

FARM REPORT



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FROM THE PRESIDENT'S DESK: ASSESSING COW COMFORT

Few things are more important than knowing how comfortable your cows are. I suppose if you asked the cow, she'd insist that her comfort is everything. We all understand the relationship between comfort, well-being and herd health, but seldom do we take time to properly measure cow comfort.

The most useful indices of comfort are based on resting behavior. With on-farm assessment of well-being, % of cows lying down can be accurately measured (or its inverse, standing). Measures of lying behavior can be easily and reliably recorded within 2 hours during a typical farm visit and are consistent over time. Measures of lying behavior also distinguish among different housing systems and management routines.

The three "comfort indices" in use in the U.S. today rely primarily on the proportion of cows lying down (or its inverse, standing). Taking time to observe and calculate a comfort index allows you to have a snapshot of the cows within a pen and will often flag potential problems that require further assessment.

Cow Comfort Index (CCI) is the most commonly used index and is defined as the proportion of cows in contact with a stall that are lying down. In essence it measures the cow's motivation to enter a freestall and lie down; a lower CCI (i.e., more cows standing or perching) means more lameness. The CCI is not associated with mean daily lying time,

a common misconception. Well-managed herds should have a CCI ≥ 0.85 , meaning that 85% or more of cows touching the stalls are lying down.

Stall Standing Index (SSI) is defined as the proportion of cows in contact with a stall that are standing – in other words, it is the inverse of CCI. Importantly, higher SSI reflects greater standing time throughout the day, and a SSI > 0.20 is associated with stall standing times over 2 hours per day which often contributes to lameness. A well-managed herd would expect SSI ≤ 0.15 . I often use this index because it is related to lameness and practically it requires fewer cows to be counted, so it is more quickly assessed as you walk pens on a farm.

Stall Use Index (SUI) is the proportion of cows, not actively feeding, within a pen that are lying down. More than any other comfort index, it accurately reflects cow comfort within an overcrowded pen of cows, especially as stocking density approaches 130% of stalls or more. The key is that this index reflects cows that are "wasting their time" idling in alleys rather than actively eating or lying in a stall. Herds should have a SUI greater than 0.75. The SUI requires the most cow counting to calculate, but overall it is perhaps the most useful over a range of stocking density situations.

See **COMFORT**, Page 2

INTERSEEDED CORN

I've been reading about attempts at interseeding alfalfa and other forages into corn that will be chopped for silage. Currently USDA/ARS at the U.S. Dairy Forage Research Center (Madison, Wisconsin) is seeding alfalfa into corn at planting and then using a growth inhibitor to reduce competition from the alfalfa. After the corn is harvested for silage the alfalfa starts growing normally — it's been establishing a root system all summer — resulting in a normal alfalfa stand by the following spring. And while the alfalfa is growing it provides nitrogen for the corn crop. That's the idea anyway, and we'll soon be learning more as several field trials are ongoing. I have great respect for the folks in Madison, and if anyone can make it work they can.

Readers with good memories and an appreciation for weird stuff may recall our experiences with interseeding years ago at Miner Institute. We bought a forage seed box that we mounted on an old sweep-type cultivator rescued from the Institute's farm equipment "boneyard", then trailed gangs of cultipacker wheels behind the cultivator that ran between the rows of corn. We also hooked a hose to the contraption to apply liquid N as we interseeded, cultivated, and cultipacked between the rows of the established corn. We seeded field-length strips of red clover, crimson clover and ryegrass; only the ryegrass became well-enough established to amount to much. Success (or lack thereof) depends on when the corn is interseeded, herbicide history and in-season herbicide applications, also growing conditions during and after interseeding. We didn't include alfalfa but the red clover grew so poorly that I doubt alfalfa would have done much better. The difference between what we did then and what the USDA researchers are doing now is that they seeded the alfalfa at the time of corn planting, while we waited until the corn was ready to sidedress — 12-18" tall.

Maybe I'm a Doubting Thomas (har!), but until I see positive results under farm conditions I question the practicality of interseeding alfalfa (or any other legume for that matter) into corn harvested for silage. In many university trials the corn harvest equipment is something less than huge, and plot harvesters don't chew up the soil surface nearly as much as self-propelled choppers with aggressive tire treads. And field choppers aren't the only equipment in the field during harvest: There are also trucks or dump wagons, so some parts of the field take a real beating. (The USDA/ARS researchers are of course aware of this challenge.) What about ruts, an unavoidable result of wet conditions + heavy equipment? University researchers can to some extent pick their day to harvest; farmers cannot. Most corn fields on dairy farms get liberal fall applications of manure following harvest as farmers try to empty manure pits. That's more field traffic, and with heavy axle loads. Interseeded fields also seem like a poor place for manure containing bedding, some of which would almost certainly be picked up with the first cutting the following spring. This is one case where I hope I'm wrong, but...

— *Ev Thomas*
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COMFORT, Continued from Page 1

Rumination Index (RI) is the proportion of cows ruminating that are lying down. The RI has been validated against daily rumination time. On average throughout the day, you should expect to see 50 to 60% of cows ruminating when lying in the stall. There are times throughout the day when this percentage will be higher or lower. Observe at least 20 cows that are neither eating

nor sleeping. We have observed a positive correlation between RI and daily rumination time in lactating cows. So, if you observe about 50% of cows ruminating, you can be reasonably sure that the cows are ruminating sufficiently – ordinarily 7 to 8 hours daily.

These indices should be measured when cows are motivated to lie

down. Common recommendations include approximately 2 hours before or 1 hour after milking. With continued lower milk prices, and more expensive feed on the horizon, carefully monitoring cow comfort will be more important to a farm's bottom line than ever!

— *Rick Grant*
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GRAZING DAIRIES DECEIVINGLY COMPLEX

It's that time of year when you start to see cows back on lush green pastures, eating happily. From the road it seems like such a simple and easy system to manage, but it's a complex game of balancing pasture management for yield and quality with providing additional feed to meet her energy demands for lactation. High-producing dairy cows are usually limited on energy when only fed pasture; supplementing a partial total mixed ration (pTMR) can help provide the energy needed to meet her genetic potential for milk production. Grazing dairy cows also expend a lot of energy eating and walking around the pasture — they have a different time budget than a TMR-fed dairy cow. Grazing dairy cows spend on average 9 hours per day eating vs. an average of 5 hours per day for a TMR-fed cow. This increased time is due to selecting grasses they want to eat and also reducing them in size for the rumen. Grazing dairy cows spend less time lying, around 10.5 hours a day compared to a TMR-fed dairy cow which spends around 13 hours a day lying. The grazing dairy cow has to sacrifice lying time to eat enough to support lactation. As expected, a grazing dairy cow spends more time walking compared to TMR-fed cows because pastures are farther away from the milking parlor and she has to walk for food and water. Understanding how a grazing dairy cow spends her time will allow us to better manage her to maximize intake and milk production.

An unexpected issue that commonly occurs with grazing cows is subacute ruminal acidosis (SARA) which a period, usually greater than 3 to 5 hours, with a rumen pH at or below 5.8 that can cause lower intake, milk production, and milk fat. This is commonly caused by grasses and

legumes that are high in fermentable carbohydrates and low in physically effective fiber. Physically effective fiber allows a rumen mat to form which causes the cow to ruminate and buffer the rumen with saliva. Cows that slug feed either on highly digestible pastures or on a pTMR high in energy can have apparent cases of SARA. Slug feeding on highly digestible pastures usually occurs when they first arrive at new pasture after milking. This can be curbed by offering pTMR after milking where the cows will fill their stomachs. If the cows are slug feeding the pTMR and causing SARA, then reformulating pTMR to include more forages and fibrous by-products will help prevent this. Another way is to allow the cows to graze after milking and then offer the pTMR. The goal of any feeding program is to promote smaller meals, and more of them spread throughout the day to keep the rumen at a more stable pH. Sometimes this takes a little more work, but if cows avoid SARA, their intake will be higher along with more milk production and milk fat, making the extra work well worth it.

Grazing dairy cows are also exposed to the elements, and during summer that means heat stress and solar radiation. One of the best methods to lessen heat stress and solar radiation is to provide shade, whether in the form of a tree line or shades. With tree lines, an important consideration is tree density: If the trees are too thick, then wind speed may be decreased by up to 50%. This decrease in wind speed will allow the ambient temperature to rise by several degrees. The best method to ensure your tree line is providing optimal shade is to watch your cows on a hot day and see if they use the tree line. If they don't, thin some of the trees to

permit more wind movement. Artificial shades are another option, but there are some important considerations before purchasing them. One is how much solar radiation is blocked by the cloth, the other is how big an area the cows need. In an article in *Applied Animal Behaviour Science*, researchers at the University of California at Davis found that cows were more likely to use a shade that blocked more solar radiation, and even on days with low solar radiation cows preferred the shade. In a *Journal of Dairy Science* article, researchers at the University of California at Davis reported lower respiration rate and increased use with an increased amount of shade, comparing no shade to 2.4 m²/cow and 9.6 m²/cow of shade. Based on these results, provide a shade that blocks as much solar radiation as possible; at least 2.4 m²/cow, but 9.6 m²/cow is ideal. Providing adequate shade will allow your cows to better handle heat stress and will minimize loss of intake and milk production.

Grazing dairy farms might look like a simpler and easier way to farm, but looks can be deceiving: It takes proper management to have high-producing dairy cows on pasture. Grazing dairy cows have to spend a large proportion of their day eating, which means sacrificing lying time. They also can experience SARA due to grasses and legumes that are high in fermentable carbohydrate and low in physically effective fiber. Grazing dairy cows are exposed to the elements, so providing shade will help them deal with heat stress and solar radiation. So next time you drive by a dairy cow on a green pasture, I hope you have a deeper appreciation for the whole system.

— Michael Miller
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WATER QUALITY FROM AN ALFALFA-GRASS FIELD

For this final installment in the roundup of water quality research projects at Miner Institute, I'll cover some results from the Lake Alice runoff plots in a first-year alfalfa-grass field. Although not a field-scale monitoring site, the data from this project is unique to the datasets we've been accumulating over the past decade. Over the years we've examined the impacts of various practices on nutrient losses from corn fields, but have never conducted this type of monitoring in a grass field.

Perennial crop fields present some benefits from a nutrient management perspective over row crops, but also have a different set of risk factors to consider. The primary benefit is that the year-round vegetative cover greatly reduces the risk of erosion. This erosion reduction is a result of several different factors: 1) the crop's root system holds the soil in place 2) the vegetative cover protects the soil from the impacts of raindrops 3) the vegetation slows the movement of surface runoff and thus is less erosive 4) not tilling the soil improves soil structure (how well soil holds together and forms pores to allow water infiltration). As I've previously mentioned, phosphorus (P) has a strong tendency to bind to soil particles and keeping the soil in the fields is a great way to reduce the amount of P that ends up in surface waters (rivers, ponds, lakes, etc.).

The benefits of erosion reduction on P loss can be significant, but it is also important to be aware of the risk factors that come with managing perennial stands. Applying manure following each cutting is a great way to supply the nutrients the crops need for growth. However, the risk of P loss increases as the duration between a rain event and manure application decreases. The

need to get the manure on the fields following harvest before too much regrowth occurs has to be balanced with the risk of applying before a significant rain event.

The other primary risk of applying manure to fields that have not been recently tilled is that preferential flow pathways (macropores) form in the soil and may connect directly to tile lines. These large pore spaces most often form from the natural shrinkage and cracking in soils with clay, as well as from animal, insect, or root channels. These pathways become more abundant in soils the longer that they are not disturbed (tilled). When manure is surface-applied, it may rapidly travel down into the soil through these channels. If these pathways end at a tile, manure could enter the tile without ever interacting with the soil, thus bypassing the natural chemical and physical filtration processes that would otherwise occur. While this is a risk that no-tillers face on all of their fields, for those who utilize some form of tillage, this will be a problem unique to their perennial crop fields.

Consistent with our other monitoring sites, there were low rates of both tile drainage and surface runoff at the Lake Alice research plots in 2018. Runoff from each of the four plots was continuously monitored and the results (see table) reflect the average of the plots. As expected, we saw low rates of erosion in the plots. Also, as we saw in the other trials, tile drain flows accounted for the majority (59%) of total runoff, but only about 2 and 4% of dissolved reactive P (bioavailable P) and total P losses, respectively.

The average total P lost from the plots (surface + tile) was 0.5 lb/ac. While

this is only a very small fraction of what is applied to the field annually, it does have the potential to have a negative impact on the environment. This is an important point to recognize – we are asking farmers to operate on an incredibly narrow margin of error, yet this isn't without some justification. The Ohio Phosphorus Task Force determined that losses of 0.5-1.0 lb/ac of P across the cropland in the western Lake Erie Basin is sufficient to cause the algal blooms that have plagued Lake Erie. However, it is also equally important to communicate to the non-farming community that many farms are doing a great job with nutrient management and nearly eliminating all losses is a challenging prospect.

In regards to nitrogen (N), we did see very high losses in the tile drain flows. While N losses from grass fields are typically lower than from corn, we saw substantially higher concentrations and exports of nitrate-N (water soluble N) than in any of the other field trials (all in corn) in 2018.

The reason for these N losses is likely related to the soil type in the research plots. While the lower half of the plots consists of a poorly-drained silty clay (Adjidaumo series), the upper half of the plots is a coarse-textured, stony, excessively well-drained outwash soil (Colosse-Trout River Complex). While Adjidaumo-dominant soils are prime candidates for tile drainage, there would typically be no economic incentive to install tile drainage in such a well-drained soil as the Colosse-Trout River soils. Research has demonstrated that there is an increased risk of N loss as drainage (natural or artificial) improves and these data support that case.

See **WATER QUALITY**, Page 5

FARM REPORT SURVEY RESULTS

Thanks to those subscribers who completed the survey. To those who didn't we assume that you think everything is 100% perfect as it is, no suggestions, no changes needed.

We did get some good suggestions regarding future Farm Report topics; these have been forwarded to our writers in hopes that they'll follow through in the coming months. In the meantime, if you have topic ideas or other suggestions don't hesitate to contact us since we only do readership surveys every five years or so.

Among the suggested topics: cover crops, no-till, soil health, hoof care practices, compact TMR, mineral availability, digestibility of high-chop corn, soil additives including wood ash, crop mineral uptake of fertilizer nutrients, calf raising/nursery building, tile drainage research.

— E.T.

WATER QUALITY, Continued from Page 4

	Runoff in	SRP	Total P	TSS	Nitrate-N	Total N
				lb/ac		
Surface	2.30	0.360 [#]	0.494 [#]	10.55	0.88 [*]	3.52 [*]
Tile	3.34	0.006 [#]	0.021 [#]	5.08	28.66 [*]	31.30 [*]
Total	5.64	0.366	0.515	15.63	29.54	34.82

* Means significantly different at $P \leq 0.05$

Trends at $P \leq 0.10$

While we have typically seen the highest N concentrations coming out of the Lake Alice runoff plots, the concentrations from 2018 were higher than usual. This is likely due to the interaction of the weather (warm and dry) and that we have been trying to increase the fertility of the field over the past several years with composted dairy manure applications (high organic N content). There is now a reserve of organic N in the soil that is mineralizing into plant available forms (nitrate-N), which also happens to be the form that is most at risk for loss in runoff.

This serves as a reminder that not only would it be an unwise financial decision on the front end to pay

to install tile drainage in naturally well-drained soils, it also greatly increases the risk of N losses. These elevated N losses are not only bad for the surrounding environment, but you'll also be taking a financial hit a second time by needing to purchase additional fertilizer to account for those losses. Even though there may be the occasional year where tile drainage may result in a yield gain for certain fields, it will certainly be a detriment to water quality and likely to the overall bottom line as well.

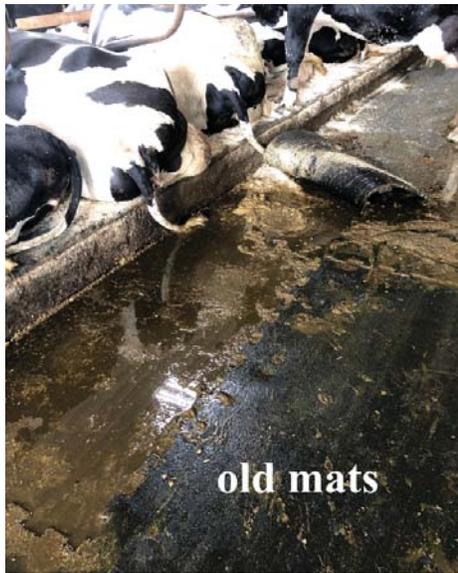
The common theme we saw in 2018 across all of our water quality projects was that, while most of the runoff occurs through tile drainage (when present), the majority of P and

sediment losses result from surface runoff. In contrast, the majority of N losses came from tile drainage. Another important result was that across all projects, the majority of nutrient and sediment export occurred during the nongrowing season. Taken together, this means that tile drainage isn't necessarily the smoking gun for water quality problems, but it's also not entirely blameless. My takeaway from 2018 is that we need to continue to identify practices that will address water quality concerns and known risk factors in both runoff pathways, with specific attention paid to the nongrowing season.

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WHAT'S HAPPENING ON THE FARM

As we move into July we're busy in the barn getting our show animals ready for the county fair. Some of our students are learning for the first time how to halter-break stubborn heifers, clip and bathe. They're learning everything that goes into going to the fair. It is strange to think that I am now helping to train the students, when just last year I was doing this all for the first time myself. All of our animals are pretty stubborn, and, once again, my yearling is probably one of the stubbornest of the bunch. However, we are all getting a little bit better every time we get the halter on, so I suppose that we're heading in the right direction and hopefully will be ready to hit the ring in a few weeks!



better for removing water from the alleys.

Our first cutting of haylage came in a little bit later than normal this year, but it is finally finished! The fields appeared to have a good yield, although we have not calculated exact tonnage yet. Our crops and barn crew have been busy spreading manure and the grass and

alfalfa are growing back nicely. We will start a second cutting of haylage in the coming weeks.

Recently, we have had all of the feed alley rubber floor mats in the milking barn replaced. The previous mats had been in the barn for quite a few years; they were worn down, and in the heat of the summer sections often peeled up underneath the alley scraper. These new mats are wide enough to cover the alley in two sections, so there are fewer seams that the alley scraper can catch on as the mats wear out. The new mats also provide a different type of edging that should be

For the month of June, we once again tested at 100 lbs of milk, and are hoping (but doubting) that we will be able to keep it up through the heat of summer, especially now that we have had our first real heat wave. The cows have been enjoying the fans, sprinklers, and misters that have all been working hard to keep them cool out in the barns and in the holding area in the parlor. Along with keeping the cows cooler, as I work in the pens it gives me the excuse of believing that every drop of liquid to hit my face must be from the sprinklers, which means that it is definitely water... right? ☺

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REVISITING GRASS SPECIES SELECTION

I've heard reports of tall fescue and orchardgrass winterkilling this past winter. The good news is that according to Jerry Cherney, meadow fescue is more winter-hardy than tall fescue. One other grass that came through this past winter in good shape is reed canarygrass, a species that has fallen so much out of favor that Cornell University no longer includes it in its grass variety testing program. I admit that I have a soft spot in my heart (or perhaps my head) for this grass; one of the first freelance articles I sold to a national farm magazine (Successful Farming) was titled "Reed canarygrass—answer to wet fields". You don't need to know when this was, but as a hint it was eight U.S. presidents ago.

There are reasons why some agronomists have given reed canarygrass the cold shoulder, so to speak: It doesn't have the forage quality of either tall or meadow fescue, and it doesn't remain productive into the fall,

often turning a sickly orange color with the first frosts. This is much unlike the fescues, which grow vigorously during cool, moist fall conditions. But a live stand of reed canarygrass beats the heck out of a dead stand of some other grass species---regardless of quality.

So, should you switch to canarygrass from meadow fescue, the current top choice in forage grasses? In most cases I think not; meadow fescue is the best choice for alfalfa-grass seedings, and if your land is suitable for alfalfa then in most cases it should be OK for meadow fescue. The exception: Meadow fescue probably won't do well on sandy, low organic matter soils. Orchardgrass is particularly susceptible to ice sheets; I've had it kill out from moderate icing that left the alfalfa injured but still alive. Meadow fescue is second only to reed canarygrass in its tolerance to poor drainage. However, if you have a field that's poorly drained (to the point of occasional flooding) and you want to establish a stand of grass that will

last a very long time, reed canarygrass may be worth the expense (pricy seed) and patience (slow seedling growth). A few years from now we might be recommending meadow fescue in this situation but as of now we don't have enough long-term experience with pure stands of meadow fescue.

What kills reed canarygrass? Glyphosate (Roundup), but not much else. Armyworms will walk a mile to nosh on canarygrass (they love those big, broad leaves) but won't kill it. We've had a field of Palaton reed canarygrass at Miner Institute persist for over 25 years. The root system is so rugged that it eventually forms an underground mat that supports field equipment. We've applied spring N to this field when it was so wet that water was pouring off the tractor tires but never made a rut. Like the Everyready Bunny, canarygrass takes a licking but keeps on ticking.

— E.T.



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A “FAIR” POINT

After taking its time, summer has finally arrived in the North Country. The lingering chill and the days of rain were occasionally punctuated by sunshine, which got everyone’s hopes up that the warmer weather might actually stick around. However, we all know that isn’t how it works. There’s a direct correlation between getting excited about something, and having that thing do exactly the opposite as hoped. Summer this year was like an animal that you’re trying to train to eat out of your hand, except you sneezed right as it got close and scared it away, so now you’re back at square one.

With the summer comes fair season, and I’m sure that most of our readership is busy preparing animals to exhibit. Two articles caught my eye this week that hold relevance to this time of year, especially when considering the throngs of visitors eager to interact with your animals. Especially if you have goats- have you SEEN the way people flock to goat pens?! (Don’t get me started on goat yoga). The Center for Disease Control (CDC)’s daily bulletin featured the topic of keeping visitors safe at animal exhibits, and their Morbidity and Mortality Weekly Report (MMWR) publication discussed Cryptosporidiosis, or “Crypto”, as it’s more commonly known. A lot of people visiting the fair — especially very small children — may not have frequent contact with animals, so may have a higher susceptibility to illness. Since the two articles arrived within a week of one another, and as fair season is ramping up, this may be a good platform to provide a gentle reminder of the importance of hygiene and awareness at animal exhibits so that visitors can thoroughly enjoy their time with your animals.

Crypto is no picnic. Between 2009 and 2017, 7,465 cases in 40 states and Puerto Rico were reported, with 35% of outbreaks linked to public pools, 15% from infected cattle and 13% from childcare settings. During this timeframe, the number of reported Crypto cases from contact with cattle increased by 20% each year. While less common, Crypto can also be transmitted through unpasteurized milk and apple cider. Crypto proliferates and spreads very rapidly, and is infectious upon fecal excretion. Washing hands after touching or being around livestock may seem like a common-sense act, but it’s something that can be very easily forgotten, especially in an overstimulating environment where people are excited to move on to the next interesting thing.

If the facility is not already equipped with a sink for hand washing, make note of the nearest hand-washing station so that you’re able to direct visitors to it. Providing a portable hand-washing station near your exhibit can give visitors the chance to clean their hands immediately after they’re done checking out your animals. The CDC even provides a link to educational material, such as hand-washing reminder posters, that you can print out and post. Signage instructing visitors not to eat and drink around the animals (nor share food with them) is also necessary as Crypto (among other pathogens) is spread via the fecal-oral route. Be aware of how visitors are interacting with animals; engaging with them will not only allow you to monitor activity (and stop Junior from feeding a blob of cotton candy to your calves), but also positively promotes agriculture by showing visitors you appreciate their attention and that you’re willing to be present and answer their questions. Also, not being on your phone or device while around animals sets a positive hygienic example, as these items tend to carry more contaminants than most. You can also contribute to good biosecurity practices by washing your hands and boots before going to visit your friends’ exhibits, and by having dedicated clothing that doesn’t get worn home to your farm after being at the fair.

Just a “fair” bit of information to consider as you prepare to enjoy the summer!

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TIPS TO KEEP FLIES AWAY FROM CALVES

With the warmer weather finally showing up, so too have those pesky fly populations. Stable and house flies are some of the more common pests affecting cattle. And let's be honest, they are also a real annoyance for those of us working with cattle as well!

Stable flies will inflict painful bites on the lower legs and if severe enough will result in noticeable hair loss and scab formation, while the house fly is primarily an annoyance to animal and human alike but can also spread disease. Stable fly populations will increase throughout the summer and have the greatest populations at the end of August and early September, while house fly populations will taper off by the end of the summer. A study of fly populations in calf greenhouse facilities collected an estimated 10,000 stable flies and 80,000 house flies in traps over four-day periods throughout the summer. I don't know about you, but I'm getting a little "bugged" out thinking about that many flies!

We all know that flies are quite annoying, but what do they mean for our calves? In feeder cattle, some estimates indicate that an average of 5 or more stable flies on the front legs of the animal results in a reduction in feed efficiency, resulting in economic loss. When flies are bothering an animal you may start to see them stamping their feet, swatting with their tail, and in a group they will start to bunch together. Some estimates indicate that over \$360 million are lost each year from the impact of stable flies alone! House fly numbers will also be quite constant throughout the summer,

and indoor facilities may see an increase as flies move into warmer barns as the temperatures start to get colder again. House flies can become a nuisance above 10 to 20 flies per calf.

Unfortunately, calf housing is an awesome breeding ground for fly populations on the farm. Fly maggots grow and develop in accumulations of manure, spilled grain and milk, other spoilage piles, and straw bedding. Sound like any place on your farm? If you're thinking of your calf housing, you wouldn't be alone. Often, calves are housed on the same pad of bedding and manure throughout the preweaning period without the pens being cleaned out, making this area a prime spot for fly populations. So what can be done to minimize those pesky flies?

An Integrated Pest Management plan (IPM) can be implemented to help minimize the number of flies that bother your cattle and employees. There are three parts to an IPM plan that will help control those pests: 1) sanitation, 2) biological control, and 3) chemical control.

Sanitation and manure management should be first on the list for fly control. Clean pens weekly and remove excess manure regularly. Mow areas around calf housing to prevent overgrowth. Hutches may be elevated to maximize airflow to help keep bedding dry. Bedding type also influences fly population growth. Sand, gravel, or sawdust have been shown to have less maggot growth versus straw bedding, but consideration for compaction of bedding material and animal hygiene also plays a role in

managing these bedding types.

Biological control can include natural enemies such as black soldier flies, rat-tailed maggots, beetles, mites, and wasps. Research which species establish themselves and which biological control would be best for your area. This part of the management program might be a little late for this year, as it is recommended to release in early spring, but it could be something to look into for next spring.

A targeted approach should be implemented for chemical control. To minimize resistance, follow resistance management practices, and change or rotate classes of insecticides. Baits and traps to capture or kill adult flies can also be integrated into a pest management system. Additionally, larvicides can be used in an area where fly breeding is prevalent, or there is an accumulation of manure. Larvicides may be useful where chemical control other control has not been as effective but should be used with caution as they also kill other beneficial insects. Finally, oral larvicides can be included in milk, milk replacer, or starter as a way to minimize fly breeding and maggot development in calf pens.

Although I have mainly talked about steps to be taken in the calf housing area, a whole farm approach should be taken to maximize fly control on your farm and keep your animals and people free of annoying flies this summer.

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Online registration and payment will be available in early August. The registration fee includes all refreshment breaks, pre-conference symposium, evening reception on Tuesday, breakfast on Wednesday and Thursday, lunch and evening dinner reception on Wednesday, post-conference symposium and one copy of the conference proceedings.

Become a sponsor!

A key component of this conference is the financial support provided by agriservice companies. Contributions enable us to continue to offer high quality education year after year. Go to Future Event Sponsorship for more information about sponsoring this program.

General sponsorship is now open!

Future Conference Dates

October 20 - 22, 2020



Farmer-Driven Research • Real-World Results

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To request updates by text or email: contact 315-465-7578

NNYADP funding is supported by the New York State Senate and administered by NYS Dept. of Agriculture & Markets

MINER INSTITUTE IS SEEKING A DAIRY HERDSPERSON

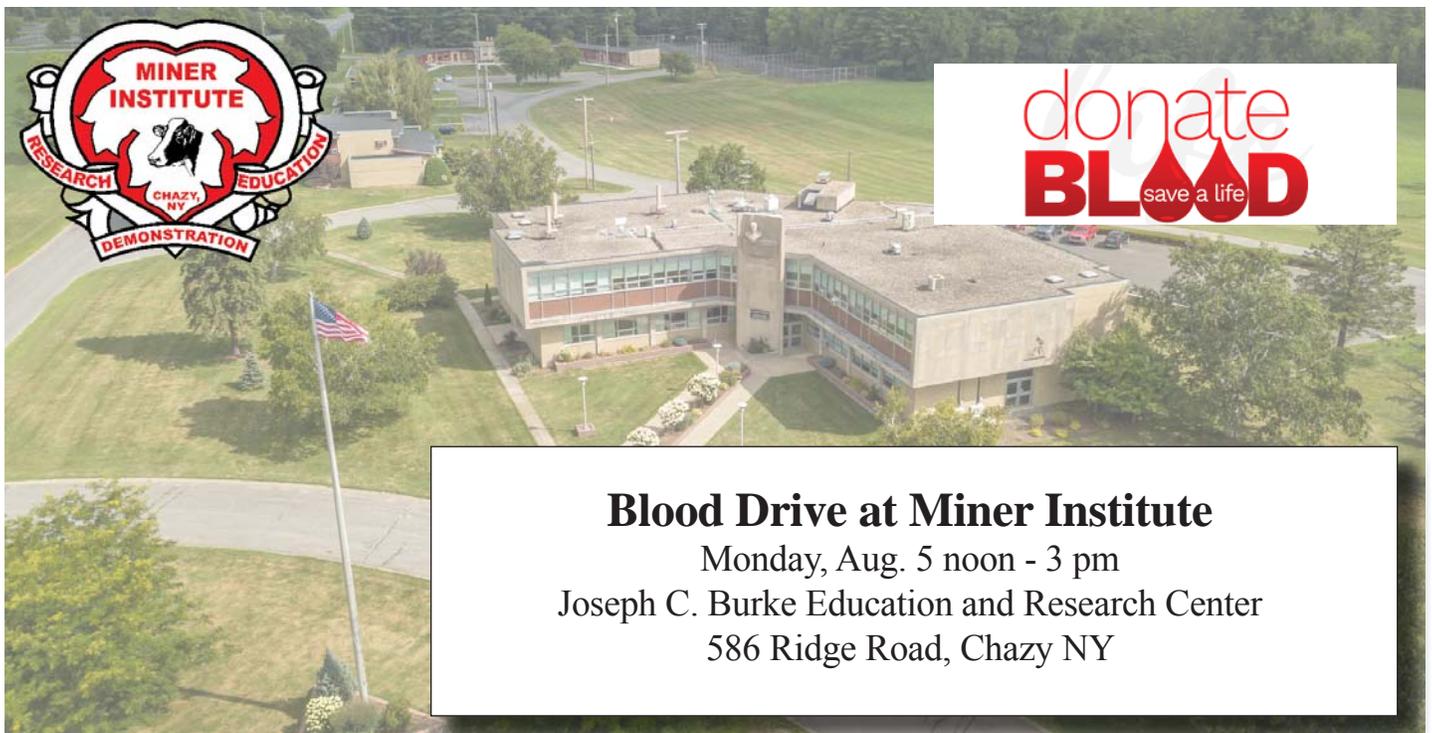
Qualifications

- Associates degree or bachelor's degree is preferred with a preference for degrees in dairy or animal science with experience as a herdsman.
- Must have a valid driver's license and be able to pass a drug test.
- Must have the ability and willingness to work independently. Herdsperson will need to adjust their days off to cover when needed.
- Be able to train and manage dairy employees, students: ensuring that all tasks are completed properly and in a timely fashion.
- Must have good communication skills and interact cooperatively with coworkers
- Skid steer and tractor experience is preferred.
- Must have ability and willingness to adhere to stringent research protocols.
- Flexibility to adjust to changing priorities of a modern dairy farm and research institute

Job Details

- Monitors the health of all animals on the premises and notes any behavioral changes.
- Treats injuries or illnesses as they occur.
- Monitors hoof health.
- Gives vaccinations and other injections.
- Manages reproductive program and assists with calving.
- Maintains comprehensive health and production records in DairyComp305.
- Works closely with the veterinarian during examinations and to insure herd health.
- Must have basic knowledge of milking parlor and other equipment; ability to troubleshoot any mechanical problems or other issues as they arise.
- Additional duties assigned by the Farm Manager.
- Play an active role in the formulation of new protocols, farm management discussions, technical meetings, and help set farm direction.

Pay is commensurate with qualifications and experience. Miner Institute offers a generous benefits package including an employer-funded retirement plan, paid time off, health insurance and more. If interested, contact Steve Couture for more information at (518) 846-7121 ext. 133 or (518) 569-4566 or email couture@whminer.com.

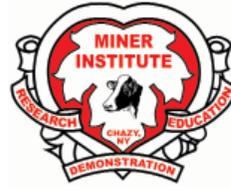


The image shows an aerial view of the Miner Institute campus, featuring a large, modern, multi-story building with a central tower and a courtyard. The building is surrounded by green lawns and trees. In the foreground, there is a flagpole with the American flag. Overlaid on the image are several graphics: a circular logo for Miner Institute with a cow's head in the center, surrounded by the words 'RESEARCH', 'EDUCATION', and 'DEMONSTRATION', and 'CHAZY, NY' below it; a 'donate BLOOD save a life' logo with red blood drops; and a white text box with the following information:

Blood Drive at Miner Institute
Monday, Aug. 5 noon - 3 pm
Joseph C. Burke Education and Research Center
586 Ridge Road, Chazy NY

The William H. Miner Agricultural Research Institute
1034 Miner Farm Road
P.O. Box 90
Chazy, NY 12921

Change Service Requested



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FARM REPORT IS HERE
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Closing Comment

Time may be a great healer but it's a lousy beautician.

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