

SINCE



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# TIPS FOR MINIMIZING STORAGE LOSSES OF ROUND BALE HAY

## BEWARE, THE BETTER QUALITY THE HAY, THE MORE YOU'LL SAVE PUTTING IT UNDER STORAGE.

Storing big round hay bales by lining them up along the fence row may be easy, but it is not economical. Baled forage probably constitutes the highest percentage of winter feed cost we have wrapped up in a cow. The production of hay uses immense resources, and the ration quality is affected by hay quality. Storing dry hay on the ground without cover causes greater amount of spoilage when compared to other methods of storage. Results found from ranch research done in the Sandhills of Nebraska by the University of Nebraska Extension in 2005-2008 reported no significant nutrient changes in total dry matter pounds, pounds of crude protein or pounds of total digestible nutrients on native hay and alfalfa plots. However, visual damage losses after one year between covered and uncovered with twine or net wrap are reported.



It should be recognized that there's no one "right way" for everyone when it comes to hay storage. Producers should consider three factors in determining their optimum storage method.

1. Look at hay quality, or value. There is a remarkable dollar difference in a 25% loss on \$200/ton of hay vs. \$100/ton hay. The better the quality, the more you'll save putting it under storage.
2. Evaluate the likelihood of spoilage in your climate. Spoilage, or weathering, is the result of moisture getting into bales, and temperature accelerating bacterial breakdown of the cellulose. Warmer temperatures, combined with moisture increase bale deterioration. Wind can also influence drying time. Moisture gets into bales in three ways: rainfall, snowmelt, and humidity. The tops of bales absorb moisture from rain, snowmelt, while the bottom wicks moisture from the ground.
3. Consider the length of time bales will be exposed to weathering. First cutting forages are more susceptible than hay harvested in the fall, depending on when it's fed. Once you've considered your elements, choose a storage method that best fits your needs. Table 1. Shows the amount of loss you can have in a round bale from dry matter in the outer layers of large round bales. An example is a 6-foot diameter bale and a 4-inch outer layer depth that has 21% of volume of the hay in that bale.

Research from past studies shows outdoor storage losses range from 5-35%, this can be reduced by 2/3 with indoor storage and be reduced by 50% with good plastic covering outdoors. Recommendations for Storage Techniques. Make a dense bale: It will shed more precipitation, sag less, and have less surface area to absorb moisture. By using net wrap, you will reduce bale sag and maintain bale shape. In addition, net wrap makes a tight, smooth surface that will resist weathering, insects, and rodents. Store bales on a well-drained location with a 4-6-inch coarse rock base that will minimize bottom spoilage. Store bales end-to-end, in rows, facing in a northwest to southeastern direction whenever possible. Space adjacent lines at least 10 feet apart. Stacking bales usually increase losses. Locate bale rows away from fences and fields and it is recommended to cover hay if keeping more than one year.

*Beef Magazine*

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## WHAT IS THE REAL COST OF MINERAL SUPPLEMENTATION?

### SELENIUM IS THE ONLY MINERAL WE SUPPLEMENT TO CATTLE THAT THE FDA REGULATES

For some management practices calculating the return on investment is straightforward. Unfortunately, determining the cost vs. benefit of mineral supplementation is not always clear. This is why it seems when input costs go up, the mineral is one of the things that can be easy to cut out or replace with a less expensive, lower quality option. The problem is that early signs of mineral deficiencies can be hard to identify and often go unnoticed. Eventually, in cases of severe mineral deficiency, producers could see widespread issues throughout the herd that has us making phone calls to our veterinarian. But those early and often sub-clinical deficiencies can also eat away at performance, productivity, and, yes, profitability. Sub-clinical deficiencies might look like a few more open cows this year compared to last or needing to treat

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a few more calves this time around. Of course, there are several reasons we would see lower pregnancy rates or higher pull rates from one year to the next, and we shouldn't always blame it on the mineral. However, ensuring the herd is protected against mineral deficiencies is a simple practice in a business where so much is outside of our control.

Think about the mineral program as a good insurance policy. The problem is that many of our common feedstuffs are deficient in one or more minerals.

Failure to provide a good quality mineral supplement leaves the herd susceptible to developing mineral deficiencies. So, what is a good quality mineral supplement? My definition is a mineral supplement that provides all the required minerals that need to be supplemented in adequate amounts to prevent mineral deficiencies without over-supplementation. I like to tell people when it comes to a mineral program, pay for what you need but not for what you do not need.

Minerals that typically require supplementation include calcium, phosphorus, magnesium, sodium, cobalt, copper, iodine, manganese, selenium, and zinc. However, if our mineral program consists of only a white salt block, we are only supplementing sodium and chloride and forgetting the other nine minerals that also require supplementation. Even when supplementing with a trace-mineralized block, we still miss three or more minerals altogether. Additionally, these products are 95-99% salt, meaning the concentrations of the other minerals are so low that cattle are still susceptible to mineral deficiencies. Some mineral supplements will also include a source of iron, which makes the product red. Iron is one mineral that is abundant in the feed and does not require supplementation. This is a prime example of paying for something that is not needed.

Selenium deficiencies can be common in parts of the United States, including the southeast. Selenium is the only mineral we supplement to cattle that the FDA regulates. This is why you see something like "not to exceed 3 mg of selenium per head per day" on a mineral tag. In cases where cattle are especially susceptible to a mineral deficiency, the source of the mineral in the supplement also matters. Cattle are not able to absorb and utilize all sources of a mineral the same, which is why some sources are more bioavailable than others. This is especially important in the case of selenium because we cannot simply add more selenium to the supplement. Therefore, I typically recommend a 50:50 blend of sodium selenite (inorganic source of selenium) and Selenium yeast (organic source of selenium) for cattle at risk of selenium deficiency.

Something else that a good quality mineral supplement will also provide is vitamins. Cattle being ruminants, can rely on rumen microbes to produce some vitamins, but Vitamin A and Vitamin E often require supplementation. Leafy green forages are an excellent source of both vitamins, but we know that cattle often do not consume leafy green forages year-round especially during the winter months or during drought. Look for the inclusion of both Vitamin A and E in a good quality mineral supplement.

Lastly, remember it takes the same amount of labor to put out a poor-quality mineral as it does to put out a good-quality mineral. Keep an eye on mineral intake to ensure the herd gets the most out of the mineral you provide. A 50-lb bag of mineral with a target intake of 3 oz per head per day should last 25 cows for about ten days. Cattle have a desire to consume salt, so salt is the driver behind mineral intake. If cattle consume too much mineral, consider placing a bag of white salt out for a day or two to allow the herd to cost-effectively meet their desire for salt and then return to providing the free choice mineral. If cattle are not consuming enough mineral, ensure that the mineral feeder is located near the water source or shaded area where cattle will be more likely to visit it.

## Augusta Co-op Solution

### Purina® Wind and Rain® Mineral Tub

The Wind and Rain® Storm® Mineral tub is a free-choice mineral delivery system designed to correct mineral deficiencies of the available forage in a highly palatable, weather-resistant form.

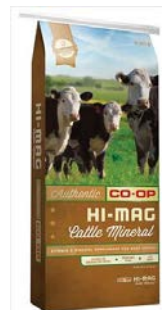


SKU - 62709

## Augusta Co-op Solution

### Co-Op, Foundation Hi-Mag Cattle Mineral, 50 lbs.

For weaned cattle on pasture. For those cattle needing higher levels of magnesium as an aid in the prevention of grass tetany. A solid choice for all-around mineral supplementation for cows on pasture. Contains the vitamins and minerals needed for a solid supplementation program.



SKU - 675

# WEANING STRATEGIES FOR PRECONDITIONING CALVES

## WHAT'S THE BEST WAY TO WEAN CALVES WHEN WE ARE PRECONDITIONING?

Weaning is a stressful time for calves. There are social stresses associated with removal from the dam and disrupting social hierarchy, physical stresses of transportation and the marketing system, and nutritional stresses of changing feed and water sources. There is a lot of interest in finding the best way to wean calves when we are preconditioning.

Common options that have been researched include: abrupt weaning - which is stressful and completely changes the environment the calf is accustomed to; nursing prevention tools - which prevent suckling but maintain contact with the dam; Short term separation from the dam to acclimate calves to weaning pens, feed and water sources; and fenceline weaning - placing cows and calves in adjacent pastures for 7 days allowing contact but preventing suckling.

Researchers from the OSU College of Veterinary Medicine compared these methods and found that for the 2 weeks before weaning calves fitted with a nose flap had reduced gains and weaning weight. During the 28-day preconditioning period calves that had fenceline access to dams and calves that had short term (24-hour separation) from dam gained the most, while abrupt weaned calves and calves fitted with a nose flap pre-weaning gained the least.

The reduced performance by the calves fitted with the nose flap can be explained by research that the nose flap decreased activities like grazing, walking, ruminating, and playing, while increasing sucking attempts increase and time spent near the dam. Additionally, blood cortisol levels (an indicator of stress) increase when the nose flap is present. Calves in the fenceline weaning system only spent 2 days with the majority of time spent within 15 feet of the fence and time spent near the fence reduced dramatically over the next 3 days. Fenceline weaning was shown to reduce stress and increase grazing and feeding behaviors during the weaning process. The success of the short-term separation treatment shows the benefits of familiarization of calves to supplements and facilities prior to weaning.

Preconditioning is a good way to add value to calves. Last year the Oklahoma Quality Beef Network enrolled over 2,674 calves with an average premium of \$14.89/cwt, this gives an estimated increased gross revenue of \$199,000 for the producers involved in the program.

Research has shown that buyers of preconditioned calves can expect 90% reduction in first treatment sick-pulls from respiratory disease, a 60% reduction in calves treated three times, and 64% reduction in chronically morbid calves. Reductions in bovine respiratory disease can have huge impacts on performance throughout the stocker or finishing phases, resulting in higher overall performance and feed efficiency and higher quality carcasses. Reducing stress while we are weaning is a good idea to increase calf gains during preconditioning and backgrounding.

*Beef Magazine*

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## WHEN TO CULL BULLS

### BULLS CAN LIVE 10-12 YEARS

It is common practice this time of year to evaluate our cows to make culling decisions, but this is also a good time to evaluate our bulls to determine which sires we are going to feed through the winter and which have come to the end of their genetic contribution to the operation.

Bulls, much like cows, can live ten to twelve years. Most bulls will remain active in the herd for closer to four or five years due to feet and leg, structural, and fertility problems, temperament concerns, or injuries. The decision to cull many bulls happens in the spring after failing a breeding soundness exam. However, producers can save input costs (6 months' worth of decent quality hay for a mature bull will cost about \$600 based on current prices) by culling bulls in the fall if they or their offspring have any undesirable characteristics that would make them unsuitable for the next breeding season.

Most mature breeding bulls can maintain condition with the same winter management as the cow herd. However, since mature bulls tend to weigh more than our average cow, you can expect their per head dry matter intake to be more as well. If we assume a bull will consume roughly 2% of his body weight in dry matter per day and that a mature bull weighs about 1,800 lbs. they will consume about 36 lbs. of dry matter daily for the nine months they are not actively breeding cows. If we know a bull has a problem it is best to cull him sooner rather than later instead of sinking more input costs into him.

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Attitude problems and feet and leg issues are two reasons why bulls should be culled sooner rather than later. If a bull is aggressive it may be in the best interest to our operation and to the safety of ourselves, employees, and other livestock to cull the bull. It is important to understand that docility is a heritable trait. As a bull matures and gains weight they may develop feet and structural issues that may limit their ability to effectively breed cows. It may be advantageous to cull those bulls now instead of waiting to see how they pull through the winter season.

Culling bulls with undesirable traits allows producers to invest in genetics that will have a genetic improvement to the cow herd. It is important to understand that the bull contributes to 90% of the gene pool and has more of a genetic contribution to the herd in one year than a cow will have in her lifetime. There is a concept among some producers where the thought process is, “the bull is paid for and regardless of his issues I am going to continue to use him.” The problem with this concept is that every year the bull is allowed to contribute his genetics to the herd he is passing along his negative traits as well. Buying a new bull has the potential to be more profitable if the new bull possesses the genetics to improve reproductive performance, growth rate, or carcass traits to name a few.

Culling bulls this fall that have reached the end of their genetic contribution to the operation not only has a positive impact on this year’s income but can lead to long term profitability in the cow herd.

Beef Magazine

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## FALL AGRONOMY PLANNING

### AS WE ENTER INTO LATE FALL/EARLY WINTER, WEED CONTROL IN SMALL GRAIN CROPS SHOULD BE CONSIDERED.

In a lot of cases, we can do a better job controlling weeds during this period while the weeds are small and have an underdeveloped root system.

This can either be done pre-plant or post-plant. Contact us to schedule a time to discuss fall weed control. Augusta Co-op has a small selection of small grains remaining in inventory. If you have interest in purchasing these items please reach out to Troy Grimm.

Additionally, it is time to start planning corn and soybean seed selection. Augusta Co-op carries NK/Enogen, Dekalb & Asgrow, and Pioneer (Bedford location only). Book now with your Augusta Co-op Agronomy Sales Team to ensure you select the hybrid varieties you want at a discounted pre-pay price. Seed corn deadline is November 17 (8% discount) or again January 9 (6% discount). Fertilizer pre-pay December 1 through January 9 (8% discount). Contact Troy Grimm at (540) 885-1265 x 243.

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## MEET MIKALA LIPTRAP – AUGUSTA CO-OP FIELD REPRESENTATIVE

Mikala grew up on a small family farm in Stuarts Draft, VA, where she participated in the Augusta County 4-H & FFA Market Animal Show and participated in livestock judging for 9 years. In 2022, Mikala graduated from Virginia Tech with a degree in Animal and Poultry Sciences.

During her time at Virginia Tech, she worked at the Copenhaver Sheep Center, participated in the Hokie Harvest Sale, and interned as a Feed Sales Representative with CHS South Central in Napoleon, ND.

Mikala currently lives in Middlebrook, VA and enjoys spending her free time riding horses, hunting, and attending cattle sales.

To contact Mikala customers may reach her at [MLiptrap@AugustaCoop.com](mailto:MLiptrap@AugustaCoop.com) or (540) 460-3169.



# WHY ARE PROTEIN AND FAT CRITICAL TO CATTLE NUTRITION?

Protein is a vital nutrient for maintenance, growth, health, reproduction and lactation in cattle. Protein supplies the microbes in the gut, or rumen bugs, the ammonia and nitrogen sources they need to function. These microbes ferment feed to make Volatile Fatty Acids (VFAs) and Microbial Cell Protein (MCP), which are responsible for digestion.

When cattle aren't getting enough protein, microbial activity decreases, causing a lower rate of digestion. Decreased digestion results in less nutrition available for absorption by the animal. While these effects are internal, you would observe the consequences of protein deficiency in the growth of your cattle.

Fat supports cow body condition and reproduction. Research suggests that the addition of limited fat supplements to beef cattle diets before breeding enhances reproduction by reducing the anestrus period after calving, as well as increasing the number of follicles formed on the ovary of the cow.

How much is needed? Like with most cattle questions, it depends.

With protein, anything less than 8% crude protein in your forages is not enough to feed the rumen microbes for optimal performance. When forage quantity and quality begin to decline, you should start thinking about supplementation to bridge that gap. The amount of supplemental energy or fat provided will depend on current body condition, other feed resources available and target production goals for that animal or herd.

There are several factors to consider when determining the supplemental nutrition needs of your cattle:

- **Forage quality & quantity:** As pastures move from a vegetative state to a reproductive or dormant state, the nutritional value decreases. Vegetative forage will provide the most protein (10-18%), transitional forage will provide 6-9% crude protein and dormant forage will provide the poorest quality nutrition with typically less than 5% crude protein. Protein supplementation can help support rumen bug population and forage utilization in these transitional periods.

- **Body Condition Score (BCS) and Production Phase:** BCS can indicate how your cattle nutrition program is working. You don't want to wait until your herd's average BCS drops and have to play catch up, especially in key production phases like breeding, late gestation and lactation. Consistent monitoring can tell you when supplementation is needed.

- **Age:** Younger, developing cattle that are still growing will have a higher maintenance requirement than mature cattle.

The goal of any protein and fat supplement is to support the returns of producers by enhancing forage intake and supporting better utilization of forages to meet needs of cows. Products like these are great options for protein and fat supplementation for your herd because they are designed to enhance the use of forages, not replace them.

*Purina Mills*



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## EVENTS / CALENDAR

### AUGUSTA CO-OP VENDOR DAY

Wednesday, February 22 | 4 PM – 8 PM

Augusta Expo - Multipurpose Building  
277 Expo Rd, Fishersville, VA 22939

Additional Information:

[www.AugustaCoop.com](http://www.AugustaCoop.com) or (540) 885-1265

Book your 2023 items at drastically reduced rates at our annual vendor day!

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### AGRONOMY CUSTOMER APPRECIATION DAY

Friday, February 10 | 11 AM – 2 PM

Augusta Expo - Building #2  
277 Expo Rd, Fishersville, VA 22939

Additional information:

RSVP to Staci Alger at (540) 885-1265 x 253  
or [SAlger@AugustaCoop.com](mailto:SAlger@AugustaCoop.com)



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