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Cornell Cooperative Extension

Southwest NY Dairy, Livestock and Field Crops Program

swnydlfc.cce.cornell.edu

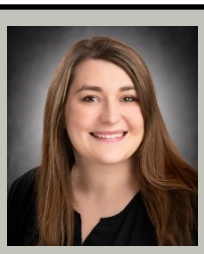
A partnership between Cornell University and the CCE Associations of Allegany, Cattaraugus, Chautauqua, Erie and Steuben Counties.

CROPS COWS & CRITTERS newsletter

Crops, Cows & Critters Newsletter

Volume 3 · Issue 5 · May 2022

Contact Our Specialists



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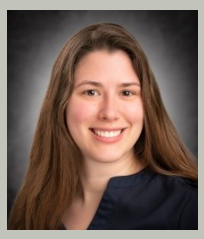

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Announcement Coming Soon -
Our New Field Crops Specialist will Be Starting this Summer!

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CROPS COWS & CRITTERS newsletter

For accommodations or accessibility concerns, please contact our specialists at least one week prior to the scheduled event. If you need information provided in a different format, call 716-640-0522.

Dairy Farming Essentials: Fine-Tuning Your Calf Disbudding Management

By Camila Lage, Dairy Management Specialist

Disbudding calves is no one's favorite task on the farm. However, like many things we often need to do, it is a necessary action to keep our cattle, and the people who work with them, safe. Horned cows are a potential source of serious injury to humans and other animals on farms as they use their horns against perceived threats or to assert dominance.

Since dehorning is a task we cannot avoid, the only reasonable solution is to make it easy and painless for both caretakers and calves. The standards in the FARM Program include developing a protocol with your herd veterinarian that demonstrates that pre-weaned calves are disbudded before 8 weeks of age and that pain mitigation practices are provided for disbudding.

Dehorning performed after eight weeks is considered a surgical procedure and needs to be done by a licensed veterinarian. The best way to address any concerns is to talk with your vet about implementing a strategy that will work best for your operation.

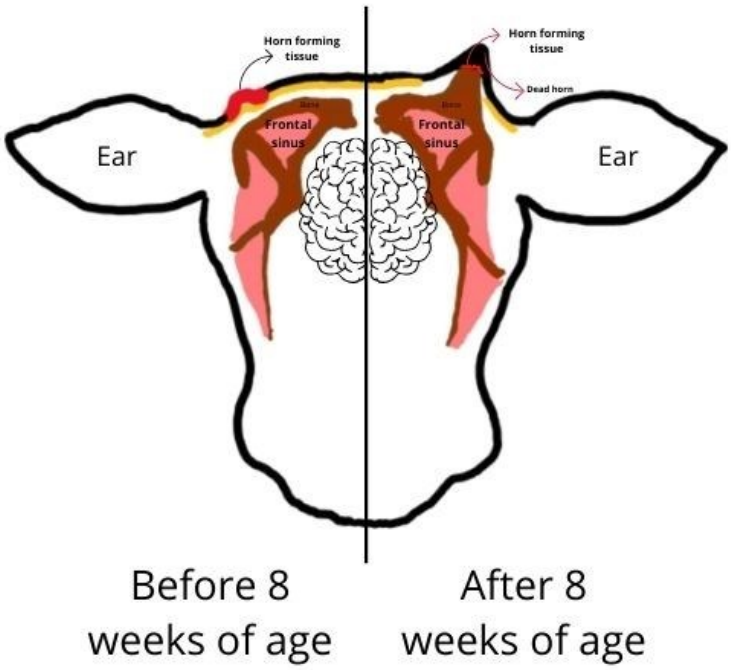

Figure 1: Anatomy of horn formation before and after eight weeks of age

Before moving on to the practical aspects of disbudding calves, I would like to highlight why it is essential that we disbud animals before 8 weeks and use pain mitigation practices. According to the FARM CARE 4.0 manual, "the term disbudding refers to the destruction or excision of horn -producing cells before skull attachment. The time of attachment varies, but scientific literature indicates that this occurs around 8 weeks of age". Since there is no skull attachment yet, adopting an early disbud causes less injury and pain than removing attached horns (Figure 1).

We can all imagine that both disbudding and dehorning are painful procedures. But we also have scientific evidence that this is the case (Stafford and Mellor, 2005). The administration of local anesthesia and NSAIDs has been shown to reduce pain, increase welfare, and reduce the impacts on the intake and performance of calves' post-procedure.

Which method to use?

Acceptable disbudding methods include applying a caustic paste or an electric/gas iron to the horn forming tissue. The best method for you will depend on factors related to your management and the preference of the caretaker. Regardless of the method of choice, the critical point is to ensure all the steps are being followed to assure your program's safety, welfare, and success.

If you are using a caustic paste, some things to keep in mind:

- Caustic paste is most effective if used within the first few days of life. This method is less effective and discouraged after the calf is two weeks of age.
- Applying paste on day one or two of life, limiting social interaction, and protecting treated calves from the rain aids in the success of using paste.
- The older calves get, the more prone they are to scratch their heads to rub the paste off. Some farms apply the paste after colostrum feeding when the calf is not moving around or during bottle feeding. Both strategies aim to distract the calves from the process, reducing their discomfort.

continued on page 4….

The best method for disbudding calves will depend on factors related to your management and the preference of the caretaker.

Caustic paste is most effective if used within the first few days of life. This method is less effective and discouraged after the calf is two weeks of age.

continued from page 3….

Procedure:

1. Restrain the calf's head safely (use a halter or head restraint).
2. Trim the hair on and around the horn bud before applying the paste.
3. Proceed with nerve block anesthesia (talk to your vet about the best protocol for your farm).
4. Apply petroleum jelly around the horn bud. The jelly will prevent the paste to spread to unintended areas.
5. Don't use too much paste. Only a small amount (dime size) applied in a thin, even coating is needed for a young calf. Don't forget to wear gloves! (Extra tip: cover each pasted horn bud with duct tape or vet wrap to assure the paste stays where it needs!).
6. Use Non-steroidal anti-inflammatory drugs (NSAID) as prescribed by the herd Vet in addition to local anesthesia to reduce the inflammation and associated pain following disbudding.

Figure 2: Only a small amount of paste (dime size) applied in a thin, even coating form is needed to disbud a small calf.

If you are using a hot iron - Things to keep in mind:

After the first week of age, the best method for disbudding is a hot-iron disbudding. The optimal window is between 7 days and six weeks of age.

1. Restrain the calf's head safely (use a halter or head restraint).
2. Trim the hair to expose each horn bud. Meanwhile, preheat the butane or electric calf dehorner.
3. Use a device with a diameter just larger than the horn base to make sure to cauterize the skin immediately surrounding the horn bud.
4. Proceed with nerve block anesthesia (Watch this video to learn more, and do not forget to talk to your vet about the best protocol for your farm).
5. Make sure to inject both sides and wait ~10 minutes before using the iron so the anesthesia takes effect. To make sure the anesthetic is appropriately applied, gently touch the skin with the tip of a needle to see if the calf reacts. The anesthesia worked if the calf does not move its ears or head. If the calf is still feeling the needle, make sure to add an extra dose of anesthesia and waiting the appropriate amount of time for it to take effect before proceeding.
6. Find the horn bud and proceed with positioning the hot iron. Apply minimal pressure and gently twist the hot iron around until a copper-colored ring forms, approximately 10-20 seconds.
7. Use non-steroidal anti-inflammatory drugs (NSAID) as prescribed by the herd vet in addition to local anesthesia to reduce the inflammation and associated pain following disbudding. ▪

If you have questions about disbudding calves, please reach out to Camila Lage at cd546@cornell.edu or 607-422-6788.

This information is for educational and reference purposes only and is not a substitute for sound veterinary consultation and following product labels. Cornell Cooperative Extension is dedicated to providing research-based information to our agricultural producers. Every effort has been made to provide correct, complete, and up-to-date recommendations. Producers are encouraged to work with their Veterinarian of Record (VOR), who is best able to develop the most appropriate, individualized pain management protocol for their operation. If you are an organic farmer, make sure to also consult a list of approved products for local anesthesia and pain management for dehorning/disbudding.

SAVE THE DATE: Dairy Processing Webinar Series! 5/25, 6/1, & 6/8

Wondering if processing and selling your own dairy products directly to the consumer might be a good fit for your operation? Join us for a three part webinar series where we'll go over marketing, regulations, and logistics of on-farm dairy processing.
Call Camila to register.

After the first week of age, the best method for disbudding is a hot-iron disbudding. The optimal window is between 7 days and six weeks of age.

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If you have questions about disbudding calves, please reach out to Camila Lage at cd546@cornell.edu or 607-422-6788.

Promises and potential of automated milking systems

By Victor Malacco, Dairy Educator at MSU Extension

What if you could spare labor time from milking and use this time to focus on the animals, the decision-making process, and fine-tune adjustments?

The automation of many processes in farming in both crop production and animal care has been increasing. One automation, using robots on small and large farms worldwide, has led to improvements in labor efficiency, animal well-being, and changes in the quality of life for farm owners and employees.

The milking routine is unquestionably the most time-consuming chore on dairies, and its automation represents a relief for most farmers. The automatic milking system (AMS) is not an entirely new technology, as the first AMS was installed in the Netherlands in 1992. The most immediate advantage of this technology is that it allows cows to be milked several times a day, in the automated system, without requiring much human labor.

Spared labor from the milking routine is not the only advantage realized when this system is adopted. The fully automatic milking package also provides essential information to the farmers regarding individual cow health, welfare, behavior, and nutrition. This gives producers a valuable source of data that can be used in the decision-making process on the farm.

Figure 1: Cow getting milked in AMS box

The primary reasons for adopting robotic milking vary among farms. While smaller dairies have typically adopted AMS to achieve a more flexible work schedule and a better quality of life, larger dairies are considering transitioning to AMS due to future labor availability concerns and the potential it offers for improving the time demands on cows each day.

In a survey published in the journal Animal by Tse and colleagues, farms with small herds with an average of 85 cows that transitioned to AMS reported a 20% reduction in the number of employees and increases in milk yield. In a study by Duplessis and colleagues performed with small herds that transitioned from conventional to AMS systems, the actual changes after adoption of AMS were measured to compare with the producer perception. They reported that about 40% of the producers accurately perceived the milk yield changes. In fact, 34% increased, 48% maintained the same, and 18% had a reduction in milk production after transitioning. In a Journal of Dairy Science article, Salfer and others modeled the profitability of AMS compared to the conventional system and reported that farms with small and medium-size herds might be more profitable when adopting the automated systems. However, it is important to notice that about half of the profit observed when AMS is adopted is from labor savings, if 100% is family labor then it will only pay off if the labor is used to perform another task at the dairy.

Survey data presented last July at the American Dairy Science Association meeting by Lage and others showed that for dairy farms with seven or more milking robot units, the most important reasons given for adopting AMS were to reduce labor costs (84.6%), improve cow's welfare (76.9%) improve herd performance (73.1%), and to reduce the number of employees (69.2%).

They also reported that respondents strongly agreed that AMS improved the quality of life of their cows (50%) and improved milk production and reproductive performance (36%). However, responders to this survey were neutral about the impacts of AMS on herd profitability. Fifty-four percent of the responders also agree that the transition to automated milking improved their employee's quality of life.

continued on page 6….

The automatic milking system (AMS) is not an entirely new technology, as the first AMS was installed in the Netherlands in 1992.

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In Canada, farms with an average of 85 cows that transitioned to AMS reported a 20% reduction in the number of employees and increases in milk yield.

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From the animal perspective, cows voluntarily milked in robots will spend less time waiting in crowded areas and milk parlors, using this extra time to eat and rest. Presumably, this should improve their comfort and welfare. In addition, the transition from conventional twice-daily milking systems to automatic milking systems often results in a milk production increase of 5 to 10%, according to an article published by De Koning at the first North American Conference on Precision Dairy Management. Tse and colleagues also reported that 81% of the surveyed dairy farmers observed an increase in milk production after adopting AMS.

Just like any other system, the AMS has its downsides. When considering adopting an AMS, you need to be aware that long-term planning is essential because you have less flexibility with this system, especially regarding expansion. A farm with a conventional parlor that is not running 24 hours per day can increase their milking herd by hiring more labor or increasing efficiency. On the other hand, the optimum number of 60 cows per robot can only be increased, in high-efficiency AMS systems, to up to 70 without compromising the milking frequency. The maintenance cost is also commonly pointed out as an issue, but the cost of $9,000/year as reported by Salfer and others needs to be compared with a conventional system that runs 24 hours a day.

It is important to say that there are some tasks that the robot will not perform better than a well-trained human milker, like cow prepping and dipping and accurate detection of clinical mastitis. The mastitis detection on AMS is currently based on sensors to monitor milk electrical conductivity, but only using electrical conductivity has been proved not to be effective. However, with the development of technology and the use of various sensors, milk quality management on AMS farms has been improving and high quality milk is being harvested.

It is essential to emphasize that ensuring the cleanliness of the cows is essential to maintain the health of the udder, as in the conventional system.

Automated milking systems have proven to be an efficient tool for milking cows. With rising costs of labor, investing in robots may provide an opportunity to manage labor costs more efficiently on the farm. However, the decision to transition to automated systems should be made carefully and reflect the needs and objectives of individual dairy farm operations. As with any other system, the best results are obtained with great effort and excellent management. ▪

RECORDING FOR MANAGING AND FEEDING COWS UNDER AMS WEBINAR IS NOW AVAILABLE!

AMS adoption is increasing exponentially worldwide, and management, especially feed management, is a critical component of AMS success. In the context of high feed prices, it is important to discuss different strategies that can be adopted and how they might affect this system's cost, production, health, and cow traffic. Back at the beginning of April, we hosted Dr. Gregory Penner (University of Saskatchewan) and Jim Salfer (University of Minnesota) to talk about management and feeding strategies for a successful AMS operation.

If you missed the webinar but would like to view the recording, you can now access it accessing our website or by scanning the QR code below.

Feel free to share the link with producers or industry individuals you think would benefit from viewing the webinar.

Scan this QR code with your phone to watch the recording

The decision to transition to automated systems should be made carefully and reflect the needs and objectives of individual dairy farm operations.

If you have any questions or have suggestions on topics you would like to have webinars and other programs on please feel free to reach out to Camila Lage at cd546@cornell.edu or 607-422-6788.

Dairy Farm Business Summary Preliminary Progress Report #3

By Lauren Augello, Cornell PRO-DAIRY. For more information about participating, contact Katelyn Walley-Stoll.

The third Preliminary Progress Report has been released, summarizing the progress made from 2020 to 2021 for the 124 participating farms. The report consists of four sections:

- Average of all Farms (124 farms)
- Less than 650 cows (43 farms)
- 650 - 1,350 cows (41 farms)
- Greater than 1,350 cows (40 farms)

Some highlights from the average report include the following:

- Labor efficiency improved in 2021, with a 2.2 percent increase in cows per worker and a 4.4 percent increase in pounds of milk sold per worker. Hired labor costs per worker equivalent also increased 5 percent.
- Gross milk price per cwt increased 6 percent from $18.59 in 2020 to $19.79 in 2021.
- There was a large increase in crop production expenses in 2021. Fuel, oil, and grease expenses per cwt increased 29%. Fertilizer and lime increased 21%. Seeds/plants and spray/ other crop expenses increased 2% and 5% respectively.
- Hay dry matter tons per acre and corn silage tons per acres increased 23 percent and 5 percent respectively. This contributed to the increase of accrual crop receipts of 191 percent from 2020.
- Net farm income without appreciation per cow decreased 32% from $874 to $595, and rate of return on all capital without appreciation decreased 39% from 7% to 4.3%.

The total cost of producing milk includes the operating costs of producing milk plus depreciation on machinery and buildings, the value of unpaid family labor, the value of operators' labor and management, and the interest charge for using equity capital. For the average of all farms and the 3 herd size sorts the total cost of producing milk per cwt are as follows:

- Average – $19.87
- Less Than 650 Cows – $22.22
- 650 to 1,350 Cows – $20.30
- Greater Than 1,350 Cows – $19.34

The operating cost of producing milk is the operating costs that need to be covered by the sale of milk only. This cost is determined by deducting the non-milk accrual receipts from total accrual operating expenses. The operating cost of producing milk for the 4 herd size sorts:

- Average – $16.06
- Less Than 650 Cows – $16.81
- 650 – 1,350 Cows – $16.37
- Greater Than 1,350 Cows – $15.81

The farms with less than 650 cows had the highest gross milk price as well as the highest operating cost of producing milk while the farms with greater than 1,350 cows had the lowest gross milk price and the lowest operating cost of producing milk, with the largest amount of money leftover per cwt after paying for their operating costs. ▪

The Young Farmers Coalition of Western New York Kicks off the Growing Season with "Getting to Know You" Events

A group of beginning farmers in WNY has come together in partnership with the National Young Farmers Coalition to create a WNY Chapter of this organization. The group provides a space for new farmers to connect and share though formal and informal activities and meetings. Their goal is to transform agriculture through service to their communities and stewardship of natural resources, which will require the effort and perspective of farmers of all ages. They believe that supporting a new generation of working farms will require leadership and engagement by all generations. The group welcomes farmers of all ages who share this vision to join their chapter.

There will be 3 pre-launch events scheduled for this growing season across WNY to bring interested farmers together before the first official meeting this fall. The first will be held in the afternoon of May 28th at Groundwork in Buffalo. Attendees will tour the farm, share ideas, and meet other farmers in the region. Attendees are asked to bring their own folding chair and plates/utensils for dinner.

Other pre-launch events will be held across both urban and rural farms, focusing on various facets of farming. If you're interested in this event, please RSVP to Amy Barkley at (716) 640 - 0844 or amb544@cornell.edu. If you'd like to be added to the mailing list, Amy can do that as well.

If you'd like to participate in the FREE Dairy Farm Business Summary program to help understand your farm's financial performance, contact Katelyn Walley-Stoll.

The cost of producing milk in 2021 was an average of $19.87/cwt. When looking at only operating costs, that value was $16.06/cwt.

Dairy Market Watch

April 2022

PRO DAIRY Education & Applied Research
prodairy.cals.cornell.edu

Prepared by Katelyn Walley-Stoll.
Funded by PRO-DAIRY.

An educational newsletter to keep producers informed of changing market factors affecting the dairy industry.

Milk Component Prices			Milk Class Prices				Statistical Uniform Price & PPD				
Month	Butterfat	Protein	I (Boston)	II	III	IV	Jamestown, NY		Albany, NY		Albany $/gal. to farmer
Mar 21	$1.72	$2.70	$18.45	$15.07	$16.15	$14.18	$15.35	($0.80)	$15.95	($0.20)	$1.38
Apr 21	$1.94	$2.81	$18.76	$15.56	$17.67	$15.42	$16.21	($1.46)	$16.81	($0.86)	$1.45
May 21	$1.98	$3.13	$20.35	$16.22	$18.96	$16.16	$17.19	($1.77)	$17.79	($1.17)	$1.53
June 21	$1.96	$2.53	$21.54	$16.66	$17.21	$16.35	$17.35	$0.14	$17.95	$0.74	$1.55
July 21	$1.89	$2.49	$20.67	$16.83	$16.49	$16.00	$16.91	$0.42	$17.51	$1.02	$1.51
Aug 21	$1.85	$2.45	$20.15	$16.51	$15.95	$15.92	$16.54	$0.59	$17.14	$1.19	$1.48
Sep 21	$1.93	$2.60	$19.84	$16.89	$16.53	$16.36	$16.81	$0.28	$17.41	$0.88	$1.50
Oct 21	$1.94	$3.01	$20.33	$17.08	$17.83	$17.04	$17.29	($0.54)	$17.89	$0.06	$1.54
Nov 21	$2.15	$2.75	$21.23	$18.40	$18.03	$18.79	$18.39	$0.36	$18.99	$0.96	$1.64
Dec 21	$2.29	$2.59	$22.42	$19.84	$18.36	$19.88	$19.34	$0.98	$19.94	$1.58	$1.74
Jan 22	$2.95	$2.35	$22.96	$22.83	$20.38	$23.09	$21.59	$1.21	$22.19	$1.81	$1.91
Feb 22	$3.02	$2.31	$24.89	$23.79	$20.91	$24.00	$22.52	$1.61	$23.12	$2.21	$1.99
Mar 22	$3.09	$2.71	$26.13	$24.76	$22.45	$24.82	$23.59	$1.14	$24.19	$1.74	$2.09

March Utilization (Northeast): Class I = 29.2%; Class II = 23.4%; Class III = 30.4%; Class IV = 17.0%.

***Class I** = fluid milk; **Class II** = soft products, cream, and yogurt; **Class III** = cheese (American, Italian), evaporated and condensed products; **Class IV** = butter and milk powder.*

Dairy Commodity Markets (Excerpt from USDA Dairy Market News – Volume 89, Report 16, April 22nd, 2022)

Dry Products: Low/medium heat nonfat dry milk (NDM) price ranges are mixed through the regions. Markets have quieted down following the holiday week and while international interests have slowed down. Dry buttermilk prices held steady in the Central/East, while the bottom of the Western range moved up. Demand, generally, is overshadowing production/ availability of dry buttermilk loads. Dry whole milk, also tighter regarding inventories, remains steady on both market tone and price range.

Cheese: Cheese inventories are available for spot purchasing in the Northeast and West, though some Midwest stakeholders report that they are slimming some orders to fulfill others. Across the country demand for cheese is strong in retail markets. Stakeholders in the Northeast and West say that food service demand is increasing and international demand is strong. Contacts, in the West, report that port congestion is preventing them from increasing the volume of cheese loads that they are sending to international markets .

Friday CME Cash Prices					
Dates	2/25	3/4	3/11	3/18	3/25
Butter	$2.58	$2.68	$2.71	$2.72	$2.79
Cheese (40# Blocks)	$1.94	$2.15	$2.19	$2.13	$2.27

Butter: Cream inventories are mixed throughout the country. Contacts in the Northeast and West report that strong ice cream production is pulling on regional cream supplies. Demand for butter is steady in retail markets, while retail sales are, reportedly, slowing in the Northeast and West. Stakeholders say that rising grocery store butter prices may be contributing to decreased consumer demand.

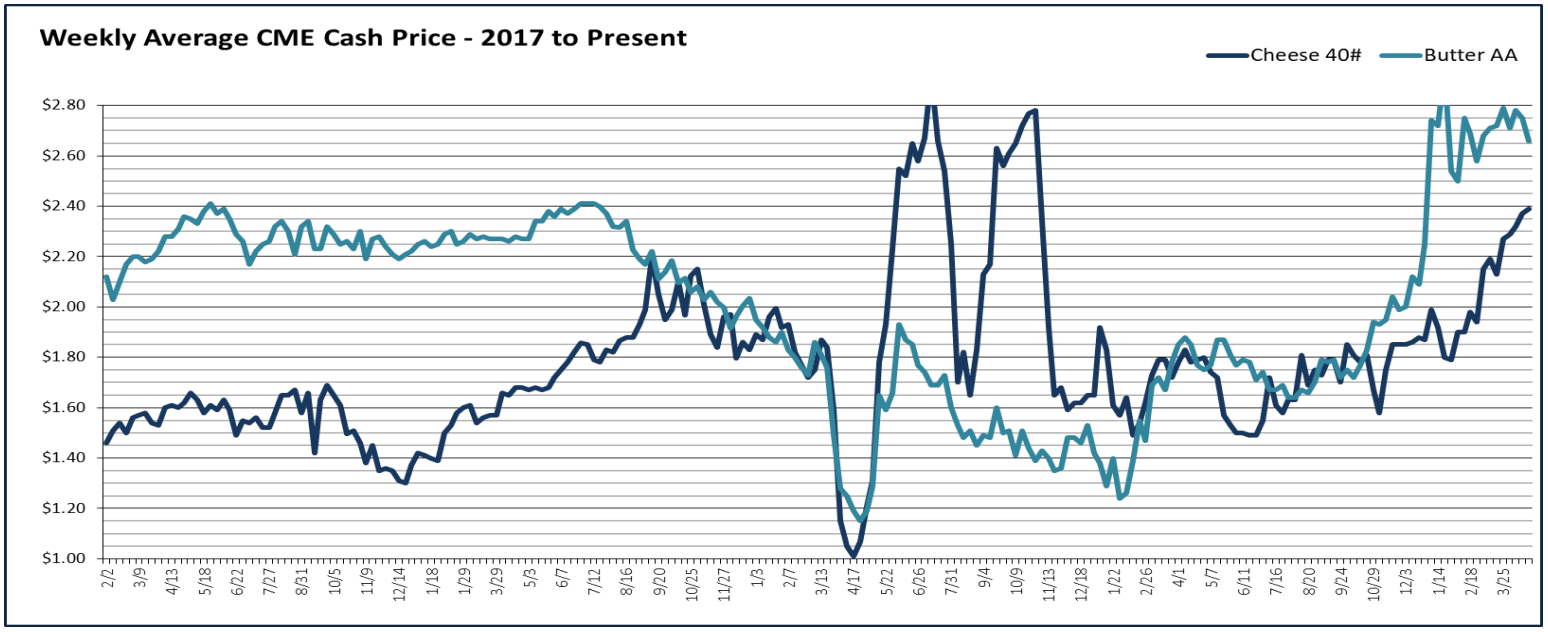
Fluid Milk: Milk production trends are increasing in most areas around the country. Class I demand reports are mixed throughout the country. Firm interests in the Northeast are being offset by slowdowns in the South. A number of contacts say Class I demand is unchanged.

February 2022 Retail Prices (FMMO): The U.S. sale of total organic milk products was 225 million pounds, down 3.9 percent from February 2021 and down 4.7 percent year-to-date. Organic half gallon milk national weighted average price, $3.98, compared to the $1.95 conventional half gallon milk national weighted average price, led to a $2.03 organic premium.

March's Albany $/gallon paid to farmers was $2.09. This is a 50% increase from a year ago.

CROPS COWS & CRITTERS newsletter

For more information on Dairy Business Management and Market Analysis, contact Katelyn Walley-Stoll, Farm Business Management Specialist, at 716-640-0522 or kaw249@cornell.edu.



Dairy Situation and Outlook, April 20, 2022

By Bob Cropp, Professor Emeritus, University of Wisconsin Cooperative Extension, University of Wisconsin-Madison
Originally published: https://fyi.extension.wisc.edu/kewauneeag/files/2022/04/Dairy-Situation-and-Outlook-April-2022.pdf

Milk prices continue well above a year ago. The Class III price being above $20 averaged $5.27 higher January through March than a year ago. The Class IV price being above $23 averaged $10.30 higher January through March than a year ago. April prices will strengthen more. The Class III price will be near $24.25, about $6.60 higher than a year ago and the Class IV price will be near $25.25, about $9.80 higher than a year ago. Domestic sales of butter and cheese continue to run above year ago levels while fluid (beverage) milk sales have been running about 3% below a year ago. Sales are expected to continue above a year ago with food service improving as restaurants continue to return to more normal. However, inflation has reduced consumer spending power and could dampen domestic sales.

While dairy export volume continues to run below year ago levels they remain at a level to support milk prices. The volume of February exports on a milk solids equivalent basis was 1% lower than a year ago, the third straight monthly decline. The decline is due to a 11.5% decline in nonfat dry milk/skim milk powder exports and a 4.5% decline in whey product exports. Lower nonfat dry milk/skim milk exports were led by lower exports to the two top markets, Mexico ad Southeast Asia. Lower exports of dry whey to the number one market, China led the decline in whey exports. While 2022 exports will be hard to match the record 2021 exports, exports should remain relatively strong as all U.S. dairy products are price competitive with Oceania and Western Europe and milk production in these two regions continue to run below a year ago. But the major driver of much higher milk prices is milk production. March milk production for the U.S. was estimated to being 0.5% lower than 2021, the third consecutive decline from a year ago. The decline in milk production was due to fewer milk cows and slight increase in milk per cow. March milk cows were 87,000 fewer, a decline of 0.9% and milk per cow was up just 0.4%.

Milk production could increase some second half of the year. But higher feed costs, labor costs, building costs, cost to plant and harvest this year's crops and fewer available dairy replacements will curtail increases in milk production. This means milk prices well above a year ago for the remainder of the year. Current dairy futures have Class III in the $24's through July and then in the $23's for the remaining of the year. Class IV is in the $24's and $25's through November. It is not certain milk prices this high will materialize but it seems unlikely prices would drop below $20. ▪

USDA is forecasting no increase in 2022 milk production over 2021. Milk cows are forecasted to average 78,000 fewer than 2021.

It's unlikely that milk prices will drop below $20 this year with the futures market calling for Class III in the $24's and $23's throughout the year.

Grazing Small Ruminants to Avoid High Spring Parasite Loads

By Amy Barkley, Livestock and Beginning Farm Specialist

Getting our sheep and goats out on pasture is something that we all look forward to this time of year. Having the animals outside makes it easier to get the barns cleaned and helps decrease our feed bills. Plus, there's nothing more serene than watching our charges walking in the lush green grass, heads down, thoroughly enjoying the buffet after a winter of stored forage.

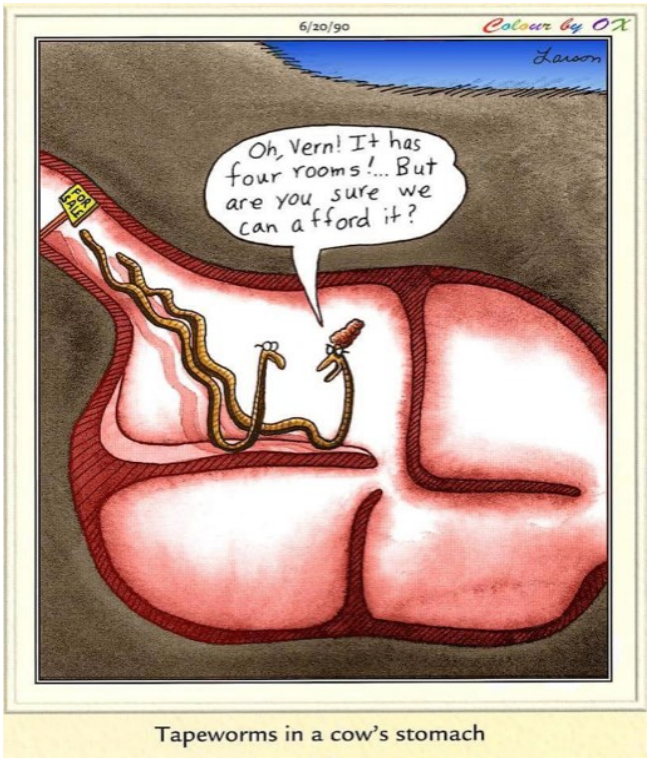
At the same time, internal parasites that have been hibernating in the gut lining during the winter, including the infamous barber pole worm, the main cause of anemia in our sheep and goats, are starting to "wake up" and cause higher rates of clinical disease. They're also now reproducing, which means that we must be vigilant as we begin our pasture rotations, even this early in the season.

The barnyard or sacrifice lot is going to the most highly infected pasture this time of year. This is especially true if the animals have had access to it for months on end because eggs and infective larvae populations are building up. Unless your sacrifice lot has an impermeable surface, there's going to be forage growing either inside or around the perimeter. Our small ruminants think that these small shreds of green are delightful. This presents two issues. First, sheep feces, and subsequently worm eggs and larvae, are polluting this area. Second, these little bits of grass are so scarce that they will be eaten down to the ground. As many of us know, the closer a sheep or goat eats to the ground, the easier it is for them to pick up infective larvae. Therefore, it makes sense to move the animals from this area as soon as the pasture has enough forage (6" at a minimum) and is dry enough to accept them. It's also a good idea to disallow them access to this spot for 60 – 90 days to allow the high numbers of larvae to die off. If they need to access a barn through a sacrifice area, eliminating any green forage will help, as will fencing off a walking path to discourage them from consuming anything on their way to and from their pastures.

Move the animals to a pasture that has not been used in the past 60-90 days or will not be used for lambing/kidding unless there will be a 60-90 day rest period between when you put them out and when you expect lambing/kidding season to start. Lactating animals and nursing young are some of the most susceptible to parasitism because of their weakened immune systems.

Before letting the sheep or goats out to graze for the year, it may be tempting to deworm everyone to give them a clean slate. Research into parasite resistance indicates that this is not ideal. If a whole population of worms is treated only those resistant ones will survive and reproduce, leading to a resistant population. Instead, individuals should be checked for parasite loads through a FAMACHA test, which shows the state of anemia that an animal is in. For herds and flocks with under 50 animals, all should be evaluated. If over that number, 50 individuals representing the herd can provide a good measure. Those animals which show symptoms of anemia should be treated, while others can be left until the next evaluation, scheduled every 2 weeks. Once the selected number in a herd are treated, the whole group can be moved to a new pasture to prevent reinfestation. Moving forward, they should be moved every 4-6 days, which is the minimum time it takes for barber pole worm larvae to hatch.

Another rule of thumb that experts share is to continue using the same dewormer drug class that you've been using historically if it works for you. The transition back-and-forth between dewormers actually may cause an increase in resistance to multiple dewormer classes at the same time. This can result in lots of trouble down the road! Instead, use what works now with selective deworming to ensure that dewormers on your farm remain viable for years to come. ▪



Tapeworms in a cow's stomach

Could also be: barber pole worms in a sheep's stomach (:

Why don't random checks help a herdsman or shepherd determine the parasite status of a herd or flock? Because 20% of the animals carry 80% of the worms!

Curious as to what FAMACHA testing consists of? Ask Amy! We're having a workshop all about it on Friday, June 10th in Allegany County!

There's a Ban on Live Fowl Shows, Meets, Swaps, Auctions, and Sales. Why, and What Does that Mean?

By Amy Barkley, Livestock and Beginning Farm Specialist

Highly Pathogenic Avian Influenza, a highly contagious, fatal, flu-like disease of poultry, has been spreading across the state since February. As of April 19, 2022, New York has seen the disease in 8 domestic flocks: One commercial, one captive wild birds, and the remainder were backyard flocks. Over 10,000 birds have died or have been euthanized. These positives started in the eastern region of the state but have moved westward over the spring season. Domestic bird positives have been confirmed in Dutchess, Fulton, Orleans, Monroe, Suffolk, and Ulster Counties. Wild bird positives have been identified in Cayuga, Seneca, Suffolk, and Wayne Counties. The most recent cases in domestic flocks in NYS were identified in the first week of April.

On March 25, 2022, Commissioner Ball and NYS Department of Agriculture and Markets announced that the state would be proactively banning all live fowl shows and exhibitions to stop the potential spread of HPAI. This meant that fairs, public hatching events, fowl shows, and other events like them would not be allowed until further notice.

On Thursday, April 14th, the ban had been expanded to include all fowl auctions and other events where people can purchase, sell, swap, or trade fowl. The reasoning behind this update was the same as the original notice from March: to limit the congregation of poultry from different farms and homesteads to reduce the spread of disease. **At this time, the ban does not include individual farms selling poultry, farm supply stores, chicks being shipped into the state from hatcheries, poultry processors that operate under a 5A or USDA Exemption, or live bird markets.**

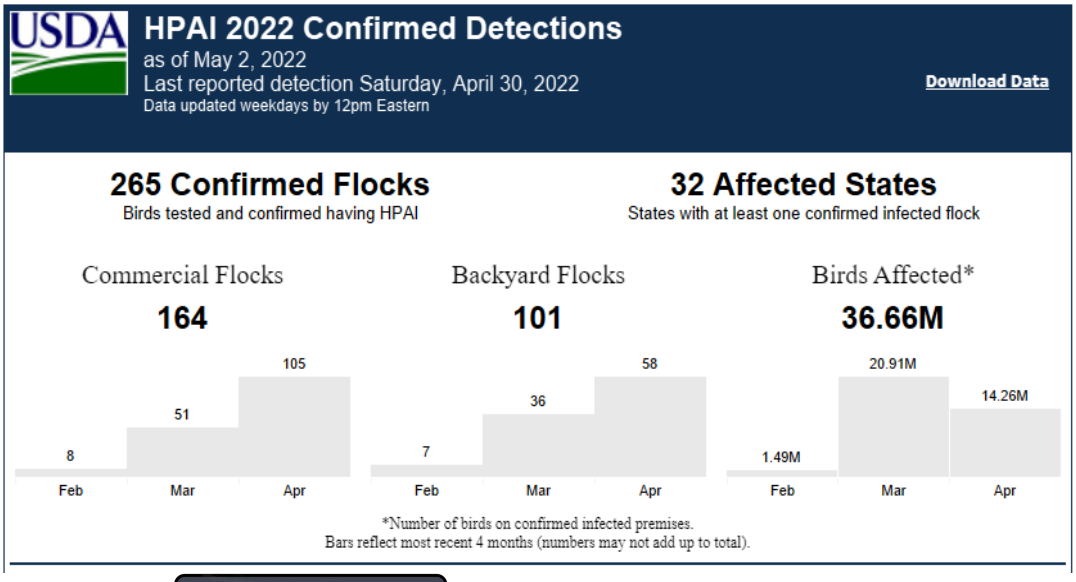
While both bans are in place until further notice, the situation will be re-evaluated at the end of May.
In the meantime, it's important that poultry owners remain on high alert for any unusual illness or deaths in their poultry flocks. Symptoms including death without an apparent cause; lack of energy or appetite; a sudden drop in egg production or an increased number of eggs with malformed shells; swelling of the head, comb, eyelids, wattles, and hocks; purple discoloration of the wattles, combs, and legs; nasal discharge, coughing, and sneezing; discoordination; and diarrhea can all be symptoms of the virus. Any suspicious illness can be reported to:

NYS Department of Agriculture & Markets: 518-457-3502

USDA (United States Department of Agriculture): 866-536-7593

Your local Cornell Cooperative Extension Office

We understand that this is a challenging time, but together, we will get through it! ▪



For updates on positive cases in wild bird and domestic poultry, you can visit the USDA-APHIS web page at www.aphis.usda.gov

You are not affected by the ban if your sales do not involve live poultry, or you do not bring poultry together from multiple locations for your sales.

Let's Talk About Making a Profit
Defining, Determining, and (humbly) Demanding a Farm Profit

Talking about profit in the farm business can bring up a broad range of feelings, emotions, and reactions. Where do you land? Images from pixabay.com. Interpret them how you will.
"A spectrum of Feelings Related to Making a Profit in Farming" by Katelyn Walley-Stoll.

Profit. It seems that the term "profit" stirs different types of emotion into farmers' hearts whenever I try to casually bring it up in kitchen table conversations. For some, profit has always been a goal – will always be a goal – and is tracked from year-to-year, or even month-to-month. For others, profit is a lofty idea that, in theory, the farm strives for – as long as they don't have to pay in any income taxes at the end of the year. Yet, for some, profit is a "bad word" and definitely not the right reason to be in the business of farming.

Wherever your thoughts and gut reactions lie on the profit spectrum, if the farm is being operated as a business, profit will come into play at some point. Understanding what profit is, and the role it plays in farming, is important to reach your overall agribusiness goals.

Defining a Profit

Most of the time, the profit equation is presented as:

Income – Expenses = Profit

Income – Expenses = Profit. Income minus expenses equals profit. Also known as Value of Production less the Cost of Production equals Profit or Loss. So, you start farming and sell what you've farmed for income. Then, you subtract out all of your expenses to create that income. And (hopefully) you have a profit at the end of the year and can keep chugging along.

BUT what if we started thinking of the profit equation as:

Profit = Income – Expenses

Profit = Income – Expenses. Now, this is a bit of a thought exercise because both equations will get you to the same point at the end. What would happen if you started farming with profit in mind from the very beginning? It's so easy to get caught up in the incomes (yay) and expenses (another bill) that you can quickly lose track of your overall financial and business goals. What if you knew what your profit goals were and then planned for incomes and expenses

continued on page 13….

The most important thing to know about profit is that it's not a guarantee. You can be doing everything "right" and STILL be losing money.

Everyone's probably tired of hearing this, but YOU CAN'T MANAGE WHAT YOU CAN'T MEASURE - but you CAN manage what you CAN measure!

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accordingly – instead of just farming how you hope will meet your goals and dealing with whatever profit or loss came at the end?

There are a million different ways to farm, and all of them are right! However, if you're not monitoring profit and redefining it as a priority, you could be doing everything "right" and never "get ahead".

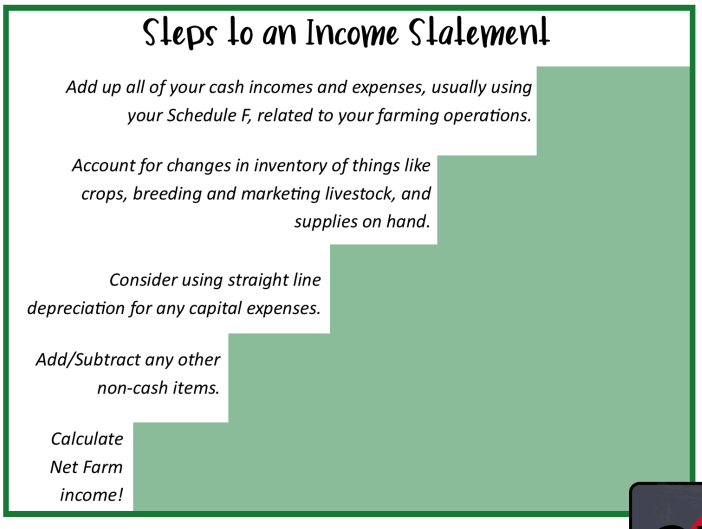
**An important note: This idea of switching around the commonly delivered profit equation isn't mine! I recently spoke with a wonderful person, Goli Ziolek, at the National Extension Risk Management Education Conference. Along with Kate Larson and Ritchie Wai, their team runs "Stateline Farm Beginnings", based in Caledonia, IL.*

Determining a Profit

How do you know if your farm is making a profit? It's so much more than watching your checkbook balance go up and down throughout the year, or guesstimating your assets to liabilities balance. Profit is measured by using your farm's Income Statement.

An Income Statement shows your farm's overall productivity, categorized expenses, and return on investment. This is also called a Profit and Loss Statement. Compiling an income statement isn't an overly taxing process (pun intended) because many of the numbers you'll need come right from your end-of-year tax documents.

However, most farms do their taxes on a cash basis, meaning incomes and expenses are recorded as cash leaves or enters the check book. While this is a perfectly acceptable and manageable method for cash-based, farm-business reporting for income tax purposes, adjusting your cash-basis accounting to accrual accounting is one way to accurately measure your farm's profitability.



Accrual accounting takes into account changes in inventory, accounts payable/receivable, interest, depreciation, and values unpaid labor and management. These are things that have value but might not have a direct line item on a Schedule F or checkbook ledger.

Income Statements have two main parts: Incomes and Expenses. After calculating the incomes and expenses, you'll make the "accrual" or non-cash adjustments to each to better reflect your farm profitability.

Incomes include cash sales of livestock and their products, crops, government payments and insurance proceeds, and other income streams related to the farm. Do not include any sources of income that are not from the farm (off-farm jobs, annuity or similar payments, etc.) – more on this later.

Non-cash adjustments to income will account for things that provide value to your farm, but don't show up in the checkbook ledger. You'll note changes in inventory of feed and grain, breeding and marketing livestock, supplies on hand, etc. This helps make sure the value of a farm product is counted in the year that it's produced, instead of when it's sold. An example – you had a really good crop year and put up a lot of extra baleage. Your plan is to store that baleage and sell it in the following year, once winter really hits. But – you've already paid to produce that baleage. Without making non-cash adjustments by recording inventory changes, your checkbook balance will see all of the associated expenses (wrap, fuel, twine) but none of the associated incomes (baleage sales). You'll also note accounts receivable which includes income that you've earned but haven't received. Usually things like the last month's milk check, an upcoming grape contract payment, or a livestock auction check that hasn't made it to the bank yet.

Then, you'll add up the cash expenses of your farm. These, again, would all come from the Schedule F. However, any large capital expenses (land, equipment, big repairs) will not be included here – instead, you'll use deprecation to account for those expenses. Depreciation is a non-cash adjustment used to show the decline in value of a capital asset over time. You can use the depreciation values on your income tax return, but you might find something like straight line depreciation more valuable and realistic. One other non-cash expense is something called "Value of Owner Labor and Management" which we'll talk about next.

Summarize the Income Statement by subtracting your total farm expenses from the total farm revenue to get your net farm income.

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Are you routinely monitoring the profit of you farm? Depending on your record keeping system, you can easily structure things to run a report annually, quarterly, or even monthly.

Income Statements measure the financial performance of a business overtime, particularly looking at your "return on investment" in the form of Net Farm Income.

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(Humbly) Demanding a Profit

Now, to the part that will probably make some of you squirm a bit. You should DEMAND a profit from your farm. You'll see that I graciously added *(humbly)* in the title of this section so you don't think I'm a completely heartless monster. But – demanding a profit from your farm business is in the best interest of you, your family, your customers/market, and your long-term business sustainability. And here's why.

As a farm owner, raise your hand if you regularly write yourself a steady, prevailing-wage, paycheck out of your farm business account that fairly compensates you for all of your time, labor, management, and investment…

While I can't see you as you're reading this, I'm guessing that your hand isn't raised. As farm owners, most of the time you're not receiving a regular draw from the business. And sometimes, you might be using off-farm sources of income to cash flow the farm during lean times. In this situation, a farm profit is – essentially – your paycheck. When you're only looking at the checkbook balance and cash inflows/outflows, without a profit there's no paycheck for you, the farm owner.

Calculating your "Value of Owner Labor and Management" can be a scary and humbling adventure, but is important to consider in your farm profitability analysis. This figure can be used as a placeholder for your "paycheck" and represents that time and effort you put into the physical and mental management work on the farm. Consider this – if you weren't farming, could you earn a paycheck someplace else? How much would that paycheck be? If you're working as unpaid owner labor on the farm, are you currently earning a profit that's high enough to value your labor? What's the value that you're providing to the farm business if you had to hire someone else for the role?

If you're still not sold on demanding a profit, your argument is likely something to do with valuing the farm lifestyle, or choosing to raise your family on a farm, or wanting to raise healthy food for your family….And, if you're absolutely committed to making a profit, you're probably ALSO farming for any and all of the reasons above. Most farmers don't farm because they really enjoy paperwork and crunching the numbers. In agriculture, making a profit every single year isn't a guarantee – but it should always be a goal. While it's absolutely, positively okay to farm for reasons other than profit, you should at least make sure you're operating the farm in a financially sustainable way.

When farms aren't profitable, the farm "loss" has to be made up someplace else. I usually see this coming from sales of capital assets which are things that you've purchased and have built equity with over time, or the use of reserves that might have been built in better years. Neither of these are good options for the long-term. There's also the use of off-farm income to essentially subsidize the farming operation. This shows up in the form of off-farm jobs, utilizing annuity or similar payments, cashing in on retirement accounts, and taking out personal loans/credit cards to make ends meet. While these options diversify farm income to varying degrees, they all carry certain levels of risk that can make it difficult to maintain personally. How can you "demand" a profit from your farm? Manage it as a business.

- Consider how you're going to make a profit before incurring incomes and expenses instead of accepting the profit/loss that happens after-the-fact.
- Maintain accurate records that you compile and analyze on a regular basis (including the preparation of an income statement).
- Evaluate decisions not only from a best management practice standpoint but also for their effects on your cost of production and adjust accordingly. Being the best farmer you can be doesn't guarantee a profit.
- Set profitability goals that will prevent you from using your labor/management and any off-farm income from subsidizing the farm business. ▪

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What's your Value of Owner Labor and Management? How are you getting a return on your labor investment?

For more information about farm financial analysis, including utilizing the Farm Business Summary programs, contact Katelyn Walley-Stoll.

It's that Time of Year—Managing to Prevent Grass Tetany

Adapted by Amy Barkley, Livestock Specialist
from the Cornell Beef Production Reference Manual, by Dr. Mike Baker, Cornell University

What is Grass Tetany?

This is the common name for a hypomagnesemia. Another name for it is "grass staggers". It's a condition where the levels of blood magnesium are too low. Some animals that can't get enough magnesium from their diets cannot mobilize enough stores from bones to meet the need either, which can result in intense symptoms. If not treated, death can occur in as little as an hour once symptoms are first detected.

Many of these deficiencies are identified during the first part of the grazing season, when pasture grasses grow quickly and animals are not weaned onto the pasture. Heavily manured pastures or those pastures with high tests of Nitrogen (N) or Potassium (K) are high risk, as are annual cover crops when compared with cool season forages.

What animals are at risk?

Any ruminant is at risk for developing this condition. Those that are most susceptible are those that:

- Let onto pasture without a transition from stored forage
- Are not provided a mineral supplement
- Are experiencing stress from birth and early (peak) lactation

What are the symptoms?

Symptoms are relatively severe and come on quickly. Animals with the risk factors above that show the symptoms below may have the condition.

- Hypersensitivity to touch
- Muscle tremors
- Frequent urination
- Staggered walking
- Distancing from the herd
- Convulsions
- Coma
- Death

(Image Source: West et al., 2002 – Massey University)

Can this condition be managed for?

Absolutely! Take a gander through the management tactics below:

- First and most importantly, cattle will need to be slowly transitioned to pasture over the course of a week if they've been in the barn all winter. Many start by letting the cattle out in the evenings, then gradually increasing the time spent outside.
- Provide livestock with a quality mineral supplement. Keep in mind that animals that are already weak, sick, or shy may not get enough of the supplement and will need to be monitored.
- Choose to graze less susceptible animals early in the spring. Males, young breeding animals, dry animals, and females with weaning age young are least susceptible.
- Pastures with legumes (>30%) have less of a risk than pastures with just grass. This is because legumes can provide additional Mg and Ca.
- If your herd is high risk, supplementing with Mg 4-6 weeks before calving/kidding/lambing, and continuing for 3-4 weeks after turning out onto pasture can help. Ask your veterinarian for more details.
- Test soils to determine if they are high in N and P. If they are, they should be avoided early in the season. ▪

Image Source: UK National Animal Disease Information Service (NADIS)

Have an Apiary? Register it with Ag and Markets

As of December 23rd, 2021, all beekeepers in NYS are required to register with Ag and Markets and renew their registration annually. It only takes a few minutes to do, and then you will get notifications of any disease issues in your area. Register at https://beekeepers.agriculture.ny.gov/registration

While symptoms progress rapidly, an emergency intervention by a veterinarian could save the animal's life.

CROPS COWS & CRITTERS newsletter

Curious to see the whole article by Dr. Mike Baker on the topic? Reach out to Amy for a copy.

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