

# FARM REPORT



## In This Issue:

|   |   |
|---|---|
| What's Happening on the Farm              | 2 |
| Fall Silage Management Reminders          | 3 |
| Ignoring the Obvious                      | 4 |
| Okara, A Replacement for Soybean Meal?    | 5 |
| Virtual Dairy Day is Dec. 8, 2020!        | 6 |
| Timing Harvests to Maximize Yield/Quality | 7 |



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## FROM THE PRESIDENT'S DESK: LYING AND LAMENESS IN JERSEYS

The most recent issue of the *Journal of Dairy Science* had an article that focused on the relationship between lying behavior and development of hoof lesions in Jersey cattle (J. Dairy Sci. 103:10494-10505). The article caught my eye since I'm always looking for work that expands our appreciation of the importance of resting, and also because it used Jerseys which is a bit of a novelty.

We've known for many years that lying time is one of the best indicators of animal welfare and health status for dairy cattle. Earlier work had found that changes in standing and lying behavior during the transition period was likely associated with development of hoof problems. This recent paper specifically focused on Jerseys in early lactation – from 20 to 120 days in milk. They identified cows as being either hoof-healthy or having a hoof lesion at 120 days after calving. Interestingly, for the 344 cows observed, greater than 80% of the hoof lesions were sole hemorrhages. Using automated activity monitors, the researchers tracked daily lying time, number of lying bouts, length of each bout, and number of steps taken for all 344 cows from day 20 to 120 after calving.

Cows with hoof lesions at 120 days in milk rested 0.53 hours less per day than did healthy cows. Based on our understanding

of the importance of lying time for health, lower stress, greater longevity, and possibly even increased milk yield, a loss of nearly one hour per day in lying time will have profound negative consequences for the cow.

Studies have routinely shown that maintaining the required daily lying time is the top priority of the cow – even higher than eating or socializing. So it shouldn't come as a surprise that less lying time soon after calving is associated with poor hoof health about three months later. Researchers have noted that cows who eat faster and stand longer around calving time tend to be the ones who later develop hoof lesions in mid-lactation. Similarly, cows that experience a fast decline in lying time in the days prior to calving go on to develop sole ulcers after calving.

This study emphasizes the importance of lying time during early lactation in Jerseys, and no doubt in any breed of cattle. Cows that lie down less develop hoof lesions. The hoof lesions may well have started prior to 20 days in milk in this study, which makes ensuring cow comfort on day one a top priority. From the moment the cow calves, is her environment conducive to lying down

See **JERSEYS**, Page 3

# WHAT'S HAPPENING ON THE FARM: TEAMWORK MAKES THE DREAM WORK

Here at Miner Institute we have a variety of employees with different backgrounds and experiences in agriculture, making teamwork the key to success on the farm. Coming from a large local dairy farm I learned that communication is a huge part in keeping the farm running at its best. My name is Conner LaPierre and I'm part of the herd health team here. Every day we all work together to communicate, making the farm a better atmosphere for both the employees and the cows.

Currently we have many studies in progress, so communication is crucial between the farm and research staff. If a cow needs a health evaluation, whether she is recently fresh or is not feeling well we record everything that was done to ensure that we can get her back to her full potential. Something as simple as her temperature is written down. Diligent recordkeeping is

important so that the next person to treat her can take the appropriate next step. Herd health assessments can be important data for our research studies, so it's important that our herd health team communicates with the research staff when a cow is being treated. This is a two-way street: It's also essential that our research staff communicates with us when they notice a cow on a study having health issues. Along with the new barn comes new pens, and learning the new pens is another job in itself. Learning the pens and knowing which cow goes where is very important for each team member. Our goal is to get everyone on the same page.

Another important aspect of communication is keeping the milkers in the loop concerning our everyday treatments. They are a vital part of our team since they're the ones sending our milk on the truck. They see every

cow every day and can be among the first employees to notice if a cow is getting sick or becoming lame. One of the most important things we must communicate to the milkers is when we treat a cow or when a cow is fresh. We use different-colored bands to make certain that milk doesn't go into the tank without a sample if need be. We make sure they know to look for a new fresh cow or a new treated cow; that way nothing goes wrong with testing the tank. To guarantee that our bulk tank can go to the co-op every day, milkers on each shift take a sample from the tank.

Teamwork and communication are the two big things we strive for to keep this business going. Our team is working harder each day to make improvements to help our cows stay happy and healthy.

— Conner LaPierre

## Teamwork in action



# FALL SILAGE MANAGEMENT REMINDERS

By now all your forages should be ensiled or mowed away, probably mostly ensiled since dry hay is an increasingly minor feedstuff on our region's dairy farms. Following are a few reminders as you feed out 2020 forages.

- Don't be in a hurry to start feeding new crop corn silage. While the forage portion of the corn plant ferments fairly quickly so NDF digestibility changes little over time, the grain continues to increase in starch availability for months after ensiling. (Corn silage with a higher kernel processing score will ferment a bit faster.) That's why we recommend that you delay feeding 2020 corn silage until the end of the calendar year. If your forage inventory won't allow this, make plans now to plant (or otherwise acquire) enough corn so that you can do so next year. A silage bag or two may be the best way to store this extra silage, especially if custom bagging is available in your area. You only have to provide enough

corn silage for an extra month or two of feedout one time; after that you can go back to your normal acreage of corn harvested for silage.

- Don't fill bunker silos or build drive-over piles any higher than the reach of your unloading equipment. Silage "ledges" formed when an unloader tunnels under a silage face are a hazard to life and limb. But even if you maintain a vertical silage face, avoid taking samples directly from the silo. (Realizing this danger, some feed companies won't allow their representatives to take samples from the silage face.) Taking samples from what's just been removed for daily feeding will result in a more representative sample, and will eliminate the possibility of getting buried under tons of silage.
- Speaking of sampling: Don't overlook the importance of proper sampling. You're trying to have a one-quart sample of silage accurately represent the tons of that silage you're feeding each

day. Work with your dairy nutrition consultant if you have questions about proper sampling. It would be a useful (and inexpensive) exercise to submit (supposedly) duplicate silage samples for NIR analysis. If the samples were properly taken the results should be almost identical. If not, your sampling protocol needs to change.

- If you have a silage bag containing forage from more than one field, hopefully you marked the dividing line(s) on the bag. If so, you should be prepared for possible changes in forage quality. This is more likely with alfalfa-grass hay crop silage than with corn silage, both because of yield and within-field differences in the proportion of legume vs. grass. That's why it's smart to sample fields as they're going into the bag. Don't ever try to punch holes in the side of a silage bag to take samples.

— *Ev Thomas*  
*ethomas@oakpointny.com*

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## JERSEYS, Continued from Page 1

comfortably? What about the close-up pens or the far-off dry pens? Research like this recent paper tells us that too-long standing times can have negative consequences for hoof health further down the road.

So, how do we boost lying time? The answer has long been known, and the main factors to focus on are: 1) make sure stall structure allows freedom of use, 2) ensure resting surface comfort with deep beds (at least 4-inch depth), 3) increase bedding volume and frequency, 4) frequently groom stall beds, and 5) don't overcrowd from the cow's perspective!

It comes down to something we have been saying for many years – do whatever it takes to make sure your cows attain their needed daily rest. The new and important point from this research is that we cannot afford to overlook a single day of the cow's lactation (or dry period) if we want to optimize lying time and hoof health.

— *Rick Grant*  
*grant@whminer.com*

# IGNORING THE OBVIOUS

This photo was taken at the head of Dake Circle, which is clearly marked by — count ‘em — four one-way signs. Dake Circle is the main road in Oak Point (actually it’s the only road) where The Bride and I hang out spring through fall; the Hammond town board named it in honor of my grandmother Ivy Dake, not her hubby since everyone liked Ivy while opinion was much more divided on Harry. You’d think that with four signs in plain sight nobody would drive the wrong way, but several times each year someone ignores 2 One Way, 1 Keep Right and 1 Wrong Way signs and drives the wrong way.



Some farmers ignore problems that

are so obvious that it must be wishful thinking instead of failure to recognize the problem. (Mystery novelist Rita Mae Brown — not Albert Einstein — defined insanity as “doing the same thing over and over again, but expecting different results”.) For example, “Gee,

that herbicide did a lousy job of weed control in my corn. I’ll use the same stuff next year and hopefully it will work better.” or “There sure are a lot of weevils in this alfalfa field. Maybe if I mow it they’ll die.” There are fewer of these farmers now because of “The Law of the Jungle” (survival of the fittest), which may be fortunate for those of us advising farmers if not for the farmers whose businesses didn’t survive.

All of us occasionally ignore stuff that we shouldn’t, be it a troublesome tooth, a traffic sign, or a problem in the field. But the best drivers (and the best farmers) keep these — ignoring the obvious — to a minimum.

— E.T.

## SAVE THE DATE! THE VERMONT DAIRY PRODUCERS CONFERENCE IS TUESDAY, FEB. 23, 2022

\* Registration opens in January

Speakers for the 2022

- Dr. Adam Lock, Michigan State University, will discuss fat and protein production.
- Dr. [Name], [Institution], will discuss [Topic].
- Ch [Name], [Institution], will discuss [Topic].
- [Name], [Institution], will focus on lean systems and efficiencies to business.
- [Name], University of California Davis will cover topics including cows and climate change.
- Dr. Sh [Name], Oklahoma State, will cover farm business transition and Coach Tom Wall share his thoughts on employee management and on-farm leadership.

**CANCELLED!**  
Please join us for our event in 2022!

# OKARA, A REPLACEMENT FOR SOYBEAN MEAL IN DAIRY RATIONS?

## *What is Okara?*

Okara, also called soy pulp or tofu dregs, is the residue after pureed soybeans are filtered for the production of soymilk or tofu. There's been increasing production of okara in the U.S. because of the popularity of soymilk. Approximately 1.1 kg of okara (80% moisture) can be produced after water extraction of 1 kg of soybeans. Okara has a high nutritive value and a wide variation in its nutritional composition, with crude protein ranging from 16 to 33%, carbohydrates from 2.6 to 54%, crude fiber from 4.5 to 58%, and crude fat from 0.8 to 22% (dry matter basis). In addition, okara is abundant in bioactive compounds such as isoflavones and conjugated linoleic acids. However, okara is currently considered industrial waste and mainly used as fertilizer or animal feed in the U.S. Due to its high moisture content, okara is prone to spoiling and recommended to be used within about 3-5 days. Alternatively, okara can be dried into okara meal for long-term preservation.

## *Okara as a Protein Source for Dairy Cows*

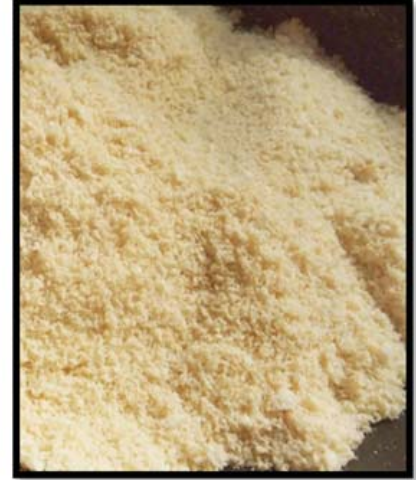
One dairy study on okara meal has been done by Dr. André F. Brito's laboratory at the University of New Hampshire. Their work, titled "Replacing soybean meal with okara meal: Effects on production, milk fatty acid and plasma amino acid profile, and nutrient utilization in dairy cows", has been accepted for publication in the *Journal of Dairy Science*. Twenty organically certified Jersey cows were fed one of two

Wet Okara



VS.

Okara Meal



experimental diets throughout the experiment. Both diets consisted of 25% first-cut, early maturity mixed, mostly grass-legume baleage, 25% second-cut, late maturity mixed, mostly grass-legume baleage, 2% sugarcane liquid molasses, and 2% minerals-vitamins premix (dry matter basis). The control diet also contained 27.9% ground corn, 10% soyhulls, and 8.1% SBM, while the okara diet had 23% ground corn, 15% okara meal, and 8% soyhulls. Dry matter intake and milk yield averaged 19.4 and 21.0 kg/d and were not changed by feeding okara meal in partial replacement of soybean meal, ground corn, and soyhulls. Yields of milk components (i.e., fat, true protein, lactose, and total solids) and milk somatic cell count did not differ between these 2 diets. Similarly, feed efficiency expressed as milk yield, 4% fat-corrected milk yield, or energy-corrected milk yield per unit of DM intake was not influenced by feeding okara meal versus soybean meal. Apparent total-tract digestibility of dry matter, organic matter, crude

protein, and neutral detergent fiber were similar between these 2 diets. The authors concluded that okara meal can fully replace soybean meal without negatively affecting feed intake, yields of milk and milk components, and nutrient utilization in Jersey cows.

## *What to Consider?*

Although scientific evidence supports the idea of feeding okara meal to dairy cows, we have to be cautious in applying this feeding strategy on dairy farms. The process of drying okara into okara meal is costly, so that okara meal is more expensive than soybean meal. Thus, dairy farmers often provide wet okara to cows rather than okara meal. To decide whether or not to include okara in dairy rations, farmers need answers to these questions: 1) Is feeding okara to dairy cows economically feasible? 2) Can okara be delivered constantly? 3) Is the nutritional composition of okara relatively stable?

— Patrick Zang  
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# DAIRY DAY AT MINER INSTITUTE

## *VIRTUAL EVENT ONLY*

### Tuesday December 8, 2020

View this event from the comfort of your computer, at home!

The Dairy Day program will begin at **11 a.m.** and will wrap up around **2 p.m.**, End time will be dependent upon engagement/participation from the audience!

You can submit questions for the program speakers to: [Emerich@whminer.com](mailto:Emerich@whminer.com)

#### Dairy Day Speakers:

- Corey Geiger, Managing Editor Hoard's Dairyman  
*Dairy demand during the pandemic and beyond*

- Katie Ballard, Miner Institute

*Heat Stress in Northern NY? What the Cows are Telling US*

- Dr. Heather Dann, Miner Institute

*Tips to Achieving Success with Your Transition Cows*

- Dr. Rick Grant, Miner Institute

*Managing for More Milk Components: Focus on Feed and Feeding Experience*

- Dr. Sarah Morrison, Miner Institute

For updates on this virtual event please contact:

Wanda Emerich at [emerich@whminer.com](mailto:emerich@whminer.com) or 518-846-7121, ext. 117

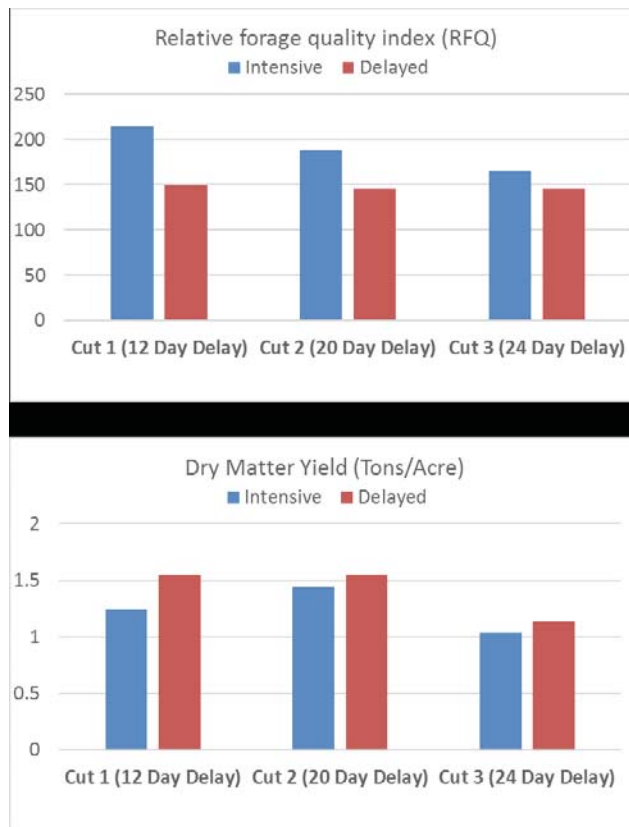


# TIMING YOUR HARVESTS TO MAXIMIZE YIELD AND QUALITY

Harvest management is one of the primary factors influencing forage quality on the farm . . . especially when it comes to the hay crop. It's also a factor that can be easily manipulated without significant direct cost to the farm. That's why putting a little thought into harvest timing for hay crop forage could pay dividends for high-producing dairy herds. It may seem like a strange time for this topic, but now is the time to reflect on the 2020 forage harvest season and consider how you might approach things differently next year.

As hay crop forages mature, forage quality drops. This means that feed value suffers whenever harvesting is delayed for some reason. Since biomass may continue to accumulate, you could easily end up with a bunch of forage that has limited feeding value. In the Northeast, potential quality loss is greatest for first and second cutting, so these are cuts that you should pay special attention to if you're looking to maximize forage quality. On the other hand, a delay during the summer heat

when third cut is ready isn't nearly as catastrophic. Even immature forage will be somewhat lower in quality as compared to immature forage at other times of the year. Furthermore, excessive heat accumulation can cause some species to mature very rapidly without



significant biomass production.

The figures show the change in legume/grass forage yield and quality when harvest is delayed by twelve days for the first harvest and a longer regrowth period is used for subsequent cuts. Even though the delay increased as the summer progressed, the lost forage quality was lower when the hot and dry weather set in (3rd cut). The potential yield benefit for delaying this harvest was also low, but not noticeably different from the potential yield benefit of delaying second cutting. Interestingly, based on these results second cut appears to offer the best return on timely harvest. Early harvest of first-cut forage offers the highest potential quality, but this quality came at the greatest detriment to yield. This is the classic yield/quality tradeoff at work. The upside is that this phenomenon could allow you to adjust the timing of first cut to target the specific yield and quality needs of your farm at the time.

— Allen Wilder  
wilder@whminer.com

## NOBODY ASKED MY OPINION, BUT...

...I believe that everything happens for a reason. Often the reason is because somebody screwed up.

...I've reached the age where my brain goes from "You probably shouldn't say that." to "What the heck, let's see what happens."

...these are strange times indeed. I recently saw a sign in front of a local town hall, "Covid-19 Testing in the Rear". Jeez, I thought they used a nasal swab.

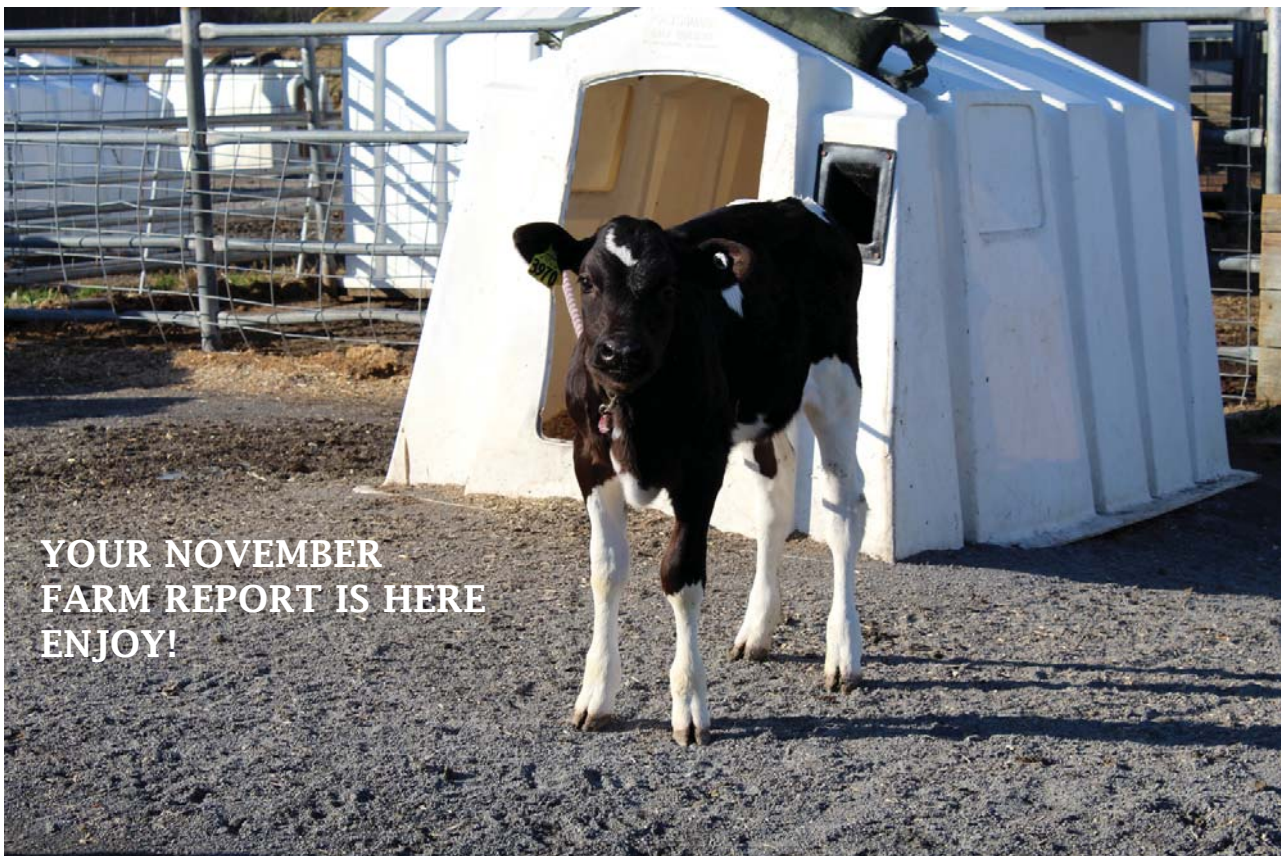
— E.T.

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## *Closing Comment*

Light travels faster than sound,  
which is why some people appear to be bright until you hear them speak.

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