



Innovation, education and regenerative agriculture

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GRASSROOTS NEWS & VIEWS JUNE 2020

Director's Note — Sean LaBrie

Howdy FFGA members;

As I sit down to write this, Alberta is in the second phase of reopening to our new normal, post COVID19. From the farms and ranches up through the food supply chain to the grocery store checkout, we have been adapting, learning, surviving. The world has been given a wakeup call to do things differently, to appreciate what really matters, *to do better*.

Here at Difficulty Ranch, the beginning of better started fifteen years ago when we joined Foothills Forage and Grazing Association (FFGA). They helped us find a mentor and complete an Environmental Farm Plan (EFP). As a benchmarking tool, the EFP helped assess our ranch's characteristics and develop a risk rating that highlighted where management decisions could be made to improve our entire operation. Our EFP has provided access to numerous county, provincial and federal programs that contribute to our vision of continual ranch improvement, (connect with Sonja Bloom at 403.700.7406 to start your EFP today).

Another step towards better was becoming certified with the Verified Beef Production Plus (VBP+) program. A 3rd party audit ensured that our management practices adhered to the highest standards for food safety, animal care and environmental stewardship.

The Canadian Beef Sustainable Acceleration Program was another step towards better. It assists by strengthening consumer trust and promoting the beef industry via the guiding

principles as defined by the Global Roundtable for Sustainable Beef.

These certifications and programs have led to many partnerships that are promoting the agricultural sector as a regenerative way to heal the planet and feed her people. Our ranch's focus on the environment is mainly through riparian and wetland enhancement. Partnering with Alternative Land Use Services (ALUS) and Alberta Conservation Association (ACA) has resulted in fencing off approximately 4.5 km of the Dogpound Creek as well as many adjacent wetlands. Our projects are already encouraging vegetation to develop in the riparian areas, which means more habitat for wildlife and pollinators, and more biodiversity overall.

Our work with these programs and others has created a network of education, support and opportunities that we value highly. As a result of our network, an un-anticipated partnership is being developed with a large marketing and communications company that will be planting 1000 trees (one for each of their employees) on our ranch to show support for the environment and encourage public engagement. This is a great win/win that is yet another step to better.

Belonging to FFGA, accessing all it's resources and learning from our members is a great way to begin your journey to better!

Sean LaBrie

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Checking water from afar



For cattle producers who rely on wells in pastures and rangelands as a water source for their cattle, much time is spent checking water to make sure that windmills and submersible wells are delivering the water cattle need. These water checks are often made daily or every other day to ensure water is available.

When problems occur with a water source cattle depend on, time is limited to get the problem fixed, haul water or move the cattle to another location where water is. Timeliness of knowing there is a problem with a well or a tank that stores water is essential to being able to correct the problem quickly and avoid the detrimental impacts of cattle being without water.

In the last several years, three technologies have been developed that can significantly reduce the time it takes to check water and know a problem has occurred.

Remote cameras and cellular technology

Remote cameras that communicate

with mobile devices by using cellular service are a recent technological development. For much of the United States, cell service is widely available. This technology allows a producer to program a camera to take pictures of a water tank at different times of the day. These pictures can then be automatically sent to a smartphone or other mobile

device using email or text, and be viewed to see if a problem is occurring with a water source.

If the level in the water tank is not where it should be, based on a series of pictures taken, the person caring for the cattle can immediately be made aware. The cost ranges from \$150 to \$750 per camera, plus a monthly data or service fee. Some cameras come with a limited number of pictures that can be delivered per month as part of the purchase package. Solar panels for charging batteries can be added to remote cameras to reduce the frequency that batteries need to be replaced. For areas with poor cellular signals, there are external, high-gain antennas that can boost signal reception. Companies are available to help producers identify the equipment and data plan that they need, as well as set up the cameras and the monitoring system.

Remote cameras can not only save time and travel, but they also can give peace of mind and freedom. Would you like to take a couple of days of

vacation? Attend a family member's activities? Being able to check water from anywhere through your smart phone or mobile device could help you achieve that. Knowing you can look at your mobile device anywhere and see the water levels in a tank gives assurance in knowing that cattle have water. **Remote sensors and cellular technology**

Another technology that can be very valuable for producers, who utilize pipelines to deliver water, is a remote pressure sensor. These sensors can transmit pressure readings via cellular signals to mobile devices, which allows for constant monitoring of what is happening in terms of water pressure on a pipeline. When water pressure moves outside of an identified acceptable range, a notification is sent that alerts the user to the potential of a problem. This can be especially valuable for producers who are depending upon a consistent, large volume of water to be delivered to cattle when there is minimal storage capacity at the tank. Should a well go down, electricity shut off, or a float come off at the tank, this monitoring system can quickly alert the person supervising the system.

Remote sensing technology paired with cellular service also allows for monitoring of water levels in storage tanks. Utilizing ultrasonic level sensors, measurements can be programmed to be taken at different times of the day and have these measurements delivered to a mobile device. This allows people monitoring water levels in a

On the cover: Moving cattle on the Ribbon Creek Ranch near Three Hills, AB. Photo: Sonja Bloom

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Thank you for your support!



7 common cattle fencing mistakes



Here are seven of the most common errors in livestock fencing, and how to avoid them.

Whether you're an experienced hand or just learning the basics of wood, wire and tape, there's always something more to learn when it comes to livestock fencing. **Jim Gerrish**, of American Grazing Lands Services LLC, in May, Idaho, and **Kevin Derynck**, Gallagher territory manager based in Keystone, S.D., shared their thoughts on the seven most common cattle fencing mistakes.

1. Corner posts are undersized, or not deep enough

This ranks as the top mistake in fencing, be it barbed, high-tensile wire or woven wire. The main issues are undersized posts and corner posts not set deeply enough, particularly in sandy or soft soils. Gerrish, who has clients in 43 states, says, "the depth in the ground should be equal to, or greater than, the height of the top wire."

Post diameter depends on the strength of the fence. Gerrish says the lightest-duty fence, such as a 1- or 2-wire, high-tensile pasture subdivision fence, only requires a 4- to 5-inch-diameter post. A 5-strand barbed wire fence, or 5- or 6-strand high-tensile wire fence, requires a 6- to 7-inch-diameter post. For net wire fences, Gerrish recommends an 8-inch-diameter post.

How to fix it: Keeping corner posts in the ground is Derynck's chief

concern. He says a 10-foot brace is the ultimate, and he favors a "floating diagonal" bracing system, in which the angle brace is a 4-inch by 10-foot post notched a half-inch into the main corner post. The other end is set on top of the ground opposite the corner post.

And he cautions against using drill stem – the metal pipe byproduct of oil wells – for corner bracing an electric fence. Unlike

wood, it can conduct electricity and lessen the efficiency of the fence.

2. Post spacing is too close

Fencers tend to use too many posts, which likely stems from people's experience with barbed wire, where the rule of thumb was 1 post every rod length (16.5 feet).

How to fix it: In an electric-fencing system, Derynck recommends fence post spacing 80-100 feet apart, or about 50 posts per mile. He suggests using a "stay" – a shorter post that sits on top of the ground and holds wires up – if posts are spaced 100 ft. apart. Gerrish prefers his fence post spacing closer together, at 50-70 feet.

3. Using the wrong sized energizer

Gerrish recommends 1 joule of output per mile of fence, regardless of how many strands of wire. If there's a total of six miles of fence, it requires a minimum of a 6-joule energizer.

How to fix it: Derynck, who represents Gallagher in Nebraska and the Dakotas, recommends a low-impedance energizer, with a low-amp fuse. "The larger the energizer, the smaller the voltage," he says, because larger energizers are apt to power through more vegetation and short out. He considers 7,000-8,000 volts high for an energizer.

4. Ground rod is too close together

Grounding is 99% of the electric fence, the specialists explain. Gerrish uses this rule of thumb: 3 feet of ground rods per joule of energizer out-

put. So if the fence is using a 6-joule energizer, 18 feet of ground rods are called for. "Typically this would be three, 6-foot ground rods, spaced at least 10 feet apart," Gerrish explains.

How to fix it: Gerrish says spacing is key, as a ground rod is essentially an antenna receiving electrons flowing through the soil and back to the energizer, completing the circuit. Ground rods can also interact with a given volume of soil. If three ground rods are driven into the ground 6 inches apart, in essence, they act as one ground rod because of the volume of soil they interact with.

Derynck says most people insert three ground rods near the energizer. He encourages people to space ground rods throughout the whole network of fencing, particularly if the average rainfall of the fenced area is less than ideal for proper grounding.

Galvanized rod is the best for ground rod, and most livestock fencing companies use an insulated galvanized lead-out wire on energizers. "Galvanized isn't as expensive as copper and you don't ever have to worry about corrosion," Derynck says. If there's galvanized wire in the electric fence system, keep everything galvanized. Derynck strictly recommends 12.5-gauge galvanized wire, galvanized ground rods and galvanized connections.

"The most effective place for the ground system is in continuously damp, high-mineral soil," he adds.

5. Don't moose-proof; make fence wildlife friendly

How to fix it: Rather than strive for a fence that's elk and moose-proof, Gerrish suggests a flexible fence. When he moved to Idaho from Missouri, the fencing was high-tensile electric on T-posts, but the T-posts were being bent and insulators broken off due to wildlife. He replaced T-posts with PowerFlex fence posts and has had few problems since, he says.

Another consideration is building a low-profile fence. On Gerrish's 2-wire range fences, the top wire is at 30

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Canadian Agricultural Partnership Program Update



There are 2 new themes that producers can apply to for cost-share funding.

Agricultural Training Support - Accepting Applications

Purpose: To provide support to the agriculture and horticultural businesses to help address the impact of COVID-19. The grant will help offset the costs of training and ensuring safety protocols are in place for new employees hired from the domestic labour pool.

Eligible activities:

- training for new hire employees in the area of COVID-19 safety procedures
- training for new hire employees in occupational health and safety
- training for new hire employees in work-related duties and activities

<https://cap.alberta.ca/CAP/program/TRAINING>

Alberta Beekeeper Stock Replacement - Coming Soon

This program will offer support to commercial beekeepers to mitigate the incremental costs that have arisen due to the COVID-19 pandemic for the purchase of colonies. This will allow the industry to continue contributing to the honey market & maintain pollination in crops.

For updates on when this program will open visit <https://cap.alberta.ca/CAP/program/BEES>



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Carbon sequestration a positive aspect of beef cattle grazing grasslands



sequestration in both soil and biomass to reduce negative environmental effects,” Owens said. “These practices enable use of the natural carbon cycle to replenish carbon stores while reducing the amount of carbon in the atmosphere.” That is where beef producers who employ grasslands as a pasture resource come in. Research by R.F.

Follett and D.A. Reed published in 2010 examined the effects of grazing on soil organic carbon storage in North American rangelands. Follett and Reed found impacts ranging from no change to up to 268 pounds of carbon stored per acre per year.

“The variability in the impact grazing can have on carbon sequestration on rangelands, pastures and grasslands is due to differences in specific grazing management practices from operation to operation,” said Sara Place, assistant professor of sustainable beef cattle systems with OSU’s Division of Agricultural Sciences and Natural Resources.

The number of cattle grazed per acre, fertilization and prior land use can all affect how much carbon is stored.

“While changes in carbon sequestration due to grazing or other management decisions may be relatively minor on a per acre basis, they can translate into significant impacts if implemented on a large scale given the number of acres of grasslands in the world,” Place said.

Research by R. Lal published in 2011 indicated if soil organic carbon in agricultural ecosystems and grasslands could be increased 10 percent globally during the 21st century, the atmospheric concentration of carbon dioxide could be reduced by 100 parts per million.

“In addition to the potential for grazing to increase the capacity of soil carbon sequestration in certain cases,

grazing beef cattle and other ruminants such as sheep and goats provide economic, societal and environmental value from available pasture and grassland resources,” Place said.

Pasture and grasslands account for approximately 27 percent of the land area in the United States. Avoiding the conversion of this land to tilled cropland and residential uses could help prevent further increases in greenhouse gas emissions.

Additionally, establishing permanent pastures for grazing beef cattle on degraded croplands that are currently tilled or of poor quality can sequester carbon at rates comparable to forests, according to a study released by the Council for Agricultural Sciences and Technology in 2011.

When it comes to beef production, the U.S. Environmental Protection Agency estimates direct emissions from the U.S. beef industry are only 1.9 percent of the total U.S. greenhouse gas emissions.

“Regardless of the beef production system, enhancing carbon sequestration through well-managed cattle grazing practices and improved feed production can reduce the carbon footprint of beef,” said Clint Rusk, head of the OSU Department of Animal Science.

Most beef cattle in the United States spend the majority of their lives on pastures and grasslands. For those finished in a feedlot, approximately 65 percent to 85 percent of their lives will be spent grazing. For grass-finished beef cattle, up to 100 percent of their lives may be spent grazing.

The main difference in carbon footprints between grass- and grain-finished beef occurs as a result of the time spent in the finishing phase, the type of feed consumed and the body weight of the animal at the end of the finishing phase.

“Cattle entering the final ‘finishing’ stage are typically 12 to 16 months of age, and remain in this phase until they achieve a level of body condition that will provide a positive eating experi-

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STILLWATER, Okla. – Beef cattle grazing on grass pastures might not be the first thing people think of when discussing the subject of combatting greenhouse gas emissions, but it is an agricultural practice providing significant dividends to the effort.

“Environmental as well as economic sustainability are key elements of best management practices for agriculture, as most people involved in agriculture are well aware they are stewards of the land,” said Keith Owens, Oklahoma State University associate vice president for the university’s statewide Oklahoma Agricultural Experiment Station system. “Air, water, soil; we pay attention to all of them.”

In terms of greenhouse gas emissions, scientific studies have long indicated the burning of fossil fuels and land-use changes such as deforestation have led to an increase in atmospheric concentrations of carbon dioxide since the beginning of the industrial revolution.

“Carbon dioxide atmospheric concentrations have risen from 280 parts per million prior to the industrial revolution to more than 400 parts per million today,” Owens said.

Carbon sequestration – the long-term capture and storage of carbon from the atmosphere, typically as carbon dioxide – is a method of reducing greenhouse gas emissions.

“Many different agricultural production practices can capitalize on carbon

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ence for consumers,” Rusk said.

Average grass-finished cattle provide a live animal weight at harvest of 1,100 pounds, a dressing percentage of 58 percent and a carcass weight of 638 pounds per animal resulting in eight U.S. citizens being fed per animal, according to USDA per capita beef consumption data.

For grain-finished cattle with a live animal weight at harvest of 1,300 pounds, a dressing percentage of 64 percent and a carcass weight of 832 pounds per animal would result in 10.4 U.S. citizens being fed per animal, according to USDA per capita beef consumption data.

Rusk, Place and Owens stress it is important to remember that the Earth’s carbon cycle is a naturally occurring process and involves cyclical recycling, storage and use of a resource in different physical states.

Plants, animals including humans and soil microbes consume molecules containing carbon for energy and release some of the carbon back into the atmosphere as carbon dioxide through the process of aerobic respiration.

“As humans, our collective impact goes far beyond that,” Owens said. “Transportation and electricity production account for more than 56 percent of total greenhouse gas emissions in the United States. We should strive to do what we can to reduce emissions, and in agriculture most do, mainly because, as a whole, the responsibility of being stewards of the land is not lost on us.”

Environmentally sound, economically viable “best management practices” for beef production, crop production and other agricultural practices are available online at <http://osufacts.okstate.edu> via the OSU Extension fact sheet system.

“Developing and disseminating research-based information to help people

solve concerns and issues of importance to them, their families and their communities is a fundamental aspect of our responsibilities as a land-grant university,” Owens said.

Author: Donald Stotts, DASNR News and Media Relations, Agricultural Communications Services. Original article can be found at <http://www.dasnr.okstate.edu/Members/donald-stotts-40okstate.edu/carbon-sequestration-a-positive-aspect-of-beef-cattle-grazing-grasslands>

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inches and the second wire is at 20 inches. It's designed to allow antelope to go under the wires at a dead run, but low enough that elk will hit the fence with their legs and not the heaviest part of their body.

6. Making gate openings carry current

In an electric-fencing system, creating a gate system that conducts current is a challenge.

How to fix it: Derynck recommends placing a floating diagonal brace on either side of the gate opening.

To keep the fence "hot," trench both insulated hot and cold galvanized wires 1- foot deep under the opening (perhaps deeper in high-traffic areas or low-lying wet spots, or shallower in less-used pasture settings). "The gate no longer needs to carry current, because you have your current going underneath the ground," he says.

7. Relying on steel posts

"Putting a steel post anywhere into an electric fence is a big mistake, because you are then relying on the insulator to keep your cattle fence from shorting out," Gerrish says.

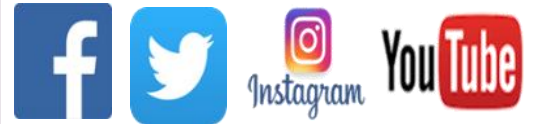
How to fix it: Gerrish prefers highly flexible plastic or wood-plastic composite posts, "No matter how good an insulator you get, eventually something's going to break or pop off, and you have the potential for dead-shortening."

So in a nutshell, it breaks down to these seven tips if you want a reliable electric fence - and that's everyone's goal, right?

1. Corner posts are the correct placement and size.
2. Fence posts need to be spaced 50-100 feet apart.
3. Using the right energizer. They suggest 1 joule of output per mile of fence.
4. Space your ground rounds far enough apart.
5. Make cattle fence flexible to be wildlife friendly.
6. Creating a gate system that conducts current is a challenge, instead trench the fence underground.
7. Don't use steel posts, instead use flexible plastic or composite posts to prevent shorts.

Author: Alaina Burt, BEEF. Original article can be found at [https://](https://www.beefmagazine.com/pasture-range/grazing-programs/0301-common-fencing-mistakes)

www.beefmagazine.com/pasture-range/grazing-programs/0301-common-fencing-mistakes



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Saving a jewel — and the setting it's placed in



Easement protects pristine valley — and the farmland above it

There's a little slice of paradise nestled in the Rosebud River Valley.

Along its craggy cliffsides, golden eagles and peregrine falcons nest, while moose and deer leave their own marks on the native grassland that surrounds the river's edge.

But these lands are home to more than just the wildlife. On top of the river valley lie cultivated fields — and the farmers who own that land have taken the first steps to protect the scenic valley forever.

"If you've ever seen the Rosebud River Valley, it's quite nice. We've got cultivated land all around these unique little river valleys with lots of wild spaces, and I just think they need to be conserved," said Rick Skibsted, who owns a grain farm along the valley near Drumheller.

"What's missing from the Prairies now is the prairie."

Skibsted has been exploring putting a conservation easement on his land for "many, many years." About five years ago, with support from his neighbours, he started putting the wheels in motion by contacting Western Sky Land Trust, a Calgary-based conservancy that focuses on watersheds and natural areas in southern Alberta.

"We could easily fit what we wanted to do in their program, and they were so excited about it that, after reviewing everything else, that's where we decided to go," said Skibsted.

"It's kind of invigorating when someone else is excited about the same thing you're excited about."

And after much back and forth — including successful applications to the provincial Land Trust Grant Program and the federal Ecological Gifts Pro-

gram — more than 4,000 acres along the river valley will be preserved in perpetuity.

"Basically what we're doing is saying we're not going to develop or subdivide it or put any industry on it. We're not going to break up any more grassland," he said. "It's just going to remain as agricultural land. And if we farm sustainably, we can farm the way we always have been."

That was a key part of the reason that Wendy and Richard Clark joined Skibsted in signing the easement toward the end of last year.

"We were faced with some threat of urban sprawl coming from Calgary, and we felt we wanted a way to make sure that, that didn't happen to our land," said Wendy Clark.

But perhaps more importantly, the group wanted to maintain an unbroken area of farmland and grassland along the river, and the easement protects these lands on top of the river valley where the Skibsteds and the Clarks farm.

"We felt that if anybody could inappropriately develop on top of the valley, that would be a detriment to the river valley," said Clark. "Having this cultivated land included is a really big deal."

The agreement has put their mind at ease, she added.

"It's a wonderful way to maintain private ownership and yet feel like you're preserving the legacy of your farm," said Clark. "I really believe that, going forward, lots of farmers and ranchers might be interested in considering this as an opportunity to protect agriculture and our natural spaces."

"We can't always count on our politicians to do it for us."

Landowners sometimes have misconceptions about conservation easements that turn them off the idea for their own lands, but depending on the easement, very little need change in how the land is being managed, said Max Fritz, executive director of the Western Sky Land Trust.

"The farmers never really lose control of the land and how it's run," he said. "They always manage the land the way they've managed it before, according to the conservation easement."

They're always in the driver's seat. They just have a new partner beside them."

Clark agreed.

"A conservation easement typically changes very little about how you're currently managing your land," she said. "We're only stopping the things we never would have allowed on our land in the first place."

Most farmers already have a conservation mindset, said Fritz, the formal agreement just ensures that the land is managed that way in perpetuity.

"Farmers are great stewards of the land, and they're always exploring other opportunities and options for the land into the future," he said. "They're thinking about their legacy — how the land can tell that great story of generations of farming and ranching."

And the farmers behind this easement take that legacy seriously.

"We're just stewards here," said Richard Clark. "We're just here for a little blip of time, and we've been given a tremendous opportunity to carry on this tradition. We'd like to see it continue on into the future."

"Our families gave us the opportunity to farm this land," added Wendy Clark. "The idea wasn't that they gave us the opportunity so that we could sell it for a windfall and walk away from it."

"So this is our promise to our neighbours — you don't have to worry about the land next door to you. And our hope would be that our neighbours will do the same."

In fact, some landowners in the area are already pursuing easements of their own to preserve their own little piece of paradise. And Skibsted couldn't be happier.

"We've sort of got a movement going on in the river valley here," said Skibsted. "Most farmers appreciate these native spaces. They really do. It's the exception that doesn't."

Author: Jennifer Blair, Reporter, Alberta Farmer Express. Original article can be found at https://www.albertafarmexpress.ca/news/saving-a-jewel-and-the-setting-its-placed-in/?utm_source=GFM+Publications&utm_campaign=f2dc726f59-Alberta+Farmer+Express+daily+enews+Jun+06%2C+2020&utm_medium=email&utm_term=0_2da8244677-f2dc726f59-88437173

Putting science into grass management



The Grazing Response Index scores foliage removal, grazing period and recovery time.

When it came out of Colorado in the 1990s, the Grazing Response Index (GRI) was strictly at home on the range. Now Ducks Unlimited Canada's Jodie Horvath says that, with a few tweaks, the grass management tool can help graziers on Western Canada's tame pastures, too.

"When you're a farmer, a lot of things feel out of your control, especially with the weather," says Horvath, a DUC conservation programs specialist and Saskatchewan grain and cattle producer. The GRI "helps you realize there are things you can control, including the number of animals you put out, where they go, and how long they're out there — so you do have some decision-making available to you."

With the backing of the Saskatchewan Forage Council and Agriculture and Agri-Food Canada, Horvath tested the index during three years of grazing at DUC's Touchwood Hills Conservation Ranch north of Fort Qu'Appelle. "There aren't a lot of ways to measure and grade how we're doing on our tame pastures," she says. "I thought the GRI would be something really practical that we could implement easily on a farm for the average producer."

Putting grass first

The GRI focuses on three aspects of grazing and pasture growth:

1) grazing intensity — the amount of leaf area that is bitten off by grazing animals; 2) the frequency — how often leaves are bitten off as the plants try to regrow; 3) and the plant's opportunity to regrow — the rest and recovery pastures get after grazing.

GRI grades "how the grazing pattern in a particular year affects the health of the plant," says Mae El-singer, Brandon-based

range management biologist with Agriculture and Agri-Food Canada. "It's about damage to the plant, recovery from damage, and the overall health by the end of the year."

Plants are like solar power systems, she adds — the more leaf area bitten off, the less solar energy the plant captures. When growing leaves are repeatedly chomped, stressed plants are forced to draw stored energy from their roots, like an underpowered solar system draining its storage batteries. As the grass weakens, it's shaded out by less palatable or weedy species. The result is a less productive pasture.

Horvath's major challenge was adapting a system designed for native range grasses into one that works for cool-season domesticated species. When the GRI was brought into Canada, researchers at British Columbia's Thompson Rivers University tested the approach on common range grasses, including bluebunch wheatgrass, rough fescue, and pinegrass to ensure what works in Colorado is applicable north of the 49th parallel.

Elsinger says the same detailed lab work hasn't been done on tame species, including the alfalfa, meadow and smooth bromes featured in Horvath's test pastures. But she adds experienced managers know tame pastures behave differently from native range.

"Tame forages have evolved under a totally different system," Elsinger says. While Prairie

grasses were occasionally trampled, grazed, or burned — sometimes severely — they probably had extended rest periods. Tame species developed in Europe and Asia under thousands of years of regular and repeated grazing, so "these grasses have just adapted to higher-intensity grazing than native grasses."

The new tame version of the GRI reflects this. When it comes to grazing intensity, the tame GRI defines "light" grazing as taking up to 60 per cent of the stand, compared to just 40 per cent for range. Ditto for "opportunity for regrowth," where a six-week rest for a tame pasture is equivalent to a range receiving a "full season" of rest after grazing.

Finally, there's the frequency of grazing. The range GRI awards top marks for a once-over rotational grazing system, but in most of the West, "the way we manage our tame pastures is often different than the way we manage our range pastures," says the Saskatchewan Forage Council's Laura Holmyr, who ranches near the U.S. border. "A lot of times we have two or maybe three times over" for tame pastures.

To allow multiple passes on tame pastures but prevent tame plants from being bitten too many times in any one pass, the updated GRI tracks the longest period livestock graze a single paddock. Assuming it takes seven to 10 days for a plant to regrow to the state where it can be grazed again (a timeline adopted from the original GRI), graziers earn a positive score for restricting a grazing session to seven to 10 days in any one pasture. Leaving the beasts in for more than 21-30 days, on the other hand, draws a negative score.

Holmyr adds managers may want to tweak this 7 to 10-day rule to fit their own knowledge of local plant growth. "Personally, at my place, we would never leave our cows on tame pasture for seven days, unless it's August and nothing is growing. We always move them in four days or less."

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storage tank to know what is happening without physically being present at the tank location.

Drones and water checking flights

Drones are increasing in availability and decreasing in cost. Using drones with remote cameras for checking water in locations that are difficult to access or without cellular signals could save time and wear on vehicles. By flying directly or utilizing a pre-programmed flight pattern for the drone, the drone can be sent up and the remote camera used to take video or photos as it flies over water tank locations. This requires that the drone be in the line of sight of the operator during the entire flight. Drones can also be used to scan windmills to make sure that from visual inspection, all parts of the windmill are in working order.

Another advantage of using a drone is that it also allows for the op-

portunity to utilize a “bird’s eye view” to see cattle at the tank and in the pasture to look for cattle that are off by themselves or acting lethargic or sick. This can help the producer quickly see where cattle are and locate them to identify potential health problems. When considering the use of this technology, make sure you understand and are in compliance with all Federal Administration Aviation rules and regulations for using a drone.

Timeliness, cattle care and peace of mind

Having water available is critically important to the health and performance of cattle. Being able to quickly identify if a problem is occurring with a water source gives producers the opportunity to respond rapidly to correct any issues. Time is of the essence when cattle are out of water. While these technologies won’t be a perfect fit for everyone, being able to check

water from afar may save time and money, shorten downtime, and provide peace of mind for those caring for cattle.

Author: Aaron Berger, Nebraska Extension Beef Educator

Original article can be found at:

https://www.hpj.com/livestock/checking-water-from-afar/article_e7fb4e4a-a5ab-11ea-9288-1343f93aeead.html



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(Continued from page 9)

Graziers using the index need to note the in and out dates for each pasture, and track how much of the stand is being grazed on each pass. When estimating grazing intensity, it's best to compare with an ungrazed stand nearby. Areas near ditches, fence-rows and neighbouring fields may be an option, but Horvath used grazing exclusion cages borrowed from AAFC. Pegged to the ground with bent rebar, the cages are strong enough to shield the grass inside, even while cattle scratch themselves on the cage.

By comparing what's in the cage to an "average" grazed area five metres away, "it's a great comparison as to what they're actually removing, and that was an eye-opener for me," says Horvath. "Honestly, you think the animals have removed only about half, or there's lots of grazing out there yet. But when you have those grazing cages they really provide an important visual."

Filling out the scorecard

After that, it's a matter of working out the annual scorecard for each pasture. For example:

- Have the plants in Field A been grazed at less than 60 per cent of their foliage? Score one.
- Were cattle on the field for less than seven days during their longest grazing period? Score another one.
- Did the field get six weeks of recovery time between grazings? Score two.
- Add up the total, and congratulations, Field A has maxed out at the highest possible score, four.

But say Field B got different treatment. It was intensively grazed (with cattle removing more than 85 per cent of the foliage) for a score of minus one. The cattle also spent at least a month in the field on their longest grazing session, so that earns another minus one. And though the field got a month between grazings, giving it "some chance" in the opportunity for regrowth score, that still only merits a zero.

At the end of the year, Field A has earned a four, while B is suffering

with a minus two. If this treatment continues, B will eventually become rundown. Options include giving B a little more TLC, and increasing the pressure on A, or subdividing pastures to get a better handle on grazing intensity by reducing time on any one paddock and boosting rest periods.

GRI "works especially great in a rotational system where you have the flexibility to make adjustments," Elsinger says. "If you have one big pasture and your animals are grazing season long from May to October and you get GRI results you don't like, you're not going to have much flexibility to change, unless you adopt cross-fencing."

The GRI "gives you a starting point for how to improve things, and an indication of the trend over time," Laura Holmyr says. "Have I been degrading this resource? Have I been improving it? What can I maybe change to do some more regenerative-type grazing instead of taking, taking all the time?"

At the very least, Jodie Horvath adds, the GRI is a simple way to inject more science into the art of pasture management. Sometimes, she adds, better management "is the one piece of control you have, when things feel out of control."

To learn more about the GRI for tame forages, visit the [Saskatchewan Forage Council's website](http://www.saskforage.ca/images/pdfs/Projects/ADOPT_GRI_Final_Report.pdf).

If you are interested in using the GRI for tame forages please click on this link (http://www.saskforage.ca/images/pdfs/Projects/ADOPT_GRI_Final_Report.pdf) and go to page 20.

Author: Ray Ford, Canadian Cattlemen. Original article can be found at <https://www.canadiancattlemen.ca/crops/forages/putting-science-into-grass>

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FFGA MISSION & VISION STATEMENTS

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Vision: 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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