

Grainews

PRACTICAL PRODUCTION TIPS FOR THE PRAIRIE FARMER

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FIVE REASONS TO HOLD OFF ON SWATHING CANOLA

When exactly is the right time to cut that swath? Here are the reasons to wait



PHOTO: LEEANN MINOGUE

BY JULIENNE ISAACS

According to Angela Brackenreed, agronomy specialist with the Canola Council of Canada, there's been a real shift in the industry when it comes to canola swath timing.

"I think there's a much better understanding of the economics and yield benefit of waiting to swath," she says. "My impression is that the early swathing that happens is done out of logistic necessity."

If you haven't gotten on the bandwagon yet, here are five reasons you should consider waiting to swath your canola this fall.

1. THE YIELD BENEFIT

In a 2013 demo study conducted by the Indian Head Agricultural Research Foundation, research manager Chris

Holzappel and team saw a substantial yield gain by postponing swathing from 15 to 20 per cent seed colour change to 40 to 50 per cent seed colour change.

"But we may have even benefited from giving it a few more days to make sure we were in that 60 to 70 per cent range, which I'd consider optimal," says Holzappel.

"As expected, seed weights were lowest with swathing at the 20 to 30 per cent seed colour stage (3.14 g per 1,000 seeds) and postponing swathing by only six days resulted in a 10.5 per cent increase in seed weight, thereby explaining the higher yields observed at the later swathing date," states the report based on the IHARF study.

The Canola Council recommends waiting until 60 per cent of seed colour change to swath; Brackenreed points to CCC data showing the potential to capture greater than 10 per cent yield potential by delaying swathing.

2. HARVEST MANAGEMENT

Brackenreed says harvest management is one of the biggest benefits to waiting to swath.

"On some people's operations it isn't feasible to swath all at the same time so delaying some fields can be a huge benefit for harvest management," she says.

Producers should start swathing in the most mature areas while allowing thinner crop stands to mature, targeting swath timing to where the majority of the yield is.

"It really depends on the architecture of the plant stand that's there," she says. "The lower the plant stand, if you seed it at a lower rate or you have poor establishment, there's a bigger benefit to waiting."

However, "this is easier said than done," says Brackenreed. A drive around a quarter section or the field

can provide an indication of the crop's staging, but producers should also get into the field and open some pods to examine colour.

"If you get everything sown all at the same time it's a tight window, but if your seeding is spread out you could start at about 50 to 60 per cent change, but it's hard to delay until that point," says Clayton Harder, vice-president at the Canola Council, who farms near Narol, Man. Depending on the forecast, Harder waits to cut until an average 60 per cent seed colour change.

"In reality, fields are variable and it takes time for growers to cover all of their acres, so getting rolling somewhere in that 40 to 50 per cent range is probably reasonable and any negative impacts on yield or quality are likely negligible at this stage," notes Holzappel.

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Wheat & Chaff

STAMPEDE

BY JERRY PALEN

"This pickup is a disgusting hybrid! It's half pickup and half trash can."

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HEARTS

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When you renew your subscription to *Grainews*, be sure to ask for six Please Be Careful, We Love You hearts. Then stick them onto equipment that you, your loved ones and your employees operate. That important message could save an arm, a leg or a life.

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LEEANN MINOGUE

saying things look good here, but, (knock on wood), as of early July, they do.

Almost all of our crops look nice. I have the best garden I've ever had, and the Saskatoon bushes we planted more than a decade ago have finally decided to produce fruit for the first time.

I know things aren't as rosy for all *Grainews* readers. I've seen your photos of hail in Alberta and excess moisture in Manitoba. I have sympathy for your situations. But I'm sure you won't begrudge us our (to date)

good fortune — we all know farm life can turn on a dime. A few years ago, I posted photos of our lush, tall canola crop on Facebook in the morning. By suppertime, hail had wiped out the whole field.

But, for today, things are great. Whether or not your crops, gardens and berry patches are thriving this summer, I hope you're enjoying the season. There really is no better place than the Canadian Prairies to spend the month of July. Leeann

PHOTO: LEEANN MINOGUE

I rolled the peas (well, some of them) back on May 22.

PHOTO: LEEANN MINOGUE

By June 23, this plot of CDC Inca peas was growing in thick.

PHOTO: ROWENA EDDY

Our neighbour, Rowena Eddy, was driving by our farm and took this shot for us on June 28.

On June 23 our CDC Impower lentils were just about flowering.

The berries in this shot weren't quite ripe, but by late June, many of our Saskatoons were the size of blueberries and nearly as sweet.

PHOTOS: LEEANN MINOGUE

In early July, I started refining my pie-making skills.



FARM SAFETY

When back pain becomes a pain in the neck

Aches and pains are common afflictions of everyday life. Stiff knees, sore feet and back pain are all too common. Back injuries can be chronic (long term) or short term and can affect everyone at some point in their life. Back pain, especially lower back pain, is a common work-related issue that affects many farmers from farms both small and large.

Back pain can be caused by many factors and can affect anyone, young or old. Farmers are especially at risk because work done on the farm can include activities that are factors for developing back pain. Some risk factors for developing back pain include:

- Lifting objects heavier than 25 pounds or repeatedly lifting lighter objects;
- Working with awkward body posture;
- Driving farm equipment for long periods of time that cause your whole body to vibrate; and,
- Slips and falls.

Most lower back pain caused by overexer-

tion is short-lived and usually resolves on its own. However, having back pain for any amount of time can be a real problem. If severe enough, back pain can lead to a hard time walking or sitting, let alone doing any farm work!

What can be done to help reduce the risk of having back pain? There are some easy steps to remember to help reduce the likelihood of spending the next few days in pain.

Start by recognizing high-risk activities. Are you spending an extraordinary amount of time in equipment? Are you lifting awkward or heavy loads? Is there a tripping hazard that could lead to a fall? Once you realize that there could be a potential for creating back pain, take some steps to help yourself.

- Avoid prolonged, repetitive tasks. (Ask somebody to help. Take turns.)
- Practice good lifting hygiene. (Use your legs.)
- Alternate between heavy and light work tasks.

- Take frequent rest breaks.
- Before starting a task, consider how it could be done differently.
- Address tripping hazards.

There are also things that you can do to strengthen your body against the suffering of back pain. Don't wait until you are in severe pain to start! Exercising, strengthening your core, stretching and eating well can not only safeguard against back injury, it can also lead to optimal health.

If you're back pain doesn't resolve itself or is unbearable, seek the advice of a doctor or other medical professional. Don't ignore the pain and hope it goes away. Medical treatment and rehabilitation may enable you to continue working and functioning. By addressing the issue, you could prevent further pain.

For more information about farm safety, visit CASA's website at casa-acsa.ca.

Canadian Agricultural Safety Association, www.casa-acsa.ca

YOU MIGHT BE FROM THE PRAIRIES IF...

By Carson Demmans and Jason Sylvestre



You see footage of gang violence on television and mistake it for highlights of a WHL game.

PHOTO CONTEST

GIVE US YOUR BEST SHOT

Emma Robb sent us this gorgeous photo from Drayton Valley, Alberta. We're sending Emma a cheque for \$25. Thanks for sharing this, Emma!

Send your best shot to 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



AGRONOMY TIPS... FROM THE FIELD

Pulse desiccant dos and don'ts

The devil's in the details when it comes time to desiccate your pea, lentils and chickpeas. And with pulses worth more than they've ever been, it pays to have as smooth a harvest as possible. Here are a few fundamentals to keep in mind:

The first step is to determine the natural maturity of the crop by watching the colour change from green to yellow, as well as the seed maturity. Desiccating too early can lead to yield, grade and quality losses.

Next, make sure you apply your desiccant at the right time of day — ideally in cooler lower-light conditions as you move into the evening. Desiccants work by bursting cells on the plant's leaf surface to release moisture.

Before you spray your desiccant, make sure you're using the right rate and water volume. True desiccant products work on contact, drying down any green material they hit. Spraying with higher water volumes help ensure that you cover all areas of the plant to get uniform drydown.

Keep in mind that pulses have the ability to keep growing and flowering. Applying a systemic product will help shut down the plant's growth and thin out the canopy five to seven days prior to when you'd want to go in with your desiccant.

This agronomic tip is brought to you by Carolyn Ruzicka, agronomic service representative, South Saskatchewan, with Syngenta Canada.

SPRAYER PHOTO CONTEST

I'm giving away a kids book to one lucky winner who sends in a photo of a sprayer in action this summer.

Here are the rules:

- The sprayer operator must be operating safely.
- The photographer must be in a safe place.
- Tell me the name of the operator, and a sentence or two about your farm.
- Email your photo to leeann.minogue@fbcpublishing.com.
- By sending me your photo, you're agreeing to let me use it in future issues of *Grainews* and possibly on our web site.

Here's a sample entry to get you started. My husband took this himself, out in our lentil field on June 27. (Don't tell him, but of course I'm not going to enter his name in the draw.)

It's a good prize. The book is *Planters and Cultivators with Casey & Friends* by Holly Dufek and Paul E. Nunn. It's a "Case for kids" picture book by Octane Press. If you can't wait for the contest results, you can buy the book for your kids at amazon.ca for \$19.

Leeann



PHOTO: BRAD BARLOW

Cover Stories

HARVEST MANAGEMENT

» CONTINUED FROM PAGE 1

FIVE REASONS TO HOLD OFF ON SWATHING CANOLA

3. TAKE ADVANTAGE OF SHATTER TOLERANCE

A slow shift toward straight cutting canola has been made possible by the availability of shatter-tolerant varieties, and Brackenreed says producers can wait even beyond the recommended seed colour change before swathing.

“We’ve seen a real push for later swathing with some of these new shatter-tolerant varieties on the market,” she says. “I’m a proponent of straight cutting and very delayed swathing even up to 80 to 90 per cent seed colour change, but I wouldn’t recommend that if you’re using a conventional variety prone to shatter. You could be inducing a lot of losses for presumably not much gain.”

Jack Froese, treasurer of the Manitoba Canola Growers Association, farms near Winkler, Man. He says his operation is now waiting longer to swath because they’re growing Invigor L140P, a shatter tolerant variety.

But Froese gets right into the field to assess seed colour change before making the decision. “Look for a lighter green look to a yellowish tinge, but make sure it’s not sun scald — check the pod and branch and make sure it’s actually maturing,” he says.

4. QUALITY

Quality is a major benefit to delaying swathing.

“Usually we see better quality as we delay the cut timing,” says Brackenreed.

“The longer you can wait, you’ll get more weight. And the longer you wait you have less greens — seeds will be more mature and give you better quality,” says Froese.

The Canola Council notes that reductions in seed protein and seed oil are observed if swathing takes place before 20 to 30 per cent seed moisture. “Seed oil fatty acids also tend to stabilize near the end of seed development (30 per cent seed moisture), strengthening the argument in favor of delaying swathing to near complete seed maturity,” reads its Harvest Management guide.

5. PRE-HARVEST INTERVALS

Brackenreed notes that an often overlooked benefit of delaying swathing is pest pressure. If producers have to spray insecticide late, they’ll need to consider the pre-harvest interval, or the number of days that must pass between a pesticide application and the time the crop is cut.

The Canola Council provides a handy “spray to swath” chart indicating pre-harvest intervals for fungicides, herbicides and insecticides on its website. Find it at www.canola-council.org.

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



Agronomy specialist Angela Brackenreed says there’s been a real shift when it comes to canola swath timing. More farmers are waiting to swath their canola.



The Canola Council of Canada agronomy specialist Angela Brackenreed says harvest management is one of the biggest benefits to waiting to swath.

PHOTOS: LEEANN MINOGUE

HARVEST TOOLS

Improved tool to determine green seed count

A hand-held roller works, but this device cranks out ready-to-read samples

BY LEE HART

It looks a bit like a meat grinder, but a new device developed by Manitoba farmer Gerry Devloo is specifically designed to crank out information on the quality of canola being harvested.

Devloo, who along with family members farms near Somerset in south-central Manitoba, has developed a canola seed crusher that measures and crushes a sample of 250 seeds so a farmer can determine the green-seed count in the crop.

“It is just much simpler than using the conventional paddle and roller system for crushing seed,” says Devloo. “We take lots of different samples at harvest and it can be slow, and a bit messy using the conventional paddle to collect the desired count and then use a roller to crush the seed. I figured there had to be a better way.”

After a few prototypes later in the farm shop, Devloo came up with the portable, table-top (tailgate top) canola crusher. With four revolutions of the crusher handle, it cranks out a strip of masking tape with a perfectly aligned, already crushed 250-seed canola seed count.

“You just put a cup or a handful of seed in the small hopper at the top of the crusher, crank the handle four times, and you have a crushed measured sample pressed onto a strip of masking tape ready for counting,” says Devloo. “It takes about 20 seconds and you can crush as many samples as you want.” You can crush and evaluate the samples at the kitchen table, or right on the tailgate of a truck in the field.

The conventional green-seed counting process involves filling the rows of tiny seeds cups on a two-by-10 inch plastic paddle with the recommended 250 canola seeds. You lay a strip of two-inch wide masking tape over the aligned seed, and then use a hard vinyl roller to crush the sample to expose colour of the seed flesh. It doesn’t take hours, but it can be a bit fussy getting the seeds in place, and masking tape applied.

With the Devloo crusher it is just a matter of putting half a cup of seed (or desired amount) in the hopper, and turning the crusher handle four times. The device holds a roll of masking tape that feeds into the crushing mechanism. The crusher counts out the desired number of seeds that pass through two notched crushing wheels. Another soft roller presses the crushed seed, in neat rows, onto a strip of masking tape. With each crank, the tape, with crushed seeds affixed, feeds out the back of the device. You just tear off the sample strip and start evaluating the sample.

The durable crusher, retailing for \$775, is made of welded aluminum, with crusher wheels running on heavy duty bushings. Devloo says it is very portable and easy to carry in the cab of the truck.

“It is basically a lifetime unit,” says Devloo. The Canola Crusher was among the Innovation Award winners at the 2016 Canada’s Farm Progress Show in Regina.

For more information contact Gerry Devloo at 204-825-8030 or email: gdevloo@xplornet.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.



The conventional seed-count paddle and roller can be slow and a bit messy.



PHOTOS: LEE HART

With four revolutions of the Canola Crusher handle Gerry Devloo produces a crushed seed sample ready for green-seed evaluation.

Grainews

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Crop
Management
Solutions

Hello,

My name is Michiel De Jongh, and I am the president and general manager of Monsanto Canada. Over the last year, my team and I have spent some time talking with growers and industry partners. We heard – loud and clear – that you’re concerned about managing weeds on your farm in a sustainable and long-lasting manner.

We’ve also been hearing a lot of fear-based rhetoric floating around – about farming practices and resistance in Canada. When it started, we should have spoken up. When you began to battle herbicide resistance, we should have stood beside you. Instead, fear spread.

It’s time to trade fear for confidence.

I am happy to announce that today we embark on a journey to turn the ship and to take the leadership position on herbicide resistance and crop management. By working together, we can find the right solutions that will help your farm thrive. To start, I invite you to explore our new agronomy platform: Monsanto Crop Management Solutions. It includes weed management strategies that you can customize to your farm. Visit **MonsantoCMS.ca** to get started.

This is an exciting time to be in agriculture. We’re seeing greater yields and more innovation. But we’re also facing challenges. It’s more important than ever to stand together as an industry.

Monsanto made one of the most powerful herbicides in the history of agriculture. And you’ve counted on it to protect your fields for decades. Together, we’ll make sure you have everything you need to keep protecting your fields for decades to come.

Reach out to us to learn about what we are doing to ensure the sustainability of Canadian farms and the effective use of glyphosate. Let’s bring confidence back to the field.

Sincerely,

Michiel De Jongh
President and General Manager
Monsanto Canada

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New grain moisture app

Home grown app simplifies on-farm grain moisture testing

BY SHEILA ELDER

My husband Jeff and I farm near Wawanesa, Manitoba. We are both interested in technology, and improving things on the farm. I had been tossing around the idea of learning to program with Apple products. While we were discussing the idea, Jeff mentioned an app that he would like: something that could replace all of the tables that he downloads and prints off to calculate grain moisture using his moisture meter. Perfect, I thought. I'll do it.

I don't consider myself exceptionally intelligent by any means, but I am determined and I like to learn new things. For someone who had never used a Mac computer, and hadn't taken a programming course for over 20 years, there was a lot to learn. Fortunately there was a wealth of information out there, and Apple Inc. has made it as easy as possible for newbies like me to learn the Swift coding language they use.

After purchasing a MacBook, setting it up with Xcode (an app used to program), and paying for an Apple Developer license, I was set. Or so I thought! I soon learned how much I did not know and saw the need

to invest in some "hands on" learning courses. This is where some great online courses by Chris Ching (<http://codewithchris.com/>) came in handy. It was well worth the price I paid. No, I'm not being paid for this plug, I really found the courses helpful.

Combine those courses with the wealth of information available from Apple Inc. and the Internet (such as YouTube), and the learning took off. By the time we were done, we would learn that we would require a website, and we felt that it was also a good idea to have a business email and a Twitter account.

The process of learning to program and develop this particular app took approximately two years, and over that time Jeff and I became quite a team. I did the programming and consulted with him on what features the app should have. Jeff is the design and marketing guru — he drew the actual icon that people tap on the screen to open the "Grain Moisture" app, and his many ideas and suggestions helped to make the layout user friendly.

Once we had a working version, we asked a neighbour, farmer Simon Ellis, to test a beta version. Simon had some great suggestions and we really appreciated his advice.

There have been many bumps and hiccups along the way, but with determination, and hundreds (if not thousands) of hours, the app was accepted by Apple and has been available in the App store since April 25, 2016.

At the initial release price of \$2.79, we will most likely never come close to covering the costs and time we spent producing the app, but it has been a fantastic first experience into the world of app development. We chose not to have advertising within the app even though it could have generated some revenue — making this app was never a get rich quick plan. Our goal was to learn to develop an app, to make something useful for us on the farm, and to share our creation with other farmers at an affordable price. A huge bonus to us as well is that Apple Inc. will collect payments, remit the GST and then pay us our share of the proceeds (70 per cent). We think it's very fair, given what they make available and what they do.

We are always looking for ways to improve this app. If you have questions or want to get in touch, our website is elderenterprises.wordpress.com.

Sheila Elder is a farmer, and now a programmer, at Wawanesa, Manitoba. Contact her at grainmoisture@yahoo.com, or follow her on Twitter @GrainMoisture.

The Grain Moisture app

The Grain Moisture app calculates the moisture content of your grain, based on your readings of your 919/3.5" or 393/3.5" moisture meter and the temperature. The app is based on a combination of formulas developed by the Canadian Grain commission and formulas we developed ourselves.

Using this app cuts down on your need to print out tables, helps prevent errors in reading off the chart and allows farmers to make sure they have up to date information — we plan to update the app anytime the CGC makes changes to these tables.

Grain moisture levels affect your decisions about when to combine and how to store your crop. Using this app can help you make sure you're getting the right measurements.

The Grain Moisture app is available for iPhones or iPads. Find it in the iTunes store by searching for "Grain Moisture." Cost: \$2.79.

Sheila Elder



CROP VARIETIES

New fall ryes have all the features

Bake it, drink it, or feed it to livestock — it's high quality and high value

BY LEE HART

Get ready for a new generation of fall rye varieties that are high yielding, have high milling quality and perform well across a wide range of soil types and moistures conditions.

Hybrid fall rye varieties that promise much more yield and market potential than the traditional open-pollinated varieties have become available to Western Canadian farmers in the past couple years. Developed by KWS a German plant breeding company two leading hybrid ryes have been licenced to prairie seed companies — Brassetto hybrid fall rye marketed by FP Genetics and Guttino hybrid fall rye marketed through the southern Alberta SeedNet group of companies.

"It's a higher management fall rye," says Greg Stamp, who's family-owned Stamp Seed is producing and marketing Guttino seed on their farm at Enchant north of Lethbridge. "But at the same time it has potential for much higher return over a conventional fall rye."

With potential for a 30 to 50 per cent yield advantage over open pollinated fall rye, growers of Guttino are producing yields of 130 to 150 bushels per acre. And with high falling numbers (a measure of milling quality) it is rye in strong demand for milling and distilling purposes, and even performs well as a high tonnage silage crop — less expensive to grow than corn, but with feed quality very similar to feed barley.

Stamp, who produces a wide range of cereal, pulse crop and other specialty crop seeds says they have been extremely impressed with the consistent performance of the hybrid fall rye on their southern Alberta farm.

"It grows well under irrigation, but it also seems to handle stress very well so it appears to have a wide range of adaptability across Western Canada," says Stamp.

While it is similar to growing winter

wheat and some other winter cereals, the hybrid fall rye has some specific differences as well, says Stamp.

Similar to corn and soybeans, the fully treated seed is sold on a unit basis (one unit being one million viable seeds). The seeding rate for Guttino is 0.8 of a unit, or 800,000 viable seeds per acre. "It roughly works out to about 70 to 80 pounds of seed per acre," says Stamp. But the objective is to seed 800,000 viable seeds per acre, targeting 18 plants per square foot.

With higher seed cost and higher fertility requirements to optimize the yield potential, Stamp says it is probably similar to hybrid canola in input and production costs.

Stamp applies a glyphosate or Prepass burn-down application prior to seeding the hybrid fall rye during the usual September seeding window. Because the crop gets off to a very early start in the spring, nitrogen is fall banded as well. Guttino is a very winter hardy, and the fully treated seed appears to help it withstand many common disease pressures. Due to its growth physiology the hybrid fall rye appears to be less affected by fusarium head blight.

While in-crop herbicides may be needed in spring to control broadleaf weeds, the hybrid fall rye appears to be very effective in suppressing and controlling wild oats on its own. "On fields where we are growing the hybrid fall rye, we don't see any wild oats, even though they may have been a problem in the past," says Stamp.

The crop heads out in about mid-May and is ready for harvest in late July. While the hybrid fall rye, with excellent milling quality, appears to be in high demand, the SeedNet group is looking at developing market connections for their hybrid fall rye producers.

For more information on Guttino hybrid rye visit Stamp Seeds website at www.stampseeds.com.

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



Rick Stamp: Rick Stamp of Stamp Seeds checks out the 2016 hybrid rye seed crop.



The combine rolls on Stamp Seeds farm biting into a 150 bushel per acre hybrid fall rye crop.

PHOTO: LEE HART

PHOTO: COURTESY STAMP SEEDS



Leaf diseases to look for in lentil

A plant pathologist reveals the main yield-grabbing diseases to watch for in your fields

BY GRAINEWS STAFF

Rain makes grain, the saying goes. But too much spring rain also means disease, and lentil crops are no exception.

Almost all pulse leaf diseases are triggered by rain and moisture in the canopy, said Dr. Sabine Banniza, plant pathologist with the Crop Development Centre. “Many need the rain in order to spread.”

So which diseases should farmers be guarding against in their lentils? Banniza outlined the top leaf diseases she sees in Saskatchewan during a Saskatchewan Pulse Growers webinar.

ANTHRACNOSE

“The number one lentil disease we have in the province these days is anthracnose,” said Banniza.

Anthrachnose causes beige or brown lesions. Those lesions are not very conspicuous, Banniza said, and so farmers and agronomists would have to look closely to see them. Once the disease is established, farmers will likely see leaf drop.

Those stem lesions can also girdle the stem, killing the plant above the girdle, she said. “And when this happens, you all of a sudden start seeing these dead patches in your lentil crop.”

There is anthracnose resistance in lentils, but that resistance covers Race One, the less aggressive strain. Race Zero is more aggressive and more common, and there is currently no resistance to it in cultivated lentil varieties.

ASCOCHYTA BLIGHT

Ascochyta blight used to be the top lentil disease in Saskatchewan. But the last serious outbreak was in 2005, said Banniza. That drop is a success story of lentil breeding program, she said.

“We’ve bred quite good resistance into almost all the lentil cultivars that are available now,” said Banniza. As a result, the ascochyta blight population “has just imploded and hasn’t really been able to come back.”

STEMPHYLIUM BLIGHT

Stemphylium blight starts out as light beige lesions that coalesce. The whole leaf eventually turns brown. Farmers will also see leaf drop.

Spores are airborne, making it difficult to do field research on the pathogen, Banniza said. But the research they’ve done indicates that early to mid-flower infections may cause yield loss, seed stain, and seed infection.

However, stemphylium blight often rolls in late in the season. Those late infections probably don’t cause much damage, Banniza said. “And if it’s really late, it may actually work like a natural desiccant because it defoliates the leaves.”

WHITE AND GREY MOULD

Sclerotinia white mould and botrytis grey mould are two different organisms. But they are “like sister and brother,” said Banniza.

“They often show up together because they both thrive in the same conditions.”

These diseases are very recognizable because they grow on the outside of the plants, said Banniza. Cottony white mould on stems, leaves, flowers, and pods is sclerotinia, while fuzzy grey growth indicates botrytis.

Both diseases show up late in the season when canopies are dense and moist. Tall, lush lentil crops are more likely to suffer an infection. Lentils tend to lodge in those conditions, creating an even denser mat of biomass that doesn’t dry.

“And that’s when these two diseases really get going,” said Banniza.

MANAGING LEAF DISEASES

Banniza recommends a four-year rotation to control leaf disease. Tightening the rotation raises the risk of building disease inoculum in the fields.

“And if you run into a year when conditions are conducive, you’ll see an earlier outbreak and a much more severe outbreak which is more difficult to control,” said Banniza.

However, that longer rotation is unlikely to reduce stemphylium blight because the spores are airborne, she added.

Farmers should also choose resistant cultivars when they can, she said.

Scouting is very important, said Banniza. The eight- to 10-node

stage is the best time to apply fungicide, so scouting needs to be done before then.

Banniza said the management strategy is the same for several of the leaf diseases.

“So if you see lesions early on in your crop, and conditions are conducive to infection, it doesn’t matter whether it’s an anthracnose lesion or an ascochyta blight lesion or a stemphylium blight lesion.”

However, it’s a “different story” for sclerotinia white mould and botrytis grey mould, she said. Because those diseases develop in thick lentil stands, usually after canopy closure, fungicides don’t penetrate the canopy.

If a farmer is lucky, the fungicide

will reach the top third of the canopy in those cases, Banniza said, but the disease is usually at the bottom. “So for these two diseases unfortunately fungicide is not a very good option.”

In fact, there are no great control options for sclerotinia white and botrytis grey moulds, she said.



“The best option is to manage your canopy. But that’s obviously very tricky because when you seed it, you don’t know what the growing season will look like,” said Banniza.




“If you knew it was going to be a wet year, you would probably try to seed at a slightly lower rate just to make sure the canopy is a little bit more open.”

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Storing grain: a marketing strategy

Is it worthwhile to store your grain on the farm while you wait for commodity prices to rise?

BY ANGELA LOVELL

Storing grain on the farm can be a good marketing strategy because, if managed carefully, it can increase a producer's profits, but it's important to have a handle on your storage and opportunity costs to assess if it's actually going to put money in the bank.

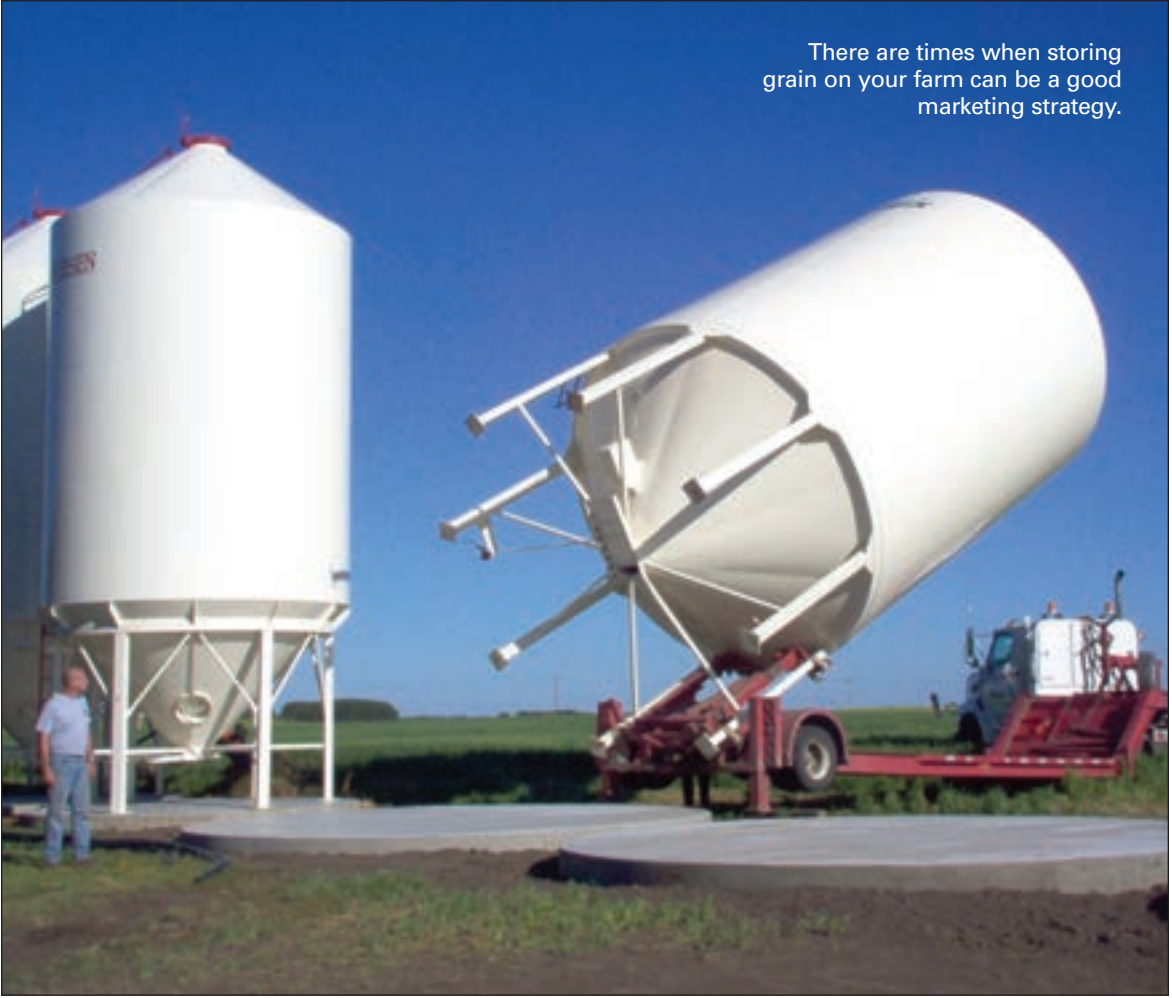
The capital costs of storage vary depending on whether you have adequate storage capacity or need to add more, and the type of storage you elect to use — whether it's a temporary system such as grain bagging or a permanent, fixed, metal structure.

A recent Alberta Government report estimates that grain storage costs can vary anywhere from \$0.18 per bushel to more than \$4.50/bu. Obviously, the longer you store grain, the greater the accumulated storage cost, and it will vary depending on your type and size of storage, financing arrangements and depreciation. Even if you have sufficient storage, or you have finished paying for a new bin, the cost is not zero. You also need to factor in the costs of aeration, repairs, maintenance and additional handling.

WAITING FOR BETTER PRICES

Storing grain can give you the option to wait and see if prices improve after harvest, when traditionally prices are lower because there is more product available. "There is a convenience factor of being able to deliver the grain when a producer has better price opportunities," says Neil Blue, crop market analyst with Alberta Agriculture and Forestry. "Typically when there is lots of supply, prices tend to be depressed, and part of the price of commodities that have a futures market is basis, and that contains the profit of the grain handlers. They offer a weak basis (the difference between the cash price and future price) when they have lots of supply."

Selling stored commodities periodically throughout the year is a way to average out price risk and limit exposure to price fluctuations. "One method of hedging and price control is to spread out timing of sales over a number of weeks or months as opposed to selling it all in one lot and that's sort of the pooling approach," says Blue. "So there can be some advantages to that."



There are times when storing grain on your farm can be a good marketing strategy.

PHOTO: LEEANN MINOQUE



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SEASONAL TRENDS NOT ALWAYS RELIABLE

There is definitely a seasonality aspect for commodity prices for some of crops. "It isn't a slam dunk though, so you can't count on it happening every year," says Blue. "As an example, quite often winter feed barley prices have a price improvement around Christmas and New Year's, and during the cold weather periods, but we had such a mild winter that there was never really that bump this year, so it was a disappointing year for the feed barley sales that way."

Canola prices — or at least basis levels — typically improve as the marketing year progresses. Prices are more volatile in the spring because of uncertainty about the new crop acres that will be seeded and how much will be available in the market.

So it's important to do some market analysis to try and decide, from year to year, which crops are most likely to benefit from storage.

THE COST OF OPPORTUNITY

There is always the risk of course, that prices could fall. Even if prices stay at the same level, both the cost of storage and your opportunity cost reduce the net return. The opportunity cost is the accumulated, foregone interest that you've paid on debt, or the loss of interest on money that you could have invested if you'd sold your grain earlier.

Alberta Agriculture and Forestry has a scenario on its website which explores the costs of storing yellow peas and illustrates how the storage and opportunity costs vary and impact net return to producers. As an example, a producer whose opportunity cost is a bank term deposit may have an opportunity cost of storing grain of three per cent or 0.25 per cent per month. A producer with an operating loan at six per cent interest has an opportunity cost of 0.5 per cent per month. If the producer is carrying credit card or trade debt the opportunity cost could be two per cent per month.



Do some market analysis

Storability of the crop can be another major factor, especially in small-seed crops. "We had a generally dry start last year and then an incredible recovery once it started to rain and a lot of the canola matured and graded number one, but a lot of it didn't cure properly," says Blue. "Even though it was dry, it stored poorly in some cases and there was a lot of spoiled canola around this winter. So storability can be a concern."

THE NEED FOR ACCESS

You also need to be able to access the grain when you want to deliver it. Can you get to your bins when there's three feet of snow? "There can be some risk of not being able to easily access the grain at times, so when the prices are good it may be that weather is preventing grain from being moved and that may also apply to the person that's storing the grain," says Blue. Delivery availability can also be a factor, as the rail transportation problems

during the 2013-14 crop year demonstrated. Backlogs at ports and lack of rail cars meant many farmers that year had bumper crops that they couldn't deliver when they wanted to.

Another consideration is your financial ability to store the grain and your need for immediate cash flow to pay bills. "Storing grain may require more co-operation from lenders in being able to carry a situation longer than what was originally anticipated," says Blue. "Interest costs are relatively low for most operations now so that is maybe not as big a factor as it has been in years past, but it does affect cash flow. Also to the extent that it's available, the Cash Advance on grain may not be enough for larger operations to offset the stored grain costs."

GETTING OUT THE CRYSTAL BALL

So is grain storage likely to be a good marketing option for

this year? We asked Blue to give us a few predictions based on what he has seen going on in the markets so far.

"There is still quite an abundance of wheat in the world and wheat tends to be a world market," says Blue. That would suggest prices could continue to be weak, so producers storing wheat and waiting for a price bump might be waiting a while. But... "On the flip side there has been a relatively strong demand for feed wheat and processing wheat locally on the Prairies with the ethanol plants and feedlot and hog farm usage of wheat has been fairly strong. So that has been a good competitor on the wheat side," says Blue. So who knows, perhaps that bump might come after all when that livestock gets hungry in the dead of winter?

Malt barley acres could be up because of good prices last year, so it's hard to predict if prices will stay strong if there is

a more plentiful supply of malt barley this year — so that might not be quite as good a bet for the bins.

"Oilseeds seem to be trying to make a bit of a recovery on price and that's based on crop uncertainty," says Blue. "Even though the crops are looking good here and in the US right now, it's likely, based on the numbers, that we may see a soybean draw down in stocks from a world perspective. So that's been price supportive, and on the canola side it remains to be seen how many acres were seeded, and if it was as low as the original Stats Canada estimate a few months ago. But the current estimates are that with extremely strong demand both from the export and crushing side, canola prices will be well supported next year." So that could be one for the bins as long as the crop is dry and cures well so it will store for a few extra months.

SIMPLE FACT: FARMERS MUST STORE GRAIN

Regardless of markets, prices and all the other factors that can make storing grain a good or bad option from a marketing standpoint, the fact remains that not all farmers can sell all their production right off the combine — even if they want to. Forty years ago the elevator capacity on the Prairies could take pretty much the whole crop produced, but today it can only handle about 10 per cent. In reality, farmers have little choice but to store more and more grain and bear the capital cost to do so. So if there is some way to turn that to an advantage, by doing some homework and following the market trends, it could be worthwhile to have a few extra bins full for a little longer.

Angela Lovell is a freelance writer, editor and communications specialist living and working in Manitoba. Find her online at www.angelalovell.ca.

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Canola: Straight cut versus swathed

New shatter-resistant canola varieties have a straight cutting edge

BY LEE HART

After 20 years of straight cutting canola on his central Alberta farm, Wilson Lovell doesn't even own a swather anymore, although he admits waiting for the crop to ripen is hard on his finger nails.

He's evaluated the two harvest options closely, and Lovell is convinced there is risk of a 10 to 30 per cent yield loss from swathed canola on his farm near Clive, northeast of Red Deer. And he's done a lot of hands-and-knees field inspections to determine that losses appear negligible when straight cutting. Even after having standing canola buffeted by

exceptional winds in 2015, he still binned a 59 bushel crop.

"I think the pro of straight cutting canola is that you will harvest more crop," says Lovell. "And on the con side, well it is really hard on your nerves. I haven't swathed for more than 20 years, but it's still hard waiting for the crop to mature."

On the flip side, Kevin Serfas west of Lethbridge in southern Alberta is committed to swathing canola. With a lot of acres to cover with 16 combines in a three-month harvest window he says it slows him down to wait for standing canola to ripen.

"Swathing canola gives us a 10 day head start on the overall harvest season," says Serfas

who is part of the family owned Serfas Farms Ltd. "We plan on one combine doing 3,500 acres. If we went to straight combining we'd need one combine for every 2,500 acres." He figures with often strong prevailing westerly winds yield losses would be higher if the crop was left standing. He doesn't rule out one day switching to straight cut canola, but for now he's sticking "with a system that works best for him."

The system that works for Wilson Lovell is to grow leading hybrid canola varieties — he works with different herbicide tolerant programs — and use proper agronomics to produce a good canola stand. "The wheat is always harvested first, but we keep an

eye on the canola," says Lovell. He waits for a killing frost before combining the oil seed.

"The crop can be fully mature, with 20 per cent moisture, so we let it stand. As soon as we have a couple nights of -10 C temperatures I know the moisture is gone and then we combine canola."

STRAIGHT CUTTING RESEARCH

Is one harvest approach better? Nathan Gregg, a project manager at the Saskatchewan-based PAMI (Prairie Agricultural Machinery Institute), says that really isn't a question he's trying to answer in a three-year research project comparing straight cutting and swathed

canola harvest system. He's just looking for yield differences.

So what has he learned after two years?

"It doesn't matter what you are combining and whether it is straight cutting or swathing canola or any crop, you're going to have losses," says Gregg. "If you ask farmers about harvest losses most will estimate one to two bushels per acre as the most common answer. But we found when you actually measure it, it is more commonly in the two to five bushel range. And depending on the situation we have seen losses as high as 10 bushels per acre. And it's not always easy to see."

Wind and wildlife activity are obvious causes of harvest loss, but travelling too fast with a combine is a leading factor. "We recommend travelling at three miles per hour and many farmers say they can't afford to go that slow," he says. "They might want to consider a second combine, and run both a bit slower." While renting or leasing a second combine might be viewed as an added cost, he recommends pencilling it out compared to potential losses.

And he points out that all makes of combines have "leakage" — either at the cutting and gathering points at the front of the machine, or at the threshing and chaff collection and distribution points at the back of the machine.

Periodically collect and check what is being kicked out the back of the machine. Collect the straw and chaff from the full width of the back of a combine, get rid of the bulky material and actually count how many seeds are passing through.

In two years of a three-year project on average the swathed canola has produced about four to five more bushels per acre than straight cut canola. These are all common hybrid canola varieties. But, there is a but.

IMPROVED SHATTER RESISTANCE

Most of PAMI's research involved established hybrid varieties, but they also looked at a new hybrid from Bayer Crop Science L140P, which was developed with improved shatter resistance for farmers considering straight cutting. In the PAMI project straight cutting L140P allowed them to harvest three to four more bushels per acre over swathed and combined canola.

On the equipment side they are comparing draper headers, to rigid auger headers, to Varifeed headers. There wasn't a huge difference between any of the systems, however if Gregg had to make a call, it appeared the rigid header had the most losses when straight cutting standing canola and the Varifeed system, which can get the cutter bar up to two feet out in front of the reel, had the least losses. Again, not a huge difference.

The PAMI research continues through 2016.

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

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The mystery of the lodged canola

BY TERRY MOYER

Roger, who farms 2,500 acres of canola, soybeans and spring and winter wheat southeast of Winnipeg, Man., had just used an aerial fungicide application to combat the stem rot pathogen sclerotinia in his canola crop when he ran into a problem. A few days after spraying, he'd discovered a broad swath of severely lodged canola running across one of his fields and he asked for my help to explain why.

When I arrived at Roger's farm, I could see the band

of lodged canola was about a third of the way across the 280-acre field. In places, the strip was up to 80 feet wide and it appeared to run in a relatively straight line from north to south, which was the same direction that the field had been seeded.

Upon closer inspection, I noticed the lodged canola plants were bent over close to ground level in no consistent direction. There was a clear delineation at the edge of the strip, with undamaged plants standing perfectly straight right next to the bowed canola.

Roger was worried there would

likely be a significant yield loss within this strip if disease set in. The grower was also concerned what the repercussions would be come harvest time, since he planning to straight cut the canola when reaping. "If this problem is going to spread, it's going to be a nightmare to harvest," Roger said.

I knew there were a number of typical causes for lodging in canola, such as overlaps in seeding or spreading fertilizer or a sprayer miss when applying crop protectants, but none of these scenarios seemed to add up. Roger recalled that there had been heavy rain

in the area over the period in question, but the perfect straight edges we were seeing along the border of the lodged canola certainly wasn't typical of wind damage associated with rainstorms.

While we mulled over the possibilities, I suggested to Roger that a bird's-eye view of the field could perhaps provide the missing piece to the puzzle. I made arrangements to have my company's UAV fly over the whole field, and the images from it provided a clear picture of what had really happened to Roger's canola.

If you think you know what's

going on in Roger's canola field, send your diagnosis to *Grainews*, Box 9800, Winnipeg, Man. R3C 3K7; email 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. ✍

Terry Moyer is a regional sales agronomist with Richardson Pioneer Ltd. at Landmark, Man.



The strip of lodged canola was relatively straight, and up to 80 feet wide. The lodged plants were bent over close to ground level in no consistent direction. There was a clear delineation at the edge of the strip, with undamaged plants standing perfectly straight right next to the bowed canola.

CASEBOOK WINNER

This issue's Casebook winner is A.J. Fisher. A.J. is a sales agronomist with R. A West at Vulcan, Alberta. Thanks for entering, A.J.! We're going to mail you a *Grainews* cap, and send you a free one-year subscription to *Grainews*.

Leeann Minogue

CROP ADVISOR'S SOLUTION

Phosphorus deficiency in canola

BY ASHLEY HIDUK

I received a call in mid-June from Jarett, who farms 5,000 acres of canola, durum wheat and lentils south of Regina, Sask. He was worried about his purpling and stunted canola crop.

"It's clear to see the canola in my field is quite a bit smaller compared to my neighbour's fields, even though they were seeded around the same time," explained Jarett, who was clearly at a loss to explain what was going on.

When I arrived at Jarett's farm and began walking through the canola field, I

could see symptoms were uniform throughout the crop. The plants, which were at the six-leaf stage, had purpling stems and leaf margins, and this was even more noticeable on older leaves. The stunted plants were also not cabbaging out as they should have been at this stage of growth.

After ruling out disease, insects or herbicide carryover as possible culprits, I turned my attention to Jarett's fertility program. The grower assured me he'd had no issues with nutrient deficiencies in his canola or any of his other crops in the past, but when I asked for details about how he fertilized the problem field, I

began to clue in on the source of the trouble.

I pulled out some plant roots, and as I suspected, there was minimal root growth. The purpling of the leaves had also provided a good clue as to what was going, so I ordered plant tissue tests to confirm my diagnosis. The results were no surprise: the canola in Jarett's field was suffering from a phosphorus deficiency.

Jarett had applied his fertilizer products, including phosphorus, in the mid-row band. Phosphorus is not very mobile in the soil, and with the extremely dry conditions in the spring, it hadn't moved at all. Due to the

lack of moisture after seeding, the canola plants had struggled to establish proper root systems, and as a result they lacked sufficient roots to access the phosphorus at a time when they needed it the most.

Canola requires phosphorus early in the season to establish a proper root system. Placing all the phosphorus in the mid-row band makes it harder for an establishing plant to reach it, especially in a limited-moisture-year as the phosphorus will not move in the soil.

In addition, the area Jarett resides in has heavy clay and high pH soils, and in these soil types it's recommended

that growers apply some starter phosphorus close to canola seed at safe seeding rates at planting time. If Jarett had done this before the weather turned dry, his plants likely would have gotten off to a much better start.

Unfortunately, it was too late for this season to help the struggling canola and as a result Jarett's yield was only half of what it could have been with a healthy crop. Going forward, Jarett plans to apply starter phosphorus close to the seed when he plants canola to avoid similar problems in the future. ✍

Ashley Hiduk is a sales agronomist with Richardson Pioneer Ltd. at Corinne, Sask.



A fish story, involving fish

When you're having fun, catching something is beside the point

LEE HART

Here's a new idea — go fishing and actually catch something. I know it is different, but I am an outside-the-box kind of thinker.

As part of my personal Canada Day celebrations I hired a fly fishing guide with a boat and did a float trip on the Bow River east of Calgary. I had fished from the shore a few times earlier this year — beautiful weather, beautiful water, and I looked darn good standing there but nary a bite. Obviously the fish were away those days.

So Canada Day weekend Sunday, I took to the river with trusted fishing guide, Steve. He had been out the day before with a party and the fishing was “hot,” so I had modest expectations as I stepped into the Sage Mackenzie-style boat for a seven-hour float down the lazy Bow to the planned “take out” point. I don't think fish like me.

There was no run-off this year. The river needs a snow-melt run off to clean the system. Nothing quite as dramatic as the flood of 2013, but it can stand a good annual flush (usually in June.) That didn't happen. The water looked good, but the river is low. The fishery may be in trouble over the coming weeks as water levels likely will continue to drop and the water warms. Part of the problem, too, I hear around some fishing circles is the provin-

cial government is doing a sub-par job of managing water release from upstream reservoirs. But this isn't a day to think politics. My mission is to slay some fish.

So off we set from departure at a point known as Policeman's Flats... let the killing begin. First job was to get my gear organized. Some people like to be prepared the night before, I prefer to do it in the boat. “How come this new reel my son got me for father's day isn't fitting properly? Okay, there it goes. I guess it was just me...” Steve, use to dealing with beginners, fortunately had brought the proper supplies to set up the line with never-fail flies and it wasn't long before they proved their value.

Drifting along in beautiful country, on a glorious Sunday morning, does a person really need to catch a fish? Damn right. I had stood out on the shore for too many hours looking like an idiot. Today was pay day.

Within the first half hour of being on the river I caught my first fish. A nice 12 to 14 inch rainbow trout. It co-operated fully, stayed on the line, and after a couple minutes of protest allowed Steve to gently scoop it up with the net. I proudly looked at it for a few seconds, Steve removed the hook, I did a little dance “I'm not a complete failure in life”... and then back into the water it went.

“That's the skunk fish,” said Steve. “The most important fish of the day... at

least now we won't be skunked.” And as the morning went on I added a few more notches to my belt — two or three more rainbows (who can keep track) and a nice brown trout... my first ever. It wasn't crazy fishing but enough to keep my interest up.

And meandering along the river, checking out this run and the next, with a guide who has been doing this trip for years I learned some local history as well. We passed a cliff area now a long-abandoned buffalo jump. There had been seven or eight encampments of Indian tribes who had used this site over several hundred years. While it is grass covered today apparently the bison bones buried at the base of the jump are several metres deep. Later on in the trip there was a once very nice home with two stone fireplaces, standing on a bank just above the river. Now abandoned and badly vandalized, it was once owned by a wealthy businessman, now sitting on land earmarked for development.


And at different points of river bottom or upper slope rolling grasslands a few remnants of movie and TV show sets, that for a short time pretended they were somewhere in Nebraska, Colorado or Montana. The quiet Bow even hosted two large ocean-going ships, built and then dismantled after they carried “passengers and supplies to a new settlement” as part of some Hollywood production.

But back to fishing. The water continued



Writer Lee Hart with co-operative brown trout, remembers the words “there is a fine line between fishing and standing on the bank looking like an idiot.”

to look good, but fishing was slow. Other guides passing with clients confirmed the same. I thought perhaps my run was over, but as we closed in on the last hour of the trip, another nice brown trout took the fly... this one larger than the first. A bit more fight, but then the 24-incher was in the net for a few seconds. My day was complete.

It was a great day. I caught some fish. It didn't rain. I didn't lose or break anything, all in the company of a great guide, and all round good guy. And just for the record, no fish died in the making of this yarn. All lived to swim another day. 

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

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A beginner's guide to cowboy boots

For the people who need them, cowboy boots are more than just a fashion statement

LISA GUENTHER

There I was, lining up for ice cream at the Canadian Farm Progress Show in Regina, when I saw something that made my blood simmer. A woman wearing skinny jeans tucked into cowboy boots.

To anyone in the know, that fashion choice is a clear signal that the “cowgirl” didn’t know a horse’s ears from its... well, you get the picture. Walk through the barns of any beef show, and you will not find any self-respecting, adult beef producer with jeans tucked into boots.

The fashionable side of cowboy boots is impossible to deny. Lisa Sorrell, a cowboy boot-maker, says

cowboys were known for their vanity, creating elaborate designs.

In my opinion, those pretty designs are for the wearer’s pleasure alone. We all must resist the temptation to show off our beautifully embroidered cowboy boots by pairing them with skinny jeans. Self-regulation builds character.

Why do people wearing cowboy boots the wrong way get up my nose? For a long time, I couldn’t articulate it other than stating it looked lame. I’m not the most fashionable person, to be honest. As far as I’m concerned, leggings and rubber boots are perfectly acceptable attire in town (or at least a muddy town).

But after the Farm Progress inci-



PHOTO: LISA GUENTHER

This is the only time you’ll see the design on my cowboy boots. Pretty, aren’t they?

dent, it hit me. It’s not really about fashion. It’s about cultural appropriation.

Ranching is still alive and well in Western Canada. There’s a whole culture that surrounds it. This isn’t to say that you must be a rancher to wear cowboy boots, but rather that to point out the boots still have a place in a living culture.

Cowboy boots are still a practical piece of equipment. The heel helps prevent the foot from going through the stirrup. Leather is tough, and lasts a long time with some basic maintenance, so the boots are a good fit for some farms and ranches. The term “foot-operated manure spreaders”* best encompasses this practical, down-and-dirty side of cowboy boots.

There’s a history to the boots as well. I did a little research, and was surprised to find cowboy boots were derived from northern European riding boots. Most western stuff seems to come from the vaqueros, but cowboy boots are one exception, according to the Internet. H. J. Justin, founder of Justin Boots, “revolutionized” cowboy boot design and started producing them on a large scale in 1879, according to *American Horse Daily*.

Cowboy boots are also an iconic symbol of the history of the West. It’s a fascinating story, loaded with larger-than-life heroes and villains and everyone in between. You can see the good, bad, and ugly of humanity, all played out on a stage of vast plains and wide-open skies.

History isn’t a dead thing that we can easily relegate to our past. In Western Canada, both the triumphs and the tragedies of what happened before us reverberate through the generations.

When it comes to cultural appropriation, there are worse sins, such as wearing headdresses to music festivals. Or stealing stories and songs from other cultures, and never giving them any credit. It’s not all done out of malice — a little ignorance is all it takes.

And it’s not that I think people should have to ride horses or own cattle to wear cowboy boots (although some sort of mandatory obstacle course on horseback would be hilarious).

But it would be nice if people would at least wear their boots the right way, especially at farm shows. It’s a little nod of respect to that loaded history and to the present-day cultures that still call “foot-operated manure spreaders” their own.

I know I’m fighting a losing battle here, but if I can prevent even one city slicker from dressing like a drugstore cowboy, it’ll be worth it.

So spread the word to your city friends. Tell them how to wear ‘em right.

*This isn’t the term I would use if I was talking to you. I couldn’t get the more common word past the editor.

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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How to find the seed in the ground

There is a better way to find your planted seed, and your anhydrous ammonia



LES HENRY

When zero till seeding began in the 1980-90s, field days to demonstrate new seeders that could accomplish the task were common. Many colours of paint would make a pass down the field and farmers took off like gophers to dig around and find out where the seed was placed. A trusty garden trowel was the main tool.

In seeding on my own little place I have often found it difficult to consistently locate the seed and be sure of placement. This spring my good neighbour used his Seed Hawk to seed my barley. As we rooted around to find the seed, I was motivated to find a better way.

In the early days of anhydrous ammonia application there were many questions about its placement and the effect of the concentrated ammonia zone on soil organic matter. The U.S. had already determined that there was no deleterious effect on soil organisms but the effect on soil organic matter was not known.

We set out to change that and first had to know what ammonia concentrations were in the "hot" zone. We followed examples from the literature and dug behind individual rows to a foot or so (30 cm) with a flat spade and were able to trace the area of anhydrous. For details of the method keen Agros/CCAs can check out Hogg, T.J. and Henry, J.L. 1982. The ammonia content in soils following field application of Anhydrous Ammonia. Can. Journal of Soil Science 62: 213-216".

It was my idea that if we could find anhydrous ammonia placement surely we could do the same for the seed.

So I took a flat spade, spent a few minutes in the shop to give it a sharp edge, and went off chasing seed. The photos (Figures 1 to 4) and captions tell the story.

I am sure there are many folks out there who have devised better ways, but this old fossil was very happy to finally have a method that worked consistently. It provides good information to determine any changes needed on depth settings of the machine.

Actually the very easiest way to establish seeding depth is to wait until the crop emerges, dig down to the seed and measure the length of the white root in the soil. But, that is a little late for the current crop!

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, SK, S7H 3H7, and he will dispatch a signed book.

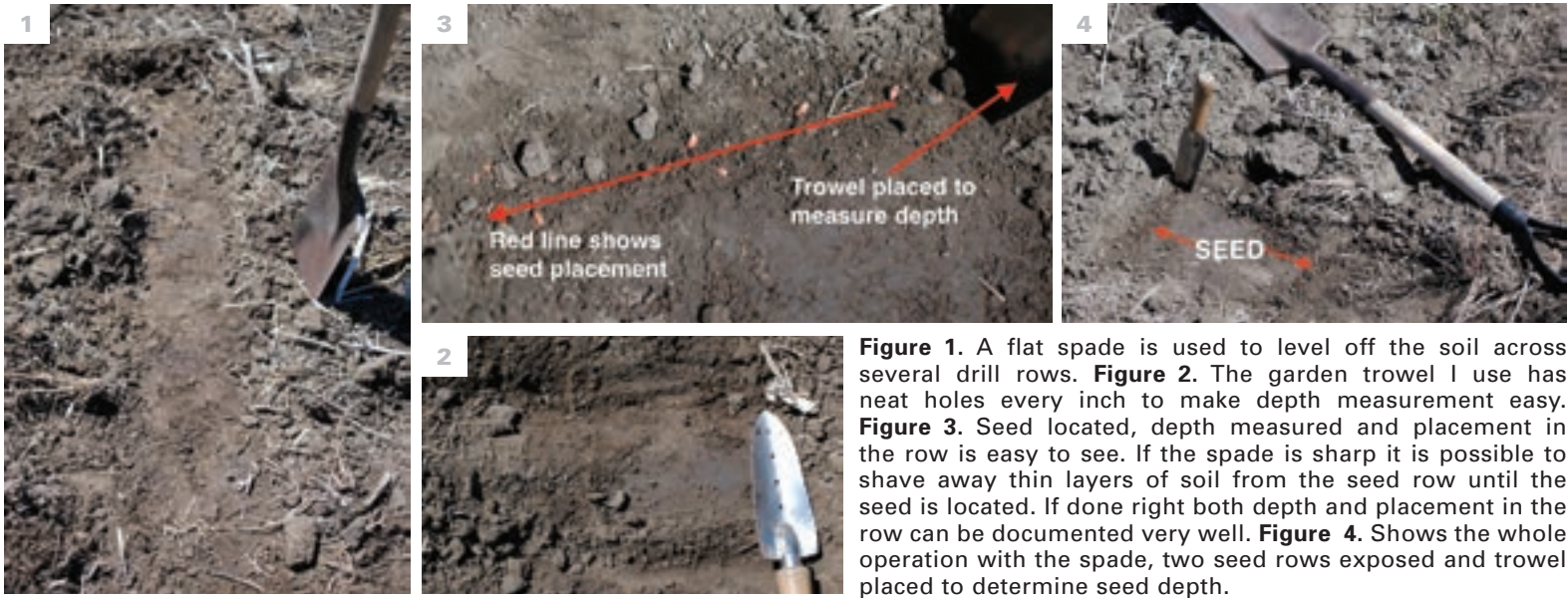


Figure 1. A flat spade is used to level off the soil across several drill rows. Figure 2. The garden trowel I use has neat holes every inch to make depth measurement easy. Figure 3. Seed located, depth measured and placement in the row is easy to see. If the spade is sharp it is possible to shave away thin layers of soil from the seed row until the seed is located. If done right both depth and placement in the row can be documented very well. Figure 4. Shows the whole operation with the spade, two seed rows exposed and trowel placed to determine seed depth.

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The perfect storm is upon us

Markets are roiling for many different reasons. Will you survive the ultimate storm?



BRIAN WITTAL

In the movie *The Perfect Storm*, three different storm cells came together to create the a storm that George Clooney, Mark Wahlberg and the rest of the crew didn’t stand a chance against. I can see something of a version of that happening in the grain markets right now.

STORM 1: WEATHER

The uncertainty as to if and when El Niño would start to dissipate and if or when La Niña may start to form and what that could mean for weather across North America has been hotly debated for the past six months.

An open and early spring got everyone in the fields early. Concern about frost held many off, but for the most part it never did have much of an impact. Persistent dry weather started to cause concerns as seeding finished up in record time with little or no rainfall across the entire Prairie region.

This started to catch the attention of grain trade speculators as dryness was also evident throughout parts of the U.S. Grain futures started to respond accordingly by building in some risk premium into the futures and driving them higher.

Then at the end of May and early June, rain started to fall at almost the perfect time and most Prairie crops were off and running!

At this time forecasters agree that El Niño is on the way out or gone and that La Niña was forming, which would mean a definite change in weather patterns across North America for the summer. The unknown now is how strong a system La Niña will be, as that would certainly impact weather intensity.

“Three storms are about to come together

STORM 2: PRICING DISCIPLINE

Do you have a pricing plan, should you follow it or ride the waves and see what happens?

As we headed into spring, old crop inventories of special crops, canola and wheat were starting to get low on the Prairies. This was helping to push prices higher, especially during early May when it was getting to be rather dry.

Old crop offers of \$14/bu. for peas, \$12/bu. for canola and \$7/bu. for wheat were common; these numbers were far more appealing than the new crop bids of \$10/bu. for peas, \$11.50/bu. for canola and \$6.50/bu. for wheat.

Many producers I talked to were holding out for better new crop

bids, because they had to go up if we were running out of old crop grain, didn’t they? Riding the waves not knowing what may be coming at them!

Then rain started to fall. New crop prices started to fall as the concern of yield loss disappeared.

New crop prices were no longer following old crop prices higher. They had been thrown from the nest and liberated to follow their own path, and with the rains that path was lower!

STORM 3: WORLD EVENTS

Many events will impact commodity markets, including weather in South America, China, Australia, Russia and the EU.

Some of these places are struggling while others are expected to produce above average crops this coming year.

Financial, stock and commodity markets are on edge in the wake of the U.K.’s vote to exit the EU. Before the referendum, caffeine-laced traders and speculators were jumping in and out of markets like cats on a hot tin roof. This caused vast amounts of money to move within markets causing extreme volatility, which further feeds the fervor and triggers more reaction and money movement in all markets, including commodities.

Now we have some very over-reactive markets at a time when our grain markets are starting to

look a little bearish. In the wake of the U.K.’s Brexit vote, that bearish tone in commodities will likely end up being overdone, and grain futures will probably fall harder than they would have. It is likely that the bearish tone in grains will drag on longer than expected because of this, unless we have some kind of production or quality disruption in the world crop that would advantage us in North America.

THE SUSPENSE

As in the movie, it feels like we are at the point where these three storms are about to come together. We are right in the middle trying to ride it out, hoping that don’t

get rolled under because we didn’t better prepare.

Are you prepared? Did you have a marketing plan and did you follow it and pre-price some new crop grain before this? Or are you out there floating in your boat waiting to see how big the waves are going to be, trying to ride this one out for the hope of something better just ahead?

Market discipline is knowing when to price at profitable levels and when not to chase markets any higher. You have no control over them, so why risk it?

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).

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Selling calls brings in cash

Even in a down market, selling calls on your stocks can bring in a profit



ANDY SIRSKI

This year I have had two friends fighting cancer, a carpenter friend chopped the fingers on his left hand and I personally have a hernia. All of this makes me think. One cancer patient sold down his cow herd and the carpenter has a hard time building stuff with only one good hand. If I had to earn a living lifting stuff or walking a lot the hernia would be a real nuisance. It is getting fixed soon.

In spite of my issues I have been able to sell covered calls all along. And I expect to keep selling calls as long as I can think, see and talk. So I have to ask: what if you had some health issues and could not do what you do now for a living?

Sure it took work to learn this skill and yes I do risk money by owning stocks. But done reasonably well, selling calls on good stocks can pay well. If you follow a few basic rules you can reduce the risk of owning stocks. In fact, you can learn how to make money when stocks fall.

I work with 10 stocks at most and most of them are well known and recognized to be good stocks. Some are U.S. stocks

so I do have some currency risk, but if I own good stocks and keep selling calls I can manage the risk.

A lot of people don't realize that selling calls can bring down the paper cost of shares over time. Take one fellow out Saskatchewan way. He bought Silver Wheaton (SLW) in 2010. By selling calls over the next four years he brought down the paper cost of his SLW shares to zero, by bringing in profits from selling calls. While the shares have moved up and down from around \$30 to around \$15 and now back up to \$25, he has collected a lot of cash.

Here's another way of looking at it. Take Microsoft shares

at \$50. You can sell weekly calls for at least \$0.20 cents per week per share. That's \$10 per year per share you can bring in. If the share dropped to \$40 you would have have lost money.

I sell calls on Microsoft (MSFT), New Flyer (NFI.TO), Precision Drilling (PD.TO), Hecla (HL), Nvidia (NVID) and others. My goal is to take in \$500 to \$1,000 a week, though most weeks I take in more than that.

Most of these trades are in sheltered accounts so there's no paperwork at tax time, while gains in my trading account are taxed as capital gains. I like my stallion stocks such as MSFT and NFI but I do own other stocks and sell calls on them. I think

the stock market faces headwinds: aging baby boomers are more likely to be paying down debt than borrowing money, banks have been forced to hold more reserves and the velocity of money has slowed from around seven to under one.

All of these conditions point to slower growth and fewer capital gains on stocks. We have a choice: be very good at selecting stocks, which isn't so easy, or settle for low gains. With my strategy of selling covered calls I can take in one per cent a week, or three to five per cent a month and I also keep the dividends.

Once you have some experience you can also buy puts to have some downside protection and/or make money while stocks drop. With even more experience you can sell naked puts on some stocks to make extra money — but this strategy comes with extra risk. Selling naked puts is not for everyone.

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BREXIT

The folks in Britain voted to leave the EU. As I heard it, the "stay" vote voted with their heads while the "leave" vote voted with their hearts, then woke up Friday morning wondering what they had done. It would not surprise me if by October a lot of the "leave" enthusiasm will have withered away and the whole issue will be less important than it was the day before the vote.

Be careful not to suffer big losses

The drop in stocks after Brexit did not hurt me. I had sold calls on all my shares and when I checked my portfolio the Saturday morning after the Brexit vote, all the options and stocks had cleared or were sold out, and my portfolio was worth more than it was week before. Long time readers will remember that in the bear market of 2007-08 I sold calls all the way through and at the end of 2008 my portfolio was down one per cent while the market was down 50 per cent.

Canada has a very narrow economy so if some governments try to reduce or interfere with trade Canada's economy might get hurt. At the same time the long-term price for oil cannot stay at \$50 without some big drop in production.

The oil industry chopped a trillion, yes a trillion, dollars from oil work this past year. That has hurt the Canadian economy. Some of that will come back over time. In the meantime we should be careful not to suffer big losses with our stocks.

Andy Sirski is mostly retired. He plays with his granddaughter, runs a small tax business, manages his family's investments and also publishes an electronic newsletter called StocksTalk. If you want to read it free for a month send an email to sirski@mts.net.



IN-FIELD EVALUATIONS

Sprayer aims at Canadian market

Grainews checked out an in-field demonstration of Agrifac sprayers

BY MARK MOORE

If you've seen a different coloured sprayer moving through the Prairies, it's not a custom paint job. Agrifac, a Dutch company with more than 30 years of experience in the design and manufacture of self-propelled sprayers, is taking direct aim at the self-propelled sprayer market with two versions of high-capacity, high-clearance sprayers with features and benefits designed with Canadian producers in mind.

We were able to see these machines in action at the DLG-Feldtage event (the German Agriculture Society's agricultural field days) held this June near Hassfurt, Germany. During the show, sprayer manufacturers held live demonstrations of their units moving through a test track that included uneven ground, obstacles and tight turns — all designed to show how a sprayer works in real-life conditions.

Agrifac was showing its Condor self-propelled sprayer, which is available in tank sizes of 900, 1,050 and 1,300 gallons (3,400, 4,000 and 5,000 litres). The company also offers the Condor Endurance, with a tank capacity of a whopping 2,100 gallons (8,000 litres).

"Our company focuses on spraying technology and innovation in a package that is easy to use and understand," explains Martine Smeijers, International marketer at Agrifac. "We refer to this by using the phrase 'Brilliant Simple' to describe our machinery."

Specs include boom widths of up to 54 metres (about 180 feet), an optional HighTechAirPlus system that can control droplet size on the fly using a special air injection system that can increase capacity up to 50 per cent, adjustable track widths from 59 to 181 inches (150



to 460 cm), and working speeds of up to 22 m.p.h. (35 km/h).

High-clearance versions are also available, like the ClearancePlus with a ground clearance of 51-79 inches that can be combined with a steplessly adjustable track width of 75-105 or 90-120 inches.

Both Condor models are equipped with the StabilioPlus chassis. According to the company, the pendulum chassis combined with the air suspension gives boom stability as well as driving comfort. Even when working at speed up to 22 m.p.h., the machine is capable of maintaining a stable boom and a comfortable ride.

For boom balance, Agrifac incorporates a unique balancing system called BalancePlus. Rolling over a moon-shaped construction, the boom remains in balance with no complicated balance system. The sprayer can be equipped with sensors that adjust the variable geometry, so hilly terrains are easily manageable, even equipped with the widest booms.

Newly released this sum-

mer is the MountainMasterPlus option that can independently adjust wheel height to level the cab independent of the boom on slopes up to 20 per cent. According to Doeko Blaauw, director of research and development for Agrifac, this provides increased stability, a better ride, and equal weight distribution.

Blaauw also covered several of the touch-screen options available in the cab. The EcoTronicPlus system provides precise control of the sprayer — from tank filling, to agitation, to nozzle and boom control, to cleaning. "All the necessary information for operating the sprayer is available to the operator. The screen shows the exact operation in a clear manner," Blaauw says.

Agrifac uses what it calls the GreenFlowPlus spraying system. A compact pump is built into the system for the shortest circuit and a minimal amount of rest liquid required. "The design of the spray system also makes it extremely easy to clean, quickly," Blaauw says.



PHOTOS: MARK MOORE

Left: Agrifac's Condor sprayer took part in a field test recently at the DLG (German Agriculture Society) Field Days in Hassfurt, Germany.

Top Right: A total of 13 sprayers (pull-type and self-propelled) took part in the field tests. Machines moved through an uneven field track to show how each machine handled the uneven terrain at working speeds while keeping the boom level.

CONTROL VIA SMARTPHONE

Making its most recent premiere is the company's EcoTronicPlus App. Through the app, the operator can start and stop the pumps while standing behind the sprayer with the touch of the screen. Sections, even individual nozzles, can be controlled via the app, making climbing in and out of the cab a thing of the past.

The company has also introduced its online visual guide, also available via smartphone. "An operator can access valuable information about the sprayer, including short and concise instructional videos, via their smartphone," Smeijers says.

GEARING UP FOR INCREASED BUSINESS

The company is ramping up its production capacity in its hometown of Steenwijk, the Netherlands. Slated for completion next year, the new factory and office facilities are being designed to double the compa-

ny's workforce and significantly increase its build capacity.

The building isn't just another factory: it is designed to be completely energy neutral and make maximum use of natural energy sources. The company is in the process of applying for BREEAM certification, with is an internationally recognized quality label that assesses building on nine sustainability categories including management, health, energy, transport, water, materials, waste, land use and ecology and pollution.

"We have designed our products with features and options that fit the North American market," Smeijers says. "We want a product that is technologically advanced and meets a producer's needs."

For more information, visit www.agrifac.ca. Agrifac is currently running a demonstration tour through several states of Canada and will exhibit at the Ag in Motion show in July.

Mark Moore is a freelance ag writer based in Germany.

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NEW EQUIPMENT

Deere debuts new air drill and cart

A third, wider model joins the 1870 lineup, and a new cart puts more product behind it

BY SCOTT GARVEY

This year John Deere unveiled a wider air drill and all-new air cart at Canada's Farm Progress Show in Regina.

The new addition to John Deere's 1870 line of air drill toolbars stretches the maximum available working width to 76 feet, joining the existing 40- and 56-foot versions. The 76 footer is a five-section design with 12-inch row spacings. This wider toolbar gets more ground clearance and 56 inches of free space between each rank of openers. All the 1870 drills use a floating hitch and have 25 degrees of flex on the wings.

The drills can be mated to the brand's updated 1910 Series 550 bushel tow-behind or 430 bushel

tow-between or tow-behind air carts. The 1910s are now available with the new AirPower 2 dual fan option that can deliver up to 550 pounds of total product per acre by using two independently controlled fans.

But the all-new 850 bushel C850 air cart bumps up capacity even more.

"If there are three things that set this (cart) apart from the competition, it's around accuracy, productivity and technology integration," said Tyson Harris, product specialist with John Deere, at Canada's Farm Progress Show (CFPS) in June.

The C850 also uses the dual fan AirPower 2 system. "If you want to see rates higher than 550 lbs. per acre, added Harris, just slow it down from 5.5 (m.p.h.) to 5 or 4.8 and you can see rates as high as

600 and even upwards of 700 lbs. of product through it."

The C850 has 260, 130 and 410 bushel main tanks along with a 50 bushel small-product tank at the front. They ride on load cells, which enables the operator to use the new active calibration feature and fine tune metering rates right from the tractor cab.

The C850 cart also gets disc brakes on the rear axle to help with stability both in the field and during road transport.

The 76 foot 1870 drill comes with Deere's TruSet depth and pressure control system. "With the all new TruSet, it gives you in-cab adjustability of depth and pressure," said Cody Wilkinson, Deere's product rep. for the 1870 drill during CFPS. "Before you had shims and donuts

that you'd have to adjust. All that has gone away now and you can do all that from inside the cab."

The 1870 drills can band fertilizer up to six inches deep, and the seed tubes can be adjusted in ¼-inch increments. A cam lever on each opener makes it easier to adjust seeding depth.

"Another nice new feature on the 1870 is Relative Flow blockage sensing," adds Wilkinson. "Previously, we had blockage monitoring, but we've taken that a step forward with being able to compare flow from tower to tower. We have secondary lines being compared to one another. If, for example, you had some fertilizer that was gummed up and you weren't getting the flow

you wanted, our system is sensitive enough to detect that show it in the cab to the operator."

For road transport, the 76 foot 1870 folds up completely in two minutes and the retractable openers narrow the folded width to 22.5 feet. A "bump up" and "duck down" feature allows operators to increase ground clearance by four inches to clear obstacles.

To make headland turns quicker, the toolbars reach full lift in the field in 7.5 seconds. And the use of more greaseless bushings and long-life components cuts service time.

For the e-QuipTV video, visit Grainews.ca.

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



PHOTO: JOHN DEERE



PHOTOS: SCOTT GARVEY



1. John Deere adds a 76-foot model to its 1870 air drill lineup and a new 850 bushel cart. 2. The C850 drill has three main product tanks and a 50 bushel small product tank on mounted on load cells. 3. Packing and trip pressure on the openers can be set from the tractor cab. 4. The C850 cart comes with a wiring harness that allows for the installation of in-tank cameras to monitor product levels. 5. The conveyors on Deere carts are now mounted on arms with five pivot points that allow for more manoeuvrability and easier loading of all tanks from one delivery location under a truck. 6. Load cell information on the C850 cart allows for seeding calibration rate adjustments right from the monitor in the tractor cab.



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SHOP CLASS

How to track down an electrical fault

We trace the source of a tractor's parasitic power drain with a multimeter

Automotive electrical systems in newer machines that make extensive use of computer processors can be very complex and confusing. But there are a lot of machines on the farm with electrical systems that won't have anywhere near that level of complexity, especially those with diesel engines and no computer controls.

Finding and fixing electrical faults in those simpler systems can be a straight forward exercise. If you understand a few simple principles and follow some logical steps, electrical faults can easily be tracked down right in the farm shop.

In this Shop Class installment we roll up our sleeves, identify and correct a typical electrical problem in a late-model utility tractor. All it took to get the job done was a reasonably good quality, digital multimeter, some basic hand tools and a lot of patience.

The battery in this tractor would lose its charge after sitting for a few days, requiring a boost or recharging to get it started again.

Because the battery is relatively new and returned to full voltage after some time on a charger, we suspected there was a parasitic power draw when the key was turned off rather than a fault within the battery itself. But we first checked to make sure the alternator was working correctly and keeping the battery up.

With the tractor running at a fast idle, we used a multimeter to check the voltage across the battery. Set to "DC volts" with one lead on the battery positive post and one on the negative, the meter showed about 14.5 volts, which confirmed the charging system was working fine.

Now we knew both the battery and charging system were in good order. So it was time to check out the likelihood of a parasitic power drain.

With the engine shut down and the key off, the negative cable was disconnected from the battery and the multimeter was set to "DC amps." When the positive meter lead was touched to the cable and the negative lead to the negative battery post, the multimeter indicated a steady current flow of 2.58 milliamps. Of course, there shouldn't be

current flow when the tractor is turned off; some machines will still have very small current flows for a variety of reasons. As a rule of thumb, anything above 0.5 milliamps is considered unacceptably high. So our initial suspicion of a parasitic power drain was confirmed.

Remember, when the multimeter is set to "DC amps", it becomes a part of the electrical circuit and all current flows directly through it (unlike when it's set to DC volts), so it's possible to damage the multimeter if the level of current flow is too high. Do not touch the meter leads directly across the battery (positive to negative posts) when set to "DC amps." Current flow that high will likely blow your meter's brains out — figuratively speaking.

The first step in tracking down exactly where the tractor's electrical fault lay was to identify the specific circuit it was in. To do that, we left the negative battery cable disconnected and the multimeter connected between it and the negative battery post. We then removed one fuse at a time from the fuse box and rechecked the multimeter reading until it fell to nearly zero. In this case that happened when we removed the ignition switch circuit fuse.

That identified the circuit with the faulty component, significantly narrowing down the number of possible culprits. From this point on in the process it's handy to have a copy of the tractor's wiring diagram. It shows which components are included in which circuits and the color of the wires connecting them. We didn't have one, but this tractor has a pretty simple electrical system and we knew from the fuse name which components we should probably check.

With the fuse from the faulty circuit reinstalled, we isolated one component at a time by disconnecting it and continually rechecked the multimeter reading. After unplugging the dashboard gauge cluster, the meter reading fell to 0.0.

Clearly, we had found the problem. Replacing the gauge cluster should eliminate the parasitic loss and get the tractor working normally again.

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



A fault in this tractor's electrical system was allowing a continuous 2.58 milliamp current to flow when engine and key were turned off, draining the battery within a couple of days.



Before assuming a parasitic power drain was causing the battery to go dead, we checked the charging system with a multimeter. The multimeter reading of about 14.5 volts with the tractor engine running indicated the alternator was doing its job.



Removing one fuse at a time until the current flow stopped revealed which circuit had the faulty component.



With the instrument panel gauge cluster disconnected, current flow fell to 0.0. That indicated the fault was in the gauge cluster and it will need to be replaced.

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TECHNOLOGY

New John Deere guidance receiver

BY SCOTT GARVEY

John Deere has again updated its satellite guidance product line with the introduction of the StarFire 6000 receiver and new SF3 signal correction. In a June press announcement, the company claims these new product offerings will give customers “greater precision capabilities, accuracy and uptime.”

“The StarFire 6000 Receiver offers a full range of differential correction levels, from the base SF1 satellite-delivered signal to the premium RTK option,” explains Mike Moeller of John Deere’s Intelligent Solutions Group, in that announcement. “And to optimize the performance of the StarFire 6000 receiver, we’re offering the all-new SF3 correction level, which delivers 40 per cent greater pass-to-pass accuracy, new in-season repeatability and 66 per cent faster pull-in time than the previous SF2 correction level.”

And if you haven’t already invested in an RTK system, the green brand claims the StarFire 6000 is capable of “RTK-like” accuracy.

“StarFire 6000 with SF3 is a great solution when RTK is not available and customers want in-season repeatable accuracy to 1.2 inches,” adds Moeller.

New guidance algorithms give the StarFire 6000 the ability to track up to three StarFire satellite signals at once, choose the one that will deliver the best performance, and automatically switch to an alternate to help maintain accuracy and performance if the primary signal is blocked.

The 6000 gets an improved Rapid Recovery feature, which allows for a quicker return to high-accuracy performance if the GNSS signals are lost due to shading from trees, buildings or terrain.

In addition, the StarFire 6000 has a built-in USB port to more quickly install software updates, cutting that time down to about three minutes compared to more than 20 with the previous receivers. It also has a built-in 8GB data logger for improved trouble shooting and diagnostics.

Deere says the StarFire 6000 remains a “plug-and-play” receiver, making it compatible with current and former displays as well as other technologies customers are using on their equipment. Producers who already use a StarFire 3000 and SF2 signal can upgrade their equipment this season.

The StarFire 6000 will be a factory-available option on 2017 model year Deere equipment.

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



Deere introduced the StarFire 6000 receiver in June, along with announcing the availability of the SF3 enhanced-correction signal.

PHOTO: JOHN DEERE

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MTZ Equipment Ltd. re-introduces the Kirovets four-wheel drive tractor



BY SCOTT GARVEY

A few decades ago the former Canadian distributor of Belarus tractors included high-horsepower, four-wheel drive tractors in its product line, and they wore the Belarus brand name. But these machines weren't built in the same factory in Minsk, Belarus that produced the front-wheel assist models that distributor sold here at the time, because the Minsk plant didn't (and still doesn't) produce very-high-horsepower machines. They were, instead, produced by the Kirovets factory in St. Petersburg, Russia and just wore Belarus badges for the North American market. Kirovets tractors have been in production in St. Petersburg since 1962.

When MTZ Equipment Ltd. took over distribution of Minsk-built Belarus tractors in North America a couple of years ago, the company's VP of sales and marketing, Arie Prilik, told *Grainews* his firm chose to use the Minsk factory's other brand name, MTZ, instead of Belarus, but the tractors are the same. And, he said, his firm would eventually add a Kirovets-built, four-wheel drive model to their product line.

The first wave of model K744 Kirovets tractors wearing MTZ badges was expected to arrive on Canadian shores last month. They'll top out the range of MTZ-branded tractors in Canada at 428 horsepower. That should help broaden the brand's market appeal, especially in Western Canada.

"At only U.S. \$198,000, MSRP, this affordable, powerful tractor allows farmers to reduce significantly their input cost and keep more money in their pockets," MTZ Equipment said in a press release. "Loaded with most popular options (duals, PTO, in-cab hitch control) the tractor is priced at US\$227,730, saving US\$130,000 to US\$200,000 compared to similarly equipped major competitors."

The K744 MTZ Equipment is importing to Canada will have a Tier 3 emissions level OM460LA turbocharged Mercedes Benz diesel under the hood, so it won't require the use of DEF



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NEW EQUIPMENT

New grain bag loader from Loftness

The new XLB10 is a new “fully featured” machine, designed to make this job easier

BY SCOTT GARVEY

In May, Loftness Specialized Equipment introduced its new XLB10 “premium” grain bagger, which, the company claims, makes it easier on operators when it’s time to install bags.

A remote-controlled jib crane and trolley system use electric motors to lift bags off the ground and slide them into place on the tunnel. A retractable bag loading apron helps pull the bags onto the bottom pan.

Loftness has also redesigned the tunnel on this model and given it a deeper bag pan that can hold longer bags, so it can fill 10-foot bags up to 500 feet long. The

20-inch auger has a large hopper and can fill those bags at a rate of about 30,000 bushels per hour.

Electric brakes add to safety when moving the bagger down the road, and the wheels can be hydraulically raised and lowered. The XLB10 uses a 540 r.p.m. PTO drive and requires a tractor with at least 85 horsepower to operate it.

The company claims producers will find the XLB10 easy to repair, because it uses “off-the-shelf, industry standard” parts that can be sourced quickly.

For more information see the company’s website at www.grainlogix.com.

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

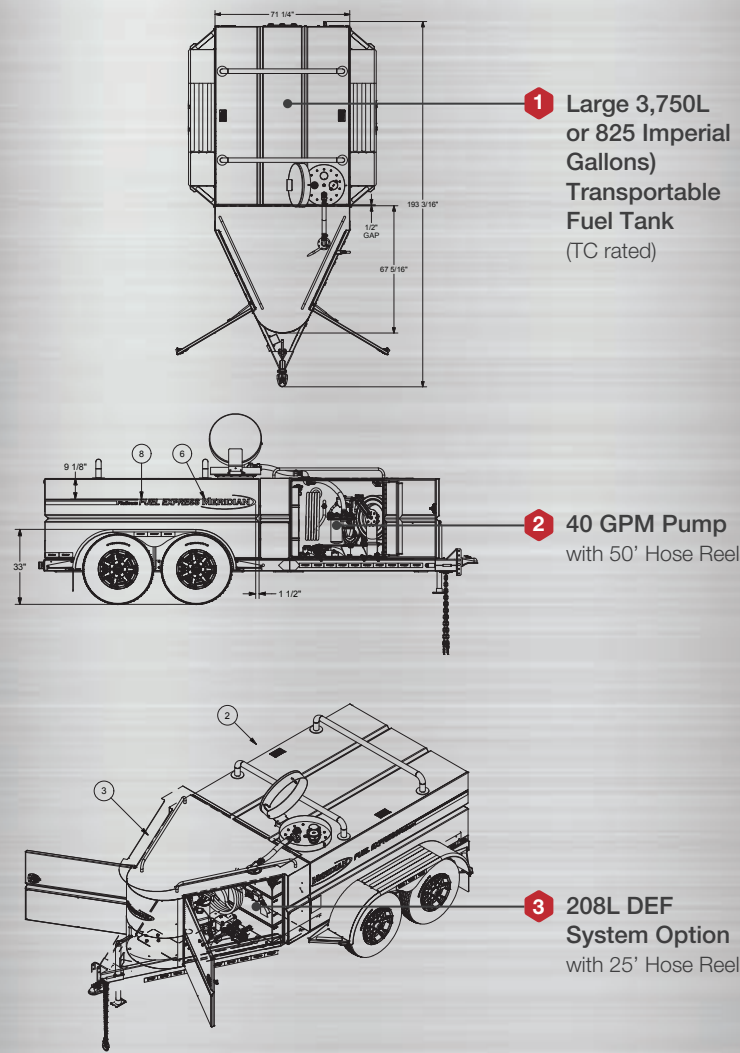


The Loftness XLB10 saves labour when installing new bags.

PHOTO: LOFTNESS



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or a particulate exhaust filter. Because the brand is new to the North American market, it gets to take advantage of a limited exemption all manufacturers were given by the U.S. EPA (which Canada has also permitted), allowing them to use lower emissions-level engines until a certain number of units are sold. Because MTZ is selling a much lower volume of tractors than the major brands, the exemption could last a while.

Behind the K744's German engine is a 16F/8R partial power shift allowing on-the-go gear changes within each of four forward ranges and two reverse. The tractor rides on a suspended front axle and has a 300 l/min. hydraulic flow rating. It also comes equipped with a category III and IV three-point rear hitch with a lift capacity of 9,000 kilograms. “Self-locking” differentials help improve traction.

MTZ's press release calls the tractor a “Solid mechanical design” and adds that it has “None of the complicated computers, electronics, finicky sensors (of other brands)”, emphasizing what these machines offer farmers: a more basic level of mechanical engineering that produces cheaper brute horsepower for those who don't need or want more sophisticated machines.

MTZ Equipment says it will be providing parts support at all its dealers not only for the K744 but also for the older Kirovets tractors previously sold in Canada.

Prilik says a K744 will be making the rounds to farm shows in Western Canada this summer. Expect to see one at this month's Ag in Motion show near Saskatoon and again at the Red Deer show later in the fall.

MTZ Equipment is also looking to increase its network of dealers across the U.S. and Canada. For more information, check out mtzequipment.com.

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

Case IH offers new guidance products

Dealer-established RTK network, easier data transfer and retrofit auto-steer packages

BY SCOTT GARVEY

Case IH announced early this year it is adding three new products and services to its AFS Connect product line. First, it will establish a network of dealer-supported RTK base stations across Canada and the U.S. This cellular-based guidance correction signal will be available via subscription through local dealers. The brand expects this network will significantly improve farmer access to high-accuracy guidance. Second, to help improve data transfer, the AFS Connect online portal will now allow for enhanced two-way data flow. This includes a cloud-based sharing feature that

producers can use to share information with third parties, making transfer of prescription maps from agronomists easier. And finally, for growers who want to add auto guidance to an older machine or equipment from other brands but stick with a Case IH AFS Pro 700 terminal, that system can now support an electric auto-steer feature that can be easily retrofitted to almost any machine. The ElectriSteer system will control machines at speeds between 1.5 and 15 m.p.h. It is designed to be quickly transferable between vehicles. *Scott Garvey is machinery editor for Grainews. Contact him at Scott.Garvey@fbcpublishing.com.*



Case IH adds to its AFS Connect product line.

PHOTO: CASE IH



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FARM PROGRESS SHOW

Forging ahead

Blacksmith Don Fox of Moose Jaw, Saskatchewan, works at his forge during Canada's Farm Progress Show in Regina in June. Fox was one of a group of artisans demonstrating some classic trades in the antique equipment hall during the show.

Scott Garvey



PHOTO: SCOTT GARVEY

BY JONNY HAWKINS

Country Chuckles



"And the All-Out Award goes to Bessy the Bell Cow, who always gives 102 per cent."



Rain at the right time

A sudden turn in moisture conditions made all the difference

BY KIM NIELSEN

I am back up on 4 Clover Ranch near Rocky Mountain House, Alta., having arrived a week ago and getting our custom grazing operation going with cow-calf pairs trucked in as this is written. Meanwhile back at our Alcheringa Pastoral (Australia), Helen happily reported that our steer sale in late May had gone well. We opted for the special “store cattle sale” held at the Hamilton Livestock Exchange in southwest Victoria, which had brought in about 2,600 head for the sale. We bought the steers through our livestock agent in September 2015 and couldn’t have bought at a higher price. We hit a price spike just perfectly and as the feeder market subsequently softened and fat cattle dropped across North America we were, needless to say, on edge with how we might do on the steers down the road. The reason why cattle prices fluctuate is always hard to pinpoint but the drop in feeder cattle was primarily due to the effects of El Niño. Winter precipitation is crucial for all Australian graziers as the summers typically yield very little rain and growth in the pastures. The spring and summer of 2015-16 were the driest since 2009. Meteorologists claim the next driest was back in the 1940s, when there was marked destocking across the country with early-weaned calves and cull cows heading to town. As well, the Australian dollar climbed to the high 70s reducing the competitiveness

of Australian beef going into the softening market of North America. MAKING THE BEST OF IT We had purchased the steers and had to make the best of it as we began grazing across the paddocks. The extremely dry winter and spring caused the grasses to head prematurely and while the feed value of the stressed grasses might have been above normal due to the lack of rain, it was clear that supplementing the dry standing feed needed consideration. This was done using urea/molasses blocks with 30 per cent protein improving rumen function on the fibrous feed. As we neared the end of summer in late March with cooler days and less evaporation, more frequent showers gave the pastures a lift. I have mentioned before that grazing during the hot Australian summer has been a steep learning curve for us but we are picking up on a few strategies. Most pasture species go dormant and have much-reduced palatability during summer such as the ryegrasses and the popular phalaris (similar to reed canary grass). They are tremendous winter and spring performers, but once headed it is hard to get the cattle to eat them. For that reason we added Venus alfalfa and Choice chicory in our forage mix when the pastures were seeded down. These varieties are more summer active and can add significantly to the feed value of the overall stand. Similarly we

selected the orchardgrass variety Savvy and perennial ryegrass One50 for the improved summer and autumn growth relative to other varieties. The choices helped the cattle performance immensely on the second rotation from March onward. THEN THE RAINS CAME As autumn approached, rain fell across many parts of Australia from far northern Queensland all the way down through New South Wales into Victoria. Farmers were rejoicing the announcement that El Niño was a thing of the past and that in fact it would be followed by a weak La Niña. The remote outback cattle country where Queensland, New South Wales and South Australia join up received record rainfalls. With very little cattle on hand, the cattle station began restocking. On outback trips of the past we have witnessed firsthand the explosive growth the dry, red centre of Australia can produce when it rains. The big cattle stations are very responsive when this happens and will travel great distances to buy cattle. The restocking is often done regardless of outside factors such as the softening beef market of North America and reduced export to China. Beef production is their game and a barren cattle station is not an option. Historically the price of Australian finished cattle has always been tied to the North American market. While it was slow to catch



PHOTO: KIM NIELSEN

Alfalfa and chicory helped carry the cattle through the dry pasture conditions. up with the processors rubbing their hands and taking full advantage of this during the last two to years, we are finally nearing the historic 80 per cent level of the U.S. price. We sold our 900-lb. steers for \$1.48/lb. and made roughly \$400 on each. Despite the nervous beginning it was a good outcome. Helen will soon arrive here on 4 Clover Ranch for the Canadian summer. Our livestock agent back in Australia will be on the lookout for steers for us come September and the drama will begin again. Kim Juul Nielsen provides an Australian perspective from time to time. Kim and Helen grow grass during the Australian summer at Alcheringa Pastoral in the South West of the state of Victoria, Australia and during the Canadian summer up on 4-Clover Ranch, Rocky Mountain House, Alberta. He can be reached at kim.juul56@yahoo.com

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THE MARKETS

Market says plan on backgrounding

Feedlot margins are not expected to improve until 2017



JERRY
KLASSEN

MARKET
UPDATE

Alberta fed cattle prices dropped to a two-year low of \$143 in late June as the beef complex absorbed the larger production. Cattle-on-feed inventories continue above year-ago levels, enhancing the weekly slaughter volumes. Wholesale beef prices have come under pressure and we are starting to see weakness in the retail market. Wholesale and retail beef prices have held up fairly well as packers and grocers struggle to

maintain high margins. However, we are now starting to see retail prices ease as the expected surge in third-quarter beef production comes to fruition. Consumer demand has exceeded expectations, tempering the decline in the beef market. Weather has been favourable for the grilling season; people are travelling and eating out as hotel occupancy rates are at nine-year highs. The U.S. economy is running full steam with low unemployment and the tight labour market has resulted in a marginal increase in hourly wages. This all bodes well for enhanced consumption but the market in general is functioning to encourage demand at the current price levels.

THE NUMBERS

U.S. cattle on feed as of June 1 reached 10.8 million head, up two per cent from year-ago levels. Fed cattle marketings in May were up five per cent from last year while placements were a whopping 10 per cent above May of 2015. U.S. weekly beef production has been exceeding last year by nearly eight per cent over the past few weeks, confirming the increase in quarterly beef production. The USDA continues to project a 360-million pound year-over-year increase in third-quarter beef production. In the final quarter, beef production will start to decline but will remain above year-ago levels

U.S. QUARTERLY BEEF PRODUCTION					
Quarter	2013	2014	2015	Est. 2016	Est. 2017
1	6,172	5,868	5,664	5,935	6,045
2	6,517	6,183	5,855	5,995	6,410
3	6,608	6,179	6,066	6,425	6,750
4	6,420	6,021	6,105	6,320	6,580
Total	25,717	24,251	23,690	24,675	25,785

by nearly 215 million pounds. The 2016 U.S. calf crop is projected to be one million head above 2015 (slightly above my earlier projection). For next year, there are sharp year-over-year increases in each quarter; however, the tightest supply scenario will likely be in the March April period. In Canada, lower feeder cattle

exports this spring have caused June 1 cattle-on-feed inventories in Alberta and Saskatchewan to reach 839,000 head, up four per cent from June 1 of 2015. Canadian year-to-date beef production for the week ending June 18 was 455,000 tonnes, seven per cent above year-ago levels. At the same time, fed cattle exports to the U.S. are up 44 per cent over last year at 142,000 head as of June 11. In Canada, the market is functioning to encourage exports of fed cattle along with fresh and chilled cuts. U.S. away-from-home food spending during May was up 7.8 per cent over May of 2015 while at-home food spending was up 3.4 per cent. The industry is looking for similar year-over-year increases in June and a potential surge in July during the peak holiday season. However, demand tends to slow in August and then drops off in September, which is a seasonal low. Keep in mind this demand seasonal low is when weekly beef production will reach a peak high for the year.

FEEDER PRICES STRUGGLE

Feeder cattle prices are struggling given the ongoing financial bleeding in the finishing sector. The prolonged period of negative margins has lowered the purchasing power for the upcoming fall. In the short term, I see further pressure on feeder cattle prices and the market is expected to trend lower into the fall. However, I want to reiterate a few points from my previous article. The surge in third-quarter beef production will drive fed and feeder cattle prices to yearly lows. This is when feedlots will want to load up on yearlings to hit the peak fed cattle market in March and April of 2017. However, cow-calf producers do not want to sell during the third and fourth quarters. This will be the year to background your calves and sell them in the first quarter of 2017 when feeding margins improve. I always like to think about potential 'black swan' variables. The Brexit is likely overblown and professionals adjusted accordingly. However, the most notable problem in the short term is China's rising debt. Financial meltdowns tend to occur in the fall, which could add pressure to the weak fundamental structure for the beef complex.

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, specializing 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.

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Diseases vary even in short distances

Clostridium hemolyticum is a good example of how conditions change



ROY LEWIS
ANIMAL HEALTH

In talking with other veterinarians it is amazing how variable the prevalence of a specific disease can be between geographic areas. We always think of the huge difference between warm climates and colder, more temperate climates. Sometimes these differences can be as close as a one-hour drive in the same province.

This becomes critical when cattle are transported over large distances such as moving to summer pastures. Producers should have a good working relationship with the veterinarians in both regions as certain large differences may exist with regards to animal health. The big difference in the clostridial diseases more specifically Bacillary hemoglobinuria (redwater) is a good example.

Redwater will most often cause a sudden death due to toxins produced by the bacteria and occurs primarily in the summer and autumn pasture seasons. It has been reported commonly in cattle and also is prevalent in game-farmed animals such as bison and elk in the endemic areas. It is less common in sheep. Its spread is commonly by water systems through flooding or drainage. Movement of contaminated hay has been incriminated and carrier animals such as coyotes may spread it from predating on carcasses killed by the disease. It is best to burn or bury the carcasses deep if redwater is suspected. Have your veterinarian perform an autopsy on sudden deaths or check an animal clinically if the urine is red. There are several diseases causing red urine which we must differentiate as each problem carries a different treatment regime.

COVERED IN EIGHT-WAY VACCINES

Clostridium hemolyticum is often the last fraction in the black-leg vaccines, which is added into a seven-way vaccine to make it an eight-way vaccine. In areas where it is prevalent routine vaccinations at six month intervals may even be necessary for prevention.

The toxin causes red blood cells to burst, which is why you get hemoglobin contained in the red blood cells showing up as a red colored urine — hence the name red water. In some cases if caught early, treatment in the form of large doses of penicillin may prove successful. Most often the only sign is sudden death and an autopsy will hopefully confirm what you are dealing with.

Certain areas in Alberta especially in west central Alberta (eastern slopes of the Rockies) can have a high incidence and on infected farms death losses can vary from five to 20 per cent if susceptible cattle are not protected. These specific geographic areas have large tracts of land where cattle are pastured from other areas. These cattle may not be protected if coming from areas where redwater is not a problem.

In my former practice area north of Edmonton, for instance, we have only seen very sporadic cases in the last several years although the incidence is increasing somewhat. Our standard recommendation is to use a nine-way vaccine (covexin-plus) because we do see tetanus as well especially with banding calves. Tetanus incidence will increase with the use of banders for castration or the use of dirty needles for vaccinating. Our protocol is to typically have all cattle vaccinated two times for feedlot animals and three times for replacement heifers by the time they are bred. This will give a very long immunity for most clostridial diseases. This however is not the case for redwater.

In areas where redwater is prevalent cattle bison and elk must be vaccinated at least yearly and if a real problem with specific herds twice yearly. Ideally the shot should be given two to three weeks before the maximum exposure occurs. Otherwise deaths will most definitely be experienced. This is a huge difference in protocols and if one is moving cattle great distances a very important fact to know.

READ THE LABELS

Some cattle are vaccinated with seven-way vaccine and have absolutely zero protection against redwater. In other areas of the province we see every six-month vaccination with a vaccine protec-

tive against redwater necessary to maintain protection. If one reads the labels of these vaccines carefully we see it is clearly stated if a problem with redwater exists at least annual vaccination is recommended. It also states if a problem exists a twice yearly vaccination may be necessary. The good news is most producers can work this into their management schemes and process when other things are administered. If vaccines for the reproductive diseases are given in the spring a multivalent clostridial vaccine containing hemolyticum can be administered at the same time. This is very cheap insurance as the clostridial vaccines are the cheapest vaccines on the market today.

Another issue, which predisposes cattle to redwater, is liver flukes. If liver flukes have been a problem in your area as they currently are in specific regions of Manitoba make sure their Clostridium hemolyticum (redwater) vaccines are up to date. The liver flukes live in and damage the liver making the likelihood of contracting the disease that much greater. This is again an example of specific areas having a condition, which increases the likelihood of another disease increasing (liver flukes leading to redwater) ✍

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.



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Rain can compromise good-quality hay

Feeding and management options to consider

BY PETER VITTI

The other week I was driving in southern Manitoba and saw a group of dairy cattle grazing tall lush pasture. The grass was up to their bellies and I thought: "When was the last time that our pastures looked so good?" The next field had cut hay in wide swaths that looked rained-on and bleached. My heart sank.

While rain is great for pasture production, the rainy weather in the last couple of months has made harvesting good-quality dairy hay nearly impossible. While rained-on hay like I saw may not replace high-quality hay in a well-balanced dairy diet, we should acknowledge

such damage. Effective actions can be taken to minimize its negative effects on dairy performance.

It's no secret rain damage on hay starts immediately after the first raindrops hit cut field grass and every minute afterward until swaths can be dried to under 15 per cent moisture and harvested into bales. For example, University of Wisconsin demonstrated that field plots of alfalfa hay lost 22 per cent of their dry matter content after a 2.5 cm (1 inch) rainfall fell on it after one day, while cured hay without any rain damage lost about six per cent dry matter. The researchers also found rained-on hay lost 44 per cent of its dry matter content after persistent rains lasted a few more days.

IMPACT ON DAIRY PRODUCTION

In addition to dry matter field losses, here are three more fundamental problems connected with feeding rained-on hay to dairy cows:

1. Loss of dairy nutrients. Similar to field losses of rained-on hay, there is a leaching of water-soluble carbohydrates, which are a good source of energy for lactating cattle as well as a significant loss of soluble protein stored in its leaves. Not only is rained-on hay less nutritious, it tends to fill dairy cattle up quickly with indigestible fibre, which is fermented slowly by their rumen microbes. As a result, what energy and protein

left over in damaged hay often cannot support even the lowest dietary nutrient requirements of lactating without some type of nutrient supplements.

2. Mould growth. If hay is harvested at moistures above 20-25 per cent, it becomes an environment for dangerous mould growth. I have seen many times in my travels, the leaves and stems of tough hay covered with white mould. Some practical field trials with white and other hay moulds have proven that cattle will eat most hay with about one to two per cent storage mould without any problem. However, cattle will likely reject feed hay with over 10 per cent mould contamination or at best it slow

down consumption if they have no other forage choice.

Even in unpalatable mouldy bales not rejected by dairy cattle, there is a fair amount of essential nutrients (in addition to field nutrient losses) that are naturally consumed by mold organisms. It is estimated an established mould in damp hay reduces its energy content up to 15-20 per cent. That's energy that could have been eaten otherwise in a mould-free state by lactating dairy cows and help contribute to milk production.

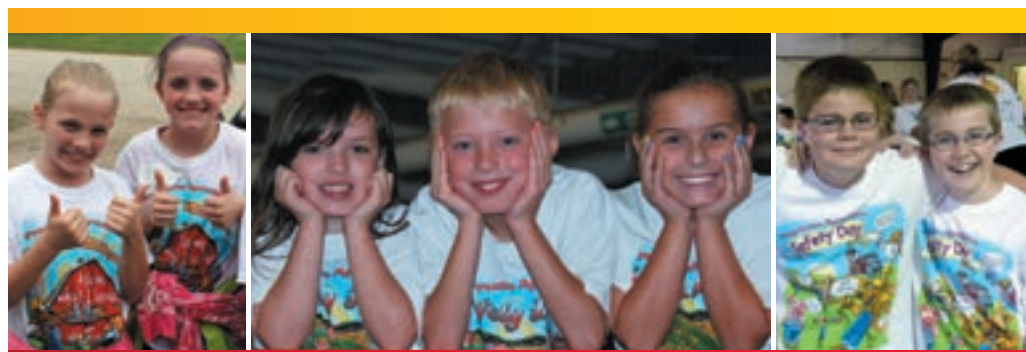
3. Caramelized hay. Mould growth produces a lot of heat, which not only denatures essential nutrients such as forage protein, but reduces overall nutrient digestibility of the hay. This process is known as the "Browning reaction." It occurs when internal temperatures of poorly cured hay reaches 60 C (140 F), which binds heated forages' carbohydrates and proteins together, and thus renders a significant amount of dietary protein unavailable to dairy cattle. In order to measure the extent of protein damage by caramelization; producers should take rained-on forage samples and request an ADIN (acid detergent insoluble nitrogen) analysis at a feed-testing laboratory.

FEEDING OPTIONS

So what can dairy producers do to minimize the adverse production effects of rained-on hay? Here are a few suggestions:

- Consider using hay preservatives such as propionic acid sprayed on to cut-down forages. While propionic acid will not stop field losses, it can reduce "dry-down time" and hay can be harvested at a higher moisture.
- Reduce the amount of poor-quality forages fed to dairy cows and complement with more silage or better quality hay. Avoid feeding extra grain to compensate for poor-quality forages.
- Consider using "forage extenders" such as beet pulp to add dietary energy and digestible fibre.
- Save it for the non-lactating cows. This hay is more fibrous and contains less energy and may have a place in dry cow diets later on.
- Some producers have switched to round-baled hay silage, where cut forage is harvested at 50-60 per cent moisture compared to 18 per cent in cured dry hay. Studies on baled hay silage show significant reductions in comparative field and nutrient losses. Like cured hay, it works well with other dairy feeds such as corn silage to achieve high milk performance in lactating dairy cows.
- Invest in an outside forage source, if available. It may be economic to buy better-quality dry hay to support milk production than to rely on nutrient-compromised hay.

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



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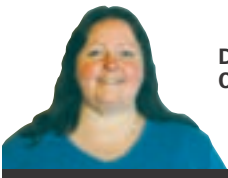


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A look at alternative parasite control

If pest resistance to chemical treatment is suspected, try other remedies



DEBBIE
CHIKOUSKY

When we first started raising goats and sheep in 1998, it was well known that parasites were becoming immune to the drugs available for their control. With no companies developing new control products for these species it is always on my mind to watch for different treatment ideas. As of 2016 nothing has changed except the parasites in these animals are getting more difficult to control. One of the hardest to deal with, in my opinion, is Barber pole worms (*Haemonchus contortus*).

The worms are 20 to 30 mm and clearly visible in feces. Only adult females have the characteristic 'barber's pole' appearance due to the pink (blood-filled) intestinal tract of the worm twisted around the paler reproductive tract. The males are smaller (around 15 mm) and pale pink. Females are prolific egg layers, laying up to 10,000 eggs per day. Higher worm egg counts are usually seen with this parasite.

The pest can take a healthy animal down very quickly, with few options for control.

ALTERNATIVE TREATMENTS

Concerned producers pointed us to a 2010 study done by the Department of Biomedical Sciences and Pathobiology, Virginia-Maryland College of Veterinary Medicine, using an emulsion of orange essential oil for these parasites. It was successful.

In the sheep trial, 18 lambs were orally infected with Barber pole worms in the L3 stage of development. They were left alone for one month, then two groups of six lambs each were dosed with 600 mg/kg BW orange oil either once or daily for three days. Fecal egg counts were monitored daily starting on the first day of treatment (Day 0) and continuing for 14 days. Results showed that a single dose of the product caused up to 97.4 per cent fecal egg count reduction compared to control sheep. Egg counts were significantly reduced by day two.

An emulsion is made by mixing the oil with something. It seems to mix best with a yogurt



PHOTO: DEBBIE CHIKOUSKY

Neem tea is one of the biological treatments that appears to be effective on parasites, if handled properly.

when we tried it. It was very encouraging to see this study shows that it is relatively safe to assume that orange oil emulsion is a useful tool.

It is important to understand that the orange oil was measured by weight (milligrams... not millilitres) so they are giving 0.6 of a gram per kg so 0.6g x 20 kg = 12 grams. This means that 12 grams of oil would be given

per 20 kg of animal body weight. Considering that these are meat animals being treated, it is recommended to purchase organic essential oil and of course discuss this with a veterinarian before attempting it on your own farm.

NEEM TEA TREATMENT

Another method of parasite control (both internal and external) used predominantly in India is to feed the animal neem tea. As explained a bit later, it must be used with caution.

Our farm used the tea for our spring worming. It appears to be very effective. There was a massive reduction in visual parasite expulsion and there appeared to be no need to retreat. We suspected parasites were developing a resistance to the commercial formulations which prompted the decision to try the neem tea.

A fellow producer used the tea last summer on a doe that had chronic parasite issues they were unable to resolve conventionally. The neem tea worked for them.

When the does/ewes have had their young we penned them in small groups in the barn and restricted the water to only

fresh-cooled neem tea to deliver the dose. We did repeat more in larger groups than when doing it individually only because it is harder to monitor individual consumption. Parasite control have been better compared to treatments with products such as Valbazen and Safeguard. We still use commercial products if the veterinarian believes it necessary.

To prepare neem tea, add three to four tablespoons of neem leaf or four teaspoons of neem leaf powder, simmered in one gallon of water for a few minutes. Let adult goat or sheep drink the tea during a day. The tea treatment can be repeated for a few days when a bad case of parasites is presenting. For external parasites (mites/lice) the tea can be sprayed with a bit of powder rubbed into the coat of the animal.

This is a plant that must be used with caution. It will cause humans or livestock to miscarry if absorbed, even through the skin. There is not a known safe rate so it must be kept away from pregnant livestock and humans.

Debbie Chikousky farms with her family at Narcisse, Manitoba. Visitors are always welcome. Contact Debbie at debbie@chikouskyfarms.com.



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Important to feed mineral properly

Weatherproof feeder improves chances of correct intake



PETER VITTI

Beef cows can't live without minerals and vitamins, which are often deficient or biologically unavailable in many pastures. I routinely recommend cattle producers feed sufficient well-formulated loose cattle mineral on a regular basis. I find that most people will take time in choosing a commercial beef mineral that's formulated to meet their cows' respective seasonal needs, but some of the same people do not feed it properly.

Either they put it out on pasture and forget about it and/or don't use a proper mineral feeder. Both failures are roadblocks to good cattle mineral intake. After buying cattle mineral, producers should calculate the right amount of mineral to be fed, poured in a clean durable mineral feeder and monitor/adjust mineral intake; all-encompassing assurance that the whole cow herd is actually consuming enough each day.

I use a standard recommendation that targets 80 to 100 g (three

to 3.5 oz.) of cattle mineral per day to prevent mineral and vitamin deficiencies from occurring in the first place and account for some natural variability. If salt makes up at least 25 per cent of this cattle mineral, then one should adjust proposed mineral use accordingly.

For example, a 200 cow-calf operator puts out loose mineral every three days; we can figure out the number of bags that are needed by using the following calculations:

1. 200 cows x 100 g = 2000 g or 20 kg
2. 20 x 3 days = 60 kg
3. Each bag = 25 kg
4. Need 60/25 = 2 ½ bags
5. Put out 3 x 25 kg bags

It is also recommended that mineral feeders should be located where cattle make frequent visits. Moving mineral stations closer to water sources generally increases mineral intake by cows, while moving feeders farther back from the water will often decrease mineral intake. It is always a good idea to have enough mineral feeders for the whole herd; one standard recommendation is one feeding station for every 30-40 cows.

Feeders should be easily accessible to all cows, but protects mineral from the effects of water, wind, sunshine and the cows, them-

selves. I will be the first to admit that I am not a fan of wooden boxes, oil drums cut in half, barrels hanging from trees, inverted tractor tires and even concrete or belt feed bunks to feed mineral to cattle. Years ago, I knew a cow-calf operator that had 100 beef cows and fed cattle mineral in one plastic children's swimming pool. All went well until a cow put her foot through it.

There are literally dozens of brands of mineral feeders available, which contribute to the good mineral nutrition of beef cows. Here are the three common types of mineral feeders that I often see on my travels from pasture to pasture:

1. Three-compartment ground feeder: Durable heavy-duty plastic feeder with a fixed metal bar in the center to secure a weather-proof rubber flap. There are notches moulded into the base for security feeder to a truck tire (keeps feeder out of water and mud). Two bags of mineral and one bag of salt can be poured into the separate compartments. Metal bar may become loose over time, but can be replaced by a ½ - ¾" bolt. Rubber flap can be replaced easily when torn. I have seen mineral feeders of this type with a wick that is attached to rubber flap filled with insecticide.

2. Moulded-barrel ground feeder: Basically a durable plastic barrel with a large hole cut into its side, so a cow can get her head inside of it to eat mineral. A 22-24" tire can be easily slipped over it to stabilize it. It's a simple one-piece feeder that effectively protects the mineral from weather. It holds two bags of mineral. I know of a 150 cow-operator that prefers this type, because he likes to see growing spring calves use it to get their first taste of mineral.

3. Weathervane mineral feeder: One of the first types of mineral feeders that I saw appearing on pastures, years ago. It protects cattle mineral from wind, rain and keeps mineral off the ground. However, they tend to tip over in strong wind, and are rust-prone. These feeders are not particularly durable, particularly when cattle want to abuse them, but some especially made to be "bull-proof."

Regardless of mineral feeder choice, some producers might find mineral consumption by beef cows is often lower or higher amounts than originally calculated as above.

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.



Moulded-barrel ground feeder



Three-compartment ground feeder



Weather-vane mineral feeder

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Haying season underway after rains

Breakdowns and repairs temporarily slow down work



HEATHER SMITH THOMAS

JUNE 1

Last week we had rain — and snow — on the mountains. We moved the cows and calves to the lower swamp pasture, and when we brought them through the lane and calving pen, I heard a calf coughing. It was Charky. She was breathing hard. The wet, cold weather probably made her more susceptible to a respiratory infection. We sorted off Charky and her mom and put them in the far pen by the barn, since it has a tarp over one corner for a roof. On the way through the pen in front of the barn, we captured Charky at the headcatcher and gave her injections of antibiotic and anti-inflammatory medication to ease her respiratory distress.

By the next day we realized she had diphtheria (rather than pneumonia) with swelling in her throat and windpipe. We changed antibiotic and gave her dexamethasone to help reduce the swelling so she could breathe. One way to tell the



PHOTO: HEATHER SMITH THOMAS

End of school warranted a celebratory ride on the range.

difference between pneumonia (infection/inflammation in the lungs) and diphtheria (infection/inflammation in throat/windpipe) is that an animal with diphtheria has trouble inhaling (windpipe restricted). An animal with pneumonia has more trouble exhaling (more effort required to push air out of the damaged lungs). We treated Charky for several days, until she got over her cough and was breathing normally again.

JUNE 15

School is out, and Dani's friend Sekowa came to stay a couple days. We took the girls riding — Sam rode Breezy, and Dani and Sekowa rode Ed double. That old mare didn't

mind the extra weight of those two giggling girls. Michael put hind shoes on Sprout (I'd put fronts on her a few days earlier), and shod Ed and Dottie for me. Breezy can get by longer without shoes; she has very strong, hard feet.

Last Saturday we moved the cows from the pasture below the lane, to the post-pile pasture. We are rotating them through several small pastures until we get hayfields cut and some grass growing back. We hope to get the hay off a little early this year so we'll still have enough water to irrigate the fields afterward.

Last Tuesday Andrea took Lynn to Missoula, Montana for his appointment with a neurosurgeon/back specialist. After looking at the MRI results, Dr. Mack said he won't be

able to do anything surgically to help Lynn's back; there's too much deterioration. But he prescribed medication that's safer than the pain meds and Tylenol he's been taking, which is hard on kidneys and liver. This is actually an anti-seizure medication and works for back pain in some people. Lynn started taking it, and it does help, but he only takes it at night because it makes him drowsy. He's getting better sleep than he's had for years!

Charlie took his second level test (he has his ham radio operator's license) and passed it, so now he is determined to take the highest level test and learn Morse code.

JUNE 30

Lynn started cutting hay in our back field, and moved a newborn fawn out of the way. On Friday Dani and I rode Ed and Dottie to check the 320 gates and fence between it and range cattle.

Saturday Andrea baled hay down below. I moved hay out of my hayshed so we could start stacking. Lynn finished cutting heifer hill and the field below it.

Sunday morning Michael and Carolyn brought their trailer and hauled our extra three-year-old bull (Lightning Strike) and their year-

ling bull to the upper place. They put the yearling with their heifers and young cows and our big bull with their older cows. Then we put our bull (Thunderbull) with our cows and took them to the little pasture above our house, and put our yearling bull with the yearling heifers in the orchard. That afternoon Michael showed Robbie how to run our old stackwagon, and they stacked four loads of hay in my shed. Meanwhile, Lynn was trying to grease the swather before cutting more hay, and discovered a serious problem. Bob Minor went to Idaho Falls the next day for sprinkler parts and picked up the bearings and parts we needed, to fix the swather.

These past few days have been really hot. Andrea got most of the hay baled on heifer hill, then the baler broke down. Robbie worked on it that night and got it working again, so yesterday she finished baling that field and the little field below it.

With the swather fixed, Lynn cut hay below the lane, and after Robbie got home from helping Michael on a fencing job he stacked hay. Maybe we will eventually get our haying finished! ✍️

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

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Are you a 'farmwife' or 'farminist' or both?

How do you see yourself? What does being a farm woman mean to you?



ELAINE FROESE

Country Guide senior editor Maggie Van Camp is a widow, mom, journalist and chicken farmer who coined a new term at CAFA's (Canadian Association of Farm Advisors www.cafanet.com) Update in Guelph in May. Maggie proposed that the culture of agriculture needs a new mindset to speak to the many women farm operators in our country, women who run farms and are more than farmwives. She wants to see an equal-opportunity approach, not unlike feminism, but her term is "farminist." Maggie says, "By definition: someone who believes in gender equality for farmers." Catchy and true I think, so much so that I suggested a new line of T-shirts to be donned in the field saying, "I am a farminist."

Do you encourage your daughter to attend ag college, wield a welder and drive the sprayer? My neighbour is dad to four smart daughters, no sons, and has heaps of farm work that any of his daughters can tackle. Maggie suggests, "The message should be that we pick the best successor — regardless of gender and that we can train our girls too. I love that. We also need to teach our boys how to do the traditional female jobs — cooking and how to do accounts, etc."

As a farm family coach I see young women anxious to do the books, make cropping plans, and farm their spouse's farm as well as their dad's operation. I also see women who are weary nursing babies, and trying to keep up their pre-parent pace of managing a dairy. Women in agriculture are a force to be acknowledged, which is why I phone my accountant to ask that her large firm change their succession pamphlets advertising brochures which do not have images of women in the wheat fields, or at the computer.

This is 2016, as the young farmers at the Ag Excellence conference declared.

Thirty-five years ago this month, on Independence Day (ha!), July 4, I became Mrs. Elaine Froese, or Mrs. Wes Froese if you really want to be traditional. I married the love of my life, a farmer. My dad, a farmer, expressed his delight at our wedding reception that I had chosen a man in the same field as Dad (pun intended). So I became a farmwife, moving into my mother-in-law's former home in September. For 35 years I have planted a garden, created hot meals to deliver to the field, raised two loving adult children, run for parts, and deposited the cheques. I don't do the farm books and never will, as attention to detail is not my forte. My 21 years of writing income from *Grainews* was to hire a bookkeeper. Words are my friend, accounting programs are not.

Lacey Gerbrandt of Emerge Ag Solutions had a great idea to host a farm women's conference in Saskatoon called Connect. This annual conference hit the nerve of celebrating the many hats that farm women wear, complete with hats to don at the Credit Union display where the memory was captured with an instant photo booth. Farm women long for connection and recognition. This was the perfect spot to laugh, cry, share stories and be affirmed for the myriad roles that farm women play today.

I shared a table with Billi J. Miller, writer and photographer (www.billijmillerphotography.com) who just released her book *Farmwives in profile. 17 Women: 17 candid questions about their lives*. Billi wrote the book as a tribute to the women in her community who have mentored and encouraged her, a new farmwife, near Lloydminster, Alberta. It was a delight to read their responses to the challenges that they experienced and their legacy. I did not envy the woman who mentioned shovelling a truckload of grain, with a hoistless truck! Farm women work hard at many roles, alongside their farming husbands, they have food



in their freezers for unexpected company, and they want their children to live with love and respect for family and hard work.

What does being a farm woman mean to you?

Would you call yourself a farminist, a farmwife, or both?

For me it is both. I want to see

credit for the farm grows with increasing input costs. Perhaps you see your key role as the operating line of revenue for family living, so you go off to town for your day job, and then roll home for your farm job. This is exhausting to young moms, and tiring for grandmas

Ag policy organizations and farm suppliers would be wise to check if their messaging and branding resonates with the many career agriculture women. Farmwives are not married to the farm as their label suggests, they are committed to their families and the success of their farm partners. They are team players with many different skill sets. Farminists and farm women all want to have a voice in decision-making on the farm.

The farminist who sat at my table in seeding time was adamant that she be recognized for her abilities to drive equipment, do mechanics, and plan production. "Being a farminist is also about being proud of who we are and what we do, regardless of gender, race or culture. I believe accepting and promoting diversity on our farms is paramount to a successful future," says Maggie Van Camp.

Celebrate who you are!

Elaine Froese, CSP, CAFA, CHICoach grows with the crops near Boissevain, Manitoba. Like her Facebook page at "farm family coach" and see [youtube.com "Farm Family Coach"](http://youtube.com/FarmFamilyCoach) or visit www.elainefroese.com. She'd love to hear your story.



Farminists and farm women all want to have a voice in decision-making on the farm

all young people work as a team to make agriculture their career and create success for their farm team. I also recognize that some women who are married to farmers have no interest in the farm, which is a bit of a red flag for the parents who expect Mrs. Junior Farmwife to start taking on the roles of her mother-in-law.

We also need to recognize that family living takes \$50K/year or more, and the operating line of

who still try to "do it all." The amount that farm women spend on family living versus what is spent on the farm can be a source of tension or triumph, if there is financial transparency between the generations. It also helps if the farm is profitable and has positive cash flow.

Farminists see their careers as agriculture, and they want respect for their skills, not jokes about their gender.

If it weren't for the messages from some of the leaders I connected with, I wouldn't have this clear vision nor the motivation to go after it. I can't thank you enough for that.
— Jen C., Ontario, AWC Delegate

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Preserving the past through photos

Retired administrator keeps memories alive

BY CHRISTALEE FROESE

Brian Miller likes old farm sites. He's not sure what possessed him to take hundreds of photos of abandoned and derelict farm sites over his 28-year career as a municipal administrator. What he does know for sure is that he's thankful he has taken photos over the years because many buildings, from two-storey brick houses to L-shaped barns, have disappeared from the modern-day landscape.

"It's a funny thing to think that our younger generation will not know what has happened here 100 years ago," said Miller, pointing to the fact that larger farming practices and oil activity have obliterated many former farmyards.

The 70-year-old retired administrator began taking the photos on a hunch in 1988.

"I would be out driving around the municipality anyway, checking the roads and oil activity, and I thought I should take some photos just in case someone calls the office or writes in wanting to know some history," said Miller, of the RM of Mount Pleasant located in the Carnduff area of southeast Saskatchewan.

The more photos he took, the more he noticed the landscape in his RM transforming over the years.

"When I compare the photos I've taken over the years, you can see the houses and barns gradually deteriorating," said Miller.

He has posted his vast collection of photos on the Vintage Carnduff website where the public can access them. His photos are all sorted by land location, as Miller never goes anywhere without his municipal map, or his camera.

On this day, he fishes the map out from behind a truck seat and proceeds to sort through several large albums of photos to find the particular yard we have arrived at. The elegant brick house in his original photo, with its banks of windows and bright-red roof, has deteriorated remarkably since the photo was taken in the 1980s. The bricks are now falling down, the exposed wood beneath is rotting, the roof has lost its shingles and the foundation is collapsing. Miller's photo has frozen the house in time while the elements have ravaged it in real life.

Occasionally a family member will seek out information about a farm site and Miller is able to retrieve one or more photos that show what the site looked like in the last 30 years. He will send pictures by email and will often dig up whatever information he can out of the Carnduff history book as well.



Brian Miller holds photos of what this farmhouse and yard looked like 30 years ago.

"Last time I had a request it was from someone doing a family tree. Sometimes it's a distant relative, like maybe an uncle. Typically they're from out of province."

One of Miller's latest posts on the Vintage Carnduff Facebook page features photos of the former home of Pete Carnduff. A com-

ment under the photo says, "I can't get enough of these pictures! I better take Dad on a road trip." (Grant Carnduff)

Miller photographs all of the outbuildings in farm sites as well. He has captured many barns and wooden granaries which have since fallen down.

"Lots of sites are totally worked over. You wouldn't even know anything was ever there. Often it happens when land changes ownership and some people don't like to see that decay around so they just clean it all up."

Christalee Froese writes from Montmartre, Saskatchewan.

Rural Prairie women making a difference

Group strives to Reduce, Recycle and Reuse — one quilt at a time

BY DOROTHY SEIBOLD

Some seniors may remember saving wool, old woollen clothes and blankets until they had a 100-lb. gunny sack full and sent it to a company in Winnipeg, Man. In exchange they received new woollen blankets. Was it frugal or out of necessity to mend, patch or reuse articles or was it the birth of the term "recycling?"

The Herschel Quilting and Recycling Group strives to Reduce, Recycle and Reuse, and twice a week from January to the first week in April, women from Herschel and surrounding community meet in the Herschel Memorial Hall to create quilts using recycled material. Bags and boxes of donated materials are sorted into similar colours and fabrics for easy access.

During the Second World War the Herschel United Church Ladies Aid made quilts in the Herschel Clubroom for the Red Cross to be shipped to soldiers. Carded sheep wool was used for batting and woollen thread for tying. Since then, quilting has progressed from the Helping Hands Ladies Aid in the basement of the Ebenfeld Mennonite Church in 1957, to the amalgamation with the Herschel United Church Women in 1990, to Herschel School in 1994. In 1995 Herschel Quilting and Recycling received a grant from Enbridge Pipelines Inc. (formerly Inter Provincial Pipeline) and in 1998, moved to the Herschel Memorial Hall.

The group is made up of dedicated volunteers who want to make an environmental difference. The members are mainly farm women who have to drive on gravel roads in snow, sleet and fog, but are determined to come out to quilt. Some even take work home.

The recommended size for quilts shipped overseas is 60x80 inches so seven rows of nine blocks (9-1/2 inches square) are needed. On a large table the blocks of quilt top material are arranged, stacked, numbered then sewn in rows. Material for backing and batting are cut to fit the quilt top and the three layers are sewn together, turned right side out and pinned and clamped to a quilt frame. Supple fingers navigate needle with double thread down through all three layers then back up in a small stitch, tie ends in a double knot and trim. When tying is completed, the quilt is removed from the frame and displayed. Lighter-weight quilts are shipped overseas to disaster areas in warmer climates, while larger quilts with thicker batting are for cooler climates and stay here at home.

The highlight of the year is the annual quilt sale in April where half of the quilts are sold. If more than one person wants the same quilt, an auction is held and proceeds go to the United Church Mission and Service fund, miscellaneous expenses, hall rent and to purchase large rolls of quilt batting. The remaining quilts are taken to Saskatoon, Sask. to the MCC (Mennonite Central Committee Foreign Aid), baled and shipped overseas to those in need.

Threads that bind fabric and people together benefit the environment and those less fortunate, a foundation for rural life on the Prairies.

Dorothy Seibold farms with husband Lloyd on their farm west of Stranraer, Sask. The Seibolds have been married for 58 years and said the farm was a great place to raise their four children. Farming has been a family tradition for over 100 years with two sons receiving the Century Family Farm Award in 2013.



Some of the Herschel Quilting and Recycling Group. Back row (l to r): Sue Neufeld, Sharon Wiens, Virginia Wilson. Middle row (l to r): Lynn Hollick, Emily Brown, Sylvia Cutler, Cheralyn Wiens, Marlene Wiens, Dorothy Seibold. Front row (l to r): Margery Martin, Kay Heatherington.



Quilters at work (l to r): Marlene Wiens, Margery Martin, Ann Rice, Lynn Hollick, Shirley Weenk.

Cooking food on a stick

Skewers have been used all over the world for years



AMY JO
EHMAN

My dad celebrated a significant birthday recently so of course we had a wiener roast. It's my dad's favourite meal. Few things are more "summer" than an open fire and food cooked on a stick.

When we were little (my siblings and me) we followed Dad into the "woods" around the dugout to hunt for wiener sticks. We'd each choose a straight young sapling, which he would cut with his jackknife and whittle to a sharp point. Yes, we learned early in life not to poke an eye out. While in the "woods" we'd gather up deadfall and dry twigs for the firepit in the backyard.

Mom set out a bowl of potato salad, a bag of buns and a passel of wieners, along with the three essential summer condiments: mustard, ketchup and her homemade relish. (Personally, if you ask me, the only essential condiment is mustard, but that's another story...).

Long before I was allowed to grill a grilled cheese or boil an

egg, I was an old pro at roasting a wiener over an open fire, turning the stick just so, keeping an optimum distance from the lick of the flames, ever careful not to drop my dinner into the hot coals. My preference was dark and bubbling but not yet charred. It still is.

While wieners are a relatively new invention, cooking with a stick is as old as the hills. Long before there were cast iron pots and rotisserie gas barbecues, there was the simple combination of a fire and a stick. This is true all over the world, whether the skewer is made of bamboo, metal or a poplar sapling. Kebabs, yakitori, satay, souvlaki, brochettes and shashlik (which literally means skewered meat).

The first inhabitants of the great plains cooked bison meat by cutting it into thin strips and hanging it on a rack made of green saplings set over a smoky fire. Once the meat was dry, it was pounded to a pulp and mixed with suet and berries to make pemmican. When bannock became a staple of their diet, it was often baked in a frying pan by the fire or simply curled around a stick held over the heat of the flames.

I believe that somewhere deep in our genetic memory we are nostalgic for the smell of wood

smoke, the aroma of seared food, the warmth of the communal fire and the self-sufficient satisfaction of cooking for ourselves in the great outdoors. And the cleanup is easy peasy. Just toss that cooking stick into the fire or "burn" it clean.

Years after our sapling adventures, my dad began making wiener sticks that served the role on a more permanent basis. These were made with dowelling set with a two-pronged metal fork. He sold those wiener sticks at the regional park and other locations where campers congregate. We dubbed them the Ehman Weeny Wonder Wands. They were awesome. I often gave them as gifts.

Dad's not making the EWWW anymore but we still use them at every occasion that draws us together around the outdoor family hearth, er, firepit.

Here's an easy recipe for cooking fruit on a stick, perhaps best done on the BBQ rather than an open fire. Plan to have two skewers of fruit and one skewer of cake per person. I've listed the fruit I like to use, but feel free to create your own combinations.

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

Bananas
Strawberries
Watermelon
Plums
1-2 prepared pound cakes
1/2 c. liquid honey
Juice of 1-1/2 limes
2 tbsp. finely chopped mint

Cut fruit and cake into one-inch chunks. If strawberries are large, cut in two. Place eight pieces of mixed fruit on each skewer. Place eight cubes of cake on separate skewers. Blend together the honey, lime juice and mint. Brush onto kebabs before and during cooking. Cook until the fruit is soft and juicy and the cake is golden.

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TCCA CURRENT EPISODES

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SINGING GARDENER

More information on potatoes

Plus, some tips on strawberries



TED MESEYTON

We can all identify with how time flies. The longest day or summer solstice for this year is now long gone. Little by little, daylight is sneaking away and shall continue to do so until just before next Christmas when we have our shortest day.

Speaking of "sneaking," let me put a question to you. Have you ever snuck a potato or two by inserting a hand into a potato plant hill early in the season to check out the size of forming tubers? Someone I know who sells early-maturing potato varieties does it regularly. Something tells me this page could be devoted mostly to spuds. Hope you're OK with that 'cause next to fruits of the vine, "apples of the earth" continue to generate a lot of interest among home gardeners. By the way, I'll also touch briefly on strawberries.

This is where the garden train stops long enough for gardeners to get on board and toot their own horn, blow their own whistle and have a right to brag about their gardens. A tip of my hat means howdy do! You're all as welcome as hummingbirds, house wrens and hollyhocks.



FOLLOWUP TO SANGRE POTATO

Received the following in my inbox: "Re: the May 17-16 Grainews. The problem with the Sangre potatoes is tuber flea beetles. These flea beetles feed on the new potato growth and the larvae migrate into the new potatoes. Control: Sevin insecticide at spud emergence, floating cloth, grow potatoes well away from the old site. This problem is very common in Alberta." Dr. Ieuan R. Evans 780-987-4398, former Alberta provincial plant pathologist.

I, Ted, followed up with a telephone call to Dr. Evans and we had an in-depth conversation about flea beetles. I learned they are a diverse group.

The pest known as solanaceous flea beetles is also called tuber flea beetles. They attack potatoes, tomatoes, peppers and sometimes beans, according to Dr. Evans. This beetle is the most serious insect pest of potatoes in B.C. More recently they've been found in Alberta and appear to be moving eastward. Flea beetles are highly mobile making control a challenge. Adults of this species primarily feed on potato leaves, and inflict injury by giving them a shot-holed appearance. The



Top Right: The combination of Adelaide Hoodless (red) and Prairie Joy (pink) roses growing side by side makes a stunning display when in bloom.

Left: Ted inspects developing strawberries growing in partial shade under floating row cover. Read about the tarnished plant bug and how to avoid cat-faced strawberries.

larvae inflict the main damage by feeding on the tubers causing pimples, surface channels, and shallow networks of fine tunnels. Vacant tunnels are lined with brown, corky skin and can be removed by deeper peeling. This leads to annoyance and waste, plus obvious reduction in marketability of potatoes.

Dr. Evans points out that "canola flea beetles, cabbage flea beetles and potato flea beetles are all very different. Potato flea beetles begin eating leaves as soon as plants emerge, later moving to potato stems where their eggs are deposited. "Hatched maggots move down the stems and burrow into developing tubers where they feed and make those little funny feeding channel marks. Later, maggots pupate and emerge as adult beetles usually in August, remaining in the soil over winter. The following year beetles surface when temperature is right and attack newly planted potatoes again."

For controls Dr. Evans suggests "spraying potato plants once or twice early on with Sevin or Ambush available at garden supply stores. Otherwise you'll have to cover them with horticultural cloth from time of planting until about the end of June or let remain all season if desired." Dr. Evans places similar floating row cover cloth over broccoli, cabbages and cauliflower with absolutely excellent defence against flea beetles that attack them.

Thanks to Dr. Ieuan R. Evans and many others out there in Grainews reader land who take time to email, write and phone. You're all distinguished in my book. What I like about Grainews and books is the printed page is always there.

CROP PROTECTION CLOTH

Lightweight and heavyweight row cover barrier cloth does a good job at foiling insect pests such as flea beetles, thrips,

aphids, cabbage moth worms, maggot flies, leaf miner flies, carrot rust flies and many others. The material insulates crops from frost and provides shade from sun, allows misty entry of rainfall and provides moisture retention.

Floating row cover is reusable and can be stored out of season for future use. It's available at some garden centres or contact the following:

1. West Coast Seeds
3925-64th St.,
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Among other additional alternative controls NIC also sells live beneficial insects, traps, lures, barriers, bat and purple martin houses.

TARNISHED PLANT BUG

Early on before flowering begins cover strawberry plants with floating row cloth (described earlier). This halts or impedes entry of the tarnished plant bug (Lygus). Both the adults and their nymphs inflict damage by feeding and sucking sap from all parts of strawberry plants including blossoms. Embryos within seeds on forming fruit are destroyed preventing proper fruit tissue growth. Affected strawberries take on a stunted, malformed cat-faced appearance that's hard like a button. Tarnished plant bugs are winged weevils capable of flying about and spend winter above ground in plant debris under snow and in hedgerows. These pests can be a major concern in commercial strawberry production.

TED'S PERSONAL RESEARCH NOTES

Let me ask: Did any home potato growers add onion skins at time of planting? If yes, I'd appreciate your feedback. This year from a personal perspective I, Ted, placed a handful of mixed dried skins from yellow, white and purple onions beneath each seed potato planted in over 100 holes with one exception. This did not include a baker's dozen of a purple-flesh variety that was planted without onion skins. From among 100 onion skin-treated plants I've hand-picked less than two dozen adult potato beetles and one cluster of eggs up to this point (June 24-16). Of course it's still early in the season and weather has certainly fluctuated a lot and left its mark. I'm not jumping to any conclusions just yet as to whether adding dried onion skins at planting time makes any difference. By contrast, the aforesaid purple-fleshed potato variety planted without onion skins had many more adult potato beetles and hatched potato bugs. This is unscientific of course, but since I'm my own backyard scientist I shall pursue this further by experimenting again next season. Meanwhile I'm now saving more dried onion skins.

ESSENTIAL OILS

Most gardeners have heard of essential oils. Scientists in Turkey have been testing control of potato bugs without pesticides using essential oils. So far, Turkish researchers have found that essential oils of oregano, thyme, wormwood and yarrow are toxic to adult potato beetles. Concentrations ranged between 10 to 20 ml of essential oil mixed separately with one litre of water and applied as a spray (20 ml equals about four Canadian teaspoonsful). At lower concentrations than indicated, each separate prepara-

tion repelled some adult beetles and fewer larvae emerged from their eggs. Effectiveness began to appear between six to 24 hours depending on which oil and how much was used. This is a chance to do some backyard experimenting if you so choose and enjoy being your own at-home garden scientist.

Researchers didn't assess whether beneficial soil organisms were impacted in any way by use of aforementioned essential oil sprays, or if harvested potatoes acquired a different seasonal flavour. Essential oils are available at health food and specialty stores and prices vary depending on selection.

It's long been known that many herbs are beneficial to the well-being of humans. Herbs also attract pollinators and repel insect pests. Seeding oregano and thyme by your potato plants may also help repel beetles.

Out of space now so gotta go.



This is Ted Meseyton the Singing Gardener and Grow-It Poet from Portage la Prairie, Man. I'm reminding readers to be aware of poison ivy when you're out and about this summer. My June 7-16 Grainews column has a section dealing with that subject. During my youth I spent several years as an on-air country music radio disc jockey and also read the news. The following sends my thoughts back to those days wondering who was tuned in. Nowadays, I think of nature as an unlimited broadcasting station through which God speaks to us every hour, if only we will tune in to His news. Readers can reach me by email at singinggardener@mts.net.

Ag in Motion boosts livestock programming for 2016

The new Livestock Central presented by BMO Financial Group will showcase live demonstrations, speakers and interactive exhibits featuring products and services specific to livestock producers.

Nestled between 1st Street and 3rd Street along Manitoba Drive, Livestock Central will feature indoor and outdoor exhibits. The indoor exhibits will be housed in a new 60x60-foot Livestock Pavilion, located at the corner of 1st Street and Manitoba Drive.

"After the success of our first year of Ag in Motion, we are thrilled to expand the expo site this year and to offer new highlights such as a dedicated livestock area," says show director Rob O'Connor.

To kick off the first day of Ag in Motion, Tuesday, July 19 has been designated "Dairy Day." All dairy producers in Western Canada were invited to attend this special day dedicated to showcasing the latest in the industry. VIP invites were included in the June issue of the *Milk Producer* and distributed by sponsors BMO Financial Group, Agri-King, Promat, Grober Nutrition, New-Life Mills and *Milk Producer*.

Live Demonstrations and Speaker Program Daily Schedule:

• **Barley Silage Demonstration Part 1** – 10:30 a.m. in the Silage Demo Field – Eight acres of barley have been planted and Part 1 of this demo will showcase harvest-

ing equipment including mowers, cutters and mower conditioners.

• **Cattle-Handling Demo** – 11 a.m. daily in the Livestock Central pasture area, Manitoba Drive and 1st Street – Experts from multiple manufacturers will explain the features and benefits of their products, as live cattle are manoeuvred through the different cattle-handling systems.

• **Livestock Speaker Program** – 2 p.m. in the Special Events Tent – Tom Snyders from Lely Forages will discuss forage management to achieve the goal of making quality feed and not just bales. Tom will cover important topics such as preparation and when to cut, height of cut, drying time, ash content, harvesting/baling, compaction of baleage and storage.

• **Livestock Speaker Program** – 2:30 p.m. in the Special Events Tent – "Essential lipids for life – is your calf thriving or surviving?" presented by PMT. Titan Clean Energy Projects Corp. will follow with information on its new feed additive product, Mayan Gold.

• **Barley Silage Demonstration Part 2** – 3 p.m. in the Silage Demo Field – Part 2 will showcase balers and bale wrappers from a variety of manufacturers.



Livestock Central presented by BMO Financial Group

As Canada's largest chartered bank lender to the agriculture sector, BMO Bank of Montreal understands agriculture, and the dedication and investment that go into every growing decision. Over the past two years cattle, hog, and field crop sectors in Canada have experienced significant price volatility, while dairy and poultry producers faced uncertain futures. Even with these challenges, the industry has adapted thanks to the resil-

ient producers who adjust to change and remain optimistic about the future.

A new generation of farmers is expected over the next decade; succession strategies will become increasingly important. The future for agriculture looks bright and BMO is here to help by sharing its expertise in the agriculture industry.

"We are thrilled to be a part of the Ag in Motion Outdoor Expo and look forward to seeing you at the show July 19 to 21," says Marcia Lemon, VP Commercial Banking, BMO Bank of Montreal.

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Greetings from the show director



Welcome to the second annual Ag in Motion, Western Canada's first outdoor agriculture trade show which features demonstrations of farm equipment, crops, crop inputs and livestock in a real agricultural setting. We're a show that offers a new fresh atmosphere for farmers as well as companies to communicate and share knowledge. This year, Ag in Motion has grown in size with an increase in exhibitors and demonstrations because of what it offers.

Ag in Motion is held on a half section of typical Saskatchewan grain and oilseed farmland about 35 km northwest of Saskatoon on Highway 16. Visitors will be able to see crop plot demonstrations by a variety of local and international companies as well as by scientific experts from the University of Saskatchewan. Another important part of Ag in Motion is the opportunity to learn. The Agri-Trend Knowledge Tent presented by RBC will hold several daily seminars on today's farming practices.

There are over 100 acres dedicated to equipment demonstrations and test drives. It's an opportunity to see equipment working before choosing which one you need to purchase for your operation. You'll also be able to see the many innovations being unveiled at Ag in Motion 2016 highlighted by the Ag in Motion Innovations Program in partnership with the Agricultural Manufacturers of Canada. Also new for 2016, is a new Livestock Central at the show featuring dairy and beef cattle farm management.

I would like to thank the staff and volunteers for helping plan and implement Ag in Motion 2016. It takes a huge amount of dedication to run a trade show and great effort to manage the growth of a show in its second year. I would also like to thank the many companies that have put their faith in Ag in Motion, especially our parent company Glacier FarmMedia with its family of farm publications produced by Farm Business Communications and the *Western Producer*. Many thanks also go to our colleagues at Canada's Outdoor Farm Show in Woodstock, Ontario who have shared their time and expertise.

I invite you to attend Ag in Motion 2016. Please stop me and say hi. I'd love to hear from you about your experience at the show.

Rob O'Connor
show director, Ag in Motion



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AG IN MOTION SHOW DETAILS

SHOW DATES AND HOURS:

Tuesday, July 19th 8:30 a.m. – 4:30 p.m.
Wednesday, July 20th 8:30 a.m. - 4:30 p.m.
Thursday, July 21th 8:30 a.m. - 4:30 p.m.

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4-H Farm Safety Day comes to Ag in Motion

4-H Saskatchewan is coming to Ag in Motion this summer in a big way with an interactive Farm Safety Pavilion and 4-H Farm Safety Day.

On Thursday, July 21, the Farm Safety Pavilion on 5th Street will be home to the 4-H Farm Safety Day as well as ongoing farm safety stations all three days of the show. Youth and their families have the chance to visit several organizations to learn more about safety both on and off the farm.

Farm safety exhibits will be open for the entire show and the program will finish with the exciting 4-H Farm Safety Day taking place in the pavilion on the afternoon of Ag in Motion's last day.

Thursday is 4-H Farm Safety Day

Youth aged nine to 14 years old can register for this free afternoon program taking place at Ag in Motion. Participants will listen to captivating speakers sharing their stories, work through hands-on stations surrounding common hazards on the farm (i.e. electrical safety, fire safety, machinery safety) and end the day watching a demonstration of emergency response teams responding to a mock emergency scenario.

According to 4-H Saskatchewan, the program's goals are to build awareness of safety issues on the farm and to empower youth with knowledge to act in an emergency.

4-H Saskatchewan is pleased to be working with several partners for 4-H Farm Safety Day: Ag in Motion, Saskatchewan Safety Council, S.A.A.S.E., Canadian Centre for Health and Safety in Agriculture (C.C.H.S.A.), S.T.A.R.S., War Amps, and C.A.S.A.

Senior members and adults, ages 16 and up can join in too. Safety Ambassadors (SAs) will lead groups of participants through the stations. This is a special volunteer opportunity for senior 4-H members, parents and leaders.

Safety is important on and off the farm. The 4-H Farm Safety Pavilion will be open all three days of Ag in Motion from 8:30 a.m. to 4:30 p.m. Thursday's special 4-H Farm Safety Day kicks off at noon and runs until 4:30 p.m.

Registration is free and open to 4-H members as well as friends aged nine to 14 years old. More information and registration forms available at <http://www.4-h.sk.ca/events?id=444>.



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Unlike any western Canadian farm show

Ag in Motion offers farmers a unique opportunity to see live crop plots from a variety of seed and crop protection companies, all in one place. For year two of Ag in Motion, attendees will see more plots and even more variety.

“The aerial says it all,” says show director Rob O’Connor. “The crop plots are an eye-catching and clear way Ag in Motion sets itself apart from other farm shows in Western Canada. We bring the seed guides to life and better purchase decisions come from that.”

To prepare the plots, exhibitors begin planting a variety of crops on site in May and June to showcase their latest innovations and products. The crop plots, which are all 170 feet deep and range in frontage from 30 to 500 feet, are located around the perimeter and throughout the show site.

The live crop plot exhibits will showcase seed and inputs for a diversity of crops, including wheat, barley, oats, flax, hay mixtures, corn, soybeans and canola.

Here are a few of the crop plots and strip trials farmers can explore this July at Ag in Motion:

Alliance Seed	Engage Agro
ATP Nutrition	ESN Smart Nitrogen
BASF	Monsanto Canada
Bayer CropScience	SeCan
BrettYoung	Stoller Enterprises
CANTERRA SEEDS	Union Forage
Cargill	University of Saskatchewan
Compass Minerals	Farmers Edge
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Ag in Motion offers a unique opportunity for farmers to see live demonstrations of field equipment and crop plots in action, all in one place. photos: farm boy productions

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