

Director's Note — Morrie Goetjen

Hello,

I continue to be amazed at the bright, energetic, and youthful (yes, youthful!) individuals that FFGA continues to attract to their board and the membership, in general. These young producers are bright, innovative, and hungry. Their thirst for knowledge is palpable (you'll notice a bit of bovine terminology there) and I am quite confident that they will continue to lead FFGA into topics that are relevant, innovative, and always informative!! In the words of Lieutenant-colonel John McCrae; "from failing hands, we throw the torch; be yours to hold it high", have never been more appropriate.

In addition to FFGA duties, I also participate to other questionable activities such as, but not limited to, drinking rum with past and present board members; golfing on days that end in 'y'; attending bull sales with absolutely zero intention of buying a bull, and last, but certainly not least, dabbling in a little cowboy poetry. And see as how this is the merry month of May (presumably springtime in southern Alberta), I thought I'd impart a poem about that very topic. It's called:

Winter's Done

I know when winter's done for good, And spring has come to sprung, When winter's grip has eased a bit, And the awakening has begun

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And it's not when the ice in the water trough, Don't require a daily choppin' Nor when that warm south wind blows steadily in, Then the barometer starts a droppin'

It's not when the bulls start sheddin' hair, And rub on any post, Nor when them calves are runnin' mad, Those it's a sight I love the most

It's not when the crocuses start to bloom, Nor when the willer starts to bud, And it's no surprise the creeks all rise, And begin their yearly flood

Yes, these are signs that winter's done, And spring has turned the clock, But I know winter's cold has lost its hold, When we burn our chopping block!

Morrie



Foothills Forage & Grazing Association is pleased to support 2022 Canadian Nuffield Scholar Ingrid Johnson in her global study of *direct marketing and shipping temperature—sensitive products from the farm right to consumers*.

Ingrid Johnson Biography



Ingrid is delighted to jump into the Nuffield Scholar experience to stretch her knowledge, and absorb everything she possibly can! She has a creative personality and loves brainstorming ideas and solutions. She has a developing, keen fascination, with agriculture based direct marketing. She is studying "farm to door" and "urban rural connection" through her travels and interviews. Her goal is to help producers be able to share their products in Canada a little easier, even if they are quite rural and unable to regularly access urban areas.

Ingrid, alongside her husband, owns and manages the Historic Onward Ranch (600 head cow calf) and TJ Consulting Ltd (all things environmental) near 150 Mile House, BC. She grew up on a beautiful BC ranch and will carry a passion for agriculture and a quest for knowledge about the land, for the rest of her life. Soil, plants, livestock, people; it is all intriguing to her. Ingrid and Ty lived off grid on their wilderness ranch for the first 11 years of ranching together, before settling at the Onward for the next 11 years. Also in the adventurous spirit, Ingrid and her family have launched the very first ever first Grass-fed Beef boxes BC wide, directly from one ranch, to doorsteps through onwardranch.ca. Ingrid shares her excitement for agriculture, teaching along-side Ty, in the Applied Sustainable Ranching Program, at Thompson Rivers University, where they co-teach the Beef module. Her enthusiasm for teaching is also evident in her fiddle career, where she organizes square dances in the Onward barn. Ingrid loves gardening and knowing deeply where her food comes from.

Website: https://www.onwardranch.ca/

Instagram: *@onwardranching*





On the Cover: Buffalo Beans blooming in Southern Alberta

Thank you for your support!



United Nations declare 2026 the International Year of Rangelands and Pastoralists



On March 15, 2022, the United Nations (U.N.) General Assembly (UNGA) in New York unanimously declared 2026 the International Year of Rangelands and Pastoralists (IYRP).

This final approval is the culmination of an IYRP movement that grew over several years to become a global coalition of over 300 pastoralist and supporting organizations, including the International Livestock Research Institute (ILRI) and several U.N. agencies. Building on these efforts, the government of Mongolia and 68 co-sponsoring countries developed and put forward the resolution to UN-GA.

UNGA fully appreciates the importance of the IYRP resolution for addressing global biodiversity, climate change and socio-economic issues. It recognizes that "pastoralism is a dynamic and transformative livelihood linked to the diverse ecosystems, cultures, identities, traditional knowledge and historical experience of coexisting intensive livestock production has a with nature." It affirms that "healthy rangelands are vital for contributing to economic growth, resilient livelihoods and the sustainable development of pastoralism." It asks the Food and Agriculture Organization of the United Nations (FAO) to facilitate the implementation of the IYRP in 2026.

The rangelands cover over half (scientists currently estimate 54%) of the world's earth surface and is thus

our largest ecosystem but is most endangered and least protected. Around the world, rangelands support the livelihoods and food security of hundreds of millions of pastoralists, who provide livestock products not only for themselves but also for millions of others. Pastoralists use their livestock to convert often sparse and short-lived vegetation that cannot be consumed by humans into inexpensive, healthy food with high-quality protein for both domestic and export markets. They thus contribute to global nutrition and food security.

Sustainable rangelands and pastoralism are sorely needed even more so now in a world facing an unpredictable and changing climate, where already over 700 million people this sector. The ultimate goal is to - almost one-tenth of the world population - are suffering hunger and where 1 million animal and plant species are threatened with extinction.

Particularly in the last 100 years, pastoralists have endured numerous injustices, such as dispossession of their traditional grazing areas and blocking of their migration routes. Yet these communities continue to survive and apply knowledge and skills that make them strong allies in sustainable development in the face of the increasing uncertainty we are all experiencing. As stewards of the rangelands, they play a vital role in maintaining and increasing biodiversity and providing ecosystem services, such as in carbon sequestration and protection of watersheds.

Whereas industrial, confined, big carbon and water footprint, the footprint of pastoral systems has been scientifically proven to be next to nil. Rangelands sustained by pastoralism form the largest carbon sink on the planet. Keeping rangelands managed under sustainable grazing practices is essential for climate change mitigation. Pastoralism is a production system that requires little fossil fuel

energy. It relies primarily on selfgenerating natural pastures. It also helps to prevent wildfires, since grazing consumes much of the groundlevel vegetation that could provide the fuel to burn. Thus, pastoralism can be a nature-friendly livestock production system that optimizes the dynamic balance between production and sustainability under highly variable and changing conditions.

The IYRP aims to raise awareness and fill knowledge gaps globally about the considerable benefits provided by healthy rangelands and sustainable pastoralism. It will also advocate for strengthening the capacity of the pastoral livestock sector and for increasing responsible investment in make rangelands and pastoralists prominent in policy debates around everything from confronting climate crises to reducing poverty, managing threats to biodiversity, developing sustainable food systems and helping to achieve the sustainable development goals. In these debates, the IYRP will help amplify the voices of pastoralists and scientists about the value of rangelands and pastoralism.

- From an American Forage and Grassland Council news release

Original Article: <u>https://</u> www.progressiveforage.com/news/ industry-news/united-nations-declare-2026-the-international-year-ofrangelands-and-pastoralists

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Restoring marginal lands can be a long-term money-maker



Alberta producers are finding a way to make their marginal lands pay, with a little help from Ducks Unlimited Canada (DUC).

"Not all parts of a field are created equal," said Darwin Chambers, head of DUC's conservation programs in Alberta. "There can be certain areas of a field often low-lying areas — that just aren't profitable due to poor growing conditions. So, producers are looking for alternatives to turn that land into something that produces benefits and finding that conservation has a place there."

The benefits of wetland conservation and restoration are well known: filtering and storing water; building biodiversity; creating a buffer for drought or flood events. But in many cases, farmers don't even realize they have wetland restoration opportunities, said Chambers.

"A lot of the wetland drainage happened many years ago — sometimes generations ago — so farmers view them as low areas that are unproductive," he said. "But it may actually be a wetland restoration opportunity."

Restoration costs are entirely funded by DUC, but beyond that, the projects create a more profitable operation, he added.

"Rather than sitting there fighting Mother Nature and trying to farm something that is just not producing, it's oftentimes beneficial to look at a wetland restoration program," said Chambers. "The financial incentives offered through it are enticing."

That was what initially drew Kolton Kasur and his family to install a DUC project on their Black Angus and Black Simmental seedstock operation near Bashaw.

"Initially the decision was somewhat self-serving," said Kasur. "When DUC approached us about the first project, we were dealing with a drought, and a few years before that, the beef industry was under pressure from the BSE situation. So to be completely candid, the compensation was a big factor for the ranch at that point in time." But it wasn't long before they started to realize other benefits of the 50-acre spillway project.

"The true value of the conservation project wasn't realized until it was completed," he said. "It really supercharged the ecosystem. The surrounding grasses really took off, and there's an abundance and variety of bird species, not just waterfowl, throughout that pasture.

"It was a real eye-opener to the value of wetland habitat to the ecosystem. It's Dad's favourite place on the ranch to check cows. He's down there just about every day seven months out of the year. It's created a little oasis on the prairie."

Repurposing the land

A few years later, the family approached DUC about doing a similar project at another location — a 30-acre spillway on his grandparents' farm.

"Growing up we always called this spot 'the big slough," he said. "We don't really know why, but over the years, whether it was due to waterways being changed or trees being cleared, reducing snowpack run-off on neighbouring properties, it slowly began to dry up."

That work was completed last year, and as a result of these two projects, the Kasurs secured a reliable source of water — something which proved its worth during last year's drought.

"Thanks to this project, we had access to fresh water for the cattle all year and the grass in that pasture lasted longer and was more resilient."

Shifting these marginal lands to conservation projects "wasn't much of a struggle," he added.

"You're not really taking it out of production as much as you are repurposing it, often for a job it is much more effective at. In a crop scenario, the lowlands surrounding a wetland typically hold water in the spring, so you get poor germination during seeding and end up wasting costly inputs like seed and fertilizer. Then you usually just end up with a few stunted plants anyways.

"In a livestock operation, they are typically too soft and peaty for cattle to graze in, and they can cause issues like foot rot."

DUC recently launched another program to help Alberta producers manage their marginal lands. After two years of successfully running in Saskatchewan and Manitoba, the Marginal Areas Program has expanded to Alberta and will offer a financial incentive of \$125 per acre to seed unproductive annual cropland to forages. "The program is designed to help producers increase their profits while farming fewer acres — essentially farm less and make more," said Janine Paly, agricultural programs and extension specialist at DUC in Alberta.

As the owner of a mixed operation north of Edmonton, Paly has been seeding her own marginal lands to forage to help with wet, peaty soils that have low productivity and cause headaches at harvest.

"We're looking at it from a costrecovery perspective," she said. "When you're putting inputs in and you're getting very few bushels per acre back, you really have to evaluate it and ask yourself if there are better options out there."

Seeding the areas to forages made sense for Paly's 2,400-acre operation. In wet years, their combine and tractor aren't getting stuck anymore, and in dry years, the soil is better able to conserve water, leading to better hay crops.

"In a year like last year where a lot of us experienced drought, that lower peaty land capitalized on the water in the soil, and we were able to produce large amounts of hay crop for our livestock," she said, adding grain farmers could either leave those areas idle or have neighbours cut them for hay.

"We're really not looking for a largescale crop conversion," she said. "This program will be capped out at 40 acres per quarter, so it's more for those smaller areas a grower is struggling with, whether because it's saline or a clubroot area or they're not seeing a return on their investment because of the soil profile."

For Kasur, working with DUC has changed the way he looks at his land.

"You take care of it and it will take care of you," he said. "We ask a lot of the land. We want it to grow our crops and feed our cattle, yet across the landscape, we see more and more trees being cleared, sloughs being drained, and native grass being tore up and converted into other purposes.

"I think sometimes we can forget that we need to take care of the land, too. We are its last line of defence, and for some of these habitats, once they're gone, they're gone."

Author: Jennifer Blair Original Article: <u>https://</u> www.albertafarmexpress.ca/news/restoringmarginal-lands-can-be-a-long-term-moneymaker/



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Long-term study shows benefits of planned rotational grazing



Fencing & Grazing workshop at VXV Farm

Planned grazing can reduce feed costs and eliminate need for fertilizer

Six years of comparison data between planned rotational grazing versus conventional grazing has produced sufficient evidence for Manitoba researchers to abandon the conventional approach in 2022.

Instead, they plan to introduce a modified rotational approach on a research farm that has been conventional acreage. This should allow the cattle to help rejuvenate what is now a depleted stand of pasture species mixed with unwanted invasive plants.

Manitoba government livestock specialist Pam Iwanchysko, spoke about the research finding in her presentation "Planned Grazing: Making the cows work for you" during the first session of the 2022 Profitable Pastures conference organized by the Ontario Forage Council.

Why it matters: Government funding programs linked to climate change will support a transition to rotational grazing but farmers currently using conventional approaches need assurance their herds will remain profitable and healthy if they make the change.

Iwanchysko says fencing and watering technology has improved significantly over the past 25 years, including being much easier to repair. Manitoba figures show a low adoption of rotational approaches when the research farm started its project.

Even now, she said, only 10 per cent of ranchers use high intensity grazing paddocks. "There are lots of tools out there that aren't being used to their full potential."

A key focus of the Manitoba Beef and Forage Initiatives (MBFI) Research Farm work is garnering knowledge of how to implement rotational grazing while avoiding the pitfalls that could lead to a beef producer reverting to the old system.

Iwanchysko's team, also including researchers from the University of Brandon, took over the farm north of Brandon after it was purchased from the Ducks Unlimited wetland conservation organization. Within a landscape of numerous sloughs (ponds) that had already been partially fenced for grazing, they seeded a diverse mix of coolseason grasses and some legumes to establish 90 acres each of rotationally grazed paddocks and conventionally-grazed areas.

They put 25 cow-calf pairs on each of the 90 acres — not necessarily because that was the number called for in the research but because that's the number of cattle available in the herd. They also installed a solar-powered pump at one of the sloughs to provide water.

Year one was unusually wet, with the pick-up truck and trailer hauling fencing supplies becoming mired in mud on more than one occasion. It gave them the impression that managing cattle movements through fencing could be labour-intensive.

But those wet conditions haven't returned, with the past three years being very dry. Regardless of weather conditions, Iwanchysko said the first year of operating a rotational system will require much more labour than subsequent years.

Even with the irregularly shaped paddocks on the MBFI farm, "it doesn't take a rocket scientist to set it up," Iwanchysko said. Due to other research activities, the cattle have to be checked every day anyway, so it becomes part of that daily chore. "We've got it down to about 15 minutes."

They've learned to place the water at one end of the paddock and mineral at the other — forcing animals to walk between the two instead of spending long periods standing in the vicinity of both. "It's really an effective tool for getting better utilization of the entire pasture," she commented.

For her though, fencing and watering technology is a lower priority in getting rotational grazing right. Instead, properly observing a rest and recovery period for the pasture stands "is probably the number one factor that you will want to target." Plant readiness before grazing and residue management after grazing are also key factors since these two factors work together towards having enough biomass and growth going into the winter to enable the paddock to effectively capture spring moisture and get a strong start the following year.

Cattle are typically removed from a paddock after 50 per cent of the plants have been grazed, although Iwanchysko admitted "it's more of an art than a science" to determine utilization since it's difficult to measure.

Profitable Pastures moderator Christine O'Reilly of OMAFRA observed that Iwanchysko's 75-day minimum for rest and recovery period may not apply in Ontario due to different moisture regimes. The Manitoba specialist responded that the MBFI plan "is not really based on the calendar at all ... It's based on what's ahead" of the cattle in terms of pasture supply, and on climatic conditions.

"It's just a plan, and we don't always stick to that."

In 2021, facing extreme dryness, they kept the cattle back on some paddocks to the point they had been grazed beyond 50 per cent utilization. This, Iwanchysko said, was based on what was ahead of the cattle and trying to extend the pasture availability.

But they always keep in mind that 75to 90-day rest period.

On the continuous grazing side of their comparisons, after six years, the grasses are shorter, they're slower to get established in the spring, they've thinned out, and undesirable species have begun encroaching. On the planned grazing side, the pasture plants have more substantial root systems than on the continuous side.

After three straight years of dry conditions, the trend already clearly shows higher productivity on the planned side versus the continuous. And she predicts that if moisture returns, the productivity on the planned side will rebound a lot more quickly and to a greater degree than on the continuous side.

Using what she described as "cowboy math," she showed how the farm is getting more grazing days on the planned paddocks and this translates into feed cost savings. In 2021, the cow/calf pairs were out on the planned pasture an extra 41 days compared to the continuous side — days when the cattle weren't being fed from stored feed, said Iwanchysko. There were no significant differences in herd health or fertility.

Going against the advice she gave for years in her extension work serving conventional grazing farms, Iwanchysko reports grazing cattle provide the only fertilizer on the planned grazing side at the MBFI farm. "We have not had to (use imported nutrients) and we have had good success. And I think it's because of the strong microbial population in the soil."

O'Reilly noted it has also been shown that cattle under intensive grazing more effectively distribute manure across a paddock compared to conventional approaches.

Author: Stew Slater Original Article: <u>https://farmtario.com/</u> <u>livestock/long-term-study-shows-benefits-of-</u> <u>planned-rotational-grazing/</u>

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The building block of soil



Soil scientists are putting more focus on the value of organic matter for feeding important microbes and boosting moisture-managing capacity.

Without it, soil is just dirt. There's a new recognition of the importance of soil organic matter, and not only for improving crop yields. It's also a tool in the effort to mitigate climate change.

Blain Hjertaas, a holistic management farmer and grazier at Redvers, Sask., participates in the Soil Carbon Challenge, an international "competition" that monitors carbon changes on sites where farmers or other land managers are trying to increase soil health and increase soil organic matter (SOM). The Soil Carbon Coalition, which monitors the North American sites at three-, six- and 10-year intervals, reports that Hjertaas increased his SOM by 18.54 tonnes per hectare from 2011 to 2014. That's equivalent to 22.88 tonnes of carbon dioxide sequestered per hectare each year. Each Canadian's CO2 footprint is 18.9 tonnes per year.

"Every hectare I operate more than sequesters one Canadian's footprint," says Hjertaas.

Food for microbes

While SOM has always been recognized as important for soil tilth, there's also a new understanding of the value of the soil microbes which depend on it for food.

"SOM is an organic form of carbon in the soil, which drives the microbial population," says Diane Knight, a soil science professor at the University of Saskatchewan. "They use carbon for their metabolism. When the microorganisms die and decompose, they slowly release nutrients for the plants to take up. But we want to protect SOM because we don't want it to be superavailable for micro-organisms or else it would degrade right away and there wouldn't be any SOM left."

Knight says there's no "ideal" target level for SOM —it depends on many factors such as climate, soil type and crop rotations.

"There may be some ideal target SOM levels in a particular area, but it's not across the board and it will vary based on region as well as what farmers are able to grow on their farm."

In the brown soil zone in the generally hotter, drier region of the Prairies, it's harder to build — plants don't grow as large, so there's less SOM going back into the soil. In the black soil zone with more moisture, there is more available.

Knight says it's particularly challenging to increase SOM in sandy soils, which are lighter and tend to retain less nutrient and water, whereas clay soils build SOM more readily.

"There's something magical about clay particles. Clay particles are really small, and they can form shells around organic matter, and protect it from being further degraded," she says.

Input versus output

AAFC research stations across Western Canada have been conducting longterm crop rotation studies for decades, assessing rotational effects on yields, disease, weed competition and other agronomic factors. These studies have not measured carbon until more recently, and so there is no clear understanding of which crop combinations could be most effective at building SOM. It is known that higher-biomass plants such as cereals can help build SOM, but lowerbiomass crops such as pulses may not be as effective. However, a combination can help.

Simply put, soil carbon status is determined by the balance between carbon inputs and outputs.

"If you increase the carbon inputs relative to the outputs you should start to gain some soil carbon, or vice versa if you hold your inputs the same but reduce the outputs, the same thing should happen," says Reynald Lemke, a research scientist at Agriculture & Agri-Food Canada's Saskatoon Research and Development Centre.

The rotation studies have shown that carbon inputs from a canola crop are gen-

erally higher than inputs from wheat.

"Carbon outputs from growing a wheat and canola crop shouldn't differ greatly because the management of those crops is not so different," says Lemke. "But if carbon inputs increase by growing canola versus wheat, then there should be a benefit in terms of soil carbon stock, and we have some data from the long-term rotations that is demonstrating this. Although farmers' decisions to include canola in their crop mix may not necessarily be related to its benefit in terms of soil carbon, it's a nice bonus."

Some rotations, such as wheat and lentils, have proven to boost yields and soil carbon in long-term studies at Swift Current. Although the lentil crop has a lower carbon input than the wheat crop, it provides a yield benefit to wheat the following year. That balances the system as the wheat crop grows more biomass and residue to help build more SOM.

Lemke has just introduced soybeans into one of his long-term rotation studies and early indications are that it may have the same synergistic effect.

"Because soybeans fix their own nitrogen, there's a real benefit in terms of nitrous oxide emissions during the soybean year and probably in the following year because you get some nitrogen benefit," says Lemke.

"In terms of building soil carbon, it looks to me at this point that the indications are pretty good, but it's early days and we won't be able to say that for sure until we have done many more years of studies."

Extending the season

The decline of SOM started when the first plow hit the Prairies and was accelerated by decades of summerfallowing. Modern practices have slowed the trend.

"Reduced fallow and reduced tillage was a very good combination in terms of improving soil quality and soil carbon over the past few decades," says Lemke.

But Knight emphasizes that however farmers choose to continuous crop on their land, they need to make sure they have optimal fertilization. "Farmers want to get the most growth on their land, so that means maximizing root growth as well as the crop residue material that will be returned to the soil," she says. "That means having a well-managed fertility program, not over-fertilizing but apply-

(Continued on Page 11)

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ing what the plants need to support that growth."

Some farmers such as holistic practitioner Hjertaas are wary of chemical fertilizers.

"Commercial fertilizers are oxidants so they help decompose the organic matter and the bacteria must breed up to get rid of the nitrogen. It's complex but basically it also depletes the SOM," he says.

His SOM-building program is designed to produce as much material for as long as possible through the growing season.

"The key to building SOM is photosynthesis — you have to have green plants that are capturing sunlight which then creates sugar which sends roots exudates down and feeds the microorganisms, and that's what ultimately creates the organic matter," says Hjertaas.

"The longer you can do that — the

longer you can keep it green — the better it's going to be. The problem with most cropping systems is that they are only green for about 70 days of the year, whereas perennial forage, if it's managed well and has a chance to regrow after grazing, can be green for 220 to 250 days of the year."

Perennials for straight grain

Hjertaas says it can take up to five years to get to the point where SOM increases can be measured but farmers should notice positive changes in their soil within a couple of years, starting with improvements to the water cycle.

"Every gram of carbon holds eight grams of water, so as you get more carbon in the soil, you can have a hard rain shower and you won't see any water lying around. It's gone immediately."

Hjertaas says farmers who work perennial crops such as alfalfa and clovers into their rotations will see rapid SOM improvements. In practice, that can be a challenge, especially for grain farmers who don't have livestock and grazing land.

But he says there are different ways to include perennials in a grain-only system and more and more farmers are adopting some innovative practices such as cover crops, winter cereals and intercropping — to try and make sure there are growing roots in the soil from spring thaw to fall freeze-up.

"We just have to change our mindset to look at diversity and think about 'Once I get this crop harvested in the middle of August, what can I seed into it that will grow for a couple of months and either the frost kills it, or if it was green, the cows can eat it, which would even be better," says Hjertaas.

Author: Angela Lovell Original Article: <u>https://</u> <u>www.country-guide.ca/crops/growing-</u> <u>into-being-a-good-steward-of-the-soil/</u>

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