Cornell Cooperative Extension | Northwest NY Dairy, Livestock and Field Crops Program

AG FOCUS

Considering Value-Added Dairy Processing? by Margaret Quaassdorff

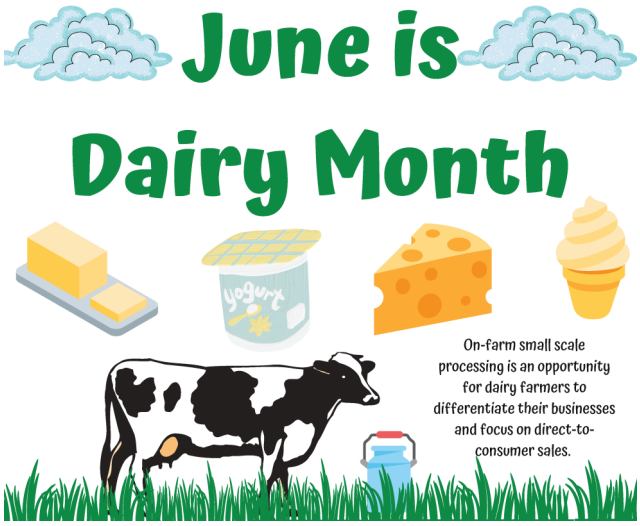
June is Dairy Month, and we are connecting to consumers and celebrating all things dairy! Bringing farm-brand high-quality products closer to local customers has been a goal of dairies that do on-farm small scale processing. It is also a rising interest to dairies due to volatility in milk price and farm input costs. In addition, the local food movement and consumer attention in where food comes from is growing. This presents an opportunity for local dairy producers to consider differentiating their businesses and focus on direct-to-consumer sales.

Common value-added dairy processing products include bottled milk, cheese, butter, yogurt and ice cream. It is romantic to imagine happy customers enjoying cones outside your family farm's ice cream store, or seeing your farm name-brand butter at the local grocery store. But before you jump head-first into a value-added business venture, you may want to consider the following:

- How do I plan a value-added business?
- What regulations should I be aware of?
- Who is going to manage and perform daily tasks of the value-added business?
- Who will handle the marketing and paperwork?
- Who loves people and wants to be the face of the business?
- Do these people/resources exist within your farm family/business now, and do they have the right skill-set and passion to make this successful, or will you need to hire?

Here are some resources to check out:

- **On-Farm Dairy Processing Online Series 2022:** For business considerations and regulatory requirements of on-farm dairy processing. Session 1, held on May 25th, focused on "*Fitting On-Farm Dairy Processing into your Business to Improve Profitability*". (Please reach out to me if you would like the recording.) Session 2 on June 1st will discuss "*Considerations for Designing your Processing Facility for Quality Production*" and will be followed by Session 3 on June 8th where the topic will be "*Managing the 'Red Tape' for Efficient and Sustainable Value-Added Dairy*".
- **Calendar of workshops from Cornell Dairy Foods Extension:** https://cals.cornell.edu/dairy-extension/course-calendar. There are a variety of offerings for those considering milk processing (fluid milk, ice cream, yogurt, cheese, food safety and quality, etc.) throughout the year.
- Recording of **2020 On-Farm Dairy Processing Webinar:** https://www.youtube.com/watch?v=NKrxxAyp5_0&list=PLBMGyzTr13dvqmw5Ma-b0vPcYMvvNBDAq This webinar presented by CCE and NYS Ag & Markets. Some of the individuals who presented are not currently in the same roles, but the information is a good overview.
- **The Cornell Dairy Advancement Program (DAP)** is offering funding assistance for business planning, business analysis and advisory teams, and new initiatives of the program focus on improving record keeping for decision making and operational budgeting to improve annual operations. Take a look at the details: https://cals.cornell.edu/pro-dairy/our-expertise/dairy-advancement-program



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By law and purpose, Cooperative Extension is dedicated to serving the people on a non-discriminatory basis.

Remember To Check Out The NWNY Team Blog!

The blog will feature **Crop Alerts, Dairy Alerts, Bilingual (Spanish) Resources, Upcoming Events** and more from our team members. You can visit the blog at: https://blogs.cornell.edu/nwny-dairy-livestock-field-crops/

For more information about our program, visit us online at: https://nwnyteam.cce.cornell.edu/

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Inside This Issue

2021 DFBS Results, Comparing Performance Among Dairy Businesses by John Hanchar

Summary

- The Cornell University/CALS & CCE Dairy Farm Business Summary (DFBS) program is a valuable tool for managing a farm business.
- This article illustrates the use of the DFBS program's comparison abilities to identity possible areas for improvement.
- The illustration suggests that receipts, some measures of production and others are similar when comparing the lower 90 percent of farms to the upper 10 percent of farms currently in the 2021 DFBS data set, while costs, profits, efficiency differ -- here groups are defined using a measure of profitability.

Introduction

As of 9 May 2022, the number of dairy farm businesses cooperating in the Cornell University/CALS & CCE DFBS program for the 2021 calendar year totaled 131. Participation enables producers to: analyze their financial situation; set future goals; and make sound financial decisions. The DFBS program also allows a cooperator to compare their business' results to results from other farms using a comparison tool. A user describes a comparison group based upon a single or several size of business, rate of production, performance and other factors. This article illustrates the approach and results.

Table 1. Selected measures by factor by group, 2021 DFBS results, NYS, May 9, 2020.

Selected Factors	Group Average, lower 90% of Farms	Group Average, upper 10 % of Farms
Size of Business		
Average number of cows	1,164	1,353
Worker equivalents	22.4	21.0
Total tillable acres	2,111	2,218
Rates of Production		
Milk sold per cow, pounds	27,102	27,281
Hay dry matter per acre, tons	3.7	3.5
Corn silage per acre, tons	19.1	19.5
Labor Efficiency & Costs		
Cows per worker	52	65
Hired labor costs per cwt.	$3.11	$2.61
Hired labor cost, % of milk sales	15.7	13.3
Cost Control		
Grain & concentrate/cwt. milk	$6.76	$6.09
Labor & machinery/cwt. milk	$6.89	$5.84
Operating cost producing cwt.	$16.25	$14.57
Income Generation		
Gross milk sales per cow	$5,370	$5,368
Gross milk sales cwt.	$19.81	$19.68
Net milk sales per cwt.	$18.45	$18.43
Profitability[1]		
Net farm income per cow	$544	$999
Net farm income per cwt.	$2.02	$3.68
Rate of return on all capital	3.8%	8.3%

[1]All profit measures are without appreciation.

The web based DFBS program's comparison tool generated results for 2021 for two groups of farms -- the lower 90 percent and upper 10 percent, based upon the rate of return on all capital without appreciation. The upper 10 percent group generated a minimum rate of return on all capital without appreciation of 7 percent, while the lower 90 percent group consisted of the remaining farms.

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2021 DFBS Results, Comparing Performance Among Dairy Farm Businesses

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Results

Some measures of size, production efficiency, and economic performance were similar among the two groups, while others, for example, cost control and profit measures, differed (Table 1). Results suggest that the lower 90 percent and upper 10 of farms differed considerably based upon profitability measures. An examination of receipts and expenses from the income statement can provide greater detail. Farm receipt values for the two groups were very similar per cow and per cwt. by receipt item -- milk, dairy cattle, etc., and total. Groups were much less similar based upon expenses, including when focusing on the relatively largest items.

For example, the upper 10 percent group averaged $1,662 per cow for the dairy grain and concentrate item, while the lower 90 percent group averaged $1,832 per cow, a percent difference of -9.3 (Table 2).

Closing Thoughts

A cooperating farm business owner could generate meaningful peer to peer comparisons to similar farms based upon size, rates of production, performance and other measures. Using comparison results such as those in Tables 1 and 2, for example, where a farm would compare its results to a group of top performers' results, a farm business owner could work on identifying possible areas for improvement. For more information, please contact John Hanchar.

Table 2. Selected expenses ($ per cow) by item by group, 2021 DFBS results, NYS, May 9, 2020.

Selected Items, Operating Expenses	Lower 90 percent of Farms	Upper 10 percent of Farms	Percent Difference (vs "Lower …")
Dairy grain & concentrate per cow	$1,832	$1,662	-9.3
Hired labor per cow	$844	$712	-15.6
Machinery operating per cow	$590	$510	-13.6
Milk marketing per cow	$371	$341	-8.1
Fertilizers, seeds, sprays and other crop inputs per cow	$321	$269	-16.2

NWNY Team Webinars - *Available When You Are*

The NWNY Team has several recorded on-demand webinars available on our YouTube channel. Several topics are available to view for free, anytime and some are available in both English and Spanish.

Topics Include:

- Transition Cows
- Calf Care
- Feeder School
- Focus on Farm Management
- Sustainability
- Waterhemp Control in Soybeans and Corn
- Pasture Management
- Marketing Meat Products

Visit: https://www.youtube.com/user/CCENWNY

Dealing with Mud Season by Nancy Glazier

By the time you read this I am hoping mud season for livestock is over. The research is out there, with data showing how stressful mud is on both animals and humans. With cattle, mud that is dewclaw deep can potentially cause loss of gain with cool temperatures (see table below). It can also lead to lameness and potentially foot rot. Lots of issues can arise if calving occurs in mud, such as navel ill, mastitis, scours, and more.

Table 1. Risk potential caused by mud, 21 to 39 degrees F.

Mud Depth	Potential Loss of Gain
No mud	0%
Dewclaw deep	7%
Shin deep	14%
Below hock	21%
Hock deep	28%
Belly deep	35%

Beef Feeder, University of Nebraska, August 1991.

How do we deal with mud season, which some years is extended? Look at your outwintering and see what you can improve for next year. There is no one solution and adaptation may be needed every year. Some options are more permanent.

Concrete pads. Target high traffic or heavy use areas. They are nice, but as soon as cattle step off the pad they are in mud. Possibly a transition zone of geotextile fabric and stone could be added to extend a more solid surface. Perhaps put feeders and waterers on concrete pads.

Provide ample dry bedding. This material could be corn stalks, straw, or wood chips. It is needed whether animals are on concrete or the ground as they need a dry place to lie down. Keep mud, dirty bedding, and manure scraped if on concrete.

Investigate wood chip pads. Annual maintenance is required for these systems with removing the top portion and adding additional wood chips. University of Vermont has put together a fact sheet that can be found here, www.uvm.edu/sites/default/files/media/woodchip_factsheet_draft_2.pdf.

Some temporary or movable options. These can lead to compaction problems, but the freeze-thaw of early spring may help alleviate some issues if animals are moved to another location.

- Build mounds or utilize high spots. The natural high spots on your farm may be more gravelly and better drained.
- Stockpile pasture. This may help with portion of the mud season. The stockpile can provide additional cushion to reduce mud. Possibly set up paddocks to keep cattle moving.
- Use pastures in need of renovation.
- Roll out hay. This is a lot of work and requires equipment to accomplish, but there may be times or situations where it is useful.
- Move hay feeders. This also is a lot of work and the risk of getting a tractor stuck can be a problem, too.
- Keep livestock out of wet areas. When livestock have access to wet spots water will pond and increase compaction and water quality risks.

Weather challenges can impact feed intake so have quality feed available, supplement if nutritional needs are not met.

Sorry to say I do not have a silver bullet. If you have something that works on your farm not mentioned please let me know. I'd like to learn about it.

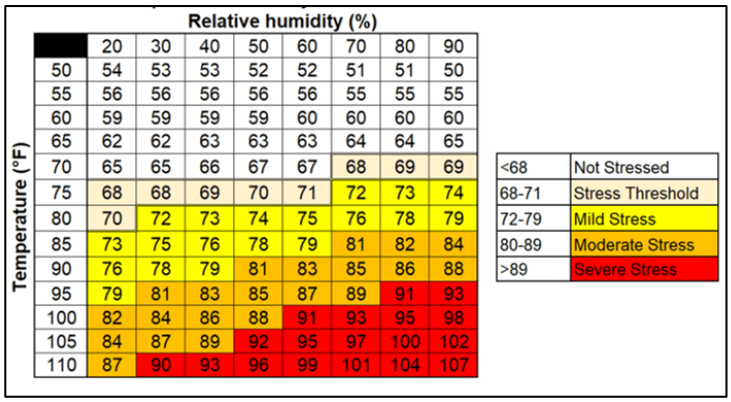
If cattle are on pastures when wet, severe pugging can occur. Photo: N. Glazier / CCE NWNY Team

Heat Stress Can Last a Lifetime. Or Three. by Kaitlyn Lutz

Although summer does not officially start for another 20 days, odds are that your herd is experiencing the impact of the warmer weather already. Before we get into the astounding findings of recent heat-stress research, let's review some facts:

When do cows get heat stressed?

Around 68 Temperature Humidity Index (THI). In our area, with high relative humidity, we are above 68 THI for most of the summer (see Figure 1). Fifty years ago, heat stress in cattle was seen around 72 THI. This is due to the higher producing dairy cattle of today. Higher milk production= higher metabolic rate = more heat production.



Temperature (°F) \ Relative humidity (%)	20	30	40	50	60	70	80	90
50	54	53	53	52	52	51	51	50
55	56	56	56	56	56	55	55	55
60	59	59	59	59	60	60	60	60
65	62	62	63	63	63	64	64	65
70	65	65	66	67	67	68	69	69
75	68	68	69	70	71	72	73	74
80	70	72	73	74	75	76	78	79
85	73	75	76	78	79	81	82	84
90	76	78	79	81	83	85	86	88
95	79	81	83	85	87	89	91	93
100	82	84	86	88	91	93	95	98
105	84	87	89	92	95	97	100	102
110	87	90	93	96	99	101	104	107

<68	Not Stressed
68-71	Stress Threshold
72-79	Mild Stress
80-89	Moderate Stress
>89	Severe Stress

Figure 1. Temperature Humidity Index (THI) for Cattle. Lactating dairy cows are at greater risk for heat stress when the THI exceeds 68.

Source: Extension.umd.edu

How can we tell if our cows are heat stressed?

The easiest way is to walk into the barn and observe. If cows' **respiratory rates are above 60 breaths per minute** (or one breath per second), and they are otherwise healthy, they are heat stressed! This can be a useful tool to teach your employees and monitor by pen. If pushers start recording this daily for every pen, you can soon start to identify the best place to focus your next fan or sprinkler upgrades. Other important changes that can indicate heat stress are: >5lb/cow drop in milk production, >5% drop in conception rate, bunching away from exterior walls, and increase in sole ulcers in the fall.

How should you treat a cow with heat stress?

If you encounter an animal who is panting and has a really elevated rectal temperature, the key is to cool them down quickly. This can be done by spraying them down with water, putting fans on them, putting rubbing alcohol on the ears and top-line and offering lots of fresh, cool water. In severe cases, cool oral or IV fluids may be indicated. As always, listen to your grandmother: an ounce of prevention is worth a pound of cure!

So, how do we prevent heat stress?

You already know the answer: well maintained, properly spaced fans and sprayers/soakers to aid in evaporative cooling. Shade cloths along outward facing freestall rows or feed alleys can minimize direct solar exposure. For more information visit the Dairyland Initiative.

Research Update on Dry Period Cooling

During the dry period we can't see the effects of heat-stress as readily, but the effects are real and have been proven time and time again. The average loss in the dam's subsequent lactation if no heat-abatement was provided during the dry-period is about 11lb/day, or over 3,000lb/cow during a 305-day lactation (Ouellet et al., 2020). The reason, in part, is that heat-stress during this period dampens the growth of mammary tissue and changes its actual structure, including smaller milk ducts etc. (Dado-Senn et al., 2019).

A recent study published in the Journal of Dairy Science in 2020 shows that this effect continues through to the daughters born to that heat-stressed dam as well as her granddaughters. The group out of University of Florida who conducted this study used data from 156 daughters and 46 granddaughters whose dam or granddam was either cooled with shade, fans and sprinklers or not cooled, meaning only provided shade.

The daughters born to heat-stressed dams showed between **5-15lb/day less production** than those born to cooled dams. And the kicker? ***This lasted for 3 lactations!*** The granddaughters showed about a 3lb/day decrease during their first lactation. Furthermore, the daughters born to heat-stressed dams had a higher probability of leaving the herd prior to first calving and their

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Heat Stress Can Last a Lifetime. Or Three

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productive life was shorter by almost 5 months.

How could this be?

You might be asking yourself how one episode of heat stress could have such long-lasting effects. The answer is epigenetics. This is the effect that the environment can have on the way our genes are expressed. Heat-stress causes changes certain genes to be blocked or "turned-off", which can lead to the changes we are seeing in mammary structure and production. Researchers are continuing to determine the exact mechanisms, but they know that when the fetus overheats in the last 6 weeks of pregnancy, cell development of different organs is altered. This can affect not only the mammary gland, but has potential to significantly impact other organs, such as those involved in immune function etc. (see Figure 2).

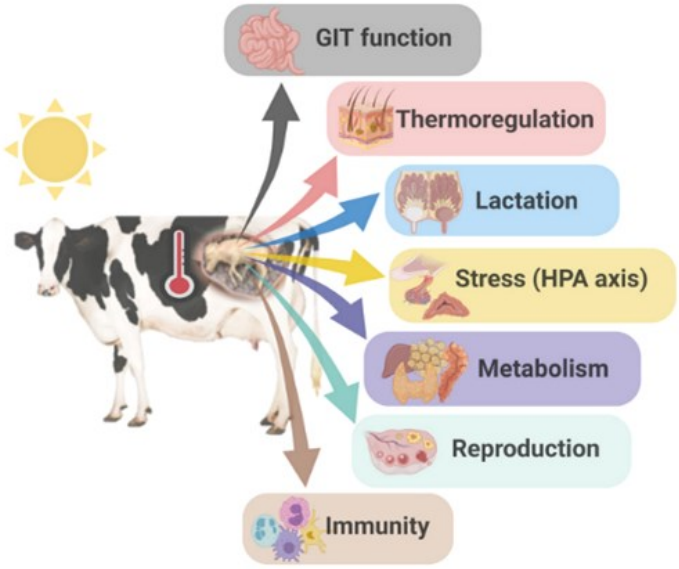

Figure 2. Diagram of the various functions impacted by in-utero heat-stress. Laporta, et al. JDS. 2021.

June's Most Unwanted Field Crop Pests By Mike Stanyard

Even though our growing season has been behind this spring, rest-assured the pests that like to eat them will be here in June! Here are the top six to look for in corn, alfalfa and soybean.

Black Cutworm (BCW)

This moth usually is the first uninvited guest of the season. Pheromone traps have been catching BCW since April 12 and some big flights have been recorded since late April. There are plenty of cover crops and grassy areas to lay eggs so it looks like we will be on the watch in early June for BCW larvae activity in corn fields. Tune into the NWNY Team Blog for weekly pheromone trap and degree day updates for your area.

Walk the rows looking for cut, wilting, or missing plants. If you find an injured plant, dig in the soil around the base. BCW are nocturnal and will hide under the soil during the day. If 5% or more of the plants in the cornfield are cut or injured, an insecticide spray is warranted. You can view our video on how to scout for BCW on our YouTube page at www.youtube.com/user/CCENWNY.

Common Armyworm (CAW)

Like BCW, the first CAW were caught on April 12 and there have been steady numbers caught since then. Armyworm infestations can be found each year in barley, rye and wheat. They also can cause problems in grass fields, pastures, mixed grass/alfalfa seedlings and corn. Remember to look for the blackbirds to help you find where the CAW are feeding in small grains.

With the increase in the use of cover crops, we have the potential to see more larvae injury in corn. CAW larvae feed from the outside edge of the leaf towards the midrib. Leaves look very ragged. Larvae feed at night and hide in the corn whorls during the day. Penn State recommends "Control efforts are usually not economical unless ten percent or more of the plants are infested." See their factsheet for more information https://tinyurl.com/psu-armyworm.

Alfalfa Weevil

The adult weevils do overwinter here in NY and are usually a potential problem in first cut alfalfa. Weevils have been easy to find but damage has not been economic so far. Hopefully, we can get first cut in the bunk with no problems. Do not forget about second cut regrowth. If we have lots of small larvae emerged at first cutting, they can eat regrowth as fast as it emerges. If 50% of regrowth shows feeding injury, spraying is justified. Here is another video available on our team YouTube page showing how to assess and scout for weevil larvae injury.

Potato Leafhopper (PLH)

Since PLH fly in each year from the south it is hard to predict their arrival. There are no pheromone traps to monitor them. I have seen leafhoppers as early as May 6th and as late as June 7th. As of May 10, no PLH have been found in NY. Second cut regrowth and new seedings are the most vulnerable. PLH feed by piercing and sucking the plant sap from the plant. The resulting hopper burn (yellow leaves) and stunting means that we missed our opportunity for timely management.

PLH management is based on plant height and leafhoppers per sweep. Cornell recommends taking five sets of sweeps with a sweep net (10 sweeps per set) per field and calculating a PLH (adults & nymphs, see picture) per sweep for each set.

Plant Height	PLH per Sweep
< 3 in.	0.2
3 to 7 in.	0.5
8 to 10 in.	1.0
11 to 14 in.	2.0
15+ in.	> 2.0

Soybean Aphids

We are still not sure what soybean aphids are going to do yet. They have not been an issue the last couple of seasons. In most years I observe the first winged females flying to soybeans during the first week of June. A high percentage of our soybeans are being treated with a systemic insecticide seed treatment which will reduce the success of this initial flight.

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June's Most Unwanted Field Crop Pests

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This seed treatment will not be effective against later summer flights. Always look at the newest growth for the first colonies. Hopefully, natural enemies like lady beetles can take over and keep aphid populations in check. If not, foliar insecticide applications are very effective. The unpredictability of this insect makes scouting your beans even more important! Remember: treatment threshold is 250 aphids per plant. Here is another video available on our team YouTube page showing how to scout for early soybean aphids.

Slugs

There are three species found in our soybeans but the most common is the gray garden slug. This species overwinters in the egg stage and hatches in the spring right when young seedlings are emerging. The young slugs feed on the leaf tissue. They hide where it is moist and cool during the day and will come out in the evening to feed. Their slime trails are a sure sign that they are present. Even a little bit of tillage seems to be enough to disturb their feeding. Many farms are running over their fields lightly with one of the vertical tillage implements and getting good results. Pelletized slug baits containing metaldehyde (Deadline® M-P™) can be very effective at reducing slug populations quickly but they do not last very long in the field, are pricey, and difficult to apply.

Cornell Cooperative Extension
AGRICULTURAL WORKFORCE DEVELOPMENT

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

Become an Effective On-the-Job Trainer!
In-Person from 1:00 - 4:00pm

Growing Great People: *Training Skills for Dairy Farmers*

When employees have the right knowledge, skills and attitude to do the job right, it:

- Saves time
- Avoids problems
- Engages employees
- Reduces turnover

This hands-on workshop uses the following system:

TELL: describe the procedure and why it's important

SHOW: demonstrate the procedure and emphasize key points

DO: allow the learner to try to answer any questions

REVIEW: are the steps in the procedure done correctly?

After the workshop you will be able to:

- Plan for organized and effective trainings
- Make trainings meaningful to employees
- Measure and follow up to see if people *really* learned!

*Trainings are conducted simultaneously in **English** and **Spanish***

Register Online: https://nwnyteam.cce.cornell.edu/events.php

or call Brandie Waite at: 585-343-3040 ext. 138

Dates and Locations:

June 29, 2022 - Spring Hope Dairy, Clifton Springs, NY

June 30, 2022 - Noblehurst Farm, Pavilion, NY

COST: $20 per person

Presented by:

Dr. Richard Stup
Ag Workforce Development

Dr. Kaitlyn Lutz
NWNY Team

Libby Eiholzer, MS
Cargill

NY farm viability INSTITUTE

**This program is generously subsidized by the New York Farm Viability Institute*

Cornell Cooperative Extension

Northwest NY Dairy, Livestock and Field Crops Program

Herdsperson Training:
Fresh Cow Assessment

June 2022

Offered in English and Spanish
In-Person *(Locations and Times Vary)*

Physical examination and a basic knowledge of cattle anatomy, physiology, and behavior is key for dairy personnel to be able to understand "normal" and identify what may be a health concern.

This workshop will teach fresh cow assessment and monitoring practices to recognize and minimize fresh cow metabolic disease rates and improve fresh cow health.

This one-day in-person workshop is offered at different locations. It includes a scenario-based presentation, and hands-on demonstration and practice. Participants will leave with their own fresh cow monitoring kit and certificate of completion.

Performance Objectives:

- Practice and understand basic cattle handling and behavior
- Effectively monitor fresh cows, visually and with data
- Perform a physical examination on cows
- Assemble a fresh cow assessment toolkit

Cost: $75 per person

Register at: https://nwnyteam.cce.cornell.edu/events.php

or call Brandie Waite at 585-343-3040 x138

**** Limited to 10 participants per location ****

Questions? Contact Margaret Quaassdorff, maq27@cornell.edu
or call: 585-405-2567

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.

Locations and Times:

Tuesday June 7, 2022
1:30pm-4:30pm

Stein Farms
8343 Gully Rd.
LeRoy, NY 14482

Wednesday June 8, 2022
1:30pm-4:30pm

Purdy Family Farm
1970 Sand Hill Rd.
Canandaigua, NY 14424

Friday June 10, 2022
2:00pm-5:00pm

Atwater Farms
9676 Lower Lake Rd.
Barker, NY 14012

Presented by CCE NWNY Dairy Management Specialists:

Margaret Quaassdorff, MS and Dr. Kaitlyn Lutz

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2009 WESTERN STAR 4900; Detroit Diesel 490 HP; Jakes; Allison 4500 Auto. Trans. w/PTO; Double Frame Cab & Chassis; 20K F/A; 69K Triple Locking Rears; Neway Air Ride; 312" WB; 368" Bridge measurement; 31" Frame Behind Cab; 61,745 Miles; Stk. # 6353 - $59,900

2013 KENWORTH T800; Cummins ISX 600 HP; 18-Spd. Manual; Double Frame; 244" WB; 20K Front Axle; 46K Full Locking Rears on Hendrickson Air Ride Suspension; 3.73 Ratio; 2-Spd. Auxiliary Transmission; 164" CT; 176" Frame Behind Cab; 545,546 Miles; Stk. # 6321 - $54,900

2011 PETERBILT 37 TANK TRUCK; CAT 475 HP; 18-Spd. Manual; 20K F/A; 46K R/A; 19K Steerable Tag; 265" WB; 175" CT; 4,200 Gal. Tank w/Fruitland Pump; WILL SELL JUST CHASSIS; 326K Miles; Stk. #5963 - $61,900

2007 PETERBILT 357 CRANE TRUCK; 430 HP CAT C13; 8LL Manual Trans.; Double Frame; Terex BT4792 23.5 Ton/ 92' Reach Crane w/4-Outriggers; 36" Bunk; 18' Steel Deck; 20K Front; 40K R/A; Steerable Lift Axle; 216" WB; 105,127 Miles; Stk. #5798 - $71,900

2012 MACK GU813; Mack MP7 395 HP; 13-Spd.; Double Frame Flatbed w/Hab 2868P Hi Pro Knuckleboom Crane w/Remote; 24' Steel Deck; 20K Front Axle; 44K Rears on Camelback Susp.; 20K Rear Mounted Lift Axle; 246" WB; Crane Can Be Removed; 28' Frame Behind Cab; 200" CT; 387,637 Miles; Stk. # 6388 - CALL

2011 KENWORTH T800 WATER TANKER TRUCK; Cummins 425 HP; w/9,226 Gallon Advance Steel Tank and Pump; 250" WB; 16K Front Axle; 46K Full Locking Rears on Hendrickson Air Ride; 4.30 Ratio; We Will Separate the Tank from the Chassis; 21' Frame Behind Cab; 172" CT; 48,978 Miles; Stk. # 6354 - $58,000

2007 PETERBILT 357; 475 HP CAT C15; 18-Spd Manual; Clean Daycab w/Tulsa Winch; 20K F/A; 46K Full Locking Rears; Chalmers Susp.; 224" WB; 496,503 Miles; Stk. #6241 - $39,900

2003 KENWORTH T800; 475 HP CAT C15 6NZ Turbo; 8LL Manual Trans.; Clean Daycab w/12,800# Front AXle; 46K Rears On KW 8-Bag Air Ride; 4.11 Ratio; 186" WB; Wetline; 447,898 Miles; Stk. #5925 - $49,900

2004 & 2003 PETERBILT 378 TRI-AXLE DUMP TRUCKS; 475 HP CAT C15 Single Turbo; 18-Spd. Manual; 20K F/A; 44K R/A; Air Trac Susp.; Double Frame; 21' Aluminum Box; Airlift Tag; 540,000 Miles; Stk. #6345/6346 - CALL FOR PRICE

1999 MACK RD688S DUMP TRUCK; 400 HP Mack E7; Engine Brake; 8LL Trans.; Rubber Block Susp.; Tri-Axle; 19' Steel Body; 20,000# F/A; 46,000# R/A; 22.5 Tires; 248" WB; Spoke Wheels; EXPORT PRICED!!!!; 777,148 Miles; Stk. #5902 - $19,500

2009 KENWORTH T800 FLATBED; CAT 335 HP; 10-Spd. Manual; Clean Double Frame Flatbed Truck w/Palfinger PK11001 Rear Mounted Knuckleboom; 42" Forks; 20K Front Axle; 44K Full Locking Rears on Neway Air Ride; 23' x 96" Aluminum Deck; 4.63 Ratio; 270" WB; 192" CT and 28' Frame Behind Cab; Flatbed & Knuckleboom Can Be Removed; 278,458 Miles; Stk. # 6308 - $48,900

2005 PETERBILT 357 6x6; Clean Double Frame 316" Flatbed Truck; CAT 350 HP; 8LL Trans.; 23K F/A; 46K Full Locking Rears; 425/65R22.5 Tires; Hendrickson Haulmaax Susp.; 5.65 Ratio; 288" WB; 216" CT; 30" Frame Behind Cab; Will Separate Bed from Chassis; 174,181 Miles; Stk. #5701 - $49,900

2005 KENWORTH T800 FLATBED; CAT 335 HP; Double Frame Flatbed Truck; 20K F/A; 44K Full Locking Rears; 21'6" x 96" Steel Deck; 5.29 ratio; 244" WB; Hendrickson Susp.; Flatbed Can Be Removed; 19' Frame Behind Cab; 162" CT; 12,584 Hours; 137,760 Miles; Stk. # 6323 - $49,500

2005 PETERBILT 357 CAB & CHASSIS; Cummins 370 HP; Engine Brakes; 8LL Manual Trans.; Quad-Axle w/Double Frame; 18K F/A; 44K Full Locking Rears; (2) 11K Steerable Lift Axles; Air Trac Susp.; 22' Frame Behind Cab; 212" CT; 302,500 Miles; Stk. #5831 - $43,500

2008 PETERBILT 367; Cummins ISX 485HP; Allison Auto. Trans.; Clean Single Frame Dump Truck w/15' Steel Body w/3' Sides and 1' Sideboards; Tarp; 14,300# F/A; 46K Locking Rears on Air Trac Susp.; 204" WB; Plumbed for Pup Trailer; Engine Had Complete Rebuild (Paperwork Included); 383,992 Miles; Stk. #6264 - $62,900

2008 PETERBILT 340 DUMP TRUCK; Paccar PX8 330 HP; 13-Spd. Manual; Double Frame; 19' Heated Steel Body; 20K Front Axle; 20K Lift; 46K Full Locking Rears; 246" WB; Tarp; 5.25 Ratio; Air-Trac Suspension; Hitch and Plumbed for Pup Trailer; 214,987 Miles; Stk. # 6342 - $49,900

2007 MACK CTP713; 370 HP Mack MP7; Clean, Low Hour Double Framed Feed Mixer Truck w/Supreme Int'l, Inc. 1400T Feed Mixer; Digi-Star EZ3400 Scale System; Allison Auto. Trans.; 20K F/A; 46,400# R/A; Camelback Susp.; 264" WB; 198" CT; 24'6" frame; 79,280 Miles; Stk. #6363 - $104,900

2010 WESTERN STAR 4900FA; Detroit Diesel Series 60 14.0L 495 HP; 18-Spd. Manual; Clean Fuel Tanker Truck w/3,550 Gal. Hannin's Steel Tank & Pump; 245" WB; 14,700# Front Axle; 44K Full Locking Rears on AirLiner Susp.; 3.90 Ratio; We Will Separate Tank from the Chassis; 20' Frame Behind Muffler; 158" CT; 223,505 Miles; Stk. # 6384 - $53,900

2007 MACK CTP713; Mack MP7 370 HP; 10-Spd.; Clean Cab & Chassis; 18K Front Axle; 46K Locking Rears; Air Ride Susp.; 270" WB; 172" CT; 21' Frame Behind Cab; 118,186 Miles; Stk. # 6369 - $47,250

2012 KENWORTH T400 FEED MIXER; 330 HP Paccar PX-8; Allison Auto. Trans.; Clean Double Frame Feed Mixer Truck w/Kuhn Knight Profeed 7011D Feed Mixer; Digi-Star EZ3600 Scale System; 18K F/A; 46K Locking Rears; Hendrickson HN Susp.; 244" WB; 176" CT; 23'3" Frame; 7.17 Ratio; 59,926 Miles; Stk. # 6364 - $79,900

2006 WESTERN STAR 4900 TANDEM TRI-DRIVE CRANE; 550 HP CAT C15; Double Frame; Tri-Drive, Twin Steer Truck w/Terex Stinger TM7571 Crane w/House; 37.5 Ton Capacity; 71' Reach; 36" Bunk; (4) Stabilizers; 36K F/A; 57K Triple Locking Rears; Fifth Wheel; 408" Bridge Measurement; 4.56 Ratio; 32.5 Ton Lift Block; 221,496 Miles; Stk. #6361 - $72,900

2004 KENWORTH W900; 335 HP CAT C10 Engine; 8LL Trans.; Cab & Chassis; 20K F/A; 46K Full Locking Rears; 252" WB; 21' Frame Behind Cab; 150" CT; 4.89 Ratio; Haulmaax Susp.; 118,703 Miles; Stk. #6075 - $29,900

2001 INTERNATIONAL 5600i 6x6 CRANE; 435 HP Cummins N14; 10-Spd. Manual; Double Frame; Pitman Hydra-Lift HL1580 7-Ton/ 65' Crane; 4-Outriggers; 20'x8'6" Flatbed; 20K F/A; 46K R/A; Hendrickson HN Susp.; 244" WB; 184" CT; 25'3" Frame Behind Cab; 158,174 Miles; Stk. #6299 - $49,900

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N Sidedress and UAS Flight Timing by Jodi Letham

Farmers and consultants have inquired about the effects of delaying sidedressing past V6. Would it still benefit the crop if the equipment was available to apply N to already tall corn plants? At the Musgrave Research Farm in Aurora, New York, from 2017 through 2020, a sidedress experiment was conducted by Dr. Quirine Ketterings and the Nutrient Management Spear Program. Each year, 30 lbs. of nitrogen (N) was applied per acre as a starter. The six treatments included zero N (NoN), N rich (NRich; 300lb N/acre at planting), and sidedress applications (180 lb. N per acre) at V4, V6, V8, and V10 growth stages. Each year, corn was harvested for grain.

Results indicate that at the V4 and V6 growth stages, sidedressing produced the same yield as the NRich treatment. Delaying the sidedress application until V8 and V10 resulted in a lower yield than when the same quantity of N was applied at V4 and V6. However, the yields from sidedressing at V8 and V10 were still much higher than the yields from the NoN-treatment. The N balance evaluations revealed that sidedressing after V6 decreased N use efficiency, particularly as a result of yield losses incurred when sidedressing was delayed (and sidedress N was needed to begin with). The N balance evaluations revealed that N use efficiency decreased with sidedressing beyond V6, primarily due to the yield loss experienced when sidedressing was delayed (and it was originally needed to begin with). Based on these findings, the study concludes that if additional N is required beyond a small starter for optimal yield, it is best to sidedress earlier rather than later in the season.

During 2019 of the N sidedress experiment at the Musgraves Research Farm in Aurora, New York, a total of 12 UAS flights were done between VE and R5 using the Quantix™ mapper from AeroVironment Inc. Yield estimation models were derived using the normalized difference vegetation index (NDVI).

According to Sunoj et al. (2021), yield estimation using drones is a promising method if the following management measures are implemented:

- Don't delay sidedressing beyond V6 since it reduces grain production and produces unpredictable NDVI values.
- Fly the drone between R1 and R4
- Avoid flying on cloudy days, as this can affect the images and accuracy of yield estimation models derived from imagery.

Picture source: https://www.dtnpf.com/agriculture/web/ag/news/article/2019/06/01/nitrogen-sidedress-studies-show-form

This article is summarized from:

Sunoj, S., Q.M. Ketterings, J. Lawrence, and G. Godwin (2021). Too Late to Sidedress Nitrogen? Summary of 4 years of Data. What's Cropping Up Blog. Retrieved May 7, 2022, from https://blogs.cornell.edu/whatscroppingup/2021/07/26/too-late-to-sidedress-nitrogen-%e2%88%92-summary-of-4-years-of-data/

Sunoj, S., J. Cho, J. Guinness, J. van Aardt, K.J. Czymmek, and Q.M. Ketterings (2021). Corn Grain Yield Prediction and Mapping from Unmanned Aerial System (UAS) Multispectral Imagery. Remote Sensing, 13 (19), 3948. https://doi.org/10.3390/rs13193948

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>> UPCOMING EVENTS <<

June 2022

2022 Small Grains Management Field Day - Thursday, June 2, 2022 from 9:30am to Noon at Poormon Farms in Seneca Falls, NY. Pre-registration is required. DEC Points available. For more information visit: https://cals.cornell.edu/2022-small-grains-management-field-day

On-Farm Herdsperson Training - June 7, 8, and 10, 2022. Held at various locations, see page 13 for details. Information and registration can be found on the NWNY Team website, https://nwnyteam.cce.cornell.edu/

Growing Great People: Training Skills for Dairy Farmers - June 29 or 30, 2022. Held at various locations, see page 12 for details. Information and registration can be found on the NWNY Team website, https://nwnyteam.cce.cornell.edu/

July 2022

Pasture Walk at Hendrickson's Grazing Acres - Wednesday, July 13, 2022 from 7:00pm - 8:30pm. Will meet near 5702 Route 19, Gainesville, NY. Cost: $10 per person. Pre-register online at: https://nwnyteam.cce.cornell.edu/. Questions? Contact Nancy Glazier: 585-315-7746 or email nig3@cornell.edu

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