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## GRASSROOTS NEWS & VIEWS FEBRUARY 2021

### Director's Note — Tanis Cross

*Howdy folks!*

If this is winter now, we will take it! These mild temperatures so far sure have me grateful. Here at the A7 Rancho we are set for some monumental changes over the next while as we transition from 130 years of Cow/Calf to a strictly yearling operation. As I watched cows roll through at some of our best conception rates ever, it was like watching history through the chutes. Some mother cows still have a note of brindle coloring from generations gone by.

The responsibility of change is one that we in the agricultural community take seriously. It seems this years changes have been great with issues such as a proposed coal mine, COVID-19 and for us personally the growth of infrastructure to move us forward into the future more prepared. That is the goal of change is it not?

It feels like just yesterday I was fortunate enough to join the FFGA directors. Our meetings have been

over Zoom video of course yet still I have achieved my personal goal of building deeper relationships within the agricultural community in Southern Alberta . We as a board welcome new ideas for the Association to cover and plan events around. It's contribution from each member that makes this Association what it is today and will be tomorrow.

I'm naturally very excited for 2021 as our ranch moves toward a new focus and continued desire for grass health and soil health on our own operation. I hope that we as a board can assist you to be better prepared and more knowledgeable for the changes that find you in 2021.

Kindly,

*Tanis Cross*

*Photo: The A7 herd, seen below, gather to form the A7 brand in this creative aerial photo.*



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# Well Decommissioning 101



Photo: From files

Wondering what happens when a wellbore is decommissioned on your land? What steps it goes through and what processes are undertaken to ensure the wellbore is permanently plugged?

The decommissioning of a wellbore goes through several steps, some of which are unseen, and landowners may not be aware of. We've included a brief guide that will provide you with a basic understanding of what is involved and how it is achieved.

## What does it mean when a wellbore is abandoned?

Also known in the oil and gas industry as *abandonment*, the decommissioning of a wellbore in Alberta follows strict rules put in place by the Alberta Energy Regulator (AER). The current rules for well decommissioning (Directive 20) have been in place since 2011 and ensure that all wellbores are decommissioned in a safe manner that will ensure the safe, permanent closure of the wellsite.

A wellbore is considered abandoned, (decommissioned) when it has been deemed safe and secure by the AER. This

happens after the wellbore has been permanently shut down, plugged and the wellhead removed.

Whether the wellbore is classified as inactive, suspended or abandoned, it's up to the licensee to take care of decommissioning and reclamation costs. If there is no viable owner, wellbores are managed by the Orphan Well Association with costs covered by an annual levy collected from the oil and gas industry by the AER. Following decommissioning, the site is remediated (de-contaminated), if required, and reclaimed back to what it was prior to any well being there.

When it comes to the decommissioning process, the wellbore goes through seven basic steps from start to finish. They include file review, landowner discussion, site inspection, engineering program, on-site operations, cut and cap and lastly reporting.

## Step #1 – File Review

Once it has been determined that a wellbore is to be decommissioned (either by an operating company or, in the case of an orphan well, by the OWA) the history of the well must be compiled so that engineers will know the best way to abandon the wellbore.

There are numerous government and public data sources that can be accessed that provide important details on a wellbore including; when it was first drilled, how deep it is, what formations it was produced from, as well as any issues drillers may have encountered when drilling the wellbore. All wells in the province have what is known as a well file. Well files are also reviewed as they provide a complete history of the wellbore, including; drilling, workovers and production history, etc.

During this initial step, regulatory approvals are also completed. The regulatory approval phase can vary in length depending on the specific wellbore. Approvals may include a wellsite decommissioning, (abandonment) notice to the AER, non routine wellbore abandonment approvals, access approval from the access rights holder, (Road Use Agreement for example) as well as engineering program and vendor selection.

It is important to note, not all of these agreements are required for every site. For example, non routine wellbore abandonment approvals can be applied for and approved during the field abandonment stage. These non-routine approvals may be required where unusual or infrequent downhole wellbore characteristics require additional measures prior to decommissioning.

Project planning is also part of this step where issues within the wellbore are identified such as potential leaks and insufficient cement. Any potential issues identified are repaired in accordance with regulations to ensure the wellbore decommissioning in place is strong and will remain sealed.

## Step #2: Landowner Discussion

Prior to any equipment moving to site, the landowner is consulted. In the early stages of discussion, the company or the OWA will confirm access and discuss the work required on your land. Landowner input is important to help crews execute work in the best way possible and with the least amount of disruption to landowners. Landowners may also have important historical knowledge of events at the site and what issues may be present.

(Continued on page 8)

**On the cover:** Participants watch a water infiltration demonstration on the Stavely Research Ranch fall 2020. Photo: Sonja Bloom

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# Soil Health Webinar Series



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*Joel Williams is an independent plant and soil health educator and a healthy soils advocate. Joel provides lectures, workshops and consultation on soil management, plant nutrition and integrated approaches of sustainable food production.*

## **Webinar Series Details:**

### **Thursday Feb 11 - What is New in Soil Health & Plant Nutrition 101 (1:00pm to 2:30pm)**

- Role & Function of Essential Minerals
- Managing Photosynthesis for Plant Development
- Rethinking Root Exudates
- Soil Biology: Wanted Dead or Alive?

**Register at:**  
<http://bit.ly/3c1gDrC>

### **Tuesday Feb 16 - Transitioning to Low Input Production Systems (1:00pm to 2:30pm)**

- Leveraging Soil Nutrient Pools
- Seed Treatments & Bio-stimulants
- Tips on Foliar Inputs
- Roots Not Shoots
- Plant Species Diversity for Nutrient Scavenging & Pest Management

**Register at:**  
<http://bit.ly/364pt46>

### **Tuesday Feb 23 - Strategies for Regenerating Forage Stands & Using Perennial and Annual Forages in Crop Rotations (7:00pm to 8:30pm)**

- Essential Nutrients for Protein Synthesis
- Foliar for Forage
- Mixtures vs Monocultures
- Grazing for Soil Health

**Register at:**  
<http://bit.ly/3o7uLly>

### **Tuesday March 2 - Questions and Answers with Joel (7:00pm to 8:30pm)**

- Special Q & A session, where participants will be able to interact with Joel

**Register at:** <http://bit.ly/3qLNghk>



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# *Letter to the Editor:* Will the development of the Grassy Mountain Coal Project adversely affect one of the top agricultural food production areas on the continent?



Normally when I write or speak of selenium, it is in regard to cattle supplementation as a result of deficiencies in many areas of the province. The announcement of the potential development of an open pit coal mine on Grassy Mountain, at the headwaters of the Oldman River with additional potential impacts to the tributaries as well as the Crowsnest and South Saskatchewan Rivers, has me concerned and thus now writing about potential toxicity of selenium to both animals and humans.

Selenium is a required nutrient for all living organisms. There is a narrow range with selenium between what is essential and what is toxic. In humans the range of toxicity is less than 1 mg selenium per day. Thankfully, as nutritionists, we rarely deal with selenium toxicities. Once an animal is selenium toxic, it is usually fatal.

Early symptoms of selenium deficiency versus toxicity are very much alike, which makes diagnosis difficult. Without a history of selenium intakes, a tissue sample of the animal must be taken and analyzed to determine if the animal is deficient or, in fact, poisoned by selenium. Cattle and other ruminants have the greatest tolerance to selenium toxicity. Less tolerant in descending order are monogastrics such as pigs and horses, followed by birds, reptiles and finally least tolerant, invertebrates and fish. As an intolerant species, signs of selenium toxicity in fish are an early indicator that there is a potentially toxic level selenium in the environment, so it is important to ensure fish are monitored downstream of development.

The daily upper recommended limit

of selenium intake for humans, as recommended by the WHO, is 400 nanograms per day. At twice that level, 800 nanograms/day, selenium intake may start to become toxic. Levels of toxicity will be affected by the form (organic vs inorganic) of selenium.

The availability of selenium depends on its form.

The two most common

forms of inorganic selenium are selenite and selenate. Selenate is extremely soluble and mobile which allows it to be taken up by plants. Selenite is not as soluble therefore is not taken up by plants. Inorganic selenate, when taken up, is converted into organic forms of selenium by the plant. These organic forms are ten to 100 times more bioavailable than inorganic selenate when consumed or absorbed by other living organisms, such as cows and humans.

Conversion of inorganic selenate to organic forms of selenium by plants has been used to remove selenium from contaminated areas. The plants containing high levels of organic selenium decay and the selenium is then converted into gaseous forms such as hydrogen selenide ( $\text{SeH}_2$ ). These gases are then released into the atmosphere, thus resulting in decreased levels of selenium in previously contaminated areas.

In this case however, this process cannot be used in the downstream prime agricultural area. Here, irrigation is essential. Crops are used for livestock feed and/or human food consumption and are not permitted to decay. The more bioavailable organic form of selenium remains in these crop plants, moves up the food chain and accumulates in increasing levels in both tissue and waste material (fecal). Two things happen through the transformation from inorganic to organic selenium forms:

This increased concentration can quickly result in toxic levels of selenium in animals and humans consuming the farmed products from the watershed. These agricultural products become unsaleable and could result in a huge eco-

nomie loss for southern Alberta and Canada.

Now let's talk manure. Crops containing high levels of organic selenium are harvested then fed to animals at nearby intensive livestock operations. Results from studies in North Carolina showed that manure from animals with high selenium intake will produce manure that has 10 to 50 times the level of selenium that is in the feed. When the manure from the intensive operation is applied to cropland, the high organic selenium runs off into the river causing concentrations 100 times more bioavailable than the original selenate which came from the mining operations. Not only would the water downstream of the intensive livestock operations have more concentrated selenium levels, but because the selenium is in organic form, it is more bioavailable and therefore more toxic.

Remember there are also the inorganic selenium forms to consider. Water sourced from the river for irrigation will contain higher levels of inorganic selenium and the consequences can be described by the Kesterson Effect. As river water is applied to crops, some of it evaporates from the soil, leaving the selenium to become concentrated as selenium salts. Over time these salts contribute to the salinity of the soil (salinity is already an issue for irrigation districts). When a high moisture event occurs (natural or man-made), selenium salts will leach back into the river system downstream. The result will be an even higher concentration of inorganic selenium in water downstream. This Kesterson effect is documented as the cause of selenium toxicities in the San Joaquin Valley in California.

A review of the literature indicates that the top three sources of man-made selenium contamination worldwide in order of greatest to least are:

1. Mining
2. Irrigation
3. Feedlots

The Oldman River and South Saskatchewan watersheds already have large feedlots and supply irrigation. If additional pressures from a new coal mine

*(Continued on page 5)*



were added to these watersheds, this area would be unique in the world as having all three top contributors to selenium contamination.

The proposed Grassy Mountain coal mine lies at the headwaters of the Oldman River, which flows into the South Saskatchewan downstream. As mentioned previously, fish are early indicators of selenium toxicity. Research shows that waste material from the open pit coal mines in the adjacent Elk Valley have been contaminating the Elk River with high levels of selenium to such an extent the local fish population is threatened. The Elk River watershed flows across the US Border and there are currently international conflicts over this contamination. Treatment of runoff water from the Elk River mines to remove selenium has not been successful despite the mining company spending \$600 million dollars to try to resolve this problem.

The coal from Grassy Mountain is from the same geological coal formation as the Elk Valley. Therefore, one can assume the waste material from coal in Grassy Mountain would contain the same levels of selenium as the Elk Valley mines. If the selenium is not removed from the waste rock, there can be no guarantee it will not contaminate the watershed. At the point of writing, there is no mention of removing the selenium from the waste rock at the proposed Grassy Mountain Mine. Why is there no plan for this?

If contamination of the watershed occurs, a domino effect will happen downstream with increasing concentrations of selenium going back into the river. First, fish will start dying from the selenium contaminates. Secondly, due to the Kesterson Effect, there will be increased concentrations of inorganic selenium as it moves downstream. Thirdly, there will be increased concentrations of organic selenium from manure. The overall effect over time, has the potential to increase selenium levels to the point where the water in the river will be toxic to all living creatures.

The company proposing the mine for Grassy Mountain state they will have settling ponds to capture selenium but nowhere does it mention actual removal of this captured selenium. Is there a relationship to profitability? Other mining sites have shown that settling ponds on steep mountainsides have periodic catastrophic failures in times of heavy rainfall or runoff from high-snowfall winters. The silt contamination along with the

selenium and other heavy metal contaminants would have severe deleterious effects on the watershed.

One solution to deal with the high selenium is dilution; remove all allocations and let the river waterflow uninterrupted from the mine to Hudson Bay. If allocation is prohibited from the Oldman and South Saskatchewan Rivers, dilution would likely keep the waters within healthy limits.

The problem is, calling a halt to irrigation from the watersheds would result in the end of Taber Corn, french fries, greenhouses producing huge amounts of fresh vegetables, feedlot alley, thousands of jobs and millions of dollars. Economically this would be devastating to the tune of billions of dollars to southern Alberta and Canada. How would all that food be economically replaced?

From a purely academic point, Southern Alberta would be the only location in the world to have the top three causes of man-made selenium contamination of water in the same river system. It would be interesting to observe how high the selenium levels could get in Medicine Hat. Development of the Grassy Mountain Mine must consider the impacts of selenium in the waste. In my opinion, if selenium is not removed from mining waste, the potential impact to food supply, economics, and human health could be devastating. Removing selenium from the mine site is the only way to ensure that selenium does not go into the river. The other option is to not allow the Grassy Mountain mine to go ahead.

Respectfully submitted,


Lee Eddy

*This Letter to the Editor was originally submitted to the Western Stock Growers Association and shared with FFGA membership with permission from the author.*

#### ABOUT THE AUTHOR

*Lee Eddy graduated from the University of Alberta with a B.Sc. in agriculture majoring in Soil Science, Animal Science and Economics. He has spent his career working in animal nutrition, forming BlueRock Minerals in 1998. Lee has been involved in significant nutrition research in the industry and the University of Alberta. Lee has both spoke on and published many articles about cattle nutrition and is incredibly knowledgeable in the field. He is always looking for a re-*

*search project to help propel our industry into greater profitability.*



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# Cattle care in cold weather



Photo: Stephen Hughes

The recent cold snap across the province has been a concern for humans and livestock. Barry Yaremcio, beef and forage specialist at the Alberta Ag-Info Centre,

says there are ways to lessen the stress on cattle created by cold temperatures.

The recent cold snap across the province has been a concern for humans and livestock.

Barry Yaremcio, beef and forage specialist at the Alberta Ag-Info Centre, says there are ways to lessen the stress on cattle created by cold temperatures.

Yaremcio says to start by adjusting rations to meet requirements, as there is a limit to the amount of heat cattle can produce by digesting feed.

"You can't just let them pick extra hay or pick straw off the bedding pack to make up the intake differential," he said. "Straw is a low protein, high fibre, low energy feed that takes a long time for the animals to digest. If they eat extra straw, the total protein content in the ration goes down, and bacteria can't digest the fibre."

"In reality, their feed intake may drop two, three or four pounds a day, and you're just going backwards by letting them have the extra straw."

While referring specifically to cattle, the principles also apply to other animals staying outside, he said.

"Cattle can stay warm down to -20 C without wind chill, and the heat from digestion when they consume their feed will keep them warm," he said.

It is a natural response for animals to eat more feed when it gets cold, he said.

"Provide extra hay or silage but extra grain is needed as well. Feed intake changes when the temperature drops below -20 C," he said. "At -30 C, increase grain intake by an extra two pounds of grain per head per day over and above what was previously being fed at -20 C."

"If temperatures drop to -40 C, four pounds of extra grain per head per day

needs to be added."

Thin animals get colder faster than those that are in good shape, as they do not have the fat layer that provides insulation, he said.

"That four pounds of additional grain during the cold weather might have to be stepped up to six or seven pounds to maintain their body weight or hopefully get them to gain a little bit," he said.

"It is difficult to do in cold weather but it is a possibility. Judge accordingly, and watch the manure. If the manure looks normal, you can see that your ration is providing an adequate amount of protein."

Providing shelter behind a wind fence and providing a lot of bedding helps reduce the amount of energy needed for an animal to keep warm," he said.

"If possible, move the thinnest animals into a barn to protect them from the weather," he said. "A cow lying on snow could potentially lose 25 per cent of her body heat, especially if that snow is wet or dirty."

The implications of not lessening the stress from cold temperatures could compromise the animals, he said.

"During cold weather, cows can lose anywhere between one to three pounds a day," he said. "If the cow is losing weight in the last trimester of pregnancy, it is possible there will be more calving difficulties because the cow's muscles are not as strong as they should be."

"Nutrient requirements for a lactating cow increase by 25 per cent compared to one in late pregnancy. That is when the large weight

losses can occur.


"Colostrum quantity – and possibly quality -- will be compromised if the cow is losing weight prior to calving. The calf may not be as healthy, and get up rapidly after birth if the cow has lost weight in the cold weather. You could have a little more problems with disease."

A cow with very little fat reserve will not be able to produce as much milk as one that is in good condition, he said.

"The growth rate of the calf is probably going to be reduced as well. Long term, if that cow stays skinny all the way through lactation, it can reduce reproductive efficiency by 20 to 30 per cent," he said.

- Source: Alberta Agriculture

*This story was published March 2019. In March of 2020, Barry started Yaremcio Ag Consulting Ltd. as an independent ruminant nutritionist and production management consultant.*



## FARM Transition Webinar

with Merle Good, Farm Tax Specialist


**March 4th, 2021 - 7:00pm**

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Merle worked for over 30 years as the Alberta Provincial Farm Tax Specialist and continues to work with top accountants and lawyers throughout Canada and on a yearly basis speaks at over 25 public seminars and assists over two hundred farm clients per year.

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(Continued from page 2)

Keep in mind, in the case of an orphan well, the OWA may need access to your land at anytime throughout the year, regardless of what agricultural stage your land is in. We simply have too many sites to decommission to always wait for crops to come off for example. We will always strive to limit our activities to the former surface lease.

Throughout the process, the OWA will be in constant communication with landowners, keeping you up to date about what is happening.

Landowners should also be aware that they are entitled to be compensated for unpaid surface rent even if the site is an orphan. However, unpaid rentals are can only be provided by the Surface Rights Board, not the OWA. Landowners who restrict access for decommissioning or reclamation may impact their ability to receive unpaid surface rentals.

### **Step #3 – Site Inspection**

After landowners are contacted to ensure the wellsite can be accessed, a site inspection takes place. If the wellbore is on a larger site or part of a recent operation, access is typically much easier. Older wells that have been out of service for extended periods may no longer have visible access roads. In these cases, the surface lease agreement will be consulted, and the original access utilized.

During the inspection, the overall condition of the wellhead is determined, and wellbore pressures are recorded. The wellbore is also checked to see if there are any leaks, (gas, oil, or water) that may be occurring. Initial environmental parameters may also be gathered at this stage. This initial environmental review is known as a Phase I Environmental Site Assessment (ESA) and is part of the reclamation process.

### **Step #4 – Engineering Program**

In this step, engineers use the information collected in the File Review to develop a detailed decommissioning program for the wellbore. This will outline what type of primary decommissioning equipment is needed, (e.g. service rig, drilling rig, coil tubing unit, e-line unit, etc.). It also provides detailed instructions for where to place certain plugs and downhole devices, as well as how much and where special cement should be placed.

### **Step #5 – On-Site Operations**

This step in the process will involve the mobilization of several pieces of specialized equipment to the site. Typically, a service rig is used for well decommission-

ing operations, but a coiled tubing unit may also be used in some cases. Smaller operations may use a smaller unit known as a logging unit or “e-line”. Other equipment may also be on site including a steamer truck (especially in winter), cement unit, and various transport and service trucks.

First the wellhead is secured and disconnected from any pipelines. The wellhead is then opened to allow certain tools to be lowered down the wellbore. The type and number of pieces of equipment placed on the lease will depend on the complexity of the wellbore. If more information is required on the wellbore, a logging truck may be sited to run several tools down the well. These tools are very specialized and can provide information such as how well cement has bonded to the outside of the casing, if the casing has good integrity, or if there are any leaks in the wellbore.

Any production tubing is removed from the wellbore and sent for re-use or recycling. These “joints” of tubing are each ~10 metres long and are fitted end-to-end with screw connections. Depending on the depth of the wellbore, this tubing “string” can be up to several thousand meters long and made up of hundreds of individual joints.

The inside of the wellbore is often cleaned, and any residual oil or gas is removed. This is done to ensure cement plugs that will be inserted into the wellbore bond optimally to seal the wellbore.

The actual plugging of the wellbore takes place during this stage. A device known as a bridge plug is lowered into the wellbore and placed just above the perforation zone (this is the portion of the wellbore that was previously perforated allowing gas or oil to flow into the wellbore from the formation). Once the bridge plug has been placed and mechanically connected, the seal of the plug is tested to ensure it is secure, and then several meters of cement is placed above the bridge plug. These actions result in the wellbore being “downhole abandoned”. The wellbore is left filled with fresh water or other non-corrosive fluid.

Any necessary equipment is also moved in during this step. Semi trailer sized equipment is brought in to set cement below surface and seal the hydrocarbon source(s).

Next, an evaluation for potential shallow issues is conducted.

This is to protect ground water and the surface environment. If any issues arise during this stage, certain equipment may return to site and further repairs will be made.

### **Step #6 – Cut and Cap**

Once the wellbore has been permanently plugged downhole, the wellhead at the surface is then cut off and any near surface equipment removed. Wellheads are cut off at least one meter below ground surface (some exceptions apply) to ensure no future issues with cultivation.

### **Step #7 – Reporting**

After a wellbore has been permanently decommissioned, the last step in the process is to electronically report the wellbore status change to the AER so that the wellbore will now appear as decommissioned on provincial databases.

Once the wellbore has been successfully decommissioned, other infrastructure on the site, including pipelines, will be removed and the site reclamation process can begin.

### **Did you know?**

The average lifespan of a wellsite can be upwards of 20-30 years. The life cycle of a wellsite includes 6 main classifications, beginning with active and ending with reclamation. The 6 classifications include active, inactive, suspended, abandoned, orphaned, and reclaimed.

### **Where to find more information**

- [www.aer.ca/regulating-development/project-closure/suspension-and-abandonment/how-are-wells-abandoned](http://www.aer.ca/regulating-development/project-closure/suspension-and-abandonment/how-are-wells-abandoned)
- [www.alberta.ca/surface-rights-rental-recovery.aspx](http://www.alberta.ca/surface-rights-rental-recovery.aspx)
- [www.alberta.ca/agriculture-energy-utilities-and-surface-rights.aspx](http://www.alberta.ca/agriculture-energy-utilities-and-surface-rights.aspx)
- [www.pembina.org/pub/landowners-primer-what-you-need-know-about-unreclaimed-oil-and-gas-wells](http://www.pembina.org/pub/landowners-primer-what-you-need-know-about-unreclaimed-oil-and-gas-wells)
- [www.orphanwell.ca/](http://www.orphanwell.ca/)

*Article submitted by the Orphan Well Association.*

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# Working with farming neighbours to graze crop residue



Photo: Sonja Bloom

Fall and winter grazing can help a beef producer reduce winter feed costs, and some cattlemen are finding value in creating co-operative relationships with neighbouring farmers to graze crop residues.

Joey Bootsman has a cow-calf operation near Rapid City, northwest of Brandon, Man., and for several years has made arrangements with farming neighbours to graze some of their fields. His cows calve in April and he backgrounds most of the calves — and sometimes buys additional calves to background.

“We run between 600 and 700 cows, depending on the year, and send a lot of our cows to other places for grazing. Most of them go to private pastures but some go to AMCP (Association of Manitoba Community Pastures),” he says.

He started stubble grazing on farmland five or six years ago, as a way to lower costs of production, and this part of his grazing program has continued to grow.

“Sometimes we also graze Ducks Unlimited land in the summer. This is pot-hole country; there are many sloughs and waterways in our area. On the average 160 acres, there might only be 125 acres farmed. There’s enough wasteland and sloughs to be worth grazing,” he says.

“We started with some neighbours next to our pastures, so fencing was minimal; we maybe only had to string a mile of electric fence to make it work. Now we’ve evolved to where we’re grazing quite a bit of land farther away. Our cows go north for summer pasture and come home on liners. We recently dropped 250 pairs in a field east of us a ways. They work their way back home across various stubble fields, grazing crop aftermath,” says Bootsman.

It all depends on fall weather. “One year we started with a new farmer because it was so wet that after he dropped

some straw for other neighbours no one could get it baled. We went into those places with some of our cattle to clean it up. Now we are growing this kind of arrangement as much as we need,” he says.

Conditions in 2019 were very dry, so they picked up more grazing acres. Even though they had adequate moisture this year and didn’t need as many acres, they wanted to maintain the relationship, so they continued to use those acres.

“We had a nice fall and still had all 700 cows out on pasture in early December — and hadn’t moved them to swath grazing yet,” he says.

They fence areas ranging from a quarter to three quarters at a time. Aircraft cable, rolled on reels, serves as electric fence.

“A local business called 7L Livestock Equipment supplies the steel reels, and we use drills for rolling up the cable. They have several versions including 3,000- and 5,000-foot-length reels. We use the 3,000-foot length because the aircraft cable is heavy. We typically unroll and roll it up using quads. We pound wood posts on the corners to hold it, and put step-in posts in between,” says Bootsman.

This year there were some problems with moose tearing up fences, so they had to check fences every morning. Generally, the system works well, though. After grazing, they pull the posts, as posts are a problem for farming equipment such as sprayers.

“When we are done, you wouldn’t even know we were there.”

This year, they grazed about eight quarters, including their own silage ground and other farmers’ land. Utilization varies, says Bootsman, but this year they were averaging five to seven days per quarter in most fields, with 250 pairs in one block.

“Ideally, the earlier you can get into it, the better quality grazing it is, but due to harvest and working around the farmer’s schedule, we need to be pretty flexible. It works well when we have some land adjacent or around it and can make adjustments on the fly. If we need to go to some of our own land or silage ground in between, we will do that, but if we can keep using the farmer’s pasture, we do,” he says.

Their grazing arrangements don’t interfere with the farm’s grain production, and they’ll keep the cattle off some land if necessary, he says.

“The fewest grazing days we had was on a half-section, but we did minimal fencing because it was already fenced on three sides; we only had to string fence for half a mile. We ran 250 heifers on it for eight days. When you look at the economics of it, this still works.”

Bootsman says the first step is to just ask any farmers in the area who might be willing to allow grazing on crop aftermath or acres that aren’t being farmed.

“The price point is often the challenge. In years past, some people could acquire this kind of temporary grazing for next to nothing. We typically base the price on a per-day cost and subtract the cost of fencing,” says Bootsman.

In his area some people use percentages. He always bases the stubble grazing value at about 70 per cent of what an annual forage might cost to graze.

“If I’m paying \$1 per day per pair for grazing, stubble, in my opinion is only worth 70 cents because the quality is lower. Then I work back from there on the fencing. For instance, the half-section where we only have to string half a mile of fence, if we were targeting 70 cents per day per cow, and spend half a day fencing and half a day taking it down, it might net out to be about 60 to 65 cents on that piece,” he explains.

On some pieces of land where they have to fence the whole thing, taking more work and time, it might go down to about 50 cents to the farmer per day per cow. This is land that the farmer isn’t getting any use from at that point in time anyway, so it’s a bonus for the farmer to have someone pay to graze it.

“Typically, the farmers might get \$500 to \$1,000 per quarter, for letting us graze. If this doesn’t negatively impact what they do, and can make them a little money, most of them are happy to do it. We’ve never had anyone not like it, or not want to continue doing this with us,” Bootsman says.

Occasionally a late harvest might make it unworkable, as the grazing season just isn’t there. That’s why Bootsman bases the rate on per day of actual grazing, rather than a flat rate.

“If it’s really wet, I’d rather move the cattle off, instead of making a mess for

(Continued on page 11)

# SOUTHERN ALBERTA GRAZING SCHOOL FOR WOMEN & ALBERTA RANGE STEWARDSHIP COURSE PRESENTS:

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the farmer. There's not enough grazing value to leave them on it too long and make a mess. When we start working with these guys, we have an agreement that we won't make a mess."

Ideally, the cattle are helping the land and making it better, rather than hindering future production. Grazing the potholes and rough areas, cattle can help by bringing manure back out into the fields, and there shouldn't be a negative to it. Being flexible, and willing to adjust, is one way to make the first year or two a success, and forge a good ongoing relationship with that farmer. When he works with farmers, it's all done with a handshake deal; no written contracts are needed. But communication is key.

"We are very particular when we start out, to make sure everyone is on the same page and understands what this will entail — what the farmer's goals might be. One guy's main request is that when we graze it and leave, it should look like we weren't even there; the cattle won't have any negative impact. We manage that guy's stubble different than some other pieces," Bootsman says.

Sometimes a farmer wants cattle to clean up everything, in preparation for tilling that field again. Utilization varies with the wishes of the farmer.

The main thing is to make it work, economically. Bootsman allows \$700 per day of costs for fencing labour (himself and another worker), plus the tractor, post-pounder and quads. When looking at the cost of buying hay for those cattle, it's still worth paying about 50 cents per day to the farmer to graze 250 cows, he says.

"My sweet spot is 250 pairs, to make it work for me. With 250 pairs on a quarter-section, this is about a week. If a person is only running 50 cows, in order to get the same days on that property you would need to leave them there five weeks, and that might not be the best for the cattle or the land," he says.

Grazing residue or unfarmed acres can be a great way to stretch feed resources. It has to fit the

operation and be beneficial to both the rancher and the farmer, and herd size is part of the equation. A smaller outfit might be able to do the fencing cheaper, or have some other angle that makes it feasible. There are many variables, and every operation is unique in what might work, or won't. The type and class of cattle also make a difference.

"The land we used with our pairs this fall was pretty good, for grazing quality. We also used some pasture that was mostly slough grass; we went there with bred heifers that were adequately fleshed and didn't need as high-quality feed as the lactating cows and calves. You wouldn't want to put young steer calves on pasture where they would not be able to gain the desired number of pounds per day."

*Author: Heather Smith Thomas with Canadian Cattlemen. Original article can be found at <https://www.canadiancattlemen.ca/features/working-with-farming-neighbours-to-graze-crop-residue/?module=under-carousel&pgtype=homepage&i=>*

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\*Some conditions apply.







VIRTUAL

# Annual General Meeting

Keynote Presentation "Grazing Ruminants: a resilient solution to long term agriculture profitability, productivity, and climate change" from Ryan Boyd, 2019 Nuffield Scholar

**MARCH 23, 2021 | 1 PM - 3:30 PM**

- **Ryan Boyd, Nuffield Scholar: 1 PM - 2 PM**
- **Business Meeting: 2:15 PM - 3:30 PM**
- **AFSC Update**

Register at <http://bit.ly/2YF1V1G>

**\*\*Please note, you must be a member in good standing to vote during the Business Meeting. Memberships can be purchased online at [www.foothillsforage.com/membership](http://www.foothillsforage.com/membership)\*\***



Are you interested in joining the Foothills Forage & Grazing Association Board of Directors? Email [manager@foothillsforage.com](mailto:manager@foothillsforage.com) for more details!



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## FFGA MISSION & VISION STATEMENTS

**Mission:** Assisting producers in profitably improving their forages and regenerating their soils through innovation and education.

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

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