

Fields north of Moosomin as the growing season nears an end

'The only people in the world that can bankrupt my business' What one farmer said when he had the chance to address ag ministers from across Canada

What would you say to all of Canada's federal, pro-vincial and territorial agriculture ministers if you had a chance to speak with them? Kristjan Hebert of Hebert Grain Ventures spoke to the

assembled federal, provincial and territorial ministers recently. Kevin Weedmark interviewed Hebert and the complete

interview follows.

How did it come about that you made the presentation

How did it come about that you made the presentation to the agriculture ministers? How did that happen? The Ag Minister and his Chief of Staff invited me in to do a seven or eight minute presentation and then an hour and a half long panel, to the national meeting of Federal, Provincial, and Territorial Ag Ministers. There was myself and a livestock farmer, Murad Al-Katib out of ACT and an individual aut of BC. Sai two carsoli

out of AGT, and an individual out of B.C. So it was a really

good, widespread panel to get different opinions. The fertilizer emissions targets came up but I would say that it was more of a broader level, sustainable farming, cli-mate positive practice type idea.

Bringing

What was the main point that you were trying to get



Kristjan Hebert

across to the ministers that day? I used my presentation piece to outline what we're al-

ready doing, but my biggest message to them was that I don't get anxiety ever, almost never, but sitting in a room of Ag Ministers I can have anxiety because they're actually the only people in the world that can bankrupt my busi-ness and I said that to their faces—that poor policy could ruin agriculture, so they need to take their jobs seriously and they need to get input from greac-roots not inst from and they need to get input from grass-roots, not just from mid-level type organizations, which is where a lot of their information comes from.

Another point I made is the one thing we learn when coaching minor sports is that you praise in public and criti-

cise in private. I feel that currently our national media outlets and our federal government don't have that figured out.

They criticise on the world stage saying that we need to be better and our targets need to be more aggressive, and

be better and on highs here to be how aggressive, and the praising on the point out that until somebody's will-ing to be Big Brother and call China and Russia and some of those countries to action, the one per cent or whatever change we want to do in Canada is going to be pretty minimal

Continued on page B5 🖙



Ag News - Moosomin, Sask.



A field of sunflowers north of Redvers, Sask

Hot, dry weather helping to ripen crops Harvest still well behind five-year average

In Southeast Saskatchewan, producers saw their crops begin to ripen more rapidly after receiving hot, dry weather last week.

The weather also made for good harvesting conditions with more producers getting into their fields last week to combine or swath.

Harvest progress for the region sits at six per cent, well behind the five-year average of 20 per cent. Crops in the region have been delayed due to late seed-ing dates and more regular rains throughout the growing season. Where adequate rainfall was received, crops look very good and producers are very happy with their esti-mated crop yields. There has been 13 per cent of the winter wheat, 36 per cent of the field peas, 24 per cent of the lentils, 14 per cent of the barley and five per cent of the loats combined so far across the region. Once crops are fully mature, harvest will progress quickly for producers in this region as long the weather stays favourable. Very little rain fell in the southeast this past week, with most areas of the region receiving trace amounts up to 5

most areas of the region receiving trace amounts up to 5

However, the Moosomin area caught the edge of a

Storm and received 18 mm. Cropland topsoil moisture is rated as five per cent sur-plus, 72 per cent adequate, 21 per cent short and two per cent very short.

Hay and pasture land is rated as nine per cent surplus, 68 per cent adequate, 21 per cent short and two per cent very short.

Very short. Pasture conditions in the region are rated as eleven per cent excellent, 62 per cent good, 22 per cent fair, three per cent poor and two per cent very poor. Pastures have largely improved in the region which has relieved a large amount of stress on livestock and live-

stock producers, who did not have to worry about haul-



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ing feed and water to cattle. The majority of crop damage this week was due to grasshoppers and flea beetles. Grasshoppers have been



B2

APAS says it wasn't consulted on fertilizer emissions

BY SIERRA D'SOUZA BUTTS LOCAL JOURNALISM INITIATIVE REPORTER

Bill Prybylski, vice-president of Agricultural Produc-ers Association of Saskatchewan (APAS) said the association is unclear how the federal government came up with the national target for reducing levels of GHG emissions from fertilizer usage by 30 per cent from 2020 levels by 2030.

"We certainly have some concerns, there's a lot of uncertainty to what this means for producers," said Pryb-

"We don't really know how our emissions are right now in the Prairies compare to the rest of Canada, we don't know if the modelling they're using is even rele-vant to our individual operations on the farm, we don't know what the consequences of our actions are, or where the emissions savings are if we do some of the practices that we're already doing. We don't know what those numbers are, so we need to know if the government's modelling is correct.

"Other than the uncertainty surrounding it, our biggest concern is no federal or provincial policy should ever af-fect production. If in fact this emissions production target

comes down to reduced fertilizer usage, that certainly is going to affect production which is very concerning." Prybylski spoke about how the planned reduction in fertilizer emissions can affect Saskatchewan and Canada's overall production of food.

"Certainly any reduction in the overall use of fertilizer is going to mean a reduction in productivity. To be fair this mandate is only a reduction of fertilizer emissions, and if there are ways to reduce emissions without reduc-ing the amount of fertilizer used, that would be very ac-

ceptable," he said. "I think farmers would accept that quite happily because it's going to mean lower costs for their farms, but in fact if it comes down to having to reduce the amount of fertilizer used overall, that is certainly going to negative-ly affect our ability to produce the crops that the world Prybylski was asked how APAS would work with the

federal government on reducing GHG emissions in Canada's agriculture sector.

"It comes down to research. We've not seen any of the research as to where this 30 per cent has come from," he said.

"We certainly would be willing to come up with farm-ers' names, we'd be willing to co-operate with the federal government to do the research to see what these emis-sions levels are at right now.

"From my circle of farmer acquaintances I know of no-body that has ever had any research done on their farms to know what nitrous oxide emissions are created on their farms. I have no idea where the government is coming up with the numbers they're using to calculate the emissions

"It's our understanding that they're using the total of



Vice-president of APAS Bill Prybylski spoke about the concerns he is hearing fromfarmers about the federal government man-date for reducing greenhouse gas emissions in

Canada's agriculture sector.

fertilizer sales then multiplying it by emissions factor, and we have no idea how they have calculated that emissions factor or if they have taken into account the practices that farmers are already doing to reduce emissions, whether it's topography, soil type, crop rotations, all those types of things that affect emissions. We just have no idea how they're benchmarking any of their calculations."

Farmers already doing their part in reducing GHG emissions

Prybylski said farmers have already adapted practices that create less greenhouse gas emissions. "Soil sampling is one, farmers are only putting as much fertilizer as they need to achieve their target yields. Especially with the cost of fertilizer being as it is, farmers can't afford to be putting on more fertilizer than they absolutely have to, so soil sampling certainly is important,"

he said. "New technology in the seeding equipment with the use of sectional controls and GPS guidance makes a difference. With sectional control, farmers are only putting the fertilizer on once and not overlapping. Given the variability of our soils, we have the ability now to only put the amount of fertilizer that is needed on every acre rather than using uniform application across the whole farm

"With direct seeding putting down all the fertilizer



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with the seed, rather than broadcasting and with crop rotations, the use of pulses and forages in a rotation that's using less fertilizer, all these are things that farmers are doing already, but have not been recognized for it."

Aside from reducing fertilizer usage, there are other ways farmers can reduce GHG emissions, Prybylski said. "The agriculture industry as a whole has done a lot over the last 20 years to reduce greenhouse gas emis-

sions, and not because of a government mandate, but be-cause it makes sense for our farms," he said.

"The technology used for seeding now has made sig-nificant reductions in GHG emissions. Direct seeding for nificant reductions in GHG emissions. Direct seeding for example, one pass across the field to put the seed and fertilizer into the ground as opposed to years in the past where farmers would be tilling the soil three or four times a year before they could get a crop in. "That itself has eliminated a lot of greenhouse gases, it has reduced the use of fossil fuel usage, and the lack of pillage that has helped sequester the carbonated soil rather than releasing if into the atmosphere".

rather than releasing it into the atmosphere.

Continued on page B6 🖙

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Horses in a sunny field between Welwyn and St. Lazare with rainy skies to the north.

Canola 4R Advantage offers incentives to increase value and efficiency of nitrogen use

On August 11, the Canola Council of Canada (CCC) unveiled a new program offering financial support to help growers initiate or advance 4R Nutrient Stewardship on canola acres.

canola acres. The program, named Canola 4R Advantage, will reimburse growers for up to 85 per cent of eligible costs, up to \$12,000 per farm per year. Funding for Canola 4R Advantage has been provided by Agricultural Climate Solutions – On-Farm Climate Action Fund (OFCAF). "Canadian canola growers are leaders in sustainability, and we're excited to launch this program to keen build-

"Canadian canola growers are leaders in sustainability, and we're excited to launch this program to keep building on this excellent track record," says Jim Everson, CCC president. "Expanding the use of 4R Nutrient Stewardship is an important opportunity to improve fertilizer efficiency, which is good for both farm productivity and the environment."

environment." The CCC has chosen to focus its program on precise, efficient and sustainable nitrogen management using 4R principles. "4R practices help growers ensure they apply the right source of fertilizer at the right rate, right time and right place for optimal results," says Charles Fossay, canola grower near Starbuck, Manitoba and director of Manitoba Canola Growers and CCC. "This maximizes the crop's access to nutrients while minimizing any losses as nitrous oxide emissions."

nitrous oxide emissions." Canola 4R Advantage will provide incentives for canola growers to use best management practices (BMPs) in four areas: soil testing, enhanced efficiency fertilizers, preferred application and field zone mapping. To be eligible for these incentives, a grower must have a 4R Nutrient Stewardship plan that has been verified by a Certified Crop Adviser or Professional Agrologist who has earned the 4R designation from Fertilizer Canada.

"These BMPs fit in well with canola production across the Prairies and are effective ways to use fertilizer efficiently and get more return from that investment," says Roger Chevraux, canola grower near Killam, Alberta and chair of Alberta Canola. "And by working with a 4R designated agronomist, growers get guidance from certified experts and their acres accounted for and recognized under the 4R Nutrient Stewardship program."

Continued on page B12 🖙





'The only people in the world that can bankrupt my business' What one farmer said when he had the chance to address ag ministers from across Canada

Continued from front

Continued from front On the other point. I think we're missing one of the biggest opportunities in history. If we, on a public global stage, actually outlined everything we do and how that compares and benchmarks to the rest of the world, I think we have the ability to bring in billions of dollars of international investment. international investment.

I think we could sell carbon as a commodity, no differ-ent than wheat, canola, or cattle. But our government is not currently taking the path to capture that opportunity. They're almost trying to send kids to their bedroom for doing something wrong. So I just pointed that out and said, first of all, thanks for finally caring about the envi-rement Emmersh have had to are about it for combining ronment. Farmers have had to care about it for centuries because if we do a bad job on the land as a farm, all we're doing is hurting our grandkids. We have a legacy statement on our own farm that my job is to pass the land, the financial statements, the com-

job is to pass the land, the financial statements, the com-munity and the industry on and in a better state, genera-tion after generation. So I'm really happy that they're part of the club now that cares about the environment, but don't make farm-ers feel like environmental pirates when we've been im-plementing practices for years—things like zero till, soil testing etc. to get better all the time.

Hearing some of the concerns from the farmers, do you think those concerns are warranted based off that

you think those concerns are warrance based of the discussion paper? I think it's a catch twenty-two. The discussion paper to be honest is reasonably logical when it comes to 4R and soil testing, variable rate, treating your nitrogen. I would say the issue right now is farmers and agri-

Two due say unlessue right how is faithers and agin-cultural organizations, we don't really trust the federal government to only do that. The carbon tax was supposed to start at how many dol-lars per ton and what is it now. So, the view from farmers is if we give them any ground now, what is it going to be in the churce? in the future?

It's really turned into quite a political issue. If you read the discussion paper, it says it's a 30 per cent reduction in emissions, not a 30 per cent reduction in fertilizer, but because of leadership races and elections, that's getting thrown around very differently. Another point of it is, and my main point to them was, if was are given to hock at an omission hereat it is chould be

if we are going to look at an emission target, it should be based on per metric ton output, not per acre. We sell output around the world. That is what we

should be benchmarked on.

If you go back the last decade we are down well over 30 per cent on emissions because our yields in produc-tion have increased so much and currently in the report 1 think that is one of the biggest weaknesses is that they are measuring total fertilizer purchases and calculating off of that.

Say 10 years ago, canola average yields were 26 or 27 bushels an acre, and now they're 42 or 43—we have hit the reduction target simply by increasing output per unit.



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That was my big point to them. I don't disagree with looking at ways to be better, we're always going to look at that. I don't disagree that they suggest to farmers that soil testing and 4R are a good thing, I think they are. And I think as an industry we have to make sure we point that out that most of us have taken up these things, but there are a bat who haven't each wure greed to existence the there are a lot who haven't and we need to continue to improve.

I would say the biggest worry right now with the cur-rent federal government is that we just don't necessarily trust if we give an inch, they won't try and take a mile. It's not feeling very collaborative and that to me is the issue.

I wouldn't say that with our provincial government I I wouldn't say that with our provincial government I think Minister Marit and the premier currently are huge supporters of Western Canadian agriculture and Sas-katchewan in particular and I think you look at the trips and the offices they have been setting up in Dubai and the Emirates specifically to really promote Saskatchewan products and our emissions per unit of output versus the world world

I think they are putting a lot of time and effort into it and starting to see some big wins, but I wouldn't say we are getting that feeling federally yet.

Talking to the ministers and looking at the discus-

Talking to the ministers and looking at the discus-sion paper, do you get a sense that the politicians and the bureaucrats really understand farming? I think provincially our minister and our top bureau-crats have a fairly good grasp on agriculture, but even they will admit they don't understand all of the most progressive ideas yet. I look at one type of fertilizer I am using now, it's a phosphate made completely from plants on the adves of the city nulling human waste out of the using now, it's a phosphate made completely from plants on the edges of the city pulling human waste out of the water, so talk about a perfect story. We're pulling human waste phosphate out of urban sewer droppings in the water streams and using them to grow crops, but there's new technology like that coming all the time.

I think federally there's some questions especially on the understanding of Western Canadian Broadacre Agri-culture that there's enough advice or feedback loops, etc., to fully grasp that. I think it is really important we all push them. It is fine

to have the global strategy to reduce emissions, there's a whole bunch of points to that, no different than calling out different countries that need to meet targets before

we make a big affect. The biggest thing is when we go to implement these policies, whether it is agriculture or any other policy, is to have regional theories. My farm here is significantly different than a farm in Southern Ontario and we need to realize that. You can't have blanket approaches—they ruin and cripple different parts of industries.

Where are you hoping this goes, best case scenario for the federal policy? In a perfect world hopefully it takes a little while to get implemented and we see the voluntary carbon market come in that you are seeing in the U.S. already. I think as farmers we need to understand that consum-ers are willing to invest money in ESG strategies and car-bon cetoriories. Uthink the arrivate morter will how a very

bon strategies. I think the private market will have a way

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to use some of that shareholder money and invest it back

to use some of that shareholder money and invest it back into agriculture. I do think there is a huge opportunity here to have car-bon selling be part of a tarm's net worth, and really the one best thing about farms is that all the revenue they create literally gets invested rurally. One of the things I said to the feds, this might be an op-portunity to revitalise rural economies that you are miss-ing. Did we get the point across enough? I don't know, but I do have to say they hosted a really good meeting of federal, provincial and territorial minsters in Saskatoon. They took them to the Ag in Motion show and walked them around to check out combines and they had a group of Saskatchewan producers say some pretty blunt things.

of Saskatchewan producers say some pretty blunt things. It wasn't hidden in an Ottawa back room boardroom, it was pretty up front, and they had a lot of people there. Hopefully, we got our point across. I actually encouraged the federal minister and her chief

of staff that they are more than welcome to come to my farm any time to walk around if they want to ask ques-tions and try to understand more. And even though I don't necessarily always agree with the current federal regime's current ideas, I definitely want to understand why they're doing what they're doing.

Do you think there is a general understanding among the public and the federal politicians of the net carbon impact of farming? No, I don't I don't think that there has been enough money invested into the science and the data behind it yet. I think there is a lot of theory, and I think we could do hender we lot to compare our phase footright to carbot yet. I think there is a lot of theory, and I think we could do benchmarks to compare our carbon footprint per unit of output of wheat versus Europe's, but with what's ac-tually going on in the soil. I think it is a huge area where government and universities could actually allocate re-search dollars to better understand the soil.

Where do you see the future of farming in terms of emissions and fertilizer use. How do you see that changing? I think the biggest thing is in the future we are definite-

ly going to have the data set to measure what is actually going on. Then hopefully, real data is what the decisions come from.

Think we need to be opportunistic. Companies such as Nutrien have significant ESG strategies now, and signifi-cant dollars that can be invested in them. There's ways as farms we can work with that, and I think we need to promote everything that we are doing well. You could even argue that we are a net carbon sink in a lot of cases, but in most cases because of the amount of zero-till in Canada most cases because of the amount of zero-till in Canada our net emissions are significantly lower than compared to the rest of the world. That is something we should be selling to the world, not highlighting what we could do better. We can always be better, but let's highlight all the things we are already doing better. I think Canada and Saskatchewan, especially, we're still thought of as a little bit luddite-like and plaid shirts around the world, and that doesn't always attracts a lot of

around the world, and that doesn't always attract a lot of international investment. When you have the population we do, international investment is pretty important.

APAS says it wasn't consulted on fertilizer emissions

☞ Continued from page B3

"Improved crop varieties has made a difference in the

amount of greenhouse gas that's emitted from the crops from those particular crops," said Prybylski. "There's better fertilizer management, better manure management from livestock operations, all those types of things, I believe, have made a huge impact on the amount of GHG emissions from agriculture."

APAS plans on writing a letter to the federal govern-ment that expresses their concerns regarding the mandate

"We certainly will respond to the government's request

for consultation. We're in the process of putting together a response that will be submitted to the federal governhe said. ment."

"For the most part the letter is not necessarily oppos ing it, but really questioning the methodology used to calculate the 30 per cent and how it's going to affect our producers, and how the plan will be implemented across the country.

'We recognize that here on the Prairies we've done a lot to mitigate greenhouse gas emissions, again not because of the government mandate, but because it made sense on our farms

"Compared to other areas of the country where maybe they are still broadcasting huge amounts of nitrogen fertilizer that's being broadcast on top of the soil, obviously that would have a lot more emissions.

"I think for the biggest part not knowing where the numbers are coming from is a concern to us and whatever happens, whatever policy is put into place, it cannot affect productivity.

"APAS will definitely support and welcome farmers' concerns, we will do our best to make sure that whatever policy comes to play, will be in the best interest of producers.

Feds back off on entering farmland • Sask government sent a letter August 21, Federal government told World-Spectator August 22 it had stopped entering land to take water samples Feds confirmed Friday they were testing for pesticides

BY SIERRA D'SOUZA BUTTS LOCAL JOURNALISM INITIATIVE REPORTER

Within a day of Saskatch-ewan Water Security Min-ister Jeremy Cockrill taking the federal government to task for Environment Canada officials trespassing on farmers' land to take water farmers' land to take water samples from dugouts, the federal department told the World-Spectator it has stopped doing any sam-pling until it can ensure that it is following the law. "Environment and Cli-mate Change Canada (ECCC) is reviewing sam-pling protocols to ensure they are consistent with area

they are consistent with area laws before doing any fur-ther sampling," the depart-ment told the World-Spectator Monday. "ECCC is currently look-

ing into the matter internal-ly, and has become aware ly, and has become arrest of an incident that occurred or an incident that occurred on August 11, in Pense, Saskatchewan, where wa-ter scientists were taking samples very near a highway when a landowner approached the scientist to inform them that they were

in fact on private land. "ECCC is also looking into the other two locations, though have found no record of them so far.

The department denied it was testing for nitrates, and said it was conducting tests on behalf of Health Canada.

The World-Spectator contacted Health Canada that week asked what they were testing water samples for.



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"Over the summer. Health Canada has been engaging with partners and stakeholders, to develop better pesticide monitoring in Canada," stated Health Canada.

Canada. "As part of these activi-ties, Health Canada has partnered with Environ-ment and Climate Change Canada and Agriculture and Agri-Food Canada to collect water samples at various lo-cations across Canada." On August 21, Minister

Cockrill addressed the con-cerns made by farmers in the southern areas of Saskatche-wan and wrote a letter to Steven Guilbeault, the minister responsible for environment and climate change, asking for an explanation. "Recently, Saskatchewan

producers in the Pense,

Mossbank and Pilot Butte areas contacted the Gov-ernment of Saskatchewan and raised serious concerns about Government of Canmarked Government of Canada vehicles, trespass-ing on private lands," he stated. "When

"When approached by producers, these employees indicated that they were testing water sources for pesticide/nitrate levels. "The lands and water

body, a producer's dugout, are both privately owned. Government of Canada rep-resentatives did not request permission to enter from the landowner, nor did they seek permission to perform testing or advise landown-ers of any other purpose or necessity for attendance.

"There are two main issues that require an immediate explanation from your office. General water qual-ity management falls under provincial jurisdiction. The federal government should in no way be interfering with the Saskatchewan Wa-ter Security Agency's man-date to manage this area, particularly by inappro-priately accessing samples from various private lands in Saskatchewan. "While consulting on the creation of a Canada Water diate explanation from your

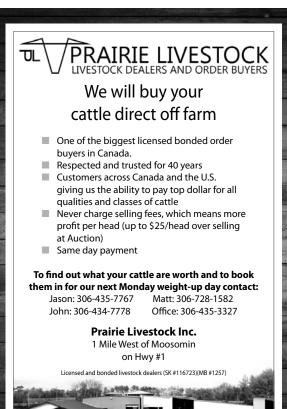
creation of a Canada Water Agency, your government indicated that it would not infringe on provincial juris-diction but would work in collaboration with provin-cial governments.

"Your attempt at covert testing of water bodies on private lands in this manner. without collaborating with the Saskatchewan Water Security Agency or any Gov-ernment of Saskatchewan ministry, has created unnecessary fear and disruption to our citizens while also dis-playing a disappointing act of bad faith. These actions call into question the federal government's motivations when it comes to water management in Canada. On the Wednesday of that

week. Guilbeault responded in a letter referring to Cock-rill's letter and media reports on the water testing as "misinformation" however did not address what the samples of water were being tested for.

Two days later, Health Canada confirmed to the World-Spectator that testing was being done for pesti-cides, as Cockrill indicated in his original letter.





IDIAL TITLE

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Harvest season around the corner for farmers

LOCAL JOURNALISM INITIATIVE REPORTER With harvest around the corner, local

farmers shared their thoughts on how this year's crops performed. "This year's crops are looking very good, you never know until you get into them, but there was really good growing conditions this year," said Kevin Hruska who farms in the Esterhazy, Bredenbury

and Langenburg areas. "It was a little too wet off the start, but these timely rains have really made crops look pretty good. There's a robust weed crop out there, not just us, everyone."

With a late start to seeding this year, Hruska said he is satisfied with the out-

"We're just estimating yield now be-cause we haven't been out there, I would say the late seeding didn't hurt the yield yet, but an early frost would," he said.

"Last year it was dry, even here we're one of the areas that had some of the better crops, but overall it was very dry in the rest of the country, and this year it's wet everywhere. There's a couple of dry spots I heard about, but it's very small, everywhere I go to crops look excellent. "The rain did affect us a little in the area

around Esterhazy, we also farm in the Langenburg area which is wetter because we got more rain. That area is different, we're between 12 and 20 inches of wa-ter and that's the difference on our farm. Some areas only have 12 inches some areas are pushing 20 inches, we're not quite as wet as the Rocanville and Moosomin area because we missed a couple of those extreme weather events."

Hruska said he expects harvesting to begin at the start of September. "At best case scenario we don't expect to harvest until September 1," he said.

to harvest until September 1," he said. "It's about a week later than usual, but harvest is going to drag out because we're not going to be able to continue for as long during the day. "Time will tell when we can start har-vesting, and how much rain we get in harvest. You can have a year like this too where all of a suddon it gives a bar.

where all of a sudden it gives us a har-vest window and it dries up and you're

"The canola will be harvested later, it has a long way to go especially with the moisture we've been getting which

Conditions apply



An aerial shot of crops east of Moosomin.

doesn't speed it up, either.

"We would like to wish everyone else good luck and to get their harvest off, hopefully we do have an open fall. "I think everyone has good crops out there, in my opinion. It looks good for averyone prices are strong normally.

everyone, prices are strong, normally strong prices and robust crops don't hap-pen at the same time, so it's looking like a good year, it really does."

Thunderstorms impacted farm, but crops are doing well overall

Steven Donald, farmer in the RM of Martin, also said the wet weather con-ditions from this summer impacted his crops and contributed to a delay in har-

vesting. "Some of the crops are looking very good and some of the crops are looking very poor because there's lots of drowned

"When the tornado came through we lost two sheds and 12 bins, and a roof on

one home, we got hit pretty hard. "By the looks of the crops we might be harvesting next week, depends on the weather. If we get some nice weather we'll might be able to harvest quicker or

it might also drag on for another couple weeks." With a late start to seeding this year

Donald said he is not sure how his yield will turn out.

"Everything was late all the way through, but it seems like it's hanging in there. The crops are at the right stage

In there. The crops are at the right stage we're just at them a month later because of seeding starting later than normal." Donald said his plans to start harvest-ing are all weather dependent. "We have to have the right weather to start combining if we want to do it by next week," he said. "If we get any more moisture from now writi thes wo'll he luket to cart combin

until then, we'll be lucky to start combin-ing in two weeks. The days are shorter so the grain doesn't dry down enough dur-ing the day, and we'd have to work with the sunlight too a little bit to help with the crop maturity. Then we also have to worry about frost the further we go out in the year.

"It was a fight to get the crops to where they are now and we fought to keep it there, I just hope we don't have the same fight to get it off."

Grain farmer satisfied with this year's crops

Although the crops are in good shape, Mark McCorriston, a grain farmer near Moosomin, said he believes the area surrounding Moosomin is behind on har-

vesting because of the excess moisture. "Unfortunately I feel that our area, the Moosomin and surrounding area like Maryfield and Rocanville, is far behind compared to the crops I've seen," said McCorriston.

'I was on my motorcycle for a 2,200 kilometer cruise around the Prairies and our crops are the least advanced, not saying that we don't have some good crops, but we're behind on average in the Prairie provinces and we're behind on aver-age for the calendar year too." He said he thinks his farm is behind

compared to previous years because of the late start to seeding this year, and because of weather conditions throughout the summer.

"Seeding seemed to start later in the year than it has on average in the last five years, not only did we get a late start, but we've had our fair share of rain, which I'm grateful for, but that's extended our growing season," McCorriston said.

"I think the crops are excellent they're just later than average which I'm grateful for. It looks like we're going to be having some good crops to harvest, the down-side of it is that as the season lingers on, the daylight really starts to disappear.

"At 9 o'clock it's already dark so com-bining without the lights on, especially if you have multiple lights combining in one field, is just a little bit more stress especially since some of my guys are older

"It's nice to get an early start to the season because you have the longer and warmer days. As you get later in Septem-ber it gets dark earlier and it gets damp earlier, that you don't get the big days to get lots of crop off. When you get a late start it usually ends up being a long, later harvest

"But I'm definitely not complaining, I would much rather have a late harvest and good crops than dealing with the stress of not enough moisture, like the drought we had last year.

"I'm thinking this year the crops will be average or above average. I definitely have some fields in Rocanville that were too wet for too long and they drowned out some spots so it's just weeds now, but the spots that were higher land, they got the rain that they needed and I think it will make up for the low spots that we lost.

McCorriston said he plans to start harvesting next week, but may possibly push it back a week longer depending on the weather.

"I've got my fingers crossed for a nice, long fall and am patiently waiting," he said.

"My operators and myself are getting kind of excited to get on the land and start harvesting, but mother nature dictates the terms so we're going to keep our fingers crossed and wait for a good September and just wait until we can get





B7



New name, new mission for Richardson Centre for Food Technology and Research

The Richardson Centre for Functional Foods and Nu-The event many selected to reflect the RCFTR's focus on collaborating with the agri-food industry to advance food quality and human nutrition through food research and pra-countering food industry to advance food quality and human nutrition through food research and pra-countering food industry to advance

and pre-commercial product development. The RCFTR is a world-class research and development facility on UM's Fort Garry Campus which provides ex-pertise and services in traditional and innovative food processing techniques to industry partners. The site hosts a federally regulated grain milling and dry fractionation facility, a suite of analytical testing services for food in-gredients, and a nutritional research unit able to conduct clinical nutrition trials. Additionally, the 55,000-square-foot RCFTR leases office, laboratory, test kitchen and pilot

plant space to organizations involved in food research. Unique to the RCFTR is the expertise offered through the affiliation with UM's Department of Food and Nutri-tional Sciences, with researchers in food chemistry, processing, metabolic and applied nutrition. The department also offers added capability through their analytical, ex-traction, processing, cell and tissue culture and genomic laboratories. "The University of Manitoba's role as leader in food

processing and nutrition science is greatly enhanced by our ability to collaborate with industry partners in tack-ling new technologies and innovations. The critical R&D and training provided by RCFTR supports a vibrant and rapidly growing Manitoba food sector," said UM Vice-President (Research and International) and Distinguished Professor Dr. Diavir Luva. Professor Dr. Digvir Jayas.

"We are excited to announce the new Centre name, a key part of our strategic vision that includes intensifying research, enhancing collaborations and aligning with pro-vincial and national mandates related to food research," Vincial and national mandates related to tood research, said Dr. Rottimi Aluko, RCFTR Director. "The RCFTR is uniquely positioned to help our industry partners with our combination of researcher expertise, pilot plant and analytical services and clinical nutrition trials." "The Richardson name has been closely aligned with the the followed to the set of the wet

"The Richardson name has been closely aligned with the growth of the global agri-food industry for the past 165 years, and as Canada's largest agribusiness, we are proud to continue our investment and support in its in-novation," says Hartley T. Richardson, Executive Chair, President & CEO of James Richardson & Sons, Limited. The RCFTR was originally funded in part by a joint \$7-million investment in the University of Manitoba by the Richardson Firm, Family and Foundation in 2003.



The Richardson Centre for Food Technology and Research

Fields, fence posts and a tractor, taken east of Stoughton on Highway 13.





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Minister Bibeau shares reasoning behind reducing GHG emissions in Canada's agriculture sector

The Agriculture and Agri-Food spokesperson for Min-ister Marie-Claude Bibeau spoke to the World-Spectator about the federal govern-ment's fertilizer emissions reduction target of 30 per cent below 2020 levels by 2030. Following is the full inter-

Farmers in Saskatchewan have been using zero-till farming, along with high technology seed drills, where does the federal government see the waste of fertilizer and emissions being used in the Canadian agriculture sector?

Canadian farmers have faced unprecedented en-vironmental challenges such as last year's historic drought and devastat-ing floods. They are on the front lines of climate change and among the first to feel its effects. Supporting sustainable agriculture is one of the government's number one priorities for the sector, building on the existing efforts of farmers and the sector to protect the environment and reduce greenhouse gas emissions.

Canada is a global lead-er in agricultural innovation and technological development. Innovation is revolutionizing modern agriculture and is key to finding solutions to agri-cultural challenges and the government is committed to helping producers further adopt practices and technologies that protect the environment and re-duce greenhouse gas emissions without compromis-

ing production. Farmers work hard to safeguard the environment, knowing it preserves their farms for future generations. Their efforts present a win for their farms. consumers, and the Cana dian economy by responding to domestic and global demands for sustainable

food. While existing initiatives are moving the needle on emissions reductions in the agriculture sector, we are working to develop further strategies and approaches to meet Canada's emissions reduction target. As we look towards the future, there is an opportunity to encourage broader uptake of new and existing technologies, practices and approaches.

How did the government come up with the 30 per cent reduction target of fertilizer usage?

It's important to note that many factors can impact emissions reduction

potential—which is why the target was developed by accounting for variations such as soil type, soil humidity, climate and crop types across the country. The fertilizer target was established based on available scientific research and internal analysis which pointed to the potential of optimizing nitrogen fertilizer use with an accompa-nying reduction in greenhouse gas emissions, while maintaining or increasing yield. The emission reduction

target of 30 per cent was the result of an iterative process weighting various factors and characteristics, such as: ambition - con-sidering climate goals and international efforts; tech-nically achievable – technologies and know-how largely exist; economically feasible – potential cost savings while maintaining yield through efficiency gains; scientifically defensible - supported by research findings relevant to Canadian context. There is no single uni-

versally applicable path for reducing emissions from fertilizer. A tailored approach will be necessary to reduce emissions costeffectively. The approach for achieving this target is currently in development and will continue to evolve as stakeholder feedback is received

In the Government of Canada's Discussion Paper it suggests that farmers can replace synthetic fertilizer with manure, compost or digestate to reduce emissions by 10-20 per cent. As this sug-20 per cent. As this sug-gestion would require a separate pass and cannot be done by a seed drill it would cause tons of emissions to be used to cover millions of acres. What would be the environmental impact of taking this approach? Farmers are a funda-

mental part of the Cana-dian economy, and play a key role in land stewardship and conservation. They have already made a positive environmental impact through practices such as no or low-till, and will have an important role to play in further reducing GHG emissions in the years ahead.

Fertilizer emissions are not spatially or temporally uniform across Canadian agricultural landscapes. The seasonal pattern of N2O emissions reflects the interaction between soil temperature, soil water and nitrate availability. For example, drier regions

of the Prairies have much lower N2O losses than the moister regions of Eastern Canada. As a result, strategies to achieve the 30% N2O emis-

sion reduction objective will vary by region across the country as the emissions reduction potential is impacted by biophysical factors (soil type, soil humidity, climate), crop types, and climate change impacts.

In recent interviews the Minister has stated this is a voluntarily approach for farmers and is currently not mandatory. Will it remain voluntarily?

Government The of Canada has set a fertilizer emissions reduction target of 30 per cent below 2020 levels by 2030, and will continue working with the fertilizer industry, agricultural stakeholders, farm-ers, provinces, and territoto develop voluntary approaches to meet that target. Canada's fertilizer emis-

sions target does not represent a mandatory reduction in fertilizer use. Efforts to meet Canada's target will focus on improving nitrogen management and op-timizing fertilizer use. For example, practices such as the use of enhanced efficiency fertilizers, minimiz-ing fall application and/or broadcasting of fertilizers, increased use of pulses in crop rotations, and annual soil testing can improve the efficiency of nitrogen use and reduce emissions while maintaining or im-proving crop yield. Although farmers cre-ate emissions, they also

sequester the carbon in the soil and produce food for Canada and globally

How are the use of emis-



Climate change is one of the greatest challenges of our time, and taking action to tackle it will require engagement from all parts of Canadian society anadian society.

The Government of Canada has introduced the Emissions Reduction Plan (ERP), which provides a roadmap for how Canada can achieve greenhouse gas emissions reductions of 40 to 45 per cent below 2005 levels by 2030.

Taking into consider-ation the best available science, the 2030 ERP includes new measures and strategies across all sectors of the economy, and puts in place more of the essential building blocks to grow a strong, resilient economy, create jobs, meet Canada's climaté objectives, while leaving the flexibility to adapt to the future. The ERP also includes \$1.05 billion in new funding for programs to assist the agriculture sector in reducing emissions.

Fertilizers are an essential input for Canada's agricultural crops. They have helped drive increases in Canadian crop yields over time, increases in grain sales and exports, record farm gate receipts, and greater prosperity for Canada's farm families. However, the application of nitrogen (N) fertilizer in particular results in nitrous oxide (N2O) emissions, a potent greenhouse gas with a global warming po-tential 265 to 298 times that of carbon dioxide (CO2)

over a 100-year period. Between 2005 and 2019, fertilizer use increased by 71 per cent in Canada, pri-marily driven by growing fertilizer sales in Western Canada (BC, AB, SK, and MB). Over the same pe-riod, N2O emissions from fertilizer application in Canada increased by 64

per cent, with direct and indirect emissions associ-ated with synthetic fertilizer N2O emissions in 2019 at 12.75Mt CO2e (National

Inventory Report, 2021). Although some produc-ers have already imple-mented beneficial management practices to help drive emissions reduc tions while maintaining or increasing yield, op-portunities for improvement remain, particularly in regions where uptake of BMPs have been more limited.

The fertilizer emissions target's objective is to contribute to lower GHG emis-sions from the agriculture sector by building on and leveraging existing public and private programs and initiatives.

There is no one-size-fitsall approach to meeting the target. Canada's ag-riculture sector stretches from coast to coast, and varies by crop, soil, and region. Encouraging the use of existing technologies and practices can help meet this target and more solutions continue to be developed through additional research.

We will continue to work with the sector and our partners to identify and address challenges to determine how best to support farmers in implementing these practices on a broader scale.



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A flax and canola field meet north of Griffin and south of Fillmore.

Canola 4R Advantage offers incentives

Section Continued from page B4

B12

Canola 4R Advantage will begin accept-ing applications on August 17 through a digital platform linked to the CCC website. In the meantime, growers and agronomists can review program details and eligibility criteria at canolacouncil. org/4R-advantage "We're pleased to support Canada's canola farmers by funding Canola 4R Ad-vantage through the On-Farm Climate Action Fund to expand the use of 4R Nu-trient Stewardship practices. This is an im-

trient Stewardship practices. This is an im-portant opportunity to build on canola's portant opportunity to build on canoa s leadership in sustainable growing prac-tices," says Minister of Agriculture and Agri-Food Marie-Claude Bibeau. The CCC is one of 12 partners selected across Canada to deliver OFCAF, which is deciment formers in adapt

is designed to support farmers in adopt-

ing beneficial management practices that store carbon and reduce greenhouse gas-es. Up to \$17.4 million in funding is cures. Op to \$1/4 minor in runding is cur-rently approved for the two-year Canola 4R Advantage project. The CCC is also partnering with Fertilizer Canada to pro-vide training, information resources and knowledge transfer activities to growers and agronomists. The Canola Council of Canada is a full

The Canola Council of Canada is a full value chain organization representing canola growers, processors, life science companies and exporters. Keep it Com-ing 2025 is the strategic plan to ensure the canola industry's continued growth, demand, stability and success – targeting 52 bushels per acre to meet global market demand of 26 million metric tonnes by the user 2025. For more information unit the year 2025. For more information, visit canolacouncil.org or follow CCC on Twitter @canolacouncil.

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Three generations at the **USask Crop Development Centre**

COLLEEN MACPHERSON

The history of the Crop Development Centre (CDC) at the University of Saskatchewan is a celebration of plant breeding and how new varieties indelibly changed ag-riculture in Saskatchewan, and around the world. It is also the story of individuals connected through teach-ing, learning and mentorship. The experience of Dr. Bob Baker, Dr. Pierre Hucl and Dr. Curtis Pozniak is but one example of the best students and mentors creating the best next generation, not unlike plant breeding itself. We have no idea how they have calculated that emissions factor or if they have taken into account the practices that farmers are already doing to reduce emissions, whether it's topography, soil type, crop rotations, all those types of things that affect emissions. We just have no idea how they're benchmarking any of their calculations.'

Dr. Robert (Bob) Baker **Emeritus Professor**

When Bob Baker, a research scientist with Agriculture When bob Baker, a research scientist with Agriculture Canada in Winnipeg, was offered a position as a wheat breeder at the CDC, he saw it as an opportunity to move back home to Saskatchewan. More importantly though, it was a chance to pursue his passion for teaching. Baker, who grew up near Pierceland, joined the CDC in 1978. "Although there were only about seven or eight professional people are toff it two a time of ensuth for

in 1503. Antibular that we found a time of growth for professional people on staff, it was a time of growth for the centre," he said. "We were introducing pulse crops in those days, doing a lot of field research. It was quite a rewarding place to work."

It was also rewarding for Baker to supervise grad stu-dents who ultimately numbered more than a dozen before he moved to the then-titled crop sciences department in 1988 to take on heftier classroom teaching responsibilities. "For some reason, I loved teaching. I really enjoyed explaining difficult concepts to students, but I had no formal training as a (grad student) supervisor beyond what I had gone through at the University of Minnesota as a PhD student.

"Every student/supervisor relationship is a separate event," added Baker, "but I think a key element to a suc-cessful relationship is the design of research experiments. It's important to look at the question being asked, and to lt's important to look at the question being asked, and to help students set up a research protocol that has a decent possibility of answering that question." One of his most successful students was a young man

from Ontario named Pierre Hucl. "His CV looked good and so I took him on," said Baker. "With Pierre, what I found very early on that the best approach was really to stay out of his way and let him get on with it. He was very self-motivated but I hope I did a reasonable job as his su-

pervisor; you'll have to ask Pierre about that." Although his wheat breeding program was not overly successful, Baker's research into the interaction between genotype and environment built his reputation, as did his classroom teaching; he is still occasionally recognized by former students, most recently a pharmacist who took his undergrad statistics class. Baker said he marvels at the talent he saw among CDC

grad students, "many of whom have gone on to do great things. I feel very satisfied that I had a little part to play in their success.

Dr. Pierre Hucl Professor, Dept. of Plant Sciences and CDC

When Pierre Hucl was doing his master's in plant sci-ence at the University of Guelph, he reviewed a number of papers on quantitative genetics, "and one was by this guy named Dr. R.J. Baker who was doing all the things I was interested in so I wrote him a letter asking if he was looking for students." A November 1982 trip to Saskatoon to meet Baker was a bit of a shock, weather wise, he re-

called, "but it was a good fit for the two of us." The CDC had a lot of students when Hucl joined; he spent the first few months at a desk in a hallway "but I was happy to have a spot." As a grad student, "I was pretty independent, but Bob was great as a supervisor. His door was always open,

and he never kicked me out. We also have the same birth date so it's one of those cosmic things."

After a stint with the Saskatchewan Wheat Pool, Hucl returned to the CDC in 1990 as a wheat breeder who, with his own grad students, emulated Baker in his approach. "I certain-ly have an open-door poli-cy like Bob, and he was always very well organized so I did pick up on that from him too. I think it's important when you have new students who've never done research to have the project well mapped



CDC wheat breeders: Dr. Curtis Pozniak, Dr. Bob Baker and Dr. Pierre Hucl.

out because it's not textbook learning."

For Huch first impressions are important taking on stu-dents but he also keeps a close eye on master's students in the plant sciences department. "They're a known quan-tity and that helps because it's such a unique relationship-students are apprentices doing a paid job, and the supervisor is boss and mentor, and in some cases your friend, or not. It's a real balancing act." That balance worked well with Curtis Pozniak who, on

Baker's recommendation, arrived at Hucl's door in 1999 hoping to get into grad studies. "I had a project breed-ing for herbicide tolerance in wheat. Curtis' background was not perfectly aligned but there was something more to him, something in his thinking process, his need to un-derstand principles and methodologies in his research, which is one reason he's been so hugely successful. But Bob was the same, he spent a large part of his career studying other people's statistical methods and debunk-ing a lot of stuff." Having spent 13 years as grad chair, Hucl appreciates good student/supervisor relationships because he's seen his share of troubled ones. "As chair, I tried to mentor ju-

nior faculty based on my own experience, but you some-times also have to be an arbitrator when conflicts arise, you sometimes have to have difficult conversations, and ultimately, you have to make an assessment about whether the relationship is

salvageable or not." Being the CDC is a rela-tively small group, Hucl believes success for both students and supervisors "boils down to drive and work ethic. You have to be a 'get on with it' person."

Dr. Curtis Pozniak Professor and **Director, CDC**

Curtis Pozniak had a plan get an agronomy de-gree and "make my way gree and "make my way back to the family farm near Rama". But he caught the bug for plant breeding doing summer jobs and that ultimately turned into "a bit of a fairy tale-farm boy makes good." Pozniak's search for a

grad studies position start-ed with Dr. Bob Baker, then chair of the grad committee in the Dept. of Plant Sciences, who sent him to see Dr. Pierre Hucl. "Pierre and

Saskatchewan agriculture helps feed the world and helps fuel our province's growth.

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Steven Bonk, MLA MOOSOMIN CONSTITUENCY Phone: 306-435-4005 622 Main St. Moosomin, SK

I chatted about a project he had in mind and it sounded like a perfect fit so I started working on my master's in

1999." He described Hucl's approach to supervising him as the model for his own mentoring—"hands off but guid-ing, just a little push from behind." And it worked well; a year and a half into his master's, Pozniak was encouraged to move directly to a PhD program, a rare occurrence "but the faculty I respected were saying it was a good idea so I thought, why not?" He was hired as the durum and high-yield wheat breeder even before he defended his DBD and in 2003 bacan building his renowned research PhD, and in 2003, began building his renowned research and breeding program. In July of last year, Pozniak was named director of the CDC.

As a supervisor, Pozniak first relies on a student's CV to demonstrate interest "but what I'm really looking for is a passion for what they do coupled with common sense, and the ability to filter out noise and focus on the prize. That can be hard to identify in a CV."

Pozniak believes the best students are the ones who move the bar set by their mentors, "and that kind of drive is evident almost immediately."

In his years mentoring students, Pozniak said he has learned valuable lessons from them in return. "What I've experienced is that we all learn differently and you have to tailor the way you supervise to the individual. I took my own experience with Pierre as normal but that won't work for everyone.'

He has also come to accept that everything does not have to be perfect. "In my own PhD, I really strived for perfection but I recall a very frustrating experiment that wan't working and I simply would not drop it. Finally Pierre said, 1'm dropping it for you.' It's important to re-member that grad school is a training experience."

Despite the added director duties, Pozniak's research continues, as does his supervision of students. And while things like technological advances mean those destined to be plant breeders must learn how to use new tools, "but the basic building blocks Bob Baker taught me when I took his quantitative genetics class and the advice Pierre provided along the way remain. The fundamental prin-ciples are ultimately the same—you cross the best with the best, put them out in the field and select the best."



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A prairie sunset over ripening crops east of Kipling, Sask.

LLITE SALE

Feeling stressed out? **3** strategies to help you through it

BY REBECCA HANNAM Farming can be a stressful business, and many factors that influence agricultural production can't be controlled. In busy seasons like planting or harvest, the added work-load and time sensitivity pressures can cause stress levels

load and time sensitivity pressures can cause succes incluse to escalate. Kathy Somers, a registered kinesiologist at the Stress Management and High-Performance Clinic in Guelph, Ont, describes stress as what we experience when de-mands and pressures exceed our personal and environ-

mental strengths and resources. Stress responses can be physical, emotional or cogni-tive. Symptoms can vary from person to person.

Recognize the signs It is common to experience headaches, neck, back and shoulder tightness, gastrointestinal disturbances or in-creased blood pressure as symptoms of stress. Changes in sleep, mood and behaviour can also occur. "Some people think that stress symptoms are all body experiences, so they're surprised that having a shorter fuse, not being able to see somebody else's perspective, feeling less hope or needing to be alone are also stress re-

feeling less hope or needing to be alone are also stress re-sponses," says Somers.

In addition, stress can trigger behavioural changes such as smoking or drinking more, tapping fingers or twirling hair.

3 strategies to manage stress While eliminating stress and seasonal increases in stress is unrealistic, there are ways to prepare for busy seasons and implement healthy management strategies. To maintain physical and mental health, Somers shares three suggestions:

1. Eat regularly

1. Eat regularly Eat a meal or snack—made up of a protein and a carbo-hydrate—every three to four hours. Carbohydrate fuels the body immediately, and protein provides energy to last another three to four hours. Effective energy management does not involve drink-ing coffee or consuming sugar. If the taste is desired, they should only be consumed after a quality protein and car-bohydrate. How to prepare Make growery lists to other servering.

How to prepare: Make grocery lists to stay organized and identify foods and containers stored in the shop or equipment for easy access. Make meals to freeze ahead of busy seasons.

Continued on Page B17



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Ag News - Moosomin, Sask.

Waiting for the 2022 harvest to begin

After five years in a row of harvesting in early August, be it winter wheat, peas or in last year's case, drought, it seems really weird to be hanging around home in August and even weirder still, to have my better half at home some days as well, antsy though he is to get to work on this word, harvest

this year's harvest. My two-page 'to-do' list sits in plain view, one page with all the outdoor projects I want to complete in Au-gust, one page with a list of potential frozen harvest meals to prepare. The project page includes 22 items (that's what happens when four years of your life has been all about doing nothing as you await two hip re-placement surgeries and finally have them and are back up and mobile enough again to tackle projects) whereas the frozen meal page has remained blank since the day I wrets the back doing of the ten of the tenes for wreads are

The prozen mean page has remained blank since the day I wrote the heading at the top of the page four weeks ago. The plus-side of having hubby not harvesting yet is that he has been a great project helper as we build decks, tear down playhouses and create privacy screens in the backyard. The downside is we are nowhere close to having enough freezer meals ready for harvest, not that any

ing enough treezer meals ready for harvest, not that any harvesting is actually happening. I took great pleasure in getting my "RV yard" at the farm ready for the harvest season, all trimmed up and neat once we had pulled the camper home from the lake in early August. The weed wacker took care of the tall grass and the lawn mower trimmed up our camping spot

(you know, the one with the great view of the shop and the chicken coop) and then the wait began. At that point I thought that I might as well stock the cupboards and the freezer and fill the fridge full of water bottles (and mini chocolate bars for the kids of course). Three weeks have now passed and we are no closer to starting up that big, green machine. Trips to the lake this summer were interspersed with a

few days at home here and there and the inevitable "crop checking" trips hubby took me on. Little does he know how uninterested I am, even though I realize the quality

Grains and oilseeds

Sheep and goats

Supply Management

Greenhouse, vegetables

Fruits and tree nuts

Vegetables and melon

OVERALL RISK MANAGEMENT

STRATEGIES FOLLOW 2020

2022 remains at 82% (Table 1). Production risk scores

increased (+2 overall) but were offset by small de-clines in legal, HR, and marketing risk scores.

3 TAKEAWAYS

FROM THE SURVEY

Here are three takeaways from this year's analysis compared to 2020 survey

1. Production risk man-

agement continues to im-

prove Our score suggests that

89% of production risks are mitigated by Canadian pro-

ducers, a gain of two per-centage points from 2020. This gain is led largely by the livestock sector, though the supply management score also increased. Small

declines were recorded for grains and oilseeds, fruits

RESULTS The overall risk score in

Greenhouses and

horticulture

Poultry and eggs

Livestock

Hogs

Beef

Dairy

and fruits

Grand Total

strategy.

data



and quantity of these crops are my bread and butter. I get much more excited when I get to start up a combine and actually start picking up a swath. Alas even those days are coming to an end as more and more is straight

tay's are coming to an end as hole and more is staging combined every year! The twins (11) are ever excited about all things 'farm' and are already bemoaning the fact that not only is school starting in a week, but that they won't get their usual three or four weeks of combining in before school other. We orging to be beyone on them but there is one starts. It's going to be tough on them but there is one thing I know—they will still know what's been done and on what field because they absorb this kind of informa-

on what hield because they absorb this kind of informa-tion through osmosis, I am sure. I was fortunate enough this past month to enjoy a bit of a trip down history lane (via photos) when my brother and his family went to Ontario on vacation. I may have left there 50 years ago but every now and then, nostalgia hits and I want to go 'home.' I want to take my grand-kids and show them where I lived and played but then I realize I would need a bus...and a lot of cash lo!!! If's a wond doed this of the photoe back have order works incomparison. wonderful thing, though, to have such warm memories of your childhood home and every time I have my grand-children over (which has been lots this summer), I just

want to ensure they have lots of fun times and create lots of memories of life on the farm. I chuckled this morning when I saw that the twins, who had grown a four foot by six foot patch of wheat (in rows) this year, had removed the chicken fencing from around uus year, nad removed the chicken fencing from around their wheat patch. There, laying on the grass next to the patch were carefully cut and laid-out stalks of wheat, so beautifully gold (and much more golden than the wheat on my field!)

With so many children this past month, both tempo-rary and full-time grandkids, what a month it's been. Some moments have been a bit noisy and a tad crazy, but

Some moments have been a bit noisy and a tad crazy, but overall we've had a pretty good time. When we created our own backyard waterpark com-plete with small pool, splash pad and bouncy/water council, the kids had a blast. Day after day, we used our water park or the town pool to cool down on those hot August days. Hubby was certain the neighhours were going to chase us out of town, so noisy were we. As for me, I was a little testy for a couple of days. Re-ally, Amazon? Well, actually a scammer no doubt with a recording saying it was Amazon. Day 1: 9 a.m., 11:30 a.m., 3 p.m., 6 p.m. and 8 p.m. Day 2: 6/20 a.m. 1 jumped

a recording saying it was Amazon. Day 1: 9 a.m., 11:30 a.m., 3 p.m., 6 p.m. and 8 p.m. Day 2: 6:20 a.m. I jumped out of bed and out of a deep sleep, certain someone in my family had died or been injured. Nope, just the Amazon scam. Then again at 8 a.m. and 10:30 a.m. On the night of Day 2, I packed up my little overnight guests and headed for the farm, far away from the land-line which I am seri-ously thinking I should cancel. We've also had some great, backyard, evening visits with family and friends (something we simply haven't been able to do in recent years due to early harvests), take in some local (Whitewood) barbecues, food truck wars, rodeos and all sorts of fun thines.

rodeos and all sorts of fun things.

As I close this out this time around, my hope for you all is that you've enjoyed some great summertime moments and that for those who have a crop to bring in, that you'll be able to do that safely and successfully

LEGAL

79% (-2)

76% (-1)

78% (-6)

71% (-11)

76% (+2)

82% (-1)

77% (-8)

84% (+2)

86% (+2)

85% (+1)

88% (+4)

87% (+2)

79% (-1)

RISK

HR

RISK

74% (-2)

71% (-4)

85% (0)

68% (-2)

68% (-5)

78% (-5)

80% (-6)

77% (-4)

85% (-3)

82% (-5)

94% (+6)

79% (-8)

75% (-3)

Risk mitigation scores remain elevated in Canadian agriculture critical of past risk manage-ment effectiveness while challenging the operation to account for new emerg-ing risks should provide benefits going forward.

PRODUCTION

RISK

88% (-1)

91% (+9)

98% (+9)

86% (+4)

91% (+10)

91% (+2)

90% (-3)

91% (+4)

87% (0)

89% (-2)

86% (+2)

83% (0)

89% (+2)

MARKETING

86% (+2)

73% (-4)

83% (+1)

66% (-9)

72% (-5)

73% (-4)

72% (-2)

74% (-5)

80% (-6)

75% (-9)

86% (+3)

81% (-10)

80% (-1)

RISK

FINANCIAL

85% (-1)

81% (+7)

89% (+14)

76% (0)

81% (+7)

84% (-3)

80% (-11)

85% (0)

83% (-3)

85% (-4)

82% (-4)

81% (-2)

84% (0)

Table 1: Risk scores by sector and categories (change relative to 2020 between parenthesis)

RISK

BY AINSLEY MACDOUGALL,

ECONOMIST AT FCC Risk is unavoidable agriculture, making risk management a key contrib-utor to a farm's success. In 2020, we analyzed the risk management strategies of management strategies of Canadian farm operations in a survey about risk per-ceptions and producers' implementation of relevant risk management strate-gies. The last two years have brought new chal-lenges: inflation and rising interest rate, the ware in interest rates, the war in Ukraine, supply chain dis-ruptions, and beyond. So, time for an update!

How we measured In July, we used the FCC Vision Panel to understand the influence of the evolv-ing operating environment on risk mitigation strate-

- gies. We grouped risks into five categories: -Production
- -Market
- -Financial -Human resources
- -Legal Each theme includes multiple specific risks. For example, financial risks include interest rate, work-

ing capital, debt repay-ment, and operating costs. ment, and operating costs. We constructed a score-card that measures how producers within a sector match their level of con-cern (on a scale of 0 to 3) with available risk man-agement tools (for exam-ple I have a business plan

ple, I have a business plan, off-farm income, utilize ac-crual accounting to make e. I have a business plan. decisions)

The individual scores are weighted based on the respondents' risk toler-ance level, defined as risk averse, risk neutral, or risk preferring. A score of 100% would indicate that, for every risk identified, there is an appropriate strategy to mitigate. Conversely, zero would indicate there is no appropriate risk mitigation

and tree nuts, and the poultry and egg sectors' sample size was too small for these results to be statistically significant.

TOTAL

RISK

83% (0)

79% (+2)

88% (+5)

74% (-2)

78% (+2)

82% (-2)

81% (-5)

82% (-1)

84% (-2)

84% (-4)

88% (+2)

81% (-4)

82% (0)

Sources: FCC Vision Survey and FCC Economics

2. Human resource risk 2. Fuminin resource risk remains the lowest-scor-ing risk category The approach to human resource risks remained a

significant challenge and declined slightly compared to 2020. There are opportunities for Canadian farms to mitigate risks in this area by creating a transition plan, purchasing insurance against employee injury or other options that can assist farmers even when family labour is available. Labour shortages are a growing concern in Canadian ag-riculture and require new and inventive strategies to attract and retain workers.

3. Risk management strategies differ by sector The livestock sector showed the most opportu-nity for increased risk mitigation efforts in 2020, and it narrowed the gap in the total risk score with other sectors in 2022. Financial and production risk scores took a noticeable jump in 2022. Financial risk mitigation strategies at a time of high inflation, rising inter-est rates and higher feed

prices and mixed margins are certainly relevant. Legal risk mitigation scores highest for the greenhouse, fruit, and veg-etable sector. The complex retail marketing options and absence of futures contracts in this sector, es-pecially considering the pandemic's impact on dis-tribution, could necessitate more detailed and frequent contracts. This would make legal risk strategies

more legal risk strategies more important, resulting in higher risk scores. One puzzling differ-ence between the 2020 and 2022 results is the marketing risk score that declined across multiple sectors and as much as 10 percentage points for vegetables and melon production. The

marketing risk category encompasses those risks associated with price fluctuations, changes in the Canadian dollar, and supply chain challenges. The decline in the score may be due to the unique nature of marketing risks' com-plex mitigation strategies in these sectors, or pro-ducers' choice to prioritize ducers choice to prioritize other risk categories. For example, farms impact-ed by flooding, fires and droughts this past year would likely place greater importance on addressing production and financial risks first, before consider-ing marketing rick mitiga. ing marketing risk mitigation strategies.

BOTTOM LINE

Farm operations are deploying various strategies to mitigate risks. Look-ing backward at their effectiveness might reveal business areas on a farm that require more attention given risks in agriculture are ever evolving. Being



Ainsley MacDougall

currently completing her Master of Food and Resource

Ag News - Moosomin, Sask.

Feeling stressed out? **3 strategies to help** you through it

Section Continued from Page B14

2. Get enough sleep Lack of sleep impacts alertness, judg-ment, coordination and reaction time

ment, coordination and reaction time while driving. Being awake 18 hours or longer causes the same impairment as having a blood al-cohol content of 0.5% and being awake for 24 hours is equal to having a blood alcohol content of 0.10%, according to the Centre for Disease Control and Prevention. For people prone to mental health or

For people prone to mental health or cardiovascular issues, lack of sleep exacer-bates their symptoms.

bates their symptoms. How to prepare: Coordinate extra help during busy times and schedule shifts to protect the sleep time of all workers. **3.** Talk it out Take time to talk as a family and farm team regularly. This could include a quick team phone call each morning and family dinners on Friday evenings. Conversation chauld include checking in with each part should include checking in with each person to see how they are doing, and plan-ning the workday or debriefing the week on the farm.

How to prepare: Plan when and how the family and team are going to commu-nicate during busy seasons and commit to following through.

How to de-escalate

How to de-escalate When stress does arise, Somers recom-mends taking slow, comfortable breaths and releasing body tension on the exhale. Next, repeat a mantra of "1 will handle this" and ask yourself what can be done to cope with the situation. "If you're experiencing stress that feels uncomfortable or if your loved ones are telling you about your stressed behav-iour, seek out professional help," advises Somers. "There are phone numbers you and call to talk, even from the field in the middle of the night." For an extensive list of contacts and re-

For an extensive list of contacts and resources visit domore.ag



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	64" x 8,000'	\$285.00	N/A		
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	1 mil x 30" x 5,000' - Green	SOLD OUT			
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B17

Our agri-food is about to get a whole lot smaller

It's tomato season, and Canadians love their tomatoes. It is by far the most popular vegetable at the grocery store. According to Agriculture and Agri-Food Canada, the av-erage Canadian consumes at least six to seven kilos of to

The construction constructs at reast six to seven killos of to-matoes per year. More than 12 kilos per capita of fresh and processed tomatoes are made available to Canadians ev-ery year. We do waste a lot but have plenty to go around. Tomatoes are the fifth largest vegetable crop in Cana-da, after corn, beans, peas, and carrots. For greenhouse-grown vegetables, though, tomatoes are the log crop in Conside. After penperson terms the set of the penperson

grown vegetables, though, tomatoes are the top crop in Canada. After peppers, tomatoes are the leading vegeta-ble exported by our own growers here in Canada. But we also import a lot of tomatoes, mainly from Mex-ico and the United States. Surprisingly, import and export rates are very similar across Canada. Many provinces have made efforts to increase the number of controlledenvironment agriculture projects to grow more food do mestically.

mestically. California provides a lot of processed tomatoes to Canada, as it is the largest producer in the world. Sauces, salsa, soups, you name it—many products with tomatoes end up on our Canadian grocery shelves. But California is in trouble with its water supply. It's running out of water, and we are now constantly hearing more about farmers having difficulty growing anything in these drought con-ditione. ditions.

Recent reports suggest California is experiencing the worst drought in 1,200 years, impacting many crops, including tomatoes. Some are even speculating that we could run out of spaghetti sauce. Prices may rise, but it is highly unlikely that Canada will run out of spaghetti sauce. For one, we have many great local products often overlooked by consumers only looking for certain brands. Also, we produce a lot of tomatoes here in Canada, and sauces are easy to make. We should be concerned about many things, but not about running out of spaghetti sauce.

That said, the troubles in California will lead to massive changes in how we grow, import, and export com-modities – the way farmers' fields connect with what we consume every day. And the change is happening very quickly.

For growers and producers, coupled with mother na-ture's wrath is carbon energy, once invisible and now significantly affecting costs. Spending energy to produce, process, and transport food is about to get more expen-sive. Putting a price on carbon will get companies to strategize differently. Producers and processors are now compelled to think differently about how they service markets, including Canada. In other words, our agri-food world is about to get much smaller.

Case in point: this summer, we learned that California giant Driscoll's signed a partnership with farmers to grow berries right here in Canada. Driscoll's is one of the largest fruit growers in the world and has had to face water scar-city issues. In the deal, while Canadian farmers in British Columbia and Quebec are taking on the task of growing for Driscoll's, they've also received Driscoll's know-how, including genetics and growing expertise. This is worth a lot of money and time. Driscoll's smart move will actually allow both Canadian growers and consumers to gain.

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Essentially, the business fundamentals are changing for companies like Driscoll's. It not only needs to get closer to markets it wants to service, but it also needs precious resources that were once abundant in California. Climate change is undoubtedly changing tomato-growing eco-nomics. Such a partnership between our farmers and the California giant is a perfect example of onshoring busi-

ness, and you can expect to hear about more such moves in years to come. Global agricultural trading in the future won't neces-sarily just be about trading bananas, beef, wheat, and apples; it will be about intellectual property, genetics, and branding. Since trade is ultimately about sharing, what we share will change. While it will get less tangible, the focus will be more on finding the most economically sus-tainable method to supply a market. Exporting actual food products may no longer be the best option moving forward. forward.

This is the one type of globalization we will continue to see in years to come. Dr. Sylvain Charlebois is senior director of the agri-food ana-

lytics lab and a professor in food distribution and policy at Dalhousie University.



Bold USask projects aim to advance MS therapy, agriculture innovation

Three interdisciplinary health and agriculture projects led by University of Saskatchewan (USask) researchers have been awarded \$250,000 each under a federal program that aims to foster innovative high-risk research with the potential to yield significant and impactful results

Recipients of the New Frontiers in Research Fund

(NFRF) Exploration Grants are:
Dr. Graham George (DPhil), professor in the Department of Geological Sciences in USask's College of Arts and Science;

• Dr. Leon Kochian (PhD), professor in USask's College of Agriculture and Bioresources, and Canada Excel-

lence Research Chair in Global Food Security; • Dr. Tim Sharbel (PhD), professor in USask's College

of Agriculture and Bioresources.

Studying role of metals in neurological disease development

George and his collaborators are investigating whether dysregulation (deficiency or excess) of essential metals is sclerosis (MS) caused by demyelination—damage to the protective myelin sheath that covers nerves.

The research is a bold new approach, which builds on a hypothesis that imbalance of metals such as iron, zinc and copper might be important in MS, said George. "We propose to develop new methods for super-reso-

lution visualization of metals using the synchrotron," he said. "If metals are involved in MS and other demyelin-ating diseases, our study may lay the groundwork for developing potential therapeutics to prevent, delay or reduce severity of demyelination in certain subsets of MS patients."

Improved therapies are urgently needed for MS, which is a leading cause of disability in young adults world-wide. Saskatchewan and Alberta are hotspots for the in-curable disease in Canada, which itself has a disproportionately high incidence rate of MS compared to the rest of the world.

of the World. George's collaborators are: Dr. Bogdan Popescu (MD, PhD), assistant professor in USask's College of Medicine; Dr. Ingrid Pickering (PhD), professor in geological scienc-es; and Dr. Yanbo Zhang (MD, PhD), associate professor of psychiatry at the University of Alberta.

Getting at the root of climate-resilient plants

As climate change causes more prolonged and severe droughts and floods that threaten global food security, Kochian's group is studying plant roots at the molecular and functional levels to develop climate-resilient crops that absorb water and nutrients more effectively and sequester more carbon in soil. In developing climate-resilient crops, plant breeders

so far have focused mostly on the genetic traits of plant shoots, which are readily visible. However, breeding plants for improved root traits has lagged because it's tougher to study root systems in the soil.

Work by Kochian and others worldwide has led to the development of root growth and imaging platforms that enable scientists to determine the complex genetics that control efficient root system architectures in thousands of plants, which Kochian calls "the foundation for breeding better root systems."

"In collaboration with university computer scientists, deep learning and artificial intelligence methods are be-ing employed that help us, in a more automated fashion, use molecular breeding and gene editing to improve the plants' use of water and nutrients," he said.

Collaborating on the project are: Dr. Ian Stavness (PhD), associate professor of computer science in USask's Col-lege of Arts and Science; Dr. Curtis Pozniak (PhD), prolege of Arts and Science; Dr. Curtis Pozniak (PhD), pro-fessor in Usask's College of Agriculture and Bioresources and director of USask's Crop Development Centre; and research associate Jordan Ubbens from computer science. They have pioneered a method to use images of shoots to phenotype plants' response to drought and flood stresses. Their goal is to employ deep learning technol-

ogy to extend phenotyping to both the roots and shoots of plants in the lab and develop algorithms that would enable breeders to use images of shoot architecture to pre-dict when plants in the field have larger root systems.

No seedy sex please, we're breeding a better canola

Sharbel's project holds the potential to spur a revolu-tion in crop production, starting with Canola, by applying to plant breeding the findings of 20-plus years of lab research in Germany and Canada to understand naturally

occurring asexual seed formation (apomixis) in plants. "When applied to crops, our cutting-edge engineering biology approach would be a highly disruptive, billion-dollar technology that would greatly facilitate the production of new varieties with novel traits to feed our rapidly changing world," said Sharbel.



Dr. Graham George (DPhil), Dr. Leon Kochian (PhD) and Dr. Tim Sharbel (PhD).

His research group is working with the Institute of Synthetic Biology—at the CEPLAS-Cluster of Excellence on Plant Sciences at the University of Düsseldorf in Ger-many—and the National Research Council's (NRC) Saskatoon division to develop a "mini chromosome" that would deliver into Canola plants several apomixis-candidate genes they have identified.

"The impact on breeding programs would be enor-mous, as it would allow us to immediately fix any desired genotype in a single generation," Sharbel said.

This would give Canada's Canola industry an enormous advantage in both time and costs to create diverse varieties with desirable traits focused on specific environmental, agricultural or economic needs, something that until now has not been achievable using other modern breeding methods, he said.

Sharbel's collaborators are: Dr. Martin Mau (PhD), research scientist at USask's College of Agriculture and Bioresources, and Drs. Xingliang Ma (PhD) and Pankaj Bhowmik (PhD) at the NRC Saskatoon.



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