



GRASSROOTS NEWS & VIEWS

Soil Sampling near Cremona—Rachel McLean



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November 2017

Director's Note

I recently attended the American Grassfed Exchange course in Albany, NY, along with Morrie Goetchen and his wife Debbie.

The two day conference was preceded by a one day farm tour.

We toured two places - the first was Black Queen Angus. It is located at Thornapple Farm which is still owned by the Roosevelt family and the land has been used for grazing since the 1600's. They raise, you guessed it, Black Angus with a focus on genetics that can be finished on grass. These are easy fleshing cattle with a smaller frame score. They sell both breeding stock and finished beef to supply the large direct-to-market demand currently enjoyed in the state of New York. From what we are used to seeing in Western Canada, we found their herd to be roughly 2 frame scores smaller than ours, but no less fleshy. These animals are grown on very similar grasses to ours such as rye, clover, vetch, Reed canary and broom grasses, along with the ever popular toad flax, burdock, and thistles. A lot of the steeper slopes and some of the more unsuitable farming areas have returned to a natural treed state.

These wooded areas are managed under what they referred to as a silvo pasture. They fence off the treed areas and raise the trees to sell. One of the tour speakers discussing the treed areas said "forests should be managed for optimal yield, like pastures." He also said "like cattle, some trees are just

easy keepers and do better". With property taxes climbing up to \$50.00/acre, they have become proficient in finding various revenue streams.

The second stop on our tour was Dharma Lea Farms. It is a grass based dairy. They have built a 100% Grassfed model specific to dairy cattle and have been using it in practice for the past 14 years. They ship their milk to Maple Hill Creamery which is a 100% Grassfed organic creamery that produces milk, yogurt, butter, and cheese.

Dharma Lea has 60 grass based milk cows in a fall calving program which is intended to make milk product available at the time of year when there is a natural shortage of grass based milk, thereby capitalizing on this high value market. Their 1000 lb cows are producing an average of 8500 lbs of milk per year. That number didn't mean a whole lot to the regular cattle guys in the crowd, but our speaker was pretty excited about it.

To achieve that kind of milk production, their grass management is excellent. It would likely be the equivalent to us grass finishing a yearling and achieving feed lot gains. Our speaker was Phillis Van Amburgh and she and her husband are the owner/managers of this dairy. She was one of the most qualified grazers, focusing on holistic management, production, and profitability, and was well worth listening to.

Next we were off for two days of conference learning. The key speakers were Dr. Alan Williams, and Ray Archuleta, who are both speaking at the upcoming Western Canada Conference on Soil Health and Grazing, in early December.

Dr. Alan Williams spoke on soil health, adaptive forage, and grazing management. He focused on the concept of regenerative agriculture and

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Director's Note

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enhancing profitability through stacking enterprises. He was a great speaker and has done very well with his program.

I also really enjoyed hearing Ray Archuleta. He spoke on microbes and the biology behind soil function. He is a regional soil health specialist and brought forth a lot of knowledge on anything from fungus to bacteria. I particularly enjoyed his slide on water infiltration which compared bare soil, overgrazed, managed, and ungrazed soil, showing the difference of rain water

seepage and runoff into the various soil samples. It helps explain why one neighbor may appear to get more rainfall than another, when the reality could be based on soil condition.

It is always beneficial to interact with producers from different areas, with a variety of concerns, and realize how much we have in common. The conference was well worth attending and was a great area to visit. The only sticky moments were when the American producers wanted to discuss their concerns about COOL. We felt like

Flames fans coming out of the Northlands Coliseum after an Oilers game. I guess I shouldn't have worn my Iginla jersey after all.

To close, it was recently brought to one of our directors' attention by someone in government that the FFGA was getting too focused on soils, and not enough on grazing. A quote from Dr. David Kohl:

"Work on making your soil healthier. Healthy soil supports better plants and livestock growth which is healthy food for healthier people."

Alex Robertson

Nov. 14, 2017

Registration Begins
at 9:30
10:00-3:00

Mountain View
County Office



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The caterer cooking a "steamship round" over a hardwood fire.

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Cow-Calfenomics

Enhancing Farm Business Decisions in Alberta's Cow-Calf Sector

Date	Location	Venue	Time
November 14, 2017	Brooks	Heritage Inn Hotel and Convention Centre 1217 2 Street West	9 a.m. Coffee and registration 9:30 a.m.-3:30 p.m. seminar
November 15, 2017	Lethbridge	Country Kitchen Catering (in the lower level of the Keg) 1715 Mayor Magrath Dr S	
November 16, 2017	Olds	Pomeroy Inn & Suites at Olds College 4601 46 Ave	
January 23, 2018	Vermilion	Vermilion Regional Centre 5702 College Dr	
January 24, 2018	Westlock	Westlock Inn & Conference Centre 10411 100 St	
January 25, 2018	Stettler	Stettler Agricultural Society 4516 52 St	

This year's agenda will cover:

- Cattle market situation and outlook
- The use of risk management tools in the beef industry
- Business structures for new entrants
- Production enterprise analysis
- Agriprofit\$ beef
- A farmer's guide to agricultural credit
- The value of having a mentor

For more information, visit agriculture.alberta.ca/cowcalfenomics

How to Register: Please register by Tuesday, November 7 for the 2017 fall meetings, and by Tuesday, January 16 for the 2018 winter meetings. The registration fee is \$30 and includes lunch. **Registration for students and young producers (those under 25) is free**, sponsored by the Alberta Beef Producers. To register, please call the Ag-Info Centre at 1-800-387-6030 or register online at <https://eservices.alberta.ca/cowcalfenomics.html>

If you are exempt from paying GST, please call 1-800-387-6030 to register.



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Profit Above, Wealth Below

December 5-7, 2017 ~ Edmonton, AB

Featuring: Gabe Brown, Ray Archuleta,
Jim Gerrish, Odette Menard, Efren Cazares,
Dr. J.C. Cahill, Dr. Allen Williams, Tim Hardman,
Dr. Yamily Zavala, Dr. Richard Teague,
Dr. Alan Iwaasa, David Brandt and more!

For the agenda & registration info visit:
www.absoilgrazing.com



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(8:30-8:50 Registration, 8:50 Start)
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Crystal Mackay,
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design your own.

FOCUS ON THE FEED
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analysis samples

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NOW WHAT?
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Harmony Beef Plant

SMOOTH RIDE
Tips for transporting cattle
Karen Schwartzkopf-Genswein
AAFC

ENVIRONMENTAL
HOOF-PRINT
Tim McAllister
AAFC

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* Verified Beef
* Canadian Round Table for
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* Environmental Farm Plan

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Enjoying the Little Things in Life—Soil Microbes



Soil microbes provide billions and billions of teeny helping hands to your crops. Those helping hands are key to sustainable, profitable crop production. Crop growers can choose practices that promote healthy soil microbial communities, and researchers like Bobbi Helgason are developing ways to further enhance agriculture's ability to tap into the remarkable capacity contained in soil microbial life.

"Healthy microbial communities perform a wide range of critical ecosystem functions, such as regulation of nutrient availability and pathogen suppression. They decompose organic matter such as crop residues and release the nutrients. And they do many other things, like maintaining soil structure and good hydrology, as well as plant growth control," says Helgason, a soil microbial ecologist with Agriculture and Agri-Food Canada (AAFC) in Saskatoon.

"All of those processes may go underappreciated sometimes in our farm fields, but having a healthy microbial community is essential to making sure those ecosystem services keep working properly."

Nurturing a healthy microbial community

"A 'healthy' soil microbial

community is one that can provide ecosystem services in a way that is balanced and sustainable," Helgason says. "So to assess the health of a microbial community you need to measure a suite of processes. Those processes might differ depending on what the soil is being used for, for example an annual crop production system versus pasture land. So you might have two very different microbial communities in two different soils, but they are both healthy because they can perform all the key functions that are required."

A microbial community's abundance and diversity are indicators of its health.

"Microbial biomass is like the engine that drives biological processes in the soil. The bigger the engine, the more capacity you have to deliver those processes," Helgason says. If you grow a greater amount of microbial biomass, you increase your soil's capacity to deliver those key functions.

"Microbial diversity is like taking out insurance. The more diverse a community is, the more likely it is that the community can perform services across a wide range of conditions." For example, in a diverse community, if one group of organisms gets knocked out when conditions are too wet for it, then a different group of organisms that is suited to wet conditions is poised to step in and keep those processes going. Sometimes an imbalance in soil conditions, such as too much moisture or low nutrient availability, creates an opportunity for harmful microbes, like plant pathogens, to get a foothold in the soil. However, a healthy microbial community is more likely to be able to outcompete those harmful microbes.

Agricultural practices influence the health of microbial communities. Helgason notes, "Good soil stewardship leads to healthy soils and healthy microbial communities." She gives some examples of practices that promote healthy microbial communities: balanced nutrient additions; reduced physical disturbance or no tillage; continuous cropping (rather than summerfallowing), so continual plant resource inputs are available as food for the microbes; diverse crop rotations, so a variety of plant inputs are available to the microbes, increasing their activity and diversity; and the use of microbial inoculants, such as rhizobium, when appropriate.

Recovering from carbon starvation

One of Helgason's recent studies underlined the importance of plant residues as a critical source of energy to drive soil microbial processes and crop yields.

She and her colleagues examined four of the systems in the Alternative Cropping Study, a long-term experiment at AAFC's Scott Research Farm that compares organic and conventional management systems. One of those four systems was an organic system with a diverse annual crop rotation: lentil green manure-wheat-pea-barley-sweet clover green manure-mustard. This system involved tillage, no chemical pesticides, and no added nutrients from external sources (such as livestock manure, compost or chemical fertilizers).

This organic system had consistently lower yields than the other three systems (two conventional and one organic) over the 18 years the Alternative Cropping Study had been running.

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To find the cause of those poorer yields, Helgason sampled the soils in the four systems and examined their microbial abundance and microbial functions, including cycling of carbon, nitrogen and phosphorus.

"This particular organic system – despite the use of green manures and legumes in the rotation to add biologically fixed nutrients – developed an imbalance of nitrogen and phosphorus early on, which reduced crop growth," she says. "The new finding from our work is that the microbial communities in this organic system were not only nitrogen- and phosphorus-limited, but because crop growth was reduced then the crop residue returns were also reduced, so those microbial communities were also carbon starved."

She explains, "Carbon from crop residues is the fuel or the food for most of the microbial activity in soil. In organic systems, we rely heavily on that microbial activity to release bound nutrients, like nitrogen and phosphorus, and make them plant-available."

Although plants can fix energy through photosynthesis and give it to the microbial community, their ability to do so in this particular system was impeded by nitrogen and phosphorus

limitations. And since no nutrients were added only from biological nitrogen fixation without any additions from livestock manure, compost or fertilizers, there was a net export of nutrients out of the system with each crop harvest.

The result was a negative feedback loop. "There may have been pools of nitrogen and phosphorus that could be released biologically, but the microbial community was too exhausted through carbon limitation to be able to perform those processes in a way that could support crop growth," Helgason says.

Out of the four systems, the best functioning one was a conventional production system with an annual crop rotation of canola-fall rye-pea-barley-flax-wheat. Helgason says, "This system was being managed very judiciously under best management practices: it was no-tillage; it had a diverse crop rotation; and fertilizers and pesticides were applied based on soil tests and crop scouting." Its soil had the largest microbial biomass and the greatest ability to perform nutrient cycling and other key functions.

Now Helgason and her colleagues have a new study underway to look at how to restore the productivity to that low-yielding organic system. They are evaluating various soil amendments, such as

extra wheat crop residues, livestock manure and compost. These amendments add nutrients, such as nitrogen and phosphorus, and also add organic matter to fuel microbial functions, like nutrient cycling.

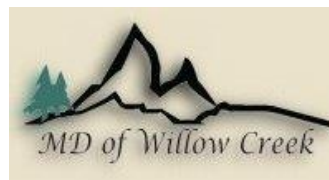
Sustaining healthy crops under changing conditions
A related line of Helgason's research is looking at long-term soil fertility under changing conditions, such as higher yield goals and changing weather trends. "This work is really important for understanding how to maintain long-term fertility under what we anticipate will be increased production goals. If we are producing larger crop yields from the same land base, then how do we ensure soil carbon returns and sustained fertility despite the fact that we are exporting more nutrients out as crop products," she says.

As part of this research effort, Helgason and her colleagues compared microbial soil carbon transformations in humid conditions in Ontario and semi-arid conditions on the Prairies.

They wanted to see how different temperature and moisture conditions affect the way microbial communities transform crop residues into soil organic matter and the amount of carbon remaining in the soil.

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The increased understanding gained from this research will help in developing soil management recommendations for sustaining healthy microbial communities and crop productivity under changing climate cycles.

Their aim is to determine how those compounds differ between varieties of each crop and how those differences affect the crop's interactions with the soil microbial community. Breeding for better crop-microbe interactions

Another area of Helgason's research involves investigating how the root microbiome – the bacteria, fungi and other microbes that associate with plant roots – interacts with crop roots and how that interaction impacts crop growth and yield potential.

"We've got a new study underway to understand the mechanisms a plant can use to select root microbiome partners," she says. "The end goal is to develop tools that breeders can use in their breeding programs to develop crop varieties that better exploit the inherent capacity of the root microbiome to improve crop growth through improved nutrient uptake or increased stress tolerance or increased pathogen resistance and so forth."

One mechanism a plant uses to select microbial partners is to release specific biochemical signalling compounds from its roots, called root exudates. These compounds trigger a helpful response in certain microbes. A large, collaborative study co-led by Helgason and Steven Siciliano at the University of Saskatchewan is looking at signalling compounds released by canola, wheat and lentil.

Their aim is to determine how those compounds differ between varieties of each crop and

how those differences affect the crop's interactions with the soil microbial community.

For example, imagine several wheat varieties are growing in very dry conditions. Perhaps some of those varieties release a signalling compound that recruits a particular microbial partner, and that partner helps the plants tolerate dry conditions. Maybe the partner is a fungus that responds to the signalling compound by sending out fungal hyphae to locate and bring water to the plant. Or perhaps the microbe causes the plant to improve its water use efficiency, or increase its root growth to access water from deeper within the soil. Other wheat varieties that don't produce that signalling compound would suffer more from the dry

conditions.

Helgason and her colleagues hope to identify key molecules that trigger relationships between crops and service-providing microbial partners.

Soil microbe-crop partnerships are vital to crop production. Research advances will help growers to sustain and enhance their ability to draw on the incredible wealth of help available from soil microbial communities.

By: Carolyn King

Source: [https://](https://www.topcropmanager.com/soil/enjoying-the-little-things-in-life-19764)

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Low Cost Winter Feeding Workshop November 16, 2017 ~ Fort Macleod, AB



9:30am-3:30pm ~ Fort Macleod Community Centre
\$40/members, \$50/non-members, Includes lunch

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Topics will include: winter grazing strategies, bale grazing, swath grazing, standing grazing, winter watering, and stockpiling grass.

Register at: <https://winterfeeding.eventbrite.ca>
Questions? Call: 403-995-9466

12 Tips on Positioning for Success in Times of Economic Resets



Seeds of Encouragement from Elaine Froese

Here are Dr. Kohl's notes on positioning for success in the economic reset.

Even though he was addressing a US audience, we can all learn to be better farmers.

1. Focus on what you can control and manage.

This is critical in business. Dr. Kohl's Homestead Creamery made \$68K this year because people kept their glass milk bottles. His milk business had a plan for folks who cherish the glass bottles even when the naysayers said this habit would ruin the business.

2. Really good managers are making a cost re-adjustment wherever they can.

Kohl told the story of a young farmer who relinquished marginal land, cut family living costs and added thousands to his bottom line. What lines on the balance sheet do you need to reset?

3. Work on making your soil healthier.

Healthy soils support better plants and livestock growth, which

is healthy food for healthier people. I overheard one young farmer singing the praises of minimum tillage and the big difference it was making on his farm.

4. Honor the ag entrepreneurs who are returning.

Honor boomerangers with skill sets from their engineering jobs to create systems and standard operating procedures on their farms and related side businesses. This is why farm coaches recommend that your college grad successors work for another business and manager to get new insights and system ideas for your farm.

Kohl sees lots of opportunities for diversification within agriculture and outside agriculture. One farm woman at the session had a very successful hair cutting franchise that was surpassing the farm's income!

5. Tweeners (Those too big to be small and too small to be big farmers) are exiting farming.

This becomes an opportunity for growth. Kohl says 10-15% of tweeners exit with equity, 10-15% do a partial or total liquidation, and 10-15 % have negative cash flow

and negative net worth.

6. \$7 corn is not coming back.

Warren Buffet said, "when the tide goes out, you find out who was naked."

Farmers made money in the higher commodity price years, but now they are not making a profit and people are having a hard time convincing landlords to lower the land rent. Kohl depends on the FINBIN database to see where the net farm income trends are moving. Make 5 percent changes to increase income and decrease expenses across many lines.

This is Danny Klinefelter's 5 percent rule that top farmers use to generate a better net income.

7. Modest Living Expenses

This one warms my home economist heart. Often in transition planning, there are shockwaves when the founders want \$120K annual draw from the farm, and the next generation can only afford \$39K as a draw to the founders. I see this many times where folks are clueless as to what their true family living costs are. If your family living is in the \$40K to \$70K US (\$50-87K CDN)

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you are modest, if you are over \$90K to 140K/year, you are enjoying the KT (Killer toys) and not using that extra \$60 to 80K for cash flow on the farm. We use Quickbooks to track our family living costs. You can change what you measure. Do you follow the habit of "the more you make the more you spend?" Kohl likes to see the monthly family living budgets with an allowance for adding 25%.

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Do you follow the habit of "the more you make the more you spend?" Kohl likes to see the monthly family living budgets with an allowance for adding 25%.

8. Paying attention to your financials regularly is critical.

Hopefully, you use the accrual accounting method, know your cost of production for each enterprise, have year-to-year comparisons, benchmark with your peers, and keep important data safe (eg. a fireproof safe). Kohl relayed the story of a farmer whose records burned in the house. Today we have the cloud to store data and backups.

What are you doing to keep your financial information safe? Our accounting firm, MNP, gives us a benchmark chart annually to show us our financial report card.

9. How much is enough?

The bottom 30 percent of producers have an undisciplined pursuit of more. I've seen young farmers do this when they buy campers, fancy trucks, and other items that they truly cannot afford. High maintenance living is causing financial stress.

One hog farmer told me he could live on \$50K annually in the good times, and pull back to \$18,000. He did not tell me if he was living in his parent's basement!

10. Follow the hut principle.

Hear what the issues are that need to be addressed. Understand the context of those issues and seek creative solutions. Take action.

Many folks have financial plans on the shelf



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right next to their estate plans, unsigned wills and forgotten transition plans. FOCUS and execute. You can only eat a great steak one bite at a time, so take baby steps, but get moving!

11. Change your attitude about paying taxes.

Go from focusing on minimizing tax to the dance of managing your income tax. Kohl says you likely will never go broke with managing taxes.

12. Where is your legacy?

Kohl says "21% of the farms and ranches in the U.S. do not have a next generation...ie. a successor." Farming is not fun for folks who have lost their legacy.

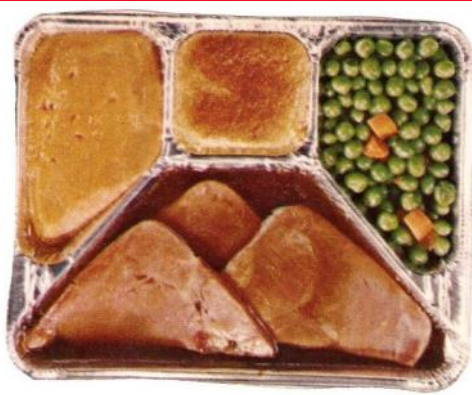
What steps can you take today to create certainty for your farm's future?

By: Elaine Froese

Source: <http://elainefroese.com/farming-business/economic-resets-dr-david-kohl/>

[inf_contact_key=135e330288891409d512aca6796787dd8c9216d21bf71f043b07d41f80e247e9](http://elainefroese.com/farming-business/economic-resets-dr-david-kohl/?inf_contact_key=135e330288891409d512aca6796787dd8c9216d21bf71f043b07d41f80e247e9)

Swath Grazing: More Than Just Frozen TV Dinner for Your Overwintering Cattle



“Swath grazing: More than just frozen TV dinner for your overwintering cattle “

The phrase in the above title to describe the practice of swath grazing was coined by none other than Dr. Vern Baron, a leading scientist on forage research at the federal government’s agricultural research centre in Lacombe.

“Swath grazing is just like providing cattle with frozen TV dinners. And they don’t mind eating them outside,” he says explaining why this practice, believed to be tested and adopted by some 30 to 50 per cent of cattle producers, can be cost effective.

Dr. Baron says the practice of swath grazing has multiple benefits, including reducing on-farm labor to 34 per cent, diesel fuel required to 25 per cent and land required to feed cows over winter by 50 per cent. These are all possible if the swath-grazed crops are high yielding and managed to their optimum. The advantage is that more cows can be managed on the same amount of land, with the same or less labor with a reduced carbon footprint.

Swath grazing is, in a sense, extending the grazing season and in doing so, saving on many expenses that might add up to a substantial total. Selecting this option for feeding overwintering cattle will save a producer from spending time, money and effort on the following

operations: harvesting, hauling feed, processing and managing/hauling manure. As an added benefit, the cattle leave the manure in the field while grazing, effectively fertilizing the land without any effort on the part of the producer.

Another point to consider is that energy and fuel saved through swath grazing reduces the carbon footprint of the cow herd, perhaps as effectively as carbon sequestration. Dr. Baron’s research found that compared to traditional feeding methods, swath grazing 100 cows for 100 days saved the equivalent of 2,534 L of diesel fuel. This amounts to reducing atmospheric greenhouse gas emissions by 67 kg of CO₂ for each cow that grazes for 100 days. A carbon credit worth \$12 per tonne for 300 cows at this rate would be worth \$240. If the carbon credit increases to \$50 per tonne, the credit would be worth \$1000 for 300 cows.

But while swath grazing is profitable, it is not simple and it charges the producer with some homework to be done. In many cases, producers assume that swath grazing requires no inputs. In reality, little agronomic research has been conducted related to extended grazing per se.

One of the most important tasks for the producer is to know the characteristics of his soil. “One of the interesting things is that producers often feel that they don’t need to use fertilizer because they are grazing, but that is not necessarily so,” Dr. Baron said in an interview, explaining that manure spread through grazing is deposited above ground and often in patterns, so a good portion of the soil is unfertilized.

“I have had many calls where yields and

capacities have not met expectations,” he added.

Dr. Baron says this could be due to anything from poor utilization to low yield.

“We have found that some varieties and some species are less preferred, but you have to be sure that you have enough (nutrients). If your yield target is high, you have to have an optimum combination of manure and fertilizer.

“But many producers just rely on manure, many producers use the same land over and over again for swath grazing. You will have to soil test and determine what they need for nutrients.”

He adds that grey wooded soils, in particular, need nutrient support as they are known to be low in nitrogen and in phosphorus.

Another important element of management is the choice of the crop to be seeded for swath grazing. Research conducted so far seems to favour triticale as one of the most optimal crops for swath grazing, followed by corn. However, Dr. Baron recommends the use of the highest yielding crop selected from trials in the producer’s region.

“Forage quality is important, too,” says Dr. Baron.

“Crops such as corn are expensive to grow, but they do maintain forage quality throughout the winter. Beware of anti-quality characteristics of some crops.” Selecting crops with high yield potential may well lay the groundwork for freeing up land for other crops to be grown.

“The higher carrying capacity of triticale and corn resulted in less land required to grow crops used in winter feeding than the control and swath-grazed barley since land requirement is the reciprocal of carrying capacity,” said the authors

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of a study, including Dr. Baron, published in the Canadian Journal of Plant Science in May 2014.

"Triticale was more consistent than corn from year to year in this regard. The significance is that as much as 50 per cent less land may be required by cow-calf producers to produce winter feed in central Alberta. This reduces the footprint of the cow herd, leaving the remaining land to be used for another economic alternative or for conservation purposes," the study concluded.

While everybody has a favorite crop, crop rotation is important as in any other cropping system. Crop rotation reduces the risk of crop diseases which can build up over time due to crop residues left behind. "Beware of cropping sequences from other farming operations," cautions Dr. Baron. "Barley leaf diseases that reduce yield can be broken by alternating barley with oats, triticale or corn. Ergot has been detected in swath-

grazed barley and triticale. Brassicas are not likely resistant to and can carry prevalent canola diseases." Other management concerns that producers should take into consideration include:

-The location for swath grazing:

Thin cows that are not strong enough to endure harsh winter weather will need more nutrition than the average overwintering animals, therefore, it is important that the grazing area should be suitable for monitoring the herd during the period of grazing;

- Availability of windbreaks, whether natural or portable, is an important factor to ensure that adverse weather will not hamper grazing for an extended period;

- Contingency plans should be made to be able to provide supplemental feed to grazing livestock in case conditions arise requiring emergency measures;

- Adequate steps need to be taken to protect the stock from wildlife intrusion;

- Availability of adequate

water needs to be ensured in case snow is not enough or unsuitable as a water source.

Overall, swath grazing can reduce the winter feeding costs for cattle by up to 50 per cent, according to research conducted at the Lacombe Research Centre under Agriculture and Agri-Food Canada.

With beef prices fluctuating wildly over the last few years, more cattle producers might find higher efficiencies and margins in their operations through this practice.

As forage experts continue working on developing new crop varieties to generate higher yields, it is believed there may be further upside potential for cattle producers to enhance the profitability of their operations by adopting swath grazing and other extended grazing practices.

By: Mustafa Eric, Media Coordinator
Agriculture Financial Services Corporation



2018 LLL
SATURDAY
JANUARY 20TH

Acme Community Hall

8:30 AM - 4:00 PM

(8:30 - 9:00 registration)

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\$50 (Includes lunch, coffee, and snacks)

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FFGA MISSION & VISION STATEMENTS

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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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This Publication is made
possible by our two major
funders - the Agriculture
Opportunity Fund and
Alberta Agriculture and
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