks and flash floods, which hit our Southern Tier counties pretty hard, once again (recent memorable years include a stalled jet stream to the west of the Appalachian Mountains in 2006 and Tropical Storm Lee in 2012).

A management area to seriously consider is the maturity rating of your corn and soybeans. Select maturity groups that don't rely on an exceptional season to finish. A few extended falls in succession lure us into a state of complacency; and then we have a cooler than average season, like in 2017, where without the unusually warm 2<sup>nd</sup> half of September, our crops would have struggled to reach maturity. The trend for silage has been to select longer maturities to maximize yield. On well-drained soils, that's a reasonable strategy. But as we move to less well -drained soils or to increased elevation typical of our hill soils, I suggest being a bit more conservative on maturity selection.

There are two very important pieces to the corn silage puzzle: yield and quality. When the crop doesn't mature timely and you are at the point where you are hoping it finishes before frost, you are highly likely to have a compromised crop. Harvesting at an ideal moisture level to support fermentation becomes harder and an immature ear will have lower starch levels, resulting in less available energy. It might save some time and fuel at harvest because you won't have to crank the processor down, but I don't believe that will offset the lost nutritional value.

The yield advantage between hybrid groups is not as great as it once was. We used to see a yield advantage of 1 ton or greater of silage for an uptick in maturity group. Today's hybrids are better able to handle stress conditions from pests to vagaries of weather such as drought and excess moisture. If you look at hybrid yield trial results you will find competitive hybrids in all maturity groups. Eliminating the barriers to reaching yield potential include selecting a hybrid that matches the conditions where it will be planted with the traits you need will support overall performance.

"We conducted experiments during 2005 and 2006 to determine what could be expected by planting corn in June and July. Three corn hybrids (brown midrib, full-, and shorter-season) were planted on five different dates from April 28 to August 1 at Arlington, WI. The 2005 growing season had a killing frost on October 26, which was three weeks later than normal.

Seasonal dry matter production after planting during July ranged from 0.7 to 7.5 Tons DM/A while the same hybrids planted April 28 to June 1 produced 8.7 to 10.0 T DM/A (Table 1). Milk per acre is significantly lowered 92 to 17% to levels ranging from 2,300 to 24,000 lbs milk/A for planting dates in July. Crude protein, NDF and NDFD increased with later planting dates. Although, little starch content was measured in later planting dates, overall milk per Ton tended to decrease slightly. Thus, relatively small changes in Milk per ton occurred during planting dates in July with levels ranging from 2600 to 3200 lbs milk/T, which was a 16 to 22% decrease from corn planted April 28 to June 1.

Full-season hybrids produced the greatest dry matter yield and Milk per acre when planted during July (Table 2). No significant interaction among corn hybrid types was measured for Milk per Ton, although brown midrib hybrids tended to produce the best quality.

Corn can produce significant dry matter yield when planted during July, but the amount produced depends upon when a killing frost occurs. Growers need to check on options available from their insurance companies before taking action and planting corn in late June and July for emergency forage. Herbicide labels must be adhered to before switching to other crops. A small amount of fertilizer may be justified in replanted areas. There is no guarantee that flooding and ponding will not occur again later during the growing season."

Source: Laurer, Joe, Corn Agronomist, University of Wisconsin, UWEX, Planting Corn in June and July! - What can you expect? http:// corn.agronomy.wisc.edu/AA/A057.aspx.

Table 1. Corn silage yield and quality response to planting date at Arlington, WI. Values are averaged across brown midrib, full- and shorter-season hybrids.										
Planting date	Harvest date	Season GDUs	Forage yield	Crude	protein	NDF	NDFD	Starch content	Milk (2006)	
			T/A		%	%	%	%	lbs/T	lbs/A
2005										
April 29	September 9	2369	9.5	-	7.4	43	60	34	3400	32500
June 1	September 21	2325	10.0	7	7.0	46	59	32	3300	33300
June 30	November 1	1996	7.5	-	7.7	51	62	20	3100	24000
July 15	November 1	1694	5.6	5	8.2	54	66	12	2900	16500
August 1	November 1	1304	2.8	ģ	9.6	59	73	1	2600	7300
R2			0.82	0	0.99	0.99	1.00	0.92	1.00	0.94
2006										
April 28	September 8	2242	9.1	1	7.7	45	57	33	3300	29700
June 1	October 25	2197	8.7	8	8.4	42	56	35	3300	28900
June 30	October 25	1723	5.9	8	8.9	55	63	18	3100	18500
July 14	October 25	1442	3.5	1	.0.3	68	64	0	2800	10000
July 31	October 25	1036	0.7	1	.2.4	68	75	0	3200	2300
R2			0.97	0	.96	0.99	1.00	0.79	NS	0.99
GDUs= Growing Degree Units from planting until I			Intil harvest or l	killing fr	ost		-			
Date when mi	nimum tempera	ature <= 28 oF: 2	2005= October	26; 200	6= October 1	2				
Table 2. Corn	silage yield and	quality respon	se to planting o	late at A	Arlington, W	I. Values are	averages of 2	005 and 2006.		
Planting date Fora			Forage yie	vield Crude pr		in NDF	NDFD	Starch content	Milk (	2006)
		T/A		%	%	%	%	lb/T	lb/A	
Full-season hybrid (108 d RM)										
April 29		10.0		7.4	43	56	35	3300	33300	
June 1		10.3		7.3	44	55	34	3300	33800	
June 30		7.5		8.0	56	60	17	3000	22600	
July 15			5.3		9.4	61	63	8	2900	15300
August 1		2.1		11.1	64	72	1	2800	5600	

R2

Shorter-season hybrid (94 d RM)							
April 29	9.4	7.4	42	55	37	3300	31500
June 1	9.4	7.7	41	54	39	3300	31300
June 30	7.0	8.6	50	57	23	3100	21900
July 15	4.7	9.5	60	63	8	2800	13500
August 1	1.9	11.3	63	72	1	2800	5000

0.82

0.87

0.76

0.87

0.88

0.57

0.87

BMR hbrid table continued on pg. 15

### CONSIDER BEDDED PACK BARNS FOR COW COMFORT AND MANURE MANAGEMENT: LEARN MORE FROM JANUARY 9 PANEL AT NYCO MEETING

Small dairy farm operators in New York may soon be faced with the prohibition of winter spreading of manure by the State Department of Environmental Conservation. As an alternative to winter spreading, farmers considering updating barns or building new facilities can consider a bedded pack barn system for manure storage and animal comfort. There may also be government assistance to help build such a barn.

A panel of farmers who have used bedded packs will be featured at the NY Certified Organic (NYCO) meeting on January 8, 2019, beginning at 10 AM, in Jordan Hall, 630 West North Street, Cornell AgriTech, Geneva, NY. There is no cost or need to register to attend the NYCO winter meetings in January, February, and March. Participants are asked to bring a dish to pass at the potluck lunch.

NYCO Winter Meeting Organizer and Cornell Cooperative Extension Small Dairy Specialist A. Fay Benson provides the following information on the two types of bedded pack systems, including some pros and cons of each type and examples of one system in Vermont and one in New York.

The choice of pack depends upon each individual farm's needs. Both systems have been used by confinement and grazing operations and with beef and dairy cows.

The **Deep Bedded Pack** (DBP) uses fresh bedding daily to keep the pack dry and clean. The pack grows to a depth of 5-6 feet by the end of one winter.

A DBP system generally consists of a foundation of concrete or hard clay. Most DBPs use straw, which is more absorbent than hay. DBP systems use more bedding. For example, one farm used 20 lbs. of straw/day/animal. As more manure and bedding are added daily, the pack grows deeper and requires strong retaining walls. DBP cleaning is more difficult due to the wetter, compressed material.

The **Composted Bedded Pack** (CBP) requires the farmer to stirring once or twice a day with a tractor tractor-mounted rototiller. This system works best with wood shavings or chopped straw.

CBPs have a foundation of concrete covered by a layer of thick wood chips to allow moisture and air movement at the base.

Composting in the pack happens just as in a compost pile. When the pack has the correct carbon-nitrogen ratio and air is regularly introduced to the pack by stirring, microorganisms flourish and break down the carbon structures of bedding and manure.

The main drawback to a CBP is the requirement of an expensive piece of rototilling equipment and the daily labor to run it. The bedding requirement for a CBP is less since stirring releases moisture to the air and the bedding is drier. Some CBP barns direct fans at the packs to increase drying.

The CBP's main benefits are that they contain less material to be spread and more nutrients (N, P, & K) that are more stable in the compost and will not run off with water when applied to the land.

Microbial activity in the CBP provides heat throughout the bedding for animal comfort through the winter. A farmer with a CBP barn in Vermont measured 60-80 degrees F up to 12 inches into the pack.

Benson has seen CBPs mostly on grazing dairy operations using the barn only during the 150 days or so of the winter.

For both types of bedded packs, side-retaining walls need to be strong enough to contain 4-6 feet of the pack and stand up to cleaning. As with any type of housing management, using adequate bedding, properly maintaining the bedding system, and consistently applying good milking and animal hygiene help manage the pathogens naturally found in a bedded pack system. Cow access, animal grouping, and travel-to-the-feedalley patterns can be managed by electric fences. Cows make more manure in eating areas so scraping those areas daily will also help reduce manure in bedded areas.

Good ventilation, whether the pack barn is positioned for natural wind ventilation or uses mechanical assistance with fans, helps keep cows healthy, the pack dry, and odors down.

The open barn area of a bedded pack system allows for natural animal movement, which will become increasingly important as animal care standards are implemented. Opinions differ on how much room should be allowed per cow; 85 to 100 sq. ft. per animal is usually the recommendation and is higher than

## THE BENEFITS OF A BEDDED PACK BARN

- Increases cow comfort
- Can increase milk production
- Manure storage with less capital investment and less labor requirement than liquid storage
- Pack manure mixed with extra carbon is a better soil nutrient then raw manure from typical manure storage.
- Particularly adapted to grazing dairies since barns are used only 6 months and allow plenty of time to clean
- An option for outdated dairies looking for build a combined housing-feeding barn with manure storage
- Enhances dairy farm conservation practices

for a freestall system. Breed, age, and animal condition impact that decision when planning a new barn. The general consensus is the more room, the better. The extra housing cost per animal is one reason BP barn structures are used more on smaller dairies.

The comfortable environment of a BP system reduces lameness and provides for cows' deep and restful sleep that in turn positively impacts milk production. A report at the 5<sup>th</sup> National Small Farm Conference in 2009 noted that a 2000-lb. increase in milk sales/cow was attributed in part to use of a bedded pack management system:

(http://www.allacademic.com/meta/p373821\_index.html). That same year a study by the Cornell University Department of Applied Economics and Life Sciences concluded that the bedded pack management system was "an excellent environment for cattle and provided the intended environmental benefits."

#### **Vermont Pack Barn Shows Innovation**

Bedded pack barns have been used in Vermont as a way for a smaller operation to build manure storage since the state prohibited winter spreading of manure in 1995. At his organic Butterworks Farm in Westfield, Jack Lazor used a DBP with

three animal groups in a 60X120-foot barn. He separated them with electric fences suspended from the ceiling and raised as the pack grew. A 6-foot coil of water line inside water troughs unwound as the waterers rose with the pack. Jack used bale rings to feed baleage on the pack.

Jack noted that the return for the significant expense of straw for the pack (\$40-\$45 every other day plus the labor of composting the pack), was a positive effect on the soil and soil nutrients. Once the cows went out to pasture, Jack would usually remove the pack after first cutting. He left it in long, 6foot-high windrows on a nearby field until after the last harvest. By leaving it for 3 months, the pack composted to reduce the amount to haul to fields for spreading. Jack reasoned that applying the aged manure in the fall mimicked nature applying carbon to the soil in the fall with dead leaves and grass.

"Raw manure is hard on the soil and the environment; many of the nutrients are volatile or water soluble. By adding the extra carbon through the straw more of the volatile nutrients are captured and stored. Allowing them to go through the biological activity of composting, the nutrients are stabilized and won't run off with significant rainfalls," Jack said. \*

Continued from pg.13							
Brown midrib hybrids							
April 29	8.4	7.9	47	63	28	3400	28500
June 1	8.3	8.2	47	64	27	3400	28200
June 30	5.9	8.3	53	69	17	3300	19300
July 15	3.8	9.0	62	73	3	2900	10900
August 1	1.4	10.6	65	79	0	3000	3800
R2	0.89	0.78	0.79	0.89	0.89	0.47	0.88
Hybrid * Planting date interaction	**	**	**	**	**	NS	**
Bmr hybrid: 2005= 112 d RM and 2006= 102 d RM							

#### NEW YORK STATE ANNOUNCES OPEN APPLICATION PERIOD FOR INDUSTRIAL HEMP AGRICULTURAL RESEARCH PROGRAM

Application Period Open Through the End of December for Research on Industrial Hemp and Growing and Processing CBD

New York State today announced an open solicitation for individuals and businesses interested in growing or processing industrial hemp to further grow the industrial hemp industry in New York State. As part of the State's Industrial Hemp Agricultural Research Pilot Program, the Department of Agriculture and Markets is now accepting applications for growers and processors of industrial hemp.

The Department is also accepting applications for the processing of industrial hemp as it relates to Cannabidiol (CBD). Applications can focus on research into the benefits and risks of CBD use for wellness purposes and to gauge its effectiveness. Applications related to human and animal food will not be considered at this time.

The applications and additional information, including the Department's CBD Research Partner Agreement, can be found on the Department's website at <a href="https://www.agriculture.ny.gov/PI/PIHome.html">https://www.agriculture.ny.gov/PI/PIHome.html</a>. The open solicitation ends December 28, 2018.

Any questions must be submitted in writing to <u>industrialhempNYS@agriculture.ny.gov</u>; all answers will be posted on the Department's website under the FAQ section.

In addition, the Department continues to accept applications on a rolling basis for future research partners in the areas of grain and fiber. Call Janice with questions—607-391-2672. \*

## Cornell University Cooperative Extension SCNY DAIRY & FIELD CROPS TEAM

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CALENDAR OF EVENTS					
Jan 8, Feb 12, Mar 12	2018 NYCO Winter MeetingsDish to pass luncheonJordan Hall, 630 West North St., GenevaSee Page 8 for more information	10am –2pm			
Jan 9, 16, 23 & 30	QuickBooks for Farmers and Growers - Register using link on Page 9 Cortland Chamber of Commerce, 37 Church St. Cortland	10am-12pm			
Jan 14	<b>Becker Forum: Farm Labor: Planning for the Future</b> Liverpool Holiday Inn Detailed Information: https://nwnyteam.cce.cornell.edu/event.php?id=801	8:30am –5pm			
Jan 17, Feb 14, Mar 21	<b>Dairy Manager Discussion Group Series -</b> See Page 11 for details Cortland Chamber of Commerce, 37 Church St, Cortland	Lunch 12 pm Meeting 1-3 pm			
Jan 29	<ul> <li>2019 Winter Crop Meeting - Clarion Inn (formerly Ramada Inn)</li> <li>2310 N. Triphammer Rd, Ithaca</li> <li>See front cover for more information and registration information. DEC/&amp; CCA credits</li> </ul>	9:30am-3:30pm			
Jan 30	<b>New York Ag Labor Road Show -</b> NYS Fairgrounds & Home Center Building 581 State Fair Blvd., Syracuse See Page 4 for more information and registration instructions	9am-4pm			
Feb 7 & 8	<b>Dairy Day: Uncovering Opportunities for Your Dairy -</b> Feb 7, NYS Fairgrounds, Syracuse; Feb 8, Owego Treadway See Page 3 for more information and registration instructions	9:30am-3pm			
Mar 6 & 13	<b>Dairy Managers Training -</b> Locations to be determined See page 10 for more information and registration instructions	9:30am-3pm			
Mar 8	<b>Spring Manure Handling and Trucking Safety Workshop with DSSC</b> NYS Grange, 1 Grange Place, Cortland Call Shannon to pre-register. This meeting meets CAFO Training Requirements	9 am—3 pm			