

Can Calf Barns Really Have Too Much Fresh Air In The Winter?



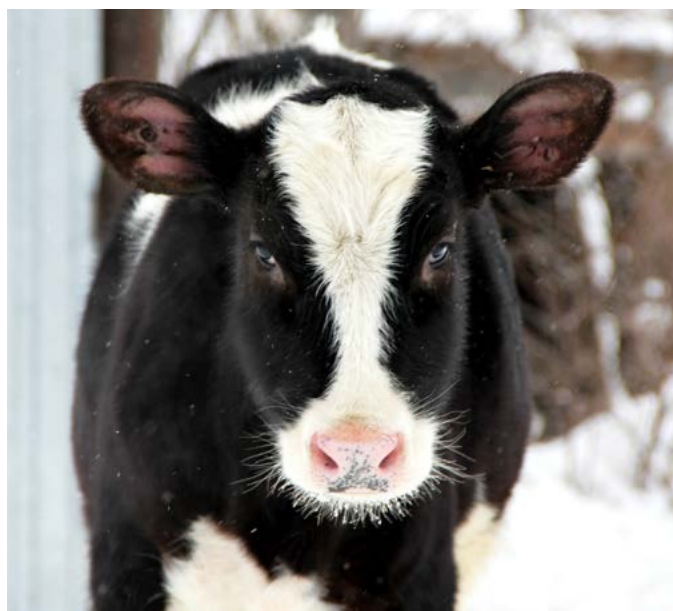
By Ryan Leiterman, D.V.M.
Director of Technical Services

Cold temperatures are here and winter is quickly approaching. As the temperatures drop, calf barns are closed up and the ventilation rates are turned down. As an industry we do this reflexively, but is it what's best for the calves?

Studies show that pre-weaned calves raised in hutches have lower pneumonia rates when compared to calves raised in barns. Even calves raised in calf barns equipped with modern ventilation systems can experience increased respiratory disease rates when compared to their hutch-raised counterparts.

Current calf barn ventilation guidelines suggest that as temperatures cool, the volume of fresh air brought into the barn should decrease. I would like to humbly challenge this assumption. After all, hutch-raised calves have been challenging this concept for years. Hutch calves do not have their volume of fresh air reduced during cold weather. Once outside the hutch, calves have an unlimited volume of fresh air to breathe, regardless of the season. For these reasons, the current recommendation of providing calf barns with four fresh air exchanges per hour, often defined as minimal winter ventilation, should be revisited.

The fact that hutch-raised calves do not have nose-to-nose contact certainly helps prevent the spread of contagious pneumonia. Yet, the individual pens used in many calf barns also prevent nose-to-nose contact and these calves often have higher pneumonia rates than hutch-raised animals. It seems counterintuitive that hutch-raised calves would have less respiratory disease than their barn-raised counterparts. Hutch-



raised calves often experience more heat stress in the summer and colder temperatures in the winter.

During wet spring months, it can be challenging to keep hutch calves dry. In winter, if the wind is blowing into the hutch, calves can be exposed to a dangerous draft. Yet from a respiratory disease standpoint, hutch-raised calves are still healthier than barn-raised calves. Their lower pneumonia rates suggest that having

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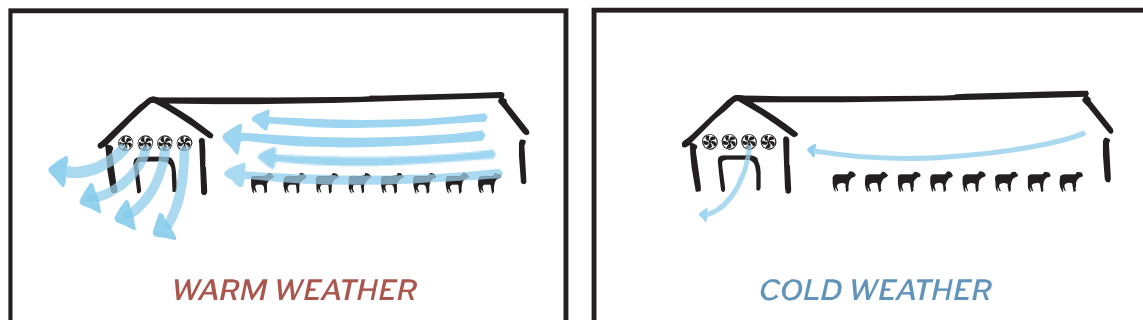
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Can Calf Barns Really Have Too Much Fresh Air In The Winter?

(Continued From The Cover)

NEGATIVE PRESSURE VENTILATION

Figure 1



unlimited amounts of fresh, outside air to breathe offsets the environmental hardships hutch-raised calves experience.

“Too Much” Fresh Air?

As a veterinarian working with calf raisers for the past eight Wisconsin winters, I have never had a client say, “Doc, sometimes I worry about my hutch calves having too much fresh air to breathe in the winter.”

There is a belief throughout our industry that if we increase the volume of fresh air brought into a barn, it will be drafty on the calves. This belief stems from decades of experience with negative pressure ventilation systems.

If hutch calves thrive with an unlimited volume of fresh air to breathe in winter, why are we as an industry limiting our calf barns to only four air exchanges per hour during cold weather?

Negative pressure ventilation systems use exhaust fans to suck air through a barn. The classic example of a negative pressure ventilation system is a tunnel-ventilated stanchion barn. Multiple large exhaust fans pull air through the barn and overtop of the animals. As more fans are turned on, the volume of air sucked through the barn increases, subsequently increasing the air speed. With any negative pressure ventilation system, the air speed flowing through the barn is directly related to the volume of air pulled through by the exhaust fans.

In negative pressure ventilation systems, higher airflow volumes result in faster air speeds through the barn. Lower airflow volumes result in slower air speeds through the barn. See Figure 1.

These principles of negative pressure ventilation have created the longstanding association that increasing fresh air volume increases speed. It makes sense, with a negative pressure ventilation system, to reduce the volume of fresh air brought into the barn during cold weather; it's the only way to avoid a draft on the animals. The principles of negative pressure ventilation, to reduce fresh air volume during cold weather and increase it during warm weather, eventually became the basis of our current calf barn ventilation guidelines. See Table 1.

The current ventilation guidelines have remained unchanged for decades while over the same time-period, ventilation technology has improved dramatically. Today, many calf barns are ventilated using positive pressure tube systems, which do not follow the same engineering principles as negative pressure ventilation systems. Thus, it does not make sense to follow guidelines developed for negative pressure ventilation when designing positive pressure tube systems.

Positive Pressure Tubes Are Different

Positive pressure tube ventilation systems blow fresh, outside air into ductwork, commonly referred to as a tube, to evenly distribute it throughout the barn. The tube has specially designed holes that discharge fresh air out of the tube and into specific areas of the barn.

Table 1

CURRENT RECOMMENDATIONS FOR BARN CALVES

WHAT HUTCH CALVES EXPERIENCE

Season	Fresh Air Exchange/Hour: Barn Volume
Summer	40x
Spring/Fall	10x-20x
Winter	4x

Fresh Air Volume Surrounding Hutch
Unlimited
Unlimited
Unlimited

With negative pressure ventilation, air speed and volume are linked; increasing one increases the other. This is not the case with positive pressure tube ventilation. Air speed at the calf level is not dependent on the volume of air blown into the tube but rather the:

- 1. Distance from the tube to the calf:** the longer the air has to travel, the slower it will be when it reaches the calves.
- 2. Diameter of the discharge holes in the tube:**
 - Small diameter discharge holes produce weak, thready air streams that quickly lose momentum, much like air blown through a small-diameter straw. These weak air streams result in slow, gentle air reaching the calves. Numerous, small diameter holes in a ventilation tube are ideal for cold weather use.
 - Large diameter discharge holes in a tube produce robust air streams with more momentum, much like a leaf blower with a large-diameter nozzle. These robust air streams deliver fast, cooling air over longer distances. Fewer, large diameter discharge holes in a ventilation tube are ideal for warm weather use. See Figure 2.

What Does The Future Hold?

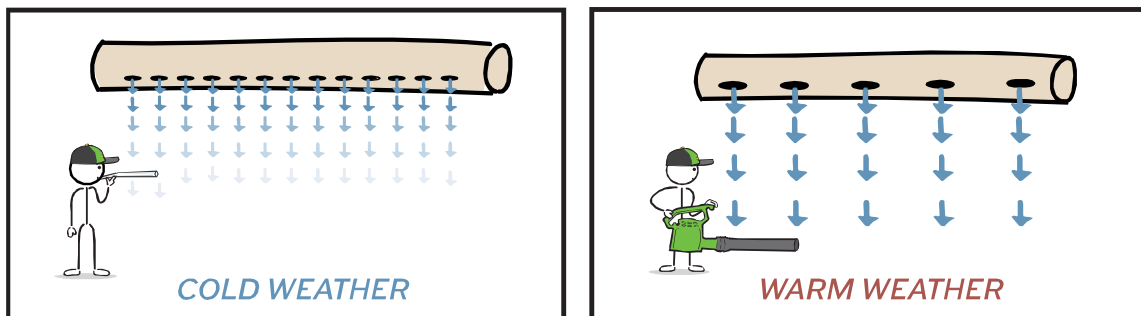
Our industry has the opportunity to expand the conversation about how we ventilate calf barns. The fact that positive pressure tube ventilation can be used to increase winter ventilation rates beyond four air exchanges per hour brings into question the age-old concept of reducing fresh air volume during cold weather. This technology has exposed the need for new calf barn ventilation guidelines to be developed and implemented; guidelines that promote higher volumes of fresh air exchange during cold weather.

My experience has shown that numerous calf raisers are finding cold weather ventilation success with positive pressure tubes that deliver non-drafty fresh air at exchange rates greater than four times per hour. These calf raisers have learned through experience that limiting the volume of fresh air coming into the barn was not in the best interest of the calves. After all, hutch-raised calves have shown for decades that in the absence of a draft, there is no such thing as “too much” fresh air.

This article was originally published with the Progressive Dairyman Magazine at: <https://www.progressivedairy.com/topics/calves-heifers/winter-calf-barn-ventilation-can-calves-have-too-much-fresh-air>

POSITIVE PRESSURE VENTILATION

Figure 2



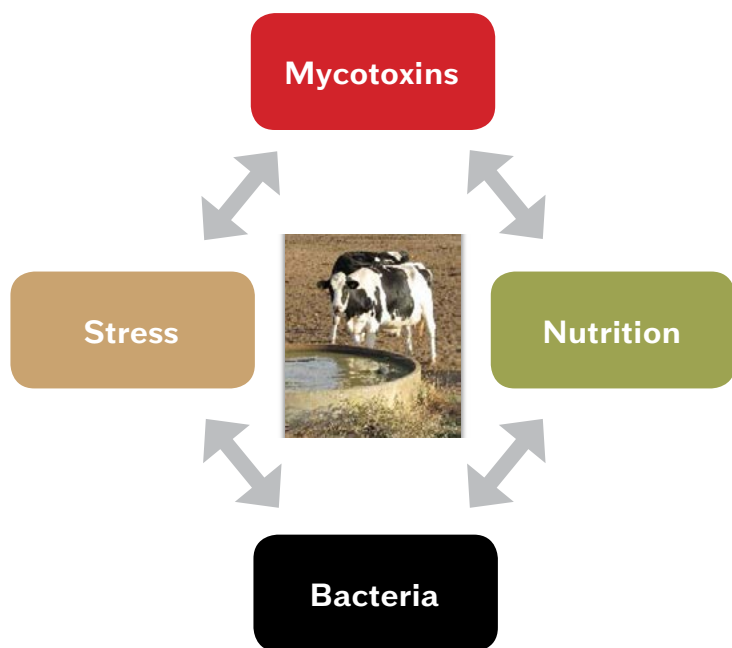
Anti-Nutritional Trends And Thoughts With 2017 Feeds Across The Midwest

By Dr. John Goeser, PhD,
PAS & Dipl. ACAN-Rock River Laboratory, Inc.
Contributing Editor

Historically, mold, yeast and mycotoxins are thought of as the primary contaminants in feed that rob high performing dairy cattle of health and nutrition. More recently, stress and pathogenic bacteria have been better recognized as contributing factors that interact with fungal and mycotoxin contaminants. See Figure 1.

Figure 1

Interactions that affect animal health and performance:



Feed hygiene and cleanliness has become a recognized topic on farms. The 2016 corn crop (silage and grain) brought considerable fungal and mycotoxin contamination, which

subsequently challenged dairy cattle health and performance. Further, corn grain rumen digestibility trended downward (data not shown), which likely contributed to more grain bypassing the rumen into the lower digestive tract (small intestine and hind-gut). Mycotoxin impact, rumen bypass starch and pathogenic bacteria present on some farms materialized in a pathogenic “perfect storm” which lead to digestive upsets and eventual animal death in some cases; challenging dairy performance and profitability.

With the 2017 corn crop beginning to come off the fields, the desire is a cleaner crop. Professor Damon Smith, University of Wisconsin-Madison Plant Pathology Professor, and his research team are seeing less mold with this year’s crop. Confirming their observations, Rock River Laboratory’s team have also recognized downward trends in Vomitoxin and T-2 toxin concentration across all feeds as fall progresses. See Figures 2 and 3. Pathogenic bacteria, such as *Clostridia perfringens*, concentrations appear to be sporadic. See Figure 4.

In summary, the 2017 crop appears to be cleaner than that harvested in 2016 yet recent heavy rains coupled with cooler weather could create conditions where contaminants grow. Our focus should be optimal fermentation through aggressive management, which will help create a clean feed. Bacterial and fungal contaminants warrant consideration when nutrition, environmental or mycotoxin stress are present, contributing to immune suppression in cattle. Concern levels for contaminants are shown with red lines in Figures 2, 3 and 4. Feed and TMR fungal, bacterial and mycotoxin contamination measures and services, along with interpretation guidelines, are available online at Rock River Laboratory, Inc.: www.rockriverlab.com.

Figure 2

Vomitoxin concentration (parts per million, with red line position at 1.0 ppm) across all feed stuffs analyzed by Rock River Laboratory since 2012.

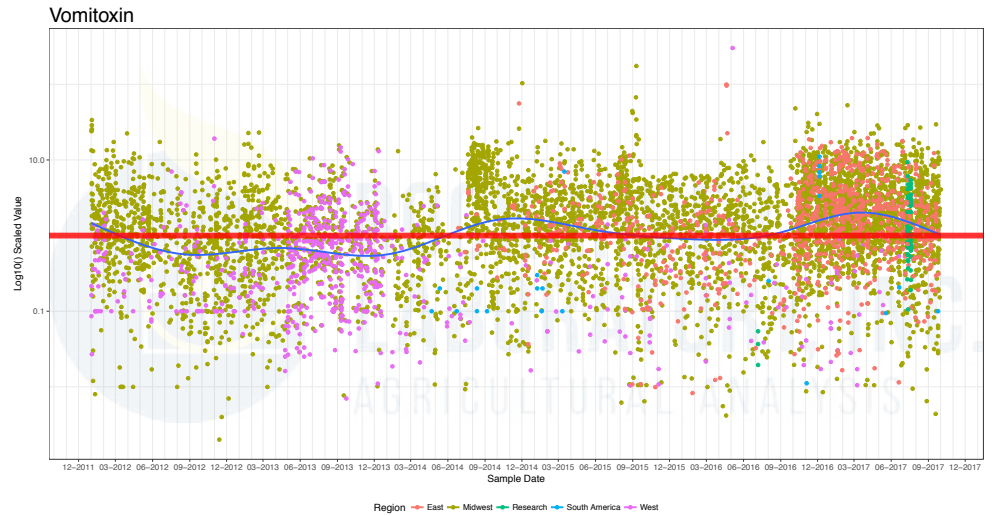


Figure 3

T-2 toxin concentration (parts per billion, with red line position at 400 ppb) across all feed stuffs analyzed by Rock River Laboratory since 2012.

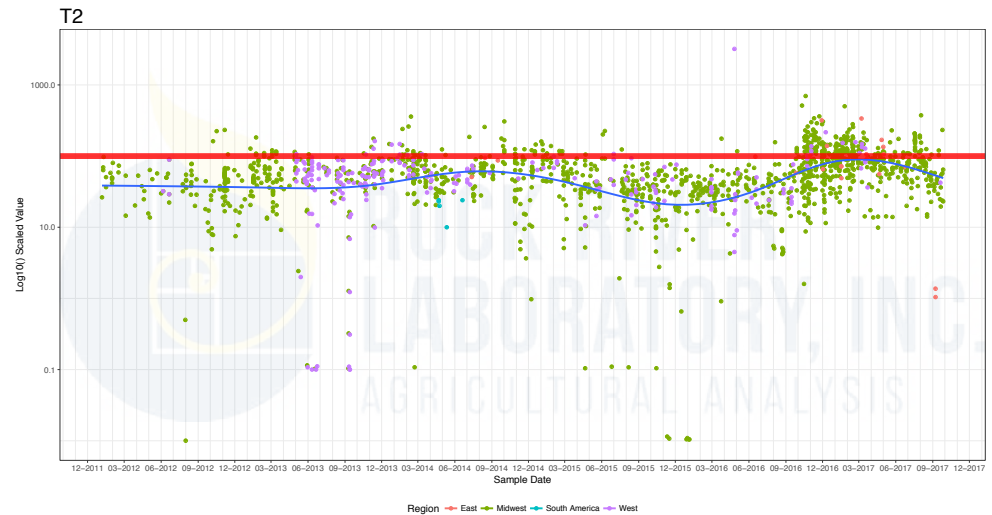
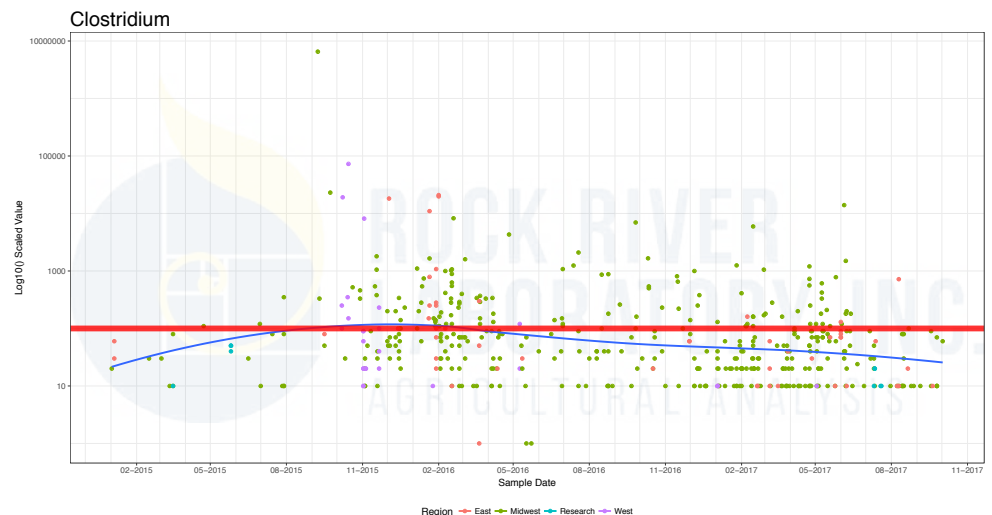


Figure 4

Clostridium perfringens count (colony forming units per g feed, with red line positioned at 100 CFU/g) values for all feeds analyzed by Rock River Laboratory since 2015.



The Importance Of Forage Testing



By Dan Leiterman

The age old question of “How often should I test my forage?” has a different answer for every operation. Field sizes, crop varieties, harvest timing, and storage methods play an important role in determining forage testing needs. It is important to watch for

changes in forage quality by observing your cows. Dry matter is the one exception for testing needs, as this should be evaluated weekly. There are several low cost, on-farm testing options available to monitor the dry matter of forages, such as a Koster tester or a microwave.

There are a variety of labs and forage testing options available but the minimum key nutrients to test for are moisture, crude protein, starch, sugar, NEL, calcium, phosphorus, and potassium. Consult with your Crystal Creek® nutritionist for directions on these testing procedures.

Baled Hay

Baled hay typically can be tested by the crop and/or the field at the conclusion of harvest. Testing by early fall will allow each hay type to be dedicated to different cattle groups based on quality and inventory. For example; grassy, low potassium hay should be dedicated to dry cows, whereas higher quality hay would be dedicated to the milk cows. When harvest season is complete, review forage inventories as this is an important part of any nutrition program and will insure the right type of forage inventories are on hand for the herd's different stages of lactation. When testing baled hay it is important to collect samples with a hay probe from at least six random bales per crop. Manual hay probes are available from Crystal Creek®. Consider purchasing a power tool driven probe if frequently testing high volumes of hay samples.

Silage

Haylage should be tested based on storage structure (silos, bags, or bunkers) when first

starting to feed from them. You should also test if you notice a change in your cow's performance. Corn silage should be tested at the start of feeding and every three months thereafter, as the fermentation process will affect starch availability. This will also allow you to evaluate protein degradation and fermentation losses. When testing silages from a silo, run the unloader for several minutes and collect at least six handfuls of silage. Mix the samples in a pail and pull a composite sample for testing. If testing a bunker, pull six handfuls from six locations utilizing a crisscross pattern, mix in a five gallon pail and pull a composite sample from the pail.

Mycotoxins

In the previous newsletter article on mycotoxins and anti-nutritional trends, Dr. Goeser states the 2017 late summer corn crop in the Midwest is seeing less mold than previous years. It is important to note that regional weather patterns have a large impact on the mold and mycotoxins found in harvested grains. Unlike the Midwest this year, New York and Pennsylvania, in particular, are experiencing an increase in the mycotoxins found in their harvested crops. If you suspect the presence of molds and mycotoxins, additional testing can be done to establish a count. If significant counts are reported, you can have a species identification run to determine a remediation program if necessary. As with any sampling process, discovering whether or not your cattle have exposure to mycotoxins or molds is never 100% accurate. Error can come from both the size and scope of samples being tested. Watch for signs indicating that your herd is facing mycotoxin exposure such as:

1. Reduced dry matter intake
2. Lowered immune function
3. Reduced milk production
4. Lowered weight gain
5. Altered nutrient metabolism and absorption
6. Reproduction issues

If you observe any of these indicators consider taking steps to reduce the impact of mycotoxins. Crystal Creek® offers Fuse 207™ and Ultrasorb R as part of a remediation program for molds and mycotoxins. Fuse 207™ is to be fed at a rate of 1 to 2 ounces per head per day and provides a highly concentrated source of B-1, 3 glucans and polarized ions for livestock at risk of mold and/or mycotoxin exposure. Research shows that B-1, 3 glucans provide better natural blockers than non-polarized clay or charcoal based alternatives. Ultrasorb R is to be fed to ruminants at a rate of 10 to 30 grams per head per day. Use Ultrasorb R in addition to Fuse 207™ specifically when addressing difficult mycotoxins such as DON/vomitoxin.

Prevention Is Key

Ultimately, prevention is the key in maintaining forage quality. Steps can be taken to prevent degradation and reduction of dry matter loss through the use of proper inoculants. Crystal Creek® offers a full line of inoculants to assist with good management practices in reducing the negative effects of fermentation loss. Inoc-U-Lock™ is available in either liquid or dry forms depending on your application preference. Contact a Crystal Creek® nutritionist to learn more about evaluating your current forage management and sampling program and the impact it can have on your herd's performance.

Crystal Creek® Welcomes New Employees



Kelly Hubert

Kelly Hubert is a livestock specialist for Crystal Creek® who joined our team in July of 2017 after teaching agriculture education for 5 years. Kelly graduated from the University of Wisconsin-River Falls with a degree in Agriculture Education and a minor in Animal Science.

Kelly knew from a young age that her passion was helping others and working with animals, especially dairy cattle. In her spare time, she enjoys hunting, tractor pulling and spending time with family and friends. Kelly is eager to help Crystal Creek® producers reach their goals in a sustainable and profitable manner.

Alex Austin graduated from the University of Wisconsin-River Falls in 2014 with a Bachelor of Science degree in Agricultural Business with an emphasis in Dairy Science. Alex grew up on a dairy farm in northwest Wisconsin, where she developed her passion for agriculture. After graduating from UW-River Falls, she worked at a local cooperative in both the feed and agronomy departments.

In her spare time, Alex enjoys riding her horse and helping on the family farm. She also enjoys riding four-wheeler and snowmobile with her family and friends. Alex is looking forward to working with producers and clients to help them achieve their livestock and production goals.



Alex Austin

Staying On Track: Reviewing Proper Milking Procedure



By Kelly Hubert, B.S.

There may be a time on every farm where the milking protocol is not implemented or followed properly. This could be the result of a person in a hurry to finish chores or a new employee still learning proper protocol. It is important to follow proper milking

procedures which can lower somatic cell counts, increase milk production, help earn better premiums and increase overall profit.

Proper Milking Procedure Tips

Provide a low stress environment: A cow that feels stressed will release adrenaline. Adrenaline inhibits the release of oxytocin, the hormone which stimulates milk let down. Refrain from yelling or making sudden movements as cows enter the barn or parlor to reduce adrenaline release. Cows like consistency so keep the milking routine as close to the same as possible for each milking.

Wipe off the teats: Start the milking procedure by wiping off the teats with a clean, dry towel. This will remove any organic matter from the udder. Failure to remove dirt, manure, or organic matter will inhibit teat dips from disinfecting the teat. Make sure to use a new, dry towel for each cow so bacteria are not spread from one cow to another.

Pre-dip: Pre-dip to disinfect the teat. Ensure the teat is completely covered. Sprayers do not effectively cover the entire teat. Even though a dipper may use more product than a sprayer, it can pay for itself with less mastitis cases. Using a non-return dipper can reduce the spread of contaminants. Allow the pre-dip 30 seconds of contact time to work effectively¹. Removing the dip too early,

may not allow the dip to properly disinfect the teat.

Forestrip: Remove 3-4 squirts of milk from each quarter. Forestripping helps check for abnormalities and removes the milk containing the highest somatic cell count. Strip milk into a strip cup, not the floor or stall. This helps prevent stalls from becoming contaminated and makes it easier to evaluate for abnormalities such as flakes.

Wipe the dip off: Make sure the teat end is clean and dry. One way to test this is by using a paper towel to press up on all four teat ends.² Refer to Dr. Leiterman's article, in the August, 2008, Crystal Creek® Newsletter, "Clean Teat Ends, Healthy Udders." If the teat end is still wet, there is a high probability of bacteria being introduced into the udder during milking. This step also helps to stimulate milk let down.

Attach the milker: The milking unit needs to be on the cow within 1 to 2 minutes from the start of the prepping process¹. Attaching the milker in this time frame takes full advantage of the oxytocin that is released, creating better milk let down. Make sure the milker is attached squarely on the cow's udder to ensure proper milk flow and prevent squawking.





Post-dip: Completely cover the teat with teat dip. Post-dip immediately after the unit is removed to protect the teat end until it closes after milking, which may take 10-15 minutes. Pushing up feed after milking will encourage cows to stand, preventing bacteria from entering the teat and allowing the teat end time to close. In extreme cold weather, allow the teat dip 30 seconds of contact time and blot dry any excess dip to help prevent chapping and other cold weather issues³.

Additional Tips

Clean out dip cups: Clean out dip cups each day to reduce the risk of transferring bacteria from cow to cow.

Wear gloves: Wearing gloves helps to reduce the spread of pathogens, specifically *Staph. aureus*. The number one cause of *Staph. aureus* mastitis infections is ungloved hands.

Prepping Order: If prepping a group of cows at one time, make sure to keep the same order of the

cows for each step. Example: pre-dip and forestrip cows 1 through 5 then wipe cows 1 through 5 (not 5 through 1 as this will change your dip contact time and the timing to attach each milker).

Culture: Sample the bulk tank no less than quarterly and culture high SCC cows as they occur, to determine the cause of any problems. Cows with mastitis, especially *Staph. aureus* or *Mycoplasma*, should be milked last so they are not spreading bacteria to other cows in the milking line. Cows with *Staph. aureus* or *Mycoplasma* should be culled from the herd.

Take the time to analyze milking procedures on your farm and periodically review them with your employees. Maintaining consistent procedures can help provide optimum milk production and profitability on your operation.

Sources:

¹ Ruegg, Pamela L. "Standard Milking Procedures." Milk Money, 2005.

² Leiterman, Dr. Ryan. "Clean Teat Ends, Healthy Udders." Cow Tales, 8/2008.

³ Reneau, Jeff. "Wintertime Teat Dip Management For Cold Climates." University of Minnesota, 1991.

Give Your Beef Calves A Strong Start



By Erik Brettingen, B.S.

The stress caused by weaning decreases a calf's immune function and makes them more vulnerable to disease. For many years it has been common practice to give medicated feeds, pellets, or additives around the time of weaning to decrease the incidence

of disease. Treating with these medicated feeds can be expensive, counterproductive to rumen function, and now requires a veterinary prescription due to the Veterinary Feed Directive (VFD). Crystal Creek® formulates products that have natural ingredients proven to support calves during the stress of weaning and do not require the need for a VFD. Crystal Pellets™ and Heifer Pride™ are two products that can help give your beef calves a strong start.

Crystal Pellets™ are an aloe vera based flavoring agent to be fed to calves either in the grain mix or top-dressed onto their feed. Crystal Pellets™ help support the health of the calf by helping increase feed intake and providing ingredients that have been proven to support immune function and nutrient absorption.

Appetite Support: When calves eat more, their immune system simply has more calories to support its function of fighting off harmful pathogens. It is helpful to think of the calves calories as dollars and the calf's needs as a number of bills to pay. There is the heat bill to maintain normal body temperature, a maintenance bill for basic body function, an immune system bill for disease protection and hopefully some left over funds to pay the growth bill. The immune system uses more calories in the body than any other system, but if primary needs for survival like body temperature and maintenance aren't being met, there surely will not be adequate calories left for a strong immune system leaving the calf at an increased risk of illness. Eating more leads to increased caloric intake which results in more calories for a calf to pay its "bills" to be healthy and grow.

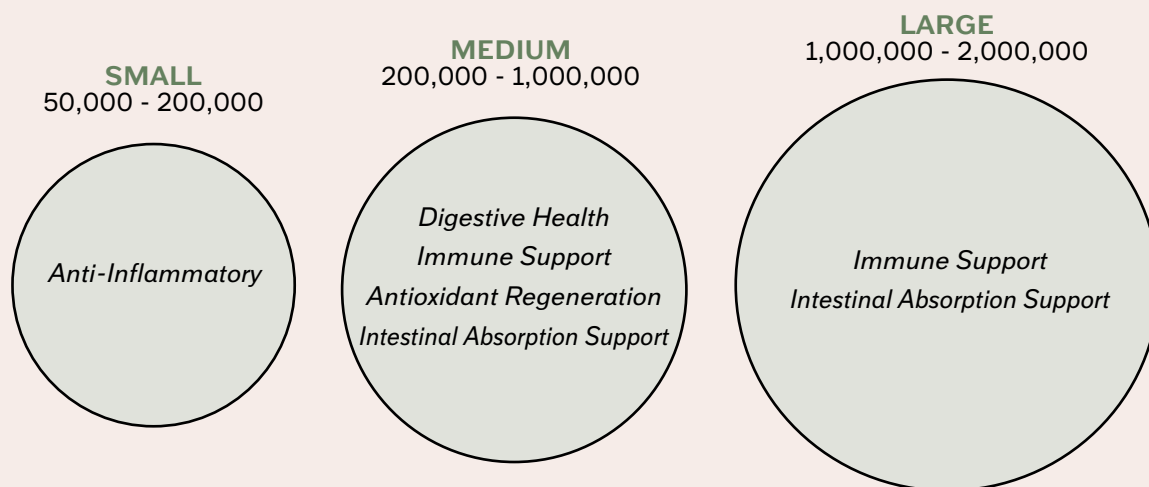
Powerful Ingredients: The naturally derived ingredients in Crystal Pellets™ have been scientifically proven to:

- Decrease inflammation by selective COX-2 inhibition
- Stimulate the immune system along the gastrointestinal tract
- Promote nutrient absorption in the lower gastrointestinal tract

Figure 1

ALOE VERA POLYSACCHARIDE PROFILE

(Molecular Weight in Daltons)





- d. Promote antioxidant regeneration
- e. Stop/reverse gastric ulcer formation in laboratory models

The complex polysaccharide profile that can be found in Crystal Pellets™ is made up of small, medium, and large molecular weights. This molecular weight is very important and helps to determine what body system the ingredient helps to support. See Figure 1.

Heifer Pride™ is a nutritional supplement added to the calves complete feed or creep feed that many producers have found to be useful in helping keep their calves healthy and moving forward. After weaning, it is not uncommon for calves to “go backward” due to stress and its impact on the intestinal tract. Many times a rough hair coat and watery, off-colored manure go along with

this backward slide in animal health. The naturally derived ingredients in Heifer Pride™ have been proven to support the integrity of the intestinal tract of ruminants during times of significant stress such as weaning or regrouping.

It is important that beef calves wean smoothly to maximize their average daily gain, feed efficiency, and overall profit. There are alternatives available to the medicated feeds currently requiring a veterinary prescription. These alternatives work with the calf to support its immune system. Natural supplementation with products that contain beneficial ingredients that have been scientifically proven to be effective can be a useful tool for many farm and ranch owners. Contact a Crystal Creek® representative to learn more about how Crystal Pellets™ and Heifer Pride™ can be a positive addition to your calf weaning program.

Winter Udder Care



By Alex Austin, B.S.

Udder care is important year-round, but the winter months can present their own specific set of challenges. Low temperatures and cold wind chills can be brutal on exposed skin. Preventative measures and proactive treatments can make all the difference in udder health.

Cooler weather may provide relief from issues like fly pressure and heat stress but with the change in seasons new concerns are created. As we move into the winter months, maintaining healthy teat condition can become challenging. When temperatures lower and wind speeds increase, the occurrence of frostbite becomes more prevalent. **Figure 1** shows the damaging effects of wind chill on exposed skin. When wind chills reach 15°F it is time to take preventative measures to protect the udder. A good rule of thumb is if your own hands and lips are starting to become cracked and chapped, it is a good indication the weather is impacting your animal's teat condition as well.

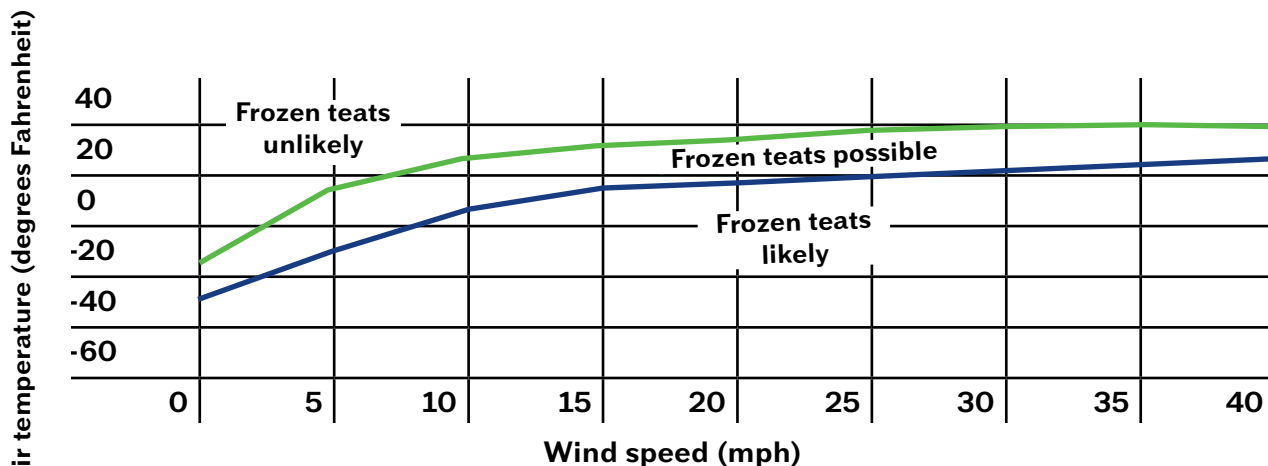
Most farms milk two to three times a day. This means the teats are getting washed and dipped just as often, leading to chapped and cracked tissue. The skin has a natural defense layer called the acid mantle which helps to control organisms like *Staph. aureus*. When the teat tissue is damaged, the natural defense of the acid mantle is not able to do its job which may lead to mastitis issues. The best way to stop this damage from happening is to limit wind exposure, provide dry bedding, and use a teat conditioner mixed with your teat dip.

Crystal Creek® products to consider during this time are:

1. **Udder Velvet™**: A low inclusion teat dip emollient agent with a botanical additive that helps decrease the risk of chapping and supports healthy teat ends.
2. **Udder Fancy™**: A beeswax based salve containing healing plant oils that decrease the risk of frostbite, provide a moisture barrier and promote healthy tissue when teats become chapped or cracked.

Figure 1

WIND CHILL EFFECT ON EXPOSED SKIN



The likelihood of frozen teats depends on air temperature and wind speed.

Note: At temperatures of 20°F frozen teats are possible, when wind speeds reach 15 mph. Anytime cows exit a parlor into extremely cold weather conditions in which the combination of wind and cold result in wind chills of 15°F or less, preventative steps need to be taken to avoid frostbitten teats.

Source: Reneau, Jeff. "Wintertime Teat Dip Management For Cold Climates." University of Minnesota, 1991.

When using a salve (or other multiple use per container product), make sure to use new, clean gloves each time you go into the jar to decrease the chance of spreading bacteria from animal to animal.

Another challenge in winter months, is the increase in udder edema. Udder edema in first calf heifers is four times more likely to occur in the winter than in the summer.¹ Udder edema causes added discomfort and stress on these young cows during a critical time of their life. This can cause poor milk let down and change the shape of the teats, increasing the chance of developing clinical mastitis. Edema that is not addressed can cause long term damage to the support structure of the udder.

Crystal Creek® Veterinary Dairy Liniment™ cream or spray can help address edema issues. Being proactive and treating udder edema immediately, can help prevent chronic problems. Veterinary Dairy Liniment™ uses contrast therapy to help reduce swelling. The natural wintergreen in this liniment initially warms the tissue increasing circulation and blood flow, while the menthol and

camphor components cool and assist the lymphatic system with drainage; providing relief and comfort. The lymphatic system keeps the udder healthy by bringing white blood cells to the tissue to fight off potential infections. The additional natural plant oils in the liniment contain proven anti-microbial and anti-inflammatory properties. An animal that is in discomfort is stressed. Stress can decrease feed intake, suppress the immune system and lower the ability to fight off infections.

Monitoring udder health for the first sign of problems and using the correct tool to address the issue can make a difference in overall health, longevity and profitability. The knowledgeable staff at Crystal Creek® is here to help you stay ahead of winter issues. The old adage “an ounce of prevention is worth a pound of cure,” is definitely true when it comes to winter udder care.

Sources:

¹ Melendez, P., Hofer, C.C. and Donovan, G. A. . “Risk Factors For Udder Edema And Its Association With Lactation Performance On Primiparous Holstein Cows In A Large Florida Herd, U.S.A.” Preventative Veterinary Medicine, 10/2006.



Ask the Vet/Ask the Nutritionist



“We see sporadic outbreaks of ringworm in our livestock and can’t seem to get rid of it. What exactly causes ringworm and how can we prevent it?”

- Puzzled in Pennsylvania

There are many producers across the nation who experience bouts of ringworm and struggle to get rid of it. Ringworm is caused by a contagious fungus called *Trichophyton verrucosum*. This fungus spreads easily throughout groups of livestock, especially those housed indoors. The spores multiply and spread rapidly, and can be picked up anywhere in the environment. Once an animal comes into contact with the spores, they irritate the skin and cause an infection.

Ringworm is classically observed as a variety of circular, grey-white scabs. It is most commonly seen on the facial area and around the eyes but can be found anywhere on the body¹. Ringworm will typically resolve itself without treatment; however, this can take up to nine months².

Many sources suggest different home remedies to cure ringworm but the surest way to address it is through prevention. Crystal Creek® recommends an examination of the nutritional support of the livestock and an inspection of their surrounding environment. A balanced nutrition program with sound trace minerals, including selenium, and Vitamins A, D, & E, aids in supporting the immune status of the animal. A strong immune system makes it more difficult for the fungal spores to infect the animal’s skin. Crystal Creek® offers an entire line of calf products formulated with high levels of bioavailable vitamins and minerals to support the

immune system such as: Swift Start® Texturized Calf Feed, Swift Start® Calf Pellets, and Swift Start® Calf & Heifer Mineral. Many producers have observed ringworm all but leave their youngstock after switching to the Swift Start® program due to the improvement in vitamin and trace mineral quality.

In addition to sound nutrition, regular sun exposure will help reduce the incidence of ringworm. It is also a good idea to routinely clean any equipment used to handle animals. It is especially important to thoroughly clean grooming and show equipment, as items like brushes and halters can harbor spores over the winter and infect new animals the following spring. Remember that an animal does not need to have visible ringworm scabs to be carrying the infectious spores.

Lastly, ringworm, as with any disease, can be introduced to the herd from incoming animals. Isolating new animals for a set period of time will help to ensure that they are not carrying any transmissible diseases that may present with clinical signs after arrival. Focusing on these key preventative strategies will save much time and effort down the road with reduced ringworm outbreaks.

¹ Purdue University Cooperative Extension Services

² Langford Veterinary Services, University of Bristol

By Jessica Getschel, B.S.

Please submit your animal health or nutrition questions in writing to:

Crystal Creek®
Ask the Vet/Nutritionist

1600 Roundhouse Road
Spooner, WI 54801

OR

askthetvet@crystalcreeknatural.com

January 2018

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- COMFORT BOLUS™

February 2018

Save 10% on
Oral Calcium Supplements
FRESH-N-EASY™



March 2018

ELECTROLYTES
SAVE 10%

In Addition To
Normal Volume Discounts



April 2018

PIVOT FL™

1-3 boxes: \$10/box discount

4-9 boxes: \$18/box discount

(\$10/box discount + \$8 per box
existing volume discount)

10+ boxes: \$23/box discount

(\$10/box discount + \$13 per box
existing volume discount)

Pail:

\$2/pail discount



HEIFER PRIDE™

\$10/bag discount
\$2/pail discount





1600 Roundhouse Rd., Spooner, WI 54801

Sustainable And Effective Livestock Nutrition Programs for Today's Progressive Producer!

Cold Weather Udder Care Products



Veterinary Dairy Liniment™

combines the proven benefits of both warming and cooling therapy for challenged muscle tissue and edema relief.



Teat Saver II™

a gentle iodine teat dip to support optimum teat condition.

Teat Saver™ Concentrate

a chlorhexidine teat dip that conditions and protects teats from chapping.



Udder Velvet™

a botanical teat dip additive to support healthy teat condition.

Comfort Bolus™

supports optimum performance of livestock during challenges.



Lini-Rub™

a soothing massage liniment.

Udder Fancy™

a naturally soothing, topical salve to promote healthy tissue.