CATTLEMAN'S® ADVISOR
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LAND O LAKES® Feed

Be Careful When Storing Wet Distillers Co-Products

In the last few years, the price for ethanol co-products such as wet distillers grains plus solubles (WDGS) during summer months has provided incentive to purchase co-products and store it to feed at a later date.

Storage can offer added flexibility for smaller cattle producers to use wet co-products, for cow-calf producers who want to purchase wet co-products during summer months for use later, and for larger feedlots that may be able to store large quantities.

At the same time, storing WDGS to ensure against spoilage during warm months can be challenging. According to University of Nebraska experts, small cow/calf producers and backgrounders face the most challenge in storing wet distillers grains. Because wet distillers are 65 percent water and 35 percent dry matter, being able to handle that much water in a feed can be difficult.

Researchers say that wet distillers will keep for about three weeks in cooler winter months, but only about three days to one week in the summer.

A joint project by University of Nebraska-Lincoln Institute of Natural Resources beef researchers and the Nebraska Corn Board resulted in publication of *Storage of Wet Corn Co-Products*, a manual described as "a starting point for producers that want to take advantage of storing co-products."

This manual can be obtained from the Nebraska Corn Board by calling Kelly Brunkhorst at 1-800-632-6761, or it can be downloaded from the following websites:

- http://www.nebraskacorn.org/publications/coproducts_storage.pdf
- http://beef.unl.edu/byprodfeeds/corn_coproduct_storage_manual_may_2008.pdf

Based on research, a number of ways to store ethanol co-products have been identified. Most of these involve storage in "ag bags" or similar silage-type bags or in bunker silos constructed from cement or hay bales.

In order to pack the co-product for storage in these structures, it is typically mixed with some type of inexpensive roughage, such as ground wheat straw.

Precise methods for mixing co-products for storage vary according to the type of co-product, the moisture content and the type of storage you wish to utilize. The *Storage of Wet Corn Co-Products* manual provides details for physically mixing and storing co-products.

Experts say that storage of co-products involves several costs that vary depending on the storage method used. For example, in addition to the cost of purchasing the co-product itself, you must also consider the costs of machinery, labor, storage structures, transportation, interest, shrink and other factors when making decisions to store co-products.

The beef cattle nutrition consultants at your Land O'Lakes Feed cooperative can provide you with more specific information about utilizing and storing WDGS and other ethanol co-products, plus help you develop cattle nutrition programs tailored specifically for you operation.

Give Your Calves a Head Start with Creep Feeding

When milk is not enough, and grass is less than optimal, creep feeding can provide calves with much-needed nutrients to help them thrive and achieve optimal weight more rapidly. It can also support normal weaning weights and enhanced, efficient use of forage and range land.

Healthy calves. Calves that bring top dollar and boost bottom lines. It's what beef producers are always looking for better ways to cultivate.

Producing consistently healthy calves with excellent body condition scores wouldn't be that difficult if high quality forage were always plentiful and calves were always born to prolific milk producers. Unfortunately, that's not always the case.

Milk can't do it all. Because some beef cows produce considerably more milk than others, some calves are at a clear advantage in their development, while others will lag behind. Supplemental feeding is important in the effort to make up for any deficits in nutrition and energy.

And, even when cows are producing milk at acceptable levels, they can only supply about half of the nutrients their calves need, according to an analysis published by Dan Eversole, Extension Animal Scientists at Virginia Tech University.

"Milk from a lactating beef cow furnishes only about 50 percent of the nutrients that a 3-4 month-old calf needs for maximum growth. The remaining nutrients must come from elsewhere if the calf is to realize its genetic potential for growth," his article states.[1]

Plus, after the first 60 days of the calf's life, the cow's milk production begins to taper off, further compromising the calf's nutrient and energy intake.

Creep Feeding Can:

- Provide optimal growth nutrition to develop muscles and skeleton, without adding fat
- Help achieve optimal weaning weights
- Help capture genetic growth potential
- Improve resource utilization of forage and range land

"Studies have revealed that maximum milk production of beef cows occurs during the first two months after calving and then declines. The energy and protein requirements of a growing calf increase well beyond the milking potential of most beef cows to meet the nutritional requirements of calves from birth to weaning."[2]

The average beef cow produces about 13 lbs. of milk a day during a 205-day suckling period, according to Eversole. And, while 10 lbs. of milk are required by a 100 lb. calf to meet daily energy and protein requirements, a 500 lbs. calf needs 50 lbs, leaving what he calls a "hungry calf gap" of almost 40 lbs.

Forage quality isn't dependable. Quality pasture is the best and most economical source for augmenting the nutrition calves receive from milk. However, location, seasons and weather patterns can all affect the quality and quantity of forage.

In spring-calving herds, for instance, when calves start switching from mother's milk to grass often comes right at the time when pasture quality and quantity are deficient in the proper nutrients. In addition, Eversole says the developing rumen of nursing calves often cannot digest the amount of forage it would take to satisfy nutritional needs not met by the calf's milk intake.[3]

How creep feed can help. Because nursing calves can't always achieve normal weaning weights due to inadequate milk production or poor or insufficient forage, creep feeding is a logical way for producers to give their calves an extra boost.

When administered properly, creep feeding has proven an effective strategy for protecting and supporting normal weaning weights in calves born to young or very old mothers, or when pasture conditions are poor. Male calves and crossbred animals respond best to creep feeding.

Starting calves on creep feed. Creep feeding utilizes special rations and feed units, gates or buildings that allow only young calves access. It is generally started when calves are 2-3 months old, when their nutritional requirements approach the first peak of their lifetime and when their mother's milk production begins to decline. Nutritional stress on the mother will be heightened as she conceives her next calf. And, without creep feeding, nursing mothers and calves compete for the same food.

Placement is everything. It's important to locate your creep feeder in a place where calves will notice and use it, and where they will be able to eat at their leisure, without being rushed. That means placing it in an area where the herd congregates, such as near a watering location, hay bunk or even in a shaded pasture.

Many creep-feed formulations are commercially available. Your choice should be based on such factors as the age and breed of the mother, pasture conditions and weather. Land O'Lakes offers options that are suited to almost any producer's situation. Talk to your cooperative or local representative to find out more about the creep feeding solution that's right for you.

References: Creep Feeding Beef Calves, by Dan E. Eversole, Extension Animal Scientist, Virginia Tech University, May 1, 2009, www.pubs.ext.vt.edu/400/400-003/400-003.html 2 Ibid. 3 Ibid.

Her "Hired Hands" Deliver Profits, in More Ways Than One

This amazing "cowgirl" owns, manages and works a 400-acre, 400-head cattle ranch in Central Missouri, by herself. Correction; she would say she does have hired hands. The only distinction is, they are dogs.

When Tammy Goldammer motions with her hands or whistles while she's working cattle, she's not gesturing at her assistants on horseback, or at the cows. She's signaling her cowdogs to do their jobs, for which they've been carefully selected and bred.

You see, in addition to breeding and raising a herd of 400 Angus/Simmental crossbred cattle, Tammy also raises working cowdogs, which she uses extensively in her operation. She also has been breeding and offering them for sale since 2006.

Tammy is a natural in the cattle ranching world, having grown up on a cattle and horse ranch in the Sandhills of Nebraska. She says it's really "all I've ever wanted to do."

After attending the University of Missouri and majoring in beef production and economics, she worked at the University of Nebraska Experiment Station at North Platte in the beef cow program.

"We did feedyard and carcass research, collecting yield grade, quality grade and rib eye information on meat destined for restaurants and grocery stories," Tammy explained.

She moved back to Missouri and took over the daily operation of the Goldammer Ranch when her father died unexpectedly in 1996. Her mother still lives on the ranch with her.

Her herd of 400 head of cattle is comprised of crossbred or composite cattle: part Simmental and Red Angus, and part Simmental and Black Angus. The cow-calf part of the operation occupies 400 acres in central Missouri. When calves reach 550 to 600 pounds, they are sent to a feedyard in Arapahoe, Nebraska where she retains ownership until they are harvested at Fort Morgan, Colo.

Tammy says she enjoys watching the bulls and replacement heifers grow and develop, as well as "fine-tuning genetics, within the operation, to create the ultimate carcass to earn the most premiums on sale and get the greatest return on investment."

She enhances that return on investment with supplemental feeding products such as Land O'Lakes SteakMaker Stress Care® Starter, on which she began weaning calves in 2008.

"It works really well," she said of the starting program. "It has all the nutritional bells and whistles to assist in keeping the calves' stress level in check. It has the correct protein and mineral values, as well as additional components, such as selenium yeast and monesin, which I have custom blended into the pelleted supplement to help improve feed efficiency and utilization."

In addition to the SteakMaker Stress Care® formula she has her Land O'Lakes Purina beef production specialist, Joe Abbott, blend for her, Tammy also uses Land O'Lakes beef cattle range cubes to supplement cows and calves on pasture when they need additional protein and energy, such as during the winter months when forage quality is poor. She also plans to try some of the new Land O'Lakes mineral products in the future.

"Joe really listens and pays attention to the details," she explained. "He tries to configure products that fit each individual operation and not just try to sell you any feed, just for the sale and the commission. He's a good communicator, and he does a very good job of customizing products and matching products to producers."

But, her affinity for Land O'Lakes products doesn't stop with cattle. Tammy also has been using the Land O'Lakes Exclusive® dog food line since 2002 for her "Hangin' Tree Cowdogs," a composite breed that's part Border Collie, Australian Shepherd, Kelpie and Catahoula Leopard.

Since they are bred specifically for cattle work, they are, according to Tammy, tough and savvy and have a lot of "cow sense." She trains them to "hunt 'em up" and "bring 'em," which enables her to run her operation without additional hired hands. She currently has about 40 cowdogs of various ages and stages of training.

For her, the Exclusive brand dog food line provides the quality nutrition her cowdogs need to maintain performance and help her increase the profit potential of her ranch.

"Land 'O Lakes has improved the formulation, and it has everything I think my cowdogs need," said Tammy, who recently participated in a 45-day field trial of new formulations of the Exclusive® dog food. Tammy is also an ambassador for the Exclusive® dog food products.

"Buying a quality product may cost a little more up front, but the end result is worth it. When people come to look at my cowdogs, they can see the difference in coat quality, stamina and overall health."

PRODUCER PROFILE

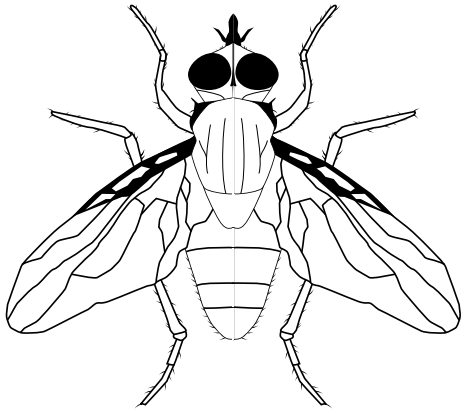
Using Mineral Supplements to Combat Those Pesky - and Costly - Horn Flies

Horn flies. Every cattle rancher knows they are the height of annoying. And on top of all that irritation, they cost beef producers an estimated $800 million per year.

That's because these "obligate parasites," survive by literally sucking the life blood from their hosts. They feed on cattle by cutting through the skin and extracting blood, causing pain and distress to the animal. In addition to the discomfort, their activity has a direct impact on body condition—and on the producer's bottom line.

"Making blood is an expensive process," explains Scott Boutilier, vice president of sales and marketing for Central Life Sciences (CLS) professional businesses. "All that blood is lost body mass, weight, meat and muscle that could have been going on someone's plate."

Luckily, beef producers are not without tools to combat these noxious pests. There is a product that successfully controls the life cycle of horn flies: S-Methoprene, which is the generic name for Altosid® IGR, registered to a subsidiary of CLS.



Horn Fly: Causes an estimated $800 million loss to the cattle industry each year.

Originally developed in the late 1960s for mosquito control, the product was registered by the EPA in 1975 as a cattle feed-through product. When incorporated into cattle feed, Altosid passes through the animals without affecting them. It remains in the manure to control horn flies by mimicking a juvenile fly hormone that inhibits fly larvae from maturing.

"Methoprene by nature is very similar to juvenile insect hormones," said Boutilier, who studied entomology, chemistry and insect physiology in undergraduate and graduate school. "It's very complex chemically but environmentally benign. It breaks out into very simple compounds, so it doesn't have negative effects on the environment."

What's more, the EPA has determined that the use of methoprene is exempt from tolerance. And, unlike many other insect control products that kill the adult, insects have not developed a resistance to Altosid.

"At the same time," he explained, "the product is sensitive to sunlight, so delivery and formulation is critical to its performance. And, you have to make sure you deliver the correct amount to achieve the right effect."

Consequently, CLS has created a variety of formulations, all quite specific to their intended uses. For example, in the cattle market they created a formula that passes through and remains in manure. The dosage is low, typically about 1.1 mg per hundredweight of animal, per day. So, it affects horn flies, but doesn't inhibit the ability of dung beetles to break down manure.

CLS created a special formulations of Altosid® for Land O'Lakes for its RangeLand® Mineral line. The line includes RangeLand® Early Season 6, RangeLand® Fescue 8, and RangeLand® Year Round, all of which contain Altosid.

Land O'Lakes also incorporates cutting-edge technologies that use taste and other properties to control how much the animal consumes, thereby keeping nutrients at appropriate levels for the desired effect.

Mineral Supplements Can Increase the Effectiveness of Your Vaccination Program

Most ranchers assume a vaccinated beef cow has achieved immunity once the vaccine has been administered and the appropriate interval has been observed to allow the cow to develop titers to the disease.

But, when mineral deficiencies exist, that immunity may never be achieved.

According to Justin Sexten, State Extension Specialist-Beef Nutrition at the University of Missouri-Columbia, trace minerals, such as zinc, copper, manganese, selenium and Vitamin E play a significant role in immune function.

Without proper nutrients, such as these minerals, "the cow can't respond to the vaccine because they may not have adequate enzyme activation to get the immune system to respond," Sexten said.

John Paterson, PhD, Extension Beef/Cattle Specialist at Montana State University, agrees, based on research he's conducted on Infectious Bovine Respiratory (IBR) disease.

"We gave all the cows IBR with and without minerals. We had about 25 percent higher titers when minerals were supplemented, including copper, zinc, cobalt and manganese," Paterson explained. "We are convinced from both our work and the work out of Colorado that there is a synergistic relationship between minerals and vaccines."

Paterson thinks it's a clear case for balanced mineral supplementation.

"You are going to vaccinate. Your buyers require it. So, why take the chance of wasting your money on vaccines if you don't have a good mineral program?"

RANGELAND® MINERAL SUPPLEMENTS CONTAINING ALTOSID®	
RangeLand® Early Season 6 Mineral ALTOSID	Granular
RangeLand® Early Season 6 Mineral ALTOSID AU5600	Granular
RangeLand® Fescue 8 Mineral ALTOSID AU5600	Granular
RangeLand® Year Round 8 Mineral ALTOSID	Granular
RangeLand® Year Round 8 Mineral ALTOSID AU5600	Granular

"They've made the product attractive, so that cattle will eat it, but only eat so much," he explained. "Then after a while, they will come back for more. It's an amazing level of sophistication."

Incorporating Altosid with pre-existing feeding programs yields a cost-efficient way of controlling horn flies, according to Boutilier.

"If you are going to feed an animal anyway, you have no additional labor cost to deliver the horn fly control with feed," he pointed out. "Plus, this method is so much easier than an ear tag or back rubber. And, every dollar you spend yields $6-10 dollars in increased weight gain and faster weight gain, so it is a high value solution for cattle producers."

Boutilier recommends that producers start administering the product about a month before horn flies start maturing until about 30 days after the first hard frost. That way they can virtually eliminate the horn fly season. He stressed that administering Altosid 30 days after the first frost is needed to make sure the insect doesn't go into pupae.

"Most cattle producers who start on the program stay on it, because it is effective and delivers a good return," he concluded.

Customer satisfaction is very high."

For more information about options for controlling horn flies through mineral supplements, contact your Land O'Lakes Feed cooperative or your local representative.

Altosid® IGR is a registered trademark of Wellmark International.

Tips for Low-Stress Handling

Keeping animals calm is the key

Temple Grandin has become known, nationally, even internationally, for her keen insight into how human behavior influences animal behavior, especially as it pertains to handling livestock. She recently shared her recommendations for low-stress handling with *Cattleman's Advisor.*

CALM DOWN

"The first thing people have to do is calm down. Stop waving your arms, screaming and whistling. When you get cattle excited, they are harder to handle; Plus it takes them 30 minutes to calm down," Grandin explained. "The most common misconception people have is they want to force cattle to do something, so they scream, they hit."

UNDERSTAND FLIGHT ZONE AND POINT OF BALANCE

"If you walk up to most cattle, they run away. You want to work on the edge of that flight zone (when moving cattle), backing off when they begin to flee. The point of balance is at the shoulder. If you are behind the shoulder, they go forward; if you are in the front, they go backward. It's the same principle as with horses."

BE AWARE OF—AND TRY TO MINIMIZE—DISTRACTIONS

"A rapid movement, a piece of paper blowing in the wind, a reflection on a car…. all these things can excite livestock unnecessarily. Try to control the environment to reduce or eliminate these stimuli."

DON'T CROWD CATTLE

"Fill the crowd pen half full. They have to have room to turn and move. And, one of the best ways to work cattle in the chute is to keep the alley single file and half empty. Then they will walk right up and see the chute, and they have a place to go. Too often, handlers jam big groups up the chute."

INSTALL NON-SLIP FLOORING

"Non-slip flooring is really important. That applies to scales, squeeze chutes, top-loading ramps, even the concrete in front of squeeze chutes. If the floor is slippery, cattle will go crazy, and they could injure themselves and others."

REAP THE BENEFITS; AVOID THE HAZARDS

"Calm cattle have better weight gains, so there is good reason to handle them quietly. It's also a safety issue; incited cattle hurt people and hurt themselves. Stressed cattle can result in meat quality problems, such as dark cutters, which causes large monetary losses to the livestock industry. The National Beef Quality Audit estimates that dark cutters cost the beef industry $5 for every fed animal slaughtered."

Tips for Good Handling

- Move small groups of animals
- DO NOT overcrowd crowd pens; fill them only ½ full
- Handlers should understand the basic concepts of flight zone and point of balance
- Ranches and facilities must have non-slip flooring
- Keep animals calm. Calm, quiet animals move more easily[1]

References: 1. http://www.grandin.com/behaviour/facility/live.hold.guide.html

Mineral Supplements: It's a Balancing Act

Achieving the appropriate balance of minerals in your herd's diet involves much more than just adding copper or zinc. Mineral deficiencies in herds vary widely, depending on soil content and forage. An analysis can put you on the right track in selecting and customizing your mineral supplement program, thereby enhancing your herd's overall health.

It is widely accepted that adding minerals to your herd's diet supports their overall health, and body condition.

But how do you know what minerals to supplement so that your cattle are getting the nutrients they need—and in the appropriate balance—without spending unnecessary dollars?

John Paterson, PhD, Extension Beef/Cattle Specialist at Montana State University, is recognized for his work in mineral metabolism in cattle. His current research focuses on dietary-mineral antagonists and how they influence cattle productivity and morbidity. He recently offered his perspective on this important topic to *Cattleman's Advisor*.

Q. Tell us about your current research on minerals.
A. We spent 15 years looking at mineral metabolism. From a historical perspective, in prehistoric times Montana was a great inland sea, so all that salt settled in this environment. Plus we have a huge amount of coal with high levels of sulfur, which tells you there's lot of sulfate in the water and soil. Cattle that would eat forage in some of these areas had more respiratory problems and sickness, so we started doing research to see if supplements could balance out mineral antagonists such as molybdenum and iron.

Q. What did you discover about how minerals helped?
A. Working with the Montana Feed Industry we have fed 400,000 calves a mineral pellet. The data said that if you give better trace minerals, you could reduce sickness (morbidity).

Q. So how did you determine what minerals to give and in what proportions?
A. We started with the national research council recommendations from 1996 and used their recommended levels as a starting point. Then we looked at the soil in our area. Because of all the sulfates we'd seen in our research, we believed that copper and zinc were needed. We determined efficiency partly by taking a liver biopsy and analyzing it for minerals. Copper, for instance, should be about 90 parts per million (ppm). Of the 1,200 head of cattle we examined in Montana, Wyoming, Colorado, Nebraska, Texas, Nevada and North and South Dakota, many were between 15 and 40 ppm, so they were very deficient.

Q. In what forms did you supplement the Copper?
A. Most copper is provided in an inorganic sulfate form, but we knew we already had too much sulfate because of our soil, so we tried a supplement with a combination of copper sulfate and copper lysine. We also did the same with zinc . We supplemented with zinc methionine and zinc oxide. We used a ratio of 70 percent inorganic to 30 percent organic because we believed the minerals in the forage and water would not affect organic compounds as much as with inorganic forms of the trace minerals.

Q. Were you right about the effectiveness of the organic copper?
A. Yes. We found that uptake of copper was better with the organic complexed forms.

Q. Were there other issues you had to deal with?
A. Our soil in eastern Montana is alkaline, and when animals graze forage on alkaline soil, the availability of copper goes down even more than if they graze forages raised on acidic soil.

Q. How does all this apply to other areas of the country?
A. The specifics may not apply, but the process does. Ranchers have to play detective. They have to observe what is happening with the cattle, and they should do a forage and water analysis and make appropriate changes to their mineral supplements, based on what the analysis shows.

Q. Why is the forage analysis so important?
A. It's not good to just throw minerals at them. Some ranchers look for a silver bullet, such as copper deficiency. That's a misconception. The mineral supplement has to be balanced. Take zinc and copper, for example. Feeding just one in excess can create a deficiency in the other. You have to give them in the right balance.

Q. Doesn't all that end up being expensive?
A. Ranchers always need minerals, even if it's only salt. You want to make sure you are getting your money's worth.

Q. Is it hard to find just what you want in mineral supplements?
A. Most feed manufacturers have different formulations to meet your requirements. Land O'Lakes, for instance, provides minerals in various forms and formulations. They have come out with a new mineral that the cattle eat only so much of, so they control their intake and keep them from getting too many minerals.

Because many factors can alter the mineral needs of your herd, it's important to take Dr. Paterson's advice. Observe your cattle on a daily basis, consider having your forage analyzed to determine just what deficiencies may exist. Then, contact your local Land O'Lakes Feed cooperative for help in providing the proper mineral balance for your specific situation. The result will be more efficient use of nutrients, optimal performance and increased profits from your herd.

Anaplasmosis: An Insidious and Costly Disease for Beef Producers

It's a tricky disease that can cost cattle producers $400 per head, and the industry as a whole, about $300 million each year. With symptoms ranging from anemia and fever to abortions and death, anaplasmosis is one of the most prevalent tick-born diseases of cattle.

A rickettsial parasite called *Anaplasma marginale*, is the culprit. The parasite is transmitted by ticks and biting flies or, less commonly, through blood contaminated mechanical vectors such as needles or dehorning and castration equipment.

The organism is complicated and stubborn. While vaccines are available on a state-by-state basis, they do not provide protection against all serotypes of *Anaplasma*. And, once the organism invades the red blood cells of cattle and other ruminants, it remains there for life. And, that life can be considerably shorter, as the mortality rate for anaplasmosis is approximately 30 percent among infected cows.

To make matter more difficult, the disease is difficult to detect, especially in its early stages.

"You very seldom see clinical signs in young cattle," according to Denny Hausmann, DVM, Technical Services Manager - Cattle, for Alpharma® Animal Health, which develops pharmaceutical products for food-producing animals.

"Where you see the most signs are in older cattle. That's because the younger livestock are replacing red blood cells at a much faster rate and more efficiently."

Sometimes beef producers mistake the symptoms, such as anemia, icterus, fever, and separation from the herd, for respiratory disease because the cattle are breathing rapidly due to inadequate red blood cell capacity, explained Hausmann, who was a practicing veterinarian for 16 years before joining Alpharma. More often, there aren't any symptoms, and older cattle are simply found dead.

But, even if they don't show symptoms of the disease, cattle may indeed be infected; that can spell trouble for the entire herd.

"You can have what we call enzootically stable herds where cattle recover from the disease but become carriers of the organism," Hausmann said. "So, adults appear normal, but they are carrying the disease and can pass it on to the young calves through ticks or vaccinations. Some cows—about 20 percent—will even transmit the disease intrauterinely, and the calves won't show clinical signs."

"So, you can have a herd that looks normal, but is harboring the organism," Hausmann added. "When you purchase new animals and turn them out with your herd, if the new animals have never been exposed to *Anaplasma*, the new animals may get infected and die."

In addition, Hausmann points out that the presence of anaplasmosis in a herd can limit international exports, resulting in further potential losses for producers.

With no complete cure available and limited assistance from vaccines, how do you deal with this insidious threat? Hausmann recommends a multi-pronged approach, employing the following elements.

Watch out for telltale symptoms. Look out for the symptoms of this costly disease, which include anemia, fever, and abortions—even death. If you suspect a case of anaplasmosis, call your veterinarian immediately for an accurate diagnosis.

THE FACTS ABOUT ANAPLASMOSIS	
Organism	Anaplasmosis marginale, a rickettsial blood parasite
Transmission	Ticks, biting flies, contaminated needles, equipment
Symptoms	In adults, anemia, fever, abortions, death In calves, usually no symptoms
Mortality rate	About 30 percent
Recovery	About 70 percent, but cattle remain carriers for life
Prevention	Control flies and ticks, sterilize needles, equipment
Control	Aureomycin, available in Land O'Lakes mineral formulas
Vaccine	Approval depends on the state; some serotype specificity

Prevention is key. Attention should be given to controlling ticks and biting flies to reduce infection, although Hausmann admits that insect control can be difficult, especially during warm months and in grazing situations. However, proper hygiene can significantly reduce the risk of contamination from equipment.

"Producers should always use good clean needles and change them frequently when vaccinating cattle," Hausmann recommended. "When cattle are processed and vaccinated at feed yards, for example, cross contamination can occur if cattle are asymptomatic and handlers don't change needles. Hygiene is equally important when it comes to castration and dehorning equipment."

Control infections with approved antibiotics. Alpharma's Aureomycin®, a member of the tetracycline family of antibiotics, is the only tetracycline approved for free-choice use in controlling anaplasmosis infection. It is not a treatment, Hausmann explained, but it will help control losses from the disease.

He added that Aureomycin, which has been on the market for more than 50 years, has a zero day slaughter withdrawal at all approved dosages and label claims. That makes it easy for the producer to cull cattle as needed, and without withdrawing the antibiotic. While the drug does not require a veterinarian's prescription, Hausmann advises getting the veterinarian involved in the herd's overall health program.

"Aureomycin is widely accepted as a beneficial management tool for anaplasmosis," he said. "We used to think the disease was primarily geographic, with most cases in the Southeast or Northwest where there are large tick populations. Now the disease has been diagnosed in every contiguous state of the union. We even see some cases in the winter."

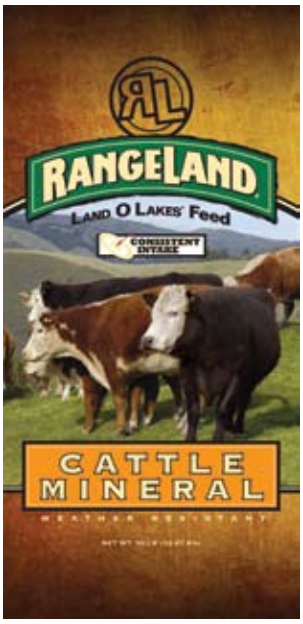
One of the easiest ways to administer Aureomycin is through feed additives. Land O'Lakes provides Aureomycin in several of its mineral supplements; exact formulations vary in different parts of the country. Talk to you Land O'Lakes Cooperative or your local representative to learn more about starting your herd on a mineral program that includes Aureomycin® antibiotic.

Land O Lakes® Feed Introduces the "Next Generation" of RangeLand® Weather Resistant Minerals

The health and productivity of your herd depends on the nutrition package you provide. A properly balanced mineral supplement helps to assure your cattle receive the nutrients they need for your specific situation. To that end, Land O'Lakes research is constantly looking for the best ingredients, and the most effective levels of those ingredients, to assure your cattle perform up to their genetic potential.

Recently, Land O'Lakes Feed introduced the "Next Generation" RangeLand® Weather Resistant Minerals. The new formulations offer consistent mineral consumption, balanced nutrition and improved weather resistant capabilities, all in a new, stronger bag for less wear and tear during shipping and handling.

Consistent mineral intake is critical to meet daily requirements, animal-to-animal and day-to-day. Some animals will eat more of a free-choice product to achieve those requirements, and others may reject the same formulation, both resulting in performance deficits and unnecessary out-of-pocket expenses. RangeLand® Cattle Minerals contain Diamond-V® Yeast Culture to improve mineral palatability and to support intake consistency.



These new formulas are so fine-tuned that they contain all of the essential macro and micro minerals, at proper levels and ratios, designed to address the mineral deficiencies in your forages. They are the most precisely formulated minerals ever offered, so your cattle's nutritional requirements are met every day throughout the year.

RangeLand® Cattle Minerals are formulated to reduce product loss due to rain, snow, or wind. Unlike conventional minerals, a larger particle size keeps the mineral from blowing out of the feeder, and the new formulation assures the mineral will remain palatable, even if it gets wet. The ingredients in these formulations help shed water and reduce bricking in the feeder, so cattle will still eat the mineral, even during inclement weather.

Talk to your local Land O'Lakes Feed cooperative today to learn how these mineral products can help you protect your mineral investment while helping to achieve your performance and profit goals.

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