



FROM THE PRESIDENT’S DESK: DID WE PACK TOO MUCH?

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No, this wasn’t a conversation between my husband and I during a recent long weekend trip away, though he does travel with a much larger suitcase than me. Traveling for work with a carry-on has honed my skills of packing light. This is a follow-up to my article from last month, “Pack, Pack, and Pack Some More” where I discussed our need for better silage packing to achieve our silage density goal of at least 15 lb. of dry matter per cubic foot in a haycrop silage bunker. I stated some ways our team was going to increase silage packing density, including packing for an hour after the last load is delivered to the bunker since previously we stopped packing too soon after the last load was delivered.

One of my favorite things about the Farm Report is the comments that I get back from readers. Thanks to Bill Mahanna (Pioneer) and Joe Lawrence (Pro-Dairy) for reminding me that we can actually over-pack silage, and spending too much time packing the last load can actually be a problem. Here are the takeaways from their comments:

Spend a “normal” amount of time compacting the top since additional time spent packing will have little if any effect on improving silage density.

- Often less than 30 minutes is needed to properly pack the top layer; it should be like the other layers.

Layer thickness (4 to 6”) is key for proper packing.

- Packing is only affecting the top 4 to 6” of material, nothing below it.
- Packing each layer well is critical before adding another layer of material.
- It’s easier to pack against a hard surface (i.e., a hard bunk floor or well-packed layer) than a soft surface.

Over-packing the top increases the likelihood of more spoilage on the top layer.

- Excessive tire traffic causes damage to the plant cells thereby releasing water and nutrients to fuel growth of aerobic spoilage organisms.
- Usually more of a problem in haycrop silage.
- Can cause a layer of white mold 6 to 12” below the top surface.
- Observed on farms that pack for several hours after harvest is completed.

Over-packing wastes people’s time (labor), fuel, and feed because of subsequent spoilage.

Thankfully, our team didn’t really end up packing for an hour after the last load. They used common sense and finished packing at the right time...leaving a hard layer that wasn’t mushy.

— Heather Dann
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SO NICE, WE DID IT TWICE: A SECOND CALF STUDY WITH KEFIR

In March, 2023 my *Farm Report* article titled “Brewing up a potential new probiotic option for calves” reported the results of a study that evaluated supplementing calves with the fermented milk beverage kefir until 21 days of life. The results of that study were intriguing, especially since the calves that received kefir on one farm had significantly improved starter dry matter intake (DMI) at weaning compared to calves not supplemented. While no other health or performance measures were improved by treatment, the increased starter intake posed some more questions about what the potential residual effect of probiotic supplementation could be on other metabolic or physiological parameters, especially rumen development. While it’s well known that the beneficial bacteria, yeasts, and fungi in kefir have benefits to gut health and development, these microorganisms also produce some bioactive components whose functions and benefits are lesser known in the calf. One such component lies, quite literally, in kefir’s backbone.

Complex sugar compounds called exopolysaccharides (EPS) not only form the structure of the kefir grains themselves, they also give kefir its distinct texture and yogurt-like thickness. While many EPS are produced during kefir fermentation from the lactic acid bacteria, the most prevalent EPS is kefiran, and it has caught the attention of biotechnology and health sectors for its versatility and potential health benefits. Kefiran has been explored as edible food packaging, an antimicrobial agent, a thickener for foods, and as a potential modulator of gut immune function. Benefits of kefiran supplementation have been observed in mice, chicks, and rats, but has not yet been explored in calves. Production of kefiran on an

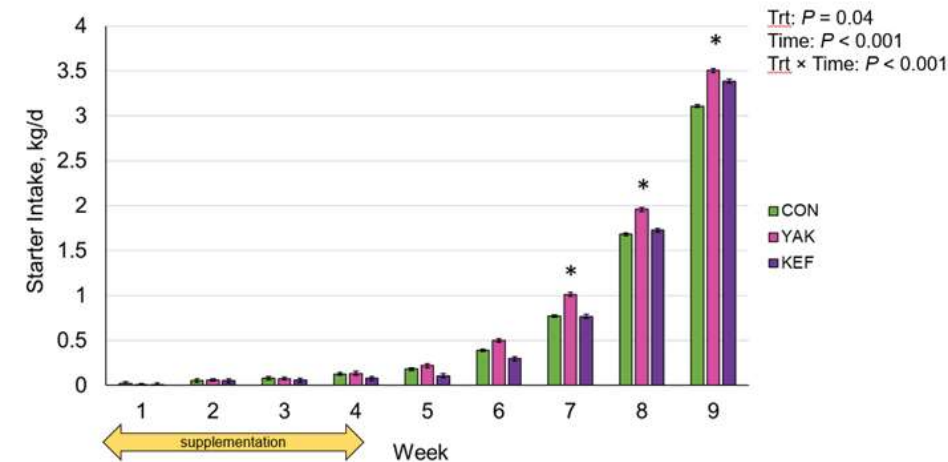


Figure 1. Calf starter DMI in calves supplemented with ½ cup (125 mL) salable whole milk (CON), ½ cup kefir (KEF), or ½ cup kefir fermented with 1% yeast powder (YAK) 1x/d at the AM feeding until 28 d of life. Asterisk indicates statistical significance.

industrial scale is difficult and inefficient, so maximizing its productivity during kefir fermentation has been explored. One such method involves co-culturing kefir with *Saccharomyces cerevisiae* (brewer’s yeast), which is thought to increase the amount of kefiran. To explore this method further and in a more practical manner, our study first sought to determine an optimal inclusion rate and form of brewer’s yeast (dried activated or autolyzed yeast powder) in kefir for increased EPS production. Exopolysaccharide production was best optimized with the inclusion of autolyzed yeast powder at a 1% weight/weight ratio (g of powder/20 g kefir grains). For clarity, autolyzed yeast powder is not live; it’s the by-product of spent yeast after fermentation and mainly serves as a source of amino acids and nutrients.

The second objective was to determine if kefir fermented with or without the inclusion of brewer’s yeast improved dry matter intake, growth, and intestinal permeability in preweaned calves. Seventy-five calves were enrolled, and after initial colostrum and transition milk feedings, were randomized to

receive ½ cup (125 mL) of a control (salable whole milk), kefir fermented without yeast, or kefir fermented with 1% autolyzed yeast powder 1x/d at the AM feeding until 28 d of life. In the previous study, calves only received ¼ cup (60 mL) 1x/d until 21 d. Calves were fed milk replacer (13.5% solids) 2x/d in pails at a maximum of ~2.6 gallons (10 L)/d. A step up-step down plane of nutrition was utilized, and calves were weaned at 56 d of age. Calf starter and water were provided beginning at 3 d of age. Feed intake, feed efficiency, growth measurements, average daily gain, and health scores were measured for all calves through 63 d of age. Indigestible markers D-mannitol and Chromium-EDTA were administered to a subset of calves at 15, 29, and 50 d, and their recovery in serum and plasma was an indicator of intestinal integrity. Rumen fluid was also collected from these same calves at 63 d to determine differences in volatile fatty acid profiles and explore potential influence on rumen development. Data was collected through one week post-weaning (d 63).

See **KEFIR**, Page 4

IMPLICATIONS OF SUGAR INCLUSION IN DAIRY DIETS

Sugars are non-structural carbohydrates that are soluble in water. They can be classified as simple sugars or monosaccharides, having one sugar molecule, and disaccharides, having two monosaccharide molecules. Monosaccharides include glucose, fructose, and galactose, while disaccharides include sucrose (glucose + fructose), lactose (glucose + galactose), and maltose (glucose + glucose). It's necessary to clarify that a structural carbohydrate known as cellobiose also contains two glucose units, but it differs from maltose by the type of bond that links the glucose units; maltose is made up of α -linked glucose units while cellobiose is made up of β -linked glucose units. The importance of these bonds lies in the ability of animal/human enzymes to break them down. Human and animal enzymes can digest α -linked glucose units but cannot digest β -linked glucose units. The β -linked glucose units are broken down by microbes. Glucose, fructose, and sucrose are the most abundant sugars found in plants (Hall, 2002). Complex sugars which include polysaccharides (multiple units of simple sugars) like starch and glycogen won't be discussed in this article.

Sugars are important sources of energy in the diet, like starch, but in ruminant animals sugars are fermented in the rumen at a faster rate than starch. According to Van Amburgh et al. (2015), the digestion rate (kd) of sugar in the

rumen is 40-60%/h, compared to starch and soluble fibers with a slower digestion rate of 20-40%/h, and available neutral detergent fiber (NDF) which is even slower at 1-18%/h. The rapid rate of sugar fermentation might pose the risk of lowering the rumen pH, but there hasn't been any conclusive evidence in the literature to prove this, so sugar inclusion in the diet isn't directly linked to ruminal acidosis (Oba, 2011). Studies have shown that high sugar diets produce more butyrate compared to other volatile fatty acids in the rumen, and this is advantageous because butyrate provides energy for the functioning of the inner lining of the rumen and the cells that line the large intestine, aiding the absorption of fermentation products across the rumen wall (Hall, 2002; De Ondarza et al., 2017). Inclusion of dietary sugar has also been shown to increase dry matter intake (DMI; Broderick, 2008), milk yield (De Ondarza et al., 2017), and milk fat content (Broderick et al., 2000; Firkins et al., 2008; Penner and Oba, 2009). On the flip side, NDF digestion has been shown to decrease with high sugar diets. A study by Huhtanen and Khalili (1991) showed depression in ruminal NDF digestion when they fed a diet with included sugars of up to 15.9% of diet dry matter. Regarding the effect of sugar inclusion on enteric methane emissions, Hindrichsen et al. (2005) noted that there was no statistical difference in enteric

methane emissions when they fed six diets with dietary sugar ranging from 6.2 – 17.7 % to Brown Swiss dairy cows. This was supported by Staerfl et al. (2012) who observed no effect of feeding a high-sugar ryegrass containing 193 g/kg water-soluble carbohydrate (DM) on enteric methane emissions in primiparous Holstein cows.

A major question is how much sugar is ideal for optimal rumen function and productivity? Hall (2002) suggested 5% of the ration should be sugars, while De Ondarza et al. (2017) observed from the review of several studies that the inclusion of 6.75 – 8.0% dietary sugar in the diets of lactating dairy cows had the highest effect on fat-corrected milk yield and milk protein yield. They also recommended the inclusion of 21.6 – 27% of diet DM of dietary starch, and 6 – 8.5% of diet DM of soluble fiber when adding sugars in dairy diets. Furthermore, Hall (2002) advised the provision of adequate effective fibers and rumen degradable protein in the diet as considerations for sugar inclusion in dairy diets.

Sugars can be considered as possible alternative sources of energy, however, the impact of other components in the ration like NDF, protein, and starch has to be considered for optimum benefit.

— Gift Omoruyi
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MURIATE OF POTASH AND THE PRICE OF EGGS

Two housewives were discussing the price of eggs. Eggs had been about \$1.00 a dozen, then a combination of factors (higher grain prices, fewer hens, etc.) caused the price of eggs to soar to \$3.00 a dozen, resulting in a great deal of griping by the ladies. Then prices started dropping and soon eggs were down to \$2.00 a dozen. “Finally”, said one, “eggs are a reasonable price again.”

This is similar to the changes over the past five years in the price of potash fertilizer. In 2020 muriate of potash (0-0-60, also called potassium chloride) was less than \$400 per ton. Then in February 2022 Russia invaded Ukraine, and because Russia is a major supplier of potash this plus other market factors caused the price to more than double, to over \$800 per ton. Since then the price of 0-0-60 has been coming down, currently about \$500 per ton. (These are Midwest

prices so your price may be different.) Will potash ever be \$400 again? Mom used to say “Never say never”, but I think it’s unlikely.

Fall is a good time to spread potash on alfalfa fields, but also on corn fields that were harvested for silage. Potassium is antifreeze for alfalfa! This is particularly important if previous high prices resulted in your using less fertilizer than usual. Milk prices are up and cull cow prices are high, while corn and soybean prices are at multi-year lows. Rely on current soil analyses of course, but is the time right for some “catching up” on soil fertility? If not now, when?

At the same time let’s not forget about the nutrient value of topdressed manure. The potassium in dairy manure is at least as plant-available as that in commercial fertilizer, and application as a slurry or liquid retains

the urine portion, increasing its potassium content. The first manure out of the pit will usually contain more potassium on a dry matter basis but is often lower in total solids content. If you don’t have enough manure to apply to all your alfalfa and alfalfa-grass fields, give priority to those with low to medium soil test P levels, most which will probably also need potassium. Most dairy farms have a positive phosphorus balance (more P coming onto the farm than leaving it), so a reasonable goal is to minimize purchases of phosphate fertilizers, relying primarily on manure. Don’t be afraid to ask for help on your nutrient management program — what best goes where, and when — either from your crops consultant or Cooperative Extension field crops educator. Let me know if I can help.

— *Ev Thomas*
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KEFIR, Continued from Page 2

Encouraging starter intake in calves as early as possible is recommended for accelerating gastrointestinal and rumen development and reducing weaning stress. Calves supplemented with kefir + yeast had significantly increased starter DMI in the two weeks prior to weaning compared to control and kefir fermented without yeast (Figure 1). Surprisingly, calves receiving kefir without yeast showed no improvement in starter intake compared to control calves during this time, which differs from the last study. Updated recommendations for starter intake in calves prior to weaning now recommend that small breed calves consume at least 2.75 lb (1.25 kg)

and large breed calves consume at least 3.85 lb (1.75 kg) of starter prior to weaning. Starter intake in calves supplemented with both types of kefir was also markedly improved compared to calves fed a control in the week following weaning. Growth, average daily gain, health scores, feed efficiency, or intestinal permeability were not affected by treatment. Volatile fatty acid analysis is currently ongoing.

As with many scientific endeavors, we’re still left with more questions. The continued pattern of increased starter intake is likely indicative of some kind of benefit from the early-life probiotic supplementation. The

calf’s gastrointestinal tract is very easily influenced in the first few weeks of life, so the provision of beneficial bacteria may help to drive its stability and maturation. It could also be speculated that the addition of yeast powder, though in a small amount, may provide some type of prebiotic benefit to the gut microbiota, though this is speculative at best and could be explored more in future work. This study contributes to the growing body of evidence for probiotic supplementation and provides more support for kefir’s use as a practical, on-farm probiotic source.

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RECIPE REPORT

Dairy products are extremely versatile as they can be eaten in many ways, whether it be a food, beverage, or an ingredient in a recipe. For example, cottage cheese has resurfaced as a popular product thanks to social media. There are many videos and recipes that show how cottage cheese can be used to make recipes better for you and provide more protein. This is how I found these delicious high protein bagels that are made with cottage cheese and take under an hour to make. I like to top my bagels with everything bagel seasoning and pair it with some Cabot cream cheese!

Cottage Cheese Protein Bagels

Ingredients

- 1 cup all purpose flour
- 2 tsp baking powder
- $\frac{3}{4}$ tsp salt
- 1 cup cottage cheese
- 1 egg, beaten
- Optional toppings: everything bagel seasoning, poppy seeds, garlic, sesame seeds, onion flakes

Instructions

1. In a bowl whisk together the flour, baking powder, and salt. Add the cottage cheese and mix until the dough begins to form small crumbles. (Note: some recipes call for the cottage cheese to be strained to remove excess liquid, I don't do this but instead I add a little more flour if the dough is too sticky).
2. On a clean surface, work the dough with your hands until it comes together. The dough should be smooth and tacky, but not sticky enough to stick to your hands.
3. Divide the dough into 4 equal balls. Roll each ball into a thick rope and join the two ends to form bagels.
4. Top with egg wash and sprinkle both sides of the bagel with your desired seasonings.

To cook

- Air fryer- spray air fryer basket with non-stick spray and air at 350F for 10 to 12 minutes or until golden. Let cool for at least 15 minutes before cutting.
- Oven- preheat oven to 375F, place bagels on baking sheet lined with parchment paper. Bake for 25 minutes. Let cool for at least 15 minutes before cutting.

These bagels reheat well in the toaster or oven. I hope you enjoy!



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NOTABLE QUOTES

- At age 20, we worry about what others think of us... at age 40, we don't care what they think of us... at age 60, we discover they haven't been thinking of us at all. — *Ann Landers*
- People never end their lives thinking about things they wish they'd bought, but they do think about things they wish they'd done. — *Craig Johnson, author of "The Longmire Defense"*
- Since this is an era when many people are concerned about "fairness" and "social justice", what is your "fair share" of what someone else has worked for? — *Thomas Sowell*
- Just because you can sing doesn't mean you should. — *John Kennedy, Louisiana Senator*

MENTAL STRESS IN AGRICULTURE

Before choosing a career in agriculture, one should consider the physical and mental demand it puts on your body. After working long hours with heavy manual labor and a significant lack of time off, many people in the agricultural industry experience varying levels of burnout. Burnout is an emotional, mental, and physical reaction to constant stress. Physical symptoms of burnout include headaches and migraines, difficulty breathing or panic attacks, digestive issues and vomiting, high blood pressure and chest pains, and sleep issues like insomnia. Mental and emotional symptoms of burnout can show up as anxiety, anger, sadness, hopelessness, depression, and/or suicidal thoughts. In a cross-sectional survey conducted by researchers from the Dublin City University on burnout and sleep issues in Irish farmers, they found that 1 in 4 farmers are burnt out. More than 50% of farmers get poor sleep, with 31% of farmers only getting 5 to 6 hours a night. Additionally, the researchers

found that farmers with pre-existing physical and/or mental health conditions experience 40% more burnout and sleep issues than farmers without pre-existing conditions. Compared to the general working population, farmers experience higher overall burnout, sleep issues, cynicism, and exhaustion. According to studies conducted by the American Farm Bureau, suicide rates in farmers are 2 to 5 times higher than the national average. With financial uncertainty, labor shortages, extreme weather and natural disasters, farmers have a heavy stress load. Nearly 90% of farmers have financial issues and/or business problems and 87% of farmers fear they will lose their farm. The rural isolation of farming and social stigma around mental health often makes it difficult for farmers to reach out and get the help they need.

So how do we help farmers struggling with burnout and mental health? Many organizations like Farm State of Mind

from the American Farm Bureau have a vast amount of resources available. On their website is a list of crisis helplines and access to anonymous online peer-to-peer support groups. Similar to Farm State of Mind, the USDA has a Farm and Ranch Stress Assistance Network of organizations across the U.S. that provides support and resources to farmers struggling with stress and mental health.

For agriculture to have a sustainable future, the well-being of farmers, ranchers, and anyone in the industry is paramount. In order to do so we must continue to break the stigma surrounding mental health and become educated on the warning signs of suicide and how to help and support our peers struggling with stress, burnout, and mental health.

— Summer Greene
Summer Experience in Equine Management 2024

If you are concerned about yourself or somebody else, reach out.

- **In an emergency, call 911.**
- **National Suicide Prevention Lifeline, dial 988.**
 - **Crisis Text Line**
Text “Got5” to 741-741
- **Unsure of where to turn for resources or assistance? Call 211**
 - **NY FarmNet, www.nyfarmnet.org**
 - **NYS County Mental Health Directory**
https://www.clmhd.org/contact_local_mental_hygiene_departments/
 - **Farm Aid’s Farmer Resource Network**
<https://farmaid.my.site.com/FRN/s/>

WHAT'S HAPPENING ON THE FARM

Fall is here! Although it doesn't officially start until September 22, we often associate fall with chopping and harvesting. We are currently on 3rd cut grass hay and hope to start chopping corn silage later this week. The farm is starting to settle down after a busy summer! We said goodbye to our summer students in mid-August, as well as welcomed back one of last year's previous summer students, Ella, as this year's new year long intern.

We've been struggling with more mastitis than normal, so when we have problems like this we go back through what we've done, as well as evaluate and reevaluate things that we are doing. We revisited our milking protocols, stall cleanliness, as well as had management meetings to make sure everyone is on the same page with what we are doing.

In August, we had quite the baby boom! In total, we had 39 heifers born, 38 bulls born, and 5 AngusX calves, as well as 4 sets of twins! This meant we had a lot of hands on deck ensuring that all of the calves were delivered as smoothly as possible, as well as making sure that our fresh cows were well taken care of. Our fresh cow problems have gone down to a minimum, and the cows are taking off well in milk.

Happy Fall!

— Rebecca Sprang
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NEW YEARLONG DAIRY INTERN: WELCOME ELLA SHAMUS-UDICIOUS

My name is Ella Shamus-Udicious and I am the year-long dairy intern. Last year I was a Farm Management summer intern and I loved my experience at Miner Institute so much that I decided to come back! I graduated in May 2024 from the University of Maine with a B.S. in Animal and Veterinary Science. While in college I worked on the university dairy farm milking Holsteins in our tie-stall barn. I also was a Teaching Assistant for the Dairy Management class, as well as a member of Maine Animal Club. I participated in Dairy Challenge at both the regional and national level.

In high school I was very involved in both 4-H and FFA. I was in two 4-H clubs, one for dairy goats and the other for dairy cattle. I was the president of one of my 4-H clubs for almost 4 years. I held multiple different officer positions in my FFA chapter, and was Vice President my

senior year. Through FFA I competed in Livestock, Equine, and Dairy Cattle Evaluation competitions. I also competed in public speaking competitions.

I started working with animals when I was about 14 years old when I got my first job doing simple farm chores at a small farm in my home state of Connecticut. Since then I've had a wide range of jobs working with cattle, goats, horses, pigs, chickens and even dogs. Even though I enjoy all livestock, dairy cattle have always been my favorite. I knew from the second I bought my first show heifer that I wanted to work with cows for the rest of my life. Not only do I have a love for animals, but through all my years of education I've developed a love for agriculture. I love to share my passion with others, including educating the public about our amazing and important line of work.



— Ella Shamus-Udicious
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SAVE THE DATE:
VT DAIRY PRODUCERS CONFERENCE
Feb. 18, 2025
South Burlington, VT

CORNELL NUTRITION CONFERENCE
October 22-24, 2024

Featured Speakers in 2024 include:

- Dr. Jackie Boerman, Purdue University: *Timing and extent of skeletal muscle depletion and accretion*
- Dr. Billy Brown, Kansas State University: *Setting calves up for success: Pre- and postnatal nutritional strategies*
- Dr. Phil Cardoso, University of Illinois: *Amino acid balancing related to health and reproduction in dry and lactating dairy cattle*

For more information, visit <https://cals.cornell.edu/animal-science/events/cornell-nutrition-conference>

TO BE FOREWARNED IS TO BE FOREARMED

Excessive heat and excessive moisture are bad for forage digestibility. The combination of both — ugh. This summer has been hot almost everywhere, and unusually wet in much of the Northeast including some areas that have already exceeded their normal yearly precipitation total. Even well-eared corn may have less than normal NDF digestibility (NDF-D), while the quality of poorly-eared corn could be terrible. Where soil drainage is good you may have high yields, but of what quality? (The answer to the question “What’s worse than having low quality corn silage?” is “Having a lot of it.”) My recommendation is to get this year’s corn silage crop tested as you fill silo; don’t wait for it to ferment because

while fermentation significantly increases starch digestibility it has a relatively small impact on NDF-D. You won’t balance rations based on this analysis, but it should give you some idea of what lies ahead — thus the title of this article.

What about high chopping a high-yielding, low NDF-D corn crop? This may be an option but not if the corn is immature, for two reasons: First, there’s less grain in an immature crop so high chopping won’t help as much as when the crop is around 35% DM. And second, the stalk quality of immature corn is usually fairly good.

Many farmers have a bumper crop of

alfalfa and alfalfa-grass this year, and as a result I’ve been getting more questions than usual about whether or not to take a September harvest. Knowing the quality status of this year’s corn crop may help you make these decisions. Storage options may be a limitation, but if you can find a place for the forage you may want to feed more haylage and less 2024 crop corn silage. Work closely with your dairy nutrition consultant in determining how best to feed what could be a very challenging corn crop. Corn grain prices will likely be low, so corn meal could partly compensate for the reduced grain content in immature corn silage.

— E.T.

CORN SILAGE QUICKY

Corn grain prices will be unusually low this fall. If you have corn you were planning on having combined and sold, before doing so make sure that you’ve chopped as much corn for silage as possible, even if it means stacking bunkers and drive-over piles a foot or so higher than normal (keeping safety in mind, of course). And if you normally run out of “old crop” corn silage before the end of the calendar year, this would be a good time to put up another several months of corn silage. If this is your situation, the nutritional differences between partly- and fully-fermented corn silage are enough that it may pay to have one or more silage bags custom-filled, especially if you have a “high and dry” storage site for the bags.

— E.T.

Advanced Dairy Management – residential course offered January-May 2025

This course is designed for undergraduate students interested in a career in the dairy industry or allied agribusiness.

Course Goals and Objectives include:

- Provide students with critical thinking skills through engagement with faculty, dairy producers, and agribusiness leaders
- Provide a hands-on learning environment to enable students to assess dairy farm design and management
- Provide tools to assist students in making crop and nutrient management decisions for dairy farms in the Northeast
- Provide students with skills necessary to objectively evaluate dairy, crop and facility issues on the farm
- Provide students with skills to effectively communicate thoughts and ideas in a group and 1-on-1 setting

For more information, contact Dairy Outreach Coordinator Wanda Emerich, emerich@whminer.com
Application (due 11/15/24) available at: <https://www.whminer.org/advanced-dairy-management>

DECISION-MAKING PREFERENCES

Have you ever been in a meeting where it seems like everyone on the team is on a different page? It's safe to say we've all been to a meeting where frustrations are high, and it seems a decision could have been made by now. What is the process in which decisions are made? Have you considered that personality preference may be playing a role in this?

You may be familiar with the Myers-Briggs MBTI assessment and the 8 personality preferences. These include extraversion vs. introversion, sensing vs. intuition, thinking vs. feeling, and judging vs. perceiving. Two of these dichotomies are functional in nature and would be directly related to the decision-making process. They are sensing vs intuition, which relates with how someone collects information, and thinking vs feeling, which is how we make decisions.

Let's break down each of these categories-

Sensing- *What are the facts?* This preference likes to focus on what is here and real. They observe and easily recall data and specifics, like to gain understanding through hands-on experiences, and tend to be factual and concrete.

Intuition- *What are the possibilities?* This preference is attuned to the possibilities of the future, are concerned with meanings and patterns in information, trust their gut feelings and inspiration, and tend to be imaginative and creative.

Thinking- *What are the logical consequences of acting on each option?* This preference value logic, use cause-and-effect reasoning, are

objective, strive for what's fair, and are critical and analytical.

Feeling- *What are the human consequences of acting on each option, and what do I care about?* This preference values compassion, consider effects of their decisions on people, seek to maintain harmony, softhearted and empathetic

A common misconception when using the MBTI tool is that when you are "classified" in a certain category that is the only thing you are capable of. Rather, each classification should be considered more of your default preference given the option, like a response to a last-minute decision. It is not to say that you cannot lean into and exhibit the other side of that. In fact, once you are aware of your default, or the default of others on your team, you can challenge yourself and others to practice their inferior preference. Within a team it is very valuable to have diversity so that each member complements the others within the group.

The process of decision making follows this order: sensing → intuition → thinking → feeling. From each of these four preference types, each person has their most dominant function, second dominant, and so on in which they spend the most time at that step of the decision-making process. This means that within an hour-long meeting each person will move through these functions at different paces based on their preference. For example, my order of preference is sensing, thinking, feeling, and intuition. I like to spend a lot of time collecting information to feel comfortable moving forward (maybe 30 minutes of the hour-long meeting). Since intuition is my least favored preference, I might only spend 5

minutes of the meeting thinking about the bigger picture. Next, thinking is my second favored preference, in which I like to use logic I might spend the next 15 minutes here. Finally, the last step would be the feeling judgement where I would start to consider the effects that decision has on people and spend the last 10 minutes of the meeting here. On the other hand another person may spend much less time on the first steps of the decision-making process and already be ready to make a decision early on in the one hour meeting. As a result, this may lead to the frustration discussed above.

With this knowledge, how can we make more effective decisions? Lean into the strengths of those preferences. If someone on your team is really good at collecting information, give them advance warning about the topic so they can do some work in advance of the meeting to have that process already done, or give some structured time to allow them to do this during the meeting. Ensure input from all team members to get buy in and allow them to share their priorities and considerations. For each decision, everybody has to go through these four steps so by giving space for everyone to do that, they will be more content with the final decision.

*There are probably more out there, but a free tool I've found to be a good first pass at MBTI personality assessments is [16personalities.com](https://www.16personalities.com) if you do not have the ability or resources to take the official MBTI test. This test might not go in depth about the order of your preference types but it will give you some insight into your top two.

— Sarah Morrison
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\$14.3 MILLION INVESTED IN FARM-TO-SCHOOL GRANTS

I optimistically believe that schools can be transformed into a source of long-term agricultural learning for future generations. Our farming systems have evolved over the past century to feed millions on relatively few farms, a far cry from the deeply agricultural foundations most of the country was built on. With this evolution, children have become steadily less and less familiar with food production. Without consistent exposure to agricultural systems or how those systems work, it's unreasonable to expect a child to understand where the spaghetti and meatballs they're served in the cafeteria come from. Educating the public on the realities of farming can be a fraught topic: How do you teach someone that the niceties they are so accustomed to come from farms that don't often fit their aesthetic expectations?

In July the USDA announced that they would be awarding almost \$15 million in Farm to School grants – a record breaking amount – to 154 schools in the country. The capital from these grants will create opportunities for school children to connect with farms in their area, supporting local farms and providing nutritious food in school

cafeterias. Affecting almost 2 million children, this program is designed to generate a compounding understanding and appreciation of the food system. An early acquaintance with nutritious food is proven to impact a person's diet into their adulthood, and children are more familiar with food if they're involved in its production and preparation.

Educating the public, including children, about animal agriculture adds a level of complexity and heightens the stakes for agricultural communities. Who shoulders the responsibility of undertaking that education? What should be included? I think that the most successful outcome will come from a combined effort: All involved in animal agriculture must do some small part to add up to a cumulative impact. This reinvestment from the USDA in educating and feeding public school children could be a transformative opportunity for connecting children with the food they eat.

Many farms and schools are already invested in some type of agricultural educational experience. Schools may tour farms, and farms may enroll in the adopt a cow program. These are

excellent opportunities for low-stakes engagement on both ends of the supply chain. A frank understanding of animal agriculture from a young age can go a long way in shaping how that individual will purchase food in their adult life. Do we owe it to consumers, both young and old to have an honest comprehension of where their food comes from, even if they are opposed to some of what they see? When we include idyllic and aesthetic imagery into marketing for meat, cheese, and milk, are we doing a disservice to both the producer and the consumer? Including on-farm experiences in children's learning can be a small first step in broadening their understanding of the realities of where their food comes from.

We owe both future eaters and producers a generation of individuals invested in and comfortable with the scale of food production needed. Programs like Farm to School can have triplicate effects, supporting schools, farms, and individuals in their education, production, and nutrition.

— Bridget Craig
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NOBODY ASKED MY OPINION, BUT...

- ...I'd like to know why eggs are sold in flimsy paper cartons while batteries are in packaged in impermeable plastic.
- ...there are very few sandwiches that can't be improved by a slice of cheese.
- ...when I hear or read the non-word "efforting", which you won't find in a dictionary, I figure that the person is educated past their level of intelligence.

— E.T.

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Closing Comment

If you think it would be nice to go back to your youth, one word: Algebra.

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