FARM REPORT

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FROM THE PRESIDENT'S DESK: WHAT DO WE REALLY KNOW ABOUT LACTOSE?

If you asked me several years ago about lactose, I would have said it makes up 4.8% of milk and is the osmotic regulator of milk volume and left it at that. Not much interest was paid to lactose for many years as it has been viewed widely to be a low-information trait. However, with routine milk analysis by mid-infrared spectroscopy in DHI and payment testing programs, lactose results have been reported and monitored more frequently. In our milk laboratory, I am amazed at just how different the lactose content (percentage) is among our individual cow milk samples as well as in milk samples from different herds.

In the *Journal of Dairy Science,* there are a couple of excellent review articles on lactose from both the production and dairy foods perspectives (Costa and colleagues, 2019; Portnoy and Barbano, 2021) that have influenced my current thinking about lactose. Lactose is a major milk solid but has the lowest commercial value when compared with other milk solids such as fat and protein.

Many methods exist to determine lactose concentration with the most relevant methods being enzymatic assays, high performance liquid chromatography (HPLC), and mid-infrared spectroscopy analysis. Portnoy and Barbano emphasized that lactose should be reported as anhydrous lactose because lactose data are being used to make increasingly important decisions in dairy food processing and dairy herd management. In 2017, the USDA federal milk market laboratories started reporting lactose content as anhydrous lactose and discontinued the reporting of lactose by difference. Consistent and accurate methods are critical when developing new dairy products and marketing existing products as well as finding new, value-added uses for lactose. Also, good quality lactose data are needed if lactose is to be used for farm management decision making especially in the context of production efficiency and health status. Understanding factors that affect lactose content is important as there is a challenge of finding economically viable uses for lactose, especially when lactose is a byproduct of cheese, high protein milk, or whey powder manufacturing. Portnoy and Barbano suggested that farmers should focus on high-value milk components such as fat and protein produced per unit of lactose produced by dairy cows.

In a study reported in the *Journal of Dairy Science* this year, Gargiuio and colleagues explored sources of variation for lactose production in dairy cows. Their dataset included 14 years (2008 to 2022) and 393,772 records from 33,280 cows from 85 herds. They found significant variation in lactose

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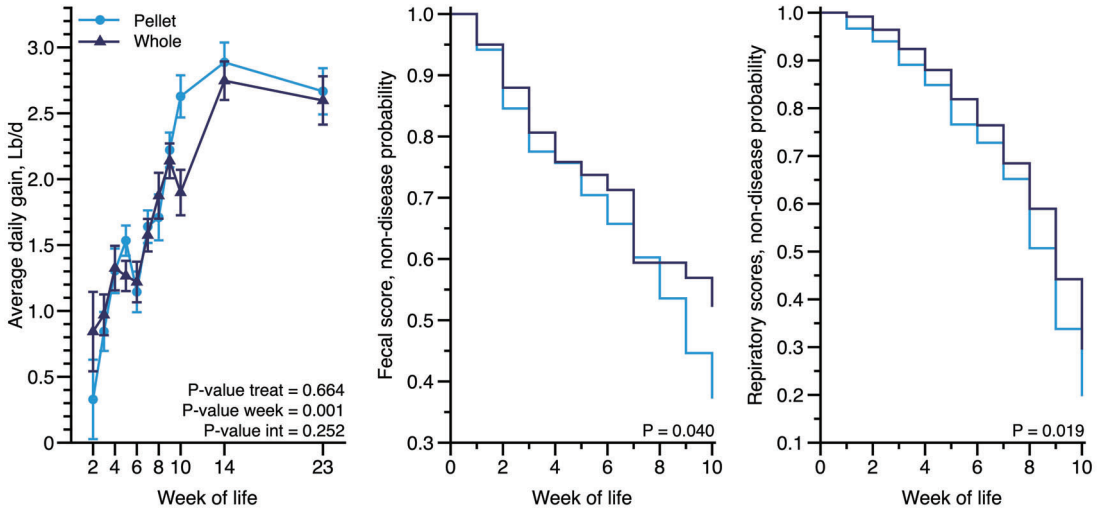
CHOOSING THE RIGHT STARTER FEED FOR YOUR CALVES: WHAT DAIRY FARMERS NEED TO KNOW

When it comes to raising healthy and productive dairy calves, starter feed plays a critical role. But does the physical form of the feed—textured or pelleted—make a difference? We published a recent study in Animal that investigated this question, comparing the effects of textured starter feed (TSF) and pelleted starter feed (PSF) on the intake, performance, and health of young Holstein calves. The findings provide valuable insights for dairy farmers looking to optimize early calf nutrition.



What the Study Found

We evaluated 24 Holstein heifer calves, assigning them to either TSF (a mix of pelleted ingredients and whole-kernel corn) or PSF (fully pelleted feed). Both feeds had identical nutrient compositions, ensuring that any differences observed were due to their physical form rather than nutritional content.

The results showed no significant differences in feed intake, growth performance, or body weight between the two groups. However, calves fed TSF exhibited better health outcomes, with lower incidences of abnormal behavior, fewer respiratory issues, and better fecal consistency. In contrast, calves on PSF showed higher scores for respiratory disease and looser feces, indicating potential digestive challenges.

Why Textured Feed May Be Beneficial

One of the key observations from the study was that calves fed TSF sorted against smaller feed particles, whereas PSF-fed calves tended to consume more of these fine particles. This difference in sorting behavior could influence digestion and gut health. Larger particles in TSF may help stimulate rumen development and promote better overall gastrointestinal health, potentially explaining the improved health scores in TSF-fed calves.

What This Means for Dairy Farmers

While this study suggests that TSF may provide some health benefits, the decision to use textured or pelleted feed should also consider labor, feed consistency, and farm management practices. Pelleted feed is often easier to store and handle, reducing waste and ensuring uniform intake. On the other hand, textured feed may promote better gut health and reduce certain health issues.

It's also worth noting that previous research has shown mixed results, with some studies finding no significant differences between the two feed types. This suggests that the best choice depends on individual farm conditions, calf management practices, and labor availability.

The Bottom Line

For dairy farmers aiming to improve calf health, TSF may offer advantages over PSF, particularly in reducing respiratory and digestive issues. However, **both feed types can be effective when managed correctly.** The key is to choose a feeding strategy that aligns with your farm's operations and calf-rearing goals.

Would you like to know more? Check out https://doi.org/10.1016/j.animal.2024.101400

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AGRICULTURE AS A TOOL TO IMPROVE PLANETARY HEALTH

The subject of environmental sustainability and planetary health has become unavoidable in recent years, and a lot of resources have been dedicated to addressing it. Agriculture as a sector is very pivotal to guaranteeing environmental sustainability, and a major way this can be achieved is through nutrient use efficiency. Several inputs go into agricultural production systems to create the desired outputs; however, an optimal amount of these inputs must be used to minimize wastage and enhance efficiency, thereby reducing environmental pollution. A practical example of this is nitrogen and phosphorus pollution from crop and livestock production. When the protein intake of livestock is not optimized, an excess can lead to nitrogen excretion in the waste, and this additional nitrogen in the waste can contribute to environmental pollution by releasing volatilized ammonia into the atmosphere, leaching nitrate into groundwater, and emitting nitrous oxide which is a greenhouse gas. The use of excess phosphorus as fertilizers in crop systems can lead to a depletion in soil quality and the runoff into water bodies can lead to eutrophication which can negatively impact the biodiversity of aquatic ecosystems. Hence, the target of including inputs in agricultural production systems should be at a level that can boost production without polluting the environment.

Recycling within agricultural systems is also a viable way to manage resources, through the utilization of waste from one agricultural system as an input in another. The use of manure from livestock systems as organic fertilizers in crop production systems, and the use of harvest wastes like corn stalks as livestock feed are good examples of this. By-products from food processing like soy hulls can also be fed to livestock. Some regenerative agricultural practices like integrating livestock production into cropping systems, agroforestry, silvopasture, and cover cropping can help maximize resources, reduce wastage, and revitalize the soil. Horticultural production can also be maximized to preserve economically important insects like honeybees which are in turn beneficial as pollinators in crop production systems.

Carbon dioxide is a greenhouse gas which contributes to global warming and climate change, and one effective way of removing this gas from the atmosphere is through the process of photosynthesis by plants. Therefore, afforestation should be given more priority to provide additional trees that will sequester carbon dioxide from the atmosphere. Methane is also a greenhouse gas of concern and enteric fermentation from ruminant animals is a major source of methane emissions from the agricultural sector. Proper diet modification can help to reduce the emission of this gas and improve the efficiency of the animals.

Genetic tools can also be used attain environmental sustainability, through selective breeding of more efficient livestock that require less input to produce more products like milk, and breeding more resilient and high yielding crop varieties that can generate more biomass per land area and adapt to changing weather conditions.

Conclusively, the adoption of these practices will improve the environmental footprint of the agricultural sector, enhance biodiversity, increase output and profit for producers, and conserve the environment, which is a win-win for everyone.

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WHAT ARE YOU LISTENING TO? – MUST LISTEN AG & DAIRY PODCASTS

Whether you're a dairy farmer, a consultant, or simply someone interested in learning about the world of agriculture, podcasts offer an easy and accessible way to stay informed and up to date on all things ag. From the latest trends in farming technology to recent research discoveries, or even just chit-chats about the latest news, there's a podcast for almost every interest in the agricultural industry. Below, in no particular order, are some must-listen agriculture and dairy podcasts that cover a range of topics.

1. AgriTalk
AgriTalk is a daily podcast and radio show that focuses on agriculture, agribusiness, and rural issues. The show is hosted by Chip Flory and brings in experts to discuss topics such as commodity markets, farming trends, and government policies. AgriTalk provides market analysis, policy updates, and insights form experts-making it a great resource for anyone invested in the future of agriculture.

2. Uplevel Dairy Podcast
The Uplevel Dairy Podcast, hosted by Peggy Coffeen, is a podcast for dairy owners and industry professionals who are looking to improve their operations, leadership, and profitability. Every week Peggy talks with industry leaders about real-world success stories covering topics like herd management, business growth, leadership development, and personal growth. This podcast is great for anyone in the dairy industry looking for their next level of success.

3. Barn Talk
Barn Talk, hosted by father-son duo Sawyer and Tork, provides candid conversations on modern farming, entrepreneurship, and challenges and opportunities in agriculture. With a combination of personal experiences, guest interviews, and industry insights, Barn Talk is great for anyone interested in the realities of farm life, entrepreneurship, and a little entertainment.

4. DairyVoice Podcast
The DairyVoice Podcast, produced by DairyBusiness News, is released twice a month and offers speakers with real-world perspectives on topics like herd management, farm innovation, business management, and other hot topics in the industry. The DairyVoice Podcast is great for anyone looking to stay up to date with the latest information in the industry.

5. Real Science Exchange
Real Science Exchange is a podcast by Balchem Animal Nutrition and Health that offers in-depth conversation with animal scientists on the latest research and innovations. This podcast brings together leading animal scientists, industry professionals, and producers to discuss topics like dairy and livestock nutrition, emerging technologies, and feed efficiency. With episodes released twice a month, and currently over a hundred to choose from, Real Science Exchange is a great educational podcast to stay informed on the cutting-edge science in animal science.

6. Bovine Banter
Bovine Banter is an educational podcast produced by the Penn State Extension Dairy Team that provides insights on management, production, and profitability. This podcast brings in experts in the field to speak about management, genetics, and industry trends, and provides real-world experiences. Bovine Banter is a great resource for anyone interested in improving farm success. Check out episode 19.2, where our very own Dr. Heather Dann talks about transition cow nutrition.

7. Discover Ag
Discover Ag is hosted by Tara Vander Dussne and Natalie Kovarik, two women in agriculture that share a passion for the industry. Every week, the show discusses the latest news in agriculture, western culture, and food. Tara and Natalie breakdown the latest trending topics in food, farming, and rural life, debunking myths and providing insight into modern agriculture. The blend of storytelling, education, and advocacy, makes Discover Ag an easy listen podcast for farmers, ag enthusiasts, and consumers.

8. Xtreme Ag: Cutting the Curve Podcast
Xtreme Ag: Cutting the Curve is a podcast for farmers looking to improve their cropping practices and farm return on investment. Every week, the host, Damian Mason, provides real-world insights on topics like agronomic strategies, farm efficiency, and new equipment and technology by speaking with farmers and industry experts. Cutting the Curve is a great podcast for farmers who are looking for strategies they can apply on farm to improve their cropping.

These podcasts offer a wealth of information for anyone in or interested in the agriculture and dairy industries. Whether you're managing a dairy farm, running an agribusiness, or a student exploring agriculture, there's a podcast out there to help you stay informed and inspired. If you have a favorite ag podcast, feel free to share as I am always looking for new listens.

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WHAT'S HAPPENING ON THE FARM

March has begun and everyone here on the farm is looking forward to the warmer spring weather and hoping for a break from the heavy snowfall we experienced in February. It's almost time to start opening the doors and curtains to let in the fresh spring air. Although we had a cold winter, the cows have still been performing well as usual, with a herd average of 97 lbs of milk, 3.17% protein, and 4.39% butterfat.

Supernova with dairy team members from L to R: Nicole Roblero, Mackenzie Abbati and Ella Shamus-Udicious.

We've had some exciting things happening on the farm recently, including our annual Kiss a Cow event that we host with United Way of the Adirondack Region. The fundraiser raised more than $13,000 for programs that support ALICE (Asset Limited, Income Constrained, Employed) families in our region, who sometimes find themselves a small emergency away from serious financial distress. Multiple New York State leaders and United Way members showed up to kiss our beloved cow "Supernova", who has become somewhat of a local celebrity after appearing on multiple local news stations. Miner Institute is a very special place that makes an effort to be involved with the community and places importance on public outreach whether it is through fundraisers or teaching local students about farming and agriculture. Although we're always dedicated to keeping our facility clean and well-kept, we made sure to put in extra effort for our visitors by adding extra sawdust in the walkway, cleaning up the surrounding area, and washing up Supernova to make her as presentable as possible.

Another exciting thing we look forward to every March is interviewing applicants for our Summer Experience in Farm Management internship. The application deadline for our program was February 15, so now that we have received all of the applications it is time to start looking through our pool of applicants and having phone interviews with them. Something unique about our internships at Miner Institute is that prior experience working on a farm is not necessary. We simply take dedicated, hard-working individuals who get to learn all the aspects of running a successful dairy farm, no matter what their background is. Many of our interns in the past have enjoyed their experience so much that they return for job positions, yearlong internships, graduate studies, or simply just to visit every so often.

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LACTOSE, Continued from Page 1

percentage (LP), lactose yield (LY), and milk solids yield (MSY) across breed, parity, stage of lactation, and season. Holsteins had the highest LY and MSY and lowest LP whereas Jerseys had the highest ratio of MSY:LY. The LP, LY, and MSY:LY are moderately heritable with values ranging from 0.24 to 0.33. Gargiuio and colleagues suggested that identification of cows with lower LP or higher MSY:LY ratio is an opportunity for selective breeding to increase the production of economically important milk components while decreasing milk volume leading to a better milk production efficiency. Milk from first lactation cows had higher LP and lower LY than older cows. Interestingly, LP did not follow the usual lactation curve shape of fat and protein percentages with LP being highest in early lactation and lowest in late lactation. As expected, LY was related to milk yield and peaked during early to mid-lactation. Cows with a lower LP had a higher somatic cell count although the correlation was low (-0.3). The LP was highest in the summer and lowest in the fall whereas LY was highest in the spring and lowest in the fall.

By understanding and starting to manage factors that influence lactose production, farmers may be able to improve milk production efficiency and economic return.

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A SURVEY OF COLOSTRUM PRODUCTS ON THE MARKET

There are many colostrum products on the market, and it's sometimes challenging to decide which one to go with. Colostrum replacers are a very important tool in the toolbox if enough maternal colostrum is not available in the right quantity, quality, and cleanliness on a farm. We know that the first feeding of colostrum is one of, if not THE, most important meals for a calf. Therefore, we want to make sure we get it right from the start.

A convenience sampling of eight milk replacers on the market in the United States were purchased. The colostrum products chosen were marketed and labeled as replacers and not supplements. The three types of colostrum products selected were:

1. colostrum powder, made from drying colostrum (n = 2)
2. colostrum replacer, mixed with multiple ingredients (n = 5)
3. plasma protein, made from spray dried plasma protein from blood (n = 1)

The overall guaranteed analyses were summarized (Table 1) and then we analyzed the colostrum replacers for fat, protein, minerals, fatty acids, amino acids, vitamin A, and IgG. The general range of crude protein provided was 42-60%, crude fat 10-20%, and IgG per bag ranging from 60-150 with the amount of powder per bag ranging from 225-500 g.

Most products were provided in individual bags or “servings”. It is important to note that we focused on bags that would provide one feeding per calf for the first feeding except for the product 1 that only provided 60 g/bag of IgG. If you were to feed only one bag of this product it wouldn't be enough for a single first feeding of colostrum. Additional bags of this product would be needed depending on the size of the calf to achieve the targeted IgG. Recommendations are to provide >150 g in the first feeding with targets for excellent transfer of passive immunity more likely to occur when >200 g of IgG is provided in the first feeding. Product 6 and 7 was provided in a bag that water could be directly added and a esophageal tube could be attached to the bag, thus limiting the exposure to pathogen from multiple

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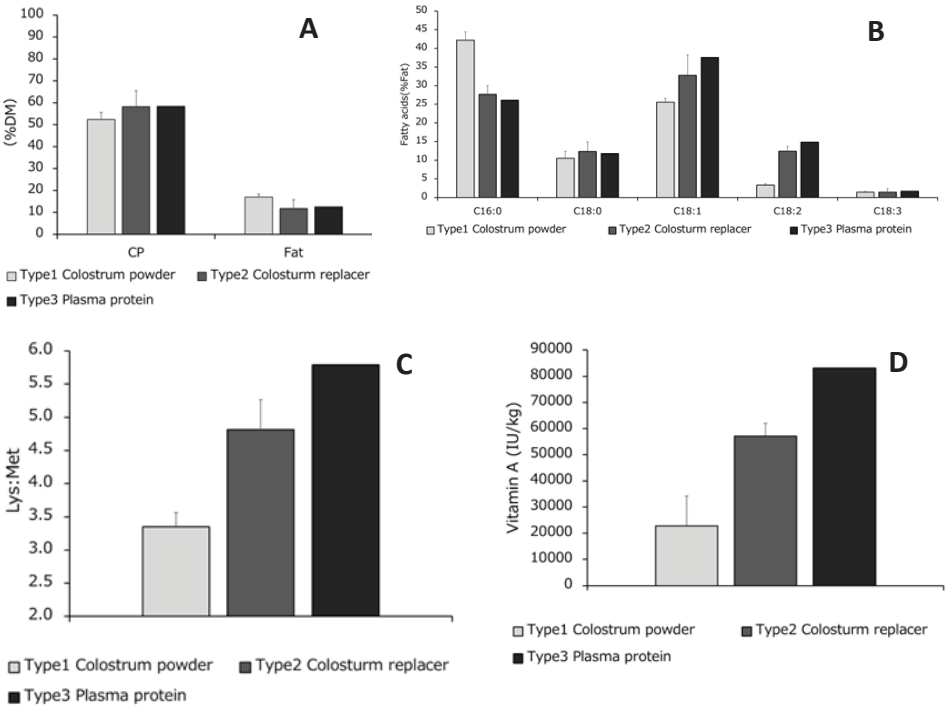
Sample No.	Product type	Crude Protein %	Crude Fat %	Ash, %	V.A. IU/kg	IgG, g/bag	g powder/bag
1	1	55.0	18.0		-	60	225
2	1					100	470
3	2	56.0	15.0	6.0	66,000	100	350
4	2	56.0	15.0	6.0	66,000	100	350
5	2	60.0	10.0	6.0	66,000	150	350
6	2	47.0	20.0	-	66,000	150	500
7	2	45.0	20.0	8.0	77,000	150	500
8	3	42.0	14.0	-	99,000	150	500

Table 1. Colostrum products samples surveyed from a convenience sample in the United States and the tag information provided (guaranteed analysis).



Figures. Analysis results for colostrum products samples, crude protein content and fat content (A), fatty acid composition (B), lysine: methionine ratio (C), vitamin A content (D). Fatty acids were similar, except for palmitic (C16) which was highest in the colostrum powder products (~42% of FA compared to <30% in the other products). The lysine to methionine ratio was lowest among the colostrum powder products. Vitamin A was also lowest in the colostrum powder, likely due to vitamin A not being supplemented into the formulation. In all products, the amount of IgG provided was above the guaranteed analysis, indicating an emphasis on the amount of IgG provided to calves across products. The solubility was the lowest in colostrum powders and higher in colostrum replacers.

NOT YOUR AVERAGE HEADACHE: ASPIRIN USE IN DAIRY CATTLE

Aspirin: a staple in nearly every medicine cabinet, the first line of defense against an oncoming headache. This familiar friend in human medicine, however, takes a complicated turn when we consider its use in veterinary medicine, particularly in livestock animals. This simple pain reliever raises complex questions about residual effects and potential risks that extend beyond the individual animal. Increased use of aspirin has captured the attention of the FDA as farmers use it to treat pyrexia and pain in dairy cattle infected with highly pathogenic avian influenza (HPAI). Thus, the seemingly straightforward question of using aspirin in cattle becomes a complex and multifaceted issue, highlighting the need for careful evaluation and adherence to strict guidelines to ensure both animal well-being and the safety of our food system.

In October 2024 the FDA issued a "Dear Veterinarian" letter, prohibiting the use of unapproved aspirin to treat fever and pain in lactating dairy herds. Previously, aspirin use was considered of "low regulatory concern," but increased use, particularly for HPAI treatment, and the risk of milk residues prompted this change. While technically "unapproved," aspirin was previously allowed for extralabel use under the Animal Medicinal Drug Use Clarification Act (AMDUCA). This raises the question of what "unapproved" yet legal means.

Dr. Alison Vander Plaats explained on the American Association of Bovine Practitioners (AABP)'s "Have You Herd?" podcast that drug approval requires manufacturers to prove safety and efficacy. Aspirin, along with other common farm drugs like lidocaine, epinephrine, and calcium solutions, lacks formal approval. Although ideal, the low revenue generated by these products makes the expensive approval process unrealistic for manufacturers. However, certain research indicates that the demonstrated effectiveness of aspirin could make the FDA approval process a worthwhile investment for manufacturers and potentially benefit consumers as well.

Recent studies have investigated the potential benefits of administering aspirin to postpartum cows, suggesting it may enhance their recovery and productivity. Two studies by Barragan et al. (2020, 2021) offered compelling evidence for the potential value of short-term aspirin use. Barragan et al. (2020) indicated a positive influence of aspirin on the metabolic status, production, and overall health of postpartum dairy cows. Additionally, Barragan et al. (2021) observed that aspirin use after calving reduced incidences of uterine diseases; this ultimately led to improvement in conception rates and reduced calving intervals. The benefits associated with aspirin use in dairy cattle, especially those in the transition stage, may add value to the idea of approaching the FDA approval process for the drug. However, while these studies show promising initial findings, more research is certainly necessary to exclude more information, such as optimal dose and long-term effects of use. Gathering additional information would serve in making a case for FDA approval and provide practitioners with evidence for using the product. Nonetheless, until aspirin receives FDA approval, and its benefits are conclusively validated by scientific research, it is advisable to follow the progress of ongoing studies rather than implement its use in dairy cattle.

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COLOSTRUM, Continued from Page 6

containers and other feed utensils.

Much focus has centered on the amount of IgG provided to calves through colostrum and replacement products, which was evident in this sampling of products on the market. Reading the bag for amount of IgG is important to provide the adequate amount of IgG to the calf to ensure transfer of passive immunity. Less information has historically been emphasized in terms of nutrient provision for these products. From this sampling, not all colostrum products provide the same nutrients. Furthermore, from a practical standpoint, being able to appropriately mix the powders into solution may be a barrier to adoption. Some of the colostrum powders are more challenging to get into solution than others.

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FAMILY FARMS Editorial comment

In Lewis Carroll's "Alice Through the Looking-Glass", the Red Queen tells Alice that "It takes all the running you can do to keep in the same place. If you want to get somewhere else you must run at least twice as fast as that!" Dairy farmers can empathize with Alice's situation: Over the years they've greatly increased milk per cow through selective breeding and better herd management, and milk per farm is higher because of (in addition to other improvements) larger herd size. They've had to make these changes because of higher input prices and also the cost of complying with government regulations, both environmental (CAFO) and otherwise. Farmers didn't increase herd size because of a belief that "Bigger is better", but because large herds are generally more profitable due to the ability to spread fixed costs over more producing units.

There's a push by some politicians who have never milked a cow or plowed a furrow to promote "family farms" over "factory farms", apparently unaware that 97% of U.S. farms are family-owned and account for 90% of farm production by value. A dairy farm bears no resemblance to a "factory farm" (whatever that is) since each cow is treated as an individual, necessary to maintain proper reproductive efficiency and good herd health. A contented cow is a productive cow, so herd managers do whatever it takes to keep their cows comfortable and healthy.

What some people think they want are small family farms, which if true would reveal their ignorance about the economics of modern agriculture because that ship has long since sailed. I remember many years ago entering an old stanchion barn during cold weather and being enveloped in an ammonia-laden fog due to poor ventilation. These conditions were unhealthy for the cows and also for the farmer. (In those days many farmers wore coveralls which their wives made them remove and hang on a hook outside the door before entering the house.) Contrast these conditions with a modern dairy barn with multiple fans and/or curtains which can be automatically raised and lowered based on precipitation, temperature and wind direction. There's nothing wrong with a well-designed tie-stall barn especially for mid-size dairies, but once herd size approaches a certain level (which varies due to preference, economics, etc.) some sort of freestall/milking parlor design becomes the most economical choice.

We need to continue to educate people about modern farming, about which most folks know so little, and much of what they think they know is wrong. For example, my city-raised father thought that when a heifer reached a certain age she had a calf, with no assistance from a bull. (The last time anything like that happened there were three wise men and a star in the East.) One of our Mexican exchange students refused to believe that the maple syrup she loved actually came from a tree; we had to bring her to a "sugar shack" to prove it. This is why Miner Institute's "Farm Days for 5th Graders", a 3-day annual event which in 2024 involved about 540 students, is so valuable because it educates children *and their teachers* about modern farming practices. The Institute has been doing this event since 1982 so it's involved at least 25,000 5th graders to date as well as hundreds of adults. One school brings so many "chaperones" that it's essentially the whole town!

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2nd Annual Miner Legacy Run
5K/10K
May 10, 2025

Join us to help support CVPH nursing programs!
National Nurses Week is May 6 – May 12, 2025 and to honor the amazing nurses in the North Country, we have teamed up with the CVPH Foundation to support nursing education and nursing work. This year, the theme of "Nurses Make the Difference" honors the nurses who embody the spirit of compassion and care in every health care setting.

Register here: https://runsignup.com/Race/NY/Chazy/MinerLegacyRuN

UNDERSTANDING H.R. 649: THE WHOLE MILK FOR HEALTHY KIDS ACT OF 2025

Since 2012, schools that participate in the National School Lunch Program (NSLP) have been required to serve low-fat or fat-free milk. Milk in schools represents a relationship between our nation's education system, farmers, and children. Milk is an affordable source of protein, vitamins, and minerals that can connect children to the wider food system that they exist within. Milk might seem like an afterthought on a cafeteria tray to some, but the decisions that got it there are more complex and political than many realize.

Right now there is a bill proposed in the U.S. House of Representatives called the Whole Milk for Healthy Kids Act of 2025. The bill has been referred to the House Committee on Education and Workforce. This bill, sponsored by Glenn Thompson of Pennsylvania and with bipartisan support in Congress, would allow schools participating in NSLP to serve whole milk, along with skim and low-fat options. Schools could continue to serve flavored milk with any fat content and could also serve organic milk. The bill stipulates that no milk imported from China could be served in the NSLP. It is important to note that the amount of milk served in the NSLP coming from China is negligible.

The bill would mostly impact large scale, wholesale orders through institutional food service providers like Sodexo or Sysco. At this stage, the bill does not describe how food purchasing would change. However, the opportunity to sell whole milk, a product that requires one less step of processing, could open doors for farm to school sales. Currently, farmers and school districts that want to get milk directly from local farms to their school must work with an operation that can separate their milk into low or fat free products. If this legislation passes, there could be increased opportunities to get local milk into schools without farmers and processors needing to expand their infrastructure. The benefits of farm to school programs have been long expressed – farms benefit from an additional market, children benefit from a healthy product, and both groups benefit from their exposure to one another. When kids have some context of where their food comes from, they may make lifelong decisions in support of local agriculture, and this context can positively shape how they view farming for the rest of their lives.

This possible positive relationship comes with the reality of nutritional considerations. The current nutrition standards regarding milk in schools allow only low or non-fat options because they fit into the <16 g/day of saturated fat recommendations. While the proposed legislation does not demand that all milk in schools be whole, the reality is that those children who do choose whole milk would be using up to 10 g of that recommended saturated fat in one serving. There have been thousands of clinical studies that seek to understand the long-term relationship between fat percentage of dairy products consumed and lifelong health. While some studies suggest that a childhood spent eating 3.5% fat products may lead an individual to be more overweight, the overarching literature remains inconclusive. The fat in milk does, importantly, aid in vitamin D uptake, a nutrient many American children are deficient in. Some studies have suggested a correlation between whole milk consumption, vitamin D uptake, and lowered BMI in healthy children, but additional research is required to draw overarching conclusions.

From an industry perspective, we do know that the food a child eats in their life will impact the choices made into adulthood. Positive experiences with dairy products in childhood can create a lifelong dairy consumer, and full fat products can contribute to that positive experience.

Tens of thousands of bills are introduced in Congress in a legislative session, usually with less than a thousand becoming law. This bill remains at the beginning of the legislative process, having been introduced and assigned to a committee. Support and opposition for the bill could wax and wane with other political priorities in play across the federal government. Another version of this bill was introduced in 2023 and didn't become law. While the bill would strengthen relationships between education and farming communities, there are nutritional questions still to be answered. For now, we know that the milk being served to school children is safe, healthy and provides them with the nutrition they need.

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EQUIDAY 2025: THREE PART EQUINE SERIES

EquiDay is coming up! This year's lineup is a three-part series of FREE events. There is no need to pre-register, but feel free to let us know if you'll be attending via email: lassell@whminer.com or phone at 518-846-7121, ext. 120. Light refreshments will be served at the in-person events which will be held at Miner Institute's BERC auditorium at 586 Ridge Rd., Chazy.

PART ONE: Thursday, March 20 at 6 pm will kick off our series with a Zoom presentation by Dr. Jennifer Weinert-Nelson from the University of Wisconsin-River Falls. As an assistant professor in their animal science department, she brings her expertise in digestion, endocrinology, and microbiology to the study of the whole horse. Her early career as a trainer and stable manager gives her a unique perspective on the day-to-day workings of horse life, but her education will tell us more about the inner workings of the hind gut. "What's going on back there? Why the equine microbiome is more than just digestion of food" will be our look into just how important those little bugs are! The Zoom link is available at whminer.org.

PART TWO: Saturday, March 22 from 9:30 am to 12:30 pm. The focus will be Self-Care. The first speaker, Lisa Eklund's talk is titled: "Unleash the Best Rider in YOU!!! Bring Joy and Confidence Back to Your Riding." Her years of riding, coaching, and learning have created her successful business as The Mindful Equestrian. You'll end this presentation with tips and tools to improve your connection with your horse. With our minds ready to roll, our second presenter will be Amanda Hoss of Hoss Equine in Alburgh, VT to get us prepped to integrate that into some body practice. Amanda's experience as a rider, instructor and certified yoga teacher will lead us through a few exercises that we can do sitting in the auditorium that will make riding feel better in our own bodies and therefore our horses' bodies by default. No special clothing or preparation required! Finally, author and natural horsemanship clinician, Tim Hayes, will be leading a discussion of his new book, *Horses, Humans and Love.* There will be books available for purchase and Tim will be autographing copies too. You'll leave EquiDay a changed-for-the-better person and your horse will love you for it!

PART THREE: Tuesday March 25 from 6 to 7:15 pm, Dr. Betsy Colarusso will join us at the BERC auditorium at Miner Institute. She is a practicing veterinarian and co-owner of Vermont Large Animal Clinic in Milton, VT. We all know that a horse should get a "float" once a year, but what does that really mean? Good dental health is a passion of Dr. Betsy's and she'll lead us through a talk about the importance of equine dentistry and some of the benefits to the horse by having regular dental care by qualified practitioners.

NOTABLE QUOTES FROM FARMERS

I've been at this business for a long time, but I still remember some of the comments made by farmers of widely varying abilities. Some I remember fondly, others not so much. A sampling:

- *"I've been a widow for many years so I know what it's like to be without male companionship."* This by a middle-aged woman — and a crackerjack dairy farmer with one of the highest-producing herds in the area — in reply to my asking why she had a bull on her farm when one of her best friends was an AI inseminator.
- "I don't want to kill the quackgrass, just sort of set it back " After I told the farmer how to eradicate quackgrass from his corn field prior to seeding alfalfa, he said that his alfalfa seedings usually turned out so poorly that he relied on quackgrass for much of the yield.
- *"You don't understand; I'm not farming as well as I know how to."* While this may sound like the punchline for a joke, the farmer was serious. This was in reply to my obvious frustration at his routinely doing everything — planting, harvest, etc. — weeks too late. He was right: I didn't understand. The problem was fairly short-lived, though, because the farm went belly-up the following year.
- *"We also sell bagged shavings, you know."* A farmer had just delivered a load of straw to the Miner Institute horse barn, only to have his flatbed truck fall through the second-floor wood deck, winding up suspended between the first and second floors. We felt horrible, of course, but the farmer took it in stride, as his comment indicated. Talk about nice guys…
- *" I got a great deal on my new 20' x 60' silo; it holds at least 100 tons more corn silage than it's supposed to."* This claim was based on his seed dealer cutting ten stalks of corn from one field and weighing them to predict the silage yield for his entire corn crop. After hearing this I had two choices: Explain the unreliability of a 10-stalk sample in determining silage yield (thereby raining on the farmer's parade), or agree that he sure did get a great deal on the silo. Which would you have done?

— E.T.

HOOF LESIONS: WHAT ROLE DOES THE ENVIRONMENT PLAY?

The overall hoof health in dairy cows plays a critical role in ensuring productivity of farms Not only does it impact the well-being of cows, but also the output of milk yield and reproduction rates. Lameness is one of the most prevalent health issues on cattle operations and can be attributed to many factors that range from management style to nutrition (Moreira et al., 2019). Hoof lesions are one the main drivers of lameness and can cause significant concern for dairy farmers. Hoof lesions can be categorized into various types, including sole ulcers, digital dermatitis, white line disease, and laminitis (Omontese et al., 2020). Prevention and management of these lesions are essential to maintain the productivity and overall welfare of dairy herds.

Lesions can lead to ulcers and digital dermatitis which can have lifelong effects on some cows. The environment in which a cow spends her life can hold significant influence on the frequency of hoof lesions (Omontese et al., 2020). Whether it be a pasture-based or confinement system, each style comes with its own set of benefits and drawbacks when it comes to the condition of the hoof. Traditionally, dairy cows were raised in pasture-based systems, but with increasing technology and specialization in dairy farming, many herds are now housed in confinement systems; these include tie-stall barns or freestall barns with concrete flooring.

The design of these barns can aggravate hoof lesions, harbor infection due to soiled bedding compaction and limit the amount of movement cows can participate in. In confinement systems, cows have constant contact with concrete flooring which causes abrasion and will wear the hoof down over time. Wear and tear on the hooves for long periods of time can lead to sole ulcers and white line disease (Somers et al., 2005). Additionally, standing on concrete can increase the pressure on certain areas of the hoof and risk injury or infection.

In contrast, pasture-based systems provide naturally softer footing. Grass and dirt surfaces offer better traction than concrete and will reduce the risk of injury during estrus behavior. However, muddy or wet pastures can introduce challenges, as excessive moisture weakens hooves and can predispose cows to digital dermatitis and other infections (Omontese et al., 2020).

On the positive side, cows on pasture have more freedom to move around, which may improve circulation and hoof health by reducing the time spent standing on hard surfaces. In freestall settings, cows have the option to move around but are still constricted to the area of the pen. In addition, many barns have freestalls that are overcrowded, which can lead to longer periods of standing time. As previously stated, this can lead to pressure related issues. More natural movement and grazing can help maintain hoof wear and prevent abnormal growth patterns that can lead to lesions (Fabian et al., 2014). Additionally, walking on varied terrain can provide a natural method of trimming hooves, helping to maintain proper hoof shape and reduce the buildup of overgrowth, which can lead to injuries.

In confinement, cows are often restricted in their movement. Systems such as tiestalls do not allow for movement at all due to the cows being tethered to their bedding area. This system can lead to issues with digital dermatitis due to the buildup of manure and bedding impaction on the hooves if not monitored closely. One certain benefit of freestall housing is that it allows the manager to observe locomotion and detect health issues early on. Additionally, grooving carved into concrete flooring increases the traction and prevents potential damage of the hoof from slipping. Both systems can be complemented by a scheduled footbath that will clear up pathogens and bacteria found in the manure that may cause infection. On pasture, footbath treatments are rarely used.

In conclusion, hoof lesions are an ever-present issue that dairy farmers deal with, but with proper management techniques these issues can be caught early on and will reduce the efficacy of infections that lead to expensive solutions. Regardless of the housing system a farmer chooses, it is crucial to implement comprehensive hoof health management practices. These include consistent monitoring, prompt treatments, and proactive measures to prevent hoof problems. By prioritizing hoof health and continuously refining management strategies, dairy farmers can ensure the well-being of their herds, enhance productivity, and ultimately achieve long-term success.

— Sommer Thompson
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This photo was taken after a storm dumped a foot of snow in mid-February.
The snowbanks have receded since.

Closing Comment

Never confuse education with intelligence.

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