

Grainnews

PRACTICAL PRODUCTION TIPS FOR THE PRAIRIE FARMER

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# FIGHTING HERBICIDE-RESISTANCE

Herbicide resistant weeds aren't a novelty anymore — now they're just the norm

BY LISA GUENTHER

While herbicide resistance isn't a new problem, it is a growing one. Today 80 countries report herbicide-resistant weeds, says a researcher. And Canada is near the top of that list.

Dr. Ian Heap heads the international survey on herbicide-resistant weeds, and reported those findings at the Herbicide Resistance Summit in Saskatoon this March.

"North America as a whole has more herbicide-resistant weeds than any other continent. And Canada is actually quite high up on that list," he said during an interview.

In fact, Canada ranks third globally when it comes to the number of herbicide-resistant weeds.

Why does Canada rank so high on that list?

"It's really because you have a massive land area and you've been using herbicides for so long that you've been selecting herbicide-resistant weeds," Heap said.

Closer to home, researchers with Agriculture and Agri-Food Canada are surveying farmers' fields to see how much resistance has eroded herbicide efficacy in Western Canada.

Dr. Hugh Beckie presented findings from the 2014-15 Saskatchewan weeds surveys, which were led by Dr. Julia Leeson.

Researchers do the surveys every five or 10 years, he said. Manitoba is next on the list, and they plan to scout Alberta fields in 2017, Beckie said. Researchers survey fields in July, after weed manage-

ment is done, so they can look at weeds farmers are not controlling, he added.

Researchers did the baseline surveys in the early 2000s, and found herbicide-resistant weeds on about 20 per cent of fields, Beckie said. They haven't finished screening for herbicide resistance from the latest survey, but Beckie expects "well over 50 per cent of cultivated land in Saskatchewan will have a herbicide-resistant weed."

"Certainly the trend is continuing upward, which is what our model predictions indicate. We don't have any new herbicide chemistries in the last 30 years and so growers have had to use the same tools to manage their populations, whether they're resistant or not. So inevitably, if we don't have

## TOP 10 WEEDS IN SASKATCHEWAN

- The 10 most abundant weeds in Saskatchewan include:
1. Wild oat
  2. Green foxtail
  3. Wild buckwheat
  4. Volunteer canola
  5. Canada thistle
  6. Spiny annual sow thistle
  7. Cleavers
  8. Lamb's quarters
  9. Narrow-leaved hawk's beard
  10. Dandelion
- Source: Agriculture and Agri-Food Canada's 2014-15 Saskatchewan Weed Survey

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Wild oat is the most abundant weed in Saskatchewan. Researcher Hugh Beckie says it's safe to assume that wild oat in your field is resistant to Group 1 herbicides.

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# Wheat & Chaff



STAMPEDE

BY JERRY PALEN



“Your grasshoppers came to town and ate my roses again!”

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PHOTO: LEEANN MINOGUE



LEEANN MINOGUE

In case you've been on a very long vacation, Saskatchewan and Manitoba are holding elections this month.

Our voter cards came in the mail a couple of weeks ago. When I was about to use a fridge magnet to “file” them until election day, the information on the back caught my eye.

We are in a new constituency. Well, not one of the actual “new” constituencies — Saskatchewan just added three extra MLAs, increasing our total from 58 to 61 — but our constituency is new to us. We've been transferred from Cannington to Weyburn-Big Muddy.

### BOUNDARY CHANGES

Every 10 years, the Saskatchewan Constituency Boundaries Commission redistributes Saskatchewan's electoral districts. The goal is to have roughly the same number of voters in each constituency (with the exception of two large northern ridings, where the population is very sparse.)

To divide up the population evenly, they take the number of voters in “southern” Saskatchewan (that is, south of the two northern ridings), and divide it by 59 (61 ridings less the two northern ridings). In the 2011 census, there were 770,480 “southern” residents old enough to vote. Divide that by 59, and you get 13,059 voters for each of the southern ridings.

The commission's job was to draw new boundaries making sure the population in each riding was within five per cent of 13,059.

Besides population, the commission took into account: existing boundaries, municipal boundaries, “communities of special interest” and roads and geographical factors (for example, not placing you in a riding you need to swim a river to reach.)

While it was news to me that I was in a different constituency, it really shouldn't have been. The “new” maps have been available on the Internet since September 2013. There were public hearings about the new boundaries in 2012.

But as I've just learned, my “new” constituency has a jagged border. The eastern border of Weyburn-Big Muddy juts out into a small area that includes our farm

and two or three neighbouring farms. The new border seem specifically designed to include me. (It's always nice to feel wanted.)

I'm pleased to be part of the Weyburn-Big Muddy constituency, no matter which MLA is elected. Our son goes to school in Weyburn and we do most of our business there. The riding we've been tossed out of, Cannington, has no major centres and very few businesses or services.

But here's why the voting cards caught my eye.

Since I've moved here, we've always driven five miles to Griffin to vote in federal and provincial elections. This year, according to our voter cards, our polling station is in Weyburn, 30 miles away.

There will still be a polling station in Griffin (we'll drive right by it on our way to Weyburn), but the voters there will be choosing the Cannington MLA. The new Weyburn-Big Muddy boundary that juts out to include me juts right back in north of our place, leaving Griffin residents behind.

### A LIMITING DISTANCE?

Driving 30 miles to vote seems a little excessive. That's a 100-kilometre round trip. If I was inclined to support the Green Party, would they even want me burning that much fossil fuel to cast a vote for their candidate?

Tim Kydd, senior director of communications and outreach for Elections Saskatchewan (the secretariat that works with the Boundaries Commission), told me through email that, “Polling division boundaries were created in recognition of the most likely polling location that will be used for the voters within each division. In general, the goal at the outset was for no voter to travel more than 30 km to attend a polling station.”

This goal, Kydd pointed out, was for a 30-km straight line between two points, “so it wouldn't allow for the direction of the roads to get from Point A to Point B, grid roads, seasonal roads, etc.” He didn't have any statistics around how many voters are within that 30 km distance, but he did note that in northern ridings, where the distance is “considerable,” residents have an option of voting by mail.

Our farm is about 40 km from our new polling station, as the crow flies. This is still well over the commission's 30-km goal, but I'm getting little sympathy. One friend pointed out that I'm in Weyburn at least three times a week anyway, for reasons usually way less important than democracy (assuming

you consider coffee to be less important than democracy). At least my new polling station is in a direction I typically travel.

But what about my farm neighbours and the residents of Griffin that I've left behind? Cannington is an odd-shaped constituency that manages to rope in its 13,059 voters without including any major centres. Most people in Griffin use the Weyburn hospital and send their kids to school in Weyburn. The Cannington riding is not a great fit.

In its final report, the Saskatchewan Constituency Boundaries Commission wrote this: “The commission has taken into consideration community interests of which it is aware and where possible.” They tried, but it's not working for everyone.

I'm not sure exactly what I'm complaining about — would I rather drive just five miles to vote, but be part of a riding where I don't feel at home? Or am I happier making the 30 mile trek to vote for an MLA that will represent the area where my son plays soccer?

### LIFE ON THE EDGE

Living on the edges of a boundary leads to all sorts of unusual situations. Because the school boundaries are just to the south of us, there are a couple of neighbour kids near my son's age that he barely knows — just because they go to school in Midale instead of Weyburn.

I grew up on the edge of a school boundary too. The bus that picked me up went to Elrose, but my cousins in the same yard were sent to school in Kyle. My second cousins' farmyard was a couple of miles north, and they went to school in Eston. Parents generally followed the buses — buying groceries and opening bank accounts in the towns where their kids went to school.

Living on the edge of a boundary can be marginalizing, whether it's a riding boundary, a health region boundary, or a school district boundary. (Don't get me started on the sheer number of boundaries we're dealing with.)

Sometimes, out here on the edge, we feel left out of decisions, and we worry that that people in “the middle” won't see our problems as important.

But there is always a bright side. When you live in a small, jutting-out part of a jagged boundary edge, at least you can get through an entire election season without having a candidate slog all the way out to your yard to knock on the door. And, at least I can get a coffee when I drive in to vote. ☕

Leeann





## A farm accident changed Bailey Kemery's life

**B**ailey Kemery was four years old, growing up on her family's farm in Major, Sask., when her life changed forever.

On April 20, 1994, she and her brother were playing on a tractor-driven rotary tiller that was parked, but running, not far from where her parents were standing in the yard. "The rototiller shook itself into gear, my brother fell forward, and I fell back." Bailey says that as dangerous as high-speed power takeoffs are, it was the rotors on the tiller that did the most permanent damage. It only took a split second for Bailey to suffer serious injuries. "The rotor blade stripped the muscle on my left leg from the calf down. A blade went into my stomach and cut some of my intestines, then went all the way up into my liver. And I have a scar where it tore my face right down my laugh line."

Twenty years later, she still remembers having trouble breathing, but remaining calm as her mother scooped her up. Bailey's mother had taken a first aid course not even three weeks before and never panicked. She took charge of the scene immediately and worked to stop Bailey's bleeding with sanitary napkins she had on hand. "Driving to the nearest hospital, about 30 kilometres away in Kerrobert, I remember looking for birds. That was a game we would play when we were driving. My Mom told me that was because she wanted to keep me awake."

Although Bailey's mother was confident in her actions, local doctors and nurses were unsure how to treat Bailey's injuries. Bailey went into shock before the decision was made to transfer her by ambulance to Royal University Hospital — two hours away in Saskatoon. Her mother followed the ambulance the entire way. "Mom remembers stopping twice on the highway ((behind the ambulance), and she knew something was wrong," Bailey says. "My heart



Bailey spoke to nearly 1,000 children on the importance of farm safety during her teenage years.

stopped, twice, and it can't fibrillate in a moving ambulance."

Seven surgeons met the ambulance upon its arrival in Saskatoon. All of Bailey's veins had collapsed, and doctors couldn't get an IV started which delayed surgery. The situation was bad; five surgeons quit during surgery thinking Bailey was a lost cause. Miraculously, she survived and after a couple of weeks in the intensive care unit, followed by another three or four months of rehabilitation, she was finally discharged.

Bailey traveled to rehab for nearly 10 years after that. Even with intensive rehab, Bailey's Achilles' tendon shrunk to the point that she always walked on tiptoe. After years of limping her spine was thrown out of alignment. Bailey opted for a second major surgery in November 2005, which doctors explained could result in an amputated leg. She says that was a hard decision to make as a body-conscious 15-year-old, but fortunately, the surgery was a success.

"As a child growing up, it was tough having the massive amount of scars that I do and an obvious limp. Legally, I was disabled. Life was

extremely hard, but I just made a choice at a young age, that I was only as disabled as I wanted to be."

Bailey played almost every sport she could in school, struggling with only skating and snowboarding. She also traveled around on a school speaking circuit, talking to nearly 1000 kids about the importance of farm safety. After graduating from high school, she moved to Calgary to become a primary care paramedic. Just last fall, she transferred to Kerrobert so she and her husband could move three miles away from the family farm.

"It happened so fast, and it changed my life," she says. "I'm so much more than the scars on my body, and I'm so much more than 'that girl who was run over by a rototiller'... but, what parents and kids don't realize is, it's not just a farm accident, it's a life sentence."

Bailey believes life has only given her what she can handle but, at the same time, she sincerely hopes sharing her story saves another child from suffering an equally difficult experience.

By Amy Petherick, freelancer for Canadian Agricultural Safety Association, [www.casa-acsa.ca](http://www.casa-acsa.ca).

## Set your soybeans up for success

**M**any factors come in to play in getting your soybean crop off to a good start. Field selection, fertility, varietal selection and planting populations are some of the key elements to be considered during the planning phase.

As the planning phase ends and you move to in-season practices, your early season weed control will be important to a successful crop.

Soybeans have a "critical weed-free period" that takes place between emergence and third trifoliate. During that period, your soybeans aren't very competitive, and not controlling weeds properly can lead to irreversible yield damage.

In general, glyphosate will be your go-to weed control product. However, you may want to look at tank mixing with another product that provides residual control. That way, you're giving seedlings a chance to gain some ground when they're most vulnerable to weed competition.

Of course, even with all your careful preparation there's the chance for a late frost to force a re-plant. That's where you'll want to make sure that the residual product you decide to tank mix with your glyphosate won't injure the other crop you've penciled in as your back-up plan.

This agronomy tip was brought to you by Doug Fotheringham, agronomic service representative, with Syngenta Canada.

### YOU MIGHT BE FROM THE PRAIRIES IF...

By Carson Demmans and Jason



You didn't know what the word downhill meant until you were 10.

### PHOTO CONTEST

## GIVE US YOUR BEST SHOT

This spring photo was taken last year, on April 12, at Star Mound, near Snowflake, Manitoba. Shannon Holenski of Thornhill, Man., took the photo and shared it with us. Thanks for sharing this sign of spring, Shannon. We're sending you a cheque for \$25.

Send your best shot to [leeann.minogue@fbcpublishing.com](mailto:leeann.minogue@fbcpublishing.com). Please send only one or two photos at a time and include your name and address, the names of anyone in the photo, where the photo was taken and a bit about what was going on that day. A little write-up about your farm is welcome, too. Please ensure that images are of high resolution (1 MB is preferred), and if the image includes a person, we need to be able to see their face clearly.

Leeann





# Cover Stories

## WEED CONTROL

» CONTINUED FROM PAGE 1

### FIGHTING HERBICIDE RESISTANCE

any new modes of action, we're finding that they continue to increase."

#### TOP 10 SASK WEEDS

The latest weed survey revealed the 10 most abundant weeds in Saskatchewan.

Beckie noted that narrow-leaved hawk's beard jumped from No. 20 in 2003 to its present spot on the top-10 list.

"I know on our farm near Davidson it's become a real problem weed that's fairly recent — in the last 10 years," said Beckie.

Beckie considers cleavers "the most problematic broadleaf weed with resistance in Western Canada. Back in 1970 it ranked 50<sup>th</sup>. Now it's No. 7. It's the weed that's increasing the fastest in the last 50 years."

Spiny annual sow thistle leaped from No. 34 in 2003 to No. 6. Beckie said he's never seen a jump like that before. He noted that there are ALS-resistant populations in Alberta.

"And we're finding in our surveys in Saskatchewan that there's a lot of ALS resistance. This may be part of the problem in terms of control," said Beckie. Spiny annual sow thistle seed is also very light, and can travel high up in the atmosphere, he said. That makes seed dispersal a problem.

Volunteer canola also moved up, from No. 16 in 2003. Beckie said that increase probably reflected more intense canola rotations.

As for the top three weeds (wild oats, green foxtail, and wild buckwheat), Beckie said they haven't moved in the last 15 years, despite availability of ACCase and ALS inhibitors.

Farmers and their agronomists also submit suspect weeds for herbicide-resistance testing. Between those samples and the weed surveys,

it's safe to assume Group 1 resistance in wild oats is everywhere, Beckie said.

"I'm actually surprised growers still submit samples for testing because I would assume as a grower we have resistance," he said. But, he added, farmers are trying to figure out which Group 1 still works on that field.

Beckie estimates that at least 20 per cent of farmland in the Prairies now has multiple-resistant populations of wild oats.

Beckie appreciates growers sending in samples. Field surveys miss many of the early cases, but suspected herbicide-resistant samples gives researchers a heads up, he said.

#### WHAT ABOUT KOCHIA?

Kochia seeds aren't viable pre-harvest, so the weed has to be surveyed after harvest. But kochia is certainly on researchers' radar. Based on survey data, Beckie estimates there are several hundred cases of herbicide-resistant kochia.

Beckie summarized research looking at how kochia weeds are dispersed. Researchers at Scott and Lethbridge fitted kochia tumbleweeds with small GPS collars, then set them free to go where the wind would take them. They noted how many seeds the tumbleweeds had at the beginning and end of the experiment.

At Lethbridge, it was quite common for tumbleweeds to travel a kilometre, Beckie said, and they would have tumbled on if it wasn't for a fence. At that distance, they'd dropped 80 to 90 per cent of their seeds. Beckie added that the faster the tumbleweeds rolled, the more seeds dropped as well.

At both the Scott and Lethbridge sites, researchers found kochia could shed up to 100,000 seeds per plant. And most, if not all, of those seeds were viable.

Kochia is an outcrossing weed so resistance can also be spread through pollen, Beckie said.

Beckie noted they avoided using glyphosate-resistant kochia in the experiment.

#### TOP 10 MANAGEMENT PRACTICES

Beckie said it's challenging to get farmers to implement herbicide-resistance BMPs because growers are diverse, and one size doesn't fit all. But through the surveys, Beckie has found that growers who use BMPs tend to have less herbicide resistance.

Beckie presented his top-10 BMPs, in the spirit of David Letterman's top-10 lists.

10. Sound record-keeping. Include weed populations in each field, not just herbicide use.

9. Strategic tillage. Researchers found that growers who included some tillage, even infrequently, had less resistance. Beckie said there is a place for some tillage, especially with weeds such as kochia. Vertical tillage and rotary hoes are two options.

8. Site-specific weed management. Manage resistant patches early, before they spread through the field, Beckie said.

7. Weed sanitation of equipment.

6. Don't use wheat-selective in-crop herbicides every year on wild oats. Wild oat uses the same enzyme system to break down herbicide as wheat. Using wheat-selective herbicides repeatedly will select for resistant wild oats.

5. Rotate herbicide groups.

4. Use tank mixes.

3. Pre- and post-herbicide scouting.

2. Select competitive crops and implement practices that promote competitiveness.

1. Crop rotation. Overall, Western Canada does have relatively diverse crop rotations, despite canola being grown frequently. "And I think that has kept the lid on resistance in Western Canada, along with some of the other practices."

Beckie said he can't say enough about the importance of monitoring herbicide resistance. "We really have to keep our eyes open."

For video interviews with Hugh Beckie and Ian Heap, visit [Grainews.ca/video](http://Grainews.ca/video).

*Lisa Guenther is a field editor with Grainews based at Livelong, Sask. Contact her at [Lisa.Guenther@fbcpublishing.com](mailto:Lisa.Guenther@fbcpublishing.com) or on Twitter @LtoG.*

## CROP VARIETIES

# Double clubroot resistance

New canola variety, PV580GC, offers double resistance to clubroot

BY LEEANN MINOGUE

It's the last minute, but if you still have time to move some acres around, a new clubroot-resistant canola variety, PV580GC, is available for this growing season.

PV580GC was developed by the University of Alberta's canola breeding program, in partnership with Crop Production Services (CPS) and

the Natural Sciences and Engineering Research Council.

This new variety has been in development since 2004. PV580GC carries a resistance gene from Mendel, a European winter canola cultivar, and a second gene from an exotic germplasm. The idea is that if one resistance gene doesn't work, the other will do the job. Also, CPS expects that including two types of resistance will give growers "more durable resistance."

Is there still seed available for this growing season? Bruce Harrison, director of CPS's Research Development and Innovation division, wrote, "Being the first year, we will always be limited in seed volumes. Still, for farmers that are interested in PV580GC I'd encourage them to contact one of their local CPS retailers in the central/north central areas to check on availability."

*Leeann Minogue is the editor of Grainews.*

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# Controlling seeds post-harvest

Can pulverizing weed seeds after harvest control weeds in Western Canada?

BY LISA GUENTHER

As buzz builds about Australia's Harrington Seed Destructor, researchers are looking at whether pulverizing seeds after harvest will work on the Prairies. But preliminary research shows post-harvest seed control is unlikely to work for all of Western Canada's weeds.

Breanne Tidemann presented new research at the Herbicide Resistance Summit in Saskatoon this March. Tidemann, who is completing a Ph.D. at the University of Alberta, looked at whether cleavers, wild oats, and volunteer canola seeds could be managed post-harvest in wheat and faba bean crops. The trials ran in 2014 and 2015 at sites near Lacombe, St. Albert, and Scott.

Tidemann said there are two requirements for controlling seeds post-harvest. The first is the height the weeds are producing the seeds.

"If they're producing them any lower than about 15 cm, we risk damaging our equipment too much to actually target them that low in the canopy."

All three weeds passed that test. But the weeds also needed to retain seeds long enough for farmers to collect them. Researchers placed shatter trays under the weeds. They then noted how many seeds the weeds had retained at wheat swathing, wheat harvest, and faba bean harvest.

Volunteer canola is the best candidate for harvest weed seed control, Tidemann said. "It retains its seeds really well and it produces them high in the canopy."

In fact, canola retained its seeds at all three sites in both 2014 and 2015.

the only year that we saw this in. Again, whether that's because of low moisture or something else playing a role, we're not really sure. And we still have some work to do to figure that out," said Tidemann.

Cleavers still seem like a good target for post-harvest weed seed control, Tidemann said. But farmers might have to swath to catch seeds before they're dropped.

## FUTURE RESEARCH

Tidemann and her colleagues aren't surrendering to wild oats yet.

One new idea is to target wild oats during seed formation. Researchers are looking at cutting panicles when they pop above

crop canopies. Tidemann said after cutting panicles every week, they keep seeds to see whether they're viable. Researchers are also leaving wild oat seeds on the ground to see how that affects wild oat populations.

Tidemann noted that cutting panicles with garden shears isn't a great option for farmers. But farmers could silage crops. In fact, work done by Dr. Neil Harker shows that cutting barley for silage reduces wild oat populations, she noted.

Another weed-control option might be a CombCut, which Tidemann described as a selective mower with stationary knives. The idea is to run it through cereal crops at an early

stage. Cereal plants will bend, avoiding damage.

"The broadleaves, they're not going to bend. They're going to get cut off." It could also cut seed heads emerging above the crop's canopy, she added.

Agriculture and Agri-Food Canada has also purchased a Harrington Seed Destructor to see how it handles weeds in Western Canadian crops.

"We have kochia. We've got wild buckwheat. How does that change how well the Seed Destructor can work? What about the number of seeds? If you have 10 seeds going through compared to a million seeds going through, how does that change it?"

Tidemann also urged farmers and agronomists to remember the basics when it comes to weed control. Good agronomy, such as higher seeding rates and the 4Rs of fertilizer application, go a long way to establish a competitive plant stand.

In over 90 research studies looking at 29 different crops, only six studies failed to show lower weed counts with higher crop density, she said.

"It's a hard statistic to argue with." For a video interview with Breanne Tidemann, visit [Grainews.ca/video](http://Grainews.ca/video).

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## Remember the basics

The good thing about wild oats was they were also very consistent, Tidemann said.

"The bad thing about wild oats is that they're consistently losing a large number of seeds very early on, to the point that the number of seeds that we could collect is not really going to impact the population," said Tidemann. "So they are not a good target for harvest weed seed control."

Cleaver seed retention varied between sites and years. For example, cleavers retained 80 to 90 per cent of their seeds until wheat swathing at Scott both years. In Lacombe, cleavers retained most of their seeds until wheat swathing in 2014, but seed retention dropped the next year.

St. Albert saw huge variability in cleaver seed retention. The first year cleavers had retained 90 per cent of their seeds by wheat swathing and 40 per cent at wheat harvest. But in 2015, cleaver seed retention was down to 50 per cent at wheat swathing, and nil by wheat harvest.

"This is the only location and



# Weed control in a dry summer

Dry summer weather could mean a whole new slate of weed control challenges

BY ANGELA LOVELL

When it comes to weed control, no two seasons are the same. This year, many forecasters are predicting a hot, dry summer. What challenges will this bring?

For one thing, some weeds that thrive better under hot, dry conditions, says weed expert, Robert Blackshaw with Agriculture and Agri-Food Canada in Lethbridge, Alberta.

"Some weeds that have a different photosynthesis mechanism, and C4 plants such as corn, thrive under warm conditions," he says. "We also have C4 weeds, such as kochia and redroot pigweed, so those would definitely be an issue."

A bigger concern for farmers is dry conditions during seeding, because that leads to uneven crop emergence and staggered weed emergence, which makes herbicide timing tricky.

"Farmers like to have the entire crop uniform at the correct leaf stage to apply their herbicide and they'd like most of the weeds to be up and present as well, but under drier conditions that often doesn't occur," says Blackshaw.

When it comes to staging the herbicide under these patchy conditions farmers probably just have to do it when the majority of their crop is at the correct leaf

stage and has some weeds growing. "They pretty much need to spray at that stage and perhaps consider a second application of a herbicide if they have a second flush of weeds," says Blackshaw. "Some herbicides are safe enough that you can use them on the crop at a little later growth stage, and others are not, so they have to be careful about that."

In dry conditions, there are often flushes of weeds during the growing season after rainfall. A second application may not be possible depending on the product window or if reduced yield potential of the crop makes it uneconomic.

It's also not as easy to kill weeds with a post-emergent herbicide application during drought conditions, which seems counterintuitive, says Blackshaw. "We might expect that if the weeds are stunted and under stress due to dry conditions, it might be easy to finish them off with a herbicide but for most of our herbicides it's the exact opposite of that," he says. "If the weeds are actively growing and very healthy then that allows the herbicide to exert its full effect and weeds are killed the best under those growing conditions. But if plants are under stress due to heat and drought, then weed control is actually reduced with a herbicide."

Contact herbicides will be the most effective during drier conditions because they don't need to move within the plant

to exert their full effect. But herbicides that need to translocate through the plant — such as Roundup, or Group 1s like Poast, Select, Horizon or Axial — will not be as effective.

"The majority of herbicides do require movement within the plant often to the growing point of the plant to exert their full effect and that's greatly reduced under drought conditions," says Blackshaw. "As well, the herbicide entry into the weed can be reduced under hot dry conditions sometimes because the plants produce thicker cuticles and deposit more wax on the outer surface of their leaves to try and inhibit moisture loss and so that acts as a barrier for uptake of the herbicides into the plant as well."

Be cautious about using spray additives or surfactants in an attempt to increase absorption of the herbicide into the plant. "Herbicides have gone through a very rigorous registration process and evaluation and the companies have selected the best additive for that herbicide, so whether it's already included in the herbicide formulation, or they suggest what is the best surfactant to add to a herbicide, farmers should stick with those recommendations," says Blackshaw.

In some cases, says Blackshaw, especially if conditions are dry in the fall after harvest, it might be worth gambling on getting some control from a soil-applied

herbicide applied in the fall or early spring, followed up with a post-emergent herbicide later on. "If it was soil-applied last fall and there's some snow melt or rainfall this spring those herbicides will be activated in the soil and be effective," says Blackshaw. "If we have very dry soil conditions those herbicides will be less effective, just as the post-emergent herbicides will."

### DON'T REDUCE SEEDING RATES

One thing farmers should not do, says Blackshaw, is reduce seeding rates. "If farmers have a reasonably high seeding rate, it's a little bit of an insurance policy if they do have dry conditions that are going to reduce germination and emergence," he says. "A little higher seed population will help you get a decent crop up and makes it more competitive crop with weeds."

Although it doesn't help much with weed control during the growing season, farmers can consider using a desiccant or swathing at harvest time to dry down weeds. "It doesn't solve your weed problem but it could reduce the amount of green material that would affect the crop in storage," says Blackshaw.

Angela Lovell is a freelance writer, editor and communications specialist living and working in Manitoba. Find her online at [www.angelalovell.ca](http://www.angelalovell.ca).

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# Getting ready for corn planting

Check these four key planter parts before seeding to ensure a successful season

BY NICOLE RASMUSSEN

**M**ake corn planting less stressful by doing as much preparation as possible ahead of time. This includes ensuring all equipment is in proper working order to prevent any problems. There are four main components in any corn planter that should be examined before planting.

## 1. SEED TRANSMISSION SYSTEM

Sprockets and chains should be in good condition. Sprockets should have no missing teeth and chains should be the correct tightness.

## 2. OPENING DISC

The opening disc should not be overly worn, and should be a minimum of 14.5" in diameter to ensure the correct amount of contact at the bottom. Bottom contact depends on the make of the planter, but is generally in the 1.5 to 2.5" range.

## 3. BAR HEIGHT

Bar height should be equal to make sure the machine is level. Measurements should be taken from a number of points on the planter to ensure the planter is level. It is very important to level your planter in the field in motion and not in your shop.

## 4. SEED TUBES

Any worn components of the seed tube should be replaced. A worn seed tube can affect how the seed drops which in turn affects the crop growth and emergence.

Consistent depth and spacing when planting is crucial to a successful season. If any component of the planter is out of order, it could affect how deep seeds are placed and spacing between plants, as well as overall yields of the crop. Even if you have purchased a new planter from an equipment dealer you need to be aware that they are not field ready, you still need to spend time setting the planter and checking all the above components.

## WATCH THE ENVIRONMENT TOO

In addition to well-tuned equipment, environmental factors impact planting. When planting takes place, it's important that soil conditions are correct. Ideally, soil should not be too wet or dry. Corn should be planted 1.5 to 2.0" deep; shallow planting will impede proper root development.

Soil temperature should be at least 10 C to prevent hormone problems in the seed, also known as imbibitional chill.

When the dry seed imbibes cold water as a result of a cold rain or melting snow, imbibitional chilling injury may result. The cell membranes of the seed lack fluidity at low temperatures,

and under these conditions, the hydration process can result in rupture of the membranes. If the cell tissues of the kernel are too cold, they become less elastic and may rupture during the swelling process. Instances of chilling injury following germination during the emergence process can also occur, often causing stunting or death of the seminal root system, deformed elongation of the mesocotyl and either delayed emergence or complete failure of emergence.

This results in incorrect development of the plant and a decreased stand. Watch the weather forecast two to four days after planting to watch for cool temperatures.

Weed management is also an important consideration when planting corn. Growers need to be aware of what weeds they have in their fields and then develop a plan to manage those weeds. In corn, the yield opportunity is maximized if the corn is weed-free from spike/emergence to the V6 stage (approximately eight-leaf).

Well-maintained, properly tuned equipment and a strategy for planting can go a long way in reducing stress during a busy time. Take the time before planting to prepare and maintain controllable factors during a frenzied time and reap the rewards.

*Nicole Rasmussen is an area agronomist with DuPont Pioneer.*



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## TOUGH TO BEAT IN THE LONG RUN



# The case of the fallen canola

BY RACHELLE FARRELL

Jason, who farms 1,000 acres of canola, wheat, barley and oats near Morinville, Alta., called me at the beginning of June with deep concern over one of his fields where some of the four-leaf canola plants were turning purple and falling over. “I need you to come out and take a look,” Jason said. “I’m sure I have cutworms in my field right now.”

So far, it’d been a cold, dry spring and I knew it was a stressful time for Jason, with flea beetles affecting his crops along with the less than ideal growing conditions. Cutworms were the last thing he needed at this point in the season, so I told Jason I’d come right over.

When I arrived at the farm, Jason filled me in on the field’s cropping history. The grower assured me he had been following proper rotations and that cutworms had never been an issue in this field before. I knew there

were a number of factors to take into consideration as environmental stress had been a large factor all season.

As I walked the canola field, I could see toppled over plants here and there throughout the crop. I also observed that the fallen plants still had a lot of moisture in them, indicating they hadn’t been down for very long.

On further inspection of these plants the symptoms were similar to cutworm damage — the stems were broken off just below the soil surface. Conditions had also been conducive to cutworm feeding, but we couldn’t find any of the worms in the soil. Also, cutworms typically work in patches within a field, and there was no such pattern in this case as the affected plants appeared sporadically throughout the crop.

I wondered whether the damage could be the work of flea beetles, as they had been an issue on Jason’s farm this season and may have been stem feeding at this point. I did observe some girdling on the plant stems that could be attributed to this pest. However, the four-

leaf growth stage is usually past the stage when flea beetle feeding causes a major issue in canola, and the girdling didn’t seem to be enough to topple the canola plants at this stage in their development.

By this time, I was starting to have a good idea what was causing the damage in Jason’s canola field. I took some plant samples in for lab analysis and it confirmed my suspicions.

If you think you know what’s causing Jason’s canola plants to topple over in his field, send your diagnosis to *Grainews*, Box 9800, Winnipeg, Man. R3C 3K7; email [leeann.minogue@fbcpublishing.com](mailto:leeann.minogue@fbcpublishing.com) or fax 204-944-5416 c/o Crop Advisor’s Casebook. The best suggestions will be pooled and one winner will be drawn for a chance to win a *Grainews* cap and a one-year subscription to the magazine. The answer, along with the reasoning that solved the mystery, will appear in the next Crop Advisor’s Solution File. ✍

*Rachelle Farrell is a crop inputs manager with Richardson Pioneer Ltd. at Morinville, Alta.*



Some girdling on the plant stems could possibly be attributed to flea beetles, but it didn’t seem to be enough damage to topple the canola plants.



Rachelle Farrell is a crop inputs manager with Richardson Pioneer Ltd. at Morinville, Alta.

## CASEBOOK WINNER

This issue’s Casebook winner is Tara Hillis. Tara, her husband and their three sons live on a mixed farm near Semans, Saskatchewan. Tara, we’re renewing your *Grainews* subscription for a year and sending you a *Grainews* cap. Thanks for reading and thanks for entering!

*Leeann Minogue*

# Aphanomyces root rot stunted peas

BY KENDRA LAING

In June, I received a call from Phil, a farmer from just outside Lipton, Sask. who asked me to come look at a pea crop that was doing poorly. Phil grows mostly wheat and canola, and this was first time he had ever planted peas.

The grower was alarmed to see his pea plants stunted and beginning to turn yellow. There had been a lot of rain lately that likely had something to do with it, but Phil wondered if the in-crop herbicide he had applied could be partially responsible.

“My peas were doing quite well and looked healthy until I sprayed them in crop. Then they just took a turn for the worse,” Phil said.

As I walked the problematic field, I observed many plants exhibited symptoms similar to that of waterlogging, not surprising since there had been approximately 20 inches of rain the previous few weeks. The affected plants were turning yellow (especially in the low spots), but emergence was decent throughout the field.

I discovered the peas on the hilltops were less affected and were a darker hue of green than the rest of the crop. The soil everywhere, however, was saturated, even on the hilltops, which indicated plant stress caused by environmental conditions was not the only culprit.

It appeared that the affected plants had got off to a healthy start with consistent emergence and an abundance of nitrogen-fixing nodules present on the roots. Some kind of pest had apparently caused the once-healthy plants to come to a halt in their development at some point, triggering the peas to pinch off and turn a sickly yellow colour.

It was obvious that Phil had done everything in his power, from pre-seed to in-crop spraying, to nurture his pea crop. My thoughts turned to disease. I took representative plant samples and sent them to the Crop Protection Laboratory in Regina for testing. The results came back positive for *Aphanomyces euteiches* root rot.

This made perfect sense, since Phil’s peas showed numerous indications of

*Aphanomyces*. The fact that the plant symptoms were worst in lowest lying areas of the field was one telltale sign, since the pathogen that causes root rot thrives in low spots.

The caramel-coloured roots were another indicator — the pathogen interferes with the plants’ water and nutrient uptake, causing roots to discolour. The pinched-off bases on the pea plants was another sign that we were dealing with *Aphanomyces* root rot, as the disease can cause plant lesions cause the tissues to collapse.

In most cases where a field has plants that test positive for *Aphanomyces* root rot, the crop rotations include peas or lentils. This particular field, however, had never been planted with either of these crops before since Phil had been farming it. Phil’s pea field was clearly an exception.

*Aphanomyces* root rot tends to be more severe when there is an excessive amount of moisture present. The rain Phil’s field received in the spring most likely caused the plants to be stressed, opening a gate-

way of opportunity for the soil-borne pathogen to thrive.

It was disheartening to see a producer who did everything right, unable to do anything to revive his pea crop. At this stage in plant development there was not any management alterations Phil could make. Thankfully, Phil had crop insurance and it was written off. On average, the crop yielded 10 bushels per acre.

Going forward, there was not much Phil could do other than plant different crops in the affected field. I advised him not to plant any pulses or legumes there in the near future, as the *Aphanomyces* pathogen can survive in soil for a very long time. The Saskatchewan Ministry of Agriculture for example, recommends that a susceptible host such as peas, lentils, alfalfa, dry bean as well as some varieties of red clover and fababeans should not be grown for a minimum six years of after an incidence of *Aphanomyces* root rot. ✍

*Kendra Laing is an area marketing representative for Richardson Pioneer Ltd. at Marshall East, Sask.*





# Don't reseed winter wheat too soon

One agronomist recommends getting halfway through seeding before you decide

BY JULIENNE ISAACS

In parts of the Prairies, thin to nonexistent snow cover in parts through much of the early spring months might have some farmers worried about their winter wheat.

But agronomists say it's too soon to make the decision to reseed.

"You can go out and do a spring assessment at the end of April if the weather has been nice and you want to go check it, but that's far too early to make decisions about the stand," says Amanda Swanson, an agronomist with the Western Winter Wheat Initiative in Moose Jaw, Sask.

"Before May 25 it's too early to make that decision."

The WWWW's recommendations note that a four-inch cover of light, fluffy snow through the coldest part of the winter — December 22 to March 20 — is ideal for protecting winter wheat against extremely low temperatures.

But this year, Swanson says, the risk of winterkill was low, with soil temperatures rarely ranging as low as an estimated -10 C to -15 C.



**Before  
May 25  
it's too early**

"Although we haven't had the snow cover, we aren't that concerned because soil temperatures need to get down to minus 20 or below before there are concerns about winterkill," she says.

She notes that careful scouting is necessary. It is possible, for example, to mistake other problems for winterkill, such as plant mortality in select areas due to ice encasement from early spring runoff.

Winter wheat growers should dig up plants in various locations and check for new root and shoot growth, as well as white crown tissue, which are all signs of healthy plants.

## RESEEDING DECISIONS

Mark Akins, who farms south of Moose Jaw, says he is currently waiting to do a spring assessment on 900 acres of winter wheat.

He's been growing winter wheat for a decade, and in his experience, insufficient snow cover hasn't yet been a factor

in winterkill. "I haven't had a winterkill experience at any point in my winter wheat career when I had a good establishment in the fall," he says.

Good fall establishment — when plants get to the three- to four-leaf stage with good crown tissue — will usually result in healthy plants come spring.

"In our area producers who have winter wheat are probably more concerned about early warm temperatures — we had some crazy high temperatures at the beginning of March, and probably one of the things growers are worried about are their crops starting too early," he says.

Swanson notes that growers

new to winter wheat are more likely to be concerned about winterkill than experienced growers. For new growers, Akins recommends assuming winter wheat will be hardy enough to make it through the winter, but developing a "Plan B" just in case.

His rule of thumb is to get spring seeding 50 per cent completed before making any decisions on whether reseeding is necessary.

At that point, if producers are still unsure about the status of the winter wheat crop — and Akins says it should be obvious if the crop is doing well by this point — they should consider implementing Plan B.

WWWI can send agronomists

out to fields to help producers make that decision.

But Swanson says she's never yet recommended a grower "rip up a field."

"A poor winter wheat stand usually ends up being a better option than a late seeded crop of another variety," she says. "Poor winter wheat stands can surprise you. And when you look at the economics of it, if you've spent money on the seed and fertility, the poor winter wheat stand is still usually more profitable than the next crop you're seeding, if you wait until the end of May to make that decision."

*Julienne Isaacs is a Winnipeg-based freelance writer and editor. Contact her at julienne.isaacs@gmail.com.*

## About the WWWW

The Western Winter Wheat Initiative is a joint effort by Bayer Crop Science, Richardson International and Ducks Unlimited to build awareness of winter wheat as a crop option for Prairie farmers.

For more winter wheat agronomy information, see the WWWW's website at [growwinterwheat.ca](http://growwinterwheat.ca) or call the office at 1-866-761-5270.

*Leeann Minogue*

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# Thistle still on ‘least wanted’ list

Early and thorough control is essential to keep Canada thistle under control

BY JULIENNE ISAACS

Canada thistle has been a thorn in farmers’ sides since before Confederation.

In 1865, when the Canada Thistle Act of Upper Canada was signed into law, Her Majesty required all citizens of Upper Canada “to cut, or to cause to be cut down all the Canada thistles growing thereon.”

The Act continued, “If any owner, possessor, or occupier of land shall knowingly suffer any Canada thistles to grow thereon and the seed to ripen so as to cause or endanger the spread thereof, he shall upon conviction be liable to a fine of not less than \$2 nor more than \$10 for every such offence.”

The value of the dollar has gone up since 1865, but producers are used to counting the cost of Canada thistles.

“The Canada Thistle Act started legislation for weeds,” says Nicole Kimmel, a weed specialist at the Pest Surveillance Branch of Alberta Agriculture and Forestry. “It’s been listed ever since.”

The reason for Canada thistle’s remarkable persistence is twofold — the plant is allelopathic, meaning it has an inhibitory effect on other plants, and it quickly regen-

erates from cut root pieces. In fact, only 10 per cent of Canada thistle comes from spreading seeds, Kimmel says. The majority spreads through root fragments.

“All you need is a root piece that’s a quarter of an inch by an eighth of an inch round. That’s enough to start a new Canada thistle plant,” says Kimmel. “And those roots can extend down six meters. So Canada thistle is tapping into nutrients and water that little else reaches.”

As Canada thistle has such a great amount of biomass in the root system, it can only be controlled with aggressive weed control measures.

### CONTROL OPTIONS

“The worst thing you can do is go out and spray Canada thistle one year, assume it’s controlled, forget about it next year and go back to a herbicide with only top growth suppression,” says Bill May, a crop management agronomist with Agriculture and Agri-Food Canada.

“For control, you need two years of concerted efforts, either in-crop with clopyralid or pre-harvest or post-harvest glyphosate, depending on the growing season, to start to knock down the Canada thistle density,” he says.



Canada thistle

Good to excellent control of Canada thistle in canola and flax can be achieved with the Group 4 herbicide clopyralid (Lontrel) added into a tank mix, he adds. “Pulses are the big problem and with the current price of lentils I expect producers are going to end up with lentils on fields that are not as low in perennial weeds as they would want,” he says.

May was involved in a four-year study of herbicide timing and intensity in the control of Canada thistle from 2004 to 2008. He says pulses suffered the largest yield decrease from Canada thistle, but

over two to three years it could be controlled with the use of herbicides. However, it only took a couple of years for Canada thistle to re-establish in fields once herbicides used in those fields shifted away from those that controlled the weed.

“There’s a huge amount of biomass in the root system of Canada thistle. You need to select a herbicide that doesn’t just burn off the tops, but translocates into the roots,” says Kimmel.

Kimmel says tillage used to be one possible control strategy for growers battling the noxious weed — but the measure was labour intensive, requiring repeated passes over summer fallowed fields. Since the zero-till movement, which emphasizes minimal soil disturbance, and virtually eliminates summer fallowing, growers are turning to chemical controls.

“If no-till growers can do a good job of cleaning up fields from Canada thistle prior to moving to no-till, they have a lower risk of Canada thistle re-establishing because they’re doing minimal disturbance,” she says.

For growers who do not yet have Canada thistle in their fields, Kimmel recommends stav-

ing the weed off with aggressive preventative measures.

“Clean equipment between fields, especially if equipment comes into contact with Canada thistle,” she says.

“If you do have Canada thistle problems, broadleaf crops and hay and pasture offer challenges in thistle control. Any herbicides that you use to control Canada thistle will kill alfalfa and clover. There’s no herbicide that selects specifically for Canada thistle.”

May emphasizes that the use of good agronomic practices to promote crop growth can help growers combat weed pressure. The list includes the use of appropriate nitrogen fertilizer and other nutrient rates, as well as appropriate seeding rates — high enough to get a good canopy and quick closure.

Despite the high biomass of Canada thistle, Kimmel says cows prefer not to eat it, so even its value as a viable feed crop is low.

“It’s tenacious and aggressive. As a weed, it’s done very well for itself. If we could get crops to grow the way Canada thistle does, we’d be laughing,” she says.

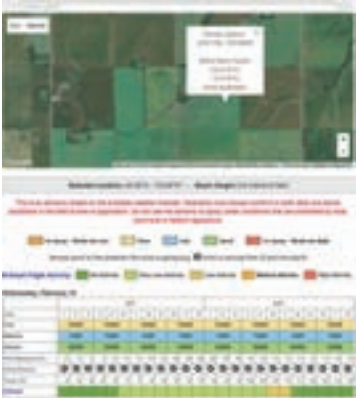
*Julienne Isaacs is a Winnipeg-based freelance writer and editor. Contact her at julienne.isaacs@gmail.com.*

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# Should I grow the latest new crop?

Angela Lovell asks the experts whether or not getting in on a hot trend is a good idea

BY ANGELA LOVELL

Niger, quinoa, fenugreek. These are just a few of the new crops starting to appear on a very small number of acres across Western Canada, but the biggest question farmers should be asking about them is — who's going to buy them?

"With any new crop, farmers should make sure they're not listening to marketing hype, but that there is somebody buying and using the product, even if it's on a small scale," says William May, a research scientist who works with new crops at Agriculture and Agri-Food Canada at Indian Head, Sask. "Then they have to consider where is the market, what's the cost of getting it there, what quality the buyer needs, and how it compares economically to the crops they are currently growing."

Camelina is a good example of a crop that was over-hyped to begin with, but which has developed a niche market that's doing well. One company ran into financial difficulties in 2012 when it couldn't meet its projected sales expectations for the camelina it had contracted with producers. By contrast, Three Farmers of Midale, Sask., has successfully established a specialty niche market for camelina oil as a healthy oil for human consumption. "It's a great

example of where one part of the market has been successful with a new crop and another has moved away from it," says May.

## HOW DO I GROW IT?

The next question is: "How do I grow it?" May and his colleagues do the background agronomic work on new crops so that if they offer some opportunities for producers, they have the agronomics to support production. "It's important to get the agronomics in hand at an early stage so that it can be given a fair shake as a new crop," says May. "If nobody knows how to grow it, and they grow it the wrong way, it gets a bad rap and then it's twice as hard to promote it the next time."

Farmers can run into production issues if they adopt a crop wholesale, before it's proven itself under different conditions. "I always worry about over-enthusiasm for a new crop," says May. "You can run into problems in production practices going from a small, isolated area to a bigger area that you didn't expect."

If everyone jumps into a new crop at the same time there can be overproduction and too much supply, which has happened in the hemp industry, says May. "Hemp seed production increased

faster than demand in 2015 and now we've overproduced, so hemp production is going to fall back a bit before it can move ahead again," says May. "With minor crops there's always that risk as well."

## NIGER, QUINOA, FENUGREEK?

So what's the prognosis for the three crops we started this article with?

Fenugreek is used as both a culinary and medicinal herb, and is a common ingredient in Indian food such as curries. It is rich in vitamins and minerals, and is also high in protein. "There's a small acreage of fenugreek used by Emerald Seed Products in Avonlea, Sask., that is fractionated and sold for several high value products but it is difficult to predict how fast that market is going to expand," says May.

Quinoa is a highly nutritious, gluten-free, ancient grain that comes from the Andes region of South America. It has become popular with health-conscious consumers in recent years after celebrities like Oprah Winfrey touted its nutritional benefits. About 5,000 acres of quinoa were grown on the Prairies in 2015 and one company projects acres to reach 100,000 by 2018. "I'm interested in seeing what the actual area of adaptation is for quinoa because there are some issues there," says May.

Niger is an oilseed crop that has been cultivated in Ethiopia and India for several thousand years, where it's used mainly as a cooking oil. It's also imported as a bird feed in Europe and North America. Niger has a small but established market as a bird seed and is currently grown by a few farmers in western Canada that sell to local stores or farmer markets. However, currently regulations dictate that Niger be heat sterilized at a USDA approved facility before it can be imported into the U.S. which limits the market of niger produced in Western Canada.

## BUT... YOU NEVER KNOW

The good news is that there's always somebody out there looking for opportunities. "You never know when all of a sudden somebody has a market demand for something new and there's potential to produce it here," says May. "For farmers, they're looking for new opportunities, and it often depends how well they are doing with their other crops whether they're interested in assuming more risk with some newer crops, that in the long term could be economically advantageous for them."

*Angela Lovell is a freelance writer, editor and communications specialist living and working in Manitoba. Find her online at [www.angelalovell.ca](http://www.angelalovell.ca).*



# Make the least of your farm taxes

It's that time of year again. Here are some farm tax tips direct from the CRA

BY HEIDI HOFSTAD

Canadian farmers of all types — from dairy to fruit to livestock — contribute to the healthy lives of Canadians. The Canada Revenue Agency (CRA) has made filing your taxes easy, so you can save your energy for the harvest. The agriculture and agri-food industry is vital to the economy, and the CRA wants to make it easy for Canadian farmers to grow their business.

### WHO'S A FARMER?

If you raise a few farm animals or have a plot to grow your own food, you are considered a hobby farmer, rather than a business, and you can't deduct any expenses or losses. On the other hand, if you devote the majority of your time to farming by investing in buildings, machinery, and inventories to run the operation, you're likely the owner of a farming business. Keep in mind that farming income does not include money earned from working as an employee on a farm or from trapping.

For more information on farming, including the types of farming income and deductions and tax

credits available to farmers, go to [www.cra.gc.ca/farming](http://www.cra.gc.ca/farming).

### WHAT'S DEDUCTIBLE?

Generally, farmers can deduct any reasonable current expense incurred to earn farming income, including interest on loans and losses, and the cost of fertilizer, feed, veterinary fees and materials to pack and ship goods. Other expenses that may be eligible include machinery rental, electricity, insurance and motor vehicle expenses. And if you decide to farm out some of your accounting duties, you can also deduct the fees you paid to your accountant.

Not every year can be a winning year. If you had a farm loss for the year, you may be able to deduct up to the full amount of your loss. A farm loss can be carried back from the current year to any of the previous three years or carried forward up to 20 years. For more information on farm losses and how to calculate and apply them, see Chapter 6 of CRA Tax Guide T4003. (Find this document online at [cra-arc.gc.ca](http://cra-arc.gc.ca).)

Eligible farmers who dispose of breeding livestock in a tax year

because of drought or flood can exclude a portion of the sale proceeds from their incomes until the following tax year, under the Livestock Tax Deferral Provision. The rule also extends to bees and to all types of horses that are over 12 months of age that are kept for breeding. (Find more information about this by searching for "Livestock Tax Deferral" on the Agriculture and Agri-food website at [www.agr.gc.ca](http://www.agr.gc.ca).)

### ARE EMPLOYEE EXPENSES DEDUCTIBLE?

Do you hire seasonal farm workers? If you hire a qualified Red Seal trade apprentice, such as an agricultural equipment technician, you may be able to claim your employee's salary as an expense. You may also be able to claim the apprenticeship job creation tax credit. This non-refundable investment tax credit is equal to 10 per cent of the apprentice's salary or wages. The maximum credit an employer can claim is \$2,000 per year for each eligible apprentice. For more information on the Apprenticeship Job Creation Tax Credit, go to [www.cra.gc.ca/small-business](http://www.cra.gc.ca/small-business) and select "investment tax credit."



### WHAT ABOUT ERRORS AND INSTALMENTS?

You pride yourself on producing the cream of the crop, so don't risk your reputation by underreporting your farming income. Under-the-table cash deals undermine the integrity of Canada's tax system and deprive Canadians of funds for vital programs that benefit everyone. If you are caught evading taxes, you may face fines, penalties, or even jail time. Save yourself the trouble — don't participate in the underground economy. For more information, go to [www.cra.gc.ca/undergroundeconomy](http://www.cra.gc.ca/undergroundeconomy).

Stay on top of your record keep-

ing throughout the year to avoid the stress of ploughing through countless invoices and receipts. You need to keep complete records of your business-related expenses to support your claims. Without these supporting documents, the CRA could disallow your credit or deduction. Plant the seed and get in the habit of keeping complete records! To learn more, go to [www.cra.gc.ca/records](http://www.cra.gc.ca/records).

If you have ever made an error or omission, the CRA is offering you a second chance to correct your mistake through its Voluntary Disclosures Program (VDP). If you make a valid disclosure before you become aware

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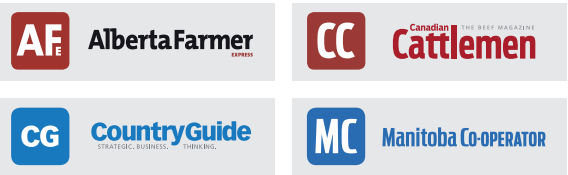
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WHEN'S THE DEADLINE?

The deadline to file most Canadian income tax and benefit returns for 2015 is April 30, 2016. However, since this date is

a Saturday, the CRA will consider your return as filed on time and your payment to be made on time if it receives your submission or it is postmarked by midnight on May 2, 2016. Self-employed individuals and their spouses or common-law partners have until June 15, 2016, to file their income tax and benefit returns, but any balance owing is still due no later than May 2, 2016.

From the growing popularity of farmers' markets to farm-to-table menus, today's consumers want locally grown and sustainably sourced produce and meats. Another trend most Canadians are cultivating is filing their taxes online! Filing online is fast, easy,

and secure. If you're entitled to a refund, you can enjoy your money in as little as eight business days, by combining online filing with direct deposit! For a list of tax software and web service options, including those that are free of charge, go to [www.cra.gc.ca/netfilessoftware](http://www.cra.gc.ca/netfilessoftware).

New this year, the CRA's Auto-fill my return service is available through some certified tax preparation software. This secure service automatically fills in certain parts of your income tax and benefit return. To use Auto-fill my return, you must complete your registration in full for My Account. For more information, go to [www.cra.gc.ca/auto-fill](http://www.cra.gc.ca/auto-fill).

You know the growing seasons and plant rotations by heart, but what about important dates related to your taxes? Like the *Farmers' Almanac*, the CRA Business Tax Reminders app can help! This new app lets you create reminders and alerts for key CRA due dates for instalment payments, returns, remittances, and other tax-related business matters, so you won't have to worry about penalties and interest.

You can also stay up to date by registering for online mail through either My Account or My Business Account. When you register for online mail, we will no longer print and mail eligible correspond-

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Stay on top of the latest CRA news or tax tips by following @CanRevAgency on Twitter.

*For Grainews readers who prefer to get their tax information offline, call the CRA's general inquiries phone number, 1-800-959-8281. They will be able to answer your questions and send you paper copies of the forms and publications you need.*

**Heidi Hofstad, CRA spokesperson.**

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# Six tips to successful land rental

Rental prices have risen along with land prices, but rental basics are still the same



How much is this land worth?

PHOTOS: MARIANNE STAMM

BY MARIANNE STAMM

“How much land does a man need?” The title of an old Russian folk tale by Leo Tolstoy hasn’t lost any of its significance.\* It’s a question farmers ponder today, as land and land rent prices continue to rise to levels never seen before.

Despite lower commodity prices, the cost of land is still rising dramatically in the Westlock, Alta. area (about an hour’s drive north of Edmonton). A few short years ago farmers worried about going broke buying land at \$2,000 per acre. Today that same land would probably sell at \$5,000 per acre. As land prices soar, so do land rent prices. Although more expensive than some other areas, Westlock’s situation is representative of much of what is happening across the Prairies. Landlords are asking themselves, “What is a fair price to charge for land rent?” Farmers ask, “What can we afford to pay for land?”

While the cost of purchasing land is quite easy to find out — it’s publically available information, or you can just listen to the coffee shop talk — land rental rates are not so clear. Neither landlords nor farmers are trumpeting out the numbers. Word does get around though, especially when a new deal is made at an amount far above what was considered the established rate. Landlords might smile and farmers wince. Especially at these high prices there are a few things to consider for both.

## 1. BUILD RELATIONSHIPS

Bernard Wiese is a retired farmer who still lives in the Westlock community and rents his land out. “I’m more concerned about having someone who looks after the land and farms it properly than getting the top dollar,” he says, adding, “Both parties have to be satisfied for it to work out.”

Ryan Kubinec is a young grain farmer that rents land from several landlords. “Renting land is about

relationships,” he says. Good relationships provide more security. A farmer is less susceptible to direct competition from other farmers. Asked if the current rent prices are still viable for farmers he says, “If it’s a good piece of land that ties in to your operation, the higher price could still work.” He’s concerned about non-farming companies that are purchasing farm land. “They’re just looking for a return on investment.”

## 2. FIND A FAIR PRICE

How does one establish what is fair market land rental? A good place to start could be the ratio used in the article, “The best time to buy and lease farmland” on the website of Manitoba Agriculture: “This is usually in the range of 18 per cent to 22 per cent of gross revenue (yield per acre times price per bushel). For example: A farm with an average wheat yield of 50 bushels and three-year average price of \$7 would make the average gross revenue \$350 per acre. Fair market land rental should be about \$66 per acre (the range is usually about \$63 to \$77 per acre).”

In an Article for Alberta Agriculture, “Land Rent — Frequently Asked Questions,” Ted Nibourg writes: “It is often difficult to determine cash rent in an area through word of mouth. Prices and values are quoted but unless one understands the true nature of the rental arrangements, difficulties and misunderstandings can occur.” Some agreements might include bin rental, raising the value and per acre price. What it boils down to, Nibourg says, is to determine land productivity. One quarter might produce a good crop of canola and the next hardly a decent crop of barley.

## 3. MAKE SURE IT PAYS

What to do if a landlord insists on the top price? In a press release from Farm Credit Corporation J.P. Gervais writes, “Knowing your cost

of production and making projections about revenue are critical in determining your ability to pay for rented land,” adding that producers should also factor in fixed costs, such as equipment, property taxes and insurance, when considering a lease.

“Normally renting land is about bringing down capital costs by spreading them over more acres,” says Kubinec. “The question is: is it spreading capital cost or is it raising it?” Will extra machinery be purchased on loan to operate the rented acres? That can be risky, especially if the land rental agreement is such so the farmer isn’t certain he can keep the land. If the lease is lost, a farmer can be stuck with expensive payments he/she is no longer able to make.

When land rent increases significantly it can be tempting for farmers to give up the land. “Balancing the need to secure land for the long term and managing the financial health of your operation is a difficult exercise,” Gervais says. “Nobody can predict the future with accuracy. The only available option is to run scenarios and position your business to be able to take advantage of future opportunities and face emerging challenges.” If the farm is able to carry a loss for a year or two, it may be worthwhile to keep the lease in order to secure the future.

## 4. GET IT IN WRITING

Rental agreements should be in writing, even if everyone completely trusts each other. People forget things, and it’s good to have it in black and white. Renting land is about more than just price per acre. Landlords need to think about what tillage practices they want the renter to use, whether straw can be taken off the field, trees taken down, if certain crop rotations must be followed. How important is it to them that the land is well taken care of and what does that mean? All those things should be written down. As Wiese



Does the land rental price include storage?

said, for many farmers it is more important to know their land is well cared for than to get top dollar.

For the renter, clauses such as the right of first refusal and length of the agreement are important. Agreements can have different renewal dates. There may be one date for lease renewal and another for rental rate renewal.

## 5. TRY A PRICE FORMULA

There are several options to set land rent prices. The most popular one is straight cash rent — so many dollars per acre, period. “We prefer to do all our rents on a cash basis,” Kubinec says. “You can budget and prepare that way.” Others work with flexible cash rent. The base price is set on a certain price of a commodity, for instance \$10 per bushel canola and \$5 per bushel wheat. If the price goes up the landlord gets an agreed upon premium. Another option is to charge a lower base rent that uses the following equation for a top up after harvest: bushels harvested (for example, 50 bushels canola) times price per bushel at a specified time or the average over a specified time (for example, \$10 per bushel) times 15 per cent. If the total exceeds the base payment, a top up is paid. This protects the farmer in a poor

year and the landlord benefits in a good year.

In the Westlock area, the crop share arrangement, where the landlord shares in the cost of production and the commodity sales, is becoming less popular.

## 6. KEEP IN TOUCH

Key to land rent negotiations is good communication. Both landlord and renter should try to put themselves in the other’s shoes. “Clearly communicating and understanding each other’s goals, values, expectations and circumstances will go a long way to making an agreement work for both parties,” says a Manitoba Agriculture article on Land Rent agreements. Where good communication is possible, a farmer and landlord can discuss the repercussions of a seriously bad year. The best agreements, at whatever price, still rely on a solid respectful relationship.

\*Editor’s note: Leo Tolstoy’s classic tale of land, farming and greed is available online. It’s one of the stories included in the book, “What Men Live By and Other Tales.” You can read the story or download a free copy at [www.gutenberg.org](http://www.gutenberg.org).

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# Don't misdiagnose soil compaction

Erosion or true compaction? A correct diagnosis is key to proper management

BY JULIENNE ISAACS

Subsoils are naturally compact, and what looks like a soil compaction problem might actually be a case of erosion removing the top, soft layer of soil and exposing the dense subsoil.

"People assume they have a soil compaction problem, but exposed subsoil is often misdiagnosed as a soil degradation issue," says David Lobb, a professor in the Department of Soil Science at the University of Manitoba.

Subsoils are naturally compacted at depth, with a higher bulk density than top soils.

"Sometimes in areas where glaciers have been moving over the surface you get a lodgement till, resulting from massive pressure compacting the soil. Some soils will have bulk density of 1.7 to 1.8 grams per centimetre cubed. That's natural," he says.

"But once you have thousands of years of bugs and worms and roots mixing the soil, you get soil that's loose at the surface. That's what we think of as normal and ideal, that's what plants think too."

A relatively dense subsoil is natural and fairly consistent across the Prairies, according to Lobb, but problems with bulk density can occur more easily in soils on hilltops, where the top soils are thinner and subject to erosion.

Lobb says true soil compaction caused by traffic is usually a result of too much activity on the soil when it is too wet to resist the pressure. "For the most part, when soil is relatively dry, it has good strength and resists compaction by driving," says Lobb. "That's when you want to do field work, when the soil is dry enough to resist compaction."

But often, field work is done at what Lobb calls the "shoulders" of the growing season, when there is a risk of rainfall events. "That means that soil has less ability to resist compaction, so bulk density goes up and you get problems."

## TRUE COMPACTION?

Lobb says there are telltale signs of true soil compaction. First, there will be poor plant stands and spotty growth, he says, which is conspicuous in

two places: at headlands and field entrances, which see the most traffic during planting and harvesting.

"That's where you look to see if there's a crop impact," he says. "That's where people should be looking. I hear people say they've got soil compaction in the field, but if you do not see these issues near headlands or entrances, you don't have a problem with compaction caused by traffic."

If soils are heavily compacted, roots will begin to grow laterally rather than into the subsoil.

One way to deal with traffic-caused compaction is to change the axel design to isolate compaction to distinct rows, says Lobb, rather than dual or triple

wheel rows. "You're sometimes better off keeping the zone of compaction low," he says.

"This becomes really important for liquid manure applicators which carry tremendous weight. Minimize it by localizing it."

Other obvious strategies include minimizing traffic at headlands and field entrances, and confining traffic to dry periods as much as possible.

One controversial method of correcting subsoil compaction is "ripping" the subsoil with deep rippers that penetrate 10 to 16 inches.

"The only time that ever works really well is to do it when the soil is really dry," says Lobb. "You're giving up a cropping year. But

it also doesn't last very long — that de-compaction is lost within months to a year or two. If you've got that problem and that's the choice you've made to deal with it, you'll be burning lots of fuel to deal with that issue."

Long-term solutions to soil compaction include the use of deep-rooting crops like alfalfa, which can break up the subsoil over time and create better infiltration. Practices that build up organic matter improve the soil's structural strength and resistance to compaction.

Some compaction can naturally correct itself over time. "We have a lot of freeze-thaw in the Prairies," says Lobb. "Compaction is a problem where

you don't have natural alleviation. Freeze-thaw can go down fairly deep and cause a lot of heaving and cracking and de-compaction."

With regard to subsoils exposed through erosion, Lobb says there is no way to get rid of natural compaction. There are only two ways to deal with this issue — by reducing erosion, and moving soil back to the exposed areas.

"Properly diagnosing the problem is important," he says. "If you've got compaction due to erosion versus compaction due to traffic, the solutions are different."

Julienne Isaacs is a Winnipeg-based freelance writer and editor. Contact her at julienne.isaacs@gmail.com.



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BY JONNY HAWKINS

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# New class coming for 29 wheats

More than two dozen older Hard Red Spring wheat varieties are being reclassified

BY LEE HART

Western Canadian farmers won't have to make any major new decisions on wheat varieties this year, but come the spring of 2018 they will have to pay attention to whether some of their tried and true varieties have been moved to a different class.

Creating a new classification for some long standing wheat varieties that just don't make the cut for hard red wheat specifications isn't a perfect solution says a Saskatchewan farmer, but it's probably the best option to ensure world bread makers are getting the quality Canadian wheat they want.

Margaret Hansen, who along with family members produces wheat, canola and barley on their farm near Langbank, in south-east Saskatchewan, says a plan by the Canadian Grain Commission (CGC) to move 29 "under performing" wheat varieties into a new (likely lower value) classification taking effect in 2018 may not be the best long-term solution for marketing wheat, but it is necessary under the current system.

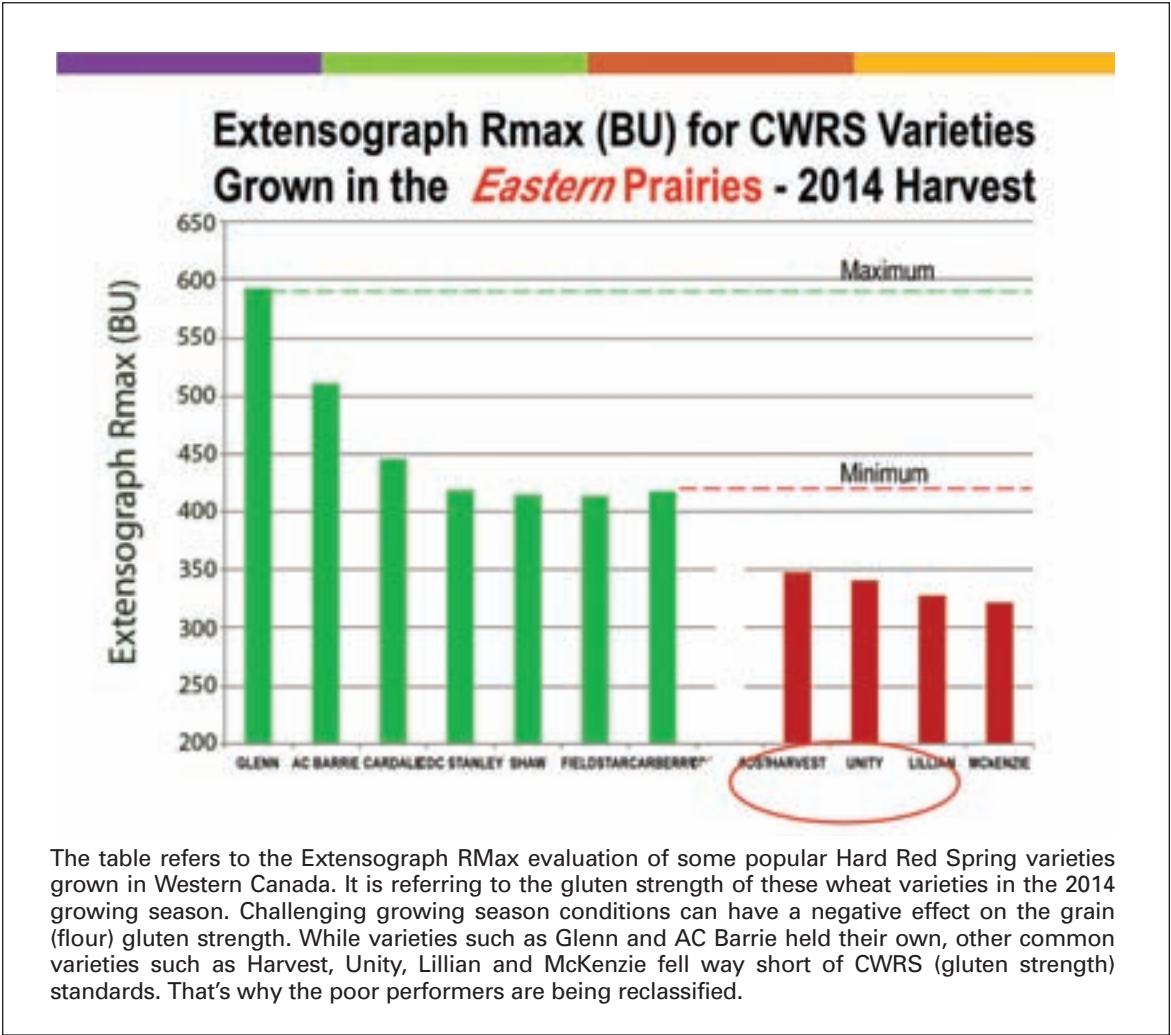
"In principal I support the reclassification of these varieties," says Hansen who is also Saskatchewan vice-president of the Western Canadian Wheat Growers. "I believe there are better ways to sell wheat than the current classification system, but for the time being it makes sense to move these under performing varieties into a new class. It is important that Canadian wheat customers get the quality of wheat they expect."

The 29 varieties (see listing) were initially registered in the Canadian Western Red Spring (CWRS) class, which is generally regarded as top of the line wheat most suitable for bread making. Some of these flagged varieties were marginal in terms of that high quality, particularly during some poor growing seasons and customers were complaining these wheats weren't delivering the consistent quality — the high gluten strength — they were expecting. In the accompanying chart referring to extensograph Rmax (a measure of gluten strength) varieties such as Harvest, Unity, Lillian and McKenzie, for example, in 2014 were well below minimum requirements to qualify as CWRS wheats. After some review, the CGC decided to create a new classification for these and other varieties called the Canadian Northern Hard Red (CNHR) class.

### NOT SUITED FOR BREAD

The reclassification doesn't mean these varieties are bad, says Jim Smolik, assistant chief commissioner with the CGC, it just means their quality limits make them more suitable for other end-use products such as noodles or flat bread, where gluten strength isn't an issue.

"Probably the closest analogy is to the different grades of gasoline," says Smolik. "There is premium gas, mid-grade gas and



The table refers to the Extensograph RMax evaluation of some popular Hard Red Spring varieties grown in Western Canada. It is referring to the gluten strength of these wheat varieties in the 2014 growing season. Challenging growing season conditions can have a negative effect on the grain (flour) gluten strength. While varieties such as Glenn and AC Barrie held their own, other common varieties such as Harvest, Unity, Lillian and McKenzie fell way short of CWRS (gluten strength) standards. That's why the poor performers are being reclassified.

### Background for Modernization Proposal

- Customer concerns related to gluten strength has increased in last few years
- Gluten strength is a function of wheat's glutenin and gliadin proteins and is key to bakery processing, crumb structure and gas retention in a loaf

- Not all Canadian wheat varieties have the same protein components: Quality of protein just as critical as Quantity

If you don't have proper gluten strength and other quality characteristics in your bread flour this is what happens when you bake a loaf a bread. This low-gluten weakness measured with a "falling numbers" test is what has prompted the Canadian Grain Commission to undertake a reclassification of Canadian wheat varieties.

regular gas. They'll all run your car, but the different grades have different components depending on what the customer wants and they have different values. These wheat varieties don't have the quality to keep them in the premium (CWRS) grade so they are being moved into a new mid-grade category. They have qualities that suit a certain number of end-use food products, but they aren't consistent enough to keep them in the higher value class."

Smolik says buyers of Canadian wheat have complained they aren't getting the consistent quality from Canadian wheat they were expecting. The reclassification is necessary to protect Canada's reputation as a marketer

of a range of grains, including high quality wheat. During CGC meetings with customers in key world markets last year, buyers were pleased to hear that Canada is tightening its quality control.

The reclassification process, which has been underway for more than a year, has met with some mixed reaction from the grain industry. Some farmers in particular aren't happy that some of their favoured varieties with good yield and agronomics are being moved into a new class, which is potentially lower value than the CWRS class.

While Smolik says he understands their concerns, he also says there are still plenty of excellent wheat varieties within the CWRS

class, and new varieties are being developed. The CGC extended the implementation of the new class until 2018 to give seed companies, plant breeders and farmers time to adjust their programs in light of the reclassification.

### SELL ACCORDING TO SPEC

Back on her Langbank farm, Margaret Hansen says she would like to see a system where wheat classes are eliminated in favour of marketing wheat (or grains) on the basis of quality and specifications — a system now possible in an open market following the elimination of the Canadian Wheat Board.

"More farmers are moving to this

## Varieties designated for 2018 wheat class

It might take a bit of thought to keep all the old and new classes straight, but here are the wheat varieties scheduled to be moved into a new Canada Northern Hard Red (CNHR) class effective August 1, 2018.

There are 29 long-standing Canadian wheat varieties on the list and of those, 25 were originally registered as hard red spring varieties in the CWRS class. The new CNHR class will also include four Canada Prairie Spring (CPS) varieties formerly in the Canada Prairie Spring Red (CPSR) class.

There will be no change in any class for the 2016 and 2017 growing seasons, but come the spring of 2018 farmers will have to decide whether they will continue to grow these varieties to be listed under the new Canada Northern Hard Red class.

### CANADA WESTERN RED SPRING (CWRS) VARIETIES MOVING TO CANADA NORTHERN HARD RED (CNHR) CLASS

- AC Abbey
- AC Cora
- AC Eatonia
- AC Majestic
- AC Michael
- AC Minto
- Alvena
- Alikat
- CDC Makwa
- CDC Osler
- Columbus
- Conway
- Harvest
- Kane
- Katepwa
- Leader
- Lillian
- McKenzie
- Neepawa
- Park
- Pasqua
- Pembina
- Thatcher
- Unity
- 5603HR

### CANADA PRAIRIE SPRING RED (CPSR) VARIETIES MOVING TO THE CANADA NORTHERN HARD RED (CNHR) CLASS

- AC Foremost
- AC Taber
- Conquer
- Oslo

Lee Hart





# Wheat class changes for 2016

While it is the hard red spring (CWRS) varieties that capture most of the attention as the Canadian Grain Commission (CGC) introduces some new wheat classifications effective in 2018, there are some changes taking place for the 2016 growing season.

Starting this year, effective August 1, 2016, the CGC is changing the name (and moving 22 varieties) of the Canada Western General Purpose (CWGP) that includes many of the feed wheats to a new name — Canada Western Special Purpose (CWSP) class.

Here's the list:

- CANADA WESTERN GENERAL PURPOSE (CWGP) VARIETIES MOVING TO CANADA WESTERN SPECIAL PURPOSE (CWSP) CLASS:**
- AAC Proclaim
  - AAC Innova
  - AAC NRG097
  - Accipiter
  - Broadview
  - CDC Clair
  - CDC Falcon
  - CDC Harrier
  - CDC Kestrel
  - CDC NRG003
  - CDC Primepurple
  - CDC Ptarmigan
  - CDC Raptor
  - Minnedosa
  - NRG010
  - Pasteur
  - Peregrine
  - Pintail
  - SY087
  - Sunrise
  - Swainson
  - WFT 603

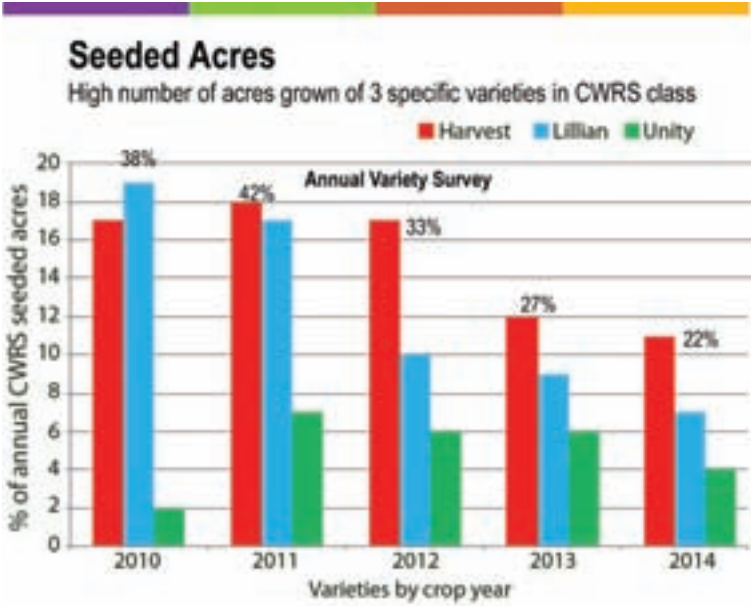
**NORTH DAKOTA HARD REDS**

And if you have had an eye on some promising North Dakota varieties, which are now registered in Canada, those three Hard Red Spring wheats will be moving into the new Canada Northern Hard Red (CNHR) this year.

The varieties, Elgin-ND, Prosper and Faller are described as high yielding, good disease resistant, hard red springs, but they fall short of making the quality standards of Canada Western Red Spring. The three varieties developed in North Dakota have been parked in a temporary Canada Western Interim Wheat (CWIW) class until the CGC decided on permanent name for a new class. The North Dakota varieties will be designated as Canada Northern Hard Red (CNHR) class starting this August.

Twenty-nine other Canadian Hard Red and CPS varieties will move into the CNHR class in 2018.

Lee Hart



While some of the 29 wheat varieties being reclassified in 2018 are old, others are still quite popular primarily because of their agronomic capabilities. Harvest, Lillian and Unity had as much as 42 per cent of the wheat acres in 2011, but that dropped by nearly half in 2014, as new and improved varieties have been registered.

approach where they are selling their grains based on customer specifications," says Hansen. "It is a marketing system we use on our farm." She says determining the class and grade of grain is initially based on a visual inspection, which doesn't tell the story of the grains actual quality. She says she would like to see Canadian grains marketed according to quality and not based on variety or physical appearance.

"The customer provides the quality specifications they are looking for and then the grain is tested and it doesn't matter what variety it is, or what it looks like — if it meets the quality specifications it is sold on that basis.


"We have had situations on our farm, (using fall rye as an example) where we've had a variety that looked good and graded No. 1 but when it was analyzed it just didn't have the quality (a low falling number) that didn't meet customer requirements. And we've had the reverse situation with grain samples that didn't look that great, but they had high quality. So I think we need to get away from a system of arbitrary assessments and sell based on quality specifications. Farmers need to be aware if they have their grain tested to determine quality characteristics, it can give them a great deal of bargaining power."

In the meantime, the reclassification of these former CWRS varieties will take effect August 1, 2018. Farmers delivering grain to buyers will have to specify variety on the declaration form at the elevator, which will then determine the class of the grain.


More details of the reclassification process can be found on the Canadian Grain Commission website at: [www.grainscanada.gc.ca](http://www.grainscanada.gc.ca).

*Lee Hart is a field editor with Grainews based in Calgary. Contact him at 403-592-1964 or by email at [lee@fbcpublishing.com](mailto:lee@fbcpublishing.com).*


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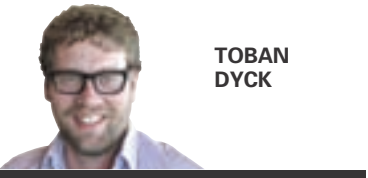
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CAN'T TAKE THE FARM FROM THE BOY

# The wide world of agricultural jobs

At best, non-farmers only have a vague understanding of ag career opportunities



TOBAN DYCK

I was chatting with someone the other day who got visibly excited when I mentioned the variety of soybeans I would be growing this year. I loved that. Her farm grows the same beans, and they've been impressed with the results. This is my life now, I thought, before getting into specifics with this person about yields, seeding dates, and other nerdy things. It was a fantastic conversation, and one that spurred me to reflect on how I wouldn't have

been able to hold my own in such a chat a year or two ago.

Three years ago I was someone who dabbled in agriculture. Now, it excites me, and I do more than dabble. My wife, too. This year, she'll be running a CSA (community supported agriculture) garden, delivering fresh, in-season vegetables to a handful of people. Plus, I'm pretty sure we'll be getting more animals. I heard mention of goats and donkeys the other day. I didn't press for details.

My off-farm life is becoming more ag related. I'm comfortable with that. It makes sense. It was bound to happen. It's become a life I want to enjoy, as well.

The opportunities surrounding the industry are ones I promote

to everyone on the outside who is looking for a career change.

Attending a Manitoba Farm Writers and Broadcasters Association meeting, I heard from ag insiders that in the next few years, there will be tens of thousands of vacancies in the industry, in Canada alone. The biggest challenge companies and farms looking for employees face is getting the word out to qualified candidates.

"Yeah, okay, cool, but I don't really want be a labourer on a farm," is something I hear often, when I've attempted to take the wheel of my friends' careers (something I have no business doing, by the way).

The exact percentage escapes me — perhaps I never knew it

— but only a small amount of the current and projected openings will be on-farm labour jobs. Most of current and anticipated vacancies will be in office towers, research facilities, or posts allowing you to work from home with willingness to travel.

Employers are scrambling, trying to figure out the best place to market these openings. Which industries cultivate skills in people that are transferable to agriculture? More than you'd think, I learned. But it's an interesting question to think about.

The military came up, and if that presenter followed through, there will be marketing campaigns aimed at bringing veterans on board to fill posts. Military

training often involves communications, technology use, and problem solving skills mixed with intense physicality. At first, I found the connection weak. But less so on second thought.

More and more eyes will turn to agriculture over the next decade. Issues involving food, genetics, livestock, and grain farm practices are only growing. These are not just headlines for farmers to click on. They are above-the-fold stories in newspapers. And while it's still a surprise for some to hear that the agriculture industry has a use for skillsets previously limited to urban environments, people are starting to clue in. Most of those who've jumped into ag later in life, working on policy, research or other facets love it. The work is interesting, diverse, and growing. Fast-forward five years and the crystal ball gets murky. I'd guess an increase in vacancies and an increase in interest.

The amount of jobs available is new to most people, insiders and out. Jobs in agriculture means working on a farm. And working on a farm means wading through manure while wearing overalls and chewing on a stock of wheat. Wrong. You know this. You know that farming requires much more than that, and agriculture encompasses an interesting spectrum of jobs.

But there's more going on here. There's more to ag companies and larger farms hoping to attract the attention of candidates who may not necessarily know much about the industry: fresh thinking, the specifics of which I can't properly articulate.

What's at work behind such a lazy phrase as "fresh thinking" is this: there's lots we can learn from how the non-farming, non-agriculture industries of this world function. This phenomenon isn't unique to agriculture. Every sector, every industry benefits from wide-eyed newcomers.

"Some of the best farmers around are the ones who came into it after doing something else." I heard this, and quickly agreed, in part because I came back to the farm after having done something else for a decade and a half. But also because no matter what the industry, myopia is something you have to intentionally rally against. It happens to everyone, and it's a terrible way to live.

This is why I urge my journalist friends to consider agriculture. This is why I urge anyone stuck in a job that no longer seems fulfilling to consider jumping ship to a sector that is growing and making tangible changes to the world we live in.

Toban Dyck is a freelance writer and a new farmer on an old farm. Follow him on Twitter @tobandyck or email tobandyck@gmail.com.

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# Reviewing the transport review

David Emerson's review of the transportation system isn't all great news for farmers



LISA GUENTHER

I think it's fair to say David Emerson's transportation system review was a bit of a let-down for the grain sector. There were a few bright spots in the report. It suggests an infrastructure program to fund capital investments in short-line railways. Producer car shippers should have the same protection as other shippers, the report recommends. It calls for an expansion of the Canadian Transportation Agency's data-collecting ability. Mediation and arbitration related to service level agreements should also be more accessible to shippers, the report states.

Yet at times the reports' authors seem to contradict themselves. "Regulation tends to stifle both technological and service innovations, thus keeping rates higher than necessary," the report's authors state as rationalization for eventually axing the Maximum Revenue Entitlement, on page 161.

## Soft power alone doesn't cut it

Yet, in the very next paragraph, the report starts into level of service obligations, and how grain shippers' needs can be better met under current legislation.

The recommendation to sunset the 160 km interswitching limit also seems strange, combined with the recommendation to phase out the revenue cap. The report outlines a host of concerns from the national railways. American railways might snag Canadian traffic, while Canadian railways can't reciprocate. The regulated interswitching rates "are contrary to market-based pricing." And very few shippers have used the extended interswitching limits so far, the report says.

Assuming that third concern is true, wouldn't it deflate the other two concerns? If it's rarely being used, that means Canadian railways aren't really losing business to the U.S. rail lines, or suffering from reduced rates. So why do we need to sunset that clause?

I'm frankly a little sceptical of the claim that shippers aren't using the expanded interswitching limits. Wade Sobkowich, executive director of the Western Grain Elevator Association, has said at least three grain companies use interswitching regularly. They may stick with the primary carrier, but leveraging interswitching gives them better service or shipping rates, he told Allan Dawson of the Manitoba Co-operator.

If the interswitching rate is unfair to the railways, that can be adjusted. But interswitching is one of the few levers shippers can pull, so why remove it?

In a previous issue, we ran a story based on comments from Dr. James Nolan, a transportation policy specialist with the University of Saskatchewan. Nolan would like to see open access for grain shippers, to create a little competition.

## IT STILL COMES DOWN TO POWER

The grain handling and transportation system is incredibly complex. I'm sure that all kinds of things go wrong that aren't the fault of CN or CP. Crop yields are climbing, but they vary year to year. Yield forecasts could certainly be improved. Most grain is stored on-farm,

meaning everyone has to be on the ball when it's time to start shipping. This puts a lot of pressure on the railways to perform. Or it would, if they had any competition.

Power is at the heart of the issue, and the review does allude to this at times. For example, it recommends giving the Canadian Transportation Agency "enhanced soft power" to resolve disputes around service. It notes that shippers see service failures as an abuse of market power. It holds up the federal government's order-in-council mandating minimum grain volumes as an example of hard power (and criticizes that action as having unintended consequences).

Emerson and his crew seem to see soft power as the best solution to the grain transportation issues. They're not entirely off base. For example, giving the Canadian Transportation Agency more access to data should better equip it to resolve service disputes. And if those disputes can be resolved through mediation instead of arbitration, all the better.

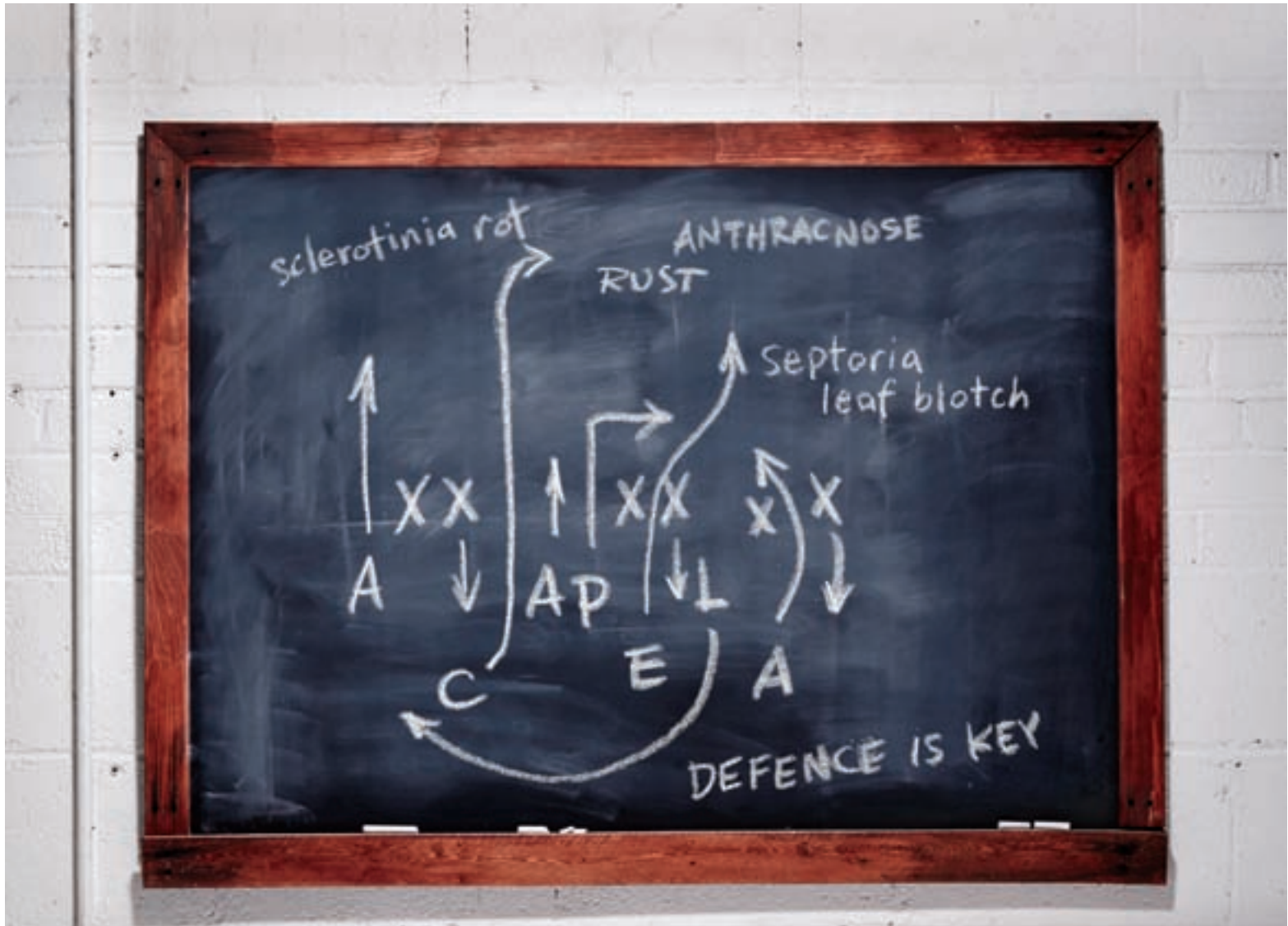
But soft power alone doesn't cut it. Soft power is really about convincing someone to help you or work with you. That doesn't work if the other party doesn't think it's in their interest to do so, and has no incentive to work through it in good faith. What's needed is so-called "smart power," which is

the ability to use either hard or soft power effectively, depending on the situation.

The bottom line is that grain shippers need more levers to pull. That doesn't mean they'll have to use those levers all the time, but having them will help them negotiate better service and rates.

Nothing has been decided yet, of course. Now is the time for farm groups to get federal politicians on side, so they can eventually gain a little leverage in their dealings with the railways. Or at least not lose the few levers they have now.

Lisa Guenther is a field editor with Grainews based at Livelong, Sask. Contact her at Lisa.Guenther@fbcpublishing.com or on Twitter @LtoG.



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# Selling calls like milking a cow

Andy Sirski believes that selling covered calls can bring in a reliable income



ANDY  
SIRSKI

In February, I bought 1,000 shares of Microsoft (MSFT) on a Tuesday and sold calls for the nearby Friday. I netted about \$280 for those three or four days. Those shares were exercised — that is, the buyer of the calls bought the shares at the strike price.

So the next Monday I bought another 1,000 shares and sold calls for the nearby Friday. I had enough U.S. cash in another account to buy another 700 shares so I did that and sold more calls. I figured at \$US51, 1,700 shares was about enough for one stock.

That Friday I bought the calls on the 700 shares back. I cleared about \$400 for the week and sold calls again for the next Friday. The 1,000 shares were exercised at \$51.50 so the next Monday, March 7, I paid \$51.07 per share for 1,000 shares (yes 43 cents per share less than the exercise price) and sold yet more calls for March 11 at strike \$51.50.

Those options close tomorrow, as I write. If they get exercised I will make about \$850 from the call premiums and another \$450 of capital gain. Pretty good for one week.

I have not added up how much those shares of MSFT have brought me but I'm sure it has been several thousand dollars in the last two and a half weeks. I don't know

how long this will last but in the meantime this is like milking a good cow.

MSFT shares are running right along the top of the Relative Strength Index (RSI) chart at around 50 to 51. (RSI measurements range from zero to 100. They are calculated using daily price movements. Stocks with RSI measurements of 50 have neutral market movement.)

Microsoft shares go up to about \$53 and then drop. They've done that at least four times. But the price doesn't drop much below \$50 before the price goes right back up. So I've been selling weekly calls at \$51.50 and \$52. If they get exercised I just buy more shares the following Monday and sell calls again.

A reader on the West Coast told me that selling covered calls has improved his retirement. He said he likes selling covered calls because when he collects the premium he crystallizes gain.

My shares have brought in something close to \$2 per share since January 1 and the share prices have moved sideways. If the shares do break out I likely will hold 500 or 1000 shares just for capital gain for a while.

Microsoft has changed its business model to focus on the cloud. When I turned on a computer in Beijing this winter, it was using Microsoft software — in either Chinese or English. That software pretty well dominates.

## A RETIREMENT ACCOUNT

I turned 71 in January 2015. By the end of that year I had to convert my RRSPs and annuities into some other retirement

account. I chose to set up a self administered RRIF from one of those accounts. I had paid \$48 a year into that annuity for 35 years —roughly \$1,700.

That annuity was worth \$16,000 when I converted it in the fall of 2015 and I set up the RRIF at TD Waterhouse. That account will now pay me about \$76 a month for a long time. I bought 400 shares of Concordia (CXR.TO) with that account and sold a call for April strike price \$40 and collected \$1,165. That means the premium for the two months paid me more than that account will pay out in a year at that \$76 a month.

## GOLD AND SILVER

In the past gold and silver prices have dropped in price going towards June. I don't own any gold and silver stocks except Sandstorm (SSL). Come the bottom, after June I expect to buy shares and my choices could be Silver Wheaton (SLW), Barrick Gold (ABX) and there are others. I like ABX because the company has already paid down \$3 billion of debt and is on record that it should be able to pay down another \$2 billion this year.

As had 2,700 shares of SSL before leaving for a vacation at the end of January. I had a chance to buy more shares at \$2.97 but did not get around to it. While we were away the price went to almost \$4. I sold the 2,700 shares when we got home and cleared about 15 per cent in six months.

I sold a naked put on 2,000 shares with a strike price of \$4 for March and cleared \$0.25 per share — \$500 for six weeks or so. Selling naked puts, that is, selling puts on a stock when you don't own the underlying shares, has risks and is not for everybody. If the shares trade below \$4, on expiration day I will have to buy the 2,000 shares at a paper cost of about \$3.75 per share. If the price stays above \$4 I can keep the \$500 with no obligations. I would sell a naked put on another 2,000 or 3,000 shares again.

Selling puts is risky but if a person knows what he or she is doing this is a good way to pick up a few hundred bucks a month. Keep in mind, when you sell naked puts, you don't own the shares but you do carry risk. You need to be ready to own the shares you sell the puts on.

A friend of mine from university days has figured this strategy out. He's willing to take the risk so he sells naked puts on 200 shares or so of higher priced stocks. He sells the put with a strike price about 10 per cent below the price of the day to reduce the odds of having to buy the shares. I'm not quite so brave so I stick to this \$4 stock and am quite happy to take in \$200 to \$500 a month. Again this strategy is not for everybody and your trading account needs special approval.

*Andy Sirski is mostly retired. He travels a bit with his wife, plays with his granddaughters, has a small tax business and manages his family's investments. Andy also publishes an electronic newsletter called StocksTalk where he tells all. Read it free for a month by sending an email to [sirski@mymtx.net](mailto:sirski@mymtx.net).*

## Off-farm in china

You might have noticed something a little different about my articles the past couple of months. Here's why. My wife Pat and I left for China on January 28. We were gone for 23 days. I sold most of our stocks before we left.

We were in China and Hong Kong for 16 days. We came back on a Saturday night and by Tuesday I was back in the market.

We have a son teaching English in Beijing. My wife decided she wanted to go to China to visit him. I had a hernia forming but was not about to let her go without me. She did all the grunt work, like arranging visas, figuring out which shots we needed and booking a tour through the Manitoba Motor League. They booked the airplane tickets, hotels and so on.

On January 28 we flew to Vancouver, stayed over for a few hours then boarded a Boeing 777 Air Canada plane for a 13 hour flight to Beijing. Two meals, a little bit of wine and a couple naps and we were in China.

The tour provided us with an English speaking tour guide in every city. The guide made sure we got to our hotel and checked in. The tour guide was to take us to some highlights in each city but we were on our own about half of the time.

In Beijing we had our son Steven with us. He has a Grade

3 knowledge of spoken Chinese and he also had a friend who offered to drive us around in his car and show us the city.

The hotel served a great looking buffet the first night so we ate there. I took some of each dish, whether the food had eyes or legs or fuzzy parts. It was good. The meal cost about \$50 each but we sure ate well.

The hotel was great. We had a bed about 8x8 feet, a 50-inch TV and a computer. The room was automated. When we left the room we took out a card and a curtain came down and covered the wide window. When we came into the room and put that card into the slot that curtain went up.

The room also has a glass wall between the room and the bathroom. When we touched a switch a curtain covered the glass. The room had a bidet so a person could have a bum wash if he or she wished. Warm water washed the parts and warm air dried the parts. Sure beat the old time outhouse.

We had a wonderful buffet for breakfast. There was both Chinese and Western food so I had an omelet, noodle soup, stir fried veggies, at least three types of scrambled eggs, pancakes, toast, rice porridge and more. All included. This meant I did not have to eat all day. More next time.

Andy Sirski



PHOTOS: COURTESY ANDY SIRSKI



**Top:** Andy and his son Steven Sirski, getting ready to enjoy the food from the Chinese buffet at the New Otani Chang Fu Gong Hotel on Andy's first night in Beijing.

**Left:** The varied breakfast buffet was a highlight of the trip. These cooks made noodle soup and a flat omelet on demand.





JAY  
PETERSON

One are the days of carrying around pocketbooks from the elevator with the conversion charts in the back of them for different crop weights and tonnages. Our smartphones have replaced almost everything to do with calculators or daily calculations. That’s why I was pleased to see the Agfinity Grain Calculator — an app that will do different weight and dollar calculations for almost all the most common crops grown on the Prairies and can be downloaded on either an iPhone or Ipad.

Apps like this come in particularly handy in an industry like agriculture where most people have their own preferential unit for weight or price, and it usually is not the same as yours. Want to connect a per tonne canola price to a per bushel price? Need to know how many bushels of oats are in that load? This is the app for you.

The Agfinity calculator is set up as a standard calculator with a few more selections for crops and your desired conversions. At the top of the calculator you will notice a list of crops that you can use for conversion. The only common crop missing from this list is lentils. However there are quite a few other crops that are close to the same bushel weight as lentils so you have your choice there depending on which you feel is the closest.

The only other difference from a normal calculator is the selection bar for your weights or price figures. This bar is located just above the number pad and is characterized by orange selections for weights or purple for prices. A purple dollar sign button it the easiest way to switch between the orange weight selections and the purple currency buttons. The rest of the calculator works in a regular fashion if you need to do a little math to find out the exact number you are looking to convert.

Using the Agfinity calculator is not a whole lot more complicated than just finding where these selections are. There may be more than one way to do a conversion but here is the method I have found to work the best for me: First make sure you have selected between weights or prices. This can keep the conversion from acciden-

tally switching into loads or dollars that you may not necessarily want.

After this I type in the number or do the math needed to get to the number that is needed for conversion. Selecting the crop from the list above the number pad should be the next thing you will do. This is really because as soon as you start tapping the conversion buttons, the calculator will convert units between your selections and this leaves room for error. Notice also that once you make a selection, the crop or unit then follows the number in the very top panel of your screen.

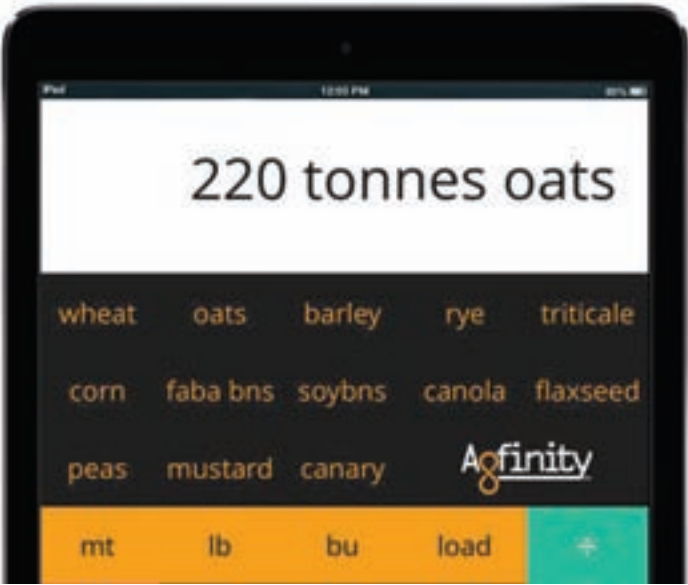
Once you select your crop, selecting the unit the conversion

is happening “from.” Tapping the unit that the conversion is going “to” will complete the process. If you would like to go from bushels to pounds to metric tonnes, pressing the bu button, then the lb and finally the mt to go through this conversion allowing you to figure out all the weights for the current number. The process is exactly the same for the dollar amounts as well letting allowing conversion between \$/mt, \$/lb. and \$/bu.

All in all this is a great little app that I personally pull up in place of any other calculator on my phone.

Price: Free.

Jay Peterson farms near Frontier, Sask.



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# Ketchup is not just a condiment

Lee Hart’s saucy commentary on Canada’s recent ketchup brand wars

BY LEE HART

I do want to tell you about the immeasurable grief and misery our tiny band of adventurers endured last month in setting up the upper camp before our final assault on Everest, but to more important things first — what are your thoughts on this ketchup war in Canada? Are you in the French’s or Heinz ketchup camp?

That’s a tough call. I have both brands in my cupboard. I just haven’t put them to the ultimate test.

The ketchup war seems to have attracted a lot of attention as the public takes sides on which company is the most Canadian — although neither of them are. I’m not sure if either of these companies is pro or con the Canadian flag, it might be just about money. Heinz in 2013 closed its Leamington, Ontario plant, putting some 750 people out of work, after more than 100 years of operation and centered its ketchup making in the U.S. At the time they were the bad guys.

But then, as they wrapped up the Leamington operation, they sold that plant to Highbury Canco, a food processing firm. Heinz doesn’t make ketchup in Canada, but the Pittsburgh-based food giant does have contracts with the new owners of the plant to supply it with tomato juice and other products. Highbury Canco is still processing Canadian tomatoes and the Heinz contracts account for 350 jobs at the plant.

Now in 2016, along comes New Jersey-based French’s, which has always been known for its mustard, and it introduces a ketchup line. French’s doesn’t make retail ketchup in Canada either. But French’s does have contracts with the same Leamington-based food processor, Highbury Canco. French’s buys tomato paste from Highbury Canco — some of it is shipped to Toronto where French’s makes its bulk restaurant ketchup, and the rest is shipped to Ohio where they make bottled consumer ketchup.

Now with the French’s tomato paste contract Highbury Canco is planning to contract tomato production from 30 more Ontario farms.

So it is really hard to determine if there is a good or bad guy in this whole story. Between the three companies it sounds like Leamington workers and tomato farmers are bouncing back pretty good after the initial Heinz plant closure.

To add to this soap opera of who is making tomato products for who, Canadian-owned Loblaw’s apparently quietly

decided not to carry the French’s ketchup brand on its maple leaf-draped shelves and consumers fired back in protest. So now French’s is back on Superstore, No Frills and other Loblaw chain shelves.

This is more exciting than Downton Abbey. The take-home message here obviously “don’t mess with ketchup.”

The final test of where my ketchup allegiance lies will rest on the day I pop that seal on the French’s ketchup and do a taste test between it and Heinz. I will make sure I have Canadian grown McCain’s french fries that day. I assume McCain’s fries still come from New Brunswick or is it Taber, Alberta. It could be McCains India for all I know. If they happen to be from the U.K. McCains plant that would be okay too. I understand McCains grows potatoes or has their plant on a farm where my grandfather was raised at Whittlesey, England. That would almost be like fries from within the family.

**A COUPLE OF UPDATES**

After a recent column on what I call the newer “spindle” type apple tree, I had an email from George McKenzie of Brownvale in the north Peace River region writing about his cousin Lavern Hawken, who was at one time the largest Massey Harris dealer in Ontario. Hawken also grew apples — he had a 30 acre orchard of dwarf apple trees.

After Hawken retired, he moved to Nanaimo on Vancouver Island, made some money playing the stock market, and kept playing around with apples. At one time he grew as many as 150 different varieties of apples. He managed his own cross breeding program, and made a \$1 million donation to an apple orchard in Nanaimo to preserve and protect some of the older heirloom varieties for future breeding programs. He died in 2015 at the age of 92. George has three 70-year-old thumb-size apple trees at his place that still produce great apples. He says everyone should own an apple tree.

And on the recent honey bee column from one specialist saying it might be disease or other environmental factors causing decline in honey bee populations, I had one call from a bee producer in Pierson, Manitoba who said he had been keeping bees for 32 years and the only time he had trouble with bee or hive survival the problem was traced back to pesticides. So that’s what 32 years of experience had to say.

*Lee Hart is a field editor with Grainews based in Calgary. Contact him at 403-592-1964 or by email at lee@fbcpublishing.com.*



It is hard to determine if there is a good or bad guy in this whole story. The end of the ketchup wars will come down to the taste test.

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# Weeds, disease and insects in mustard

In the final part of a 4-part series on mustard agronomy, Ross McKenzie turns to pests



ROSS  
MCKENZIE

**W**eed control is generally my greatest concern when growing mustard. Weed competition can greatly reduce mustard yields by competing for available light, nutrients and moisture. Although mustard seedlings are not very competitive with weeds, there are ways that growers can reduce the early effects of weeds:

- burndown of weeds in fall and/or early spring before seeding;
- direct seeding as early as possible into a clean field to establish mustard as quickly as possible in the spring;
- seed at an optimum rate

with high quality seed to maximize competition with weeds;

- seed as shallow as possible to encourage rapid, uniform emergence; and,
- spray as early as possible after crop establishment to remove weeds as quickly as possible to minimize competition.

Mustard should not be grown on fields with significant amounts of weeds that cannot be controlled chemically. A number of herbicides are registered for weed control in mustard. Unfortunately, there are no registered herbicides available for in-crop control of a number of weeds. Know the weeds present in your fields and check your provincial crop protection guides. *Only use registered chemicals on mustard. Using unregistered products could result in legal repercussions.*

Control of perennial weeds

such as Canada thistle or dandelion should occur in the previous crop year. In the fall, products such as glyphosate can be used while weeds are still actively growing. Spring treatment to control perennial weeds before planting is usually less practical, but a spring burndown of winter annuals and annuals in fields that will be direct seeded is important to optimize weed control.

For in-crop control, it is important to note that the herbicide ethalfluralin (e.g. Edge) is only registered for use with yellow mustard and that ethametsulfuron methyl (e.g. Muster) is only registered for use with brown and oriental mustard.

Weed seeds that are difficult to remove from mustard seed, can cause high losses during seed cleaning and will lower market grades. For example, cow cockle, cleavers, wild mustard, wild buckwheat and volunteer canola are extremely difficult to

remove from harvested mustard. Land used for mustard production should be free from these problem weeds. Ensuring optimum weed control in mustard is important to achieve the highest market grade, lowest dockage and highest net financial return.

### DISEASE MANAGEMENT

Using proper crop rotations and seed treatments is important in disease management. Weeds in the crucifer family can serve as hosts of mustard diseases and must be kept in control.

Seedling diseases such as damping off or root rot are caused by soil-borne fungi. Diseases such as alternaria black spot are caused by seed and soil-borne fungi. To minimize potential seedling disease problems, seed early and no deeper than one inch to assist with rapid germination and emergence. Use a registered seed treatment to minimize seedling diseases.

County of Newall in the Brooks area. To date, clubroot has not been a problem in mustard growing regions in the southern prairies.

### INSECT PESTS

Mustard growers should closely monitor fields to detect insect problems that could affect yield. The more common insect pests of mustard include flea beetle, cutworm, grasshopper, diamond back moth, armyworm and cabbage seedpod weevil.

Yellow mustard is immune to the cabbage seedpod weevil due to hairy pods and has some tolerance to flea beetles; oriental and brown mustards, are more susceptible to insect pests.

Mustard should be closely monitored for cutworm feeding at germination and emergence. Insecticide application may be necessary if significant feeding damage occurs.

Heavy feeding of flea beetles at the seedling stage can cause serious damage particularly to the Brassica mustards. Damaged plants may die or suffer reduction in vigour, particularly in warm, dry conditions. Hot weather can result in heavier feeding, while cool or wet conditions will slow flea beetle feeding. Injured plants may wilt and die during hot, dry weather, which can result in moderate to severe yield losses. The use of a registered seed treatment that contains an insecticide to control flea beetles on seedling mustard is a wise practice for oriental and brown mustard. If seedling damage by flea beetles exceeds 40 to 50 per cent at the cotyledon stage, then a foliar insecticide should be applied. Serious damage to mustard does not usually occur once the crop develops beyond the seedling stage since vigorous plants can outgrow beetle damage.

When mustard enters the early flower stage, growers should monitor oriental and brown mustard for cabbage seedpod weevils in Alberta. Saskatchewan mustard growers should be aware this pest is moving eastward into Saskatchewan. Yellow mustard is not susceptible and does not need monitoring for this pest. A nominal economic threshold of four cabbage seedpod weevils per sweep at the early flower stage can be used to make control decisions.

Diamond back moth feeding on mustard can be serious near the end of flowering and early pod formation. Control is recommended when numbers exceed an economic threshold of 30 larvae/square foot. Bertha armyworms will feed on mustard and control may be necessary when numbers exceed the economic threshold of three larvae/square foot.

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## Monitor fields to detect insect problems

The risk for sclerotinia can be assessed by monitoring environmental conditions up to the time of flowering. Warm dry weather during flowering will minimize risk while cooler wet weather will increase disease risk. Good cultural and agronomic practices are the best measures for disease control.

Some other mustard diseases that are potentially of concern:

*White rust/staghead* is a fungal disease; pods develop into swollen spiny stagheads that are initially green and turn brown to white. Most yellow mustard varieties have good resistance to staghead, and recent brown and oriental varieties have improved resistance.

*Alternaria black spot* is a fungal disease that cause abortion of florets, premature ripening, and pod splitting. Normally this disease is low in severity except in cooler wet, late summers, which are not common in mustard growing areas.

*Clubroot* is a soil-borne disease that causes club-shaped root galls on the roots of mustard. It is a problem with canola in the central prairies and has been found in canola in the

As I mentioned at the start of this series of articles, I am a big fan of mustard in a crop rotation in the drier regions of the southern prairies. When well managed, mustard yield potential is good and it can be a very profitable crop to grow on your farm.

*Ross H. McKenzie, PhD, P. Ag., is a former agronomy research scientist. He conducted soil, crop and irrigation research with Alberta Agriculture for 38 years. He has also been an adjunct professor at the University of Lethbridge since 1993.*



# Investments for long-term growth

The global slowdown is serious and widespread. Risk aversion is the new investment trend

BY ANDREW ALLENTUCK

Stock markets around the world have been tumbling almost in unison. The customary instruction from financial planners — stay invested and wait for the inevitable recovery — is tough to accept when, every day seemingly without let up, stock averages lose several per cent.

The heartache will stop and the tumble from grace will end in time. After all, the world recovered from the Great Depression of 1929 to 1939, the Great Recession of 2008 to 2009, the dot com collapse in 2000, the tragedy of Sept. 11, 2001 and numerous Canadian corporate collapses such as the

Bre-X fraud and the implosion of Nortel Networks. But this time is different. Recovery will take a change in major forces tearing down years of growth of the biggest corporations in Canada, the U.S. and Europe.

Here is a list of what ails capital markets:

1. Slowdown in global growth to little more than one per cent of global GDP compared to the 2010 to 2013 rate of growth of 2.5 to 3.0 per cent with concurrent rise in market volatility.

2. Slowdown of China's economy to a growth rate of six per cent of GDP per year, down from eight per cent two years ago with shutdown of infrastructure construction.

3. Collapsing commodity prices from reduced construction in China, reduced demand for Canadian chemical fertilizers, collapsed demand for Canadian metallurgical coal

4. Downward spiral of energy prices, a good thing for energy importers but a bad thing for energy exporters like Canada.

### GLOBAL SLOWDOWN

How serious and widespread the global slowdown is can be seen in major world stock market averages. Between Dec. 31, 2014, and Jan. 31, 2016, the world's major global stock averages have tumbled as follows in U.S. dollar terms: 8.3 per cent for the Dow

Jones Industrial Average, 20.3 per cent for the Chinese SSEA, 16.8 per cent for the British FTSE 100, and 28.0 per cent for Canada's S&P/TSX. Some emerging markets fared worse than Canada. South Africa's JSE average was down 30.4 per cent, Brazil's Bovespa was down 46.6 per cent and Egypt's Case 30 index was down 37.9 per cent.

Look at those numbers: what they say is that Canada's stocks are now trading like those of emerging markets. Indeed, the correlation of share prices in the widely used Morgan Stanley Capital International Emerging Markets Index and the S&P/TSX index since 2010 is almost perfect.

What these numbers do not reveal is where money is going.

After all, with so much stock being sold around the world, there has to be a pile of cash somewhere. Well, not exactly. Money that has left stocks has found its way to the bond market where buying of the most liquid asset in the world, the 10-year U.S. Treasury bond — and its almost-as-liquid counterparts for one, two, five and 30 years — has had dramatic results for yields. Bond yields move opposite to bond prices (as you pay more for the bond, your percentage return declines). Yields reveal what people are getting for their money. The table shows how low returns have fallen.

These incredibly low returns means that a large investor, say a pension fund, can buy and hold a U.S. 10-year Treasury bond and get 1.75 per cent a year. Inflation is higher than these returns in all markets, guaranteeing a loss of purchasing power even before tax. Worse, some yields are negative. If you want to buy a Swiss franc denominated bond from the Swiss National Bank, you will be charged three-tenths of one per cent per year for your trouble. However, appreciation of the yen and the Swiss franc and other currencies with low and negative yields have made up for the nominal losses these bonds offer.

**BANK STOCKS AND BONDS**

The flip side of the hot performance of national bonds is what is happening to bank stocks and bank bonds. Among the worst hit are major banks in Europe and the U.S. Germany's biggest bank, Deutsche Bank AG, has seen its

BY JONNY HAWKINS  
**Country Chuckles**



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shares flop 50 per cent in the last year. It is the most visible casualty, but for Europe as a whole, bank shares are bleeding badly. Europe's Stoxx 600 Bank Index has lost 28 per cent since the start of 2016. Why? Because of bad loans. Specialist traders in bank stocks reporting on Feb. 1, 2016 said that 16.7 per cent of Italian bank loans are non-performing (the borrowers are not paying on time). For Europe as a whole, almost six per cent of bank loans by value are in the red.

Banks in Canada, the U.S. and the rest of the world are taking it on the chin. The reasons are not only loan losses, still trivial in most of Canada except Alberta, but, as well, the traditional business of commercial lending. Banks borrow short through savings accounts held in the branches and via the term deposits they sell and lend long for mortgages, big commercial loans and term loans for cars and industrial equipment, business leases and so on. With cen-

tral banks pushing down interest rates, the difference between borrowing short and lending long gets smaller. The banks make less money on loans. At the same time, big banks' investment banking business shrinks. Who wants to buy new shares on businesses in a crummy economy, after all?

RISK AVERSION

The new fashion in investing is risk aversion. Investors buy negative yield or low yield government bonds, preferring to take a small loss or make virtually nothing rather than take a big loss on stocks. Banks own bonds, especially the bottom of the barrel risky bonds called Contingent Convertibles or Canada's long winded name, Non-Viable Contingent Capital, that convert to stock at the worse possible moment when banks run out of money to lend or cannot pay depositors, are collapsing in price as holders sell before their issuers run into trouble.

What to do? Friends, the sky is not falling. Shares of Canadian chartered banks have tumbled. Royal Bank is off 18 per cent from its 2015 highs. CIBC is down about 15 per cent from its 12-month high. They pay dividends and did not cut them in 2008. Excellent Canadian utilities like Fortis Inc. pay four per cent and change. BCE Inc. is pretty steady. Its shares are off just five per cent and pay 4.5 per cent as a dividend. All these companies have paid steadily and raised their dividends for many years.

It is a question of taking reasonable risks. Stock dividends are not guaranteed. Bond holders get first crack at the kitty and can put a company into bankruptcy if they are not paid. But bank bonds are being clobbered in the rush for safety and when times get better and interest rates rise, bank bonds with today's low rates will fall further.

Best bet: buy solid dividend stocks and take advantage of

WHAT 10-YEAR GOVERNMENT BONDS PAY	
COUNTRY	YIELD
United States Treasury	1.75%
Government of Canada	10.4%
German Bund	0.26%
U.K. Gilts	1.41%
Switzerland	-0.30%
Bank of Japan	-0.07

market fear. Dividends on the so-called "dividend aristocrats" are likely to rise as business conditions improve. And they will. Dividends pay you to wait. Moreover, research shows that dividends constitute 70 per cent of total stock returns.

Eventually, China will expand to use up its vastly overbuilt infrastructure like entire new cities with no one to live in them, international airports with no traffic, highways to nowhere, etc. Commodities move in long cycles. The global oil glut will disappear. After all, when

the price of gas tumbles, people remember the slogan of the radical sixties, "burn, baby, burn!"

You can be despondent about your portfolio or an opportunist. Consult your financial advisor, move slowly — it's dangerous trying to catch a falling knife, after all. But don't think the world is ending. We've been through much worse than this. Perspective is precious; keep it.

*Andrew Allentuck is author of "When Can I Retire? Planning Your Financial Future After Work" (Penguin, 2011).*

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# Climate and weather cycles

There have always been climate cycles. The question is “Where are we now?”



LES  
HENRY

One of the biggest topics for discussion in recent years is climate change and how we have to shut down the world as we know it to keep alive in the future. On the CO<sub>2</sub> and fossil fuel issue Canada is a rounding error. It is all about China. And China must change. Not so much to clean up the planet but to clean up the air so they can breathe. We are fortunate to have a “Chinese Hotel” as neighbours near our home in Saskatoon. As newcomers arrive they spend some time here while finding a more permanent abode. Some speak good English and we have become good friends. They are great people and we are delighted to have them here. Their biggest response when they first arrive is “We can see the sun and breathe the air.” Changes will happen in China for that reason alone.

### CLIMATE AND WEATHER

Weather is the day-to-day, month-to-month and year-to-year change in the temperature, precipitation, wind and humidity that we experience. Few segments of society are as affected by and in tune with weather as farmers. It is literally what we do. Weather cycles come and go from hot to cold and dry to wet. We adapt to the changes to survive. Climate is the longer term-change that the earth undergoes. Climate folks use a 30-year average as a starting point in looking at climate

changes. Too many of the modern news reports talk about day-to-day weather and put it down to climate change. Our warm winter 2015-16 is simply one of many in my 75 years on this planet.

### CLIMATE CYCLES: THE BIG PICTURE

Our planet is about four billion years old. The climate has been changing for all of those four billion years. The most recent change is the coming and going of ice ages. In the Canadian Prairies we have had at least four major ice ages producing glaciers that wiped the slate clean. The last ice age faded about 10,000 years ago so we are blessed with youthful soils developed since then. So, in the grand scheme of things we are still recovering from the last major ice age. A mile or so of ice melted as a result of a major long-term climate change event- and not a fossil fuel in site. Hmmm. There are many textbooks written on the topic of “causes” but there is still much room for debate and uncertainty.

### CLIMATE CYCLES: MORE RECENT EXAMPLES

At the University of Saskatchewan library this winter I stumbled on an interesting book: *Climate and Culture Change in North America AD 900 - 1600*, written by W.C. Foster in 2012. He started with a graph that showed warm and cold periods from 4000 BC to the present. From around 400 BC to 400 AD was the Roman Warm period. And then it got cold. Apparently the decline of the Roman Empire was not all a political problem. The years from 400 to 900 AD were cold, the years

from 900 to 1300 were warm. The Little Ice Age was from around 1300 to 1800. Since then we are in a warming period, thank goodness. As W. C. Foster traced the effects of the climate changes on North American Cultures from 900 -1600 AD, his conclusion was clear. Warm is good; cold is bad. Native North Americans in the current U.S. corn Belt had a flourishing agricultural society based on corn, beans and squash. The onset of cold (Little Ice Age) devastated that society.

### NOW FOR SOME WEATHER CYCLES

**Temperature:** As we look at the time since we broke the sod around 1900 and have built a thriving ag industry we see the following temperature trends (10 year averages). A gradual warming from ~1895 to 1940 and whip saw warming/ cooling trends through the 50s to 70s. From 1980 to ~1995 was a major warming. But the current warming trend ended about the turn of the century. I used data from Swift Current for the whole period and had data from Swift Current, North Battleford, Regina and Prince Albert for the period up to 1965. The trends were the same for all stations although absolute values were different. **Rainfall cycles:** Rainfall cycles are harder to pin down. Snow is such a big issue for agriculture and the measurements are shaky at best. What I have stumbled on is long-term groundwater observation wells. In Saskatchewan that work was started by Bill Meneley (1933 - 2000) at the Saskatchewan Research Council. Those wells are now monitored by

our Saskatchewan Water Security Agency in Moose Jaw (To find more information, at [www.wsask.ca](http://www.wsask.ca) click on “water info,” then “ground water,” then “observation well network.”) One of the charts on the Water Security Agency’s website is shown here. This one shows the record for an observation well about 10 km northeast of Melfort, Sask. The story goes like this: From 1967 to 1972 there was not much change, the water level was slightly up. The huge snowmelt of 1974-75 brought a sharp rise. From 1975 to 2005 was a general drop, ie. the 30-year cycle. (We often hear climate folks talk about 30 year cycles.)

It is interesting to see the upward blips in 1985 and 1995. Perhaps that is the 11-year cycle we hear about. 2005 was the bottom for the record period. And, the dry cycle ended with the huge snow dump in 2005. It has been mostly onward and upward (with a blip down ~2010) but the last few years have bounced up and down. I interpret that as the aquifer reaching a new equilibrium point between recharge and discharge. Not all observation wells will act as surrogates for rain/snow but several do. If you want to look for yourself check out the website. So, there you have it — another bit of data and my interpretation in the huge weather/climate file. *J.L.(Les) Henry is a former professor and extension specialist at the University of Saskatchewan. He farms at Dundurn, Sask. He recently finished a second printing of “Henry’s Handbook of Soil and Water,” a book that mixes the basics and practical aspects of soil, fertilizer and farming. Les will cover the shipping and GST for “Grainews” readers. Simply send a cheque for \$50 to Henry Perspectives, 143 Tucker Cres, Saskatoon, Sask., S7H 3H7, and he will dispatch a signed book.*

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WATER LEVEL CHANGES IN A SHALLOW (35 FOOT) OBSERVATION WELL NEAR MELFORT, SASK. 1967 - 2016

OBSERVATION WELL: MELFORT  
LAND LOCATION: NE68-07-46-17-W2

HYDROGRAPH OF MEDIAN MONTHLY WATER LEVELS  
WATER SECURITY AGENCY

DATUM: 451.104 M  
DEPTH: 10.64 M

WATER LEVEL ELEVATION (M) ABOVE SEA LEVEL

Source: Saskatchewan Water Security Agency website





# A six-month marketing check in

Looking back at recent market movements, what should you have done?



BRIAN WITTAL

Looking back over the last six months, how did you do from a marketing perspective?

The fastest way to assess this is to look at a couple of commodity price charts.

You can find these charts and more online for free at [www.tradingcharts.com](http://www.tradingcharts.com).

## WHEAT PRICE

First, let's look at May Minneapolis wheat futures. The chart shows a pretty steady downward trend from October (\$5.65/bu.) until the end of February (\$4.85/bu.) where it seems like it has possibly found a bottom and is trying to work its way back up slowly.

My questions are: What was happening back in October that pushed the futures lower? Did you react accordingly at that time and sell some grain?

Heading into the summer of 2015, world wheat stocks were near historically high levels. Moisture across the Prairies had

been sparse over the summer so yields weren't expected to be stellar. The harvest in Western Canada was just underway and then we had some rain delays. When harvest commenced it soon became obvious that yields were going to be better than first thought. In October/November the U.S. winter wheat harvest produced decent yields as well and the spring wheat crop looked good so futures started to fall on oversupply pressures.

## THE CANADIAN DOLLAR

In Canada our dollar was heading into a free fall from \$0.78 in October down to \$0.69 by January. This fall in the dollar translated into some very favourable basis levels for wheat at local elevators. Grain companies were including their currency conversion in the basis; as the dollar kept falling the basis kept getting better. I believe that these historical basis prices may have distracted some producers from the reality that the futures were in a major downward trend, but they didn't pay enough attention to the futures charts.

Many decided to wait and see how high the basis would go before deciding to price their commodities. The big problem is the Canadian dollar and U.S. wheat

futures have very little in correlation with one another — these commodities are influenced by different forces.

Since January we've seen a rebound in the dollar back up to the \$0.76 range while wheat futures have continued to slide lower. Now we are seeing the great basis levels disappear as the dollar climbs high and wheat futures are still falling. Producers who didn't price earlier are being hit with a double whammy of low futures and widening basis levels.

In the past couple of weeks, reports of seeding delays, floods and winter kill in wheat crops in other parts of the world have grabbed the market's attention. Wheat futures seem to have found some life once again, but for how long? Is this just short-term market noise or will it turn into a rebound trend?

If you know your cost of production and break even numbers and have a marketing plan in place, when prices are profitable — as they were back in October/November — you should price a good portion of your wheat based on current market intelligence and dynamics. You could have locked in the futures only, if you felt the basis was going to continue to improve, but no one knew how low oil or the dollar

were going to go so again it would have been a gamble. However, if you had at least locked in the futures, you would have protected that portion of your price from the downtrend that happened as was expected based on supply/demand fundamentals.

Soybeans and canola futures tell different stories to start, but there is still a very predictable outcome that could be expected if you watched the futures and the Canadian dollar. The only mystery was when would the dollar stop going lower and start to rebound? And, how fast would it rebound?

Early in October soybean futures hit a high and started on a typical three-step downtrend that continued until the end of November. This downtrend was followed by a rebound inspired by potential South American production concerns. These problems didn't materialize so soybean futures fell lower and then traded in a sideways pattern until March.

From October to mid-January, canola futures held to a sideways to slightly upward trend. This was due mainly to the falling dollar, which helped keep canola values strong compared to soybeans. When the Canadian dollar found bottom and proceeded to jump back up fairly quickly, it

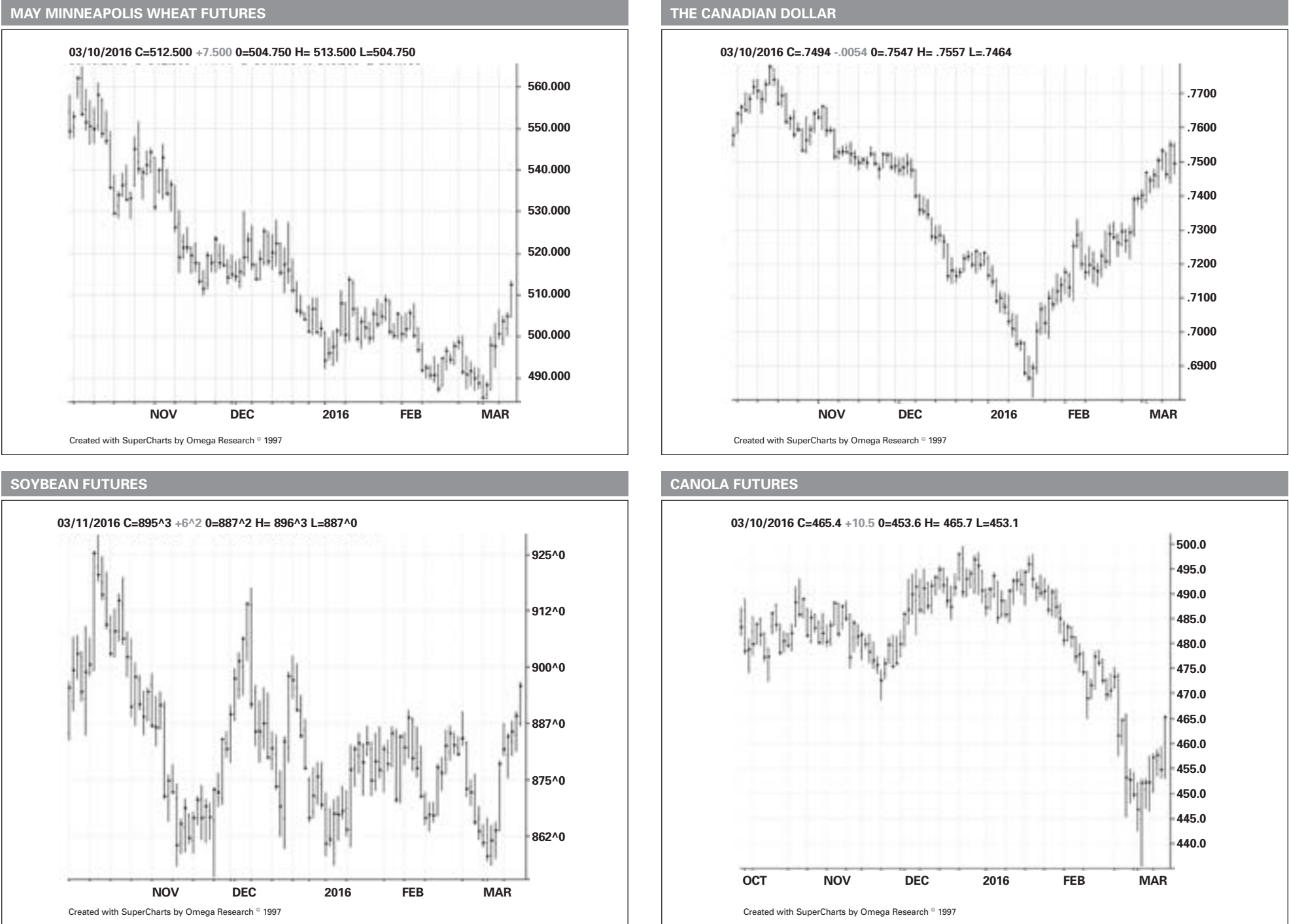
caused canola futures to take a fairly dramatic drop of over \$50/tonne (\$1.13/bushel) in less than two months.

Back in October/November we knew that the soybean crop and canola production was better than expected so hoping for prices to go much higher wasn't what I would call a very good bet. So again, why not price a good portion of your production at prices that were above \$11/bu. at the time? Especially when yields were above average? You would be making very good profits per acre at those prices.

Market noise can be an easy distraction that can keep you from making sound marketing decisions based on profitability on your farm. Hoping for the "what if" scenario and then missing the opportunity to lock in profits can be a costly mistake.

Take profits when you can. If you want to play the markets, use paper to take a position with futures or options contracts. That way you won't miss locking in a profit, or the potential for further gains in the futures. You get to deliver your grain and get the cash to pay the bills.

*Brian Wittal has 30 years of grain industry experience, and currently offers market planning and marketing advice to farmers through his company Pro Com Marketing Ltd. ([www.procommarketingltd.com](http://www.procommarketingltd.com)).*





NEW EQUIPMENT



John Deere's new small-frame G Series skid steer loaders offer new features and span the 51 to 65 horsepower range.

PHOTO: JOHN DEERE

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New skid steers from John Deere

BY SCOTT GARVEY

According to John Deere, its new, small-frame G Series skid steer loaders were “several years in the making and designed with customer feedback.” Introduced in early February, the one-tracked and four-wheeled models were built to appeal to customers in several different industry segments, including agriculture.

The series includes three vertical lift and two radial lift designs. They span the 51 to 65 horsepower range and get an improved horsepower-to-weight ratio. New boom designs mean the vertical lift models can now reach to more than 10 feet and the radial lifts get a 20 per cent increase in breakout force. The radial lift models also offer better forward reach at the mid-lift position. A new self-leveling and ride control combination features shock-absorbing boom cylinders to cushion bumps, helping retain full bucket loads while moving over rough terrain.

For power the G Series models use Tier 4 Final-compliant Yanmar diesel engines.

Inside the cab is a newly-designed operator station which uses many of the same features as the larger E Series loaders. The view from the seat is improved and the wider swing-out door and flat floor make getting in and out a little easier. There is also a bit more legroom. The cabs are sealed, making them quieter and dust free.

Among those customer driven enhancements the company mentions are a two-speed HVAC system to heat and cool the cab along with an optional electro-hydraulic joystick controls.

Depending on the buyer's preference, the 316GR and 318G models can be equipped with one of a couple of control systems: standard foot and hand controls, optional hands-only controls or enhanced (EH) joystick controls that are switchable between ISO- and H-patterns.

Scott Garvey is machinery editor for Grainews. Contact him at [Scott.Garvey@fbcpublishing.com](mailto:Scott.Garvey@fbcpublishing.com).





The Geringhoff Freedom corn header can handle a variety of different row spacings.

BY SCOTT GARVEY

Combine header manufacturer Geringhoff had a significant new product line to introduce to the North American market at the National Farm Machinery Show in Louisville, Kentucky, in February. The brand's new Independence product line of headers includes two new corn models, the Freedom and the Patriot, which offer producers some new design options.

The Freedom model makes it possible for one header to handle a wide variety of row spacings. It uses angled, two-chain feeders to pull corn into the combine. The angled position of the row units also gives the header improved performance in downed corn, according to the company. Marketing staff at the brand describe the design of the drive gearboxes on the row units as "radical," which allows for a more compact design and lets the units fit together more tightly, which is a big reason the header can handle very tight row spacings.

The Freedom header also uses the brand's Rota Disc cutting system to chop corn residue down into much smaller chunks to accelerate decomposition in the field.

The other corn header in the new Independence line, the Patriot, is designed for twin row planting configurations and was developed in partnership with Stine Seed Company. Its double-sprocket gathering chain system eliminates the whipping effect when conventional corn headers try to harvest twin row corn. The header is also available with optional end row augers that help improve feeding and yield retention.

"These new corn heads are designed for leading-edge growers who are pushing yields to new heights," said Tosh Brinkerhoff, president and CEO of Geringhoff North America in a press release. "Our breakthrough technology has been proven to handle high yields in tough conditions, and gives growers the freedom to farm with more options than ever before."

Scott Garvey is machinery editor for Grainews. Contact him at Scott.Garvey@fbcpublishing.com.

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# Out of sight, out of mind

A look inside the workings of a new, compact “single can” SCR system

BY SCOTT GARVEY

When AGCO’s Massey Ferguson 5713SL won a Tractor of the Year award at Agritechnica last November, one of the features that impressed the judges and helped the tractor win was the new, compact SCR exhaust emissions system.

The Donaldson Company, known to many farmers as a filter brand, is actually the manufacturer behind that particular system. The Donaldson All-In-One compact selective catalytic reduction (SCR) exhaust treatment system is one of the new, more compact “single can” designs to be introduced, along with the likes of Cummins’ EcoFit Single Module. They wrap up everything in a much smaller package than was available with older designs. So AGCO engineers could tuck the All-In-One away under the cab of the 5713SL and use the resulting vacant real estate in the engine compartment to create a steeply sloping tractor hood, which improves forward visibility for the driver.

Most Tier 4 Interim emissions systems consist of two canisters, one that contains a diesel oxidation catalyst (DOC) and an air-flow mixer where diesel exhaust fluid (DEF) is injected. Then, another one downstream in the exhaust flow holds the SCR catalyst. Together, they take up a lot of space under hoods.

“Naturally, there was a desire to try and figure out how to integrate those two cans into one package,” says Gary Simons, engineering director for exhaust emissions at Donaldson. “That was how the All-In-One evolved, to have a single can that contained the DOC, as well as the DEF mixer and the SCR catalyst, all in one relatively easily mountable body. To meet Tier 4 Final we took three distinct functions, if you will, and rolled them into one can.”

One of the reasons other systems use two separate cans is the need to have a fairly long distance between the DEF injector and the face of the SCR catalyst in order to allow enough time for a uniform ammonia distribution to be created in the exhaust flow before it reached the catalyst.

“So it’s not just a matter of shoving it into a smaller package,” explains Simons. “It’s getting it to improve its efficiency and getting it to work in a smaller package at the same time. The new part of this, by getting it as compact as we have, is we’ve saved a lot of volume in the design.”

Here’s how Donaldson managed to do that.

## THE IMPROVED DESIGN

The first stage of the system forces the incoming exhaust to pass through a metal-bodied DOC.

“A diesel oxidation catalyst (DOC) works similarly (to a catalytic converter on a car),” he continues. “It converts some of the gases, primarily some of the carbon monoxide and the hydrocarbons. It eliminates those. Then it will also convert some of the NOx (nitrogen oxides) from NO to NO<sub>2</sub>. And that gets broken down when it goes through the SCR system.”

Louvers downstream from the annular (doughnut shaped) DOC create a swirling air-flow as the exhaust gases pass through it. That turbulent flow allows for complete mixing when the exhaust flow reaches the DEF injector. The exhaust flow changes direction 180 degrees before it gets blended with the DEF. The exhaust gas and DEF mixture passes back through the centre opening in the DOC and flows out through the SCR catalysts. “The DEF distribution is pretty uniform at that point,” Simons adds. “Uniformity is what you’re looking for to get the highest level of efficiency out of your SCR catalyst. Ultimately the SCR catalysts are there to break down NOx. It breaks it down to nitrogen and water.”

They also ensure none of the ammonia created from conversion of the Urea content in the DEF injection escapes into the atmosphere.

Unlike some other single can solutions from other companies, the Donaldson All-In-One system doesn’t rely on a diesel particulate filter (DPF), which means the entire system is maintenance free, and there is no need to buy an expensive replacement filter when the engine hours start to rack up.

“There is no service required on this system,” Simons confirms. “If they can meet the standard without a DPF, it seems many of the manufacturers are going in that direction. There were quite a number (of brands) that chose not to use DPFs, because of the cost and service issues.”

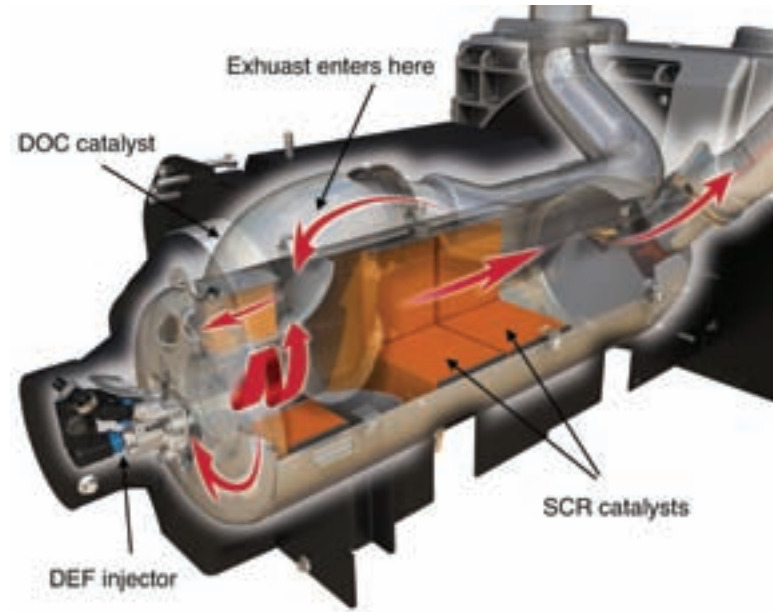
Eventually, buyers of all brands of equipment in the future will likely find a single can emissions system fitted to their equipment. Donaldson’s can be scaled to work with tractors all the way up to high horsepower models, according to Simons. “The range of our product in this configuration can go from 80 kiloWatts up to 350 (107 to 469 horsepower) or higher,” he says. “We can reach combines too. We believe this is one of our platform products that will be a good solution for Tier 4 Final, which is out today.”

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PHOTOS: DONALDSON

The compact size of the All-In-One SCR emissions treatment system allows it to be mounted under the cab on the MF 5713 SL.



Exhaust gasses pass through a DOC before blending with DEF. They then pass through SCR catalysts and out the exhaust pipe.

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# Case IH lands a tillage Barracuda

This new vertical tillage tool is an option for more aggressive field finishing



Left: New from Case IH is the True Tandem 335 Barracuda vertical tillage tool for aggressive field finishing.  
Top Right: The Barracuda uses 22-inch serrated blade design.

BY SCOTT GARVEY

In early March Case IH introduced a new implement model it says fills a niche in the vertical tillage category. The True Tandem 335 Barracuda is designed for dealing with heavy crop residues, leaving fields a little blacker than some other vertical tillage machines. It is capable of cutting, evenly distributing and burying residue up to four inches deep, according to the company.

“We developed the new True-Tandem 335 Barracuda to help producers more productively manage the record-breaking amounts of residue associated with new, high-yielding crop genetics — especially hybrids developed for standability with tougher stalks,” said Chris Lursen, Case IH tillage marketing manager, in a press release. “... the Barracuda easily slices through tough residue, uproots root balls and levels out the soil to create the ideal environment for residue breakdown and seedling development.”

The Barracuda uses 22-inch blades made of the brand’s proprietary “Earth Metal” alloy, which reduces the risk of breaking because they are not as brittle as other types of alloys, the company claims. Each blade has a “chisel-tipped” serrated design. Disc gangs are positioned on an 18 degree angle that creates some lateral movement of material to even out field surfaces.

“As the chisel-tipped teeth wear, the valley between each tip stays sharp, retaining the cutting edge and extending the blade’s lifetime,” added Lursen. “... the blades are built for durability, helping producers cover rocky terrain and uneven ground in confidence — even at high speeds.”

Like other vertical tillage designs, the Barracuda is designed to run through fields at six to nine m.p.h., and it’s available in working widths from 22 to 34 feet. At the rear, the Barracuda uses a hydraulically adjustable Tiger Claw Cumbler rolling basket to help break up clods and prepare the finished surface.

Scott Garvey is machinery editor for Grainews. Contact him at Scott.Garvey@fbcpublishing.com.

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# How to weld 90-degree outside corners

Proper welding of a corner joint starts with perfectly cut straight edges

BY SCOTT GARVEY

One day many years ago, another welding student and I were taking a break outside the door of the college welding shop. “I just love burnin’ stick,” he said, as we discussed what we were doing that day. (Burning stick is slang for arc welding, in case you didn’t get that.) I had to agree that being able to manipulate steel with welders and torches was pretty cool — or hot, or whatever.

But if you don’t take time to cut the steel properly, create good joint fitment and understand how to avoid the problems that applying a lot of heat to a piece of steel can create, the finished product will have a weak weld joint or won’t fit because it’s warped from heat distortion. That can turn love of burnin’ stick into extreme frustration and wasted effort.

Recently, it was necessary to fabricate a replacement integrated bumper and front frame crossmember on a vehicle being restored in the *Grainews* garage. That provided the perfect opportunity to take a close look at the proper procedure for fitting up and welding 90-degree outside corners. Here’s a look at the whole fabrication process from start to finish.

## GETTING THE JOB DONE

To match the original part, which was impractical to repair, the new bumper had to be built out of 10 gauge steel. The original part was pressed into a “U” shape at the factory. Clearly, that wasn’t an option for us, so the replacement will need to be made up of three pieces cut from flat stock and welded together. Creating perfectly straight edges when cutting them, therefore, is critical.

We want the replacement to exactly match the original with precise dimensions, so the cut lines were marked on the steel using a steel scribe rather than a marking pen. The scribe scratches a precise, fine line into the base steel. It’s easier to make exact cut marks with this tool as well as precisely position the cutting guide than when using a thicker line created by a felt pen.

A plasma cutter was used to cut the bumper pieces out of flat stock. Clamping a framing square onto the base metal to use as a guide for the plasma torch created a very straight edge that isn’t possible on a freehanded cut. That was important for this job. Ideally, we’d use a straight edge that is as long as the entire cut, which the framing square wasn’t. But it was the best we had, and it worked.

Once the pieces were cut, their edges were dressed with an angle grinder to remove

any slag created by the plasma cutter and smoothen them out a bit. All the surface rust on the new steel was removed as well, using a 60-grit flap disc on an angle grinder. That will allow for good electrical contact and help reduce the risk of contaminating the weld bead, and it will get the part ready for paint.

Because the bumper also acts as the front frame crossmember, it must be perfectly straight and not have any twist or distortion, so the welding process will have to be done carefully to minimize the amount of heat put into the part.

The pieces were clamped onto a welding table with perfectly square edges to hold them in place. Even though 10-gauge steel is more than 1/8 inch thick it can still warp from heat distortion. The clamps were left in place until the joint was fully welded to prevent the arc heat from pulling any piece out of position. Rather than overlapping them, aligning the inside edges of the pieces leaves a gap at the corner, which ensures good weld penetration. The weld bead creates new steel to fill in the gap.

We started the welding process in the usual way, by tacking the pieces together in a few places along the length of the joint. To finish welding it and avoid concentrating heat in one area, very short beads were

systematically burned onto the end of each of those tacks, constantly moving from one to another throughout the process. That distributes the heat evenly along the entire piece to avoid warping. And don’t be in a rush. Working slowly also helps keep heat build up to a minimum.

Grinding the weld bead smooth makes for a seamless, finished appearance. To do that, we started with a regular disc on an angle grinder and removed the bulk of the excess material, creating an overall curved shape for the corner in the process. Moving the grinder back and forth along a wide area of the joint rather than just working a small section at a time helps level out the bead evenly. Grinding can create almost as much heat as welding, so this technique also helps minimize and evenly distribute any heat generated. To finish it off we switched back to the 60 grit flap disc to get a completely smooth surface and make the weld bead look like part of the base steel.

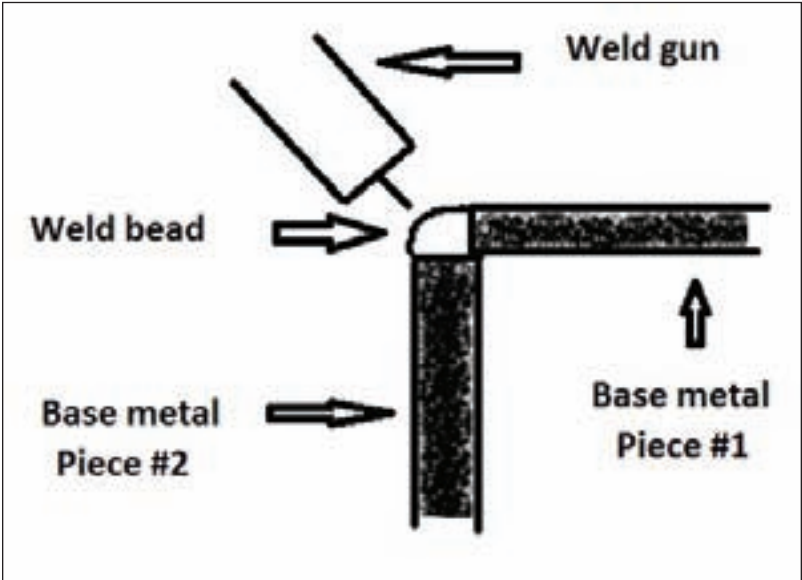
A test fit on the frame showed the bumper remained straight through the welding process and fit the frame exactly as planned. Running a constant weld bead along the joint from one end to the other would have certainly distorted and ruined the part.

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PHOTOS: SCOTT GARVEY

Clamped firmly in place, the two pieces of steel forming this 90 degree outside joint are positioned properly, allowing for excellent weld penetration.



The proper fit up for welding an outside 90-degree joint allows the weld bead to fill the corner and ensures good penetration into both pieces of base metal. Note the proper angle of the MIG gun, allowing it to direct heat evenly into both pieces of base metal.



Using a scribe to mark cut lines allows for transferring precise measurements and exactly positioning the torch guide.



A framing square was used as a guide for the plasma torch to ensure a perfectly straight edge.



The plasma cutter leaves a striated edge on the steel similar to that of an acetylene torch. It requires some dressing with a grinder to create a finished face.



Welding was spread out along the length of the joint to prevent concentrating heat into one area and warping the metal.



An angle grinder is used to smoothen out the weld bead and make the bumper look like one seamless piece.



Fitted into place with the original bent and broken part behind it, the replacement bumper looks exactly like the original once did. The only thing left to do is drill holes for the mounting bolts.





NEW EQUIPMENT

# Section control on RBI spreaders

Salford's RBI dry spreaders can now work from prescription maps

BY SCOTT GARVEY

At last year's Canada's Farm Progress Show, Salford Group announced it had acquired spreader manufacturer RBI and displayed one of the brand's models at its exhibit for the first time. In February, Salford announced RBI dry product spreaders will now be available with a section control feature to minimize overlap. That, says the company, will help producers avoid spending money on unnecessary inputs.

"Section control is not new to BBI equipment," said Richard Hagler, President of the BBI division of Salford Group in a press release. "We've been building models that can spread a full swath or manually turn on and off left and right side for the turf and orchard/vineyard markets for over 15 years. What makes this new section control option such an advance over other machines on the market today is the ability to dynamically stop in an already-applied area, to turn on or turn off the left and/or right side of the spreader rather than a mechanical switch the user must operate."

The feature will also help avoid broadcasting product outside field boundaries, into buffer strips or waterways.

Section control will only be available on a limited number of models this season, including the Javelin with a 120-foot spread capability for urea and the MagnaSpread, which has an 80-foot reach.

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Salford's RBI dry product spreaders will now be available with a section control feature to minimize overlap.

PHOTO: SCOTT GARVEY

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# GM offers retrofit trairling options

Rear view cameras and hitch packages available for 2014-2016 Silverados

BY SCOTT GARVEY

Farm pickups usually see their fair share of road miles with a trailer in tow, especially those owned by mixed farmers who almost always have a livestock trailer. This year the major pickup truck brands seem to be vying for attention from those who pull trailers by offering increasingly better option packages.

When Ford introduced the 2017 model year Super Duty trucks in Regina last November, marketers emphasized it's towing ability with an extensive rear view camera package available that helps the driver keep an eye on blind spots and any traffic close behind the trailer. Not to be outdone, in March GM announced it teamed up with a specialty company called Echomaster to develop a blind-spot-assist camera package that can be retrofitted onto 2014 to 2016 1500 model Silverados with trailer towing mirrors and all 2500HD and 3500HDs.

The camera kit along with a fifth wheel or goose neck hitch package will be available as a factory installed option package on new trucks this year.

"The fifth-wheel prep package has been designed by our structural engineers, to make the most of Silverado's fully-boxed, high-strength steel frame," said Jeff Luke, Chevrolet truck executive chief engineer, in a press release announcing the option package. "The trailering camera system was designed in partnership with our Chevrolet MyLink team to seamlessly integrate views from trailering cameras into the existing radio display."

The retrofit package, which will be available directly from GM dealers beginning in April, includes two side cameras that get integrated into the housing of the side-view mirrors to improve vision along the sides of the truck and trailer. When the driver activates the turn signal, the system automatically displays the correct side view in the centre screen on the dash.

The rear camera is designed to be mounted to the top, rearmost edge of the trailer, providing a view of what's behind the trailer when reversing. This camera is hardwired to the trailer lights for electrical power, and wirelessly transmits images to the dashboard display using a closed network. It also features infrared lighting, allowing for enhanced images in low-light settings.

Pressing and holding the radio "home" button for five seconds brings up the camera view menu and any camera view can be selected at any time.

A fourth camera can be added to the package, which can be installed inside a trailer. That would be handy for stock trailers, letting drivers keep an eye on cattle inside during the trip.

Later this summer GM will introduced a brake light-mounted camera on new trucks to keep an eye on cargo in the bed or help when connecting a goose neck trailer.

Cost of the camera system starts at US\$999. Check out the brand's website for details on the available options packages at [www.chevrolet.com/accessories](http://www.chevrolet.com/accessories).

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**Top:** GM will offer a retrofit camera package for 2014 to 2016 Silverado trucks to make trailer towing easier and safer. **Left Bottom:** Side rear-view cameras get integrated into the Silverado side mirrors. **Right Bottom:** Camera views appear on the centre dash screen in the truck.

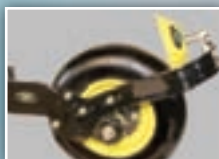
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# Deworming can add to profits

Proper dose can improve weight gains, and reduce parasite load on pasture



PETER VITTI

Just after the new year, a rancher who runs a few hundred late-spring cows called me. He was having difficulty getting his weaned calves on background feed and they were just not doing “good.” Although, he dewormed these calves once off-pasture with a commercial pour-on, I told him they might still have stomach worms. So he agreed to treat them again — this time using a drench dewormer containing a different active deworming medication.

I saw the same calves in middle of February and they were eating with vigour and growing — or as I like to say, “Like weeds.” This little story is a good reminder that cattle are very susceptible to stomach worms and there should always be a good program in place to control worms at all times.

In hindsight, whether these cattle worms had resistance against the first dewormer is unknown. It’s only a snapshot of the round stomach worm’s detrimental effects upon cattle performance, such as reduced feed intake, poor feed efficiency and inferior weight gains. It has also been proven that even a modest worm infestation in young stock can compromise their immune system. Mature beef cows are also affected, but have some acquired immunity.

### NOT ALWAYS OBVIOUS

Except for cases of severe diarrhea and anemia showing up in some animals, many producers may not realize their cow herd is infected with worms. I believe it’s because the hidden nature of a worm problem has much to do with the opportunistic subtlety of the stomach worm’s (*Ostertagia ostertagi*) life cycle:

- Infected cattle pass microscopic eggs in manure onto the ground.
- Eggs hatch and these first- and second-

stage larvae live in the manure patty.

- The infective third-stage larva develops in about a week (infective for months afterwards).
- Third-stage larva migrate to vegetative during moist and moderate weather conditions.
- Cattle ingest third-stage larva on grass, where it migrates to the abomasum mucosa.
- Matures into fourth-stage larva and to final egg-laying adults.
- Cycle repeats itself.

The entire cycle of the stomach worm encompasses a period of about three weeks. It can also spend part of this cycle in hibernation in yearlings and mature cattle. These are fourth-stage larvae that arrest development before becoming adults. This is thought to be a survival technique in which worms evolved to avoid the adverse cold of winter as well as hot and dry conditions in the summer.

Interestingly, the first- and second-stage larvae can also survive outside the cow during tough Canadian winters on pastures. They simply become active once rising temperatures and available moisture make it optimal for their continued development.

The contamination of pastures by stomach worms parallels such activity during the grazing season. It often leads to an initial increase of worms during the first couple of spring months, followed by a dip in midsummer and literally ending in a population explosion as many say, “when the kids go back to school” (early fall).

Meanwhile, new calves are starting to pick up contaminated grass, acquiring worms and depositing them back as shed eggs, which therefore contributes to the majority of late-pasture contamination.

### CONTROL MEASURES

Effective chemical control of worm eggs on pasture (and in drylot) has been around since the early 1980s with the development of a new class of dewormers, known as the anthelmintics. This class can be divided into many chemical groups, but the avermectins (ivermectin and dor-

mectin) and benzimidazoles (fenbendazole) are some of the leading dewormers against stomach worms in cattle.

Avermectin dewormers are not only effective against the latter larvae/adult stages of the stomach worm living in cattle, but can eliminate worms hibernating in their abomasum as well as has weeks of residual power. Producers also like the avermectin such as ivermectin, because it controls other external as well as other internal parasites. In comparison, fenbendazole has effective control against stomach worms, but is not effective against other parasites. It also has little lasting control.

To me, this does not mean one dewormer is better than the other. It only gives the producer a choice tailored to the situation. For example, the reasons I recommended that my friend (above) use a fenbendazole drench on his weaned calves are three-fold: (1) we targeted only stomach worms, (2) residual activity was not an issue; these animals were forage/grain-fed calves and (3) there was suspected worm resistance against the ivermectin. Plus I wanted to assure the animals were getting the recommended dose of dewormer and drenching was my choice.

### DIFFERENT ADVICE

Like me, when producers make their own personal dewormer choice, they often find the accompanied advice often varies as to when and how many times to treat cattle and also how to prevent worm buildup on pasture. Tradition dictates to treat cattle when the highest number of worms is still developing in overwintered beef cows and not yet shed on the ground. This means to me that cow-calf operators should deworm cows just prior to their release on pasture.

In contrast, a new protocol says it is not necessary to treat grazing cattle right away and they can wait up to six weeks on pasture before being dewormed. The idea being: deworm calves after the first few weeks on pasture and then process the mature cows a couple of weeks, afterward.

These worm specialists believe this allows an effective dewormer to clean up

the overwintered cattle as well as stop egg shedding for the next four to six weeks. The benefit being that there is not a buildup of worms on pasture at the end of the grazing season.

Regardless of which of these two schools of thought one follows, there are some timeless management plans that should be considered in order to prevent such heavy worm loads. For example, since rotational pastures often have higher worm loads due to higher stocking rates; it is important not to speed animals throughout all available pastures as well as not to overgraze. In addition, some rotational pastures known to carry high worm loads might be rested for a year to clean/reduce worm infestation for the following season.

### WHAT DOES IT COST?

Nobody will disagree that a high worm load will eventually cause a potential loss of revenue. However, many producers ask two common questions: 1. How much is the cost of deworming treatment, and 2. Does it pay to deworm cattle?

Let’s illustrate a general situation – one U.S. gallon of Safeguard (fenbendazole) @ \$400 (CDN) is used at the rate of 2.3 ml/100 lbs. bodyweight. It is recommended that cows be treated prior to being released on pasture and cow-calf pairs be treated after six weeks. As a result some Canadian research shows an 18 lb. weaning weight advantage due to deworming. Therefore, my input cost (cow + calf) = \$5.84/calf and estimated revenue = 18 lb. x \$2/lb. = \$36/calf; net return = \$30.16/ treated calf. For a 350 cow-calf operation that is an extra \$10,000 in revenue.

This is good news! Deworming cattle shows a clear economic advantage, which has been realized on many real cattle operations as well as the reduction of sick cows and calves or lowered death loss due to worms. It’s unrealistic to think we can rid our cattle entirely of stomach worms, yet I believe we should take this approach to control them.

*Peter Vitti is an independent livestock nutritionist and consultant based in Winnipeg. To reach him call 204-254-7497 or by email at vitti@mts.net*

## THE MARKETS

# Few Canadian feeder cattle going south

The good news is that more slaughter cattle are being processed in the U.S.



JERRY KLASSEN

### MARKET UPDATE

Alberta packers were buying fed cattle in the range of \$168 to \$170 in late March as the beef complex moves through a period of seasonal strong demand. While the market has strengthened considerably since the lows of \$155 earlier in winter, feedlot margins remain in negative territory.

Break-even pen closeouts are closer to \$195 so cattle feeders are underwater by nearly \$300 per head. However, feedlots can see some light in the deferred positions. Steers weighing approximately 850 pounds have averaging \$190 in central Alberta; forward contracts are near \$165, which

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Quarter	2013	2014	2015	Est. 2016
1	6,172	5,868	5,664	5,845
2	6,517	6,183	5,855	6,115
3	6,608	6,179	6,066	6,365
4	6,420	6,021	6,105	6,215
Total	25,717	24,251	23,690	24,540

results in small margin near \$40 to \$60 per head. Feeder cattle prices have garnered support as feedlot operators look to recoup equity erosion over the winter.

### STILL UNCERTAIN

Looking forward, there is a fair amount of uncertainty in the cattle market. Cattle-on-feed inventories are marginally above year-ago levels but carcass weights are

sharply higher. Beef consumption levels will be key to sustaining the current price structure longer term. Recently, wholesale values have ratcheted higher as retailers look to maintain the beef pipeline. Retail beef prices have held value over the past year with the exception of sporadic weekly features. The consumer hasn’t seen any relief despite the 10 to 12 per

» CONTINUED ON PAGE 36

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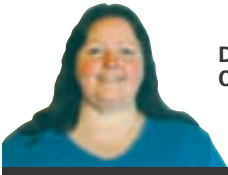
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# Learning how to use EPDs

It's about knowing your herd, knowing what needs to be fixed, and finding the right bull to help



DEBBIE  
CHIKOUSKY

Considering we have been having babies of one sort or another since December, spring has been a lot of fun. Watching the little lambs running and playing in the sunshine while we are eagerly waiting for our beef cows to start calving certainly adds to the excitement. Springtime is bull sale season though, so along with waiting for calves we have been inundated with bull catalogues. My, are there some handsome boys out there these days, but a bull shouldn't be chosen on looks alone.

Reading all the sale flyers made me realize that we really don't understand how to use expected progeny differences for cattle. A bit of research quite simply explained that expected progeny differences, or EPDs, are numbers that predict the genetic quality of future offspring of a particular cow or bull.

I also learned that the "new" North American Shorthorn Genetic Evaluation Project was completed by the American Simmental Association as part of their multi-breed genetic evaluation. So now the EPDs for Shorthorn, Simmental, Red Angus, and Gelbvieh have the same base. The result of this project means that the published EPDs for these breeds can be used to compare the performance profiles of each breed against one another. Now to learn just what these categories can teach me about a new bull.

### USING EPDS

For years the focus was on selecting low birth weight (BW) bulls. When my husband took his artificial insemination (AI) course, the instructor told the students to be careful not to only breed for low birthweight calves. Apparently they were having issues on dairies where this practice was causing narrowing of the pelvises.

The message was to use the birth weight in conjunction with calving ease (CEZ on some charts). Calving

TABLE 1: ADJUSTMENT FACTORS TO ADD TO EPD'S OF EIGHTEEN DIFFERENT BREEDS TO ESTIMATE ACROSS BREED EPD'S							
Breed	Birth Wt.	Weaning Wt.	Yearling Wt.	Maternal Milk	Marbling Source <sup>a</sup>	Ribeye Area	Fat Thickness
Angus	0.0	0.0	0.0	0.0	0.00	0.00	0.000
Hereford	2.7	-4.2	-23.6	-17.7	-0.31	-0.08	-0.051
Red Angus	4.1	-22.1	-29.9	1.5	-0.34	-0.02	-0.027
Shorthorn	6.2	9.9	27.8	21.7	-0.19	0.23	-0.135
South Devon	3.3	-5.2	-24.4	1.3	-0.11	0.23	-0.135
Beefmaster	6.4	37.2	33.3	6.4			
Brahman	11.0	44.8	10.1	23.9	-0.85	-0.08	-0.150
Brangus	4.4	15.4	5.2	2.1			
Santa Gertrudis	7.0	40.6	43.5	13.0	-0.67	-0.09	-0.103
Braunvieh	2.3	-23.4	-47.7	1.9			
Charolais	8.8	37.9	40.9	6.7	-0.43	1.04	-0.213
Chiangus	2.2	-19.5	-45.6	1.0	-0.43	0.46	-0.145
Gelbvieh	3.4	-19.4	-24.9	3.2	-0.35	0.67	-0.131

As an example, suppose a Gelbvieh bull has a weaning weight EPD of + 68.0 lb. and a Hereford bull has a weaning weight EPD of + 46.0 lb. The across-breed adjustment factors for weaning weight (see Table 1) are -19.4 lb. for Gelbvieh and -4.2 lb. for Hereford. The AB-EPD is 68.0 lb. - 19.4 lb. = 48.6 lb. for the Gelbvieh bull and 46.0 - 4.2 = 41.8 lb. for the Hereford bull. The expected weaning weight difference when both are mated to cows of another breed (e.g., Angus) would be 48.6 lb. - 41.8 lb. = 6.8 lb.

ease is calculated assuming that the bull is to be bred to first-time calving heifers. This is why the farmer needs to observe the traits of his herd such as length of body, shoulder design, head shape, circumference of bone and even use frame score to pick a bull. The reason to use frame score is because, especially in first-calving heifers, the fatter they are the more fat could be deposited internally, making calving harder.

If we look at table No. 1 from <http://beefmagazine.com/cattle-genetics/us-marc-releases-across-breed-epd-figures> the average for the traits can be found as of 2012. Then when studying a particular bull if his EPD BW is +5 it could be expected that his calves would be five pounds above breed average. (Charts developed by Meat Animal Research Center in Clay Center, Neb.)

The other important numbers that reflect more on the bull than on the cow are weaning weight (WW) and yearling weight (YW). These EPDs are indicators of the genes for growth that will be passed from an animal to its calves. Weaning weight EPDs predict the average difference in weaning weight of a

bull's progeny compared to progeny of another bull. This weaning weight difference is predicted for a standard weaning age of 205 days. The effect of milking ability of the cow is not predicted by this EPD, only the bull's genetic potential. Rapid early growth is an important selection criterion for cow-calf producers since feeder cattle are sold by the pound.

Yearling-weight EPDs predicts the average difference in weight of a bull's progeny at a year of age (365 days). Yearling-weight EPDs are the most useful indicators of growth rate of slaughter progeny in the feedyard.

This EPD is interesting for our herd. We would like to be able to get more growth on our weanling to yearling group. This is not an absolute though because environment would play a factor, but it is at least an estimate of what could be expected.

### MATERNAL MILK EPDS

We believe that the maternal milk EPDs (MM) are probably the best indicator if the new bull would be a potential producer of replace-

ment heifers. In many semen catalogues, bulls with very favourable maternal scores are listed as maternal bulls. The milk EPDs are expressed slightly differently from birth and growth EPDs. Milk EPDs reflect the milking ability of an animal's daughters. This difference in milking ability is expressed as additional pounds of calf weaned by a bull's daughters. Milk EPDs reflect in weaning weight of a bull's calves by his daughters. Milk EPDs are important in bull selection when replacements will be retained in the herd. Optimum milk EPDs need to be determined that match the feed resources and environment of the operation. Remembering at all times that more milk can result in a cow that requires a higher nutritional input to maintain body condition and reproductive efficiency.

Breed needs to be an important consideration when evaluating milk EPDs. Again, know your herd. If it is already satisfactory in milk supply then it would be advantageous to choose a bull that would keep the level where it is. If it is an area that needs improvement, then choose a bull with a positive influence in this EPD.

### CARCASS TRAITS

The carcass traits section of the EPD chart is also of interest. When the business is selling meat it is a good idea to have the best carcass possible. We would like to improve the fleshing ability of our calves. Finishing them on grass we really need them to put on weight and easily produce a nice fat cover. Basically we really want to increase our carcass weights. This is a category on the EPD chart in which we will be looking for bulls that promise a positive number. Interesting to me that carcass traits such as marbling are high heritability traits.

There is still a lot to learn on this, but we are well on our way to making a better-educated choice when we go shopping for sires. The biggest question at the moment is if it is time to include a terminal sire in our breeding plan or not. It definitely is time to critically observe our current females and decide just what traits need improvement, and what traits we do not want to lose.

*Debbie Chikousky farms with her family at Narcisse, Manitoba. Visitors are always welcome. Contact Debbie at [debbie@chikouskyfarms.com](mailto:debbie@chikouskyfarms.com).*

» CONTINUED FROM PAGE 35

### FEW CANADIAN FEEDER CATTLE GOING SOUTH

cent year-over-year decline in cattle and wholesale beef prices.

The accompanying table shows the USDA estimates for quarterly beef production. Given the year-to-date beef production, we will probably see a downward revision in first-quarter beef production. I'm expecting the first quarter to eventually finish near 5.7 million pounds, which is very similar to last year. In the second quarter, we could see the sharp year-over-year increase come to fruition.

Feeder cattle outside feedlots last October were one million head above October of 2014 and these cattle are now moving off small-

grain pasture into feedlots. I'm fairly comfortable with the USDA's second- and third-quarter production estimates, especially if carcass weights stay near the current levels. The August live cattle futures are trading at a \$17 discount to the April contract as the market factors in the larger supplies.

### CANADIAN NUMBERS

Canadian year-to-date beef production for the week ending March 5 was 168,000 mt, up five per cent compared to last year. Exports of Canadian feeder cattle to the U.S. for the first two months of the year were a measly 17,764 head, down a whopping 73 per cent from last year. Fewer feeders moving south will keep feedlot inventories above year-ago levels into the summer, resulting in the year-over-year increase in

beef production. However, beef supplies will not become overly burdensome because exports of slaughter steers and heifers to the U.S. were just over 48,000 head, up 60 per cent from 29,978 head in 2015.

The weaker Canadian dollar was a major factor driving beef and slaughter cattle exports throughout the winter. We now find the Canadian dollar percolating higher. Canadian manufacturing hit a record low in December after five months of contraction. However, January data was surprising showing a jump of 2.3 per cent to \$53.1 billion, which was a record high. The rebound in manufacturing has offset the slower energy sector. In any case, crude oil values are also up \$10 from winter lows and the deferred positions are \$2 higher. The lows in the Canadian dollar are likely

in place and we could see further strength later in summer.

### FOOD SPENDING UP

U.S. food spending has rebounded in 2016. At-home food expenditures have been running 4.1 per cent above last year while away-from-home food spending is sharply higher at 12.7 per cent. This year-over-year increase in food spending may sustain retail prices. Although restaurant spending generally eases in the summer, this data suggests we may not see the seasonal decline experienced in past years. Offsetting partial expansion in food spending is the sharp year-over-year increase in pork production. July and August and typically the lowest prices for hogs which tempers the upside in the beef complex.

The June and August futures

market has factored in the larger beef production but this may be overdone due to the stronger demand in Canada and the U.S. Feeder cattle prices are expected to stay firm and could edge higher into May because the feeding margins are positive in the deferred positions. The Canadian dollar generally trends for a longer period of time and the momentum is definitely to the upside now that Eastern Canada manufacturing is surging and crude oil prices have bounced off the lows.

*Jerry Klassen is manager of the Canadian office for Swiss-based grain trader GAP SA Grains and Products Ltd. He is also president and founder of Resilient Capital, a specialist in commodity futures trading and commodity market analysis. Aside from owning farmland in Manitoba and Saskatchewan, he's a University of Alberta graduate who grew up on a mixed farm feedlot operation in Southern Alberta, which keeps him close to the grassroots of grain and cattle production. He can be reached at 204-504-8339.*





KEEPERS AND CULLS



COW PRODUCES A LITTER

And in case you missed earlier widespread news reports, the Lamport family of Alida in the southeast corner of Saskatchewan were amazed and pleased when a five-year-old Charolais-cross cow produced — count them, one, two, three, FOUR calves in early March.

The cow had a history of producing twins, so apparently Calvin Lamport and family thought it was just a bonus when she popped out three calves in a row, but about 30 minutes later the fourth calf was delivered. Two of the calves weighed 46 pounds, another was 47 pounds and the heaviest was 50 pounds.

All calves appeared healthy and doing well. The Lamports bought a Holstein cow to provide surrogate duties for nursing the litter of calves.

LETTER TO THE EDITOR

More about ergot

The March 8, 2016 column by Heather Smith Thomas ('Small dose of ergot is harmful') is right as far as it goes, but it does not go far enough. There is much more to be said about ergot poisoning and its neurological effects.

The chemical known as LSD, formally lysergic acid diethylamide, was distilled from ergot solutions by Hoffman in Switzerland in 1934. It was used in Canada in the infamous Montreal neurological experiments in the 1950s, popularized by Timothy Leary, the Harvard psychologist in the 1970s, and then traced to the witch mania of the 17th century in fascinating historical sleuthing.

The theory that witch mania was due in part to ergot poisoning is based on two factors: 1) ergot has neurotoxic properties and thus can induce trembling in victims, said to be caused by witches in the medical notions in the 17th century, 2) the observation that witch mania increased in spring and summer seasons following wet falls when moisture in unventilated storage facilities caused rye to produce more ergot toxins.

There is scholarly debate on the correlation of ergotism, weather, and witch mania. In any event, the madness of Salem cannot be attributed to wet rye alone. A new book by the American historian Stacey Schiff (The Witches: Salem, 1692, pub 2015) puts the witch mania into a broader context of religious fervour and career-advancement by theological bright lights of the time who advanced their careers by preaching against witches to religious zealots.

Andrew Allentuck  
Winnipeg, MB

# Bull sales reflect beef industry confidence



LEE  
HART

I don't know if they are runaway prices, but a couple of people I have talked to were certainly pleased with breeding bull prices this year. The beef industry always has its ups and downs, but it would appear cow-calf producers are feeling pretty good about the outlook over the next couple of years at least.

One Alberta Simmental breeder I recently talked to was very pleased with sale results this year. They saw very good average prices with one exceptional bull selling for more than \$160,000. You've got to like that.

Organizers of the 2016 Calgary

Bull Sale, as well were also very pleased how the 116th annual sale went in early March. Neal Church, of Church Ranches, who is also president of the Alberta Cattle Breeders Association, says he was pleased to see the support given the 2016 sale.

"The number of consignors was up, the number of bulls was up and average prices were up," says Church.

And changing the venue of the sale from its longtime home at the Calgary Stampede grounds to the new facilities at the Century Downs Racetrack at Balzac, just north of Calgary worked very well, says Church.

Results of the 2016 sale show 102 Hereford bulls averaging \$8,772. There were only four Angus bulls but they averaged \$6,950. And even the ranch horse sale did well — the 12

sold brought an average price of \$9,413.

In 2015, the Calgary Bull Sale sold 84 Hereford bulls for an average of \$8,684 and the eight ranch horses had an average price of \$9,062. The 2016 results were considerably better than 2014 results which saw 87 Hereford bulls with an average price of \$5,190, 13 Angus bulls with an average of \$3,540 and 10 ranch horses with an average of \$7,475.

The volume buyers at the 2016 Calgary Bull Sale were Guenther Ranch, Miller Ranches and Ron Guenther.

The Grand Champion Hereford at the Calgary sale came from Little Poplar Grove Herefords and it sold to Rogers Hereford Ranch for \$25,000. The Reserve Grand Champion was shown by YV Ranch and it sold to XTC Ranches/Raymond White for \$10,500.



One of the Lamport Farms polled Herefords at the Calgary Bull sale

The high-selling bull was owned by SNS Herefords and it went to Pahl Livestock Ltd for \$40,000. The top-selling horse was a Palomino owned by Lorne Davey of Davey Cattle Co. of Wilkie, Sask and went to Jim Randle for \$12,250.

Lee Hart





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## ANIMAL HEALTH

# Beef cows get mastitis, too

Early treatment can save the udder, and plan to cull susceptible animals



**ROY  
LEWIS**  
**ANIMAL  
HEALTH**

Even though we think of mastitis as more of a dairy disease, beef producers still need to be vigilant for the condition in their herds. With higher milk production and cows being retained in herds longer, both these factors have a tendency to increase mastitis incidence. Mastitis cases can be smouldering during the long period beef cows are dry (not raising a calf) and flare up right at calving.

Mastitis or inflammation of the mammary gland results in swelling in the infected quarter together with heat and soreness. Affected cows may have a guarded walk because of the pain. If a severe infection or when more than one quarter is involved the cow may be febrile (feverish) and depressed. The sooner we initiate treatment the better.

## TREATMENT APPROACH

Stripping (hand milking) out the infected milk together with sys-

temic antibiotics such as penicillin and non-steroidal anti-inflammatories (NSAIDs) as well as treatment with approved products into the udder is my preferred method. This has the greatest chance of success.

If in stripping the quarter out you detect air, these are often the serious infections. The bacteria produce gas with toxins and can be life threatening. Unlike dairy cattle where we must consider milk withdrawal this is not an issue with beef cattle so using the dry cow treatments is an option.

The dry cow therapies have much longer effectiveness. They pose a viable option for beef cattle, which may be harder to treat. Make sure you comply with any slaughter withdrawal times as dry-cow infusions have slaughter withdrawals ranging from 30 days and longer. Follow your herd veterinarian's recommendations, as they may need to examine and initiate intensive therapy for cows that are very sick.

It may be necessary to poultice the infection to the outside if a large abscess develops. In severe cases the infection will wall itself off and the whole quarter may slough off. The cow may totally recover

and the problem is eliminated for next year but we wonder if other quarters are predisposed. The cow probably should be shipped.

Calves seem to avoid sucking the affected quarter(s) so I personally don't worry about them becoming sick from infected milk. Keep an eye on their flanks though to make sure they are getting enough milk. If the mastitis makes the cow physically sick their milk production will drop dramatically and the calf may need to be supplemented. In severe cases the calf may need to be orphaned to another cow as the udder may dry up completely.

## MAY NOT BE DETECTED

Many times mastitis in beef cows is not caught soon enough or there is a smouldering infection which starts after weaning and becomes clinical when the cow calves the following year. These are chronic infections and the odds of clearing them up are very rare indeed.

My advice — either ship the cow or attempt to dry up the infected quarter. It has been found a three-teated cow will compen-

sate for milk production and produce almost as much milk as if all four quarters were functional. Talk to your veterinarian what they would recommend.

There are many concoctions, which appear to work. Varying concentrations of silver nitrate, copper sulfate and other products have been tried. See which one has worked for your veterinarian. The most ideal time to do this is after weaning when the cow is naturally drying off.

When a cow is producing milk it becomes difficult to dry one quarter while expecting the others to keep producing. Once the quarter is chemically dried off it will scar down and should not produce milk again, thus eliminating the chance for reoccurrence.

In my experience two groups have a higher incidence in the beef herds. The younger, good-producing cows that have a tendency to leak milk at or around calving, and the old cows with the low-slung broken-down bags are the other group. Good selection for udder and teat confirmation goes a long way to preventing mastitis problems further down the line.

Cows with the larger — what I

call "coke bottle" — teats are not only a bother because the calves have difficulty sucking but they often have quarters which develop mastitis. Culling older cows that develop the poor teat and udder conformation (broken-down suspensory) will eliminate problems before they develop. These cows become very evident at calving and it becomes labour intensive getting the calf to nurse. A good option is to move their calf to another cow if the opportunity presents itself.

Never ever cut the teat end off or lance into the udder to drain an abscess. The udder and teats have a very good blood supply and blood loss can be very severe, even causing death.

By proper selection of replacement stock with good udder conformation and being vigilant and calving in a clean area, mastitis can be kept to an absolute minimum on beef farms. If you do observe a case be aggressive with treatment on advice from your veterinarian as most can be saved.

*Roy Lewis is an Alberta-based veterinarian specializing in large-animal practice. He is also a part-time technical services vet for Merck Animal Health.*

## RANCHER'S DIARY

# Spring coming as water begins to run

It is a good time of year to do some fencing and clean up around the corrals



**HEATHER  
SMITH  
THOMAS**

FEBRUARY 23

Last Tuesday Michael, Nick and Robbie started replacing the old, falling-down fence along our lane. Michael used the backhoe to dig out chokecherry trees and old fence posts. Lynn went to town for a doctor appointment to have his hip checked; the doctor wants him to have an MRI to try to figure out the problem.

The next day the guys got the rest of the posts set, but weather was terrible on Thursday, with wind, rain and hail, and they didn't work on the fence. The storm abated by Friday and they put up net wire. They got that project finished, and started sawing out brush in Fozzy's old pen by the creek, so we can move Sprout into that pen. She'll have more room, and trees for shade. We can then move Rishiam into Sprout's pen. We need his pen again for calving.

Yesterday I cooked lunch for the fence crew again. They burned the big pile of brush/trees they sawed out of the creek pen, and began re-establishing the hot wire around the old jack fence to keep Sprout from chewing on the fence. Today they finished, hung the gate, and I fed them lunch again. Andrea helped me trim Rubbie and Veggie's long feet. In the afternoon Lynn drove to town for his MRI.

MARCH 5

Last week our second load of oat/barley hay arrived, and Michael unloaded the truck at the upper stackyard with his tractor. The mud made it difficult for the truck to get out of the stackyard but Michael was

able to pull it partway, then push it the rest of the way out to the county road.

The next day we worked cows. Michael and Carolyn vaccinated theirs early morning, luring them into the corral with their feed truck. They were able to get Alfonzo's wild heifer captured. She came into their field last fall when Alfonzo and friends rounded up his cattle off the range. Although Alfonzo rode through the field and tried to get her out but she just wouldn't come. Michael and Carolyn told him they would bring her home the next time they had their cattle in the corral.

The heifer lived with their cattle all winter. The first opportunity to capture her was when they put the herd into the corral to give their cows pre-calving vaccinations. Knowing she would try to crash the fence or jump out, the first thing they did was put her and another cow in the trailer. The old gentle cow led her into the trailer and then turned around and came back out, enabling them to slam the door and contain the wild heifer. After they vaccinated their cows, they hauled the heifer home to Alfonzo's place.

Meanwhile, we rounded up our two groups of cows and were ready to vaccinate them by the time Michael, Carolyn, Nick and young Heather finished with theirs and came to help. After vaccinating ours, we vaccinated, deloused and tagged the 16 heifers, giving them their permanent brisket tag numbers, dehorned the two that had horns, then vaccinated the two yearling bulls from the back corral.

Saturday Andrea and Robbie used chain saw and brush nippers to cut off all the little stumps in the new pen. They put Sprout into that pen, and moved Rishiam into Sprout's old pen.

We had several days of snowstorms and colder weather, then melting snow and mud. Andrea moved some of the big bales (with the tractor) to a drier area of the stack-

yard. She did it early one morning while the mud was a little frozen, so she wouldn't get the tractor stuck.

Michael has been miserable with an abscessed wisdom tooth. It needs to be pulled, but the dentist put him on antibiotics for a week. Yesterday the guys finished setting posts and hanging new gates to replace the old wood panel and broken aluminum gate that we used to drag across the driveway to block it when we moved cattle back and forth from the calving pen to the barn. I fed everyone lunch, but Michael was limited on what he could eat, with his tooth bothering him.

This evening we went to Andrea's house; she cooked a lasagna dinner to celebrate our 50th anniversary. It was fun to reflect back over the many years here on Withington Creek — through good times and adversities — grateful for our wonderful family.

MARCH 15

Last Sunday was warm. Snow continued melting. When Andrea, Robbie and I fed cows there was water coming into the irrigation ditch from the big draw behind Andrea's house, overflowing into the lane by the creek, starting to wash out the road. We had a shovel in the feed truck and diverted the water. By midday there was a lot of water running down the draws on the other side of the canyon, filling ditches along the Gooch place. Water was coming down into our ditch and flooding across heifer hill — starting to create a gully. Andrea, kids and Robbie had gone to town for a friend's birthday party so we called Nick, who helped Lynn put a dam in the ditch and divert the water to the creek.

Monday Michael, Nick and Robbie finished rebuilding the fence in the little crowd pen at the end of our running chute, setting gateposts in concrete and hanging a metal gate to replace the old broken pole panel.



Columnist Heather Thomas and her husband Lynn of Salmon, Idaho were joined by their family in March to celebrate their 50th wedding anniversary.

Michael, Nick and Robbie started a custom fence job near Baker. Michael is now on a stronger antibiotic to try to clear up the tooth abscess (he had an earache and fever). On Wednesday the dentist pulled it, but he was still miserable and unable to eat — trying to subsist on a liquid diet and still work. He's doing a little better by today.

We all had supper at our house after Andrea got the kids back from Mark. I was finishing chores as they got here, so Sam and Dani helped me feed heifers with the new cart Robbie made. He bolted one of our hay sleds onto a little four-wheeled cart. It's easier to pull than a sled, now that the snow has melted, and holds more than our wheelbarrows. Lynn went to the doctor today to get results from his MRI. Good news! He doesn't have arthritis nor a worn-out hip socket — just damage from an old injury. So he doesn't need a hip replacement. The doc thinks physical therapy may help.

*Heather Smith Thomas is a longtime Grainews columnist who ranches with her husband Lynn near Salmon, Idaho. Contact her at 208-756-2841.*





# How to talk with your boomer parents

Here's some tips that may be helpful to do just that



ELAINE FROESE

As a Hudson Institute Certified coach I've been taught to always ask, "How old are you?" This is not rude. This is a helpful piece of information to assess what key issues need to be talked about. Scott Zimmer of Bridgeworks ([www.generations.com](http://www.generations.com)) has helped me with decoding helpful language for communication between the generations. Here's some of my gleanings from them that may be helpful for talking to your boomer parents.

**The stages by ages:**

Those born before 1946 are "traditionalists." These folks have a "silent approach" to communication and typically avoid conflict. I'm a baby boomer born in 1956 with optimism and a competitive nature. Boomers are those born between 1945 and 1964, and there are a lot of us! We tend to be idealistic and young at heart. Perhaps your boomer father thinks he is still 21, and he hasn't grasped the reality that he is 65! He also does not accept that there needs to be some changes in the farm's management.

Scott Zimmer is a farm kid who is a generation X (gen-Xer) born between 1965 and 1979. Gen-Xers were told that they would never do as well as their parents. Boomers saw a man walk on the moon in 1969, yet gen-Xers saw NASA's failure with the Challenger crash disaster. What is important to note is that the world affairs that impact us during

our formative years may help shape how we perceive stress and this impacts how we communicate.

The millennials (my children) arrived between 1980 and 1995. This group is highly driven, tech savvy, collaborative in nature, and socially adept. They want choices, efficiency, integrity and customization. One size does not fit all!

Then gen-edge folks (1996 onward) are the new kids on the farm who can really process many kinds of information quickly, and may be faster at technology than the millennials.

So what does this mean for farm family communication?

1. We all have different styles or perceptions due to the way we perceive our world, our reality.

As a boomer parent I tend to be optimistic about the future. Your dad may be idealistic in thinking "Don't worry, it will all work out," while you as a gen-Xer age 37 to 51 are saying, "It is time for some change in ownership, NOW! Let's get this on paper."

2. You might need to present your ideas to your boomer parents in a different way, and with respect. Be aware of HOW you are presenting. Our millennial son came up with the great idea of planting hemp on our certified seed farm. His boomer father said, "Show me the business plan and the sales contract." The result is three years of hemp harvest with great returns (and some growing frustrations in the field).

3. Think in terms of evolution with the intent of making things better with your communication, not revolution. Boomers have seen tons of change in their lives, but still consider changes to their personal business on the farm with great care. They don't want to waste

money, see failure of the next generation, or divorce mucking up their ideal plan. Succession planning is a process, not a one-time event, so learn to communicate to boomers about the benefits of the shifts of management, labour and ownership that you are seeking.

4. Listen more. All generations need to do this. Eighty per cent of great communication is effective listening. Don't make assumptions. Question everything and then listen carefully to the response. Our farm just got three-phase power in 2015 after better research showed that the cost would be OK with the cash flow. The new ventilation system powered up in our seed plant has everyone breathing easier with less dust. This never would have happened if Manitoba Hydro had not listened to our needs. Listen deeply. Paraphrase what you hear and feed it back to the other generations. Do not assume things. Ask "what if?" questions and then listen!

If you are 37 to 51 years old, and a gen-Xer, Scott Zimmer suggests you are a skeptic and immensely independent. Boomer dads need to understand this in order to speak and behave in ways that build trust and create certainty.

If you are a competitive boomer dad, perhaps it is time to remember what it felt like when you first owned something, e.g. land, and felt the independence that your millennial or gen-Xer heir is looking for now.

Respect is a good mode of communication to be transferred by all generations. Some 37- to 51-year-old gen-Xers may be using profane language mixed with anger that is not helping their cause of trying to get transfer agreements in place. If you are using what Zimmer calls an "unfiltered communication style," it

may be time to "clean your filter" and embrace positive, non-profane language tempered with respect.

"What would you like me to do differently in this succession process?" is a great question for all generations to ask. Gen-Xers like to question things. Asking a question is not necessarily judgment. Questions are helpful for exploration and discovery when they are asked with a tone of curiosity.

So, reflect on what your generation can do to have more effective communication with the different generations on your farm team. Zimmer observes that 10,000 boomers turn 65 every day in the U.S. I wonder how many farmers will turn 65 in Canada this year?

Twenty-three per cent of millennials (ages 21 to 36) still require financial assistance from their parents. This rings true for successors who cannot afford to buy all of their boomer parents' farm assets. These successors are looking for a collaborative solution of buyouts, gifting, and fair loans from the founders.

Some boomers are spending 20 hours a week caring for aging parents on top of other roles. So if your boomer parents are really tired from role overload, consider rested times to have fierce conversations that require more energy.

Be kind, be patient, and listen well as you navigate new plans for talking things out with your boomer parents.

Read *When Generations Collide*, by Lynne C. Lancaster and David Stillman.

What is one thing you can do today to communicate more clearly? ✍

*Elaine Froese, CAFA, CHICoach helps families communicate better. She parents two millennials, one who is her successor. Visit [www.elainefroese.com](http://www.elainefroese.com) for tools. Invite Elaine to speak at your next ag association event. Buy her books for your farm team.*

# Country à-la-carte Bed and Breakfast

Go for the food — stay for the peace and quiet

BY EDNA MANNING

Jeff Janssens combined his love of working with the public and his culinary skills to create a successful home-based business when he opened Country à-la-carte Bed and Breakfast near Clavet, Saskatchewan in 2013.

Janssens had been in sales for a number of years in Regina where he and his wife Michelle and their three children lived. When the children left home, the time was right for him to make a career move. "Michelle reminded me that one of the avenues I'd always wanted to explore was the culinary industry," he says.

Jeff was hired on by a highly acclaimed chef in Regina, who saw his potential. "What he taught me was invaluable. Within a year of getting into the industry, I was doing menus and running the kitchen. I'm not tooting my own horn; I'm giving credit to the chef. The training was unbelievable," he says.

The next 12 years in the industry provided Janssens with all the experience, skills and confi-

dence required to establish his own business.

In 2013, Michelle's work required her to move to Saskatoon. The Janssens began house hunting and came across a new home on an acreage near Clavet, about 20 minutes from Saskatoon. It would be perfect for the bed and breakfast operation Jeff envisioned. The bi-level has three spacious bedrooms on the lower level, along with bathroom and common room, and a large kitchen and their living quarters are on the upper level. Guests can enjoy the use of an outdoor hot tub, a beautiful fish pond and a firepit on five acres of wide-open prairie.

"People love the peace and quiet of the country," Janssens says. "But we are close enough to the city for clients who have business there or want to attend cultural events."

The Janssens purchased the house in August 2013 and by November of that year had all the licensing and paperwork required to open the bed and breakfast operation.

"Once I was operational, my biggest challenge was simply getting rolling. I was used to working in a busy environment, and being

involved in the social aspect of the community. I didn't know anyone out here, and was going stir crazy. It was a difficult winter. Yet I knew, like any new business, the first year would be a building process," he said.

Janssens started a website, signed up with B & B Canada, Trip Advisor, Sask Tourism, and Air B & B ([www.airbnb.ca](http://www.airbnb.ca)). It didn't take long to get support locally as he also does catering and dinner service.

Janssens prides himself on picture-perfect presentation of his meals — from side dishes to entrees and desserts. "Doing everything from start to finish allows me to be as creative as I want to be. It's a lot of fun," he said.

"I make all my sauces fresh from scratch. I use vegetables from my garden and at the end of the season I freeze a lot for winter use."

Country à-la-Carte Bed and Breakfast is located 18 km east of Saskatoon on Highway 16. For more information, visit [www.countryalacarte.ca](http://www.countryalacarte.ca) or phone 306-514-8570. ✍

*Edna Manning writes from Saskatoon, Sask.*



PHOTO: COURTESY JEFF JANSSENS



PHOTO: EDNA MANNING

**Top:** Jeff Janssens combined his love for people and cooking and opened a rural bed and breakfast.

**Left:** The bi-level sits on five acres of open prairie.



# Working Horse Field Day

Annual event demonstrates teams of horses and their drivers working together

BY EDNA MANNING

On May 28 the second annual Working Horse Field Day will be held at Dale and Joanne Janzen's farm near Dalmeny, Sask. Teams of horses and their drivers will take to the field to demonstrate plowing, take part in bale sled races, chore team competitions and much more.

"If the horses are doing work you want done, it's a working horse, whether they're 30-inch miniatures or 2,500-pound Belgians or Clydesdales," said Mel Henry, one of the event organizers.

Mel and his wife Gay and a number of other enthusiasts had attended similar field days in Bjorkdale, Rama, and Borden, Saskatchewan that are sanctioned by the Saskatchewan Working Teamsters Association (SWTA). The SWTA is noted for "promoting the practical use of draft animals for pleasure and profit."

Organizers felt a Working Horse Field Day in the Saskatoon area would be well received. "The last 15 to 20 years have seen quite a resurgence in interest in the use of animal power, whether it's for entertainment or for practical purposes," said Mel.

Mel and a group of volunteers met last year to discuss details. "Word went out and people offered to bring equipment and to help in many ways. It was a community

effort — the whole area got involved and things soon fell into place," said Gay. The date was set for May 30, 2015.

"We rented a tent and arranged for a concession truck to provide food. Gay put together a 50-50 draw and a silent auction with items donated by people in the area," said Mel.

Last year 18 teams and their drivers came from surrounding areas as well as locations farther away like Humboldt, Preeceville and Rama to participate in a variety of activities for the one-day event.

"We provided offsite parking — cars were led to the parking lot by riders on horseback and then taken to the site by a horse-drawn wagon," said Gay.

The morning began with a horse-drawn plowing competition using a Sulky plow, and harrow and discer demonstrations. "Niall Campbell from Bjorkdale and I put on a demonstration with a walking plow. Rae Ottmann from Martensville brought his cultivator and a team and demonstrated with that," said Mel.

The afternoon's activities included a farm chore team competition that requires horse and owner to pull a large tractor tire around a four-pylon obstacle course. "From there you had to hook onto a wagon that was located in a specific marked spot. Then there was another obstacle course to go through. When you brought the wagon back, you

had to bring the back wheels into the exact spot it was first parked. This takes skill and training on the part of the horse and driver," said Mel.

The bale sled race was another event with two teams per heat. "You hook your team to a sled, go around an obstacle, stop and load two bales; go to the next stop, load two more bales, then come back and unload the two bales at a specific spot, drive ahead and unload two more. It's a timed event and you have to make sure the bales don't fall off, or you lose points. Horse and driver have to work together," Mel said.

This year organizers are planning on adding a water barrel race. A barrel on a flat stoneboat is tied down and taken by a team around a specified stop-and-go course. The winner is the team with the most water left in their barrel.

The event drew about 300 visitors last year. "The oldest person in attendance was Mr. Verdun Duterte from Cudworth — he was 99 years old," said Mel.

"The day brings back a lot of memories for people," said Gay. "From what we learned last year, we hope this year will be even better."

There will be four Working Horse Field Days this year in Saskatchewan communities: May 14 and 15 — Rama; May 28 — Dalmeny; June 4 — Saskatoon Livestock Sales in conjunc-



Gay and Mel Henry helped to organize the event.

tion with the Saskatchewan Pleasure Driving Association will have a Chore Team Competition; June 18 and 19 — Bjorkdale. On September 26, there will be a threshing demonstration at Borden.

For more information about the Dalmeny event, phone Mel Henry at (306) 221-0972 or Ken Crush at 306-229-4823. To learn more about the Saskatchewan Working Teamsters Association, visit [www.swta.ca](http://www.swta.ca).

Edna Manning writes from Saskatoon, Sask.

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# People of the Prairies, unite!

Join in solidarity with people from Arizona and have a potluck dinner — just to prove a point



AMY JO EHMAN

I am about to break the law. Don't be alarmed, I doubt it will land me in jail. In fact, it is quite possible the law will be changed before this appears in print and my actions will no longer constitute a misdemeanour. In the meantime, I feel obliged to break this law on principle. Should I be called before a judge I will argue: a) It's a silly law; b) Many people have already broken this law with relish; and c) This law is in poor taste, literally.

As I write, I am in Arizona where it is illegal to potluck. You heard that right. It is against the law to hold a potluck in your own home. How silly is that? Is there anything more genial, more stress free, more neighbourly than a potluck? How can that be a bad thing?

As you might guess, I am a big fan of potlucks. Few events more perfectly illustrate the random synchronicity of the human spirit than a perfectly balanced potluck, in which meat dishes, salads, finger foods and desserts arrive at the table

without so much as a schedule or a plan. Potlucks are, by definition, soul food. (This "law of potlucks" is reinforced by its occasional exception. I once attended a potluck to which almost everyone brought dessert, and almost every dessert had chocolate. That must be more rare than winning a lottery, and just as sweet.)

I don't know about the citizens of Arizona, but I'm quite sure Prairie people have been holding potlucks since the arrival of the first pot. In the days of the pioneers, potluck picnics and church socials brought the community together at a time when neighbours lived most of the year in rural isolation. Whether they spoke English or German, Icelandic or Ukrainian, a potluck united everyone in food and friendship.

The injunction against potlucks in Arizona came to light recently when residents of a retirement community in Apache Junction, near Phoenix, held a potluck dinner. Someone reported their transgression to health authorities, who put a lid on their potlucks. This was done under the auspices of state health and safety regulations for the safe handling of food, adopted in 2006. The law requires minimum standards and inspections to ensure food

is free of "unwholesome, poisonous or other foreign substances and filth, insects or disease-causing organisms (...)" in any warehouse, restaurant or other premises."

In the case of potlucks, the law provided for one exception: "a non-commercial social event that takes place in a workplace, such as a potluck." In other words, potlucks at the workplace are A-OK but not at home, church, school or retirement park. Obviously, this law was never meant to be. It's a good example of bad writing, perhaps a case of having too many fingers in the pot. As soon as it came to light, members of the state legislature approved an amendment removing the mention of "workplace" and thus making an exception for potlucks in general. As I write, it is awaiting approval by the Senate before it can be signed into law.

In the meantime, please join me in solidarity with the people of Arizona by throwing a potluck, just to prove that sharing home-cooked food needs no regulation to be good for the stomach as well as the soul.

Here's a salad I've taken to several potlucks, legal or otherwise.

*Amy Jo Ehman is the author of Prairie Feast: A Writer's Journey Home for Dinner, and, Out of Old Saskatchewan Kitchens. She hails from Craik, Saskatchewan.*



PHOTO: AMY JO EHMAN

### CHICKPEA AND FRUIT SALAD

- |                            |                                 |
|----------------------------|---------------------------------|
| 1 clove garlic             | 1/3 c. olive OR canola oil      |
| 1-1/2-inch piece of ginger | 2 peaches OR mangoes            |
| 1/2 tsp. salt              | 2 apples                        |
| 1 tsp. each cumin          | 2 c. canned chickpeas           |
| AND chili powder           | 5 green onions, thinly sliced   |
| 2 tbsp. lemon juice        | 1/4 c. fresh coriander, chopped |
| 2 tbsp. white wine vinegar |                                 |

Chop and smash together the garlic, ginger, salt, cumin and chili powder until it forms a fragrant pulp. I use a mortar and pestle; mashing it between two forks is also effective. Stir in lemon juice and white wine vinegar. Drizzle in oil, whisking constantly. Peel and pit the fruit. Chop into a small dice about the size of a chickpea. Mix together fruit, chickpeas and green onion. Stir in the dressing. Cover and refrigerate to marinate at least an hour or two (or more) before the meal. Just before serving, stir in the fresh chopped coriander.

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# Raised-bed gardening and Marilyn potato

Ted shares info on both from fellow gardeners in Manitoba and Alberta



There's an Australian song titled "G'day, G'day" that was first recorded in 1970 by Slim Dusty, an entertainer from the land Down Under. It says whenever you're stuck for what to say look 'em right in the eye and say G'day. Since I'm a hat person myself I, Ted, can honestly say I love the hats that Australian men wear and kinda think I'd look pretty good in one. My personal headband size is 7-5/8 and I have a double crown. My dad used to say to me: you've got good understanding.

Most gardeners may have heard of square-foot gardening, so got to wondering whether some of our readers out there in *Grainews* garden country have raised beds and/or practise square-foot gardening. That's a subject I'm touching on today. Also Marilyn is on the agenda. Not Marilyn Monroe but Marilyn potato.

Along with a tip of my hat I'm saying G'day, rolling up my sleeves and turning words into sentences. You're all a good bunch of people and are as welcome as sunshine whether you're from Canada, Australia or wherever you happen to be. Thanks so much for coming by to visit with me on the page.



## MEET RUTH — A RAISED-BED GARDENER

I met up with her right here at my hometown turf where Ruth Deegan has been gardening in raised beds for 11 years. It was a chilly, blustery late-February afternoon when I stopped by. Ruth was trimming off some of the crusty snow from her two 4x8-foot- x18-inch-high raised garden beds in Portage la Prairie, Manitoba. They're made from three six-inch untreated cedar boards with metal bars on the inside for reinforcement and have stood up remarkably well. One of the first things Ruth said to me is, "Raised-bed gardening is very easy on my back and I have no other place to have a garden. That's why we (she and husband Francis) have them. I have a spiral trellis onto which cucumbers and pole beans are strung. They do really well and so do lettuces." The growing medium is a

combination of good-quality garden loam and plenty of compost with amendments added each year. Ruth highly recommends raised-bed gardening to anyone who's never tried it previously but "just make sure they're placed in a spot that catches lots of sunshine."

## SQUARE-FOOT GARDENING ON RAISED BEDS

The beauty of square-foot gardening is the ease with which raised beds can be divided into a size and shape to accommodate gardeners of all ages and levels of experience. Start small to fit your kind of gardening situation and personal needs regardless of your age and location. This includes senior gardeners with limited physical mobility and urban dwellers. The latter can consider a small 4x4-foot-square growing block containing 16 identical-size squares. Depending on choice of plants, you can grow over 100 veggies and flowers combined in a single described block. Each square foot can be planted with a different crop, yet produce an amazing amount. Such a garden based on squares instead of garden rows is a form of controlled planting and yet results are phenomenal. Weeding is simplified, it looks neat and attractive and soil isn't packed since it's never walked on. However, do make a walking space around all four sides of the block. Line such a path with unsprayed grass clippings, mulch, dry hay, straw, ground corn cobs or shredded newspaper.

Here are some planting examples. A pepper plant needs at least 12 inches of space between the next one so you can plant one pepper smack dab right in the middle of the square. Likewise, a non-vining determinate bush tomato can also be planted in the middle of a single square. Both a pepper and tomato can be edged in adjoining squares with fast-maturing veggies such as lettuce and radishes that will be ready to harvest long before the pepper and tomato need more space. Leaf lettuce seeds can be spaced six inches apart and radish seeds two inches away from the next one. Just think of the seeds you'll save and thinning is avoided. If you don't trust every seed to germinate, merely plant two or three extras and thin out the excess if all seeds come up. So what veggies require less space? Look to beets, carrots, kohlrabi, green onions and sets and of course radishes and lettuce as mentioned, plus many other salad greens. Seeds of aforesaid can be spaced a mere three inches apart. Most green or yellow bush beans require just four inches between plants. If all germinate a grand total of nine to 12 plants fit nicely into one square foot. That's a lot of diversity and good eating with no wasted space.

It's also easier to conserve moisture and weeding is minimal with less labour. It's been shown that a square-foot garden requires only 20 per cent of the space and work compared to conventional single-row gardens, yet the same amount of harvest is produced.

Climbing indeterminate tomatoes, cucumbers, summer squash and small melons are vining and best grown vertically to save space and avoid sprawling into adjoining squares. Provide sturdy trellising to support and secure plants as they proceed upward. A trellis structure is best placed on the north side of each block of 16 squares so as to not block out the sun. If you seek filtered light, the trellis can be located where you feel is best. Just think of it! You can harvest tomatoes, pole beans and cukes and clip sweet peas standing up. Many of us have always gardened a certain way but that doesn't mean we can't change. There are good reasons to be open and receptive to gradually going in the direction of at least some form of raised beds and square-foot gardening.

## THANK YOU LUCY

Lucy Zhu-Lee is with Sales and Marketing Business Development at Edmonton Potato Growers Ltd. I want to say thank you to Lucy for kindly providing a list of B.C. and Alberta garden centres and greenhouses that sell Marilyn seed potato.

- They are:
- De Herdt Gardens Ltd., Barrhead, Alta.
  - Devan Greenhouses, Abbotsford, B.C.
  - Hole's Greenhouses and Garden Centre, St. Albert, Alta.
  - Home Hardware, Fort Saskatchewan, Alta.
  - Maplewood Acres, Armena, Alta.
  - Prairie Gardens and Greenhouses, Bon Accord, Alta.
  - SSOL Gardens, Kamloops, B.C.

Also, look for Marilyn seed potatoes sold at many farmers' markets around Edmonton. A lot of home potato growers should be mighty happy. As I write this column, no garden centres in Saskatchewan or Manitoba had, as yet, been listed that sell Marilyn seed potato.

## POTATO PEEL WATER

This is one of the finest cleansing and healing drinks, beneficial to both people and plants. Scrub the outer skin of three pounds of potatoes then peel coarsely, removing about one-quarter inch of the outside. Put these thick peelings in an enamel, stainless



These two raised beds are both 120 cm wide x 240 cm long x 45 cm high (four feet wide x eight feet long x 18 inches high). Each bed provides 32 planting squares. Metal sections lying on soil surface are inserted into a trellis pole so vining crops such as pole beans, cucumbers and sweet peas can be strung up and attached to grow vertically. Those with mobility issues and urban gardeners in confined spaces can create a half-size 4x4-foot-block raised bed that contains 16 square-foot spaces for planting.

steel or heatproof glass saucepan (not ordinary glass). Add four cups cold water, place on a medium-low heat element and simmer gently with the lid on for 40 minutes, but no longer. Do not add any salt or any other seasoning. This prolonged simmering releases an abundance of alkaline minerals. Strain off the potato peel liquid and dilute it down 50/50 with distilled or spring water. May be taken at intervals as described over the course of a day or two until finished. I am not a doctor and this is provided for your information and interest.



*This is Ted Mesityon the Singing Gardener and Grow-It Poet from Portage la Prairie, Man.© Before I acquired green thumbs they were preceded by calloused palms and dirty fingernails. Actually I have to keep my nails cut quite short, as long fingernails interfere with forming guitar chords. At least for me they do. Still singing my Canadian Weather Song and O It Must Be the Tomatoes. My email address is singinggardener@mts.net.*

LOVE HEARING FROM YOU

Do you have a story about a farm- or home-based business? How about some household management tips? Does someone in the family have a special-diet need? Share some of your recipes and some meal ideas.

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Sue

CONVERSATION WITH A SEED POTATO GROWER

Thanks to Jake Hoogland of Millet, Alberta, just south of Edmonton for the great 'potato conversation' we shared over the telephone. Here's just a brief part of what we discussed. Jake doesn't grow Annabelle. I asked whether he grows Marilyn seed potatoes and what's the difference between it and Annabelle and he answered, "I do grow Marilyn, yeah, sure, you betcha." In comparison or similarity to Annabelle, Jake provided the following opinion. "I would say there's little difference. Sometimes maybe Annabelle has nicer shape and prettier by looks. Marilyn is kind of in between a finger-

ling; smooth and fatter in size. Tubers can be longer too. It's kind of a specialty mid-season yellow-skin, yellow-flesh, waxy-type potato with firm texture especially good for salads. Has wonderful flavour and also a good one to roast or boil. There are variables in shape and size of course, with possibly 50 per cent of the tubers. It all depends on soil conditions." This year Jake is growing five acres of Marilyn for seed purposes. "I think I'm the only seed grower who grows Marilyn." Hoogland Farms grows and ships many potato varieties by the truckload to commercial growers.

Marilyn is a firm potato with yellow skin, yellow flesh and great flavour. When cooked this variety holds together well and is the perfect spud when making wonderful potato salads. Keep your best-ever potato salad recipes handy.

PHOTO: COURTESY EDMONTON POTATO GROWERS LTD.



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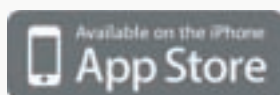
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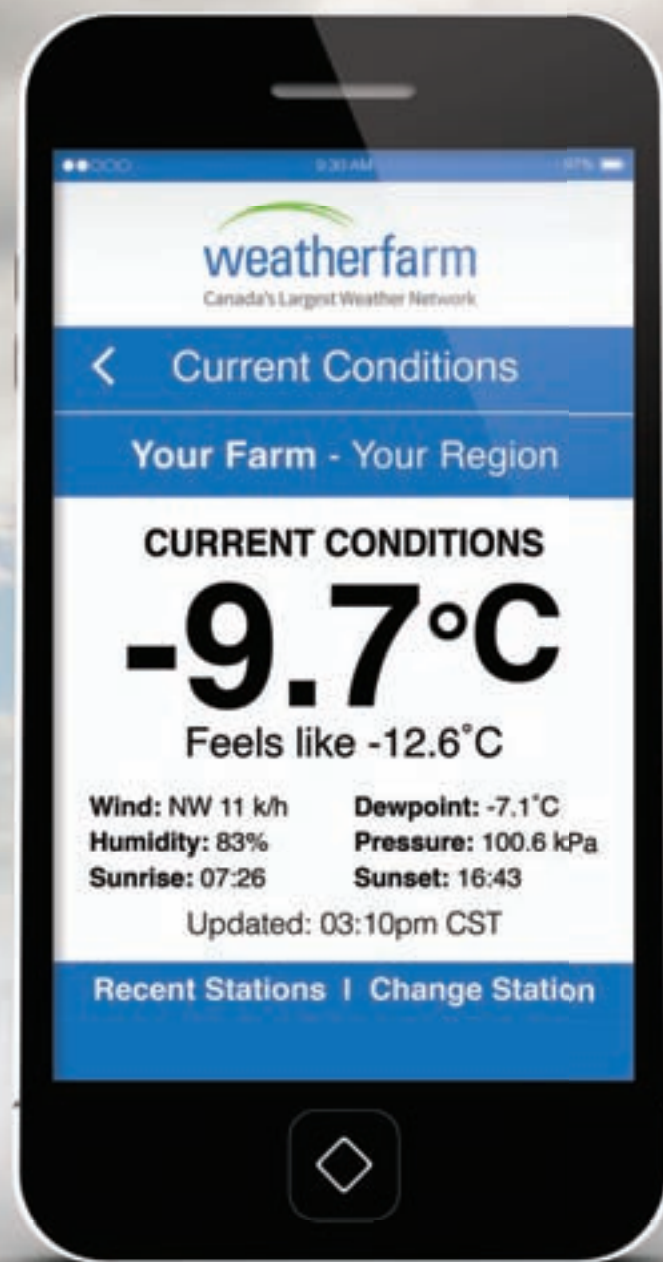
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