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## **GRASSROOTS NEWS & VIEWS** anuary 2023

## Director's Note — Ben Campbell

#### Howdy folks,

I hope everyone had a restful and enjoyable Christmas break, we scheduled 3 full days for our family with no guests and no work (outside of chores) to get a proper rest. Now it's onto a new year with new plans, although I'm definitely not a New Year's Resolution guy. I don't believe the New Year is midnight in the dead of winter, to me it's some early spring morning. So I don't wish anyone a happy New Year, just a "happy dead of winter celebration"! A big part of planning for the next year has been to create a shared vision for the ranch with my wife Steph and then making a step by step plan to get to that point. Easier said than done, but it's a common mistake to assume you both have the same vision and then start off on a lifelong path with different end points in mind. We started creating our shared vision at the Ranching for Profit course hosted by FFGA in Okotoks in early December. It was, as expected, a really fantastic event. It's pretty rare for ranches to set aside a full 7 days for uninterrupted time to come together with other ranchers and share so much about yourself and your business in a safe environment like that. A lot of big plans were made and good friendships begun! I really believe in the value of courses like this, it was my second time attending, this time with my wife, and I aspire to attend a third time with one of my sons one day. That would be the last thing I

need to do to call my career a success, is to pass on the business successfully to another person.

As we enjoy what has been so far a great winter for grazing and saving in feed costs, we try not to think about the spring too much and if we'll get enough runoff to fill our empty ponds. Instead of worrying, we plan and the Securing Success sessions FFGA has been hosting through the winter have been excellent to help people access funding for protecting wetlands, increasing grazing management through adding fencing, developing water resources and rejuvenating pastures. I have been mentoring the breakout sessions on grazing planning with Mike Roberts and we have both enjoyed seeing people arrive with a blank piece of paper and leaving full of energy and good ideas! If you haven't looked at the RALP program, I encourage you to do so, it's a great opportunity!

I included a photo of Steph and I speaking at the Prairie Cereals Summit in Banff this year. We spoke on a panel with two other couples who are past and current winners of Alberta's Outstanding

(Ben and Steph are on the right)







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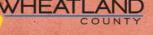


Topics include Livestock First Aid, Pasture Management, Livestock in Our Ecosystem and More!



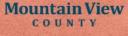


















On the Cover: Securing Success; Grazing and Funding Workshop. Photo: FFGA

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**AGRICULTURE &** ENVIRONMENT























### Alternative Winter Feeding Strategies for Beef Cattle Management



The size of beef herds has increased through time, while winter feeding areas typically have remained the same size. Concentrated wintering sites, while providing for quick access and care of animals, may increase environmental concerns.

Improperly managed confined-animal facilities pose a pollution risk to surface and ground water. Manure nutrients, such as phosphorus, can reach surface water through runoff and cause oxygen-limiting algae blooms. Nitrogen in manure can pollute ground waters through leaching. Additionally, changes in regulatory guidelines may precipitate a need for changes to traditional winter cattle management practices.

Properly managed wintering sites allow beef producers to be proactive in addressing potential future regulations. Wintering sites selected and managed to maintain consistent vegetative cover will minimize the environmental risk of runoff and seepage when compared with bare ground. Additionally, the cost from the buildup of manure and bedding can be mitigated by utilizing practices that limit confinement.

First, we will define an animal feeding operation (AFO). Drylots are AFOs with total containment of runoff and manure. Lots are usually dirt surfaces that are shaped and sloped to engineering specifications to allow proper drainage and collection of runoff.

A containment pond is constructed at the base of the lot slope. Containment pond effluent levels are reduced through evaporation or land application as fertilizer.

#### Alternative Winter Feeding Strategies **Custom Feeding**

Custom livestock feeding gives the producer the flexibility and freedom of wintering his or her cattle somewhere other than his or her home place. Many permitted feedlots throughout North Dakota custom feed cattle.

#### Advantages

Producers have flexibility and free-

 Producers wintering cattle somewhere other than their home place realize labor

#### **Disadvantages**

• Producers have an added economic investment.

#### **Extending the Grazing Season**

Grazing periods can be extended by several months through stockpiling and managing forage for late-season use. Forage stockpiling practices include bale grazing, swath and windrowed forage grazing, grazing late-summer-planted cover crops or rested pastures, and utilizing postharvest Corn and cereal residues also are viable crop residues.

Extending late-season grazing can distribute manure across a larger area and allow cattle to be maintained on vegetative growth. Allowing limited access and moving cattle frequently is important for uniform manure distribution. Additionally, it can reduce feed waste. Depending on snow accumulation, a moveable electric fence system can be utilized for consistent grazing across a pasture.

#### **Advantages**

- Producers see a winter feeding cost reduction through savings in machinery use, manure handling and fuel.
- Potential improvements occur in pasture productivity through better nutrient cycling in the system. Winter-grazed pastures have shown increased forage protein content and overall yields in comparison with forage fields that have been applied with drylot manure and compost.

#### **Bale Grazing**

Bale grazing is an alternative wintering option that involves strategically placing hay bales throughout a field (crop or hay land) and utilizing fencing to allocate bales incrementally to the herd.

#### Advantages

 More uniform manure distribution can occur through periodically moving the fenced feeding area for the herd. (Bales typically are placed 20 to 25 feet apart. The removal of twine also has been shown to help animals uniformly consume the bale, minimizing waste.)

#### **Swath Grazing**

Swath grazing is another alternative wintering option. It involves swathing a summer-grown annual or perennial forage prior to a killing frost. Make sure the swaths are on top of the stubble, narrow and as deep as possible to reduce spoilage of the swathed forage.

#### **Advantages**

• Forage utilization is improved by limiting animal access to the amount of forage that can be consumed in a week.

• Frost-tolerant cover crops, such as turnips and cereals, maintain quality as late as De-

#### **Disadvantages**

• Cover crops can be covered by snow easily, reducing accessibility, compared with windrowed forage.

#### **Use of Rested Pastures**

Pastures that have been rested for most of the growing season can be a good option for early winter dormant-season grazing. fall and early winter grazing options. Using equipment at harvest that allows for the straw and chaff to be placed in windrows and bunches can increase the ability to use cereal crop residues for late-season graz-

#### Disadvantages

- Forage quality can be low and cattle may require supplementation to achieve desired performance.
- Snow accumulation may reduce forage consumption.

#### Shelter Considerations for Alternative **Grazing Strategies**

#### **Portable Windbreaks**

During extreme cold periods, cattle utilize most of their nutrient intake to meet maintenance requirements, leaving very little extra nutrients available for weight gain. Windbreak fences provide shelter, reducing animal maintenance requirements and allowing producers to maintain or improve animal gains and body conditions. Portable windbreaks can assist with providing wind and snow protection for animals that are exposed to the elements.

A multitude of materials can be used to construct portable wind fences. Utilizing materials that are durable will increase the longevity of the fences. A durable option would be portable windbreaks constructed on 25-foot lengths of pipe frame with board slots, guardrails or sheets of steel. Paneling of 6 to 10 inches works well.

Windbreaks should be constructed to allow 20 percent of the wind to pass through. The goal is to reduce wind speed but prevent snow drifting. Slot openings greater than 2 inches allow too much wind through. Allowing for 4 to 6 inches of open space at the fence base will promote better drainage and drying.

When selecting a site for fence placement, prevailing winds and drainage

(Continued on page 4)

(Continued from page 3)

should be considered. Other landscape features such as shelter belts, hills and ravines should be factored in as well.

As a general rule, 1 linear foot of windbreak protects enough area for one cow when the fence is 6 to 8 horizontal feet. Naturally, windbreaks are a site of animal congregation, so being able to move them periodically helps reduce manure buildup in one area.

#### Nutrition

## Considerations for Alternative Winter Grazing

Alternative grazing systems may or may not have adequate nutrients available to meet the maintenance requirements or improve condition of the beef herd. The type of system employed, growing season conditions, type of animal and stage of production are factors that affect nutrient availability. When utilizing alternative wintering systems, frequently testing feed and monitoring cattle condition will assist with making sure cattle nutrient needs are being met. Depending on the situation, protein or energy and mineral supplements may be needed

Additionally, management of the number of days in the feeding area may need to be adjusted based on stage of gestation, weather and protection available.

#### Water

## Considerations for Alternative Winter Grazing

Cattle require a fresh water source for optimal health and performance. The water content of feedstuffs being consumed and environmental factors play a role in animal water needs. When air temperatures are less than 29 F, cattle require 2 to 3 pounds of water per pound of dry matter intake. Water requirements can double as a result of large temperature changes such as, minus 5 to 30 F

Snow can provide water to cattle. Approximately 12 inches of snow can provide 1 inch of water. However, some animals may not consume snow readily, and ice crusts often form on snow and limit animal consumption. Water may need to be hauled to cattle or wells may need to be constructed and plumbed into a water delivery system. Many different types of water delivery systems are available.

Portable waterers powered by solar, wind or a generator can be utilized. Stationary waterers may be heated by electricity, propane or geothermal energy. The wattage of the waterer, and distance and size of electrical lines need to be considered to adequately heat and supply cattle with water. Stray wattage also can cause animals to refuse water sources. Check waterers often to ensure that animals are drinking regularly.

Regardless of the water system, the wa-

ter trough should be insulated and heated. This ensures that cattle have water and prevents damage to the waterer from expanded ice. The watering system needs to be checked regularly during extremely cold days for ice removal and ensuring the watering system is working correctly.

#### **Winter Site Selection**

Ideally, the wintering site should be as far away from a water source (surface water/well) as possible. South-facing slopes allow more direct sunlight, which helps warm cattle and the area.

The grade of the site is also an important consideration. Nearly level slopes (zero to 2 percent) reduce the potential for nutrients to run off and reach bodies of surface water. Moderate slopes (2 to 6 percent) have greater runoff potential, and areas with steep slopes (greater than 12 percent) should be avoided.

Management practices such as buffer strips or leaving crop residue can aid in nutrient filtration and reduce pollution from wintering sites.

Rotating winter-feeding areas from year to year can reduce nutrient loading. Employing feeding locations where nutrient loading is low prevents buildup of excessive soil nutrient levels through time.

#### **Clean-water Diversion**

Construction of clean-water diversions prevents runoff from accumulating around the feeding area. This reduces mud, odors and sick cattle.

Clean-water diversions must be constructed of a relatively impervious material (clay) and be able to divert water from a 25-year, 24-hour rainfall event while maintaining an additional 0.3 feet of freeboard (additional capacity). The minimum width of the top must be 4 feet and have a settlement factor of 10 percent.

The slopes of a clean-water diversion should be shallower than a ratio of 3 horizontal-to-1 vertical. Areas that might endure equipment traffic should have slopes with a ratio of 6 horizontal-to-1 vertical.

The channel grade must be designed to prevent erosion. The maximum acceptable channel velocity is 2 feet per second on sandy soils and 3.5 feet per second for clay dikes with vegetation. The clean-water diversion also must be inspected routinely for erosional wear, ridge height and other factors that might affect the structural integrity.

#### Summary

Alternative winter-feeding systems can be ranch-efficient and economically feasible, and reduce the chances of environmental issues for a cattle producer. Periodically moving shelter, access to feed and water aids in uniformity of nutrient distribution, alleviating effects of nutrient loading from manure and urine. Feeding sites should be on gentle southfacing slopes and away from surface or well water. Utilizing the management practices described in this publication can aid the producer in maintaining cattle on locations with consistent vegetative growth, thereby preventing an operation from being classified as an animal feeding operation and concurrently reducing environmental violations.

Author: Mary Keena, Chris Augustin, Karl Rockerman

Original Article: <a href="https://www.ag.ndsu.edu/publications/livestock/alternative-winter-feeding-strategies-for-beef-cattle-management">https://www.ag.ndsu.edu/publications/livestock/alternative-winter-feeding-strategies-for-beef-cattle-management</a>



## OVERCOMING CHALLENGES IN WEED MANAGEMENT IN REGENERATIVE AGRICULTURE

Understanding the complexity of weeds and why they are there helps in figuring out how to manage them. We will combine experiences and science, and explore this subject in a working system at this workshop.

February 27 - Standard Hall or February 28 - Fort Macleod Community Hall

11:45pm - 3:00pm (Lunch Included)

FFGA Member: \$20 / Non-Member: \$25







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## Pasture insurance helps farmers manage dry conditions

In farming there are the things you can control – your crop and commodity choices, management decisions, risk management choices – and then there are the things you can't control.

Like the weather and growing conditions. Farmers and ranchers have always been subject to the whims of weather. From late springs to early falls and too little rain to too much, Alberta's producers have had to find ways to manage their risks to survive and thrive.

Over the past few years, Alberta has experienced a more unsettled weather pattern, one which has led to drier than normal conditions in many areas of the province. These dry conditions left livestock producers scrambling for pasture and winter feed and resulted in two AgriRecovery initiatives – the 2021 Canada-Alberta Livestock Feed Assistance Initiative and the 2023 Canada-Alberta Drought Livestock Assistance initiative.

"My wife and I joke all the time that every ranch should be called The Next Year Ranch, cuz, you know, it's always in conversation, 'Well, next year this will be better, next year that will be better," says Trevor Liboiron, who runs a 250 head cow-calf operation in the Jenner area.

"You have to have that hope for next year, that it's going to be better, you just keep carrying on.'

But without risk management, getting to that next year can be challenging. Agriculture Financial Services (AFSC) offers a variety of insurance and income stabilization options to help producers navigate risks and give them peace of mind.

This year, for Liboiron, that peace of mind came from AFSC's Moisture Deficiency Insurance (MDI).

"We've used the Moisture Deficiency program, I believe, for three years now," explained Liboiron. "This year was, well, basically immeasurable rain - we didn't have any rain this year.

"With the Moisture Deficiency program, it was able to pay us out some money to, you know, get feed for the cattle and be able to basically survive another year."

It's a similar story for Curt Hale of Maverick Livestock Company Ltd. Hale, along with his wife, sons, and grandsons, runs between 1,200 to 1,400 cows in the Fairview

"This is our first year for the MDI program," explained Hale. "It's helped us tremendously to get through this time of tough feed prices, shortage of feed. Without it, we would have been a lot worse shape than we're in, so we're really thankful that we had it this year."

Insuring with MDI Moisture Deficiency Insurance, in its current form, was introduced in 2005. Kalen Paulson, a product coordinator with AFSC, said that the program was well received by producers and more and more producers are choosing to add it to their insurance mix.

With MDI, producers can insure native, improved, bush or community pasture. As an area-based program, MDI uses precipitation and temperature information from a network of weather stations throughout the province to reflect moisture conditions. This information is then compared to long-term normals and when precipitation falls below certain thresholds, payments are triggered.

Producers select up to three weather stations near their farm that they feel reflect their nificant drought conditions during the 2023 pasture locations. At the same time, they choose either short or long season, which allows them to divide the growing season and coverage into different months. Finally, producers choose how to weigh the precipitation, picking the option that best reflects their area, pasture type, and management practices.

Moisture Deficiency Insurance, with all its options, can seem somewhat overwhelming. However, AFSC insurance relationship managers can help producers personalize the program to their operation.

"To work with a team that understands agriculture is huge," said Liboiron. "It just makes the whole process easier.

"I know we hadn't used Moisture Deficiency in the past because it was kind of daunting and then we sat down with a rep and it was done in minutes. It just kind of clears things up and makes it easier to understand."

Changes make MDI more responsive

Over the past few years, AFSC has made significant changes to Moisture Deficiency Insurance, including moving to monthly payments, introduction of an extreme temperature ture Deficiency program to others," said Liadjustment, as well as changes to minimum daily moisture amounts.

"We listened to our clients' feedback, and they were telling us that these were places where we could improve the program," explained Paulson. "By introducing extreme temperature adjustments, we've made sure the program can account for the impacts of hot weather and how it can exacerbate dry conditions. By increasing daily moisture minimums to 1.0 mm, we ensured that only moisture that can help support pasture growth is counted.

"And, finally, the move to monthly payments means that we can get money into producers' hands more quickly – when they need

Those changes have made a big difference to the program. Liboiron said that increasing the minimal rainfall, adding a temperature factor, and moving to monthly payments helped immensely. Monthly payments means that if he receives a big rainfall in one month, but no additional rain after that, the program will still pay out.

"The changes they made to (MDI) this year made a huge difference," said Liboiron. "It pays when it needs to pay, so the changes they made to the program made it substantially better."

While Hale is new to the program, he can also see how the recent changes have im-

"It appears to me that AFSC is looking at the whole situation and making some great changes, realizing that these meet the needs of the farmer in a better way."

If things go sideways

Many parts of Alberta experienced siggrowing season, drying out pastures and leaving producers looking for options. AFSC's Moisture Deficiency Insurance paid out \$326.5 million in claims for the 2023 growing season, allowing producers to source additional summer forage, water, and winter feed to support their herds.

"We don't buy insurance to make money," said Hale. "It's just to get us through when we have these kinds of things. It just worked out for us this year that we had one of the worst years we've ever had. I know that's not going to happen every year, but in those when it does happen, you've got it.

"So I'm saying to anyone else, if you're considering any type of insurance or anything like that, I'm not aware of any that is more suited and tailored to our needs than MDI."

Liboiron feels it just makes sense for producers to protect themselves with MDI. He said it provides a backstop for the disasters that can happen and gives him a bit of peace of mind.

"I definitely would recommend the Moisboiron. "It supplies you with a with a background - I know sometimes the premium is a little hard to swallow every spring – but it's on years like this that it makes it seem like it was very well worth it, so I definitely would recommend it."

The premium can seem like a lot in springtime, agrees Hale.

"We have a fairly large land base – it's cheap enough coverage per acre – but when you got a lot of acres it's a bunch of money you got to put out up front."

'It's one of those things you got to make the call but it's kind of like a fire extinguisher - you buy one hoping you never need it, but when you do need it, you've got it."

Author: AFSC





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# SECURING SUCCESS: FUNDING & GRAZING STRATEGIES FOR YOUR OPERATION

Join FFGA at one of the workshops on local funding opportunities. At these workshops, producers will have a chance to network with experts from the programs and other local organizations. In the afternoon choose to work hands on with experts and technicians in 1 of 3 breakout sessions; Environmental Farm Plans, RALP Funding Support, or How to Build your Grazing Plan.

January 10, 2024 - Acme Community Centre January 30, 2024 - Patricia Community Hall 9:00am - 4:00pm

<u>Cost (lunch Included)</u> FFGA Member \$25 / Non-Member \$30

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## Drought feeds vitamin A deficiencies



Areas from Calgary to Winnipeg are either abnormally dry or facing drought conditions, according to Agriculture Canada's Canadian Drought Monitor. Producers over much of the Prairie region are anxious about pasture quality and sufficient feed supplies to get them through winter. An open fall in many areas has supported extended grazing on poor pastures, post-harvest stubble fields and drought-starved crops. Many producers suffered through dry pasture conditions, needing snow cover and spring moisture to replenish grasslands. Quality of winter feed supplies, when available, varied greatly. Vitamin A deficiencies are a real possibility.

One of the essential nutrients cattle fall short of grazing dry pastures and consuming crop residue is vitamin A. Cattle on green grass get plenty of vitamin A, an important nutrient, often overlooked through fall and winter. Cattle and sheep cannot generate their own vitamin A; they need to eat green plants containing carotenoid precursors such as, carotene — found in the orange-yellow pigments in green leaves of plants. Ruminants then convert carotene to vitamin A in the wall of the small intestine. During Prairie winters and long open falls in drought years, vitamin A in rations is often deficient and needs to be supplemented. Including vitamin A in mineral mixes, incorporating it into grain rations or by injection are common and effective methods of ensuring cattle get the vitamin A they need for health, reproduction and growth.

Vitamin A is a fat-soluble nutrient that plays a role in many vital functions — especially related to health, reproduction and growth. It plays a role in low-light vision, normal kidney function, development of bones, teeth and nervous tissue. Vitamin A maintains delicate tissues lining the respiratory, digestive and reproductive tracts — keeping them pliable and in good working order. Vitamin A deficiency thickens these tissues. causing them to become more brittle and increasing susceptibility to infection because the lining loses its effectiveness as a barrier to pathogens. In addition, a hard and brittle gut cannot absorb nutrients, resulting in poor gains.

Vitamin A deficiency also impairs repro-

duction. A shortage of vitamin A reduces spermatogenesis (sperm production). Low vitamin A levels account for resorption of fetuses in pregnant females and abortions. Calves do not grow well without vitamin A.

Cows need 30,000 to 50,000 international units of vitamin A/head/day. Injectable vitamin A is a quick method of returning the cow's vitamin A status to normal. A dose of 1.5 million IU of vitamin A is needed for adult cows. If severely vitamin A deficient, multiple injections over time may be needed.

Deficiency symptoms include loss of appetite, rough hair coat, reduced feed intake, reduced growth, night blindness, edema, diarrhea, low conception rates, abortions and stillborn or weak calves. Calves born to cows deficient in vitamin A often have trouble mounting a normal immune response. Response to vaccines is, therefore, impeded.

Many fields were dry going into fall. In areas affected by drought, snow reserves over winter or precipitation last spring failed to replenish deficits. During drought, available carotene in forage is low. Therefore, whether cows are grazing dry grass or consuming hay made from drought-stressed forages, vitamin A intake suffers. Even when hay is made from good green forages, carotene is unstable and declines over time.

In a normal pasture season, the daily intake of carotene converted into vitamin A is three to five times the amount required. Cattle store up to four months of vitamin A in the liver during this period and under ideal conditions, cattle fed good-quality hay during the winter maintain adequate vitamin A levels. Drought conditions decrease the amount of carotene in plants, limiting the ability of cows to accumulate liver stores during grazing. Additionally, harvested forage during drought has extremely low carotene levels, contributing to the inability of cows to consume their

requirements during winter feeding.

Another complicating factor is that drought-stressed forages have elevated nitrate levels. High nitrate levels are thought to lead to the destruction of carotene and vitamin A in the digestive tract. Depressed thyroid function also plays a role in increased vitamin A requirements.

Drought compounds vitamin A deficiency because plants go dormant early in the year and it's a long time before animals eat green grass again. Producers need to pay attention to the vitamin A status of their cattle when feeding hay. Storage conditions affect vitamin A levels. Carotenes deteriorate during storage. Vitamin A levels vary tremendously throughout a bale. There is virtually no carotene in the outside layers of brown and sunbleached bales. Internally, green and preserved forage contains plenty of carotenes. Ultraviolet light from the sun destroys vitamin A. Heat and humidity increase the rate at which vitamin A breaks down.

Supplementing cattle with vitamin A is relatively easy and cost-effective. But by the end of winter in Western Canada, vitamin A deficiencies usually exist without supplementation. This year will be worse.

With calving season approaching, it's time to review feeding programs. Adequate vitamin nutrition is key to a successful calving and rebreeding season. Another factor might come into play: Due to global supply chain challenges and increased demand, product shortages are a possibility.

Author: Dr. Ron Clarke
Original Article: <a href="https://www.canadiancattlemen.ca/vet-advice/drought-feeds-vitamin-a-deficiencies/#:~:text=During%20drought%2C%20available%20carotene%20in,unstable%20and%20declines%20over%20time.">https://www.canadiancattlemen.ca/vet-advice/drought-feeds-vitamin-a-deficiencies/#:~:text=During%20drought%2C%20available%20carotene%20in,unstable%20and%20declines%20over%20time.</a>



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February 13, 2024

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February 15, 2024 Lilybrook Herefords Claresholm, AB

#### Agenda:

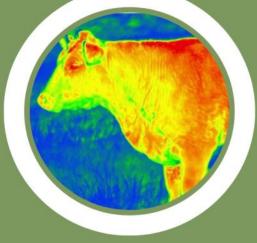
- 9:45am Coffee & Registration
- 10:00am Presentation & Cattle Demonstration with Dr. Al Schafer
- Noon Lunch (provided)
- **1:00pm** Producer Experience with Doug & Tim Wray
- **2:00pm** Genetic Technology presentation with Livestock Genetc

#### Cost:

FFGA Member- \$25 / Non-Member- \$30

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<u>Vision:</u> We envision a global community that respects and values profitable forage production and healthy soils as our legacy for future generations.

This Publication is made possible by our major funder -

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