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Get your mind around it

Of all the sciences, which is the most important for your farm? Is it biology, or soil science, or chemistry, or electronics?

My vote is for none of those. My vote is for psychology.

I hope that surprises you, because it sure surprised me.

I had just finished talking to young wannabe farmers at Ridgetown Campus of the University of Guelph.

Ridgetown does amazing science, of course, and these young farmers want to lap it all up. But the biggest challenges in front of them are whether they have the attitudes and aptitudes that it takes to farm. Can they grow these traits? Can they find a path forward not only with Mom and Dad, but also with their siblings and in-laws? Can they be good leaders? Can they be good bosses? Can they innovate? Can they inspire loyalty?

I completely agree. These students cannot farm if they don’t excel at putting production science to work.

Even harder, however, is to master the psychology involved in upping their game and bringing their personal best to their careers. Success will take more than desire, as we know. It will take much more.

Like me, however, most Country Guide readers grew up in a tradition that dismissed psychology as only for dreamers who read self-help books.

But just when I came back from that Ridgetown class, I found the next series of articles from work psychologist and GUIDE columnist Pierrette Desrosiers in my inbox, and I had to think again.

The science of psychology is amazing, and so is its growth. Pierrette points out that 98 per cent of all we know about the human brain, we have learned in the last six years. Even more powerfully, 80 per cent of everything we thought we knew about the brain before 1995 turns out to have been either wrong or misleading.

Similar advances have been made in our knowledge of human behaviour, and of human capability. It turns out that the leadership and management traits that tomorrow’s farms will depend on are growable, if you know how to do it.

It also turns out that not growing them is like not fertilizing your crop.

I’ll be honest. When I first talked with Pierrette two years ago about running a psychology column, I insisted we keep the series short, limiting it to only about five columns.

But just when I came back from that Midwest journalism conference, and I had just finished talking to young wannabe farmers at Ridgetown Campus of the University of Guelph...

I hope that surprises you, because it sure surprised me.
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There’s really no telling how much bigger these machines will get. Just when it appeared that 500 hp was a safe upper limit, manufacturers pushed right through. Below, Machinery Guide looks at five big tractor series, some with tracked technology and others with cab or transmission enhancements for 2015. All boast big horsepower, which in an era of tight operating windows and large acreages, seems a trend we’ll never see the end of.

**NEW HOLLAND GENESIS T8 SMARTTRAX ➔**

What if you could have a tractor that combines the overall versatility of a wheeled tractor and the traction and flotation benefits that come with rubber tracks? New Holland says it is making that possible with the Genesis T8 SmartTrax. One of the drawbacks of having a twin-track machine is the need to slow down in turns, increasing the chance of scuffing or even damaging the soil. With the Genesis T8 SmartTrax, that concern is attacked with wheels up front that offer tighter turning, more ride comfort and less damage. The purpose-developed axles are built with the strength needed for high power and torque to carry heavy loads. Plus there’s the advantage of the T8.410 which boasts 409 hp and the T8.435 with 435 hp maximum. And by offering a choice of undercarriage, the Genesis T8 SmartTrax tractors can provide a choice of working widths — from 76 to 152 inches.

www.agriculture.newholland.com

**CLAAS XERION SERIES ➔**

It was last August that Claas of America introduced its latest entry, this time into the all-purpose tractor market. Claas is widely known for its Lexion combines and, with the Xerion tractor series, the company is forecasting it will achieve the same success in the high-horsepower market. Not only is the Xerion series powerful, it also provides speed for efficient transport, plus reduced compaction and overall enhanced maneuverability. The company says its designers have worked hard to create something new specifically for the needs of North American farmers, which includes improved power transmission, dual wheels and enhanced hydraulics. The Xerion design includes three different models, all with a Mercedes-Benz engine: the 5000 and 4500 are equipped with a 12.8-litre engine and the 4000 comes with 10.6-litre engine, capable of running at 530, 490 and 435 hp, respectively. In spite of all that power, the Xerion line is still easy to operate, with six steering modes and three driving programs.

www.claasofamerica.com

**MASSEY FERGUSON (AGCO) 8700 SERIES ➔**

Billed as the most powerful Massey Ferguson tractors ever built, the 8700 series is said to provide more power, more torque, more versatility and more comfort and control. Two of the five new models in this series fall into the 325 to 500+ hp class — the 8735 (with 350 hp) and 8737 (with 370 hp). Their six-cylinder, 8.4-litre engine can generate up to an additional 30 hp when needed, and it’s still nimble and responsive, with higher performance at lower RPMs. With its Dyna-VT transmission, you also get a flexible and fuel-efficient ride, with no clutch packs, no shifting or clutch burnout. There’s also the capacity to control engine speed and ground speed independently, and the Dynamic Tractor Management (DTM) feature means the engine and the transmission can work together, increasing fuel efficiency.

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JOHN DEERE 9R/9RT SERIES ➔

Bigger farms can be a challenge to farmers, with more to do and more that needs to get done in a day. That's why John Deere says it is aiming its 9R/9RT Series tractors at durable four-wheel-drive and track tractor designs, complete with higher horsepower, improved traction and hydraulic capacity. In all, there are 10 wheeled models and six with tracks, making selection one of the bigger advantages.

Power is not an issue, with a range of 370 to 620 hp. According to Deere, its new e18 PowerShift transmission (with Efficiency Manager) offers the smoothest power shift in the marketplace, plus an automatic mode to increase machine fluid efficiency and productivity. Also available on the 9520R, 9570R and 9620R is the HydraCushion suspension system on the front axle, helping ensure all your horsepower goes to ground, instead of being lost to power or road lobe.

www.deere.ca

CASE IH MAGNUM ROWTRAC SERIES ➔

Case IH has 18 years of leadership in independent-track technology, but now the company says it is upping the ante with the Magnum Rowtrac tractor. Two new models are featured in this series — the 340 and the 380 — which also happen to be the horsepower rating of each. A continuously variable transmission (CVT) is standard on the Magnum Rowtrac 380 and is optional on the 340. The company says that although traction and flotation are often priorities for growers, this latest design from Case IH may be good to go with single wheels on the front as opposed to duals, thanks to a redesigned tire exclusive to the Magnum Rowtrac with the capability to fit any row width. From corn, soybeans and wheat to specialty crops like sugar beets and potatoes, Case says these two new tractors provide power and precision — and performance.

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The northern village of Cumberland House seems an unlikely place to find a farm or a farmer. For starters, it's remote — 450 kilometres north east of Saskatoon at the end of Highway 123, a notoriously bad road that spring can turn into one long mud-hole.

The village, established by the Hudson Bay Company in the late 18th century, sits on Pine Island in the Saskatchewan River Delta, and the local population, which includes the village, the nearby Cree Nation, and anyone else who stands still enough to be counted, numbers around 2,000.

But Cumberland House also has its share of graces. And for Murray Gray, those graces start with the soil laid down over millennia by the river. “Extremely beautiful,” Gray says. “Flat. Mellow. And conducive to growing anything, really.”

Gray runs his own commercial market garden in Aylsham, 175 kilometres southwest of Cumberland House on the way toward Prince Albert. (It says something about Highway 123 that Google Maps calculates it takes just over three and a half hours to drive that 175 kilometres.)

Gray is also an on-farm food safety co-ordinator, and he has been managing Cumberland House’s community market garden since 2013, so he also sees another one of the area’s graces.

The northern community’s isolation from intensive agriculture means the disease and insects found in southern Saskatchewan are mostly absent, so the area can grow vegetables, such as turnips, that don’t fare well in the south, Gray says.

And despite the northern latitude, Cumberland House’s growing climate isn’t too bad, Gray says, with the Saskatchewan River tributaries tempering the climate to produce what is, for this part of the world, a very long frost-free season.

That, in turn, brings up the other graces, like the fact that there’s a market for locally grown vegetables. Local residents are hungry for reasonably priced fresh produce, and mining camps offer a target for high-value crops such as lettuce, strawberries, cantaloupe, and baby potatoes.

And perhaps most important are the people involved in the project. Gray describes the northern village of Cumberland House as a “progressive” community that “likes to go forward with projects that are not leading them astray.”

Mayor Val Deschambeault champions the project. The five men who worked full-time with Gray last year are eager to get started again this spring. And Gray himself understands how to motivate and work with people.

It’s a good thing Gray gets it, because he’s also working with Île-à-la-Crosse, about 400 kilometres on the other side and north of Prince Albert. He’s working with other northern communities as well, and others are catching wind of the projects too. And although each community starts small, Gray thinks they can do big things.

Gray’s approach is to work with people rather than telling them what to do. He gets workers more

Plastic greenhouses make it possible to grow crops that the entire community is proud of.
involved with the business side by encouraging them to go to town council meetings. This helps them appreciate what the town council goes through to get funding, he explains. Besides, in a smooth-running operation, management and employees aren't totally separate, he says.

And Gray knows everyone likes to see results they can be proud of, whether they’re getting their hands dirty or approving funding. Politics come into play when funding doesn’t produce the expected results, he says.

Strawberries are good politics

“They love their strawberries. Insanely. If you can produce strawberries, there’s no politics,” Gray says, chuckling.

Last year, Cumberland House’s market garden yielded about 1,500 lbs. of strawberries. It was a crop they picked all through summer and into October.

Part of that success comes down to simple, but effective, gardening technology, such as high tunnels. The tunnels are plastic cold-frames that stretch over the plants. High tunnels protect plants from the extremes of weather, boost heat units, and extend the growing season by two months, Gray explains.

“You can start growing produce that you don’t normally grow here in Saskatchewan,” he says. That includes cantaloupes, vine-ripened tomatoes early in the season and red peppers.

In 2014, Gray and his Cumberland House team planted about 4,000 strawberry plants, one-tenth of an acre of potatoes, another tenth of an acre of carrots, turnips and beets on a five-acre patch. They also built a high tunnel for crops such as cantaloupe.

Those five acres had a socio-economic return-on-investment as well. Gray worked with five Cumberland House men who’d never grown anything before. He taught them how to grow produce, and how to tell when fruits and vegetables were ripe by tasting.

Seeing what their work was yielding helped them develop pride in their work, Gray says.

Gardening is a lot of work, but Gray sees no point in mindless labour. So he uses plastic mulch to suppress weeds.

“Nobody likes to weed. It’s a waste of time,” he says.

Jeremy Daigneault is a young man who works with Gray in the Île-à-la-Crosse market garden. He says Gray’s technique for growing produce is simple. And he’s a fan of the plastic mulch.

“All you do is lay it down and watch them grow. Find your odd weed here and there and that’s it,” says Daigneault.

Cumberland House is the oldest per-
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Permanent settlement in Saskatchewan, but Île-à-la-Crosse is a close second.

Daigneault was enrolled in the Gabriel Dumont Institute — a college and cultural institute — when he saw Gray do a presentation on fruits and vegetables.

“We got interested in it because we had a community garden and nobody was using it in our town. So we decided to put it all together and start our community garden,” Daigneault says.

Daigneault had a year of marketing, but no gardening experience before working in the market garden. Gray took Daigneault to his own commercial market garden for hands-on training and worked with him at Île-à-la-Crosse.

Daigneault says he was surprised by how much food they could produce with a small piece of land. “We were kind of running out of room there for a while.”

Gray encouraged a little friendly competition between the Cumberland House and Île-à-la-Crosse markets last year. For example, they competed to see who could grow the tastiest strawberries.

“Once you get a bit of a competition going, then they start taking more pride in what they’re doing,” Gray says. Selling their produce in the community further builds pride, he says.

The Cumberland House men have figured out which areas they like working in. So this year Gray plans to have them specialize in different areas, such as high tunnel production, root vegetables, corn and peas, and outdoor mulches such as strawberries.

Specializing also gives Gray a chance to set up another contest. “There’s nothing like a little competition to see who has got the best crop,” he says.

**Succession planning**

Gray has no plans to drop the community gardening projects, but he’s already thinking about succession. The biggest worry is that the right people won’t be in place to properly manage the projects in the future, he says.

This year Gray is training a young woman as a project manager. And Daigneault shows great promise for managing his community’s market garden.

Gray says Daigneault has the foresight needed to plan ahead. He’s got a good head for business, is good with equipment, quick to learn and listens. Gray has total confidence that Daigneault can carry forth, he adds.

Success starts with giving the team a job to do and then getting out of their way.

“Success starts with giving the team a job to do and then getting out of their way.

Daigneault is a young man, and he’s still considering his future. But he’s been thinking about taking over the project. He thinks it’s important for the community to sustain itself using the resources around it rather than trucking so much food in. And running a market garden seems like a good career to him, he says. “It’s lots of work, and that’s what I like to do.”

Gray has also got big plans for the northern market gardens in the next five years.

“I want to see the self-sufficiency of the communities for sure. I want to see processing facilities where we can store, sell and produce with the commercial kitchen for the winter.”

He also wants to see greenhouses in the communities so they can start bedding plants. He wants the businesses to be self-sustaining and to employ people full-time year-round.

“Just a simple little plan,” Gray says.

Daigneault will be setting up a high tunnel for the first time this spring. They’ve outgrown the community garden in Île-à-la-Crosse and so are moving to an old farm. Daigneault says the soil is full of nutrients from the cattle that were kept on the farm.

Asked about the future of the Île-à-la-Crosse market, Daigneault says: “I think we’re just going to start small and build up.”
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It’s pretty clear that we don’t exactly know what we’re doing. The shopkeeper, looking through the window, sees our hesitation. He opens the door, looks at us, smiles, and waves us in. “Please come in,” he says.

Not familiar with this stretch of city shops, we had paused to peer in the window of a store called Toronto Cash & Carry. We don’t know where we’re going. We only know that we’ve been told we’ll be glad we made the effort to come here, and that we should be sure to buy the brand of chana masala spice blend that comes in a green box.

We have tried chickpea curry and liked it, and we’ve been thinking of making our own, and apparently this is where we must come for the best ingredients.

The shopkeeper’s friendliness is nice after the downturned faces on the standing-room-only 506 Carlton streetcar that we rode to get here. We were packed together like sardines, yet most people didn’t speak or make eye contact. Everyone was close; everyone was distant.

The 506 goes through nice and not-so-nice neighbourhoods. They sit cheek and jowl. We get on at Yonge Street, just before Maple Leaf Gardens. After a few minutes, the wheels screech as the tracks curve onto Parliament Street. To the east are restored Victorian homes and urban professionals. To the south, as we round the corner onto Gerrard Street, we’re sandwiched between thrift stores and the Regent Park housing project.

Finally there’s chatter when the woman in front of us suddenly spots a friend across the aisle of the streetcar. The woman has bought a new dress and shoes for tonight, she tells her friend, adding, “I’m going out tricking.” She’s indifferent to whether anyone overhears her.

She’s still chatting when we get off at Greenwood Avenue. We’ve already passed East Chinatown, with its Chinese and Vietnamese shops and restaurants, and we’ve arrived at the Gerrard India Bazaar shopping strip, which bills itself as the largest South Asian retail cluster in North America. Both are like little villages within the city, where food opens up barriers and conversation.

Walking past the Lahore Tikka House restaurant, we see rickshaws on the patio. This may not be an Anne-of-Green-Gables picture of Canada, but it is very definitely Canada, although here the clothing stores have brightly coloured, bejewelled clothes. In one store, which smells of incense, we look at English-language books on Hinduism, yoga, and diet. There are musical instruments we don’t know, and Indian carvings and crafts.
By Steven Biggs, CG Contributing Editor

At Toronto Cash & Carry

The clerk holds the door as we go into Toronto Cash & Carry to look for the chana masala spice mix. He and the owner, Amin Vali, are quick to inquire what we’re looking for and take us to it.

Another shopper shares a laugh with my wife, Shelley, when she buys all but four of the samosas, and then worries that we wanted some too. “Four is enough,” Shelley says.

Our shopping list of one item morphs into a basket full of groceries: dried mango pulp, mango chutney, Bombay Bhel snack mix (a made-in-Toronto crunchy snack food mix with puffed rice and sticks made from chick-pea flour), powdered neem leaf, powdered pomegranate, green tea — and the chana masala mix in the green box.

Vali says he has a diverse mix of products including spices, all sorts of pickles, pulses, and rice. In the spring and summer, he sells mangoes from India and Pakistan, and in the fall, fresh dates from the Middle East. His produce section includes long, red carrots that are wide at the top and narrow at the bottom, and small, round eggplants. He also sells cosmetics, shampoos, and henna hair dyes.

One aisle is full of large, clear bags of pulses. “Some people who are vegetarian cook lentils every day,” he says, adding that these days he has more customers eating vegetarian diets.

Vali says that approximately 80 per cent of his business is retail, with the remainder restaurants. “January and February are very slow months for us,” he says. It’s a time of year when most of his customers come from the Toronto area.

Things pick up from March until Christmas. When the mango season starts in the spring, people come from across the province. He even gets customers from the northeastern U.S. “They cannot get this good mango there,” Vali says, calling Mexican mangoes “everyday” compared with the flavour of Indian mangoes and the sweetness of Pakistani mangoes.

His business is changing. These days, he says, big supermarkets carry more Indian and Pakistani groceries, so he has fewer South Asian customers. “I’ve got a lot of Canadian white customers,” he notes, saying that with the Internet, a new, non-Indian base of customers finds him.

Continued on page 18
KOHINOOR FOODS

Across the street we see the sign for Kohinoor Foods. Like Toronto Cash & Carry, this is a smaller store with a very wide variety of products.

The manager, Azim Popat, tells me his focus is foods from India, Pakistan and Bangladesh. “That doesn’t mean that everything comes from East India, it comes from all over the world,” he says. There are breads, pickles, condiments, spices, health foods, and produce. And there are samosas, which Shelley again buys, deciding she wants more than the four that she bought in the previous store.

“We are really strong in spices and Indian and basmati rice,” Popat says. He imports whole spices, which he grinds here.

While supermarkets have basic spices, he has three different types of cumin. “We supply a lot of stuff to restaurants downtown. They love our spices,” he says.

Popat says his client base extends beyond South Asians, and includes a lot of Canadian-born customers. People with West Indian background, he says, often come for spices, while people with a British background often make curries.

I buy a root vegetable called arbi. When I ask Popat how to use it, he explains that it is used like a potato, diced up and added to a curry. I see boxes of fresh green chilies, the long, red carrots, and small eggplant. In summer, his biggest-selling item is mangoes from India and Pakistan. “We get customers from the U.S., even Chicago,” he says.

I call back later and tell Popat how much I like the Mitchell’s-brand ketchup that I bought at his store. It has chilies in it. “It’s from Pakistan,” he says. It’s too bad we don’t make such good ketchup in Canada, I think to myself. I ask about what’s new. He says, “More recently we have ready-to-eat meals that come from India.”

Leaving Kohinoor Foods, we hear Indian music as we pass a store called Bollywood Music Centre. Then we spot another food store across the street.

BJ SUPERMARKET

At BJ Supermarket, owner Juejar Jajj says that his specialties include spices, nuts, dried fruits, and Indian brands of food. Here I see the neem toothpaste that I have seen in the other shops. Like Kohinoor Foods and T oronto Cash & Carry, there are the long, slender, red carrots.

His store looks a bit more like a typical supermarket, with larger, wider aisles,
and more western produce and products such as Kraft Cracker Barrel cheese. He explains that when his father opened the store in 1982, it was focused on the Indian community. But this community is changing, he says. There are now lots of Caucasians too. As demographics change, so have his products.

Another trend is an awareness of healthy eating. “We’re seeing more people are eating healthier, even in our community,” he says. That means more demand for organic and health foods. “We just started carrying organic dal (dried split pulses) awhile ago,” he notes. He says the cost of organic spices made him reluctant to carry them, yet they sell.

Another surprise was tempeh, a soy product. “We just started carrying tempeh three to four months ago,” he says. After one Indian customer asked him to get it, he brought in a case. “As soon as I had it in, it sold out in less than two weeks.”

I notice durum roti bread and Indian-style snack products that are made in the Toronto area. Jaij says that there are many Canadian suppliers of Indian-style foods. One Toronto-area supplier of Indian-style snacks has supplied his store since the 1980s. He says there are domestic suppliers of chutneys, pickles and relishes; and dairy products such as paneer (an Indian-style cheese) and ghee. “As the communities came here and matured, people opened up business,” he says.

I head to the checkout with a vegetable called tindora, which looks like small cucumbers. I ask the clerk what to do with them, and she explains they are used in stir-frys, and are usually quartered beforehand.

Leaving the store, we walk further. At Coxwell Avenue, we see Robin’s Pizza and Wings, and Gerrard once again is dotted with homes. The India Bazaar has come to an end. We end the shopping trip with a meal at a restaurant called Famous Indian Cuisine. Then we get back on the streetcar, but I see Shelley cast a look over her shoulder. She wants to know her way back for samosas. 06
Who knew? Formal process improvement is emerging as your farm’s best bet for solid gains

By Maggie Van Camp, CG Associate Editor

Farms have an impressive record of increasing their production efficiency through scale, scientific improvements and innovation. Efficiency is the ultimate controllable factor in commodity margins.

“Every year we do more with less, better,” says Dick Wittman, Idaho farmer and consultant. “We are becoming safer, more environmentally sound, and more efficient.”

As our farms become more complex and larger, are there opportunities for even bigger gains using formal process improvement?

With more people working on farms, are they following standard operating procedures and are these processes audited and rewarded for improvement?

Farm process improvement should define your company’s culture, says Wittman.

In the manufacturing sector, management programs like Total Quality Management (TQM), lean manufacturing and Six Sigma are being implemented to ensure quality and margins. Measuring and knowing how often the process varies from the standard is key to improving. For example, for Six Sigma, the sigma rating states the yield or the percentage of defect-free products it creates. In a “six sigma” process there’s likely to be only 3.4 defects per million, for a free-of-defects rate of 99.99966 per cent.

In Canada, Larry Martin teaches lean management at Canadian Food and Agri-Business Management Excellence (CFAME). Those in the CFAME course say it’s slower than expected to implement and needs a cultural change to happen effectively, says Martin’s business partner, Heather Broughton. “We also thought the concept could be applied into primary agriculture, so we have brought the content into CTEAM as well the last couple of years,” she says.

Whether it’s TQM or Six Sigma, all these programs have two common threads — process mapping and developing standard operating procedures.

Wittman teaches process improvement at Texas A&M University’s The Executive Program for Agricultural Producers (TEPAP), with a stress on developing standard operating procedures. At the beginning of the course, he points out the vulnerabilities farmers carry in their businesses that could be mitigated with improved, more formal processes.

“Farmers like to grow stuff, not put things in writing,” Wittman says. But, he adds, “This is the highest payback.”

Stories include not having any backup systems when computers crash, but also large fines levied for environmental problems or key employees quitting and no one knowing how to do their job.

Then Wittman literally takes it home. He tells of how one of the partners on his large, diversified family farm was severely injured when he rolled a tractor. The roll bar had been removed to clean out a building, one tire had been repaired but the liquid calcium hadn’t been replaced yet and he was driving on a hill. In that instant when that tractor rolled and crushed him, having standards to follow went from being peripheral to imperative. “We preached and practised farm safety but having it orally wasn’t enough,” says Wittman.

The next morning, all the employees and partners at Wittman’s farm sat down and reviewed
everything. Then they immediately started creating a six-page safety policy for the farm, writing down everything from chaining down a tractor to putting the roll bars back on after cleaning out the barn. Today, new employees sign that document and take a copy home to read.

Written safety policies can act like the mortar for standard operating procedures (SOPs). They should get everyone on the farm up to speed with awareness, and they can also help prove due diligence should something bad happen.

However, the benefits of improved processes go beyond risk mitigation. In fact, it’s the cost of things going wrong that motivates many TEPAP participants to spend the time developing SOPs and then improve on them, says Wittman. Plus, there are the benefits of superior planning.

Huge savings can be realized when efficiencies are identified, evaluated and implemented. “This is the highest payback for management and time,” says Wittman.

Part of the resistance is just in our personalities. “Farmers like to grow stuff, not put things in writing,” says Wittman. But that is changing. This year 40 per cent of the TEPAP class had personality and communication styles that were focused on processes, and Wittman says they were eager to get home and write SOPs.

Process improvement for farmers starts by identifying jobs that are repetitive, documenting how those jobs are supposed to be performed, and evaluating how to do them in a ways that are better, more effi-

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cient, safer, more economical and more environmentally sustainable. Then, the process ensures you audit how you are doing, and reward the gains that result.

“Success is doing things well over and over consistently,” says Wittman. “Be a courageous leader in being alert to deviations, and take responsibility for adherence to standards.”

Once identified, the cost of inefficiency should be analyzed, because now there’s a marker to measure the improvement. For example, in the TEPAP course, Wittman goes through an analysis of how many years of payback it would take to move from 40-foot trailers to grain trains. When the steps were broken down, the problem of combines waiting around was identified and valued. Reducing trailers with grain trains becomes quantifiable.

But process improvement doesn’t stop with a calculator. Alternative solutions are identified and the best one is implemented after looking at the total picture and implications. The new process is evaluated to ensure this was a good move and seeing how it can be improved further. It’s a very engaged, fluid and continual process.

The power comes when each product or process is evaluated based on its ability to streamline an operation, increase production, improve quality or save time. It starts by breaking down what happens currently and then really looking at these processes as a way to improve. For example, simply putting a label on something can help avoid making the same mistake over and over. It might help eliminate duplications, extra steps and inefficiencies.

WHAT’S AN SOP?

Standard operating procedures (SOPs) describe the steps and the order of actions to complete a process, such as milking, planting or spraying. These steps are the links in the chain that make up the process. They don’t necessarily have to be written. Some of the best SOPs are video recorded. With smart phones and YouTube, this can be done quickly and inexpensively. “Some large dairies are doing this (video SOPs) in a second language for some of their employees,” says Wittman.

Typically, SOPs are used to train new employees, to do performance reviews and job descriptions. Often employees write their own SOPs, which can then be used in performance evaluations to help isolate problems or verify environmental safety.

On all sizes of farms, they’re a great way to remember how to do tasks that only get done occasionally, and can be used as a checklist for rewards and consequences. Like the standards of Six Sigma, they should reduce variability and errors.

When Wittman’s daughter went off to college, it left their farm with no one who knew how to do billing and other office duties. His youngest child, then eight years old was keen to learn, so he described to her the task while he was doing it and she wrote it down. By the end of several sessions like this, she understood the job and the farm had clear easy-to-understand written instructions for office duties.

To make them even more useful, they should be measured and used on a day-to-day basis, says Wittman. And at least once a year, they should be reviewed and updated. Process management isn’t just a one-time thing. Also, don’t become bound by your standard operating procedures; that’s not the point.

Wittman identifies eight farm applications of SOPs:

• Office functions
• Harvest and equipment operations and servicing
• Crop agronomic practices
• Fuel and farm supply and storage
• Worker safety guidelines
• Food safety practices
• Herd health and stock-handling procedures
• Value-added market access and certification

Think about your own farm and where you could apply some standard ways of operating. Then, prioritize which ones need to be done first. For example, equipment maintenance checklists might be a good place to start. Then you could move on to written operating instructions for key equipment, as well as shop protocols for jobs like replacing used products or prepping equipment for field work.

You could also tackle seasonal work-flow planning, beginning with markers and white boards, and then developing a more formal approach including, for instance, how to do harvest-crew orientation, how to manage on-farm grain storage, and how to check bins after the grain is stored.

Process management begins with “process mapping,” or defining what the business does and who is responsible for what. Once a process is outlined, then it’s natural to look for ways to make it more efficient. It also can be used to help determine when it makes sense to invest in a new product or technology.

It also might make sense to talk about process improvement with your supply chain. For example, sharing your feeding SOPs with your nutritionist might identify a problem or another way of doing things that you didn’t even know about.

Having processes written down might give you a leg up for selling into premium markets, especially because you can demonstrate to buyers that you are on top of everything that happens on your farm.

In a related way, SOPs can also help prove that your are in compliance for things like animal care or environmental standards.

As Wittman says, breaking down the steps in process, could be the start of squeezing more time and margins out of your farm. But that in itself may be only the start. 66
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Campaign season

With the federal election heating up, how nervous should Ontario's dairy farmers and the West's grain shippers start getting? By some accounts, quite nervous indeed

By Gord Gilmour, CG Associate Editor

There was a time when farmers were front and centre in federal election campaigns. But no longer, it seems. With only about two per cent of the population involved in primary agriculture, it's hard for this important industry to break through.

"The reality is, the days of elections being won or lost on agriculture issues are long past," agrees Bryan Rogers, a self-confessed political junkie and former senior staffer for a number of MPs who serves now as executive director of the Grain Growers of Canada.

But does that mean agriculture will only be a bit player in this year's vote? Not necessarily. Rogers sees a short list of big ag issues in 2015, including transportation in the West, supply management in the East, and business risk management programs everywhere. And he isn't alone.

Combined with our distinctly Canadian way of making huge, periodic changes in national ag policy, it also sets up the possibility that this year's election may prove to be very big news indeed.

Our distinctly Canadian way? Murray Fulton, a noted agriculture economist and now a professor with the Johnson-Shoyama Graduate School of Public Policy, has been spending a lot of time thinking and writing about this very topic lately, including giving the 2014 Fellows Address at the annual meeting of the Canadian Agriculture Economics Society on how agriculture policy, economics and politics intermesh in Canada.

"What we get is really something that can only be described as 'punctuated equilibrium,'" Fulton says. "We have periods that are largely consensus, where there might be refinements within that consensus, but nothing changes until over the course of time pressure builds, and there is a punctuation, when the given issue evolves very quickly."

Fulton says the obvious recent example was the Canadian Wheat Board and the sales power that organization held from 1939 until August 1, 2012, when it lost its single-desk mandate. Beginning in the 1960s, subtle changes began to appear that fundamentally altered how that marketing agency functioned, including scrapping the delivery quota system, introducing protein level premiums, bringing in a farmer-elected board of directors and introducing producer payment options that mimicked important aspects of the open market.

"These were significant and substantial changes, but they were all done within the context of the CWB as a single-desk seller," Fulton says. "It was only after pressure built up over several years that it culminated in a punctuation — the removal of the single-desk power."

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That only occurred after farmers who were bridleing against what they saw as the restrictions of the system began to make it a political issue. They staged public protests, illegally exported grain to the U.S., and some even very publicly went to jail for short periods of time. In the face of this, the Chretien government introduced some of the more fundamental alterations that in retrospect led ultimately to the open-market system of today.

The message is, change happens when stakeholders who feel they are disadvantaged under the current system take their case to a larger audience, be it policymakers or the general public.

A similar pattern evolved with the Crow Rate federal freight subsidy, and with intellectual property rights for plant breeders.

And now, in Eastern Canada, the 800-pound gorilla nobody likes to talk about is supply management. In many ways, Fulton says, the poultry and dairy sectors are a textbook case of this concept beginning to play out. Supply management dates from the 1970s, and since then has only evolved at the margins, through shifts in quota policies and import allowances.

But there may be some sign that supply management’s political clout is ebbing. For instance, the negotiated, but not yet ratified, Canada-Europe comprehensive trade agreement holds out the prospect of larger cheese imports.

At the same time, too, Fulton says pressure is arguably beginning to build outside of the sector for policy-makers to rethink the supply management system.

For example, he says there’s been a marked uptick in commentary in the media, especially the English-language press, that is beginning to question the overall value of supply management to the country. Consumers would benefit from lower prices, the pundits claim, and a trading nation like Canada would benefit from ending a trade irritant.

“There does seem to be an effort to change the public perception of supply management,” Fulton says.

However, Fulton also notes these efforts tend to take years, and a few columns of print here and there aren’t likely to make the issue a major one in the coming election — but two or three elections down the road, it’s anyone’s guess.

Fundamentally he says the important thing to realize is that, to borrow a controversial idea from former prime minister Kim Campbell, elections are really more about politicking than about any substantive discussion of the issues, and agriculture issues will only come up in the larger context of a national campaign if they can gain voters or keep already loyal voters inside the tent.

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EAST AND WEST

In that way, another pundit says there are clearly going to be regional agriculture issues that emerge during the campaign. Sylvain Charlebois of the University of Guelph has become a major public intellectual in recent years, speaking often on agriculture issues. This year he’s been based out of Innsbruck, Austria, where he’s spending his sabbatical year as a visiting scholar. He spoke recently by phone with COUNTRY GUIDE about the looming federal election, and he says he sees a handful of issues, mostly broken down along regional lines, as likely to dominate any ag politicking.

“I think they’ll certainly be talking about rail transportation out West, where there continues to be a problem,” Charlebois said. “In Ontario and Quebec, I think the big issue will be the future of supply management.”

In fact, Charlebois says if there’s an issue he sees with breakout potential this election cycle, it’s supply management, albeit only if those most affected by proposed changes under the European trade deal make it one.

“This agreement has been negotiated but not ratified, and it will be the next government, not this one, that does ratify it,” Charlebois said. “I think we really do have the stage being set for the first election since 1988 where trade and trade agreements and their effects become a major issue.”

Murray Fulton might disagree with some of the details of that analysis, but on the broad strokes he and Charlebois find themselves in agreement. However, he says other than the minor adjustments under the proposed trade deal, none of the parties have any interest whatsoever in stirring the hornet’s nest, especially since Ontario farmers are major players within the system, and increasingly it’s looking like Ontario is the key battleground province.

“The next federal election will be won or lost in Ontario,” Fulton says. “Supply management might not be a big vote winner, but it could be a big vote loser.”

Steeped in the culture of the national capital, the GGC’s Rogers agrees Ontario will be critical in this race, and he adds that this likely means little in the way of major proposals that could alter the fundamental nature of agriculture this campaign. Instead he expects the election will play out along predictable lines.

“It’s going to be all about leadership,” Rogers says. “You can see how all the parties are attempting to frame the other leaders in a negative light.”

The opposition parties will snipe at each other and paint the government as out of touch, Rogers predicts. Whether either find any traction is an open question, he says, but there is one reason it might be a more successful strategy.

“The government has been in power just about 10 years now, and it seems that this is about the shelf life of a government these days,” Rogers says.

One region that might struggle to force any real attention to its issues might, ironically, be the Conservative heartland of the Prairies, and the farmers in that region in particular. Simply put, it’s because they’ve often formed the bedrock of the government’s vote, and during the hurl-by-burl of an election campaign, it’s often the squeaky wheel rather than the reliable ally that gets the grease.

“I don’t want anyone to think I’m being overly critical or anti-Western Canada,” Charlebois says, “but the truth is, during elections you only pay attention to voters who have the potential to switch.”

One reality that agriculture is going to face is the growing public interest in agriculture and food. This is a double-edged sword. On one hand, it’s a good thing for consumers to be aware that their food comes from somewhere other than the grocery store. On the other, this might mean they start developing opinions about the industry, and how you should run your business.

Again, Fulton sees evidence. Increasingly, food and environmental activists are extolling the virtues of local and organic food. Food policy is likewise creeping up on the agenda, especially through the lens of health and wellness.

In Fulton’s eyes, it’s an attempt to change the public discourse around food and agriculture, and it’s one that the larger agriculture industry can’t ignore.

“These efforts are meeting with some success, even without much direct political involvement or government involvement at the policy level,” Fulton says. “Organic food is a good example. They’ve been quite successful in establishing a market, and the government really didn’t do much other than set organic standards.”

It’s this reality that also may set the stage for farmers finding themselves in the election spotlight unexpectedly — and in a less-than-welcome way. Charlebois says somewhere, deep in an activist organization, someone could be preparing ammunition to release in the heat of an election campaign to force the issue to a head. Or there could be another major food safety issue that emerges at exactly the wrong time.

“We could see something like a Friends of the Earth or PETA releasing a damaging video around animal welfare during the campaign,” Charlebois says. “If that happens, it will become an election issue. Likewise, there could be another food safety issue like listeriosis that makes people sick or even kills someone. Given what we’ve already seen in the past few years, that would become a major campaign issue very, very quickly.”

That doesn’t mean it will happen, only that there’s a chance such an issue could emerge — and the middle of an election campaign is a tough time to get anyone to take a deep breath and a sober second look at anything.
ELECTIONEERING

Canada’s top agriculture politicians say the coming campaign has plenty of grist for the mill, but none is expecting non-farmers to care much

By Gord Gilmour, CG Associate Editor

Sometime between now and next fall, the federal election writ will be dropped and the 42nd Canadian federal election will be underway.

COUNTRY GUIDE recently spoke to federal Agriculture Minister Gerry Ritz and the critics from the other major parties about how they see agricultural issues playing out in the campaign.

As you might expect, there was some common ground, some discord, and lots of politics.

CONSERVATIVE MUSCLE

In a portfolio noted for colourful characters, federal Agriculture Minister Gerry Ritz still manages to stand out.

Always bluntly spoken and ready to crack a joke, he has both charmed and incensed during his tenure, all while dealing with his share of the challenges of eight years at the top.

From mad cow disease to listeriosis and E. coli issues at processing plants, food safety has been at the top of the agenda. Trade negotiations have seen supply management under the microscope. And while Prairie grain growers have enjoyed decent prices for much of his run, in recent years they’ve struggled with an overburdened rail network.

Even so, Ritz was upbeat during a recent conversation with COUNTRY GUIDE about his time as minister and what the big issues are in the coming years.

“I really feel that during the past few years, agriculture has come of age,” Ritz says. “It’s become more global in focus, more outward looking, more confident.”

He doesn’t take credit for this himself, saying the new generation of farm managers, processors and other business people have stepped up to the challenges of feeding a hungry world, and his job has been to clear the road for them. But he also concedes it’s a work in progress, and challenges remain.

In the coming campaign, Ritz says he expects a lot of people to be asking him about the railway situation in the West, where a terrible winter last year brought systemic issues to the fore.

“I would like to be agriculture minister again,” Ritz says. “I would like to continue that work.”

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“I think it’s fair to say there are still challenges there,” Ritz says. “We need to make sure that the railways are addressing not just the letter, but also the spirit of what the government is asking of them.”

Critics charge the railways have been cherry-picking grain off main lines and other convenient locations, leaving more remote locales to languish.

One area Ritz says the government has made real headway is through its reform of business risk management programs. It has moved away from ad hoc payments towards a more insurance-based approach. It’s not been without controversy, but Ritz defends the direction the government has taken.

“These programs are now predictable and bankable, and farmers have clearly said they prefer this,” Ritz said. “Sure, there’s the odd person who wants to write the papers when the moon is full, complaining that the government won’t backstop them for every little thing in their business — but that’s just not the role of government.”

Another bright spot has been trade and market access. Ritz says the Harper government has done much to advance that agenda, through finalized deals like the Korean free trade agreement and ongoing negotiations.

“We’ve pushed as hard as we can,” Ritz said. “Market access is very important to the grain and livestock sectors. We would certainly continue to pursue this.”
Supply management has long been the third rail of Canadian agriculture policy, a very popular system with the farmers who participate, and that many consumers either support or are blissfully unaware of. And while some pressure appears to be building for a rethink of these policies, none of the political parties are leading the charge, including the Conservatives, who are the obvious ideological champions for a revision of the policies. Ritz concedes the differences between the parties come down to the details, not the broad strokes.

“I think we all recognize the importance of supply management,” Ritz says. “That’s not to say any policy should be frozen in amber. It’s been in play for 40 years. You have to periodically revisit any policy, and evaluate how it’s working today, and how it could be refined to work better today.”

Over the next few months, Ritz will face the sitting politician’s greatest challenge — he’ll take his record to the electorate. While he hails from the Tory heartland of rural Saskatchewan, he says he’s not taking anything for granted, but he also concedes he wouldn’t mind getting the job again if it all lines up right.

“If the voters re-elect me, and the prime minister saw fit to give me the job again, then yes, I would like to be agriculture minister again,” Ritz says. “I think the government has accomplished a lot, especially around trade, and I would like to continue that work.”

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NDP AT THE TABLE

“The jury is still out,” the NDP’s Allen says. Can risk management do the job?

Malcolm Allen is the MP who has spearheaded the NDP’s agriculture efforts, serving as critic for the agriculture portfolio since the 2011 election. MP for the Ontario riding of Welland, he’s a transplanted Scot and an electrician by trade, and has been an MP since 2008. He insists that the NDP has spent a lot of time looking at agriculture policy in Canada, and arguably is the party best prepared to discuss the issues in the coming election.

“We’re the only federal party that’s taken the time to research, write and release an agriculture policy,” Allen says. “I strongly suspect we’ll be the only ones to do so before the next election.”

What Allen is referring to is the party’s Farm to Fork policy document, a national food strategy he says is sadly lacking in Canada, putting it behind other advanced nations. England, Australia and other OECD nations have one, and so should Canada, Allen says. He says we frequently get tied up in thinking about how Canadians on average spend just over 10 per cent of their income on food, and fail to recognize that even in wealthy nations like Canada, there are those who struggle to eat.

“For most of us it is a small percentage, though it has been growing for all of us recently,” Allen says. “For someone who’s working poor, say holding down a couple of jobs just to make ends meet, it can end up being much higher.”

Among other things Allen says the party hopes to increase access to high-quality food, and make farms more environmentally and economically sustainable.

Allen also says he expects to hear a number of practical issues dominate agricultural discussions during the campaign. One of the most important will be transportation problems in the West, he says, and he adds if the government is proud of its record in addressing them, it has no real reason to be.

“I don’t think it’s going to go away, I think this is going to be ongoing,” Allen said. “We had a service review two years ago, and it didn’t work. I don’t think the answer is another service review.”

Allen says there’s plenty of evidence beginning to accrue that the major railways are keeping their numbers up by creaming off the easy traffic on or near main lines, leaving many farmers continuing to wonder if their grain will move.

There’s also a growing issue surrounding what the farm of the future looks like, Allen said. He accepts the modern “family farm” isn’t the same as it was a couple of generations ago.

“I recognize that these farms can be very large, and some will be incorporated,” Allen said. “But I do think there’s some concern emerging, especially around farmland ownership, and large investments that have been made there in the past few years. I have talked to farmers recently in Manitoba and Saskatchewan who are very concerned that the price of land has got so high, and they’re less and less able to afford it.”

In Eastern Canada, Allen says he’s hearing plenty of concern about supply management. While he concedes the government largely mouths the right words, he questions the depth of their commitment, and wonders whether recent moves are the start of a slow-motion drive to undermine the boards.

“With supply management, my concern is that it’s death by 1,000 cuts,” Allen says. “Each time we get involved with a trade deal, we make concessions and tinker with it. At some point, if you give up enough, you look at it and wonder if it doesn’t make any sense.”

Allen is also sharply critical of government assurances that the new business risk management programs will in fact meet farmer needs. He notes the business is cyclical, and the programs were changed during good times and haven’t yet seen their first real test.

“The jury is still very much out,” Allen said. “The truth is we won’t know if they work until they’ve been tested, and I’m hearing a lot of concern that they’re not going to be adequate.”

LIBERALS PICK THEIR ISSUES

The Liberal’s Eyking says he sees a sea change in his party’s popularity in the West

Mark Eyking enters the coming federal election campaign in a unique situation. The Nova Scotia MP, former farmer and current agriculture portfolio critic, represents a third party that’s resurrected, but still a shadow of its former glory.

Now the party has a leader who doesn’t suffer from name recognition problems, and Eyking says he’s seen a sea change, especially in Western Canada.

“It’s gone from barely being able to get a handful of farmers out to a town hall meeting to getting 75 people out in the middle of the winter in the Prairies during a snowstorm, with terrible road conditions,” Eyking says. “Sure, there are some parts of the Prairies where it’ll be tough to make any inroads, but there are places like Manitoba where I think they’re definitely kicking the tires.”

Eyking is hoping this interest continues, and he says farmers across the country would be well represented by a Liberal government. He’s expecting a small handful of issues to dominate the agriculture agenda during the coming election.

Nationally he says business risk management is causing concern because it’s still not certain how well they’ll work when growers actually need them.

“It’s things like the trigger mechanism and how well it will work — there’s a lot of concern out there,”
Eyking said. Additionally he says some good programs that the federal and provincial governments have cost shared have disappeared under the new system, especially those that funded innovation at the farm level.

He also says it’s clear the rail transportation situation in Western Canada remains a major issue for farmers in the region, and he says the situation underlines some unfinished business in the deregulation of grain marketing in the region after the Canadian Wheat Board lost the single-desk sales mandate.

“We’re not calling for the return of the wheat board, but the reality is that the CWB played an important role in that system, providing both co-ordination and oversight,” Eyking says. “I think the transportation situation plainly shows there’s still the need for a body of some sort to fulfill that need. The government’s solution hasn’t worked.”

Eyking also says cross-border issues like the U.S. country-of-origin labelling for meat and a dust-up over a program to bond fruit and vegetable shipments are hampering north-south trade and need to be addressed. He wonders if the government has been taking the issues seriously enough.

Eyking also says he’s concerned about the government’s commitment to supply management, noting it’s a real concern in rural Ontario and Quebec, meaning it’s likely to be an election issue in those ridings, especially since there appears to be a lot of pressure mounting around the Trans-Pacific Partnership talks.

“I’m hearing that the U.S. is pushing supply management really hard in these negotiations,” Eyking said. “I’m worried because we’ve opened the door a bit with the European trade agreement.”

Eyking also wonders if value-added processing won’t be an issue in the coming election, since so much of it has shut down in southern Ontario.

“We’ve seen the loss of ketchup making in Leamington, when Heinz closed, for example,” Eyking said. “A lot of the products we used to produce, we just don’t make them anymore. It’s a real concern.”

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In 1859, a Scottish aristocrat travelled through much of Western Canada in pursuit of big game. He rode the endless, remote expanse, joining a buffalo hunt in west-central Saskatchewan, for it seems that it was here that our Scot — the ninth Earl of Esketh — got wind of an even greater adventure to be had not far away. So off he went again, this time in search of a Plains grizzly, venturing with his horse and tracker into the Bad Hills range, a 10-mile wilderness of hills and deep ravines known as prime bear habitat.

There, with the help of a Cree guide, he bagged his grizzly. And there too, some 65 years later, another Scot, this time named Bob Stables, settled the rugged hills near Rosetown. But Stables, in his way, was after even bigger quarry.

Stables was a cattleman, and he went on to build up a Black Angus herd that he named the Isla Bank Angus, after the River Isla that wound its way through his family’s farm back in Scotland.

But the story doesn’t end there. Fast-forward the better part of a century, and you’ll find Iain Stables who grew up on the Bad Hills ranch founded by his great-uncle, and who now with his fiancée Jamie Van Cleemput is carrying on the Isla Bank herd name, although not on the original property.
Jamie and Iain met at Innovation Place, a hub of science and technology that butts against the University of Saskatchewan. “We actually worked across the hall from each other,” recalls Jamie.

Jamie, who holds a graduate degree in science, was working for a pharmaceutical company and Iain an agricultural company. She had grown up in Saskatoon and Calgary, and she laughs now at how adamant she had been that she wasn’t going to end up on a farm. Her parents owned the first Taco Time franchises in Canada, and also owned restaurants in both cities, and she knew all too much about the travails of small business.

“Our income and our day-to-day life was so influenced by other people that I always wanted stability,” Jamie says. “And when you look at farming, that’s kind of the opposite.”

But things took a turn that she hadn’t planned.

“I gradually moved her out,” says Iain. They first settled on an 80-acre place, owned by a friend, south of Saskatoon. Then, four years ago, they moved farther out, to a ranch south of Delisle, about 40 km southwest of the city.

Iain always wanted to ranch, but his return to the farm wasn’t a straight line. After earning an agriculture degree from the University of Saskatchewan, he ranched with his dad for a while. But they didn’t have the land and cattle to support both of them, and his dad wasn’t ready to retire.

So Iain went back to university and got a diploma in animal science. He started working, and although he still owned some cattle, he didn’t go back to the farm for years.

Then, in 2007, Iain’s parents dispersed their herd. Iain and Jamie were living on the 80-acre farm by then, and Iain still had cattle in the Bad Hills. But they didn’t have room for all the cows Iain had retained over the years, so he had to sell over half.

“It’s not hard to source new stuff from other producers,” says Iain. But losing a line he’d curated for generations meant losing cows he knew — Iain says he could recognize an individual cow from his original herd from 1,000 feet and tell you what kind of calf each cow could produce.

“And when you start bringing in other ones, it’s amazing how it takes you two, three years before you get that same familiarity with them,” Iain says.

There have been a few bumps on the road to ranching life for Jamie, too. She says there is a bit of a stigma around being a city girl. When people hear about her urban background, she chuckles, they aren’t sure what to do with her.

The other challenge is learning to work cattle. “I keep getting told I don’t have the common sense of the rancher because I started chasing cows when I was 30,” she says. “You hang out with people who started chasing cows when they were three, and they don’t really realize what they’ve learned.”

But Jamie seems to handle it with good humour. She jokes about being a human cattle gate and pylon. And despite the steep learning curve, she’s well suited to ranch life.

For one thing, she’s a workhorse. At Canadian Western Agribition in Regina last fall, she clocked long days shovelling manure and caring for Isla Bank’s show cattle. She comes by that work ethic naturally.

“I was an only child and both parents had to run their own stores. So I spent every school vacation in the store working,” she points out.

Continued on page 34
Others have also noticed that work ethic. Since she left her full-time job, she’s been helping at the cattle shows, and she says others are more accepting of her now that they know her better.

Besides, both she and Iain have specific skills that come in handy on the ranch. Jamie describes herself as a Type A personality, so she focuses on customer service, marketing and registrations. She also creates websites and does graphic design for other livestock producers.

“Anything with a deadline seems to be my calling,” she says.

Iain knows every cow in his herd. He’s got a solid background in animal science and genetics. He also handles the daily feeding and runs the equipment.

Iain did retain some of his original Isla Bank cattle and has been rebuilding the herd. These days he runs 100 head. About 70 are purebred, and the other 30 are commercial cows that carry purebred embryos.

Jamie and Iain are trying to expand, but buying land isn’t easy in the Delisle area.

“We’re competing on the basis that it has to make money, whereas some of the people who are maybe more established, they don’t necessarily need a return from it,” says Iain.

Iain and Jamie aren’t the only ranchers struggling to expand. In fact, some potential beef producers found the hurdles too high to jump to even enter the business.

The multi-year price slump for cattle meant the returns didn’t justify the next generation taking over, unless they were working with family members, Iain says. Better beef prices should help young people wanting to take over, he adds.

But Iain wonders if poor returns have chased a generation away from beef production. Many are in their late 20s or early 30s now, settled into other careers.

“Even if you grew up with it, if you move away from it for 10, 15 years, you lose a lot of that stuff that you knew,” says Iain. Many active ranchers are older, and he wonders who’s going to take over once they retire. And Statistics Canada backs him up: In 2011, most beef producers were 55 years or older.

Iain and Jamie have found ways of dealing with the challenges of establishing their own operation.

Ranching on their own means they can’t share equipment the way some farming families do. But they didn’t want to run old equipment and deal with breakdowns. So instead they did a lot of custom haying to offset new equipment costs. They don’t do as much custom haying these days, but they do custom bale picking with their self-loading bale truck.

“You have to be diversified,” says Jamie. They’re also looking at a couple of job offers that would allow them to retain their own herd while tucking money into the bank, so they can eventually expand their own operation.

Whatever they decide to do, they intend to stick it out in the ranching industry. The Isla Bank herd name has survived for over 75 years, and they’d like to keep it going. And besides, they both love the industry.

Iain cites working with cattle as a joy, and says walking through the herd when they’re on pasture in the summer is hard to describe.

But there are annoyances too. Jamie says part of it is fighting perceptions about “factory farming” and “some of the lovely documentaries that come out when that’s not what we see outside our window” and nobody they know functions like that. She says farmers need to start telling their stories from a personal angle.

She points to Iain, who sees cattle as livestock which will eventually be slaughtered, but while they’re in his care, they should be treated well. “They can’t see that,” Iain says. “I don’t think any amount of arguing with them will get them to see that.”

Jamie tweets on #farm365, and she tries to use other opportunities, but she also says she knows she’ll never change the extremists’ views. “But they’re the most vocal ones, so I don’t want their claims to go unanswered. My goal is to really show that we do care about our cattle and we do care about what we feed people.”

Jamie adds it’s easy to have an opinion about someone when you don’t know them. When ranchers and farmers share personal experiences on Twitter, however, it’s harder for activists to make those claims because everyone can see they’re actual people.

Her goal is to clear up misinformation and share pictures from their ranch.

“It helps give the human side to the ranching story. It’s not just a factory that spits out calves and steaks.”

Jamie’s impression of farm living was that it was really hard, she says. “It’s a lot of work and it’s up in the air all the time. You have to worry about weather and all sorts of different things so it’s just a hard, stressful life.”

But both of them like the community. Beef shows are like family reunions, even though that’s the only time they see many of their fellow cattlemen, says Jamie. And agricultural communities, she adds, are good at pulling together.

But that sense of community is balanced by the freedom of running their own business.

“You’re independent,” says Jamie. “You can guide your life the way you want.”

At #farm365, Jamie tweets and posts their photos. Farmers must do more, she says, to show they’re both capable and compassionate.
HELP IN EVERY DIRECTION.

To provide you with the best agricultural equipment and support possible, we have 37 locations across the Western Prairies. So you never have to look far to find us. And we never have to look far to service you. It’s the kind of proximity, convenience, and quality that you can depend on. See our full lineup of Case IH equipment at rockymtn.com.

DEPENDABLE IS WHAT WE DO.
Finance metrics you may not have thought of — measuring financial risk

By Larry Martin and Heather Broughton

The first two columns in this three-part series focused on using the operating statement to monitor operating efficiency and to diagnose operating problems. In this column, we turn to the interaction between the balance sheet and operating statement to identify and manage financial risk.

This is very topical currently because of concerns that lower grain prices will lead to lower land prices, potentially putting those who bought high-priced land in financial difficulty.

Debt/Equity

Traditionally people used the Debt/Equity ratio as a measure of financial risk. If this ratio is equal to 1.0, it means your debt is equal to your equity. The higher the ratio, the higher your “leverage” and the higher your risk of losing the farm if you can’t pay down debt. The problem is that what it is telling you is whether you have enough assets to cover your debts if you fail. Lenders like it because they want to know their loans are secure if they have to sell your assets. That’s a little late for useful management information!

Debt/EBITDA

More useful for management is Debt/EBITDA, i.e. debt to operating earnings. If your Debt/EBITDA is 5.0, and if you use all your operating earnings to pay principal on your debt, it will take five years to pay it off. During that time you will not use any of your annual operating earnings to pay interest, make new investment, pay taxes or pay yourself. The higher the ratio, the higher the financial risk, because your operations are linked to your debt. Start with the proposition that if you buy an asset such as a farm or a major piece of equipment, there are only three possible ways to pay for it, i.e. 1. From the earnings it generates for the farm; or 2. You either sell it or have it eat into the farm’s equity; or 3. Your rich uncle dies and leaves you a nice inheritance! There are no other choices. Most people don’t have the third and don’t like the second: forced sales are not fun.

Using Debt/EBITDA

Using Debt/EBITDA can help mitigate getting into financial difficulty, starting with understanding benchmarks. For non-farm businesses, most lenders like to keep this ratio under 3.5:1. Agricultural lenders usually go higher: Canadian tax-filer data puts the average for Canadian farms at 5:1. Our experience is that 6:1 is a useful limit for farms that are expanding.

This is where understanding the interaction between the balance sheet and operations becomes useful. Our earlier columns pointed out that successful farms aim for operating efficiency of 35 per cent or more. If a farm has 22 per cent operating efficiency and Debt/EBITDA of 8:1, it is going to be very difficult for it to pay off its debt. There is almost no chance it could make any major new investment.

The ratios tell us that two things need focus here. One is to reduce debt as quickly as possible and, certainly, not take on more debt. The other is to improve operating efficiency from 22 per cent so debt can be paid down more quickly.

The reason lenders go further in agriculture is that farms often have “off-balance sheet” equity because they are carrying land and/or quota at cost instead of market price. Therefore, they pay attention to the Debt/Equity ratio because it gives them a good picture of their security. However, managers need to worry about avoiding financial difficulty. Equity can only pay down debt if it is turned into cash!

Another useful feature of this ratio is that it can help guide growth plans. Some of the most successful operations with whom we are familiar have Debt/EBITDA around 2.5 to 3.0 on average over time. However, it may jump up to 5 or 6:1 when a new major investment is made such as a farm expansion. But it goes down to less than 2.5:1 as that debt is paid off before the next investment is made.

Well-managed farms that are growing manage their growth by ensuring that each major expansion is on the way to being paid for before the next one is made. If the ratio gets much above 6:1, then the farm is facing tremendous risk of a series of low-price years, a major policy change, and/or a series of production problems that reduces yield or price.

On a final note, in calculating the ratio we use an average of three years of EBITDA to take out market fluctuations and we tend to use bank debt instead of total liabilities for the calculation. Usually, bank debt is the most important because banks usually have first mortgages and care mainly about repayment of their debt. In this case, bank debt is the financial risk.

Larry Martin is co-owner and lead instructor in AME’s management training courses. Heather Broughton is co-owner and president of AME.
WHAT MATTERS MOST?

“A strong farming business is always growing and as a young farm manager, so am I. I’ve participated in Syngenta workshops and I’m always impressed. Putting time, money and effort into things other than selling products proves that Syngenta sincerely wants to help farmers. And that’s refreshing.”

Erica Sage, 4th generation farmer and farm manager
Sage Farms, Hussar, AB

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INTRODUCTION

By Johanne van Rossum, Agronomist

Choosing the right cultivar and genetic characteristics is the first step in a sound pest-control program. The next step is the use of seed treatment products that protect the seed right after it is sown.

To respond to different problems, several approaches are possible. If you know the insect pests and diseases from previous years, it is easier to make the right choice. To reduce both environmental impacts and the risk of pests becoming resistant to a pesticide, it is essential to know the target pest or organism. Several approaches are often necessary to achieve these goals and ensure optimal yield.

This document presents the different seed treatments available for controlling diseases and insect pests. In the table for corn, we have included a list of the genetic traits that can help protect the plant against insects.

For each of the major field crops listed, we describe the corresponding seed treatments according to their active ingredients and activity against one or more of the main diseases and insects. This table is for guidance only. Always refer to the label to find the correct field application rate and to know what restrictions must be respected. Please note that most of these seed treatments are only available in a seed treatment facility. Hence, it is important to check with your seed dealers to determine which formulations they use.

There are many possible combinations of seed treatment products, particularly between fungicides and insecticides. Some of these are already premixed by the manufacturer. Many others have not been described in this guide. For the sake of protecting insect pollinators, it is vital to take precautions when using seed treatments.

For more information on best management practices for protecting pollinators, visit the CropLife website at www.croplife.ca.

### WHEAT

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**NOTE 1:** Suppression only. To control disease or pest, use a higher rate of application.

**NOTE 2:** Winter wheat only.

**LEGEND:** +: recommended pc: partial control -: not recommended
### Soybeans

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Protecting Pollinators on the Farm

Bees are vitally important to the sustainability of agriculture. At least one third of the human food supply from crops and plants depends on insect pollination, most of which is performed by bees. The estimated value of their contribution to Canadian agriculture alone is as much as $2 billion.

Farmers are well known to be excellent stewards of the land. Following Best Management Practices will help maximize the benefits of seed treatments while also protecting bees around farm operations.

As always, when handling any crop protection product, it is important to start by reading and following all label directions.

Best Management Practices* (BMPs) are approaches based on known science that, when followed, support healthy crops, healthy bees and a healthy environment.

* BMPs developed in conjunction with CropLife Canada and its member companies.
Best Management Practices

Prior to planting

• Learn about bees that may forage on your land. Know how to contact neighbouring beekeepers.
• Talk to neighbouring beekeepers about protecting bees during planting; discuss alternative locations for hives or ways to shield bees during planting.
• Store treated seed under appropriate conditions, protected from the elements and pests.
• Wear appropriate personal protective equipment (PPE) when handling treated seed.
• Do not reuse empty seed bags for any purpose other than storing the original treated seed.
• Always clean and maintain planting equipment.
• Always use high-quality seed that is free of excessive dust.
• Do not load or clean planting equipment near bee colonies and avoid places where bees may be foraging, such as flowering crops or weeds.
• Check that the planter is set up correctly and calibrated for correct depth and seed placement.
• When turning on the planter, avoid engaging the system where emitted dust may come in contact with honey bee colonies and foraging bees.
• Manage dandelions and other flowering weeds in the field prior to planting to reduce exposure of bees to seed dust.

During planting

• Avoid transfer of dust from the seed bag into the planter.
• Manage lubricants: Lubricants ease seed singulation, improve drop and reduce wear and tear on equipment and seed. The Fluency Agent from Bayer CropScience is the only seed flow lubricant permitted for use with treated corn and soybean seed. Carefully follow use directions for this seed flow lubricant.**

  ** One hundred percent graphite may continue to be used as a mechanical lubricant in finger pickup or mechanical planter meters only. Graphite must not be used in pneumatic (vacuum meter) planters when the corn or soybean seed has been treated with an insecticide.
• Plant at the recommended seeding rate.
• Check headlands, rough areas and the main body of the field for exposed seed. Spilled or exposed seeds and dust must be incorporated into the soil or cleaned up from the soil surface.
• Be aware of wind direction when planting near a source of pollen or nectar for bees (i.e. nearby flowering crops or weeds).

After planting

• Vacuum treated seed from the seed box and return it to the bag from which it came.
• Collect empty seed bags and Fluency Agent containers and dispose of them according to provincial regulations.
• Do not leave empty bags or left over treated seed in fields.

For more information about these Best Management Practices and bee health, visit www.beehealth.ca.

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### OATS

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<td>Raxis Pro MD</td>
<td>tebuconazole + metalaxyl + prothioconazole</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>EverGo Energy</td>
<td>pentulfen + metalaxyl + prothioconazole</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>DB-RED L</td>
<td>maneb</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Maxim 480 FS, Proseed</td>
<td>fluioxonil</td>
<td>-</td>
<td>pc</td>
</tr>
</tbody>
</table>

### RYE

<table>
<thead>
<tr>
<th>COMMERCIAL NAME</th>
<th>ACTIVE INGREDIENT</th>
<th>INSECT PESTS</th>
<th>DISEASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vibrance XL</td>
<td>difenoconazole + metalaxyl-M + sedaxane</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Vibrance Quattro</td>
<td>difenoconazole + metalaxyl-M + sedaxane + fluioxonil</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Dividend XL RTA</td>
<td>difenoconazole + metalaxyl-M</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Apron XL RTA</td>
<td>metalaxyl-M</td>
<td>-</td>
<td>pc</td>
</tr>
<tr>
<td>Allegiance FL</td>
<td>metalaxyl</td>
<td>-</td>
<td>pc</td>
</tr>
<tr>
<td>Maxim 480 FS, Proseed</td>
<td>fluioxonil</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Rancona Apex</td>
<td>ipconazole</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Vitafo 280</td>
<td>carbathine + thiram</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>DB-RED L</td>
<td>maneb</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>EverGo Energy</td>
<td>pentulfen + metalaxyl + prothioconazole</td>
<td>-</td>
<td>+</td>
</tr>
</tbody>
</table>

**Note 1:** Suppression only. To control disease or pest, use a higher rate of application.

**Legend:**
- +: recommended  
- -: not recommended  
pc: partial control

---

**SEED TREATMENT GUIDE 2015**
# Corn

## Insect Pests

<table>
<thead>
<tr>
<th>Commercial Name</th>
<th>Active Ingredient</th>
<th>Corn rootworm</th>
<th>European chafer</th>
<th>Westernworm</th>
<th>Seedcorn maggot</th>
<th>Black cutworm</th>
<th>Corn ear worm</th>
<th>Seedling blight (Fusarium)</th>
<th>Seedling blight (Rhizoctonia)</th>
<th>Seedling blight (Pythium)</th>
<th>Ear rot (Fusarium)</th>
<th>Ear rot (Applegill)</th>
<th>Blue-rye mold (Penicillium)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poncho 600 FS (250)</td>
<td>clothianidin (0.25 mg a.i./seed)</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Poncho 600 FS (1250)</td>
<td>clothianidin (1.25 mg a.i./seed)</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Agro B-2</td>
<td>diazinon + captane (TS)</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Agro CD</td>
<td>diazinon + captane (TS) (PRE)</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Acceleron for corn</td>
<td>clothianidin (0.250 mg a.i./seed) + ipconazole + trifloxystrobin + metalaxyl</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Gauche 480 L</td>
<td>imidacloprid</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Cruiser 5 FS</td>
<td>thiamethoxam (0.125-0.250 mg a.i./seed)</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Cruiser 5 FS</td>
<td>thiamethoxam (1.250 mg a.i./seed)</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Acceleron for corn without insecticide</td>
<td>ipconazole + trifloxystrobin + metalaxyl</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Dynasty 100 FS</td>
<td>azoxystrobin</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Rancona 3,8 FS</td>
<td>ipconazole</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Maxim Quattro</td>
<td>azoxystrobin + fludioxonil + metalaxyl-M + thiabendazole</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Vitate 280</td>
<td>carbethine + thiram</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Maxim 480 FS, Proseed</td>
<td>fludioxonil</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Allegiance FL</td>
<td>metalaxyl</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Apron XL</td>
<td>metalaxyl-M</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

## Pest Management

Genetic traits added through genetic engineering against insects:

- **Agrisure CB/LL**
- **Agrisure GT/CB/LL**
- **Agrisure 3000 GT**
- **Agrisure Vip3a 3110**
- **Agrisure Vip3a 3111**
- **Agrisure 3122**
- **Agrisure Vip3a 3220**
- **Agrisure Duracade 5222**
- **Agrisure Duracade 5122**
- **Hercules 1 and Hercules 1/ RR2**
- **Hercules XTRA and Hercules XTRA/RR2**
- **Yield Gard CB and YieldGard CB/RR2**
- **YieldGard VT/Triple (VT3)**
- **Genuity Smartstax (Monsanto) / Smartstax (Dow)**
- **Genuity VT Double Pro**
- **Genuity VT Triple Pro**
- **Optimum AcreMax / Optimum Intrasect**
- **Optimum AcreMax Xtreme**
- **Optimum AcreMax Xtra/ Optimum Intrasect Xtra**
The Value of Seed Applied Insecticides: Advanced Seed Protection Technology

Seed Applied Insecticides (SAIs) enhance crop quality and yield. They protect the seed and seedlings from pests, ensuring that the plants get off to a healthy, vigorous start, which ultimately translates into quality and yield improvements. This protection is key to agricultural production in Canada, as damaging insect pests have been documented in all growing regions of the country for each major agricultural crop.

SAI protection is particularly important in instances where there is no curative option for salvaging plant health after insect damage has occurred. Seed Applied Insecticides offer numerous environmental advantages:

- A significantly lower amount of active ingredient per acre compared to foliar and soil-applied pesticides
- Direct application to the seed, which minimizes off-target drift
- Reduced impact on non-target organisms, including beneficial insects
- Protection from increased pest pressure associated with a range of agronomic practices including reduced/no-till field conditions

Seed Applied Insecticides also deliver agronomic and production benefits:

- Optimizing seeding rates due to improved plant stand
- Minimizing the need for replants
- Extending the application window for in-season, foliar pesticide applications (when needed)
- Supporting earlier planting practices, which helps to maximize labour and production efficiency
- Complementing trait technology to manage insect pests (where there are no traits available to control insect pests and/or to provide a different mode of action for resistance management)

Seed Applied Insecticides deliver benefits even in situations of low-to-moderate insect pressure. Insect pests can cause damage to crop growth, quality, and yield, even at low-to-moderate pressures. Small populations of certain pests may have a detrimental effect, with the result that the seedling may never emerge or the health of the plant may be compromised. If untreated seed is put into the ground where pests exist, there is no way to protect the seed retroactively. In either of these scenarios, the crop may have to be replanted at significant cost.

In addition to insect control, SAIs also provide strong plant establishment, health, and vigour by protecting and strengthening the plant at crucial times of development (i.e., germination and root growth). This allows plants to better compete with weeds and diseases and deal with abiotic stresses such as cool soil temperatures or dry conditions at planting.

For product-specific information, please visit SyngentaFarm.ca

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**SEED TREATMENT GUIDE**

**CANOLA**

<table>
<thead>
<tr>
<th>COMMERCIAL NAME</th>
<th>ACTIVE INGREDIENT</th>
<th>INSECT PEST</th>
<th>DISEASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poncho 600 FS</td>
<td>clothianidin</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Vault</td>
<td>acetamiprid</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Gaucho 480 L</td>
<td>imidacloprid</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Gaucho CS FL</td>
<td>imidacloprid + carbathine + thiram</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Helix XTRA</td>
<td>thiamethoxam + malathyl-M + fludioxonil + difenoconazole</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Helix Vibrance co-pack</td>
<td>thiamethoxam + malathyl-M + fludioxonil + difenoconazole + sedaxane</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Prosper Evergl</td>
<td>clothianidin + penflufen + malathyl + trifloxystrobin</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Apron XL</td>
<td>malathyl-M</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Rancona Apex</td>
<td>ipconazole</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Allegiance FL</td>
<td>malathyl</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dynasty 100 FS</td>
<td>azoxystrobin</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Integral</td>
<td>Bacillus subtilis, a natural bacterium</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Maxim 480 FS</td>
<td>fludioxonil</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Nisso Foundation Lite</td>
<td>iprodione + thiram</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**LEGEND**

+: recommended

pc: partial control

-: not recommended
The Value of Seed Applied Insecticides: Advanced Seed Protection Technology

Seed Applied Insecticides (SAIs) are one of the most advanced forms of crop protection technology, offering growers a targeted, environmentally sustainable means of pest management. SAI technology protects seeds and emerging plants from insect damage during the critical first weeks of development.

Seed Applied Insecticides enhance crop quality and yield
SAIs protect the seed and seedlings from pests, ensuring that the plants get off to a healthy, vigorous start, which ultimately translates into quality and yield improvements. This protection is key to agricultural production in Canada, as damaging insect pests have been documented in all growing regions of the country for each major agricultural crop. SAI protection is particularly important in instances where there is no curative option for salvaging plant health after insect damage has occurred.

Seed Applied Insecticides offer numerous environmental advantages
These benefits include:
• A significantly lower amount of active ingredient per acre compared to foliar and soil-applied pesticides
• Direct application to the seed, which minimizes off-target drift
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• Protection from increased pest pressure associated with a range of agronomic practices including reduced/no-till field conditions

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IT STANDS ON GUARD FOR SEED.

The built-for-Canada-pre-mixed-formula-so-your-cereals-can-thrive treatment.

We know how much pride you feel when your cereal crops fulfill their true potential. And that’s why you need the broadest range of disease protection available.

New Vibrance® Quattro seed treatment from Syngenta is a unique combination of four systemic fungicides and the additional benefit of Rooting Power™ for consistent emergence and vigorous stand. And the fact that it’s a convenient liquid pre-mix makes for one easy application.

Give your crops some true patriot love this season – with performance and protection from Vibrance Quattro.

Visit SyngentaFarm.ca or contact our Customer Resource Centre at 1-877-SYNGENTA (1-877-796-4382).

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In our February 17 issue, we presented the results of a special survey of readers of the *Western Producer* and *Country Guide* to determine their attitudes toward the business outlook for the next 12 months. Unfortunately, there were errors in reproducing some of the tables. The corrected versions follow.

**WHO IS MOST LIKELY TO PURCHASE FARMLAND?**

<table>
<thead>
<tr>
<th>Who is Most Likely to Purchase Farmland</th>
<th>All Farmers</th>
<th>Farmers Aged 18-34</th>
<th>Farms with &gt; $2M in Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somewhat likely or very likely to purchase land in the next 12 months</td>
<td>23.7%</td>
<td>48.6%</td>
<td>47.2%</td>
</tr>
<tr>
<td>Believe that land is somewhat or highly overvalued</td>
<td>84%</td>
<td>97.1%</td>
<td>91.7%</td>
</tr>
</tbody>
</table>

22% of respondents said they purchased land in the last 24 months.

**HOW COMFORTABLE ARE YOU WITH MAKING A CAPITAL PURCHASE SUCH AS LAND, EQUIPMENT OR BUILDINGS?**

<table>
<thead>
<tr>
<th>Comfort Level</th>
<th>Now</th>
<th>Compared with 12 Months Ago</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Comfortable</td>
<td>15.8%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Somewhat Comfortable</td>
<td>53.2%</td>
<td>15.2%</td>
</tr>
<tr>
<td>No Change</td>
<td>n/a</td>
<td>35.8%</td>
</tr>
<tr>
<td>Not Very Comfortable</td>
<td>25.7%</td>
<td>28.6%</td>
</tr>
<tr>
<td>Not At All Comfortable</td>
<td>5.3%</td>
<td>14.7%</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>n/a</td>
<td>0.4%</td>
</tr>
</tbody>
</table>
NEW INVESTMENTS PLANNED – TRANSPORTATION, EQUIPMENT, BUILDINGS

CHART 1: FARMS BY CASH RECEIPT CATEGORY IN SURVEY VS. 2011 AGRICULTURAL CENSUS – AB, SK, MB
NEW INVESTMENTS PLANNED – TRANSPORTATION, EQUIPMENT, BUILDINGS

AGE 18 - 34 FARMS > $1 MILLION TOTAL

Ipsos Agriculture and Animal Health fielded this study between December 3 and December 21, 2014. A total of 455 respondents were surveyed as part of this study. The maximum margin of error for this study is +/- 4.6%, at a 95% confidence level.
Go with your strengths. Then find resource people to help you fill in the gaps. That’s one of the guiding principles of mother-daughter duo Sharon Hart and Valerie Hobbs who own and manage Blythe Brae Farms near Woodstock, Ont.

Hart and Hobbs share responsibility for operations, finance, human resources and marketing at Blythe Brae Farms where they farm 3,300 acres as well as operate a grain elevator and soybean roaster. Their skills are balanced by long-time employee, Stephen Broad, who heads up farm production.

Hobbs adds that she surrounds herself with people who love what they do, and she listens and learns from others as much as possible.

Most of all, Hobbs says that like any business, serving the customer is the most important thing you can do.

This management philosophy has paid off for the century farm which has operated out of its current location continuously since 1893. When the dairy barn burned down in 1967, the family shifted to cash crops and they haven’t looked back. Today they grow 1,300 acres of corn, 700 acres of wheat, 1,000 acres of soybeans and 300 acres of coloured dry beans. In 1988, the soybean roaster was added to roast soybeans for livestock feed.

Hobbs attributes their long-term success to their dedicated and professional staff. In total there are six full-time employees and three seasonal staff for harvest and planting. Several of the staff members also have their own farms which they manage and co-ordinate with Blythe Brae (which means “Happy Hill” in Gaelic) on equipment and labour.

“Our key value-added market is the roasted soybean,” says Hobbs. Blythe Brae has been roasting soybeans for over 25 years. It’s a process that heat-treats the soybeans to eliminate a compound called trypsin inhibitor which would otherwise interfere with their use as hog and poultry feed. Blythe Brae also roasts at a high temperature for ruminant markets.

Hart agrees that teamwork has played a critical role in their continued success. “We try to assess and capitalize on people’s strengths,” says Hart who ensures that at least two people know how to do every job in case people are away due to illness or vacation. “This also minimizes the risk of an untrained person doing a job,” she adds.

Safety is a priority at Blythe Brae Farms, says Hart. Staff is trained each spring before planting and each fall before harvest. “We try to avoid operator fatigue and try to be careful with inexperienced young people,” she says.

“When it comes to safety, we are focused on continuous improvement,” adds Hobbs.

Transitioning more responsibilities to a broader base of the staff team has also been a goal during the past year, says Hobbs. “The goal is to allow

By embracing the belief that leadership is a skill you can get better at, this mother-daughter team is smoothly integrating two generations in a complex farm

By Helen Lammers-Helps

Detailed financial statements make it easier for mother and daughter to lead in tandem

Safety is a priority at Blythe Brae Farms, says Hart. Staff is trained each spring before planting and each fall before harvest. “We try to avoid operator fatigue and try to be careful with inexperienced young people,” she says.

“When it comes to safety, we are focused on continuous improvement,” adds Hobbs.

Transitioning more responsibilities to a broader base of the staff team has also been a goal during the past year, says Hobbs. “The goal is to allow
for greater engagement of younger staff by allowing them more responsibility and decision-making. We hope it will also allow the farm management team to focus on the big picture stuff.”

With several staff and family members involved in the farm operation, having effective communication systems in place is essential at Blythe Brae. A farm management meeting is held every Friday to review and set goals for the farm. The production manager establishes weekly goals and at the daily production meeting each staff member chooses their tasks for the day and records them on the “daily plan chart.”

Hobbs admits that during the busy seasons the written plan falls out of use (when plans often change by the minute) but it is helpful to keep them on target during the slower times.

When time permits, Hobbs says they aim for decision-making to be shared by all members of the farm team. If there is disagreement, they bring in outside resources — individuals or advisers who can help them reach a mutual decision.

To keep family members not directly involved in the farm abreast of what’s going on at the farm and in agriculture, Hart posts current farm articles and photos on a bulletin board in the house. “It helps family members to understand the business and relate to our challenges, and it promotes discussion,” says Hobbs.

To promote a positive work culture, during the past year employees have been encouraged to bring in a treat to celebrate their birthdays with the other team members. “This has ranged from coffee and donuts to a home-cooked lunch. It’s allowed us to share and celebrate with each other,” says Hobbs.

Hobbs and Hart have shared their position since Hobbs joined the family farm in 2000 after completing a degree at the University of Waterloo. Hobbs says her co-op job placements were valuable training for her current role. “There is incredible learning in work experience outside your private business,” she insists.

Continued on page 42
Continued from page 41

Businesses need to be able to change and adapt, so being a lifelong learner is the reality, says Hobbs who credits her mom with encouraging her and filling in for her while she travels. A recent trip to Taiwan pushed Hobbs to try new things (both food and culture). “It’s an experience I take with me as I think about Ontario agriculture’s role in the greater world context.”

Hart believes travel provides an excellent educational opportunity. She has travelled in the American Midwest, Australia and New Zealand. She stays at farm B&Bs where she says she learned a lot. She points out that the first no-till drill purchased by an Oxford County group of farmers was an idea that came from Australia.

Hobbs also participated in the Advanced Agricultural Leadership Program Class 11 which she says helped her take on a leadership role in agriculture. “You gain more in serving outside your farm business than you can imagine,” says Hobbs who has recently been appointed to the Ontario Farm Products Marketing Commission and previously served as a director of the Ontario Soybean Growers Association. “Both positions have allowed me to learn from colleagues, gain better communication skills, and better understand the broader industry,” she says.

The Southwest Ag Conference, her local Soil and Crop Improvement Association, their grain broker, farm publications and Twitter are other sources of information that Hobbs values for staying current.

Blythe Brae doesn’t take huge risks when it comes to making changes. “We operate in a continuous improvement mode. It’s easier to improve 50 things by two per cent than one big thing by 50 per cent,” Hart says.

Hobbs agrees. “We have continued to grow slowly as opportunities come up. We consider the long-term benefit of everything we do to not only the farm but also for the people.”

They do, however, take calculated risks that are deemed appropriate, says Hart. They bought a new seed drill that was twice as wide as the old drill and it paid off with the wet weather in the spring of 2014. They have also invested in a vertical tillage tool to help keep soil in place and allow it to warm up faster.

“We operate in a continuous improvement mode,” Hart says. But they also focus on their shared values

“We anticipate greater efficiency and better corn quality from the new system,” says Hobbs.

Market volatility, adverse weather and operating independently in a consolidating industry are the three biggest challenges they face, says Hobbs. To reduce market risk, Hobbs buys and sells grain in small increments throughout the year. They establish targets for pre-sold grain that they can ship at harvest to match their storage capacity. Having their own storage and trucking allows them to keep grain moving year-round, explains Hobbs. For their own farm crops, Hobbs says they make use of futures positions when they are not able to get a good local basis.

Blythe Brae has benefited from having both her and her mother involved in the marketing, says Hobbs. “Another person can provide a sober second thought on decision-making and remind the other one of the overall marketing plan,” she says.

Sharing a position has also allowed Hobbs to gradually take on more respon-
sibilities. “We sometimes disagree but for the most part I appreciate her steady guidance,” says Hobbs who hopes her mom will continue to be involved in the farm for as long as she wants in any capacity she chooses.

Keeping good financial data records so you can understand the business and be prepared when you meet with advisers is another core management tenet at Blythe Brae. Since 1984 Blythe Brae Farms has relied on the AgManager software from Illinois-based AgriSolutions Inc.

“It was one of the first programs to allow detailed reports based on enterprises, which allows you to better understand your business for management purposes,” says Hobbs. The software captures a lot of detail which can be used for decision-making. For example, they can look at a specific field, at all the no-till fields or take a critical look at fuel costs, says Hart.

Having detailed financial records also helps when they go to the bank. The bank is an important part of the team, says Hart who always provides background on Blythe Brae Farms such as what they do and what their goals are. “Don’t make the assumption that the person you are talking to is the only one looking at your records,” she says.

Hobbs sums up: “The slow and steady turtle best describes our management philosophy. Blythe Brae remains a farming business and we will continue to look at new production, processing and marketing opportunities.”

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From farm to seed company

Greg Simpson and his two brothers have already been through succession planning once. Almost 40 years ago, Greg’s father successfully transitioned the family farm to the three brothers. He also helped them set up Simpson Seeds, telling Greg “You know I’ll be here to backstop you, but I want you to have the reins.”

Today Greg’s generation is handing the reins to the third generation. This time, however, the process is inevitably more complex and there are more people involved, and the Simpsons have broken their planning into two sections: ownership succession and management succession. The ownership piece is done. They’re now working on management.

Greg says putting together a successful succession plan takes longer than one might think — anywhere from five to 15 years. The Simpson family is in year eight.

Can the succession process at Simpson Seeds help your farm keep growing through the transition years?

By Lisa Guenther, CG Field Editor

“I guess if there was a message to be sent out there, you’d better start early,” Greg says.

David Bentall, who specializes in succession planning and executive coaching, has guided the Simpsons through the succession planning process. Greg says they could have got something done without David, but having a facilitator has helped them avoid collateral damage.

“You don’t want to have anything in the process that creates tension in the family,” says Greg.

Part of David’s job was to merge the views of each generation. Greg explains that he and his brothers had their original vision for the business. But the third generation has its own goals and ambitions. The family had to talk about what the company would look like 10 and 20 years down the road, he says.
The family emerged from those meetings with a common purpose — nourishing the world — which became part of the Simpson brand. They also established core values: family, integrity, quality, innovation.

Greg says those core values form “a gridwork for every decision to be filtered through.” That means, for instance, that the company supports employees’ families along with the Simpson clan.

Those core values affect hiring practices, too. When hiring, Simpson Seeds looks at character first. Chemistry — how well the employee will fit with the company — is the second trait they look for. Competence is third on the list. Greg explains if employees have the first two traits, they can always be trained.

Finding good people is easier said than done. Saskatchewan’s unemployment rate is very low. And potential workers for Simpson Seeds share some skills with people going into the potash or oil industries.

“A lot of our work here is about getting the right people on the bus. And then from there, getting them in the right seat. And then training them and advancing them so we can have good, qualified employees,” says Greg.

That view extends to Simpson Seeds’ management team. Greg and his brother John hold two seats, and Tyler and Elyce, both part of the third generation, are also executives.

But the other two executives are not family. Greg says the question was one of being a good family business, or a great, professionally run family business. They knew they needed a management team with the skills to grow the company.

The Simpsons recruited Clayton Bzdel from their advisory board to fill the chief financial officer chair. And Darren Lemieux, who grew up in the organization, rose through the ranks to become the head trader and market analyst. They also have a three-person advisory board they’re accountable to, Greg adds.

Many of the people who make up Simpson Seeds have worked for other organizations, which Greg says has benefits.

For one thing, people know they can contribute to other organizations, he says. “That just helps with your own self-confidence.”

It also gives them a chance to learn how other companies operate, he says. Simpson Seeds’ IT manager, for example, worked for other companies before coming to Simpson Seeds.

“Basically he garnered all that experience, and then came in here, and applied what he learned out there,” says Greg. “It’s amazing what he’s been able to do in terms of taking IT from the back of the bus and moving it to the front of the bus.”

Greg says the company plans to keep growing, innovating and improving. They want to provide the best service they can to customers, whether customers are delivering grain or receiving a container off-shore, he says.

Continued on page 46
Handing over the reins

Necessity is the mother of invention, according to an old English proverb, and it was necessity that pushed the Simpson family to sit down at the kitchen table 35 years ago and find a way to reinvent their farm. And now, as the third generation takes over Simpson Seeds, they’re focused on growing even more.

The roots of Simpson Seeds trace back to Jim and Helen Simpson’s family farm near Moose Jaw, in southern Saskatchewan. Their sons — Greg, John and Tom — were working to take over the family farm in the 1970s.

Greg had recently graduated from the University of Saskatchewan. He was working for Agri-Food Canada, as well as farming. His brothers were also holding off-farm jobs. They soon realized the family farm wouldn’t support three families, and they knew that working both off and on the farm would be difficult in the long-run.

If there was ever a time farmers needed to innovate, it was the 1980s. Wheat, which had been a mainstay for many Prairie farmers, was caught in a price trough. Farms were not profitable and the next generation was haemorrhaging from Saskatchewan, says Greg, now the CEO of Simpson Seeds.

“Our universities trained them and other jurisdictions took them... largely Alberta. And that hurt. We lost all that brain power,” Greg says.

The Simpsons added value to the farm by growing certified seed. Right out of university in 1975, Greg had begun growing peas. In 1980, they added certified Laird lentils to the farm’s rotation.

There was a movement in the ’80s to grow crops that fell outside the Canadian Wheat Board’s (CWB) single desk. Greg describes it as the ABC philosophy — Anything But Cereals. The Simpsons wanted to keep their seed cleaning plant running year-round, so they looked for crops to process.

“So lentils — thank goodness — were outside of the (Canada Grain Act). And it was basically free-enterprising capitalism with a big C. And so that’s really the philosophy that was around the kitchen table in our family,” says Greg.

Processing lentils was a leap for the Simpson family. Traditionally, they’d only grown cereals and delivered into the CWB’s pool system. At first they cleaned their own lentils, but eventually they began processing for other companies.

In the early 1990s, they started exporting pulses on their own. Greg says it was a challenge, as they didn’t know “what it’s like to throw a container on the high seas and get paid.”

In the process, Greg learned to see risk not as something to avoid, but as opportunity. “That’s a fundamental shift in thinking that I had to go through.”

Taking those risks paid off. Today Simpson Seeds has four facilities in Saskatchewan where they buy, process and export specialty crops. They’ve shipped to over 80 countries worldwide.

The family still owns a separate pedigreed seed farm that provides raw seed for Simpson Seeds to clean, certify and sell. Westgate Mills, a red lentil splitting facility, is also owned by the Simpson family and run by the third generation.

Handing over the reins

In 2012, Simpson Seeds was named one of Canada’s Best Managed Companies. The awards program evaluates Canadian businesses on a range of metrics, including corporate strategy, customer relationships, compensation packages for employees, and more. Greg sees the award as a confirmation of their succession planning and focus on a professionally run family business.

Asked what the Simpson family has done right over the years, Greg says the family has been unified since the beginning, when they talked strategy around the kitchen table.

“We’ve worked together.”
Entrepreneurial talent seems to come naturally to many farmers. But that doesn’t mean you’ll always be a natural at value adding. There’s a world of difference between getting a good deal on a load of fertilizer versus launching a new value-added product.

In fact, value adding can feel like uncharted territory. But that can be an oversimplification too. The real truth is probably somewhere in the middle. As a farmer, you’ve got good instincts and you’ve learned a lot of critical business lessons. Now you need to figure out what skills you need and what tests you have to pass in order to drive your idea to success.

One of those tests is whether you can think like the person that you’re depending on to buy your product.

But at the very start, most entrepreneurs hesitate over two other basic questions. Is there some sort of process or approach that will help me come up with a winning idea? And, how can I be sure that this is an idea worth pursuing?

Gary Morton, a Coldbrook, Nova Scotia consultant who has helped farmers launch value-added products for more than 20 years, recommends farmers take a step back and shift their perspective when trying to think of ways to add value to their operations. “Really open up your mind,” says Morton. “Look at what’s going on in other food sectors, even at what’s going on outside of agriculture.”

You may be looking at your dream in terms of adding price. But it isn’t going to work if you don’t first think of it in terms of adding value. What is it about your product or service that will make it more valuable to the target customer who buys it, so they’ll be willing to spend more in order to get it?

There are many ways to increase this perceived value including: offering a higher grade of quality; a special variety or unique breed; a new distribution channel; or through a promotional strategy, branding or further processing.

The better you understand your customer’s needs and desires, and the better you know what would make their lives easier and help them solve some of their problems, the more value they will see in your product, Morton says.

An obvious place to start is to look at transforming something you grow into something gourmet, like specialty livestock breeds. Other options could start with specially processed grains or oilseeds, or even selling cut flowers, garlic, herbs, bedding plants, sweet corn or handmade soap, to name just a few possibilities. You could even open your farm as a wedding venue, or develop an on-site retail or processing business.

The easiest place to begin your research is with an online search. You can look up demographic information and find out what other businesses are offering. You can also look at local-food websites in Canada and abroad, or you can search for specialty crop applications that other farmers are already developing.

Watch for the drivers of change. These include trends in population demographics. Aging baby boomers want to maintain their health into their retirement years by eating healthy foods. Millennials and Gen Xers have shown a strong interest in socially responsible eating. Increased immigration has meant increased demand for fruits and vegetables from Asia, Africa and the Caribbean. Time savers have proven popular with time-crunched parents who work outside the home in the majority of families.

Buzz words can give you ideas too, such as local, sustainable, healthy, responsible animal welfare, culinary tourism. These are just some of the latest trends, but even the experts admit it can be difficult to predict where they’ll go from here.

“I think of my customers as people who eat,” says Plattsville, Ont. organic vegetable grower Nathan Klassen. Many times, his customers simply want to feel they have a link to the farmer who is producing their food. That’s a value that Klassen says he can deliver on. “We don’t look to be ahead of trends too much with our products. Our main planning tool is past performance.”

Most of the people who stop at his farmers market stall are looking both for a quality healthy product plus that sense of connection to where their food comes from, says Klassen. Quality and consistency are what keep his customers coming back. “People know what they like, and they know what they get will be of similar size and quality each week,” he says.

Organizations that represent the farmers who are involved in direct marketing are another good source of information and support. Meghan Snyder, co-owner of Snyders Family Farm, an agri-tourism destination near Ayr, Ont., says she has learned a lot through her membership in the Ontario Farm Fresh Marketing Association (OFFMA). “We all learn from each other,” she says.

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This group regularly takes tours to other areas including other countries. These tours are a source of new ideas for the members. Farmers often see something elsewhere that isn’t being done at home yet, says OFFMA executive director Cathy Batholic. The tours are also an opportunity for farmers to network with each other and to bounce ideas off one other, she adds.

Cindy Wilhelm, co-owner of Dragonfly Garden Farm near Chatsworth, Ont., advises farmers to join groups online through Social Media like Facebook and Twitter. “We have access to the knowledge of thousands of farmers who openly share their experience with just a few clicks of the mouse. Ask for help when you need it. The family farm community wants to see you succeed.”

Mark Gerber, co-owner of Oakridge Acres Country Meat Store, says they try to stay on top of healthy eating trends and maintain close ties with health care providers such as naturopaths and nutritionists. They sell drug-free meat from 40 different farms along with gluten-free products, which appeals to the health-conscious consumer, explains Gerber.

Often it is existing customers asking for things that sets a value-added business in a new direction. After repeated requests for cooking instructions from their customers, Gerber realized their customers had become reliant on the ready-made dinners available from grocery stores. In response, the Gerbers added a certified kitchen to their store where they make healthy meals using their meat. “It’s another way of marketing our animals,” says Gerber who adds that he wishes they had built the new kitchen twice as big to accommodate the demand.

Morton says one of the most common mistakes he sees farmers make when developing value-added products is not spending enough time validating their idea early in the process. Too often the process is product-driven.
Sometimes farmers get some seed funding and they take this as a sign that the product they have is something the market wants. Instead, Gerber recommends farmers make a prototype, and then test its selling power at a few events or special markets. “Listen to the people giving you the money,” Gerber says, who then adds, “See if you get repeat customers.”

The goal, says Gerber, is to be sure you have a good grasp on what the market actually wants, and not just what you think it wants or what you want to make.

It’s like the old saying: it is a lot easier to ride a horse in a direction it already wants to go. Likewise, it’s easier to sell customers something they already want.

This is the second in a series of four value-adding columns from New Dundee, Ont., writer Helen Lammers-Helps. She can be reached at helen@hlhwriter.com.

More Resources
The North American Farmers’ Direct Marketing Association (NAFDMA) resources and links to associations in Canada and U.S. www.farmersinspired.com
OMAFRA Exploring Value Added Opportunities (EVAO) free online course: www.omafra.gov.on.ca/english/busdev/diversifyfarmbus/elearning.html
Ontario Culinary Tourism Alliance (OCTA) a not-for-profit organization that promotes culinary tourism: //ontarioculinary.com/
Value-added resource guide for farmers in the Maritimes available from Atlantic Canadian Organic Regional Network: Acornorganic.org/media/resources/valueadded.pdf

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SECRET DEALS

Free trade with the EU is supposed to offer a chance to standardize ag equipment regulations, but the talks are behind closed doors, and the industry is getting worried

By Scott Garvey, CG Machinery Editor

During Agritechnica 2013 in Hannover, Germany, I was invited to an informal dinner with some representatives of DLG, the German Agricultural Society, which organizes the show. I ended up sitting next to DLG’s agricultural economist, so it was a perfect opportunity to discuss a variety of topics affecting farmers on both sides of the Atlantic.

At the time, our federal government was busy hyping the tentative free trade agreement it signed with the EU. When I asked that DLG economist if the potential deal was generating any discussion in German agricultural circles, his answer was to the point. “No,” he said. “I don’t think many people are even aware of it. People are more interested in the idea of a free trade deal with the United States.”

Meanwhile, the Trans-Atlantic Trade and Investment Partnership (TTIP) negotiations between the EU and U.S. are grabbing headlines in the ag equipment sector on both continents.

Although Canada does export a lot of farm equipment to Europe, the value of that trade is small compared to what the U.S. floats over. And when large trade numbers are involved, there are bigger opportunities. The TTIP negotiations have a stated aim of broadly harmonizing regulations affecting a variety of industries in order to stimulate trade. That could benefit Canadian ag equipment manufacturers as well. We share a broad range of standards with the U.S.

As part of the process, the European Commission asked CEMA (the European Agricultural Machinery Association) to come up with specific examples of where it would make sense to harmonize machinery standards.

“Several notable technical differences still exist,” CEMA says in its position paper on U.S. versus European standards. “While some of these are small in nature, the totality of differences results in numerous practical difficulties and challenges for manufacturers and represents significant, yet unnecessary and avoidable trade barriers and costs... CEMA believes that a good deal of these differences could be addressed and subsequently solved within the framework of a regulatory co-operation process under TTIP.”

A draft of our completed Canada-Europe free trade agreement indicates we’ve agreed to co-operate on regulations with the E.U. too. “… each Party shall, when appropriate, consider the regulatory measures or initiatives of the other Party on the same or related topics,” it reads. A technical summary on the Canadian Government website refers to a provision that “establishes procedures through which Canada and the EU can request that each other’s technical regulations be considered as equivalent,” at least in the auto sector, although it’s considered likely any significant harmonization of ag equipment regulations will need to come out of the TTIP.

The regulatory differences between Europe and North America involve a variety of standards that farmers might not think of when they climb into a tractor cab. For example, the designs of all those warning labels plastered on a machine’s tinwork vary depending on where the equipment is sold.
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Continued from page 50

In Europe, ISO regulations require different symbols applied in different places than in the U.S. and Canada. In North America, ANSI rules also require descriptive words along with the symbols.

There can be regional wrinkles too. For instance, manufacturers must up-rate their standard 1.8-inch-wide seat belts to three inches if they want to sell machines in California.

Industry insiders can’t even find out what’s up for negotiation. Europe has been more open, but so far, Ottawa is saying nothing.

But not all are minor differences. Some are substantial — potentially very substantial — such as harmonizing off-road engine emission regulations.

“The implementation of a particle number limit in the power range (25 to 750 horsepower) is now embedded in the proposed new EU regulation on NRMM exhaust emissions, the so-called Stage V,” reads the CEMA paper. “However, the U.S.A. has not yet integrated this requirement in their regulatory environment.”

Yet even those differences pale compared to even more challenging design variations between farm equipment bound for North American shores versus machinery that goes to work in the EU.

On a media tour of Fendt’s new state-of-the-art tractor factory in 2013, I was one of only three North American journalists to get a personal introduction to the brand’s new 500 Series tractors. We saw the first official tractor roll off the line and out the factory doors amid much fanfare. But there was one snag from our perspective: even though the large crowd of Europeans milling around could anticipate soon putting the tractor to work, the 500 Series is still not available in a design that meets North American engineering standards.

Even though Fendt’s PR people were eager for us to tell Canadian and U.S. readers they would one day be able to own a 500 Series tractor too, there was a reluctance to say exactly when that might happen. The major changes that had to be designed for a North American version included such things as a front PTO shaft that rotated in the opposite direction, not just a few simple adjustments.

But not everyone agrees the standards are different enough to warrant negotiating broad-based regulatory harmonization into the TTIP. Writing an editorial piece in the German-language engineering magazine DER EILBOTE, Johannes Molitor of Molitor AgroTech GmbH suggested continental regulations account for only minor differences in combines.

“With my 14-year design experience with combines, there isn’t half a per cent difference in construction between a combine for U.S. and Germany,” is the English translation. “All the rest are differences in the equipment customers want.”

But aside from a disagreement in the value of potentially harmonizing machinery standards through the TTIP, there seems to be one thing that many industry insiders do agree on. They’re worried by the lack of information on what’s up for negotiation.

Public pressure prompted the EU Commission to release some information about the process late last fall, but the criticisms remain.

“There is little transparency,” said Molitor. “The U.S.A. has not provided any details so far. It is the biggest trade agreement since NAFTA...”

Similar criticisms were also levelled at the Canadian negotiations. In 2013, before either side revealed the agreement’s details, the Canadian government was asked during question period in the House of Commons about what exactly is contained in the agreement.

Here’s how that exchange went, starting with a question from Marc Garneau, Liberal foreign affairs critic: “Mr. Speaker, the Conservative government has not provided any details on what the CETA (Canada-Europe Trade Agreement) deal means to Parliament and to Canadians during the past four years... I would like to ask the government what information it has shared with the provinces because obviously the provinces have to sign on. Would the Conservatives share that with the rest of Parliament, please?”

The response from Pierre Poilievre, minister of state, was dismissive: “Mr. Speaker, he wants details. Let me give him some details: 80,000 net new jobs; 500 million new consumers for Canadian businesses to reach; a cornucopia of new products to which Canadian consumers will now have access... It is the biggest trade agreement since NAFTA...”

But the NAFTA agreement was handled much differently. The Conservative government, then under Brian Mulroney, didn’t just drop a completed agreement into the public domain, it was a very open process through negotiations, and an election was held based on the merits of it.

So the question on the minds of many industry players today — particularly those in Europe — seems to have evolved from what harmonization should we consider to this: Is it satisfactory for democratic governments to adopt a closed-door, “just trust us” approach to matters that have such a significant impact on the economic affairs of a nation?
How will climate change affect Prairie agriculture in the future? This was the question the Alberta Institute of Agrologists presented to a trio of University of Manitoba (U of M) researchers last year, including Brian Amiro, a soil scientist specializing in agricultural meteorology and climatology; Christine Rawluk, research development co-ordinator with the National Centre for Livestock and the Environment; and Karin Wittenberg, dean of agricultural and food science research at the university.

The three responded by compiling and presenting the green paper “Moving Toward Prairie Agriculture 2050” to the Alberta Agrologists annual meeting in April 2014.

Wittenberg believes the university’s focus on sustainability, combined with the number of researchers at the U of M who are studying the effects of climate change on agriculture, enabled the team to assemble the expertise needed for a science-based projection of what Prairie agriculture may look like down the road.

“Climate change has been described scientifically and technically. This (green paper) was a good opportunity to present how climate change is relevant to farmers. It gives farmers a handle as to what to expect,” Wittenberg said.

Most importantly, the green paper not only presents an overview of expected climate change by the year 2050, it is also a compilation of short papers by 23 agricultural scientists and educators. Not all are university researchers; some come from industry and government. Most are professional agrologists and work directly in the agricultural sector.

In spite of the diversity of these 23 writers and their fields of expertise, they shared a consensus that governments, educators and farmers need to plan for change if prairie agriculture is to continue to thrive.

Climate change projections

No one can be absolutely certain what the Prairies will look like in 2050. However, most climatic models point to a warming of the Prairies, with winter temperatures increasing more than summer temperatures.

More troubling is the prediction that while temperatures will go up, precipitation won’t. At least, it won’t go up as much, and as a result the Prairies will become drier due to evaporation from warmer temperatures exceeding additional precipitation.

Even more troubling, however, is the expectation of more weather extremes in both temperature and precipitation.

The chart (on the following page) from the green paper summarizes the expected climate changes for the Prairies.

Many readers will look at this chart and wonder what all the fuss is about. They will argue that a warmer winter and longer growing season would be good for the Prairies. After all, how bad can a 2°C increase in temperature really be? Furthermore, a 2°C change in temperature is nothing compared to the wide tempera-
DENYING CLIMATE CHANGE

There is likely no industry more open to adaptability, change, science, and technology than agriculture. Farmers eagerly await new advances and line up to be the first to use new technology, be it a new variety, a new crop, new pesticides, new equipment, or new ideas. For example, consider how agriculture has jumped on GPS for everything from steering equipment to adjusting applications rates, and from levelling land to robotics.

Most farmers are firm defenders of science-based advances like GMOs or development of new pesticides.

Yet at the same time many of these same farmers question climate change. Part of the problem is Prairie farmers live in an area of the world which is second only to Siberia in having the most variable weather in the world. We are so far away from a moderating ocean we simply cannot see if the climate is warming or if it is just variability in weather.

The second problem is that climate is affected by many factors, including natural cycles, energy output of the sun, volcanos, changes in the composition of the atmosphere, and even man. Instead of accepting that climate change is happening, people are busy arguing a particular cause, such as anthropogenic causes.

However, there is ample scientific evidence that the climate is warming and the vast majority of scientists believe our climate is changing.

Geochemist James Powell surveyed 16,208 peer-reviewed scientific articles on the subject of climate change published between 1991 and December 31, 2013. Only 25 of those scientific articles refuted climate change.

The Prairie Adaptation Research Collaborative, a partnership of the federal and prairie provincial governments, describes the climate change that has already occurred on the Prairies and the science behind the change on their website. They also project the impact of further warming on the Prairies and describe the adaptations farmers will need to consider. Farmers should also be considering the information on the PARC website (www.parc.ca).

To deny climate change is no different than rejecting GMOs. The denial or rejection of either is simply not science-based.

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TABLE 1: Projected climate changes by 2050 for the Canadian Prairies and globally, compared to the 1985 to 2005 period.

<table>
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<th>THE PRAIRIES</th>
<th>GLOBAL</th>
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| Summer temperature    | Increase by 1 to 4 C, median 2 to 3 C | Increase
| Winter temperature    | Increase 2 to 4 C, median 3 C, warmest in east | Increase
| Summer precipitation  | No change; possible increase by 10% | No change
| Winter precipitation  | 0 to 10% Increase, possible 20% increase | Increase
| Agriculture land capability | Class 1 climate increases from 8% of area to 19% with less heat limitation; aridity increases to affect 80% of currently cropped land. | Increase from 5.5 to 7 million
| Population            | Increase from 5.5 to 7 million | Increase from 7.2 to 9.6 billion

Continued from page 53

ture variability we see in temperature and weather on almost a daily basis.

But consider this: The average annual difference in temperature between Medicine Hat and Edmonton is about 2 C.

Consider the current difference in agricultural practices and growing conditions between Edmonton and Medicine Hat. Would agriculture as we know it today in the Edmonton area continue if the Edmonton climate became that of Medicine Hat? What adaptations would farmers have to make in the Edmonton area for agriculture to thrive?

This is why farmers need to consider the opinions and projections made in this green paper.

Below are some more highlights from the paper:

Bruce Burnett, weather and crop specialist with CWB Market Research writes: “Climate change will have both positive and negative impacts on the selection of crops that farmers can consider planting.” Burnett discusses the potential for an increase in acreage of corn, soybeans, sorghum, millet and pulse crops as the climate warms, plus a corresponding drop in barley. However, he warns: “One of the biggest concerns will be the variability of the climate in 2050. Extreme weather events (floods or droughts) are difficult for agricultural systems to adapt to.”

John Haneslak, professor of atmospheric science at the U of M, writes of the potential changes to the jet stream. He notes Alberta already has the greatest number of hail storms in Canada, and that on the Prairies alone there are an average 221 severe weather events even now.

Ron Depauw, researcher with the federal agriculture department writes: “Abiotic stresses under dryland farming scenarios may be both persistent stresses such as dryness and/or above average temperature, but also a period of heat shock coupled with very high evaporative demand. These shocks are considered to be extremely damaging and have been underestimated by previous crop models.”

Given the prediction of a warmer, drier climate coupled with increased frequency and intensity of weather extremes, plant breeders need to be working on new cultivars now. After all, it takes eight to 10 years to develop a new cultivar.

Ron Currie, entomologist at the U of M, discusses the impact of climate change on pollinating insects. He writes: “Under some scenarios, pollination by managed honey bees is predicted to decline by about 15 per cent (without management intervention).”

This could not only have an impact on honey production but on crops which rely on honey bees for pollination.

Rob Gulden, plant scientist at the U of M, looks at the impact of climate change on weeds. He writes: “Northward range expansion will result in the introduction of new weeds, many of which are already resistant to one or more herbicides.”

Dilantha Fernando, also a plant scien-
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THE THREAT FOR CANOLA

Two canola diseases have got researchers worried

Protecting any crop from plant diseases that lurk in the soil or in the stubble is a never-ending battle for farmers and researchers. Often, however, it’s even worse in canola, as becomes clear with a quick look at clubroot and blackleg. Both attack canola and while scientists and farmers are doing their best to protect the crop, each disease provides unique challenges.

Clubroot is particularly tenacious. According to Holly Derksen, plant pathologist with Manitoba Agriculture Food and Rural Development (MAFRD), clubroot spores can survive as long as 20 years in the soil, although the half-life of a clubroot spore is considered to be just four years.

What’s more, she adds, these long-lived spores have the ability to swim in the soil and seek out plant roots. If they find young, weak plants or older, vulnerable plants, it can essentially be game over.

Sometimes it’s a matter of numbers. The more pathogens present in the soil, the more likely it is a crop will succumb to them, leaving farmers with a large bill for seed, planting, spraying and harvesting — but little to show for it.

Derksen explains how the clubroot pathogen multiplies. When the clubs that form on the roots of the canola plants mature, they’ll send more spores back into the soil. Those spores will wait patiently for the next canola crop to be planted before they attack again. The pathogen also mutates and adapts to new varieties of plants and fungicides used by the farmer. So, by the time a biennial crop rotation has hit its sixth year, or third rotation, seed varieties that were once resistant to a clubroot pathotype are no longer as effective. The next crop may not be a complete failure but the yield will drop.

Derksen cautions farmers against relying solely on a switch of seed varieties to keep clubroot under control, as even intensive research undertaken by universities, plant breeders and large companies can’t solve all the problems. She says when everyone concentrates on finding a gene that provides resistance to a new race or pathotype of a plant disease, it’s quite likely they’ve all found the same source. This means that even though a grower is planting a different seed variety with each rotation, there’s no guarantee disease resistance will remain high, because all the varieties have the same resistance gene and they’ll all succumb, to some degree, to a new pathotype.

Dr. Dilantha Fernando, professor of plant pathology at the University of Manitoba, emphasizes it’s important to maintain research efforts for resistance in the fight against clubroot and other soil pathogens. He says that, although Manitoba doesn’t have a lot of clubroot now, the disease can continue to spread because the spores don’t travel on their own but they can be carried from field to field on wind-borne soil particles or on equipment. Fernando notes that good biosecurity for farm...
Fungicide resistance creeping up

Fortunately, we already have many of the tools we need to delay or stop resistance in its tracks.

we hear a lot about herbicide-resistant weeds these days. Repeated use of herbicides, especially ones from the same group and with similar modes of action, promotes the growth of weed populations that the chemicals can no longer control. A prime example is the emergence of weeds resistant to glyphosate, the most widely used weed control product in the world. Some see it as a canary in the coal mine and a sign of more resistant weeds to come.

But there is another class of pesticides flying below the radar for which resistance is also becoming a problem. These are fungicides used to control fungal diseases in plants. The impact of such diseases cannot be overstated. According to the American Phytopathological Society (APS), fungi are the No. 1 cause of crop loss worldwide. Because plant diseases have a significant impact on yield and quality, managing them becomes an essential part of crop production.

Unlike herbicides, which kill established weeds, fungicides are often applied before plant diseases occur, or at least as soon as the first symptoms appear. The APS points out that fungicides can only protect new uninfected growth from disease. Few fungicides are effective against pathogens after they have infected a plant.

But fungicides have one thing in common with herbicides. Their intensive use has produced problems in controlling the pests they are aimed at. An early example was benomyl (marketed as Benlate), a systemic fungicide introduced in the late 1960s by DuPont. The company was forced to cease its production in 2001 because parasitic fungi eventually became resistant to it worldwide, making benomyl largely ineffective.

Fungicide resistance has been known for years in Europe, where fungal diseases can cause significant economic damage to crops. But what about Western Canada, where widespread use of fungicides only became common fairly recently? Is fungicide resistance a problem here as well? The short answer appears to be no — at least, not yet.

“My personal view, and some of the things I have heard from others, would be that it is not a major issue in Western Canada as it would be, for example, in Europe and other places,” said Dilantha Fernando, a University of Manitoba plant pathologist.

Continued on page 58
Continued from page 57

But he adds this warning: “Even though the problem is not an issue at this point, it could become a problem if we don’t manage it correctly.”

How should producers manage fungicides correctly? According to the Fungicide Resistance Action Committee (FRAC), a technical sub-group of CropLife International, the strategies are the same as for herbicides: avoid repetitive and sole use; mix or alternate with other appropriate fungicides; limit the number and timing of treatments; stay within recommended dose rates; and integrate with non-chemical methods.

One of the reasons Europe has problems with fungicide resistance and Western Canada generally doesn’t is simply that Europeans have been using fungicides longer than we have, says Vikram Bisht, a farm production extension pathologist with Manitoba Agriculture, Food and Rural Development. Another reason is that growing conditions in Europe are different. Higher humidity, more intensive production and a lot of small-area crops all contribute to a greater rate of fungicide use.

Another advantage for Western Canada is that canola, its second-biggest crop, has a fair amount of genetic resistance to the two major fungal diseases affecting it: sclerotinia and blackleg. However, that may be starting to change. Fernando says some canola hybrids began to lose resistance to blackleg about five years ago and growers are now starting to consider more fungicide use.

The other major fungal disease in Western Canada is late blight in potatoes. Here, fungicide resistance becomes more of a potential problem. Bisht says the phytophthora fungus of late blight produces a lot of spores, requiring repeated fungicide applications. Sometimes, producers apply half a dozen or more passes during the growing season. If the same fungicide is used, some spores survive the applications and resistant biotypes will multiply. Unfortunately, fungicides are the only answer for fighting late blight so far because the potato varieties which are commercially available have limited genetic resistance to the disease.

“By the end of the season, after five or six applications of that particular chemistry without the use of some other chemistry, resistant types will become a dominant population,” says Bisht. “This is where it is extremely important to either have a tank mix with different groups of fungicides or to rotate them.”

The APS notes the chemistry of fungicides has changed significantly over the years. Early fungicides were multi-site, affecting a number of different metabolic pathways. Although effective, these broad-spectrum fungicides killed all fungi in its path, including ones that were beneficial. Some products were also persistent, remaining in the soil and increasing the pesticide load in the environment. (That was the problem with the insecticide DDT.) Recent fungicides are single-site and active against only one enzyme or protein which the fungus needs. Because they are specific in their toxicity and have little effect on other organisms, single-site products can be absorbed more safely into the plant.

Bisht says there were reasons for switching to single-site fungicides. With single-site, you are selectively controlling the pathogen and not affecting non-target organisms. Also, because of increased stringency in regulatory tests required to register a new active ingredient, fungicide manufacturers found it easier to develop single-site products.

But single-site fungicides come with their own problems. Because these products are specific, fungi are more likely to become resistant to them because a single mutation in the pathogen enables it to overcome the action of the fungicide.

Fernando likens it to being hit repeatedly with a stick. If you’re being hit on the head all the time, you can prepare for the next blow. But if you’re being struck on different parts of the body, you’re not prepared because you don’t know where the next blow will land. The same goes for fungicides. If the fungus repeatedly receives the same fungicide with the same mode of action in the same place, it has an opportunity to mutate so the fungicide isn’t effective any more.

It’s all the more reason to rotate fungicides from different groups and with different modes of action, just as with herbicides, says Bisht.

“Whether you have a fungus or a weed, it is still a pest,” Bisht says. “And if you’re trying to control it with one product, the selection pressure in that pest makes it develop insensitivity. So when you use it again and again, the insensitive ones tend to increase over the sensitive ones.”

Fernando also suggests non-chemical management strategies that do not involve fungicides. For example, a three-year crop rotation can substantially reduce the risk of sclerotinia because other beneficial microbial organisms will consume the sclerotia in the soil.

“You will not eliminate everything, but the numbers will be low enough for farmers to go back to a crop that could be infected by sclerotinia,” Fernando says.

Fernando says burying pathogens in the soil through tillage can make sclerotia decompose fairly quickly. Turning over the soil helps ensure inoculum does not survive on exposed stubble, ready to infect the next crop. But Fernando acknowledges a quick tillage pass to bury infected stubble may not be practical if a producer is practising minimum or zero till.

For that reason, an integrated approach to pest management in which fungicides are not the only means of control is the best strategy in the never-ending fight against plant diseases, Fernando says.

“I wouldn’t even start with fungicides because we have a lot of other management strategies that are really useful, user-friendly and environmentally friendly. Farmers can also save some bucks by doing those first.” C6
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Home Grown, World Class.
A few years ago, before she joined the Western Grains Research Foundation (WGRF), Pat Flaten was thinking about the state of agronomic research in Western Canada. At the time, she and her colleagues were thinking about bug researchers in Saskatoon. “We knew we had this great group of highly productive and experienced entomologists who were all about the same age and we began to ask ourselves, what if they all retired tomorrow?”

It turns out they weren’t the only people thinking along these lines. Since becoming a research program manager at WGRF, Flaten has heard from members as well as from other industry groups, all concerned about the future of agronomic research in Western Canada.

“Commissions came to us and said, ‘We want WGRF to fund more agronomic research,’” Flaten recalls. “People felt that research capacity was declining, but before we could increase funding, we thought we should first get a clear fix on what capacity there was in the public research system. Essentially, we wanted to know if and where the holes were so that we could make the best use of our funding.”

Next, the WGRF commissioned its own research project to find out what was actually going on in the research community. The result is Fertile Ground: Agronomic Research Capacity in Western Canada, an exhaustive report that reveals the current state of the region’s research capacity (in terms of both capital and human resources) and its projected capacity to 2020.

“Now that we know what the situation actually is, we can start to do something about it,” says Flaten.

GAPS AND DEFICITS

The report surveyed public research organizations (universities, Agriculture and Agri-Food Canada (AAFC) and the Ag Departments of provincial governments) as well as farmer-directed applied research associations, colleges and private research companies.

Anyone working in agriculture today should find the results extremely interesting. For example, AAFC (which the report identifies as the strongest and most integrated public research organization) expects about 16 senior scientists to retire (potentially) within the next three years. As Flaten points out, agriculture is not alone when it comes to this issue. “Baby boomer retirements are happening in all industries, but the natural question to arise for us is, will we, as an industry, have enough people to replace those who are leaving?”

Are the universities preparing the next generation of scientists? Well, yes and no. The report found that of all students pursuing graduate degrees in agriculture, not enough of them are taking up agronomy, entomology and weed science (soil science is the big winner here, and many of these graduates are likely aiming for careers in the environmental field). Applied research organizations, like farmer-funded groups and ag colleges, are also facing challenges maintaining adequate staff and funding, putting much-needed localized projects in jeopardy.

Throughout the western Canadian research system, the report also identified significant deficits in equipment, land and buildings, core operating funding, and more — basically, the tools needed to get the work done. It also identified some deficiencies in some of the softer areas, such as priority setting, communication and leadership.

“Less of this surprised me than I thought it would,” says Flaten. “But the depth and breadth of the need... often we see the need for equipment and infrastructure, but it’s the HR side of things that was a bit of a surprise — the immediacy of it, the extent of it.”

A primary concern, she points out, is that the HR losses are happening at senior scientist levels — these are people with a career’s worth of knowledge and expertise to share and who play a major role in mentoring younger scientists entering the system. “It’s not just about people being in chairs,” says Flaten. “How are you going to pass on that knowledge? And if we don’t signal to the bachelor-level students that there are opportunities in research, then how do we fill those positions? We were heading down a path that could be damaging to crop research in Canada.”

PLANNING THE FIX

The Fertile Ground report has done a very important thing that no one has done before. It has created a single, all-encompassing picture of the state of
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Through Western Grains Research Foundation, producers have helped fund research and development for more than 200 varieties of wheat and barley. You most likely recognize more than a few of them, and you’ve probably had some success growing several of them too. Western Grains Research Foundation is a producer-funded and producer-directed organization. Working together, we produce some of the world’s finest and most technologically advanced grains.
YOUR SOIL NEEDS CROP DIVERSITY

Stacked rotations may be worth more research, but until then, diversity is your best profit management tool.

Healthy soil is the craziest, busiest jungle you can imagine. One gram of clubroot-infested soil can have a billion clubroot spores. A billion! All in a pinch of soil the size of a Skittle! Fusariums, pythiums, rhizoctonia and countless other beneficial fungi, bacteria and microbes are there, too. So are ions and molecules of calcium, magnesium, nitrogen, phosphorus, potassium, sulphur and all the micronutrients. A mite is like a blue whale or a brontosaurus in that ecosystem.

One question that comes up in discussion about soil health is whether continuous production of one crop, over time, will boost the population of beneficial organisms and create a net positive soil environment for the crop. Or will it create a net negative, with pest species overtaking beneficial species?

“Based on what we do know, it seems continuous cropping, and its effect on soil biology, creates a net negative for crop yield when compared to a more diverse crop rotation,” says Gregory Sekulic, agronomy specialist for the Canola Council of Canada. “Simply put, soil health, crop health, and farm productivity all benefit from increased diversity.”

Mario Tenuta, the University of Manitoba’s Canada research chair in applied soil ecology, points to several studies in other crops showing that after a decade or so of continuous cropping, a soil microbial population develops that can limit soil-borne diseases.

This was shown in a wheat study in the Pacific Northwest of the U.S., where Pseudomonad bacteria built up over time to reduce the take-all fungus on wheat roots. In Wisconsin, scab-related bacteria built up over time to suppress common scab of potato. In California, fusarium and other fungi suppressed sugar beet nematode. And in Switzerland, Pseudomonads suppressed black root rot of tobacco.

That sounds mildly positive. “However,” Tenuta says, “this benefit cannot compensate for the significant yield loss associated with continuous cropping.”

These plot studies showed that as disease built up in a continuous cropping situation, yield dropped to 30 per cent of normal, or lower, over the first 10 years or so. It took a long time for yield to rise again while the microbes that attacked the disease-causing organisms built up. Yield then flattened at around 60 to 70 per cent of the yield achieved when the same crop was produced in a rotation with other crops. (See graph.)

“We don’t have canola studies, but it would likely follow a similar pattern,” Tenuta says.

STACKED ROTATION

But is there some middle ground? As Tenuta points out, these continuous cropping studies showed limited disease effect on yield in the first couple of years. Then yield fell off a cliff.

Given that, it makes some researchers wonder about the potential soil health and pest management value in the “stacked rotation” concept. With a stacked rotation, instead of canola-cereal-pulse-canola-cereal-pulse, the sequence would be canola-canola-cereal-cereal-pulse-pulse. It has the same number of canola crops in the long term, but the break between each crop is longer.

“The key to the stacked rotation is the long break,” says Dwayne Beck, manager of the Dakota...
Lakes Research Farm near Pierre, South Dakota. Beck has not specifically tested canola, but his yield experience with stacked rotations is that, in general, “the second year will not be as good as the first, but the first will be very good.”

It comes back to the benefit of diversity as a profit management tool. “Stacked rotations attempt to keep pest populations confused through diversity in the sequences and intervals used,” Beck says. “This approach can reduce costs and it minimizes the chance of tolerance, resistance, and biotype changes.”

Beck tells this story: “I saw an agronomist give what he thought was a negative example of a producer’s rotational planning. He stated that the gentleman would seed a particular field to wheat every year until jointed goatgrass pressure became sufficient to preclude wheat. He would then seed it continuously to sorghum until shattercane overwhelmed him. At that point he would seed sunflowers in successive years until white mould became a major problem. Then he began again with the wheat program.”

“The producer was at least responding to the natural cycles in his field,” Beck continues. “It might be better if he anticipated these occurring so that the switch could be made in advance. However, he probably was doing a better job than someone who blindly planted a corn-soybean, wheat-canola-wheat-pea, or wheat-corn-soybean rotation and was surprised when he had to keep changing technology to deal with new problems.”

With canola, we know that there are benefits to blackleg and clubroot management from long rotations between canola crops. Would the longer break that this stacked two-in-six rotation provides be better than a one-in-three?

Sekulic would like to see more work on the stacked rotation, especially as a management tool on farms dealing with these diseases in a big way. However, he notes, existing evidence is not generally supportive of back-to-back canola.

Crop insurance data shows a distinct yield drop for canola on canola stubble versus canola on any other stubble. And research from Agriculture and Agri-Food Canada suggests a 20 per cent yield drag for canola on canola stubble versus canola on any other crop stubble.

But as Beck notes, “I doubt there are many studies of canola on canola where there was a four-year break before the first canola.” The long break, he would argue, is not well tested.

While stacked rotations may be worthy of more study, the key point today is that continuous production of any crop does not create a better soil environment for that crop over time. Diversity benefits yield in the short term and the long term.

“Growers in continuous canola systems trade off yield loss for other benefits that may have to do with delivery options, critical challenges with rotation crops, or other factors,” Sekulic says. “But evidence shows that a crop monoculture, from a soil symbiosis perspective, is a failed concept. Crop rotation and diversity rule.”

Jay Whetter is communications manager with the Canola Council of Canada. For more on the risks of continuous canola, read the article “Rotations and risk management” at www.canolawatch.org.

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A new Cigi project may help western pulses tap into growing nutritional demand

The use of pulses as ingredients to improve nutritional levels in gluten-free commercial food products is the focus of a four-year project that began last April at Cigi (Canadian International Grains Institute).

Gluten-free products have been on the radar for the pulse industry for some time, says Heather Maskus, project manager for pulse flour milling and food applications at Cigi. “Companies we have worked with in the past have indicated this is an area where they see a major market opportunity for pulses,” Maskus says. “Pulses can provide gluten-free products with enhanced nutrition and health benefits, particularly by adding protein, fibre, and complex carbohydrates in the formulations.”

Many commercial gluten-free foods are high in starch-based ingredients derived from products such as rice and tapioca, but they are generally low in fibre, protein, vitamins and minerals, Maskus says. Some of the gluten-free products may contain more nutritious ingredients such as ancient grains, but they can be expensive while pulses are a cost-effective alternative.

“A lot of the commercial gluten-free formulations have a lot of egg in them as well and quite a bit of sugar,” Maskus says. “The egg is used to build the structure as it has a strong ability to whip and incorporate air. But using egg as an ingredient to provide the foundation is also an expensive way to make a product.”

Since April, Cigi has completed a global market analysis of gluten-free food products. The study shows an increase in gluten-free consumers, particularly in North America where, since 2009, gluten-free products have been increasing at an annual rate of 40 per cent.

Recently, Cigi began examining gluten-free domestic products to determine quality targets. “We are developing formulations for our in-house controls and will start incorporating pulses,” Maskus says. “So far, we have done some work using pulses in tortillas, started on pan breads, and may next try reformulating noodles and pasta.”

A major emphasis of the project will be the involvement of commercial gluten-free food processing companies, Maskus adds. Since gluten-free product development is a relatively new area, most of the work to date has been carried out by the companies themselves and not a lot of information is publicly available. Involving commercial partners will provide the added benefit of introducing pulses as functional, practical gluten-free ingredients.

“A lot of the products are very niche,” Maskus says. “So this is about presenting the idea of pulses as food ingredients to these companies and for us to understand what kind of quality they need.”

The type of pulses will at least partly depend on the objectives of the commercial partners, Maskus explains. “Often we look at opportunities for peas and lentils due to their volume but there is a lot of potential for other pulses as well. So it will be a combination of which pulses have the desired functionality, flavour properties and handling abilities for use in key product applications.”

Maskus says pulses in the Canadian industry have been primarily positioned in partnership with cereals and, so far, about 70 per cent of Cigi’s pulse work has been conducted in combination with wheat.

“Since we have built our product development information using wheat in product applications, we now have to take a new approach to using pulses in these gluten-free applications,” Maskus says. “We are going to try something completely different by using pulses in combination with other cereals like corn or rice to create a new platform of knowledge. It definitely is a major opportunity for Canadian pulses as ingredients in this growing market.”
BRITISH COLUMBIA

Mar. 29-Apr. 4: Rainy, windy and cool days interchange with fair, seasonal days. Cool north and east with some snow or rain.
Apr. 5-11: Fair and often mild with showers or rain on two to three days changing to wet snow inland and at higher levels. Frost pockets inland.
Apr. 12-18: Temperatures trend to the mild side with occasional showers but heavier snow and frost at times at higher elevations.
Apr. 26-May 2: Variable temperatures. Often fair but a couple of windy, cooler days bring rain mixed with snow and frost higher levels.

ALBERTA

Mar. 22-28: Temperatures vary through the thaw/freeze cycle. Fair, apart from rain or snow on two to three days, chance heavy in places.
Mar. 29-Apr. 4: Sunny and seasonal to mild but on cooler, windy days expect rain or locally heavy snow. Cool, snowy north.
Apr. 5-11: Generally sunny but with scattered rain on a couple of days. Chance of heavier snow in a few areas. Windy.
Apr. 12-18: Blustery days usher in a few mild, sunny days followed by cooler, wet conditions. Snow and frost in a few areas.
Apr. 19-25: Fluctuating temperatures with some highs near 20 C southwest. On cooler, windy days expect some rain, chance snow.
Apr. 26-May 2: Pleasant under sunshine and milder temperatures although rain, risk of snow and frost on two or three occasions this week.

SASKATCHEWAN

Mar. 22-28: Fair overall with thawing by day but a couple of cooler, frosty, windy days bring rain or heavy snow.
Mar. 29-Apr. 4: Unsettled on a few days as sunshine alternates with rain or snow. Variable temperatures. At times windy.
Apr. 5-11: Changeable weather as mild, fair days interchange with cooler, wet ones. Heavier snow in a few regions. Gusty.
Apr. 12-18: Highs in the teens most days under sunshine but cooler, windy intrusions bring some rain, chance snow on two or three days.
Apr. 19-25: Pleasant, mild days are interrupted by cooler, blustery weather with scattered rain. Scattered snow central and north.
Apr. 26-May 2: Mostly sunny aside from rain on a couple of days with a chance of snow in places. Frost most nights. Often windy.

MANITOBA

Mar. 22-28: Mild, blustery with thawing. Some rain or snow on two to three days. A weather system threatens with heavy precipitation.
Mar. 29-Apr. 4: Thaw/freeze cycle and often windy. Fair but expect rain or heavier snow on a couple of days this week.
Apr. 5-11: Weather conditions and temperatures vary as mild, sunny days alternate with rain or snow, chance heavy in places.
Apr. 12-18: Mild and sunny days are followed by cooler, wet days. Windy at times. Frosty nights. Periodic heavier snow north.
Apr. 19-25: Sunny with a few milder days in the teens south. Scattered rain and gusty on two to three days this week. Some snow north.
Apr. 26-May 2: Sunny, windy with variable temperatures. Some highs hit the 20s south but frost on many nights. Scattered rain.

March 22 through April to May 2, 2015

NATIONAL HIGHLIGHTS

Spring will be a little late in arriving across a wide area of Eastern Canada extending from Ontario to the Maritimes. Near-normal snow and rain amounts are expected to accompany this cool weather pattern. In contrast, a mild weather circulation over British Columbia and the Alberta Foothills is expected to usher in an earlier than usual spring. Sandwiched between these two extremes, the Prairies will experience a variety of changeable conditions with typical spring temperatures and weather. Unsettled conditions are likely in far eastern portions of Atlantic Canada.

EDITOR’S NOTE:
Where’s my weather page?
Look in every second issue for your month-long Country Guide weather forecast during the winter months when we’re publishing every two weeks.

Prepared by meteorologist Larry Romaniuk of Weatherite Services. Forecasts should be 80 per cent accurate for your area; expect variations by a day or two due to changeable speed of weather systems.
It seems surprising to meet entrepreneurs who manage millions of dollars and make so many important decisions, but for some reason become very vulnerable when it's time to express what they want, their limits and their wishes. Why is it so hard to be assertive?

“The employee is always late. Sometimes he doesn’t come to work and my husband never talks to him about the problem,” Martha told me. “He accepts a situation that is very unfair to the other employees. We argue about this. I don’t know why he can’t stand up as a boss.”

Often we can’t be assertive because of our fears. We are afraid of displeasing others and of losing their love. We are afraid of reprisals. He could shun me, yell at me, be insulted or judge me. With employees, we are afraid of creating conflict, that they will be demotivated, that they could leave or that we will lose their respect.

Sometimes we assume that the people around us should know what we’ve got on our minds.

“I’ve had enough. He doesn’t respect me anymore,” a client I’ll call Julie told me. “Did you make it clear to him what you wanted?” I asked.

“He should know, we’ve been together for more than 20 years.”

Well, maybe he doesn’t know. It’s up to you to set clear limits.

Being assertive means being an adult. Isn’t it a little naive to think that everyone loves you or agrees with you? It’s true that if you assert yourself, you run the risk of being judged, shunned or criticized. So what? You can be judged even if you don’t assert yourself. Even worse, you will feel frustrated, lose self-esteem and feel like life is passing you by.

Because we’re human, we try to avoid discomfort. We want to avoid conflict in the short term, but this means we create more problems in the long run.

I have met many leaders who feel the need to be liked more than anything else. They can’t stand the idea that some people don’t like them. But if you are one of those people who try to make others like you by always saying “yes,” you can be sure that their love is very self-serving.

But beware. Being assertive doesn’t mean crushing or scorning someone else or being egotistical. Asserting yourself like an adult means being able to express your ideas, expectations and limits, and respecting those of others. Assertiveness lies between passivity and aggression (see table).

Some hints about being assertive:

• Establish your limits (what is acceptable, desirable and unacceptable) and let those around you know what you expect (roles, responsibilities).
• Always give yourself a little time to consider a request. We often tend to say yes in the spur of the moment and sometimes regret it afterward.
• Give yourself the right to change your mind; when you realize that you were wrong, say so.
• Don’t justify yourself. The more you add, the more others will try to prove you wrong.

Before getting upset with others because they don’t respect you, make sure you have been clear about what you expect. If, after having been clear, the other person doesn’t take what you say into consideration, maybe it’s time to re-evaluate your relationship. It is probably a poor, immature relationship. In cases like this, it is only a matter of time before it self-destructs, unless the passive member is resigned to this kind of life.

To have successful interpersonal relationships, it is essential that you be able to assert oneself in an adult way, while taking the other person into consideration.

Pierrette Desrosiers, MPS, CRHA is a work psychologist, professional speaker, coach and author who specializes in the agricultural industry. She comes from a family of farmers and she and her husband have farmed for more than 25 years (www.pierrettedesrosiers.com). Contact her at pierrette@pierrettedesrosiers.com.

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<tr>
<th>PASSIVE</th>
<th>ASSERTIVE</th>
<th>AGGRESSIVE</th>
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<tr>
<td>Doesn’t express needs, expectations, dissatisfaction.</td>
<td>Expresses needs, expectations and desires yet is considerate of others.</td>
<td>Expresses and claims his rights, needs, expectations and desires and does not consider those of others.</td>
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<tr>
<td>Is not responsible for problems, rarely gets what he wants, avoids rejection, causes and is party to very few conflicts.</td>
<td>Doesn’t always get what he wants.</td>
<td>Almost always gets what he wants.</td>
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<tr>
<td>Is exploited, frustrations accumulate, does not meet his needs.</td>
<td>Has good self-esteem, develops good relationships, is responsible and in control of his life.</td>
<td>Inspires mistrust and hate in others, becomes paranoid, has very few relationships.</td>
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Eye drops — just a little drop will do it!

By Marie Berry

If you’ve ever had to use an eye drop, or if you do use eye drops regularly, it is important to use them properly to get the most benefit. Keeping your eyes healthy is a lifelong activity, and using eye drops correctly is a key component.

Eyesight is a valuable, irreplaceable sense. Even so, however, the rate of vision loss is on the increase. In Canada, one in nine people over 65 are affected, and one in four over 80.

Some eye diseases are not reversible, such as macular degeneration, where the light-sensitive nerve cells at the centre of the retina (i.e. the macula) lose their ability to function. Others, however, can be treated. And often, this treatment includes the use of eye drops.

Cataracts form when proteins in the eye’s lens change, making the lens opaque or cloudy. The majority of cataracts are related to old age and there is a family tendency. Trauma like a hard blow or intense heat can increase your risk, as can smoking. Surgery can successfully remove the cloudy lens replacing it with an implanted artificial one, and most people regain most or all of their vision. Eye drops are an important part of the surgery regime.

Glaucoma occurs when the pressure inside your eyeball (that is, the “intraocular pressure”) is too high. The high pressure presses against the optic nerve causing damage and progressive loss of vision. It occurs in one to two per cent of people over 65, and it is a leading worldwide cause of blindness. The aim of glaucoma treatment is to reduce eye pressure by increasing drainage from the eyeball. Regular use of eye drops will keep pressure low and maintain eyesight.

 Conjunctivitis or inflammation of the eye is often caused by infections, foreign objects like contact lenses, lack of sleep, airborne irritants such as smoke, and allergies such as hay fever. Antibiotic eye drops are ideal if an infection is involved, and saline eye drops can moisturize irritated eyes. Artificial tears are ideal for relieving dry eyes caused by a lack of natural lubricating tears.

Regardless of what type of eye drop you are using, correct instillation is key to obtaining the most benefit. You don’t want to introduce any foreign material into your eyes, so be sure to wash your hands before using eye drops, and do not touch the dropper tip to anything (including your eye). Create a pocket with your lower lid by placing your finger gently below your lower lashes and pull down slightly. Tilting your head back slightly will mean a straighter path for the drop into your eye, and looking up will reduce your chances of blinking. You can practice this setup several times prior to actually using your eye drops.

If you start with the eye drop bottle at the side of your head, then move it into position above the pocket, you will be sure to “hit” your eye and not another part of your face. Keep the eye drop bottle about an inch away from your eye and gently squeeze one drop into the pocket. Slowly close your eyelid and wait for about two minutes for the eye drop to be absorbed by your eye.

Holding your finger over your tear duct on the inside edge of your eye will also help prevent the eye drop from draining from your eye. If you need more than one drop, wait for about 20 to 30 seconds for the first one to be absorbed, and if you need eye drops in both your eyes repeat the same procedure in your other eye.

Expired eye drops should never be used and, once opened, an eye drop bottle can easily become contaminated regardless of the expiry date, with the most common contamination occurring by touching or even wiping the dropper tip. Some clinicians recommend disposing of eye drops a month after opening, even if you don’t think the drops are contaminated. Unused eye drops should never be saved for the next time and you should not use anyone else’s eye drops.

If you use eye drops on a regular basis, check your technique in a mirror from time to time. And remember, practice does make perfect. If you have difficulty sensing whether your eye drop has “hit” your eye, keep your drops in the fridge. You will sense the coolness of the drop and know that you were successful, but do check with your pharmacist just to make sure your drops will be OK in the fridge.

After all, an eye drop may be essential to maintaining good vision.

Marie Berry is a lawyer/pharmacist interested in health and education.

You may have been prescribed a steroid cream and wondered how these prescription products compare to the ones that you can purchase without a prescription. These creams are ideal for red, irritated skin, but they come in a wide variety of potencies and types. Next issue, we’ll look at some of your options and how best to use these creams.
With the average Canadian now hanging up their spurs at age 62, the age of retirement keeps drifting down in Canada. Yet the average age of a farmer keeps drifting up. Half of all farmers are over the age of 55.

While it may seem admirable to want to work until you drop, the reality is that this may not be best for you, your farm or your family, especially if you haven’t also taken care of getting the farm itself ready for what comes next.

Retirement coach Donna McCaw has seen first hand the mess that is caused when farmers haven’t taken the time for succession or estate planning. “I’ve seen too many families splintered by how succession happened or isn’t happening,” says McCaw, based in Elora, Ont.

People think they’ll spend the next 20 years in the same health they are in now, but that isn’t how it works, says McCaw who wrote the “It’s Your Time” retirement planning guide. “Denial is costly in terms of both dollars and mental anguish,” she says. “Women are often left with very complicated situations to deal with when they are grieving and vulnerable.”

McCaw has also met too many farm wives who feel trapped on the farm because their husbands won’t retire. If you promised to slow down but you haven’t followed through, then you’re letting your spouse down, says Jim Soldan, a farm business coach in Chilliwack, B.C.

This may be one reason why silver-haired divorce is on the rise, says Ed Zinkiewicz, the Nashville, Tennessee author of three books on retirement and creator of the “retire-to.com” website. Zinkiewicz published his books after retiring from a 40-year career as a software engineer and discovering that the kind of retirement information he was looking for wasn’t available.

When it comes to retirement planning, sometimes it helps to create a visual picture, says Zinkiewicz who is a popular public speaker on the topic. Take a tape measure, put your finger on the number of inches representing your current age, put your thumb on the number of inches corresponding to the life expectancy for someone your age, now put a paper-clip on the age you want to retire at. You can slide the paper clip around depending on how much you want to do after you retire.

However, keep in mind that your abilities and health will also be deteriorating. Research has shown physical and cognitive abilities decline significantly after the age of 75. If one of your dreams is to visit Machu Picchu, the 15th century Inca site located 2,430 metres above sea level in Peru, you may not be well enough to go if you wait too long.

And if you’re hoping to travel with your spouse, McCaw has a reality check for men. By age 65, almost half of women are widows, she says.

Take some time to visualize what you want your remaining years to look like, advises Zinkiewicz. “You should have an honest conversation with your spouse since this isn’t just about you,” he says.

If the older generation is having trouble letting go of the daily operation of the farm, it can be detrimental to successfully transferring the farm to the next generation. “If the senior generation stays too involved, the succeeding generation may leave in frustration, says Soldan.

It helps to have a “planned transition period,” says Soldan. The senior generation will feel more comfortable stepping back when they see the younger generation is willing, motivated and capable of listening and learning.

It’s important to strike the right balance, says Soldan who suggests it may be time to retire the R word itself. Farmers are entrepreneurs and shouldn’t feel
like they’ve been put out to pasture, he says. “Their input, expertise and wisdom should be welcomed.”

Retiring farmers have a wealth of knowledge and experience that can help the next generation. Mentoring programs are available across Canada such as Farm Management Canada’s Step-Up Program (www.fmc-gac.com/step-up). Try doing a Google search to find out what other organizations in your area offer mentoring programs.

Maybe you can keep your hand in the farm business in a different way. Can you carve out a smaller business that still allows you to have time to travel or to enjoy the grandkids? It might work, so have an honest talk with the kids about wanting to keep your hand in without getting in their way, suggests Soldan.

Perhaps there is way to take your passion and give it a new twist? If you were always good at fixing farm equipment, maybe you can apply that aptitude to a hobby such as restoring old tractors.

One of the reasons farmers often have a hard time retiring is that they have never had the time (or perhaps the desire) to carve out an identity separate from the farm. Having interests outside the farm can help a farmer look forward to having more free time.

But you may not be sure what, besides farming, “turns your crank.” Think back to a time when you were younger. What did you like to do then? Experiment with that and see if that gives you something to go on, says Zinkiewicz.

Talk to family and trusted friends who have retired or who are in the planning stages. You can learn a lot from others who have travelled down this path.

There are likely many organizations that could use your leadership skills. Could you get involved with 4-H or a local service club such as Rotary, Optimists or Lion’s clubs? Maybe there are commodity boards or agricultural organizations that you never had time for before.

There are many activities you can get involved in right in your own community. Check out your local library, community college or recreation centre to find out what programs, clubs and courses are available in your area.

And if you are hanging on to the farm because there is no family successor in the wings, McCaw has this to say. “ Wouldn’t it be better to have some control over who buys the farm instead of having it sold after you’re dead and then you have no say?”

Not all farmers drag their heels when it comes to retirement. Many are jumping at the chance to enjoy some well-deserved leisure time. However, there are pitfalls you need to watch out for, warns Zinkiewicz. People can miss many aspects of work, including the interactions with a wider range of people, the sense of purpose, the feelings of accomplishment, and the sense of being needed.

If you’re retired for 20 years, that can seem like a lot of hours to fill, or it can be humbling with things that give you a sense of purpose and of significance. Zinkiewicz encourages people to take the time to think about what it is they really want to do and to choose their activities accordingly. “Are you giving back to others?” he asks. “Are you staying busy doing things that fill up your soul — or just your time?”

“What are the seven great wonders of the world?” A teacher asked her class to make a list. There were some disagreements but these wonders received the most votes: the Pyramids of Egypt, the Taj Mahal, the Grand Canyon, the Victoria Falls, the Great Barrier Reef, Mount Everest and the Great Wall of China. When gathering votes, the teacher noticed one student had not finished her page. She asked, “Are you having trouble with your list? Can I help you?” The girl hesitated. The teacher encouraged her. “Tell us what you have.” The girl read, “I think the seven wonders of the world are to see, to hear, to touch, to taste, to feel, to laugh and to love.”

The things we overlook as simple and ordinary, and often take for granted, are truly wondrous. We live in an amazing, miraculous world. When we dig deep into life, when we pull the curtains apart, a world of wonder and miracles is revealed. What we discover takes our breath away. I like to think God is always doing his magic. God is greater than we think and there is more to life than we can imagine. Someone once said life is not measured by the number of breaths one takes, but by what takes one’s breath away. What leaves us astonished? What holds us in wonder? A bin full of seed grain can germinate, grow and produce food for thousands of people. We do not take that miracle for granted.

We humans cannot totally comprehend the immensity or the mystery of creation. However, as the little girl reminded her fellow students, we can see, touch, feel, even love creation.

As a pilot, I constantly think about the wind. In the morning I ask: “Is there too much wind to fly today?” When I climb into the cockpit, I consider the effect of wind on flight. Airplanes take off and land into wind. I ask my student, “Which runway will we use?” Wind can blow an aircraft off course when flying cross-country. “How many degrees of wind correction do we require to maintain track?” Wind is defined as air set in motion by natural causes. Since wind is an invisible current, how can we be sure it exists? We can deduce wind’s existence and presence by how it influences surrounding objects. We see trees swaying, flags fluttering, ripples on a slough or lake, clouds moving and so on. Herds of cattle stand with their tails into a strong wind. They stand parallel to the direction of the wind, forming a useful windsock for pilots.

We feel the force of the wind on our skin. We hear it when it blows through certain musical instruments.

We cannot see God, but that does not mean God does not exist. God is an invisible force. I think God is unpredictable, like the wind. Jesus said: “… the wind blows this way and that. You hear it rustling through the trees, but you have no idea where it comes from or where it’s headed next.” Most of the time, God is like the still air that invisibly surrounds and sustains us. At other times, God is a gentle breeze that relieves us on a hot day. On occasion, God can be a strong wind leading us to places we never expected to go.

We see God’s wonderful design in creation. We hear God’s whisper-quiet voice as it blows through our conscience. Like the invisible wind, God is everywhere.

Suggested Scripture: Psalm 19, John 3:7-8

Rod Andrews is a retired Anglican bishop. He lives in Saskatoon.
“You’re really sure this is a good idea?” Dale asked his wife.

“Dale, I’ve had the tickets since December,” Donna said. Then her phone beeped and she looked down at the screen in her hand while she kept talking. “It’s a little late to go changing my mind now. I’d let the other women down. Oh, good. Laura’s taking her hair dryer. I won’t need mine.”

Donna pulled a hair dryer out of a large backpack spread out on the bed. “That pack must weigh as much as you. Can you even carry it?”

“I won’t take everything on the hike,” Donna said. “We can leave some things at the hotel before we go on the hiking trail.”

“Can you even lug it to the airport?” Dale said. “I’ll figure it out,” Donna said, only half paying attention to Dale as she typed another question into her phone. “I wonder if anyone else packed a corkscrew?”

Dale shook his head in disgust and wandered out of the room and into his office, where he turned on his computer and started looking through the latest ag news. A corkscrew? What exactly was Donna planning to get up to?

He hadn’t really been paying attention when she’d first brought it up. He didn’t want to go to Peru.

“Why would anyone want to go to Peru?” he’d asked. But Donna had just laughed at him, and tried to get him interested in the pictures in the brochure her friend Laura had given her at lunch the week before. “Go if you want to,” he’d said. “Get away with your friends. Have a good time. I don’t have time to get away for 10 days. Not in the spring.”

“Not in the spring,” Donna said. “Not in the summer. Definitely not in the fall. And lately, not even in the winter.”

“Hauling all that wheat and keeping the cleaning plant running is a full-time job for more than one man,” Dale said. “And Jeff was away for a week. And Dad’s been gone all winter. Somebody has to keep the farm running. And it’s not like you’re asking me to do something important — you just want me to look at things. There’s stuff around here I haven’t looked at in years. I don’t need to spend all day on a plane to get a new view.”

“Look,” Donna said. “I want to see new things. Try new food. I’d rather go with you, but if you won’t leave this place, I want to go anyway. Laura’s going. She’s got two other women lined up.”

“Book your tickets,” Dale had said, back in December. “You’re sure you don’t mind?”

“No,” he said. “Put it on the corporate credit card. It has better insurance.”
Somehow, it had seemed different, back in December. Like a harmless afternoon away with friends. Maybe at a spa, Dale thought to himself, though he wasn’t really sure if there were any spas anywhere near the farm.

But now, with Donna actually down the hall packing to spend 13 days away, in South America, hiking up a mountain with three women he barely knew... Well, now it all seemed different.

Dale went back into the bedroom. “I’ve been looking online,” he said. “Do you know people get altitude sickness, hiking in Peru?”

“Some people do,” Donna agreed.

“You don’t seem very worried about it,” he said.

“Norma’s doctor gave us some pills. They might work, or they might not. There’s not much you can do about altitude sickness.”

“How can you stand that kind of risk?” Dale said.

“That’s a pretty silly question, coming from a farmer,” she said. “You take risks every day.”

“What if something else happens?” Dale asked.

“What if you get a bug? You could get really sick.”

“I’d do the same thing I’d do if I got sick here. Go to the doctor. We have insurance.”

“You don’t speak the language. How will you find a doctor in the jungle?”

Donna laughed. “We’re not canoeing down the Amazon with a lost tribe,” she said. “We’re taking a group tour. Four of us. We’ll have a guide who speaks English and Spanish. If one of us gets sick, the rest of us will get the guide to help us find what we need.”

Dale did not look convinced. Donna looked down at her phone again. “Oh good. Arlene has a power adapter.”

Dale shook his head and retreated to his office. A few minutes later, he was back, this time brandishing a piece of paper.

“I checked the government website,” he said. “Do you know how much crime there is in Peru?”

He looked down at his page. “Purse snatching. Pickpocketing. Theft from vehicles. This place is dangerous.”

“The tour company sent us the warnings. We’ll be fine. People go to Peru all the time.”

Dale went back to his office and sat down. This time, he didn’t turn to the Internet. He just looked around his office. Thinking.

Donna was smart. Sensible. Of course she’d already looked up all of the information about Peru. She was way better than him at researching things on the Internet. Of course she’d be fine. Her friend Laura would be great in an emergency. But why did his wife want to do this sort of thing in the first place? Didn’t they have enough adventures going on at Hanson Acres? They had grandchildren. Weather disasters. Crop disease risks. Canola market roller-coasters. Neighbours to spend time with. Why would she risk that to hike up a foreign mountain? Or to eat food that might taste awful and could make her sick?

It was the questions he couldn’t ask that were really bothering Dale. Now that Donna was spending so much of her time doing things off the farm, was he still going to be exciting enough for her? Was he going to have to give up his farm to keep his wife? How could he even do that? They’d spent their whole lives building this place. He couldn’t leave it now. Jeff wasn’t nearly ready. And hadn’t running this farm been Donna’s dream too? Had she just been pretending to love this place all these years?

He really didn’t know what was going on. He turned back to the Internet and started clicking his mouse. A few minutes later, he went back to the bedroom. Now Donna was folding pairs of hiking socks.

Was Dale going to have to give up the farm to keep his wife? How could he even do that? They’d spent their whole lives building this place. He couldn’t leave it now.

“Look at this,” he said, holding out a picture he’d printed from a travel website. “These people roast rats on sticks and eat them,” he said.

Donna took the paper from his hand and looked at the picture. “Those are guinea pigs,” she said. “A local delicacy. We’re having some with a local family. It’s part of our tour.”

Dale sighed.

“Norma’s been talking to her cousin,” Donna said. “She and her husband went to Turkey with this same company last winter. They said it was great.”

“Oh geez,” Dale said. He took his paper back from Donna and headed back to his office, wondering what kind of food he would have to eat if he took Donna to Istanbul.

Leeann Minogue is the editor of Grainews, a playwright and part of a family grain farm in southeastern Saskatchewan.
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