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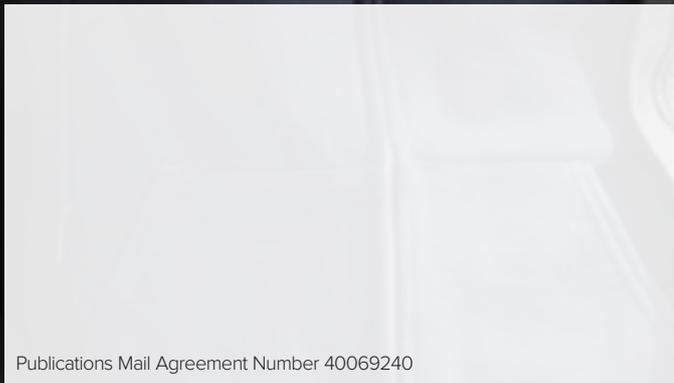
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## Total re-build

The news Brad Osadczuk got last September was news to make his blood run cold. Tuberculosis had been discovered in a cow he'd sent to the U.S. for slaughter. Now, Canadian authorities ordered that the entire herd he'd spent his adult life building had to be destroyed... 1,200 cows and 50 bulls. In an amazing turnaround, however, Osadczuk is re-building his farm. Read how in this story by Laura Laing, and check out the surprising recommendations Osadczuk makes for other farmers facing the same challenges.

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# They aren't even close to knowing



**Yes, there are lots of fascinating and even important numbers in the 2016 ag census, but it's the professionalization of farming that is really driving its evolution.**

Let me start with a complaint, just because the scene I'm going to describe is so fresh in my mind and it was so galling.

I was in a meeting and the people I was meeting weren't neophytes. They know something about agriculture, or at least they say they do. In fact, they're already making decisions for companies doing significant ag business.

And it's clear they think farmers don't put any more thought into farming than it takes to put a seed in the ground and hope that somehow it comes to harvest.

I won't share their names. It wouldn't be fair because, after all, it isn't as if they're at all unusual. I'd essentially be picking on them for a fault that is shared by so many others.

But it does make me think about the tremendous inefficiency there is in the system, when so few decision makers understand that farmers have the smarts and knowledge to be effective partners, not just commodity suppliers.

They have the same challenge I do, but we have exactly opposite ideas about it. We both are talking to farmers. But they spend all their time trying to simplify their messages while I — as I've said before, and I'm sure will say again — find that the hardest part of my job is sourcing writers who can meet the minimum standards of knowledge and insight required to deliver something worth reading to today's farm audience.

This is at least as true for business management on the farm as it is for field or animal management.

What's interesting to me is that with this issue of *Country Guide*, as with so many previous issues, we didn't set out to put together a special on education or on skills management on the farm, but this is effectively what we have done.

What happened, instead, is that we went to farms across the country, and we listened.

Ask any lawyer, banker or accountant. They will tell you that farmers have not only gained incredible business literacy in the last 10 years, they have adopted an attitude of continuous learning toward it.

Now it's the "experts" who have the challenge of keeping up with the farmers — which is as it should be.

Unfortunately, few outside of agriculture will read the features in this issue and see how each one portrays an agriculture that is firing on all cylinders, including on business management.

It used to be that farmers would laugh at how non-farmers get left behind by farm talk, and how, for instance, they're flummoxed when farmers talk about forages or inoculants or any of a hundred other technologies.

But now, if two farmers are chatting in a city elevator, the non-farmers are as likely to be left behind by the business talk. What percentage of Canadians, I wonder, could understand more than the first sentence of Maggie Van Camp's excellent story of farm corporations in this issue?

Are we getting it right? Let me know at [tom.button@fbcpublishing.com](mailto:tom.button@fbcpublishing.com).

**EDITORIAL STAFF**

**Editor: Tom Button**  
12827 Klondyke Line, Ridgetown, ON N0P 2C0  
[tom.button@fbcpublishing.com](mailto:tom.button@fbcpublishing.com)  
(519) 674-1449 Fax (519) 674-5229

**Senior Editor: Maggie Van Camp**  
[mvincamp@fbcpublishing.com](mailto:mvincamp@fbcpublishing.com)  
(905) 986-5342 Fax (905) 986-9991

**Production Editor: John Morriss**  
[john.morriss@fbcpublishing.com](mailto:john.morriss@fbcpublishing.com)

**Field Editor: Lisa Guenther**  
[lisa.guenther@fbcpublishing.com](mailto:lisa.guenther@fbcpublishing.com)

**Field Editor: Shannon VanRaes**  
[shannon.vanraes@fbcpublishing.com](mailto:shannon.vanraes@fbcpublishing.com)

**Online Editor: Greg Berg**  
[country-guide.ca](http://country-guide.ca)

**Design & Layout: Jenelle Jensen**

**ADVERTISING SALES**

**Sales Director: Cory Bourdeaud'hui**  
[cory@fbcpublishing.com](mailto:cory@fbcpublishing.com)  
(204) 954-1414 Fax (204) 944-5562

**Kevin Yaworsky**  
[kyaworsky@farmmedia.com](mailto:kyaworsky@farmmedia.com)  
(250) 869-5326

**Lillie Ann Morris**  
[lamorris@xplornet.com](mailto:lamorris@xplornet.com)  
(905) 838-2826

**Advertising Services Co-ordinator: Arlene Bomback**  
[ads@fbcpublishing.com](mailto:ads@fbcpublishing.com)  
(204) 944-5765 Fax (204) 944-5562

**Glacier FarmMedia President: Bob Willcox**  
[bwilcox@farmmedia.com](mailto:bwilcox@farmmedia.com)

**Publisher: Lynda Tityk**  
[lynda.tityk@fbcpublishing.com](mailto:lynda.tityk@fbcpublishing.com)

**Editorial Director: Laura Rance**  
[laura@fbcpublishing.com](mailto:laura@fbcpublishing.com)

**Production Director: Shawna Gibson**  
[shawna@fbcpublishing.com](mailto:shawna@fbcpublishing.com)

**Circulation Manager: Heather Anderson**  
[heather@fbcpublishing.com](mailto:heather@fbcpublishing.com)

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U.S. subscribers call 1-204-944-5766

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# A new brand for Canada

Australian manufacturer K-Line makes a big jump into the North American market

BY SCOTT GARVEY / CG MACHINERY EDITOR

**I**f you were a farm equipment manufacturer in a country that is its own continent, where would you look to make your first expansion into the international market?

For the Australian company K-Line, the choice was easy. Head to North America.

“It’s really one of the best moves we’ve made, as far as our company goes, because it’s set us on the world stage and made us far more competitive,” says Bill Larsen, director of sales and marketing for K-Line. “We’re a smaller company and we needed a solid market base so our factories don’t stop.”

Generating sales into foreign countries has also been a key strategy for Canadian manufacturers. Having multiple market outlets means a tough year for farmers in any one region is less likely to threaten overall demand and force the firm to scale back production.

But K-Line wasn’t willing to simply make a blind leap of faith, according to Larsen. The brand found a North Dakota farmer willing to work with them and put their Speedtiller tillage implement to some real-world testing.

“In 2012 we brought some machines over and a local farm family started using them on their own farms,” Larsen says. “In 2013, we said this is working. We’re going to market. We sold quite a lot of machines and for four years we’ve had a steady growth. The growth phase has been quite good in Canada.”

After a season of field trials, K-Line signed a dealer agreement with the Flaman Rentals chain, which wanted to add the Speedtiller to their rental equipment fleet. That provided the company with even more feedback from a broad range of users operating in a variety of Canadian conditions.

“For Saskatchewan and Alberta, Flaman has become our distributor,” Larsen says. “They’ve been used in rentals and now we’re opening them up to the retail market.”

The company found farmers in Western Canada were using the Speedtiller for similar reasons and under similar conditions as producers in the brand’s home market in Australia.

“The line of product that we’re currently offering in

K-Line manufacturing of Australia is making its first foray into the North American market with its Speedtiller disc.

PHOTO: K-LINE



North America is the Speedtiller,” Larsen says. “It’s a high speed disc tilling machine. We’re selling a lot to farmers who for years now have been doing minimum till or zero till. And they’re finding due to disease, chemical resistant weeds, or high residue issues, they’re falling back on strategic tillage, a one-pass tillage solution. And that’s really where this tiller has done well.”

Designed to work best at nine m.p.h., Speedtillers use individually mounted discs and are available in working widths from 15 to 41 feet. The company also builds three-point hitch mounted versions as small as eight feet.

“It takes the place of a tandem offset disc and a vertical finishing tool all in one,” Larsen says. “It’s a dual-purpose tool. There are two rows of discs and a roller. They’re on a rubber torsion system but on a very high breakout torsion, a lot higher than anything that’s used over here currently. So they do have the ability to do primary tillage work. They’ll break hay ground.”

In February, K-Line used the National Farm Machinery Show in Louisville, Kentucky, to officially introduce the Speedtiller to the overall North American

market. The company is now looking to aggressively enter the retail market. And it expects to add another model to its North American lineup before long.

“We have a new product that is coming over this summer,” he said. “We’re going to run it and get the feedback. Then I think we’ll be launching it probably in the fall. It’s called the Trash Cutter. It’s a bit of a unique product and I think it will have a spot in the marketplace.”

As a manufacturer, K-Line is about 80 per cent tillage, but also has a line of hay rakes.

They haven’t been launched in the North American market yet, but two are coming to Canada this summer, and Flaman is going to put them in rental fleets out of Edmonton and Lethbridge. If that proves successful, the rakes will be launched here next year.

“We’re an Australia-based company, and we’ve been around since 1991,” adds Larsen.

“We’re actually a farming family that started a business manufacturing farm machinery like many other companies. But we’re here and we’ve proved ourselves in Canada and the U.S.” **CG**

# Sowing advice coast-to-coast

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# Bringing Together the Elements of a Perfect Harvest

Next year's success starts with a high-efficiency harvest this year

**T**oday's margins leave little room for error. In the field, through the combine or at the elevator, any hiccup directly impacts returns. But when it comes down to it, harvest is the true measure of success and a big determining factor for future successes.

"You can seemingly do everything right, from field preparation to investing in the best crop protection products to proactively marketing your crop," said Craig Chornawka, a Case IH Cash Crop Product Specialist based in Moose Jaw, Saskatchewan. "But if you don't efficiently and effectively harvest your crop, you're not maximizing ROI, this year or for the years to come."

That's where working toward a high-efficiency harvest can help. If you ask Kevin Hruska, who farms 44,000 tillable acres near Gerald, Saskatchewan, he'll tell you a high-efficiency harvest starts with Case IH Axial-Flow® combines.

"Here in the pothole region — where we're often dealing with wet fields and wet grain on rough, rocky ground — our combines must stand up to some tremendously tough conditions," explained Hruska. "From our first Axial-Flow in the late 1970s to our 110th combine purchase within the last few years, we know we can count on our Case IH combines for a timely, high-quality harvest."

Chornawka said four elements form the foundation on which a high-efficiency harvest is built:

## 1) GRAIN QUALITY

"This is the hallmark of Axial-Flow combines," said Chornawka. Single-



*With about four weeks to harvest 44,000 acres, Kevin Hruska relies on 12 Case IH Axial-Flow combines to help him achieve a high-efficiency harvest. PHOTO CREDIT: DENAE WOYTAS*

rotor technology relies on gentle, grain-on-grain threshing so the rotor can operate at slower, less-aggressive speeds. Regardless of the crop, this results in less grain damage and a cleaner sample.

For Hruska, who runs a hard-red spring wheat-canola rotation, grain quality with Axial-Flow combines is a nonissue.

"Ever since our first Case IH 1480 Axial-Flow combine, we've known rotors are the best. There is no cracked grain, even in canola," he said. "It's an expectation. We don't even think about it. In fact, we've delivered grain straight from the combine and been accused of running it through a grain cleaner."

## 2) ADAPTABLE AND CONSISTENT

Meeting tight harvest windows often means operating in less-than-ideal conditions, yet keeping equipment rolling.

"Axial-Flow combines are simple and intuitive to operate," noted

Chornawka. "Once they're properly adjusted, those settings easily transfer to other combines in the fleet." And there's no daily maintenance, not even daily greasing.

"If our combines aren't moving, we're not harvesting," said Hruska. "And with 12 combines and 12 combine operators, ease of operation and the support of our Case IH dealer is critical to a timely harvest."

## 3) PRECISION FARMING TECHNOLOGY

From autoguidance to field mapping to variety tracking, Case IH Advanced Farming Systems (AFS) delivers data that improves decision making and helps turn potential into profit. AFS even brings efficiency to combine adjustments. The ability to fine tune settings to rapidly changing field and crop conditions helps maximize grain quality and quantity.

Once you've achieved optimal settings for specific conditions, AFS Connect™ telematics technology

lets you store that data. "When you encounter those conditions in a different field or even during a future harvest season, you can simply recall and apply those settings," said Chornawka. "Then, AFS file sharing allows you to easily transfer those settings to other combines in your fleet."

## 4) RESIDUE MANAGEMENT

Think about High-Efficiency Farming as a system. Every aspect depends on a previous or future element. Success with next year's crop depends on how the combine performed during the preceding harvest — especially how it processed and distributed crop residue. Axial-Flow combines offer up to eight residue spread settings.

"We zero-till all our crops," Hruska says. "Straw management is critical. And with Axial-Flow combines, it's impeccable. Other combines on the market simply are trying to catch up."



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# Incorporation pushes farms into higher gear

With 30,000 incorporated farms on 50 million acres, farm incorporation is on the rise in Canada, and not just because of the tax savings. In fact, these other benefits can be even more valuable

BY MAGGIE VAN CAMP / CG SENIOR EDITOR

**S**omewhere between loading trucks and getting ready for seeding on his family's farm near Fort MacLeod, Alta., Stephen Vandervalk stops midway through our conversation, breathes deeply and tilts his head. "I can't even imagine trying to operate without a corporation," he says. "How could we compete to buy land at 35 to 45 per cent (personal tax rate) versus 12.5 (corporate tax rate)?"

Today, more than a fifth of all farms in this country are incorporated. In 2016, an Agri-Food Management Institute study found 21 per cent of the surveyed farms were family-owned corporations, and another study by AMI and Farm Management Canada found that of the 604 representative farms of all types, regions, sectors, age groups and sizes in their research, 46 per cent were family-owned corporations.

In hard numbers, the 2016 federal ag census counted 43,457 family farm corporations (plus 5,135 non-family corporations), operating on over 50 million acres.

Like many progressive farms, Vandervalk Farms became a limited company back in the 1980s, when Stephen's father expanded and diversified to the point where it made financial sense to incorporate. As a rule of thumb, when family income — farm plus non-farm — reaches about \$75,000, the tax advantages may merit investigating incorporation, according to OMAFRA's factsheet on farm corporations. (If you are considering incorporating, read this first — it is a very good summary of advantages and disadvantages: [www.omafra.gov.on.ca/english/busdev/facts/16-033.htm](http://www.omafra.gov.on.ca/english/busdev/facts/16-033.htm)).

The higher the receipts, though, the higher the rate of incorporation. In 2011, more than 80 per cent of farms that were incorporated were worth over \$2 million.

However, with the market volatility of the last decade and the small business tax rates on up to \$500,000 of income, it can have an impact on even smaller farms, where incorporation allows farmers to make sales to take advantage of price spikes without having the tax implications tied to the timing of those sales.

Accountants often drive the move from sole proprietorships to corporations, mostly for tax reasons. By

transferring a business to a corporation, you become the shareholder and employee of a separate taxable entity. And those tax rates are lower, significantly.

To get an idea of the extent of the income tax savings impact, consider some rough math: If there are about 30,000 incorporated farms in Canada, with each earning a net taxable income of \$75,000, at a 20 per cent income tax rate versus 43 per cent, that's nearly half a billion extra dollars being saved in taxes every year. Which is half a billion more dollars every year for those farms to reinvest in their operations and spend in rural areas.

Earnings in a company are initially taxed at a lower rate of tax than if they were earned personally. If the business makes more than the family needs, the excess can be retained in the company.

And farm corporations, like all farmers, have a special tax rule: They can use the cash method to report income for tax purposes. Calculating taxable income under the cash basis instead of accrual basis means only using actual cash from the sale of farm products in that year and deducting the cost of buying inventory, like fertilizer, feed or livestock, even if the inventory is still on hand at year-end.

Of course, there are also some disadvantages associated with incorporating, such as the initial cost of time and money to set one up, increased record-keeping, corporate tax returns and other government filings. The corporation must file tax and financial statements in addition to the shareholders individually filing, so the ongoing costs are usually higher.

Plus when setting up a corporation it's important to consider the future. There's the rollover provision where personally held shares can be transferred tax-free to children and grandchildren. "Personally owned land used by the company also qualifies for the rollover," says Merle Good, former provincial tax specialist for the Alberta agricultural ministry and now private consultant.

And you need to be aware of the details. For example, if the farm residence is also transferred to the corporation, it may result in a taxable benefit for the family members living in the corporate-owned residence, and

the loss of the principal residence exemption. You also need to be careful not to lose the family farm corporation status by holding more than 10 per cent of assets on a fair market basis as non-farm assets.

Yet we also know the real-life impacts of incorporating are significant and multi-pronged, going far beyond the different income tax rates.

After the last agricultural census showed sole proprietorships consistently being replaced by corporations, Doug Chorney, a farmer from East Selkirk, Man., and then president of Keystone Agricultural Producers and recently appointed assistant chief commissioner of the Canada Grain Commission, explained to the public that the vast majority were small businesses, and family owned.

He also explained how this structural change was pushing Canadian farmers to a new level of business understanding and skill. "Family farms are moving into a legal entity which provides certain managerial advantages," he said.

Hold on. Does creating a separate formal business entity force farmers to manage differently, maybe even more professionally? Or does it lessen the drive that comes from having skin in the game every day?

Successful farms depend on having smart, strategic people, no matter what structure. However, being incorporated has forced farms to create accrual financial statements and operate under certain rules of engagement, which has jumpstarted more professional behaviour, such as having farm meetings.

Following are seven ways, beyond better income tax rates, that incorporation has jammed some farms into higher gear, and why it still takes a competent person behind the wheel no matter the type or size of the vehicle.

## Grain income deferral threatened

The federal government's 2017 budget launched a public consultation until the end of May (conveniently at one of the busiest times of the year for crop producers) on the income tax deferral available to farmers holding deferred cash purchase tickets. Left over from the wheat board monopoly days, when wheat, oats, barley, rye, flax, canola, rapeseed are delivered to an elevator, the elevator can issue either a cash purchase ticket or deferred cash purchase tickets. These deferred tickets are payable in the year following when the grain was delivered, so farmers can include the amount of the ticket in taxable income in that following year.

## 1. FINANCIAL MANAGEMENT CATALYST

"There is a requirement to file a balance sheet as part of the corporate income tax return so reporting gets more sophisticated," says Lisa Kemp, CPA, and partner at BDO in Lindsay, Ont.

Corporate accrual financial statements clearly measure how well the business is doing on an accrual basis, rather than simply using cash-based income and expense or profit and loss statements.

The power of generating these accrual reports comes when they're used to make decisions for the future. When these accrual reports are used to make decisions rather than as a report card for compliance with the bank and the government, it can really be an advantage, says Jim Snyder, national director of agriculture for BDO.

For any structure, key ratios can be generated and show how they have an impact on business performance, but sometimes being incorporated tends to formalize the process and make it part of the routine. "All of these management tools are available to unincorporated businesses but, personally, I have found the corporate model easier to manage. Yes... easier not more complex," says Snyder.

In Snyder's experience, the decision to incorporate has little bearing on whether the business operates in a professional manner. Instead, he finds it usually hinges on whether the restructure is undertaken as a reaction to some situation, such as tax, creditor proofing or liability, or whether the business is being structured to meet longer-term goals.

"Well-managed businesses are usually the result of the passion and vision of the leadership team, combined with the hard work that goes into every successful business," Snyder says. "And yes, most all of them end up being structured as corporations. So if that is the outcome, why not structure the business for success from the outset?"

## 2. INCOME SPLITTING

"Sometimes it's not very hard to get into the highest tax bracket," says Vandervalk. Especially with the last decade's volatile markets, some years easily put farmers into a big tax-liable position.

Incorporating a farm may allow a farmer to take advantage of some unique income splitting opportunities. Like sole proprietorships and partnerships, the farms can pay reasonable salaries to lower-income family members for the services they provide, thus taking advantage of their lower marginal tax rates. However, incorporated farms can add lower income-earning adult family members as shareholders, and also pay them dividends. (Note, though, that dividends from private corporations paid to minor children will be taxed at the top marginal tax rates, i.e. the "kiddie tax.")

CONTINUED ON PAGE 12

**3. LAND IN OR OUT?**

One of the major criticisms of farm corporations starts when farmers put land into a corporation and then find that getting it out creates a tax problem. Once assets are rolled into a corporation tax-free, they cannot come out tax-free back to a shareholder.

This can mean some farmers have missed out on the huge estate and succession planning benefit of personally held farmed land being rolled over to the next generation of farmers tax-free. But, says Good, “It’s possible to transfer corporate shares just like land.”

However, some farms are focused on expansion, not estate planning. Vandervalk says being incorporated has enabled them to expand with lower-tax dollars being drawn out of the corporation’s working capital. He says this has been essential for competing for land in southern Alberta’s very aggressive market, pushed by expanding Hutterite colonies, feedlot alley and the growing number of irrigated farms. “I see no chance for my children to farm here,” he says.

Today Stephen and his brother Brian operate over 17 sections of rented and owned, dry and irrigated land, growing canola, mustard, malt barley, durum, spring wheat, and export timothy hay. The family also operates a manufacturing business in Fort Macleod, called FalCan Industries.

Recently the Vandervalks went through a large expansion of their irrigation that required the purchase of some land for access. Not only was this financed with lower-taxed income in the corporation but the decision to expand spurred succession. “Dad’s 72, so when we looked at this investment, he said it’s time,” says Stephen, “... although he left operationally many years ago, when he was in his 50s.”

**Fewer farm corps south of the border**

The 2012 U.S. Census of Agriculture indicates that only 5.06 per cent of U.S. farms are corporate farms, mostly family farm corporations with 10 or fewer stockholders. Nine states have laws restricting corporate ability to own and operate on farmland, but they vary in how they define what a corporation is, with family farms mostly being exempt. The biggest difference is likely that in some states, personal taxes are sometimes less than corporate taxes.

**4. SUCCESSION AID**

For the Vandervalks, having the corporate structure helped in succession, because converting the share ownership to the three siblings became seamless.

Shares can be set at current value for the older generation and growth shares to the newer generation. Transferring shares can be done incrementally and with little or less value than trying to buy or transfer all the farm assets at once.

Sometimes for farms like the Vandervalks’ that have higher value and multiple siblings, a corporation permits the succession of whole, intact farm businesses with all the opportunity costs of scale.

A corporate structure allows for more transfer options and configurations than the next generation simply buying the farm outright from their parents. “How many generations have to buy the home quarter?” asks Vandervalk.

Besides, the shares of corporate family farms do qualify for capital gains exemption of up to \$1 million and the family farm rollover. There’s also the potential to add other family members as shareholders to allow your family to multiply the capital gain exemption on the future growth of the corporation. The downside to this flexibility is that you have to think about all the potential implications; in a few generations it can get very complicated with too many shareholders.

**5. ORGANIZATIONAL STRUCTURE**

Succession also led the Vandervalks to write a new shareholders’ agreement. The process of doing this required them to set up some rules under which the shareholders will operate. Now, if one of them wants out or death or divorce becomes an issue, they already have a template.

An often undervalued but important side benefit to setting up a corporation is that roles and responsibilities are defined. Who’s the CEO? Who’s the secretary? “It establishes a clear understanding of the roles and responsibilities of employees, shareholders and family members, recognizing that sometimes those roles overlap,” says Snyder.

Many of the farms that Gordon Colledge, from Lethbridge, Alta., works with are incorporated, but there either isn’t a Unanimous Shareholders’ Agreement (USA), or if there is one, the shareholders didn’t know where the agreement is kept or never had a voice in its creation. He says when something happens and it comes under pressure, they find their USA is only a cut-and-paste product that is ill-suited to the family in business.

Colledge works mainly with the “soft skills,” so he usually gets involved with rural families when there’s a wreck or when something didn’t work. In his many years helping farm families he has noticed a difference between how generations approach incorporation. “Senior, Dad, or the majority shareholder, is focused on the tax savings, while the younger shareholders are looking at the exit clause,” he says.

**CONTINUED ON PAGE 14**



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## Small biz corps hit by new tax rules

**Some major changes to how Canada Revenue Agency handles small business corporations are costing incorporated farms, especially those focused on expansion**

Tax rules change. Some governments try to lower taxes, others claw back those tax wins. Currently, Ottawa seems to be gnawing away at what some see as the very foundation of this country's economy, small business profits.

Incorporated businesses may be losing some of the tax advantages they've had over sole proprietorships, but are still in a much better tax position. The combined federal and provincial corporate tax rate on income up to the small business limit is 18.5 per cent or less in all provinces and territories — much lower than the general corporate rates. Previously, the federal portion of this small business tax was to decrease from 11 per cent to nine per cent over four years, starting in 2016. However, last year's federal budget stopped that and instead said the rates wouldn't go down in 2017 to 2019 and the small business federal tax rate will be 10.5 per cent indefinitely.

Chomp.

Another big bite comes from a change in definition. Back in 1994 Revenue Canada started reducing the small business tax rate for corporations with more than \$10 million worth of capital assets. Now farm corporations containing \$15 million in net book value (the amount originally paid for it), no longer fall into the lower "small business" tax rates. This means some farms will now be considered a "large" corporation with assets worth more than \$15 million, and taxed at a much higher rate.

Under this next category, the income tax rate jumps significantly but it varies between provinces. For example, in Alberta it went from 12.5 per cent to 27 per cent, says Kimberly Shipley, CPA with MNP in Red Deer, Alta.

Keep in mind that capital held inside a farm corporation is included in this taxable capital limit, but if held outside a corporation it isn't part of the total capital calculation. So land or quota bought many years ago or personally owned doesn't affect the small business designation. "It

hurts younger farmers, who are growing aggressively and who have bought assets at a much higher value," says Shipley.

According to Ron Friesen, CPA and partner for MNP in Saskatoon, the small business cap itself has not been re-evaluated or adjusted for inflation since 1994. "The \$10 and \$15 million benchmarks for taxable capital limits would have been aimed at large businesses 23 years ago, but in today's dollars they're impacting far more small- to medium-sized agricultural businesses."

Chomp.

Plus the tax hit will have to be paid a month sooner as the deadlines for defined "large" corporations is only two months and not the three for small business corporations, says Shipley.

Chomp.

Additionally, new tax rules in effect for 2017 eliminate some tax synergies between multiple corporations. Family farms used to be able to pool their assets in a third company and include only a pro-rated percentage of the assets in the third company. Now the whole corporate group will only be entitled to one taxable capital limit of \$15 million.

Also, profits shared between companies are being curtailed by a new way to refer to "intercorporate," called "specified corporate income." Certain profits generated through costs charged between two related groups or corporations, such as use of equipment or rent, might no longer benefit from the small business tax rate.

Chomp.

It'll likely benefit you to strategize now with your accountant on how to limit the effects of these changes on your family farm corporation, before the next tax year.

For further information read Ron Friesen's article called Agriculture Businesses Caught in the Crossfire as Government Targets Large Tax Structures at [www.mnp.ca/en/posts/agriculture-businesses-caught-in-the-crossfire](http://www.mnp.ca/en/posts/agriculture-businesses-caught-in-the-crossfire).

## 6. COMMUNICATIONS

Farm incorporation forces shareholders to learn to adopt business meetings with agendas and recorded minutes. "In a well-run corporation, communication on and off the farm moves to a higher level," Colledge says.

Furthermore, conflict resolution clauses have meaning, he says. Sometimes a mediator like himself even becomes a key member of the team, along with an agronomist, accountant, lawyer, nutritionist and the vet.

"I love incorporation when it professionalizes the way the business is run and forces shareholders to demonstrate their professionalism as directors of a multi-million dollar corporation," he says.

The process of incorporating also tends to require proof of up-to-date wills. It also spurs improved education and emphasizes the importance of relationship management, partnership insurance and an indemnification clause (marriage or co-habitation).

However, it doesn't guarantee communication. "I've heard the phrase, 'I didn't know,' too many times," Colledge says.

"If I was king for a day, I would not allow lawyers or accountants to issue a single share or give the green light to a company without each shareholder and his/her spouse knowing what's in the U.S., understanding a shareholder's responsibilities, and the meaning of voting/non-voting shares," says Colledge.

It's also really important to have a discussion upfront about what is a corporate expense and what's not, including company vehicles versus personal use and when to use a company credit card. Vandervalk farms with his brother Brian, and they both own personal vehicles outside the corporation.

## 7. RISK MITIGATION

Although most loans require personal guarantees, a corporation still creates another layer of liability insulation against farms. This becomes significant for farms with multiple enterprises such as a daughter diversifying into custom work like spraying or trucking.

"If one of our trucks drives out the lane and smokes somebody, it should help protect us from being sued personally," says Vandervalk.

Unlike a sole proprietorship, a corporation operates perpetually, even when something happens to one of the owners. A sudden loss of the owner of a sole proprietorship can result in a myriad of problems such as frozen bank accounts, no cheque signing authority or huge tax bills due to inventory deferrals. Says Snyder, "Corporations do not die." **CG**

# Three export opportunities for forage producers

By Trudy Kelly Forsythe

Export opportunities for forage producers are growing. Nicole Rogers, CEO of Agripocity, a Dubai-based company that connects Canadian farmers with the internationally-based buyers who use their crops, says producers need to determine what grows best on their land in terms of forage and then look at the global opportunities.

## EQUINE

A major opportunity for the high quality forage Canadian farmers can produce is the equine market, especially in the United Arab Emirates where they don't have a domestic production market for feed.

"Globally, there are a lot of big money players in equine," says Rogers. "We want to teach farmers that equine feed can be a tight commercial story because the feed is converted directly into the profitability of the horse and we are really trying to teach our equine sector buyers that feed, and the pedigree of the feed, can impact the performance of the horse and then that means money."

Rogers recommends producers look at what grows really well on their land in terms of forage then look at what the global opportunities are for that. Also consider how to add more value to the hay, such as mixing together two or three crops that complement each other



Nicole Rogers

to create a total mixed ration, and about the logistics, such as loading containers themselves.

## DAIRY

The dairy market is another opportunity. Some of the big global dairies are investing in land in developed markets to cultivate their own dairy feed. "I urge all farmers to look at this kind of trend and say, if I figure out what the silver bullet is for dairy production in my part of the world, are there farms that are

so committed to security of supply and continuity of supply that they will look at interesting arrangements with me?

"If you can offer as a farm an arrangement that doesn't involve a huge capital expenditure, I think, all the better," she adds. "It's just an awesome opportunity."

## SEED

A third opportunity is seed for forage. "It's not something that the big guys are really marketing, but because the animal feeding sector is growing globally, there's an opportunity to sell Canadian intel and production on forage to countries like Ukraine where they can grow just as great a forage as us," says Rogers. "There's really good business in that."

She admits it can take some time to scale up but over a five-year marketing program, a producer could easily work with a farm in another market and help grow their hay program. "We take for granted how good we are at growing hay and other crops here in Canada," says Rogers.

## LEARN MORE

Rogers will discuss the importance of crop marketing and crop future planning strategy on the farm including information on forage opportunities at the Canadian Forage and Grassland Association's annual conference in Guelph, Ontario, Nov. 14 to 16.

# A LESSON IN FARMING

At Lakeland College, an innovative student-managed farm is turning out business-minded young farmers ready for the job ahead

BY LISA GUENTHER / CG FIELD EDITOR

**N**early 10 years ago, April Thomi faced the same dilemma as many high school students the world over. She was trying to decide where to go to college.

April knew she wanted to farm. She had grown up on the Stanko family farm in southern Alberta, where her family had raised cattle and still grew grain on irrigated land, and for most of the farm kids in her area, it was a fairly simple decision to enrol in the ag programs at nearby Olds College or Lethbridge.

But then April attended an open house at Vermilion's Lakeland College, which is about 4.5 hours north of her home town. Lakeland offers two-year programs in crop technology and animal science technology, plus the option of doing an ag business diploma in the third year. April liked the campus, and the crop tech program appealed to her.

The thing that really sold her, though, was the student-managed farm, which is a core part of the second year of the crop technology program. The student-managed farm not only gives students a chance to get actual experience at things like harvesting and marketing grain, it is also a good place to learn how to work together, April says.

That's largely because it's a real farm, and it generates real revenue.

"This isn't a made-up situation," April says.

Today students in Lakeland's sheep, dairy, beef and crop programs all have a chance to run student-managed farms. But the farm got its start as part of Lakeland's crop technology program in 1990, where students apply the technical skills they learn in their other courses while running a farm business.

The farm is organized into several teams: operations, finance, production, marketing, stewardship and sustainability, communications, and research. And each team

has a manager, with the farm as a whole overseen by a student general manager and assistant general manager.

Importantly, students have to apply and interview for the management positions.

Faculty and farm staff act as mentors for the students as they plan crop rotations through to harvest, and as they market grain, manage finances, and work with peers, advisers, and others in the industry to make sure the farm is profitable and sustainable.

When it comes to the student-managed farm, "you want to make it the best year that they've had," says Craig de Jong, who grew up on a farm northeast of Vermilion.

Craig served as the operations manager in his second year at Lakeland, leading a team of five that managed harvest. It's a job that saw him working hands-on with everyone in his class as they took turns running combines, driving trucks, swathing and monitoring bins. Having his peers invested in the farm's success made his job easier, he tells me over coffee in the de Jongs' kitchen on a cool spring morning.

The student-managed farm isn't just about hands-on technical skills. Craig says the biggest take-away was the soft skills. For example, the student-managed farm gives students a place to learn how to work out conflicts with peers.

The college has a course in its first year on dealing with different personality types, and Craig confesses he did "head-butt" with a peer in his class, but they had the guidelines to work it out professionally. "At the end of the year, we had it all sorted out and it was fine."

The need for professionalism when dealing with team members, especially in potentially tense situations, is one lesson that stands out in Heather Stanko's mind, too. The youngest of the Stanko sisters, Heather was the production manager on the student-managed farm, and also worked for the de Jong family during harvest.

A hurdle that stands out in Heather's mind was the discussion around flax. The class "was pretty divided" on how to harvest the flax. Should they desiccate and straight-cut, or swath it? Some people's families had experience growing flax, but Vermilion was in a different climate zone, so they had to talk through which harvest methods would work.

There wasn't a clear majority. In the end, though, they tried both harvest methods, she says, and the results were fairly similar.



PHOTO: BY LISA GUENTHER

**With their Lakeland background, students like Craig de Jong return home having already managed farm operations. “You want to make it the best year they’ve had,” Craig says**

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#### **LEADERSHIP TRAINING**

Lindsay Halyk, the middle Stanko sister, was head of the finance team during her time on the student-managed farm. Her team’s big hurdle was creating a break-even cost and yield spreadsheet. There was a spreadsheet in place already, but there was no way to reconcile the numbers and to audit yourself, she says.

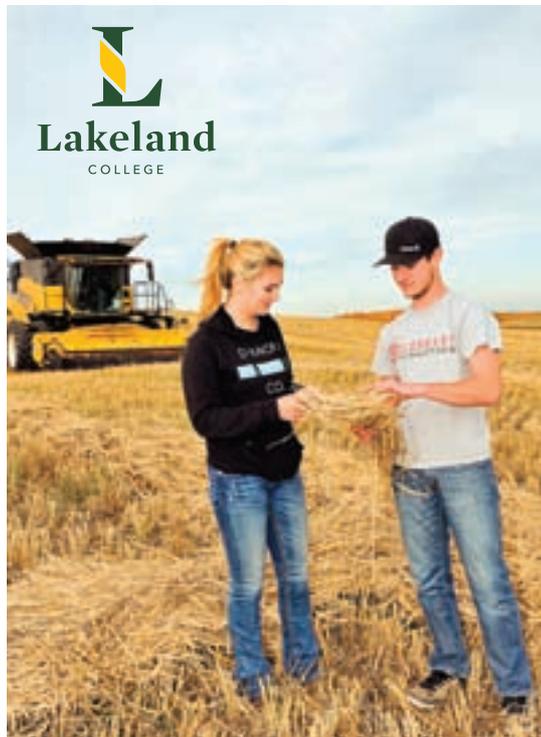
So the finance team created a spreadsheet that allowed them to correlate the numbers to invoices. It also broke down the costs for every field, showed whether the field was profitable, and calculated their break-even yields and prices.

Lindsay came up with the idea for the new system, then brought in the other four people on her team. Two worked on the spreadsheet, and the others worked on QuickBooks. Together they made sure the spreadsheet and QuickBooks records were up to date so the numbers synced.

“It’s easy just to do it yourself because you know what you’re doing and you can just get it done on your own time,” says Lindsay. But, she came to see, it’s good to “take a step back, get some help. Because otherwise you’re your own team.”

That was a sentiment echoed by all the alumni interviewed for this article. Heather says it was important to make sure everyone had an important job so they didn’t feel they were being short-changed. In the end, with the production team responsible for planning next year’s crops, it was relatively easy to divvy things up, she says. “Each person was responsible for a particular crop.”

**CONTINUED ON PAGE 18**



For the past year Heather has worked as a farm hand for Stamp Seeds in southern Alberta. She's done everything from combining to helping build the new seed cleaning plant.

In many ways, the leadership and teamwork aspects of her job at Stamp Seeds mirror her experience at Lakeland. For example, Rick Stamp is the CEO of the farm, and his three sons are each in charge of a different area of the farm. The farm employees work in different areas and report to different people, depending on the season and what needs to be done, in much the same way that students pitched in at Lakeland.

Heather says it's important to know what her tasks and responsibilities are, and to be given a chance to grow. During her time as production manager, she learned it's important not to hover over people while they're working. Now, as an employee, it's rewarding to have managers who give her support and direction, but trust her to work without looking over her shoulder all the time.

April was the inaugural operations manager at the student-managed farm. Generally her classmates were approachable and happy to pitch in.

"Sometimes if I had a tough situation, I had a couple of go-to people," she says. For example, if they had to haul grain over the weekend, she teamed up with a classmate from Manitoba who was usually around on weekends.

Being a manager of a farm team at Lakeland presents an interesting dilemma. "You're in a management position, but you're also a peer," says Craig.

That made earning respect one of the biggest challenges, he says. One day early in the year he was looking

for help, but couldn't secure it, even though he knew people were around. The next day he had a talk with his classmates, told them something had to change. He didn't have problems with people helping out for the rest of the season.

Getting things in order right off the start was "terrifying," says Craig, but important for anyone looking at management positions later on in life. That includes farmers who will be working with hired help. At interview time, Craig was hiring people for summer work. Because of his experience at Lakeland, he knows the right questions to ask, and how to deal with different scenarios that arise, he says.

"It's really easy to find drivers. But it's really hard to find operators. There's a difference," says Craig. For example, a combine operator will check the back tank, notice any problems, and react appropriately, he says.

It's not easy to manage people, Lindsay says, whether those people are peers in college or hired staff. And managing people who need to be assigned specific tasks, rather than picking up on what needs to be done, is challenging, she adds. Lindsay learned to motivate people by setting common goals that everyone can work towards. It also helps to figure out what people's strengths are, and put those strengths to good use.

That goes not only for employees, but for farm managers. Lindsay and her husband, Chad, recently moved back to southern Alberta and are farming with Lindsay's parents. Lindsay is strong in farm finance, so she's handling the books. Meanwhile, Chad is strong in mechanics.

Lindsay also learned communication is always important to make sure everyone's on the same page. Lakeland students take a communications class in their first year to prepare them for working on the student-managed farm. Initially some of the course content struck the students as kind of silly, she says. "But it's actually really important."

Although Craig had to have that talk with his peers one day, he tried to keep his leadership style peer-based. He saw himself as more of an organizer than manager, he says.

Organizing the class "was tough," Craig says. He was tasked with organizing about 30 people to start harvest as soon as they were back to school in the fall.

At first, Craig tried organizing teams and communicating by word of mouth. That didn't work, so he set up shifts and rules for running equipment. He printed schedules for the class. After all, defined shifts work well for many types of businesses.

But when it comes to farming, it's such a reactive occupation, "it's really hard to set out a schedule to do that kind of thing," says Craig. Fortunately, he adds, many of his peers were farm kids themselves, so they understood the need for flexibility.

Craig also put together harvest teams, which included a production team member who would keep

CONTINUED ON PAGE 20

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him informed. He also had a team member with experience on New Holland equipment, which they were running. Craig took into account class relations too, as he didn't want two people who didn't get along trapped in the combine together.

That format had unintended consequences. One team of good friends wanted to finish harvesting barley so they could hang out. They finished the entire field in one night. Craig knew they had a problem when

he got a message from them that evening, and realized they were still harvesting, even though he'd shut down for the night at his own family's farm. When he tested the barley in the bin it was at 17 per cent moisture.

"People need to make those mistakes to learn," he says. The school didn't have a dryer, so they figured out a game plan to rotate it and bring the moisture content down.

"It was an experience because I had too many buddies in the field all at once."

## Real people, real weather, real prices... the Lakeland project makes students take their textbook learning and apply it in the real world that farmers work in



### BUILDING CONFIDENCE

Lakeland College's program "gives you the confidence to be on a peer level with people in industry," says Craig. Students attend industry meetings, for example. And practical tasks, such as booking inputs, also help.

"It's second nature for most people who have been running the farm," says Craig. But booking inputs at college taught him what to double-check in the paperwork and who to talk to.

Craig's parents, Henry and Lillian, were impressed with Heather and the other college student they hired for harvest help. Between that experience, and what they saw their son learn, they would hire college students again.

"Most of them have a head on their shoulders," Henry says.

Each spring, students present their plans, the outcomes of their decisions, and the farm's finances in the college's theatre. They take questions from the audience, which includes teachers, parents, and others from the ag community. And while it's a celebration of sorts, anyone who has watched those final presentations knows the audience is not afraid to ask tough questions about the students' decisions.

In fact, Heather's own father put her on the hot seat, she says. It's a moment she recently reminisced about with the de Jongs.

"It's good to have that feedback as well, and that knowledge. Because no, we're not going to make perfect decisions and we can learn from those questions."

In fact, the student-managed farm also gave Heather a chance to talk farming with her parents. They talked about what she was combining, the weather, and the decisions the production team was making. On her father's recommendation, she also called another farmer for advice on growing wheat for silage.

As for Craig, he didn't have any public speaking experience before starting the program. By the end, he was confident speaking on stage in an auditorium. And afterwards, he gave an alumni presentation to Bret Lieberman, vice-president of North America for New Holland, which is an industry supporter of the program.

In the spring of 2016, after finishing his ag business diploma, Craig was farming with his parents full-time. In a vote of confidence, Henry handed over the reins for spring seeding, and Craig and his cousin planted 4,600 acres in 24 days.

## PLANNING AND ADAPTING

Lindsay originally planned to apply for the operations manager position. Finance manager was her second choice. But then she thought: "It would be really great to broaden my horizons, try something different."

That turned out to be a good move for her. As finance manager, she found she was really interested in the numbers. She learned about financial statements, break-even costs, and how to break the costs down per acre. She also learned how to incorporate those costs into marketing decisions, and she now handles the farm finances.

Both April and Craig took a third year to learn ag business. Craig thinks that extra year spared him years of trial and error on his own. This year he's setting benchmarks for cost-per-acre of different commodities on the de Jong farm. Those benchmarks

will allow him to work through potential crop rotations, take into account different weather scenarios, calculate equity and balance sheets, and see if cash flow might be tight.

The idea is to "leap ahead a year on the computer and try and figure out all those numbers" before they even put the crop in the ground, he says. Without going to Lakeland first, "never in a million years would I be doing stuff like that."

Lakeland gives students an overview of how farming works, says April, and resources to turn to if they need more help. It's not a one-size-fits-all situation, though. Students have to integrate their college experience with their farm and families afterwards.

And each family farm is different. Today April farms with her husband Bruce (they met at Lakeland). They have their own land,

about an hour north of Grand Prairie, but they work with his family. Bruce's family has a different communication style, and a different way of looking at the farm's future than her family, she says.

Teachers also encourage students to research and ask other people when planning the next year's crops, April says. "It's always good to know that farming is more than just going on a whim."

But perhaps the biggest lesson from the student-managed farm is adaptability, something learned from overcoming unexpected challenges.

The thing is, wherever you're farming and whatever equipment you're running, "you always have to learn that you can't plan things to a T," says April. "You're going to have setbacks and you have to figure out how to adapt and still work with people at the same time." **CG**



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# A better way to learn

What's the best way to choose a great mentor? Three young farmers share their thoughts on how their mentors helped them get a solid career start, and how other young farmers could benefit from a more flexible approach to on-farm learning

BY SHANNON VANRAES / CG FIELD EDITOR

**B**en Campbell thought participating in a mentorship program could probably provide fresh insight into how to improve his grass-fed beef operation. Or possibly it could expose him to new business practices and stronger management techniques.

So by the end of the year-long program, it came as a surprise to the Alberta rancher when he realized his mentorship experience had had an impact on every aspect of his farm, his life and his work, far beyond his original expectations.

It even helped him understand the importance of family on the farm.

Campbell, owner of Grazed Right, had gone into the 2015 Cattlemen's Young Leaders program with goals and a roadmap in mind, although he now believes it was his flexibility and being open-minded that allowed him to get the most out of the mentorship program, which paired him with Dylan and Colleen Biggs at TK Ranch near Calgary.

"I sort of had two mentors, they were a married couple, so I got mentorship on marriage and how to manage stress as well," says the 32-year-old husband and father of three.

"It's very difficult running a new business, and we just had our third child," he now recognizes. "Having small children and a new business — and animals which are unpredictable and weather which is unpredictable — it can be very stressful."

Campbell didn't think stress management would even come up in their discussions on grassland management or in their talks about pasture elevation, but he is glad he found a way to take advantage of it when it did.

"It was something that I didn't think I needed help with," says the rancher, but he came to see that he was taking his stress home with him. Campbell had originally planned to become an engineer before launching his own enterprise. While business management, goal setting and financial planning were at the forefront going into the mentorship program, Campbell emphasizes that it was the ability to think outside the box and re-evaluate the mentorship plan that was crucial to making the whole experience a successful one.

In fact, it turns out that a lot of the benefit of a good mentorship program hinges on the key things a mentee can do to enhance the experience and become a better farmer — and person.

"I would say, have a plan and be willing to change that plan," Campbell says. "You need to have a plan to have some direction. Otherwise you're going to waste your time."

"But you also need to be willing to change your plan because you're going to have a whole bunch of new stuff that you wanted to cover, and other stuff that turns out wasn't that important."

On the other side of the country, Adam MacLean took a more informal approach to being mentored, often looking to those who had hired him for guidance. However, the newly minted shepherd agrees that having a plan is crucial for anyone thinking about working with a mentor, as is being flexible enough to change direction.

Being able to challenge your own assumptions about what you want is absolutely crucial to fully benefiting from a mentorship, MacLean says.

When MacLean started looking at a career in agriculture, the self-described ecological entrepreneur didn't have any inkling he'd eventually end up on Prince Edward Island with a flock of sheep. If not for the guidance of mentors, he could have tried a sub-tropical market garden.

"I've experienced a number of different types of agriculture over the last six, seven years," says MacLean. "I didn't start with sheep, but there was just a certain point when I realized I wanted to run a grass farm, a pasture-based livestock farm using holistic management."

It was a point he reached with the help of mentors, as they worked with him to evaluate and challenge his ideas about what he really wanted out of farming. In the early years, MacLean thought market gardening would be the way to go and he even spent time on horticulture operations in Australia, Thailand and the Northern Fijian Islands before returning to Canada's East Coast.

But after some guidance and several months bouncing thoughts off his mentor, it seemed right to change his focus to grazing.

MacLean says all of his experiences helped him start honing in on the type of farm business he wanted to



“It’s a big commitment of time for everybody,” Ben Campbell says of his mentorship experience. But there are benefits for every aspect of the farm, and for your farm relationships too

PHOTO CREDIT: GRAZEDRIGHT.COM

invest in, but it was when he met John Duynisveld that he got down to the nuts and bolts, committing to livestock management as his path forward.

“Once I realized that that’s what I wanted to do, well, that’s how I met John, my mentor and my former employer,” MacLean says. “He was doing a delivery run to Halifax one day so I called him and started pestering him with a pile of questions about his operations and then he offered me a job. He was looking for someone to take on some responsibility there so I went for a visit. We talked things through and, yeah, that is how it all began.”

While MacLean doesn’t remember the word mentorship actually being used in the lead-up to him joining Duynisveld’s team at Holdanca Farms in Nova Scotia, he says it was obvious from the beginning that mentorship would be an important aspect of the arrangement.

“I made it really clear that my primary motivation for taking on the job would be the experience as much as the pay. So it was all really clear from day one,” MacLean stresses. “I wanted to learn as much as possible and in my experience I learned that I learn best by just doing it.”

But none of it would have worked if he and his mentor hadn’t been able to have a personal connection.

Meanwhile, Tom Lobsiger was studying equine management as part of his bachelor of bio-resource

management degree at the University of Guelph when he discovered mentorship, and he agrees that having the right mentor is absolutely one of the most important factors in determining how successful a mentorship will be.

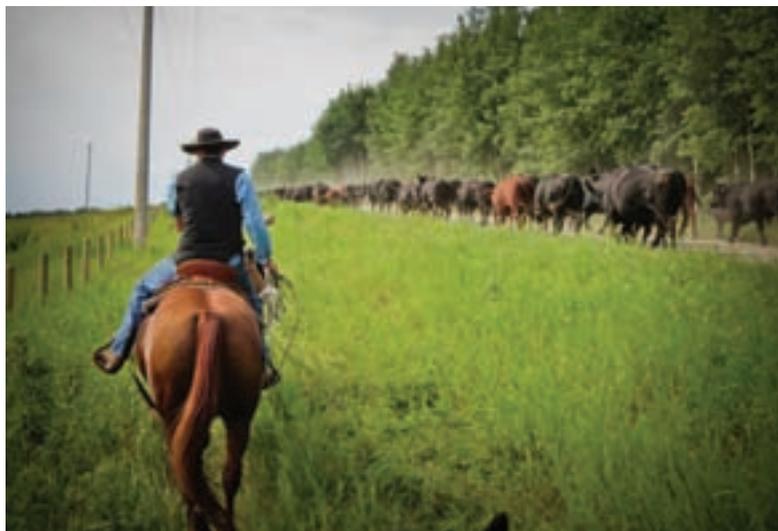
“Mutual trust and respect are the biggest things for sure,” Lobsiger says. “Having an open mind, and acting respectful towards your mentor is a good starting point. If you don’t trust or respect your mentor to be honest and respectable, you’re not going to believe what he’s saying. The same goes for your actions as a mentee. If you don’t treat your mentor as such, you will simply not get exposure to the same type of learning environment. Why should he go the extra mile to help you understand something, when you’re not really listening in the first place?”

Like Ben Campbell, Lobsiger’s mentor was Dylan Biggs at TK Ranch. However, it was Farm Management Canada’s now defunct STEP UP program that brought them together (before a funding shortfall resulted in the program’s closure in 2013).

Lobsiger adds that even a good mentor might not be the right fit for every mentee.

“You do have to be careful who you choose as a men-

CONTINUED ON PAGE 24



Working with a mentor from outside the family, Campbell says, will make you ask hard questions about all the times you do something “because that’s how Dad does it.”

tor. If you get paired with someone who is hard to get along with, is doing something you are not interested in, or doing things in a way you do not agree with, you’ll have a tough time learning positive things,” Lobsiger says. “Maintaining a good relationship with your mentor is the most important thing that will determine how well your experience as a mentee will turn out.”

In formal programs like STEP UP, where mentees may stay on a mentor’s farm for an extended period of time, learning how to get along with other employees and the mentor’s family is also an important part of the experience, which helps prepare young farmers for the challenges ahead.

But with the benefit of hindsight, Lobsiger believes he could have gotten more out the time he spent living and working on the TK Ranch.

“(Dylan) had a habit of bringing in people from the WOOFing program. Some were nice, some weren’t. He also had four daughters, some of which were easy to get along with and others not so much. In a sense, there were times when it was far from a one-on-one learning environment,” he says. “If I knew then what I know now I might’ve had more positive interaction with the people besides Dylan.”

That said, the owner of Okanagan Horsemanship emphasizes that the mentorship was a success and a big part of what allowed him launch his own business in 2015.

“Dylan was a great mentor. He had a very patient and open personality, which are always great qualities to have yourself and also makes it much easier to discuss things and learn the hows and whys of something,” Lobsiger says. However, looking back, there was more he could have gleaned from other participants.

“I wish I would have been able to return for a third season,” he adds.

In the cases where mentorships fall apart and ultimately fail, Ben Campbell believes it’s almost always

because there is a breakdown in the relationship between the mentor and the mentee. Usually that arises because either the mentor or the mentee don’t or can’t commit the amount of time actually needed to achieve goals, he says.

In Campbell’s case, he often stayed over at his mentor’s farm when visiting to get the most out of the 700-kilometre round trip. But even so, not everything was face-to-face. Campbell and his mentor also relied on texting, email and phone calls to fill in the gaps between visits and keep things current and up-to-date.

“You can’t just meet four times a year for a full day. It’s way better to talk via text or phone or email five times a month or whatever for 12 months,” he says. “It is a big commitment of time for everybody.”

One final piece of advice on cultivating the mentor/mentee relationship, “Maybe buy lots of whiskey or something — my mentors both drank scotch,” Campbell says with a laugh.

MacLean says his ability to not just get along with, but also connect and trust his boss and mentor led to a second year in their arrangement.

“I wouldn’t have stuck around for a second year if we didn’t get along,” he says. “I mean, right now I’m in contact with him two or three times a week. Just texting back and forth questions.”

But the relationship has also evolved, after researching countless breeds of sheep for his own operation, MacLean has now been able to offer advice and guidance to his mentor, opening up a two-way street with benefits and growth for both parties.

“Now that I have this experience, this training, we work together,” he explains, noting that after reviewing his business plan his mentor picked up some of his own ideas, incorporating them into his business along with a few extra sheep. “I developed a business plan for myself and then gave it to him to review and provide critical feedback, and you know, I guess his vote of confidence in the business plan came when he decided to expand his own flock as well.”

All three young farmers agree that a good mentorship will also outlive any formal agreement, leading to life-long connections and friendships, helped along by new methods of communication and social media.

And while it might seem like the short road to seek mentorship from someone in your own family, Campbell stressed that it was having someone outside the family to challenge his thinking that made his mentorship so valuable. While a lot of knowledge is passed on through farming families, from one generation to the next, that knowledge can also bring baggage and entrenched ideas about business, he says.

“It makes the relationship a professional one,” says Campbell. “I know that I can’t give advice to anyone that’s related to me, they’d tune me out immediately, but someone else can give advice to them easily.”

The idea that things are done a certain way because

that's how they've always been done is one that regularly takes hold in farm businesses — unless producers actively challenge the mindset, he adds.

"You hear things like, 'that's what my dad and that's what his dad did and we calve in March,'" Campbell explains, adding more questions need to be asked in any successful farm business. "Well, why do you calve in March? Have you done a cost prediction analysis? Have you done a financial analysis? Why you should calve in March or April? Why do you keep replacement heifers? Why do you keep replacement heifers instead of buying them? Did you do a cost analysis of buying them versus keeping your own? And people almost never do that. So you've got to get experience outside of your own family or else you're not going to be doing things properly and your ranch is going to fail."

Going one step further, MacLean adds that it can also be helpful to look outside of agriculture altogether when seeking mentorship.

"I have a little network of mentors I'm developing. I've got farmer mentors such as my former employer, but I'm also really looking for people outside of the farming community... people from other business backgrounds," says the shepherd. "I think that's really important. We can't get too stuck in our silos pretending that farming is different from every other business. Obviously, yes, it is different in a lot of respects, but especially when farmers are taking that step to start a business, I'd recommend that we look outside of agriculture as well for mentorship."

Even looking for a mentor engaged in a different type of agriculture can help a young farmer cultivate new ideas. For Lobsiger, seeing the ins and outs of the cattle industry helped steer him towards an equine enterprise, one where he trains young horses and coaches riders.

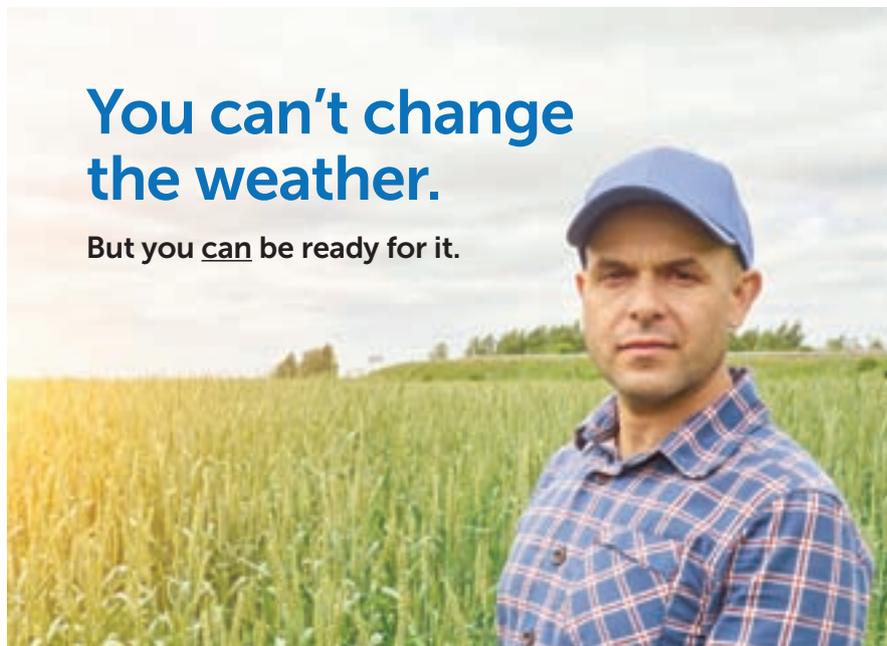
"We talked a lot about the challenges a small beef producer faces, especially consumer choices and regulatory challenges. In a sense, he opened my eyes to how the beef industry works, before I actually started a cattle business of my own," says Lobsiger. "Maybe partly because of that, or partly because I'm a horseman first and a cattleman second, I ended up much more in the horse industry than in the beef industry."

But all of the mentees urged other young or new farmers to give mentorship an open

mind and investigate the options that exist, or reach out to someone whose business and farming skills they admire.

"It's so valuable, especially for someone's that's new to agriculture — we need to get new blood into agriculture," Campbell says

"There's nothing wrong with old blood, but there's a lot of people where the next generation doesn't want to work on the ranch and you have to get someone new in. And it's so difficult to just do that on your own. Mentorship can help with that." **CG**



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# Growing professional

Across the country, young farmers like Holly White and Kent Sereda are building respect for a new generation of business skills

BY ANGELA LOVELL

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**N**ewlyweds Holly White and Kent Sereda were already quite good at tackling what you might call their legal due diligence, updating their wills and preparing marital agreements.

Then they realised they should go even further.

This was the right time, they decided, to review the whole succession plan for the fourth-generation family farm that they would one day be taking on.

Yet it wasn't something that Kent or his parents Judy and Ron relished the thought of doing, because Sereda Farms had been in almost continuous transition since 2005, and they were getting tired of the process.

"We had been in transition basically since my uncle decided to sell out in 2005, and then in 2010 we started the succession process to officially bring me into the company," says 33-year-old Kent. "We had been in a constant period of change and adaptation and metamorphosis of the company. Mom, Dad and I were all just sick of that kind of stuff and wanted to get back to the business of farming.

"Then, when Holly and I married, of course she had some questions about how things were set up and where everybody stands. So it was an opportunity for us to go back and revisit all the details. It prompted us to really clarify what we were doing, and what the succession process was."

Holly, 32, had grown up on a mixed farm in Saskatchewan, and as she prepared to quit her job as manager of agricultural services for the County of Newell, her business and administration background, as well as her outsider's eye view, helped her identify some areas of the farm operations, management and succession plan that needed some work.

"When you marry into a farm, you're marrying into a family business, so there's a lot to determine... where your place is and what your role is going to be within the organization," says Holly. "Kent already had a succession plan in place but it needed updating, and it wasn't totally complete."

## CAN YOU SURVIVE THE HIT BY THE BUS?

In her former job, Holly had been responsible for delivering programs, hiring employees, updating job descriptions, and developing safety protocols, operational processes and procedures.

She immediately had questions, particularly about what she calls the "hit by a bus" scenario.

"I started asking Kent questions like, well, you take care of this, and your dad takes care of this but what happens if one of you suddenly disappeared, if some tragedy struck? Do you have the processes in place to be able to carry on?"

"One of our goals," says Holly, "is to be able to survive the being hit by a bus test by having all our processes and procedures in place and documented."

Across the table, the Seredas could see that Holly was raising important questions.

"I knew we needed to do a better job at things, but I didn't feel prepared enough. I didn't know how to go about doing things better," says Kent. "Holly brings a professional workplace background to the table, so it was natural for all three of us to rely on her as a facilitator. My parents have always been open with the business side of things with me, and they're happy to do that with Holly as well.

"We feel like we're doing these things proactively instead of reactively. Holly facilitated those soft issues that I would have difficulty talking with Mom and Dad about. She does a better job of handling those things."

## A HISTORY OF CHANGE

In 1940, Kent's grandfather had brought a truckload of fresh fruits and vegetables to convince his family to resettle from southwest Saskatchewan to Alberta. Originally, the family were set to relocate to the Peace country, but when Grandpa came out to Rolling Hills, about 45 minutes west of Medicine Hat, he knew that even if they had a crop failure, the family could irrigate a garden and feed themselves.

CONTINUED ON PAGE 28

When he passed away in 1969, his two sons had to drop everything and become full-time farmers at the ages of 16 and 17. Ron eventually bought out his brother's share of the farm, and at 64 is still active in the operation, as is his wife, Judy, who acts as chief financial officer.

The farm has changed a lot over the years. After Kent completed his ag diploma program at Olds College and came back to the farm in 2004, only a fifth of the land was in cash crops and the rest was in pasture or forages for beef production.

Since then, the family has gone completely out of beef production and added irrigated row, seed and specialty crops, such as corn, wheat, black beans, pinto beans, alfalfa seed and certified canola seed.

"It takes a lot of drive to change," says Kent. "It was tough in our operation. But you have to keep your eyes open because I have seen a lot of biases, like looking over the fence and saying to yourself, we'll never do that. You have to keep your eyes open and jump on opportunities when they come."

Now, one of the couple's priorities is to formalize their business methods, and they're exceptionally clear at articulating how this formalization plays into their larger goals.

"It seems like we're just laying down a foundation

for success," says Kent. "We're not a large operation but we desire to grow the business. Competition and availability of land is getting tight, and we have to rethink what we're doing.

"We want to formalize our business practices so that we're making well-informed decisions. We want to know financials upside and down, and to use that to help our decision-making. We want personal and financial freedom from the business, opportunity for personal pursuits, and a good quality of life.

"Although we very much want to grow the business, we need to maximize what we're doing here currently."

One area of focus is capital efficiency, because relative to the size of their operation — around 1,200 acres — capital purchases are their biggest investment decision.

"Only one or two of those decisions made wrongly can damage a business, so we want to be confident going forward that we understand the details of those decisions," says Kent. "For example, if an opportunity arises to purchase land, we want to know exactly what we're going to have to compromise, and what the financial picture looks like if we do that, so we are making a sound business decision rather than an emotional one."

**WORKING ON MANAGEMENT SKILLS**

The couple are part of a growing trend among young producers who want to get advanced business management training. They are actively working on their business management skills — Holly is involved in the Bridging the Gap: Step up to Succession program offered through Farm Management Canada, and both she and Kent are taking the Agri-Food Management Excellence's

**“ We want to formalize our business practices so we’re making well-informed decisions,” says Kent. “We want to know our financials upside and down.”**

CONTINUED ON PAGE 30





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# Summit on Canadian Soil Health 2017

**S**ummit-17 will have implications for all Canadians.

The first purpose of this Summit is to establish the cost for soil degradation where we can, and to set a costing agenda where we presently have too little information. Those costs are particularly important to justify and implement policy that will contribute to soil care and protection.

While cropland soil degradation has cost consequences for food production and the economy, it also brings costs for water quality and quantity, for lost soil carbon to the atmosphere and for natural heritage lands that are impacted. These costs accrue and

affect everyone beginning with farmland owners and operators.

The second purpose of Summit 2017 is to identify the means to overcome degradation and improve soil so food production can be reliable and sustainable. Where there are technology gaps that inhibit progress on this front, those gaps are to be identified and prioritized for research.

The roster of speakers and participants assembled for Summit 2017 include world-class scientists. Some have experience with the Food and Agriculture Organization (FAO) of the United Nations, the United Nations – University Institute for Water, Environment and Health, the World Bank and the Canadian

International Development Agency. All have distinguished careers in soil and related sciences, and are supported by some of our best in academia, extension and the agriculture industry.

Relevance to real issues and solutions will be ensured through participation by a farmer panel from across Canada. They represent grain farmers, ecological farmers, grassland farmers, vegetable farmers and farmers who share their space with nature.

All speakers at this Summit are committed to raising the bar on soil care.

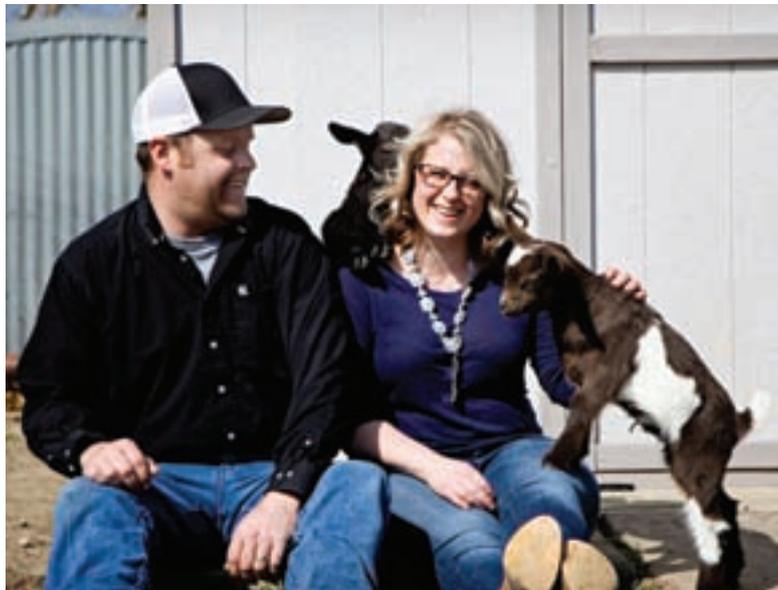
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Working toward their personal goals and building time for relaxation into their days are key objectives that also have to show up in the business plan, say Kent and Holly.

CTEAM (Canadian Total Excellence in Agricultural Management) program.

Both Bridging the Gap and CTEAM are not only helping them learn how to approach some of the issues they need to address on their own farm, but the programs also inspire them to carry on with the process.

“I had always wanted to do the CTEAM program but I just didn’t have the motivation,” says Kent. “It’s helped tremendously to keep us encouraged and keep our momentum. We really want to keep at it and make sure the business transforms, so a big part of CTEAM is giving us confidence that we are doing things right and maintaining our enthusiasm to keep going with it.”

Part of that enthusiasm comes from the other participants in the programs and from the valuable networking opportunities they have had through attending various conferences, such as the Agricultural Excellence Conference in Calgary, Canadian Young Farmers Forum in Ottawa, and the International Farm Management Association, which is coming up in Scotland this July.

“Sometimes it seems counterproductive to take time off to attend a conference or a workshop, but in the long run, it’s so valuable for so many reasons. It’s not just that you’re going to learn a new skill or identify things that you have to work on, it gives you an opportunity to network and meet other people in your industry,” says Holly. “Sometimes the conversations you have afterwards are more valuable than what you learn in the conference or in the course. It’s important too because sometimes you need to take a step back and recharge and take time off. There’s almost always something at a conference or course that inspires you, and you learn a new idea, or you meet somebody who’s done something fascinating on their farm.”

Defining roles and responsibilities for everyone is something the family has struggled with. It may be easy

for an individual to define what his or her current role is, but it’s not nearly as easy to figure out they want that role to be in 10 or 20 years time.

One of their first CTEAM exercises helped them out with this process, when Holly and Kent had to write a magazine article about their farm after they had accepted a fictitious award 15 or 20 years from now.

“After we did that, we came back and got Mom and Dad to write down where they see things in 10 years,” said Kent. “It was interesting. It was what I had hoped. Mom said she wants to be retired, she wants to hand off the bookkeeping to Holly, and Dad said he wants to help out when he’s needed. He wants his own corner of the shop where he can tinker with stuff... he really came out with what he wanted to do. So that exercise helped us to figure out where we are on the line of transformation into the future, where Dad wants to slow down and I’ll start taking over things.”

“We’ve been really lucky to have done both programs together; they’ve been really a great complement,” says Holly. “It’s allowed us to look at our operation and figure out what we are doing well and what we are not, and to make a list of goals and how we’re going to achieve them. We’re starting to get a plan in place for what we want to tackle next.”

## LOTS STILL TO LEARN

What’s next is to learn to fully understand the financial statements and to know how to translate that knowledge into making sound business decisions, rather than emotional decisions. “Kent’s mom has been doing the books and financial stuff and that’s something I’m transitioning to taking over,” says Holly. “One of our main goals with CTEAM is to figure out how to generate an accrual report to make decisions on. How do we calculate all the different ratios and what does that mean when we’re making purchasing decisions. That is something we really want to get better at.”

The couple is also developing a strategic vision for the future. “Farmers wear so many hats that it’s hard to find the time to focus on the business aspect of the farm, because even though it’s vitally important to the organization, it’s hard to carve the time out to do that or gain the skills they need,” says Holly. “We wanted to actually take the time and prioritize, and focus on things like standard operating procedures and defining job roles and responsibilities based on everyone’s skill sets and aptitudes.”

The family is also starting to hold monthly business meetings to discuss where the farm is at, their goals and vision. Holly and Kent feel fortunate that their parents are so open and willing to discuss all the parameters that come with succession and management planning.

“We are very lucky,” says Holly. “After talking with so many young farmers, not just the people in my group but the people that we’ve met at conferences, we’re way ahead on that aspect. A lot of people are just so afraid to have those conversations because they are so awkward and

can be very emotional at times, but they're so important to the business and to good family relationships, so you can still all sit down for dinner together."

The family is all onside when it comes to improving communications. "When both sides are communicating you're more than likely on the same page in the first place," says Kent. "When you're not communicating, you're making assumptions about how the other party feels or what they're thinking, and that's where it goes wrong."

#### THE CONTINUOUS LEARNING PLAN

Kent and Holly admit that learning about management isn't a chore for either of them, and a formal, continuous learning plan is something that they are totally committed to because they have already seen the huge value that the programs they are involved in has brought to them and the farm.

"We haven't formalized it yet but we plan to put down on paper that we are required to do a certain amount of off-the-farm learning every year," says Holly. "I came back to the farm after college and I thought, is this it? Do we just stop learning from here? So I started going to conferences and when you get back out there and start listening to speakers, you realize how much of a benefit it is. It doesn't mean that you learn a lesson, you come home and just apply it and it works. It affects your overall view of your operation. You make a thousand decisions every quarter, and if you're influenced to do something in a better way, it helps."

"It's absolutely something that we are talking about because not only do you have to plan for what skills you want to develop, you have to budget for it," says Holly. "These programs that we've been doing have brought up so many things that we need to learn to do and, obviously, we can't

do them all at once. So, if a conference comes up you can assess if it fits with your overall goals. If you have that written formalized plan about the areas that you want to learn, it helps you make better decisions to make sure you're getting the most out of your time and money."

Holly has a degree in agricultural biology and is a certified crop adviser. She had already become a member of the Canadian Association of Farm Advisers, and has been so inspired by their own succession experience, she hopes one day to be able to help other farm families with the process as a professional farm adviser. "It's just a dream at the moment," she says. "I have enjoyed this process so much that I would like to see how this process goes for us to the point where I'm confident that we are making headway, and then I'd like to work to help other people achieve a successful farm transition." **CG**



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# Back in business

When Brad Osadczuk lost his entire herd to TB, he discovered which attitudes and skills really are essential for starting over

BY LAURA LAING

**B**rad Osadczuk's ranch at Jenner, Alta., is eerily quiet in what would normally be the start of a very busy calving season. His pens are empty, not a cow is in sight.

This calving season, Osadczuk is a different kind of busy. He must find a new normal, since losing his entire herd to a destruction order from the Canadian Food Inspection Agency (CFIA) following a positive tuberculosis (TB) test when he exported animals to the U.S. last September.

We meet at his kitchen table, and when I ask Osadczuk how he is feeling about the cattle business, his response is not what I might have expected. Instead, it's a show of resilience, reflecting the spirit that is the Canadian cattle industry.

Maybe it could seem boastful to say that. But it also feels true.

"I am excited," says Osadczuk. "I feel very positive about the potential of the Canadian cattle industry."

It's quite clear that Osadczuk isn't giving in, or feeling sorry for himself. He says there is no time for that, and if it had to happen, he would be happy to be the fall guy again if it means helping to sustain the industry.

"Sure, it's devastating to lose a herd that has taken you years to build, onto a truck to be destroyed, but it is a small price to pay for the bigger picture. Without a TB-free environment within the Canadian cattle industry, we would not have access to export markets," says Osadczuk. "And no, it's not perfect. It is going to take me at least 10 years to get things all smoothed out again, but without open markets for our cattle, myself, my neighbours and the industry will go broke.

"We had to eat our way out of the BSE crisis and a lot of ranchers are just getting back to solid ground. This TB would have been the last straw if it closed our border. That is why I would be happy to be the fall guy. If they had saved all of my cows and they closed the border, how bad would that be?"

Although there are 21 states in the United States on a controlled status for TB, Osadczuk believes that not having a TB-free status would mean closed borders for the Canadian cattle industry, similar to what occurred during BSE, when he says the U.S. was not BSE-free, but still closed the border to Canada.

"There are a lot of people mad about the TB-free status in Canada, but without it, we don't have a cattle business," says Osadczuk.



PHOTOGRAPHY: LOREE PHOTOGRAPHY



**“Sure, it’s devastating to lose a herd,”  
Osadczuk says of the destruction  
order that claimed his 1,200 cows and 50  
bulls. Now, though, he’s climbing back.  
“I believe in what we do.”**

In total, 51 farms in southwestern Saskatchewan and seven in southeastern Alberta were affected by the quarantine, which resulted in the destruction of 10,000 head of cattle. For Osadczuk it meant the loss of his entire herd; 1,200 cows with calves at side and 50 bulls.

Despite the loss, Osadczuk doesn’t want other producers to be scared. “I want people to really understand the very minimal risk that the disease really is. Of all the cattle tested, there were only six that tested positive for the disease, and although currently there is no vaccine available for the prevention of TB, I am confident that with the protocols in place in areas formerly affected by the quarantine, and with continued sound management practices, this incident is behind us.”

Osadczuk, like any good rancher, knows his cows. So when the test came back TB-positive for cow 109Y on September 22, 2017 from a slaughterhouse in the U.S., he knew exactly who she was — a home-raised heifer, even though she, like the rest of his cattle, had showed no signs or symptoms of the disease.

The last outbreak of bovine TB in Can-

ada was an isolated incident in the Okanagan region of British Columbia, and prior to that, in 2007 in Alberta and B.C. from a bull that lived in both provinces, which led to the slaughter of almost 500 cattle.

As for the cause of TB, which has placed the small rural town of Jenner, Alta., on the map, the trail has gone cold. What initially was thought to have been spread by elk has been ruled out, as this particular strain has never been seen in Canada.

There is speculation that a bird feeding on an infected carcass in Mexico may have carried the strain with it when it migrated back to Canada.

“To think that a bird defecating on a calf and a mother cow licking it off and ingesting the virus on my ranch here in Jenner seems like incredibly bad luck,” admits Osadczuk.

Bad luck or not, those who know Osadczuk say it’s lucky TB chose a cowboy with his mettle.

“If TB had to show up, it picked the right rancher,” says Bob Lowe, chair for the Alberta Beef Producers. Lowe accompanied Osad-

**CONTINUED ON PAGE 34**

czuk in testifying to Parliament's Standing Committee on Agriculture to shed light on the crisis that he and his fellow ranchers were facing: thousands of unsold calves that they were unable to move or sell, no income and insurmountable feed expenses for cattle that, in the end, would need to be destroyed.

"Brad stood up for the bigger picture," says Lowe. "A cowboy in Parliament doesn't happen every day. He was a great voice for the industry and brought better understanding, and most of all, action."

Lowe says that while it would typically take six to 12 months to process funding support from the AgriRecovery program, in the TB case it took only 40 days. And this funding has put Osadczuk back in a position to start over.

**STARTING OVER**

Not many people actually get the chance to start over from scratch, based on what they know now versus what they knew then, but according to Osadczuk he wouldn't and won't change a thing.

"I like what I had done and how I had done it," says Osadczuk.

However, what this experience has offered Osadczuk is the chance to reflect on how he has been able to pull through this crisis. He offers the following advice and insights that he feels are critical to business survival, and not just in the business of cattle.

The first might surprise some readers.

"Understand the importance of relationships," Osadczuk says. "And make time for networking."

Osadczuk advocates getting involved off the farm. He's been active on various industry boards and organizations, he is a director with the Alberta Beef Producers and he also serves as a director for Bow Slope Shipping Association and for both Community Pasture Associations in his area, as well as being a councillor for Special Areas. He is also active in industry programs, including

Verified Beef Plus and the McDonald's sustainable beef project.

Osadczuk says the support of his wife Elaine, as well as other industry peers, pulled him through the darker days of the TB crisis.

Next, Osadczuk says, "Pick the right partners. Know your customers, and let them know you."

When Osadczuk decided to jump into ranching full time, he made a point of driving to each and every one of the buyers of his cattle as he felt that getting to know his customers and letting them get to know him was critical to his operation and bottom line. These relationships resulted in non-stop phone calls of support when the TB news hit.

"Every auction mart that I have ever sold or bought cattle from and with, the breed associations, Alberta Beef Producers... I was flooded with support," Osadczuk says.

"Get after the business of your business."

One of the mistakes he feels a lot of people make is in thinking that their job is to do the chores or "pound the posts." Osadczuk has the philosophy of spending time in the areas of what is going to make money, always asking himself the question: "Can I make more money by getting out there and taking care of my business and having someone that needs the job do the chore tasks, while I can be getting out in the industry, rolling every rock over and learning new ways of doing things, fostering relationships, and marketing my cattle?"

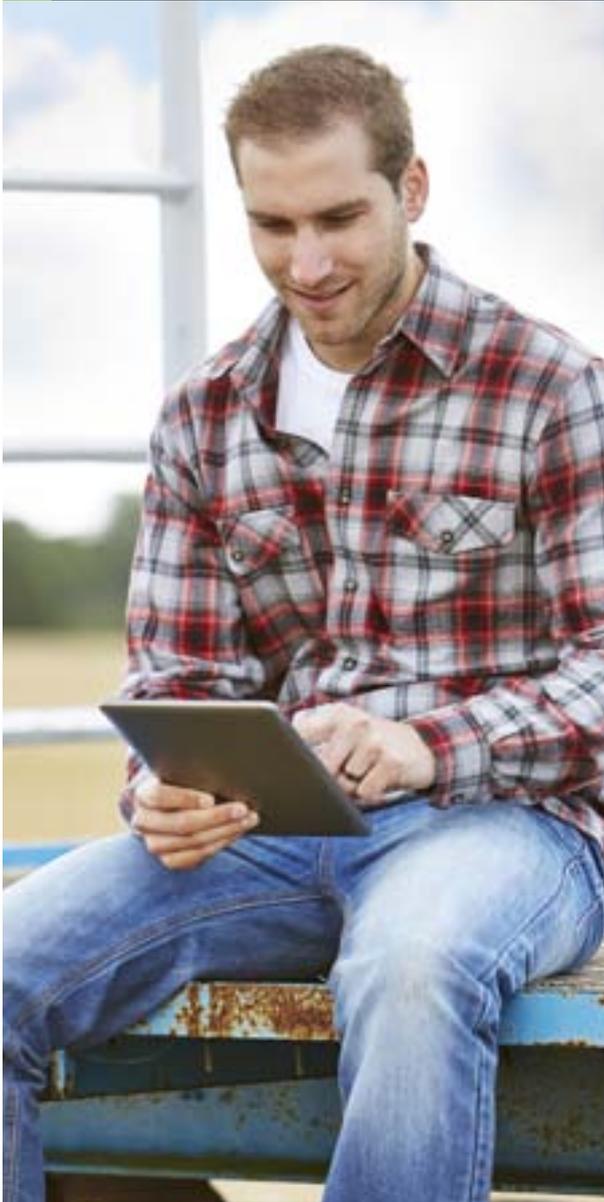
Then, Osadczuk says, "Be transparent and live your business in the bigger picture."

Osadczuk says that when the CFIA told him he needed to figure out what he would tell his neighbours when their trucks pulled into the yard, he says there was simply nothing to figure out. For him, transparency is the only way to do business.

**CONTINUED ON PAGE 36**

Brad Osadczuk and the family dog Ariel enjoy a moment in the yard of the Osadczuk ranch. Osadczuk's horses, dogs and cats were excluded from the destruction order, a change that was made to the regulations as a result of the recent TB event, as there has been no recorded transmission of the virus from bovine to horses, dogs or cats in CFIA recording history.





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Brad Osadczuk traces for writer Laura Laing the steps he and other farmers are taking to climb back from their TB destruction orders. Teamwork, openness and a positive attitude will be vital.



## AgriRecovery\*

The AgriRecovery Framework is part of a suite of federal-provincial-territorial (FPT) business risk management (BRM) tools under Growing Forward 2. AgriRecovery is an FPT disaster relief framework intended to work together with the core BRM programs to help agricultural producers recover from natural disasters.

The focus of AgriRecovery is the extraordinary costs producers must take on to recover from disasters. Extraordinary costs are costs which producers would not incur under normal circumstances, but which are necessary to mitigate the impacts of a disaster and/or resume farming operations as quickly as possible following a disaster. Further, AgriRecovery is intended to respond in situations where producers do not have the capacity to cover the extraordinary costs, even with the assistance available from other programs.

Natural disasters which may be considered under AgriRecovery are those resulting from a disease, pest or weather-related event, such as flooding or a tornado. Events which are cyclical, such as pricing cycles, or part of a long-term trend, such as a change in markets, cannot be considered under AgriRecovery.

\*Reference Agriculture and Agri Food Canada

“We are all in this together; this isn’t about my herd. This is about my neighbour’s herd, their neighbour’s herd and the welfare of the industry as a whole,” says Osadczuk.

“Rally support when needed,” Osadczuk then says. “Take a team approach.”

Osadczuk was quick to rally with those also affected by the TB quarantine. He, along with 18 producers also on the destruction order, got together immediately at the local community rink and made the easy decision to work together and navigate through the crisis, forming three boards: one for legal, one for compensation and another board for media. This resulted in one voice and the ability to negotiate and achieve action more quickly.

According to Osadczuk, although not everyone is bouncing back at the same speed, the healing has begun for those affected by the quarantine and destruction ruling.

“Love what you do and take one day at a time,” he also says.

Osadczuk says having a genuine love for what you do is what will carry you through the tough times. But keep balanced. He found it’s important not to look too far into the future or you can get overwhelmed and discouraged.

That’s advice Osadczuk says he will take himself as he starts the process of cleaning and disinfecting his facility to meet the requirements of CFIA, re-building his herd and getting back to the business of what he loves — cattle.

So, has this whole episode made him more worried? “Not even a bit,” Osadczuk says. “It’s what I love to do. I believe in what we do and I wouldn’t change a thing.” **CG**

- PG. 40** “Farmscaping” offers new chances to make a profit from sustainability.
- PG. 42** These farm-friendly apps promise big soil gains.
- PG. 44** To USDA’s Ray Archeluta, it’s really about soil “health” not soil “quality.”

# CROPS GUIDE

## The sustainability conundrum

In the Western world at least, there’s a big demand for ‘sustainably sourced’ products. What that means, or receiving a premium for them, is another matter

BY RICHARD KAMCHEN

**T**he food giants want it on their labels, and in the annual reports and other information they send to their investors. PepsiCo, Walmart, General Mills, McDonald’s, Unilever, Sara Lee and Nestlé are among those citing the years 2020 or 2025 as targets for achieving their goals of buying “sustainably sourced” products.

But what does that mean exactly, and how do those sources — farmers — show they are using sustainable practices? And if they are, will they get a premium?

“This movement towards sustainability is here to stay,” says Erin Gowriluk, government relations and policy manager with the Alberta Wheat Commission.

“It’s all about trying to satisfy that consumer demand,

or perceived demand, for something they feel is more sustainably produced,” says Paul Thoroughgood, a Saskatchewan farmer and Ducks Unlimited agrologist who’s also been deeply engaged in the crop sustainability file.

One factor behind the movement is the desire to avoid bad publicity about real or perceived poor production practices.

“NGOs (non-governmental organizations) are going to put something on the front page of the *New York Times* about our products,” says Denis Trémorin, director of sustainability at Pulse Canada.

### LESS PRESSURE ON GRAINS AND OILSEEDS

But the sustainability focus is greater on commodities other than grains and oilseeds, Gowriluk points out.

“What sounds like a tidal wave coming is more like a ripple,” adds Trémorin.

He explains the western Canadian crop sector is export-dominated and relies on destinations like China and India, where demand for proof of sustainably produced food is nowhere like that in the West.

Paul Watson, environmental farm plan director with the Agricultural Research and Extension Council of Alberta (ARECA), notes there hasn’t been an urgent need in Canada to respond to sustainable sourcing requirements.

“We are perceived quite favourably because they (PepsiCo, etc.) know that our agriculture practices are very sustainable.”

Gowriluk agrees. “We don’t see the same pressure as you might in other jurisdictions or commodities.”

“We’re well positioned in that we don’t have major environmental issues in Western Canada due to agriculture, especially due to crop production,” says Trémorin.

Walmart is among the big food companies promising ethical and sustainable practices from all its suppliers.



CONTINUED ON PAGE 38



One of the 38 pages in PepsiCo's sustainability agenda report is dedicated to its sourcing and milling practices for Quaker Oats.

**“If 80 per cent of the population wants it, whether it’s right or not, you almost have to do it.”**

*Paul Thoroughgood*

### FEW SUSTAINABLE CROP PREMIUMS

That might help to explain a lack of programs or premiums grain elevator companies are offering for proven sustainable crops.

Thoroughgood says he recently signed his first ISCC canola contract with G3 Canada, for which he received a \$2 a tonne premium. ADM also has an ISCC certification program in Lloydminster for canola used for European biodiesel.

But premiums seems to be the exception rather than the rule.

In 2013 General Mills announced its commitment to sustainably source 100 per cent of its 10 priority ingredients, including oats, by 2020.

Paterson Grain, which teamed up with General Mills to source oats and measure the supply chain's sustainability, isn't offering participating farmers a premium.

“Today, that market does not dictate that there is a

premium,” says Paterson merchandiser Lorne Boundy. “We incentivize them in other ways — a lot of on-farm time with them and some agronomy work we’re doing.”

Grain Millers, which offers a sustainability grower program for farmers in the U.S. as well as oat producers delivering to its Yorkton, Sask. plant, also offers no monetary incentives.

“We do not pay a premium for being in the program,” says program co-ordinator Jessie VanderPoel. “They do get first-chance access to different programs and markets, though.”

Viterra's sustainability program offers similar benefits to farmers.

“Enrolling in the program will give you access to new/emerging markets, which will create more demand and movement opportunities for Canadian product,” the company says on its website.

“I don't think this is a price premium for growers, I think this is going to be an expectation,” adds Thoroughgood.

Trémorin also doesn't envision farmers getting paid to fill out paperwork.

“It's not going to be a pure premium; it's going to be you're getting a contract that you wouldn't have been able to get otherwise.”

### WHAT'S IT ALL ABOUT?

Companies aren't wholly clear about what they want or how they define sustainably produced crops.

“A sustainably produced crop does not negatively impact the environment,” states Viterra. Its goal is to verify ethical farming and management practices “through a number of different criteria.”

How companies verify sustainability claims varies.

Thoroughgood says Eastern Canada growers producing soy for Europe have a much more rigorous process to go through than what he did for his canola contract. “It's actually work to get certified.”

Grain Millers cautions its online questionnaire can take up to three or four hours to fill out. The company won't share what's on the questionnaire, but VanderPoel explains the company measures 20 different areas, from food safety, training and competence, to nutrients, water and air.

Paterson's Boundy, however, says producers can fill in their Canadian Field Print Calculator Excel sheet in 20 to 30 minutes.

### MAINTAINING RECORDS

Record-keeping will be a critical piece for farmers wishing to prove they're growing sustainably.

“The best thing producers can do is around record-keeping, being able to demonstrate that you are doing what you say you're doing,” says Gowriluk.

But Trémorin says a documentation process is the one key area in which Western Canada lags. U.S. and European farmers are ahead of the curve because they're

required to document their practices in order to receive government subsidies.

ARECA's Watson says that while Canada is recognized as a sustainable source, it has become more important to demonstrate it.

"Developing systems to demonstrate to the external world we are sustainable takes time, and some delicacy. A lot has been done; much more is in motion."

Boundy knows farmers can deliver what's expected of them; it's just a matter of proving it.

"When we first began, I had no worries about that we would or wouldn't be sustainable because I know we already are growing sustainably, so it's simply to have the data to back up that claim when asked."

**WHAT DO CONSUMERS WANT?**

"What we're seeing now is the momentum seems to be gaining with respect to what consumers are looking for, and the fact

that they are looking for sustainably produced anything and everything," Alberta Wheat Commission's Gowriluk says.

One major challenge is defining "sustainable."

"And I think even consumers grapple with that, what sustainability means to them," she says.

"Industry and food producers are both trying to appeal to consumer want, but I'm not sure that it's really clear even in the consumers' mind what it is that they want," says Thoroughgood.

Lack of consumer knowledge is a big hurdle.

A 2015 Oklahoma State University agricultural economics food demand survey found 82 per cent of respondents supported mandatory labels on GMOs, but 80 per cent also supported mandatory labels on foods containing DNA.

If people don't know that every living

thing contains DNA, what are the chances of convincing them genetically modified foods won't kill them?

On the other hand, "If 80 per cent of the population wants it, whether it's right or not, you almost have to do it," says Thoroughgood because, ultimately, even when they're wrong, they're right: "When you don't listen to your customer, you do it at your own peril."

Gowriluk believes farmers and consumers have the same objectives, but with more and more consumers moving away from the farm, there's a greater disconnect between rural and urban people, and the latter's understanding of what happens at the farm level and why.

"Based on what we've seen with respect to consumers' definitions of sustainability, it's pretty broad and it's all over the map," she says. "A better understanding of what farmers are doing to reach some of those outcomes is likely needed, but that's not an easy task." **CG**

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# ‘Farmscaping’ for profitability, sustainability

Applying some of the same principles from kitchen design can improve the environment and the workflow on the farm

BY JULIENNE ISAACS

“**F**armscaping” might be a new term for many western Canadian producers, but it’s shorthand for a familiar set of ideas: building features like shelterbelts and perennial strips into the farm landscape to best utilize their ecological goods and services.

In other words, taking a “whole-farm” approach, with the goal of maximizing profitability and sustainability.

Joanne Thiessen Martens, a technician in the University of Manitoba’s department of plant science, says farmscaping can also include protecting wetlands and riparian areas with buffers and grassed waterways. In more radical cases, it can involve integrating fruit or timber crops into the farm landscape or building water-harvesting systems.

“A big part of it is observing what is already happening on the farm and asking how to encourage more of whatever good things you observe there,” she says.

But it can also mean questioning why certain farm features aren’t working and asking how they can be better utilized.

For example, she’s talked to producers dissatisfied with old shelterbelts that capture too much snow or create problems with weed control or equipment mobility. But shelterbelts can be planned around equipment sizes, and designed to be multifunctional and self-maintaining.

“Shelterbelts affect the crops around them, so strate-

gically placing shelterbelts, designing their composition and height, etc. to benefit the crops next to them is an example of farmscaping,” she says.

## SHELTERBELTS

Canada’s best-known shelterbelt program, run through the Prairie Farm Rehabilitation Administration (PFRA), was shut down after federal cuts in 2013.

But resources for producers interested in taking a new approach to shelterbelts occasionally pop up.

Kim Wolfe, a research and development specialist with Manitoba Agriculture, is currently leading a shelterbelt study for Manitoba Beef and Forage Initiatives at its Brookdale and Johnson research sites.

The project, which began last year, will study an intercropping and an “eco-buffer” shelterbelt design. The latter involves planting a mix of small shrubs (rose, currant), medium- or tall-sized shrubs (dogwood, saskatoon), fast-growing trees (aspen, pincherry) and long-lived trees, like bur oak.

Eco-buffers are designed to be self-maintaining after three to five years, Wolfe says. The intercropped twin-row shelterbelts are designed to replace artificial windbreaks for livestock systems.

Besides these benefits, the integration of trees into the farm landscape results in reduced pesticide drift, reduced odours from livestock operations, improved carbon sequestration, improved water infiltration and soil moisture, nutrient filtration and an increase in biodiversity, Wolfe says. Eco-buffers including food or valuable hardwood trees could also provide an alternative revenue source for producers.

Neil and Pat Buchanan have lived with eco-buffers for years on their 480-acre farm near Francis, Sask.

Now retired, the couple planted shelterbelts in 1989 that were later supplemented with trees and shrubs from one of Indian Head Research Station’s first eco-buffer projects in the early 1990s.

Their original shelterbelts, funded through PFRA, included caragana, white spruce, scotch pine, chokecherry, buffalo berry, buckthorn, willow and green ash; the Indian Head researchers supplemented these with tamarack, saskatoon, oak, rose, dogwood and more — totalling nearly 20 species.



Coen built a swale, or on-contour ditch-and-mound system to intercept overland waterflow. He says that one spring, the system caught more water in 10 days than the farm had used in the previous 40 years.

SUPPLIED PHOTO

After the fourth or fifth year following planting, the Buchanans noticed something wonderful happening on the farm.

“We saw the bird population change dramatically, and more and more species showed up,” says Neil. “At its peak we had about 100 species of birds living on our farm. Some of them aren’t even indigenous to our area.

“It was proof in my mind that we were doing something positive for our environment.”

Following their retirement, the system still works for the farm’s current renters, say the Buchanans. The tree rows are planted roughly 300 feet apart, which accommodates three passes from 100-foot sprayers.

But they are quick to note that the shelterbelts “look a lot closer when they’re fully grown”; new shelterbelts can be built larger, to accommodate multiple passes of 120-foot sprayers.

## WATER MANAGEMENT

Takota Coen runs a mixed organic crop-livestock operation with his parents in central Alberta’s aspen parkland. While he hasn’t personally used the term “farmscaping,” he’s used many others to describe his operation’s ecological scheme: “permaculture design, holistic management, agro-ecological design and resilient farm design,” just to name a few.

On his 250-acre operation, this involves a few elements — including the integration of fruit and nut trees with forage crops, and strategic water harvesting to maximize the area’s limited rainfall.

The latter is a key limiting factor in the region; prior to farmscaping their operation, the Coens had dried up two wells in the past and found it impossible to fill a dugout due to drainage problems.

Through Growing Forward 2’s water management cost-sharing program, Coen built a swale, or on-contour ditch-and-mound system. “It’s an earthen structure designed to intercept overland waterflow and direct it to areas of our choosing where it can be stored in either the soil or dugouts or dams or riparian areas for future use,” explains Coen.

In the summer, the system uses gravity reticulation to spread the water out through a series of pipelines.

One spring, the system caught more water in 10 days than the farm had used in the previous 40 years, says Coen. “Previously that water had just been flowing through our land into the creek. Using our cost-effective strategies we were able to put back decades of water in a single season.”

Coen also used a year-round livestock watering system grant through GF2’s on-farm stewardship program to pay for 50 per cent of the watering system.



This earthen “tank” is 100 feet above the Coen farmyard and provides gravity pressure for livestock watering, irrigation and fire protection. For more photos and videos of the Coen farm, visit [YouTube.com](https://www.youtube.com) and search for “Takota Coen — Grass Roots Family Farm.”

SUPPLIED PHOTO

## WORK TRIANGLE

But water management is only part of what Coen has been able to accomplish in terms of “farmscaping” his operation.

“The major draw for us was the desire to improve the quality of our ecosystem and leave the land better than we found it, but not kill ourselves in the process with the hard work and the stress,” he says.

Inspired by architects’ concept of the “work triangle” meant to maximize efficiency in the spaces between the fridge, stove and sink in modern kitchens, Coen redesigned the flow of his operation to make it easier to accomplish daily tasks.

“We actually started moving buildings and penning systems around on our farm to create work triangles,” he says.

After the initial infrastructural changes, which took several years to implement, the farm has transitioned into a much smoother workflow overall. The cost of feed and machinery use has decreased, the farm is finishing grass-fed beef at 18 months and pastureland quality has improved.

“There are dozens and dozens of ways we can look at this in terms of economic benefits,” says Coen. “But the biggest benefits are the quality of life benefits we’ve gained in terms of efficiency, the amount of work we’re accomplishing, and the skill and challenge involved in this operation — it’s exciting.” **CG**

# A giant leap for soil kind

Soil-health advocates like Jocelyn Velestuk look forward to new technology to help make better decisions to improve both soil health and whole-farm profitability

BY JAY WHETTER

Jocelyn Velestuk did a lot of spitting the first time she met her future father-in-law. It made a lasting impression.

As she describes it, Velestuk and her then fiancé and his father were touring around the farm she would soon marry into. Being a soil scientist, Velestuk scooped up handfuls of topsoil here and there, checking its properties and thinking through its yield potential. “I always like to get a feel for the soil,” she says, but the soil that day was too dry to make a good assessment. “We didn’t have any water so I spit in my hand and started texturing the soil.”

The action came naturally and it tells a lot about Velestuk’s character and priorities. “But they thought that was kind of odd I guess,” she says.

The Velestuks’ annual crop and cattle farm is in the thin black soils north of Broadview, Sask. “We definitely have a lot of challenges here with low organic matter,” she says, which is why much of the farm is dedicated to pasture, perennial forage and cattle.

Cover crops, manure applications and overall efforts to improve soil health are key management goals for the farm. Velestuk also promotes these methods across the province. In addition to farming, she is an

agronomist with Western Ag and a board member with the Saskatchewan Soil Conservation Association.

“I hope to be a leader in soil health and agriculture sustainability and reach as many farmers as I can to make sure we can sustain agriculture long term,” she says.

Canada’s soils have always depended on the individual effort and care of farmers, but leadership like Velestuk’s has helped bridge over a deep dip in government investment.

## SOIL GETS BACK ON THE MAP

Scott Smith is one of the last soil surveyors with Agriculture and Agri-Food Canada (AAFC), and he’s retiring. Disinterest from a federal perspective and ongoing retirements have gutted the program. “Ten years ago, AAFC had 50 people doing this work,” says Smith, who works at the research centre in Summerland, B.C. “We’re in a hiatus with provision of new soil information to Canadians.”

The good news, Smith says, is that interest is picking up. “People are asking more than ever for high-resolution soils information,” he says.

The Food and Agriculture Organization of the United Nations (FAO) has helped put soils back on the agenda, Smith says, with two

factors fertilizing the revival: Using soils to sequester carbon thereby helping to mitigate climate change, and taking care of the health of soils to feed the growing world population.

It sparked a soil-health trend in Canada. “The federal department seems to be in a hiring mode, driven by a commitment to reinvest in government research,” Smith says.

And at the University of Saskatchewan, associate professor of soil science Angela Bedard-Haughn — whom Smith calls a “bright light” — leads a new soil-mapping project. The project, with funding from the Saskatchewan Ministry of Agriculture, Saskatchewan Canola Development Commission and Saskatchewan Pulse Crop Development Board, is to develop an online and interactive soil map.

“Farmers will be able to use an app to look under the hood of their fields,” Bedard-Haughn says.

The application will be in beta testing soon and the first version could launch this winter. At its core is information from the existing soil surveys, which were done a half-century ago. But for subsequent versions, Bedard-Haughn and her team will add features to show details within fields — including distinct soil types and areas with the most erosion or higher nutrients. They’re also using drones to collect high-resolution elevation images.

“It’s like building a quilt,” Bedard-Haughn says. “Each year we could add something to make it better.”

For her, it will be so much more than a tool to help growers with variable-rate applications.

“We have many different ways to talk about precision agriculture,” she says. “This will help farmers determine the best use for all acres in a field. They may discover that some acres are just not well suited to annual cropping. Or in one field they may be able to seed two distinct varieties adapted to different conditions — one variety with high yield potential could go in the high-performing parts of the field and another more tolerant of diversity could go on hilltops, for example.”

## WORLD FOCUS ON SOIL

Bedard-Haughn is on a sabbatical at the International Soil Resource Information Centre (ISRIC) in the Netherlands to learn from one of the world’s leading soil organizations.

Tomislav Hengl, a researcher at ISRIC, leads the SoilGrids project which, accord-



“We didn’t have any water so I spit in my hand and started texturing the soil.”

— Jocelyn Velestuk

ing to a *PLOS Journal* article, provides global predictions for standard numeric soil properties — organic carbon, bulk density, cation-exchange capacity, pH, soil texture fractions and coarse fragments — at depths from zero to 200 cm.

SoilGrids recently improved to provide soil data based on grids of 250 metres square, up from one-kilometre resolution in the previous version.

“We are still far away from helping actual farmers,” Hengl says. “Once we get toward 100-metre and 10-metre resolutions, farmers will be making direct use of SoilGrids.”

Part of the ISRIC mandate is to collaborate with partners around the world to build and refine their own applications. That is why Bedard-Haughn is there.

While Saskatchewan and other provinces — Alberta, Ontario and B.C. — have digital mapping programs, Canada is playing catch-up to the Netherlands, France

and Australia. Bedard-Haughn and Smith are part of the Canadian Digital Soil Mapping Working Group tying these efforts together with the goal to advance Canada’s digital soil map.

The new approach, as Smith envisions, will do away with the old descriptions — Newdale clay loam, Oxbow clay, Ellerslie clay loam, for example — and just list the soil properties: carbon content (an indicator of organic matter), sand-silt-clay percentages and more. Application of SoilGrids knowledge could lead to a tested and proven program to predict these properties for small grids across a farm. Bigger and bigger farms will then be able to use these details to make quick and possibly automated decisions to improve soil health — and therefore profitability and sustainability — on smaller and smaller pieces of land.

“This is a whole new ballgame,” Smith says.

“The federal department seems to be in a hiring mode, driven by a commitment to reinvest in government research.”

Scott Smith, AAFC

Jocelyn Velestuk is one champion on the farm cheering these new soil management initiatives. “I really hope the soil health trend takes off because it will be a really good thing for the future of agriculture.” **CG**

Jay Whetter is a communications manager with the Canola Council of Canada.

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# It's not soil 'quality'...

Terminology can make a difference, and using 'health' rather than 'quality' is helping bring together different interests to a common cause

BY STEVEN ROSENZWEIG / COLORADO STATE UNIVERSITY

**F**or three weeks every month, Ray Archuleta captivates audiences with a few handfuls of soil. He begins with two clumps, dropping them into water. The soil from a farm where the soil isn't tilled holds together, while the tilled soil immediately disperses, indicating poor soil structure. Next, volunteers from the audience — mostly farmers and ranchers — pour water over a soil that grew a variety of crops, and it runs right through. A sample of tilled soil that grew only corn is like a brick, and the water sits on top.

The implications of Archuleta's demonstrations are obvious to food producers, who see the fate of their acres in those clumps of soil. The message is powerful, and producers drive home knowing that soil is alive, that it can be sick or healthy, and that healthy soil can do some pretty amazing things — like make a farm more resilient to drought, sequester enormous amounts of carbon, reduce erosion and support an ecosystem that's teeming with life.

Archuleta, a conservation agronomist with the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS), popularized these soil health demonstrations that by his estimates have reached more than 100,000 farmers and ranchers in the U.S. alone. He's a pioneer of a movement that has recently stolen the spotlight from conventional agriculture.

The possibility of a win-win for farmers and the environment is a driving force for the soil health movement, a management philosophy centred around four simple principles: reduce or eliminate tillage, keep plant residues on the soil surface, keep living roots in the ground, and maximize diversity of plants and animals.

Some immensely successful farmers have ascended to celebrity status in the agricultural community preaching these principles. They are growing more food while drastically reducing inputs, which is the ultimate strategy for becoming more profitable while enhancing the health of ecosystems we depend on. The possibility of a win-win for farmers and the environment is a driving force for the movement.

"This whole movement emerged out of desperation," says Archuleta. Over 10 years ago, he thought of a farmer friend of his and wondered, "Why can't he make a good living on 600 acres of prime irrigated ground, and why can't he bring his son into the operation? It starts dawning on me that something is wrong with modern agriculture."

But in 2011, Archuleta saw an opportunity to reverse these trends. Jason Weller, then the NRCS chief of staff, had assembled Archuleta and a group of other NRCS employees from around the country in Greensboro, North Carolina, to create a plan for the federal agency to engage in the broader sustainable food movement. The soil health movement had been bubbling around the country for two decades. The Greensboro team, and ultimately the NRCS leadership, decided the time was right to scale it up into a co-ordinated, national effort to advance soil health.

## POOR SOIL CAN'T HOLD WATER

We don't know who first uttered the term "soil health" in the U.S., but Jay Fuhrer started saying it in the 1990s. As a district conservationist with NRCS in Bismarck, North Dakota, Fuhrer was dismayed by the declining status of the soil in his region, where he used to spend his summers building sod waterways.

"We had all this erosion, and we were trying to establish a safe outlet for water coming off a field," says Fuhrer. "But the question begs, why is the water coming off the field?"

The answer is that degraded soil has a hard time absorbing water. That means much of the water a farmer needs to grow crops runs off and eventually pollutes streams and rivers, taking precious topsoil with it.

"So we got together one day and we kinda' looked at each other," Fuhrer says, recalling a meeting at the field office in the early 1990s. "We asked, 'How much further can we bring this system down?' It got pretty quiet in that room. Honestly, at that time, we didn't really know what changes we were going to make, we just knew that what we were doing wasn't working."

So Fuhrer and the other NRCS conservationists in Bismarck dubbed themselves the "Soil Health Team." Fuhrer doesn't recall why the term "soil health" popped into his head, or where he heard it for the first time, but the team began to educate itself about ways to restore and maintain soil function. They read academic papers and learned from successful producers in the region, and then they brought what they learned to other farmers and ranchers in North Dakota through workshops and farm tours.

Ray Archuleta knew something special was happening in North Dakota. He heard about Gabe Brown, a farmer and rancher, turning his operation around after a few years of failed crops by eliminating tillage, growing diverse mixes of crops and changing how he grazed his cattle to more closely mimic the way bison once grazed the prairie. And he almost completely eliminated his chemical inputs, helping him to become more profitable.

Archuleta watched Fuhrer and Brown start to redefine agriculture in North Dakota. And when they popped into his mind years later in Greensboro, North Carolina, what had been an undercurrent suddenly took a turn toward the mainstream.

## GROUPS WORK TOGETHER

Today, government agencies, food and agribusinesses, universities, and environmental groups are all pivoting to support and capitalize on the possibility of a paradigm shift in agriculture, and they are investing millions of dollars in the process. With thousands of farmers already on board, powerful partnerships have taken on the challenge of filling knowledge gaps in the science and economics of soil health that prevent other producers from taking the plunge. USDA announced a US\$72.3 million soil-health investment to help farmers adapt to and mitigate climate change. A pledge of US\$4 million from the Midwest Row Crop Collaborative, founded by Cargill, the Environmental Defense Fund, General Mills, Kellogg Company, Monsanto, PepsiCo, the Nature Conservancy, Walmart and the World Wildlife Fund, will augment an on-farm study and demonstration effort of soil health practices led by the farmer-led Soil Health Partnership. And the Walton Family Foundation provided a US\$626,000 grant to the Soil Health Institute to quantify the economic implications of soil health management systems.

One of the most unexpected outcomes of the soil-health movement is that groups that were once fighting each other are now working together to achieve the same goal. In the fall of 2013, for example, representatives from Monsanto and the Rodale Institute (“the organic pioneers”), came together with the Walton Family Foundation, the Nature Conservancy, Cornell University, farmers, federal agencies and numerous other stakeholders to draft a strategic plan for advancing soil health as the cornerstone of land use management decisions. This meeting, led by the Farm Foundation and the Samuel Roberts Noble Foundation, has helped spawn numerous initiatives, like the Soil Health Institute, with the goal of leveraging these powerful relationships to research and spread soil health.

What is the secret of soil health that enables such diverse groups to unite under the same banner?

There has been little analysis of soil health as a movement, but one possible reason for its success is that it nestled right in the middle of a Venn diagram of two ideologies that are so often at odds. To productivity-driven by the “feed the world” mentality of agribusiness and yield-maximizing producers, soil health means big-



More than 100,000 farmers and ranchers have attended Ray Archuleta’s soil-health talks, which start with two clumps of soil dropped into columns of water.

**“ Why can’t he make a good living on 600 acres of prime irrigated ground, and why can’t he bring his son into the operation? It starts dawning on me that something is wrong with modern agriculture.”**

*Ray Archuleta, USDA*

ger and healthier plants and animals. But it also jibes with environmentalists’ goals of improving water quality, sequestering more carbon, using less pesticide and herbicide, and providing greater habitat for biodiversity. At least for the moment, it truly seems to be a win-win.

Beyond that, however, the answer — one that can be instructive to other environmental issues — seems to lie in crafting and delivering a message that can be championed by all sides.

## HEALTH, NOT QUALITY

Throughout the 1990s and early 2000s, the push by NRCS and the research community was to advance “soil quality.” This term worked fine for scientists, because it is easy to define and measure, but farmers didn’t connect with soil quality.

“Health denotes life and function. Quality is like the quality of a couch or something,” says Archuleta. “Farmers intuitively grasp soil health.” That minor turn of phrase made all the difference.

Similarly, soil health is aligned with many of the concepts of agroecology, but

agroecology is not a staple of the American farmer’s lexicon. The soil health terminology made it possible for agroecological farming practices to emerge in mainstream American agriculture.

The success of soil health can also be attributed to the way the message is delivered. Demonstrations and conferences are the core infrastructure of the movement. High-profile farmers and ranchers speak and write to thousands of producers around the country every year, sharing stories of how soil health has revolutionized their operations. Inspired by these talks, demonstrations and articles in farming magazines, producers experiment with soil-health practices on their own farms. Pockets of formal or informal regional producer networks have popped up all around the country, and they exchange what they’ve learned through experimentation. The movement has taken on a life of its own. **CG**

**Steven Rosenzweig** is a PhD candidate at Colorado State University. He wrote this feature for *Ensis*, a U.S. environmental magazine. [www.ensia.com](http://www.ensia.com)

# Cutting down on the salt

Bakers at Cigi are showing international customers how to bake bread with less sodium

BY ELLEN GOODMAN / CIGI

**T**he bakers at the Canadian International Grains Institute (Cigi) are hearing the same message as the rest of us: Cut down on the salt.

“The aim of Cigi’s pilot bakery is to replicate what the industry does,” says Yvonne Supeene, head of baking technology. “We reduced the salt level in all bread formulations, and in our test bakery as well. It’s a great initiative, and the right thing to do.”

Supeene says that, in addition to Canada, bakers in many other countries are reducing salt use, with the U.K. taking an early lead.

Cigi’s baking technical specialist Yulia Borsuk concurs. “When we visited commercial bakeries in Latin America last year, for example, sodium reduction was of primary importance.”

The Canadian baking industry, has been

gradually reducing salt levels in commercial breads in response to a Health Canada initiative aiming to decrease sodium consumption as a health risk contributing to rates of hypertension and heart disease. According to Health Canada, Canadians consume twice the recommended amount of sodium, largely from processed foods.

In 2008 Health Canada established the Sodium Working Group to set guidelines for a gradual voluntary decrease of sodium in the Canadian food supply by December 31, 2016. A document Health Canada published for the food industry in 2012 set a target level of 330 mg per 100 g for pan bread.

The Baking Association of Canada says that between 2009 and 2015 the industry voluntarily reduced sodium levels by 13 per cent in white pan bread and 16 per cent in whole wheat breads.

**“Globally, the expectation of high wheat quality is going to become even more critical because a lack of sodium stresses the gluten or protein quality.”**

*Yvonne Supeene, Cigi*



This batch of bread made with CWRS rose nicely in part because there is some salt in the dough.

## LOWER SALT REQUIRES BETTER WHEAT

However, Borsuk says salt is an essential ingredient in baking around the world.

“Sodium has a huge impact. It not only enhances the flavour but is also very important functionally in that it strengthens the gluten (protein) and makes the dough feel stronger in addition to other reactions.”

Supeene says salt is typically added at a level of 1.5 to two per cent, and slows the rate of fermentation, controls bacterial growth, and acts as a preservative. Salt reduction not only affects protein functionality but also end-product quality and shelf life.

“Salt is the major, but not the only, source of sodium in bread as even water contains it so the sodium level depends on the formulation of all ingredients,” she says. Cigi used a calculation to reduce sodium to the target level in formulations then sent the bread samples to a lab for verification.

Supeene points out that sodium reduction is also of importance to wheat growers because it affects the quality of wheat used for different commercial bread products.

“Globally, the expectation of high wheat quality is going to become even more critical because a lack of sodium stresses the gluten or protein quality.”

She says that when meeting with international customers who are reducing sodium levels, Cigi will need to demonstrate that Canadian wheat will still perform well, providing the end-product quality they have come to expect.

“Different markets have varying degrees of sophistication and knowledge and many customers prefer a higher protein class such as CWRS to blend with other (weaker) wheats for their products,” Supeene says. “We can help customers with any challenges they face with sodium reduction, provide technical information on alternatives or the impact of changing formulation. Some may be willing to lower product quality while others may want the identical quality and to know what they can do to compensate.”

She adds that for the 2017-18 crop year Cigi will use its lower sodium levels when evaluating bread quality for the annual harvest assessment in preparation for the new crop missions, as well as for potential new wheat varieties submitted to Cigi for Prairie Grain Development Committee testing. **CG**

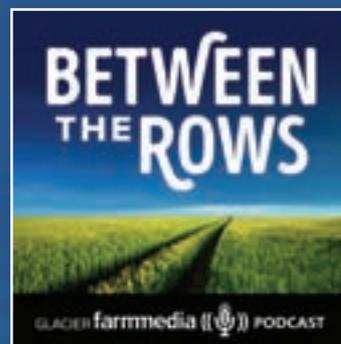
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## British Columbia

- **June 11-17:** Sunny, seasonable apart from cooler, showery days on the coast and showers or thundershowers inland.
- **June 18-24:** Warm, sunny on many days with showers in the west and heavier thundershowers east and north.
- **June 25-July 1:** Warm, mostly sunny west with scattered showers. Hot elsewhere with isolated showers or thundershowers.
- **July 2-8:** Sunshine prevails. Warm to hot. Isolated showers west, thundershowers elsewhere, some heavy.
- **July 9-15:** Sunny and warm west with passing showers. Often hot east with a few thunderstorms, risk heavy in places.
- **July 16-22:** Warm, sunny west with isolated showers. Elsewhere hot and quite dry aside from isolated thunderstorms.
- **July 23-29:** Highs in the 20s but some 30s interior. Sunny apart from a few heavier thunderstorms here and there.
- **July 30-Aug. 5:** Pleasant on many days under sunshine. Scattered heavier shower activity on a couple of days.

## Alberta

- **June 11-17:** Thunderstorms occur on a couple of occasions, some possibly heavy with gusty winds.
- **June 18-24:** Sunny. Seasonable to hot. Thunderstorms occur here and there, severe in a few localities.
- **June 25-July 1:** Sunny and often hot, humid. Scattered thunderstorm activity on a few days, more frequent east.
- **July 2-8:** Sunny and at times humid with passing thunderstorms, occasionally heavy in some localities.
- **July 9-15:** Fair summer weather dominates with warm to hot temperatures. Thunderstorms on a couple of occasions.
- **July 16-22:** Heavier shower or thunderstorm activity on two to three days this week. Otherwise sunny and warm throughout.
- **July 23-29:** Pleasant temperatures under sunny skies on many days aside from thunderstorms here and there.
- **July 30-Aug. 5:** Seasonable and sunny but a couple of cooler days trigger heavier thunderstorms at several localities.

## Saskatchewan

- **June 11-17:** Sunny with highs mainly in the 20s. Showers or thunderstorms occur on two or three days, heavier north.
- **June 18-24:** Passing thunderstorms on a couple of days, heavier in a few areas. Otherwise sunny, warm to hot.
- **June 25-July 1:** Sunny, warm with a couple of higher humidity days resulting in heavy thunderstorms in places.
- **July 2-8:** Hot on several days and mainly sunny. Scattered thunderstorms, some heavy in widespread localities.
- **July 9-15:** Sunny and often hot. A couple of humid days trigger thunderstorm activity, risk heavy here and there.
- **July 16-22:** Sporadic heavy thunderstorms pass through on a few days, otherwise sunny and warm to hot temperatures.
- **July 23-29:** Sunshine dominates with seasonable to warm temperatures. Passing thunderstorms on two to three days.
- **July 30-Aug. 5:** Temperatures vary as warm and cooler days interchange. Scattered showers or heavier thunderstorms.

## Manitoba

- **June 11-17:** Sunny. Highs often in the 20s. Showers or thunderstorms on a couple of days, possibly heavy in places.
- **June 18-24:** Sunny. Seasonable to hot temperatures. Isolated thunderstorms. Heavy on a couple of humid days.
- **June 25-July 1:** Sunny, warm on many days but a couple of more humid days set off heavy thunderstorms.
- **July 2-8:** Hot, sunny with higher humidities. Possibly severe thunderstorms on a couple of occasions.
- **July 9-15:** Sunny and hot most days with two or three humid days bringing thunderstorms to a few areas.
- **July 16-22:** Spotty, heavy thunderstorms move through on a few days. Otherwise sunny and warm weather.
- **July 23-29:** Pleasant on many days as sunshine exchanges with hit-and-miss thundershowers. Seasonable to hot.
- **July 30-Aug. 5:** Temperatures and weather conditions vary as sunshine exchanges with showers or heavier thunderstorms.

## National highlights

### June 11 through July to August 5, 2017

Pleasant weather is anticipated across most of Canada this summer. A few wet, cool spells are likely in June in all areas but a drier and warmer weather pattern should return to the West in July. These warmer conditions will be more prolonged in eastern and northern parts of the country, however, resulting in above-normal temperatures from eastern Ontario into Quebec and the Atlantic provinces. Showers and thundershowers will also bring near-normal rainfall to most of the country in spite of a few heavy thunderstorms from time to time.

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.

# The carbon tax

Farmers see themselves as the good guys in the carbon debate, with good reason. Is agriculture going to pay anyway?

BY SHANNON VANRAES / CG FIELD EDITOR

It had been another frigid day in Manitoba, snow swirling as farmers and ranchers gathered at a downtown hotel, but once inside it didn't take long for the temperature to rise. They'd gathered for Keystone Agricultural Producers annual general meeting, where one issue outpaced the rest — carbon pricing.

It was standing room only, with long lines at the microphones.

"With young farmers we have little to no equity in our farming operations... so things like this carbon pricing could really affect our entrance into the industry," aspiring farmer Carter McKinney told the crowd.

"We are at the bottom of the food chain when it comes to passing the negative effects of carbon pricing," added Bailey Sigvaldason, who was quickly followed by Paul Gregory at the microphone.



**“We are at the bottom of the food chain.”**

— Bailey Sigvaldason

"We know this carbon tax is coming down, we know it's going to be \$30, \$40, \$50 a tonne. As a farmer, as an altruistic citizen of the world, we have to be efficient, we have to be aware of the laws coming down, we have to work with government," Gregory said before yielding the floor and letting yet another producer take his place.

Manitoba's producers are not alone in their concerns. Similar discussions are ongoing in parish halls, meeting rooms and community centres across the country as farmers grapple with how the drive to reduce greenhouse gas emissions will affect their farms and their futures.

Provinces must design and implement their own plans to reduce greenhouse gas emissions or they will have one imposed on them by Ottawa, beginning with a carbon price of \$10 per tonne in 2018. Having ratified the Paris agreement on climate change, along with China, India, the European Union and others, Canada has agreed to cut its emissions by 30 per cent from 2005 levels by 2030.

But when Prime Minister Justin Trudeau made the announcement last year, it was clear all provinces were not on the same page. British Columbia already had carbon pricing, but other provinces wanted cap-and-trade systems and Saskatchewan wanted none of it at all — Premier Brad Wall refused to participate, threatening to sue the federal government.

"We're really in favour of what the province is doing now," says Todd Lewis, president of Agricultural Producers Association of Saskatchewan. "The premier's come out very forcefully with his position and we support it."

That doesn't mean agriculture doesn't want to reduce carbon emissions, he adds, just that he believes pricing carbon isn't the way to go. The fourth-generation farmer says introducing a price on carbon will unfairly punish producers while also stifling other industries in the province.

"Certainly from our viewpoint we have a good story to tell in agriculture," Lewis says. "We've been following a low-carbon model for a number of years and certainly made improvements over the years with our fertilizer application and our seeding methods... zero till, certainly the new engines and the technology there that we use in our equipment — even the variety of crops we grow now and the yields that we're achieving."

CONTINUED ON PAGE 50



**If you put cropland into grass, you might get a cheque, says soil scientist Mario Tenuta. But then, if you plow that grass, do you have to pay it back? The only answer so far, Tenuta says, is “I don’t know.”**

For Paul Glenn, chair of the Canadian Young Farmers Forum, what’s driving opposition to carbon pricing, which many call a tax, is the deep uncertainty around how it will be implemented and what it will end up costing. Glenn has tried to pin down how the push to meet Canada’s climate change commitment will have an impact on his family’s mixed farm in Keene, Ont., but hasn’t had much luck.

“It’s not exactly clear how it’s going to affect us right now,” he says. “I mean Ontario and Alberta are going to be the same but I believe Quebec is a different model so it’s going to affect farmers differently across Canada.”

What is clear is that input costs will increase, says Glenn.

“And it’s not clear yet how the credits, so to speak, are going to be compensated for, especially on the farming side,” he says. “That’s a big question.”

Ontario launched its cap-and-trade system on Janu-

ary 1 and will link it with permit systems in Quebec and California next year in a bid to keep costs as low as possible. Emission limits will shrink each year with the goal of forcing emissions 80 per cent below 1990 levels by 2050.

Companies must purchase allocations for each tonne of carbon burned every year, with revenue from Ontario’s program estimated at \$1.9 billion per year. That cash is slated to fund the province’s Climate Change Action Plan — if the province stays the course, that is.

Glenn notes that Ontario’s current Liberal government has been the driving force behind the emission reduction plans, but that like all governments it’s a temporary one. The next election could change everything, he says.

“With our government changing, probably, within the year or within next year, you can’t plan — it’s impossible,” Glenn adds.

Ron Bonnett, president of the Canadian Federation of Agriculture, agrees that the variation from province to province makes it difficult to estimate what the new emission targets will ultimately cost Canadian farmers. He’d like to provide producers with more information, but that’s not a possibility — at least not at the moment.

“We haven’t got enough information,” Bonnett says, noting that the wide variety of exemptions, inclusions and grants associated with policies in each province just adds to the current mood of uncertainty.

“To really say there’s been a full cost analysis of what the impact is wouldn’t be correct,” Bonnett says. “The thing is you’d almost have to do that cost analysis on a province by province basis to see, okay, if this province is using a carbon tax, how is that going to impact us, and if another province is using a cap and trade system what is that impact going to be... I think that there’s also a lot of confusion right now on how the whole carbon system is going to work.”

In Alberta, which has implemented a hybrid emission reduction system including carbon pricing and elements of cap-and-trade, Bonnett says producers are likely to see increased costs around \$1 or \$1.50 an acre. Farm fuel will be exempt from carbon pricing in Alberta, but the federation representative says that it’s the cost of fertilizer that is the real concern.

Dale Beugin, research director at Canada’s Ecofiscal Commission, says it’s simpler to anticipate cost in a carbon pricing system, but there are many factors to consider. Provinces need to look at everything from which industries are vulnerable, to costs, to political blowback and implementation systems before making a decision on what works and what doesn’t.

“The real story with carbon price is that you have certainty as to price; it’s really transparent as to what the price of carbon is because it’s set directly by the tax rate. So if you’re in B.C., you know that the price of carbon is \$30 a tonne,” Beugin explains. “Cap and trade is the other side of the coin; you don’t always know what the price is going to be because it’s set by this market

for tradable permits, but you do know the extent to which you're going to get absolute emissions reductions."

British Columbia has what Beugin calls a "quintessential example" of a carbon tax system. "The tax is applied to fuel distributors in B.C., so if you are importing or selling fuels, whether it's gasoline or diesel or coal, then you are charged a tax based on the carbon content of that fuel and that carbon content is really just chemistry," he says. "So that is a pretty easy, pretty convenient way to tax the amount of carbon embedded in that fuel... but then you rely on the market to pass those costs on."

And it's the concept of passing costs on that troubles Lewis and other farm representatives.

"We're price takers, not price makers," Lewis stresses. "Any sort of carbon levy or carbon tax that is put on us is one we can't pass on to our customers... we are in a

world market place, and if the cost of our production goes up because of the carbon levy or carbon taxes, well then that is going to put us at a competitive disadvantage."

Bonnett agrees, and so do many farmers and farm organizations. While climate change needs to be addressed, Canada also needs policies that reflect those of its trading partners, he says.

That's especially true given U.S. President Donald Trump's apparent desire to back away from some of his country's climate change commitments.

"Canada is an exporter of food, so any costs that are driven into our system may put us at a competitive disadvantage to our trading partners," says Bonnett.

Figuring out how carbon costs will affect competitiveness is complicated, says Beugin, adding it's an issue for all industries, but particularly for trade-exposed sectors like agriculture. However, he also emphasizes

the role carbon taxes play in competitiveness shouldn't be overstated.

"It's not the only factor that drives your bottom line, there are lots of reasons why you are competitive or not competitive, carbon is only one of many, many factors," says the researcher. "I've even heard it argued quite convincingly that strong environmental performance for folks like those in agriculture can actually be a competitive advantage. If you are demonstrating sustainable farming practices, that may be even essential for your bottom line, so it's not always fair to frame it around a single dimension of competitiveness, that's only part of the story."

Back at the Keystone Agricultural Producers meeting in Winnipeg, the discussion has turned to another familiar theme — carbon sequestration.

CONTINUED ON PAGE 52



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**“The world is going this way, and we have to do our part,” says Dale Beugin. “Let’s do it in the most cost-effective way possible.”**

“We are stewards of the land, we care about what we do, we sequester carbon with our crops,” says Jake Ayre, another young farmer and a student of agriculture.

“Ag is really the only sector that’s going to sequester any carbon in the ground and there was hope that we would be compensated for that and that’s what I’d like to see,” adds Glenn, touching on an issue raised by every farm organization *Country Guide* spoke with for this story.

The problem is that agriculture doesn’t actually sequester carbon in the soil, at least not in a permanent or solidly quantifiable way, according to experts. Soil scientist Mario Tenuta has been looking into the issue at the University of Manitoba and says more work needs to be done.

“It’s a very complex topic,” he says, explaining carbon sequestration is dependent on farming practices.

“Yes, a farmer can build soil organic matter and carbon today with a practice like converting annual fields to grasslands, pasture, but if they take it out of pasture or grassland, the carbon can go back to the atmosphere,” Tenuta says. “So the fact that it’s not permanent has never really made carbon sequestration in soil a really entertaining idea moving forward... as a way to give carbon credits to farmers. We’re never quite sure if it’s going to stay in there, because the farmer might change the practices.”

Then it gets even more complicated. “You might get a few bucks today for building some carbon in your soil, but does that mean you’re going to have to keep that carbon in your soil forever? What happens if you don’t? Does that mean you have to give your money back?” Tenuta asks. “I don’t know.”

Then the complications multiply because emission reductions under the Paris Agreement are calculated as reductions compared to 2005 emission levels.

That means farmers who adopted no till or converted land to pasture prior to 2005 would not be contributing to new greenhouse gas reductions.

Tenuta also adds there isn’t enough science around the issue of how much carbon crops actually store and by what mechanisms.

A lifetime of research on the subject has led William Schlesinger to similar conclusions. The biogeochemist and former Duke University professor recently retired from his role as president of the Cary Institute of Ecosystem Studies and says, in some cases, crop production can actually lead to a net release of carbon into the atmosphere.

While low-till and no-till systems are often lauded as a way to build up carbon in the soil — as is pushing marginal lands into production through irrigation or intensive nutrient application — what’s really being built up is a false narrative, he says.

“The real question is whether all those things work,”

says Schlesinger. “The problem with no till, or conservation agriculture, is that definitely you can document more carbon in the surface of the soil but there’s often losses of carbon in the lower soil, below the depth that used to get plowed, and when you balance the losses below and the increases above, that kind of agriculture often becomes a wash.”

As for why the idea that agriculture sequesters carbon is so prevalent, Schlesinger said it’s long been in the interests both of government and of the private sector — such as biotech companies — to promote high-yield production methods as environmentally friendly or sustainable.

“There’s an immense group of people who are willing to lobby on behalf of agriculture and farmers as doing a good thing for the environment,” Schlesinger says. “And the people that have been looking at this carefully have largely been in universities and they don’t have any constituents, so their voices are not heard anywhere as loudly.”

Tenuta believes that if there is a way to provide emission offsets to producers, it lies with nitrogen, not carbon.

“To me, nitrogen is a way more exciting opportunity to get carbon credits,” he says. “Because if I do something in the 2016 crop year to lower my nitrous oxide emissions, that’s permanent, no one can take that away from me. I can’t do anything to put that back into the atmosphere, but with carbon, I can. So I tell farmers, hey, concentrate on the fertilizer, get those emissions down with lower nitrous oxide, and it’s much more clear-cut, it’s easier for policy makers, and so forth.”

But neither of those arguments garners much traction with producer lobbies. In Saskatchewan, Lewis says that research done in his province and elsewhere shows that agriculture does sequester carbon.

“There’s lots of scientists that would rebut that... Certainly a number of conservation groups in Saskatchewan have done some long-term research and I think certainly a number of scientists across the world wouldn’t agree with those statements,” Lewis says. If agriculture is not considered a source of carbon sequestration, he adds it could undermine the very basis of what a lot of provinces are doing to reduce emissions.

“You’ll get some pushback on that one, I guarantee you. Because I tell you what, 50 years of research is going to push back really hard on that. Like really hard,” he says. “That’s the hard part of this thing, it’s so hard to put your finger on it and then all of a sudden new information will come out and it throws everything into total flux again.”

Whether or not agriculture is currently sequestering carbon isn’t the point for Beugin. He says reducing emissions is not about rewarding industry for the status quo, it’s about changing best practices to facilitate new reductions in greenhouse gas emissions.



For young farmers like Manitoba's Carter McKinney, a carbon tax is a career threat.

"What we want to do with our policies is move the dial. We want to do more than we're doing."

Many producers would disagree, and farm organizations across the country are asking for exemptions from elements of carbon pricing, as well as recognition or compensation for environmentally sustainable practices already in use. As an industry, they say agriculture is taking more financial hits than other sectors and it makes sense to support the people who produce food for Canada and the world.

"I think if they really want the programs to work, then they really need to work hand in hand with the farmers and not just let the farmers do it for free," says Glenn. "Compensate the farmers for sequestering the carbon and taking care of the land, because ultimately that's what they want done, but they want us to do it for nothing so why not compensate us?"

It's especially difficult for young farmers to deal with rising costs, he adds.

"Typically the younger farmers trying to get into the market might have to pay a little bit higher land rent prices just to get in and get some land. So having extra costs, especially on the input side, whether it be equipment, tires, and fuel — especially, fuel it being the big one — I mean it makes it a lot tougher," says Glenn.

But inputs and fuel are far from the only issues concerning young farmers. In Manitoba, the next generation of producers have also put forward concerns about social license, emphasizing that farmers risk losing it if they push back too hard against carbon pricing or fail to recognize the impact climate change is having.

"We as young farmers are concerned about the long-term effects of what happens today, public perception of our industry, our ability to be profitable with the introduction of new barriers," Sigvaldason tells the group assembled in Winnipeg. And when an individual suggests that carbon taxes be voluntary, refundable and paid for by urbanites, she adds that farmers can't send the public the message that they don't want to be part of the greenhouse gas solution.

"We want to send a message to the public that we want to be part of the conversation, we want to be part of moving forward and helping our environment, and making them pay to help us doesn't send the message we want to help ourselves," she says.

While the Manitoba government has yet to put forward a carbon pricing plan, Keystone Agricultural Producers are working with the province in the hopes carbon pricing will exempt on-farm emissions, such as those from manure-storage, livestock and the application of fertilizer. The organization also wants to avoid having carbon revenue end up as a general budget line. Instead, it wants revenue to fund alternative land use services and grants aimed at making farms more efficient.

"A carbon tax is coming — that has been made perfectly clear by the federal government," Keystone president Dan Mazier says. "However, instead of waiting for a tax to be placed on us by Ottawa, the Manitoba government has opted to develop a made-in-Manitoba solution, something that's in the works now. During this development process, KAP is striving to get the best deal for Manitoba farmers."

Farmers in Alberta have achieved similar terms under that province's carbon levy. The greenhouse industry there will receive an 80 per cent rebate on pricing applied to natural gas, and marked farm fuels are completely exempt. Low- and middle-income households will also be eligible for rebates, and grants are being offered for on-farm efficiency programs.

Greenhouse operators in British Colum-

bia also received an 80 per cent rebate and while farmers in that province initially feared major repercussions when the carbon tax was introduced in 2008, a recent study has shown the province's levy system has not reduced competitiveness, although the impact on farm revenue has not been fully examined.

The National Farmers Union is also working to address the burden that carbon pricing will put on farmers, particularly in provinces that have yet to implement a carbon reduction scheme, by pushing to return revenue to farmers.

"We are saying make it revenue neutral for the farmers," said president Jan Slomp. "You collect revenue based on the carbon emissions of the production systems, but allocate that same amount of money in the farm community — and not the processor or input supplier, but allocate it back to the farm community and allocate it on the basis of the least carbon footprint."

The national organization is also suggesting it's time to reward farms that have the lowest emissions and re-evaluate the type of farms promoted through government policies.

"The mixed farm has been penalized by policies and the focus on commodities," says Slomp, adding mixed farms present a real opportunity to change management strategies and reduce the need for costly inputs.

"The mixed farmers in Canada, those that have livestock and are producing cash crops, are actually fairly productive and fairly successful in generating farm income, as their fertilizer bill is less, substantially less," he says. But Slomp acknowledges that moving to less intensive production systems can be a hard sell, particularly among established farm operators.

Ideologies around government's role in the lives of Canadians can play another key role in how plans to reduce emissions are received. But there is the simpler explanation for resistance to carbon levies as well.

"I think there is this kind of gut reaction to taxes and even the word tax as a cost, but it's not like other environmental policies don't have costs too," Beugin says. "You never really see those costs articulated as a dollar per tonne number, like you do in the carbon tax, but those costs are absolutely still there."

"The world is going this way and we have to do our part for emissions reductions... so if we're going to do it, let's do it in the most cost-effective way possible." **CG**

# A Genius cab

This systems supplier is integrating cutting-edge automotive safety systems into off-road equipment cabs

BY SCOTT GARVEY / CG MACHINERY EDITOR

A few years ago I had the pleasure of interviewing the industrial designer who styled the cab and body of the first Challenger 65 belted ag tractors, which were then part of the Caterpillar brand before coming under AGCO ownership.

Before coming to Cat, the designer had spent several years working for General Motors and brought an automotive perspective to the tractor's design team, making him a bit of an outsider. Looking at the Challenger 65 and other early models, you can see the influence he brought, most notably in the raked-back, car-like angle of the Challenger 65's windshield.

It was something no other tractor of the time used, and, he admitted, it was an idea that had sparked considerable resistance among the engineers in the project. They believed windshields in off-road machines should be vertical or even have a negative rake to prevent dust buildup.

In the end, tests proved there was little difference with the dust problem regardless of the windshield angle, and his design made it into production.

That was also the first cab development project at Cat that focused strongly on creating a very comfortable

environment for the operator, something that was standard practice in the auto sector but not at construction equipment companies like Cat.

In fact, Cat didn't even have the facilities to create the molded plastic pieces required for the interior.

Comfort became a goal for the new Challenger tractor design because, compared to construction machines, ag tractors are much more likely to be operated by their owners, which is why ergonomics and comfort became crossover concepts brought to that project.

Recently another cab development project has also taken its cue from the automotive industry, but now instead of styling and comfort it's digital technology that is crossing over between sectors. Bosch, the primary company behind the project, is bringing some of the technology cars and trucks have increasingly seen lately, specifically the widespread inclusion of several digital safety systems and enhancements to ease of operation.

Most readers probably associate Bosch with fluid systems. But the company has now branched out beyond that, and the off-road machine cab named Genius is the result of one of the firm's newest R&D projects. The company recently debuted it at the world's largest construction equipment show in Munich, Germany.

"Bosch is turning construction machinery into technology showpieces," Johannes-Jörg Rüter, president of Bosch's new Commercial Vehicle & Off-Road unit, said in a press release. "The mega-trends of automation, electrification, and connectivity don't stop at the gates of construction sites or mines."

Although that statement and much of the promotion around the firm's new Genius cab project focus on the construction sector, the cab and its integrated technology will also have applications in farm equipment and other off-road equipment sectors, where it's likely to be of particular interest to those specialty manufacturers who don't have the resources to develop their own machine cabs.

"As a systems supplier, we want to offer everyone the solution they need," Rüter says.

The Genius cab is more than just a run-of-the-mill enclosure. The variety of digital systems carried over from the automotive sector are significant innovations in the ag market. "Modern sensor systems, cameras, and display technology improve the driver's workplace, as well as increasing safety and, hence, also productivity,"

Johannes-Jörg Rüter is president of Bosch's newly launched commercial vehicle and off-road unit.





A group of companies headed by Bosch has created a new digitally integrated cab designed for use in a variety of off-road machines. It builds on technologies used in the automotive sector.

PHOTOS: BOSCH

Andrew Allen, head of the unit's construction business, explained in the same announcement.

To develop the Genius, Bosch put together the cab concept cluster team, including several other systems suppliers as well as the Technical University of Dresden in Germany. "The project's aim is to demonstrate to manufacturers of construction machinery, agricultural machinery, and industrial forklifts how much potential there is for efficient system integration," said Bosch's press release.

Central to integrating all that digital technology into the Genius cab is the body computer. It reduces the number of electrical connections, relays and fuses required for all the system components in a machine. It not only saves on material but also makes electrical circuits less complex, which is something farmers and mechanics can appreciate.

That computer system and all the functions routed through it get fed to the operator's station and can be monitored and controlled on the Genius's DI4 mid-display seven-inch terminal. It's capable of taking input through control buttons or via a touch screen.

As well, for instance, drivers get a digital look over their shoulder via Bosch's side-view mirror-replacement displays. Integrating these displays into the cab interior means there is actually no need for old-style side-mounted rear-view mirrors. That, claims the company,

reduces blind spots and significantly increases safety around any machine equipped with a Genius cab.

Complementing those digital rear-view mirrors is an ultrasonic sensor system, similar to those used in cars to alert a driver to parking lot obstructions. These can monitor the environment around a machine and help the operator identify hazards, especially at night. Such sensors give drivers unobstructed all-round vision, even in those areas close to a machine that an operator might not be able to see from the cab at any time.

Like all the other digital systems, the operator's joystick control gets integrated with the central computer, so manufacturers who might use a Genius cab can more easily integrate vehicle systems.

As both the ag and auto sectors inch closer to autonomous vehicle operation, the need for those automotive-inspired safety features and operator enhancements grows in both farm machine and on-road vehicles. And with human operators still at the controls, these technologies are also a benefit, given the scale and complexity of today's ag equipment. GPS guidance helps keep machines on track during operations in the field, but there are many instances where an operator's skills are key.

"We take a machine that weighs several tons and manoeuvre it with millimetre accuracy, eight hours a day," one heavy equipment operator said in the Bosch press release. "Even the tiniest detail has to be right." **CG**

# From planning to implementation

Get into these management habits. They will help you develop the strategic objectives that will drive your farm where you want it to go, and then help you achieve real progress toward them

**I**n our past column in this space, we reviewed the habits of successful agricultural managers. One habit is that successful managers don't just do strategic and operational planning, they translate their plans into action — i.e. they have a process to implement the plan.

Like most farmers, many CTEAM participants have had little experience or training in planning and implementation. Frequent questions address issues like:

- How do I hold people accountable?
- How do I get my team to have disciplined processes when I'm not very disciplined myself?
- How can I use team meetings to help implement our plan, and how do I set up those meetings?

These questions become more compelling as farm businesses grow: what works at \$1 million in sales and one employee may not be appropriate at all with \$4 million and five employees. As the business grows, many managers find that they, or someone, needs to spend less time on the tractor and more in the office.

**“Progress is best made not by trying to break bad habits, but rather by developing good habits.”**

— Larry Martin

A second issue in many farm businesses is that some employees are also family. Managing and disciplining family provides very different challenges than managing hired employees. And, as implied above, frequently the family member who is the biggest problem is the owner/operator who may have no background or training in managing, may have no experience in managing people because he/she is accustomed to working alone (or nearly alone), and may be inclined to just “get it done.”

As with many issues in life, progress is best made not by trying to break bad habits, but rather by developing good habits. Here are some things CTEAM has taught us about improving implementation.

## FIRST, HAVE CLEAR FOCUS

The first step is to develop three to five very specific strategic intents that will be achieved for the business. They will be very different for different businesses, such as reducing costs substantially, introducing a new commodity, adding value to one or more commodities already being produced by marketing direct to consumers, or significantly improving financial record-keeping and decision-making.

If achieved, these strategic intents will assist in delivering on the farm's value proposition.

Intents are more than simple actions. So, for example, building a barn and buying a new combine are not in themselves strategic intents, although they may be tactics that are part of a strategic intent.

Strategic intents should be few. If even multinational corporations generally are unable to focus on more than three of four major initiatives, how can a small business with more limited resources do more?

As well, strategic intents also need to be measurable, as are all of the examples above.

## EXPLICITLY TRANSLATE INTENTS INTO ACTIONS AND ACCOUNTABILITIES

In CTEAM we provide a template that does this. For each strategic intent and each fiscal quarter (can also be monthly) it identifies what actions will be taken in that quarter to achieve the intent, who is accountable for them, by what date during the quarter, what resources will be required, and how the action's effectiveness will be measured.

This has a number of positive effects:

- It ensures that the manager and/or the management team must think through all the actions required to accomplish a strategic initiative so that a map can be laid out. It doesn't mean that things can't change if warranted, as will be discussed below, but it clarifies expectations of what needs to be done and how to do it, thereby helping improve communication.
- It provides a way to hold people accountable for their responsibilities: if Joe is responsible for getting drawings made for a new building by the end of the month, he knows it and so does everyone else.

- By being effective in holding people accountable, it will lead to a management process that works.

### HAVE MANAGEMENT MEETINGS AND PROCESSES

As suggested above, a process can be put in place to ensure that implementation is carried out effectively. This can be done using the template above as the basis for regular meetings to assess progress.

They can be monthly or quarterly, but they should be regular. The meeting's agenda is organized around the accountabilities. What was each person supposed to do? Did they do it? If not, why not? What do we need to do to get back on track, and how does that affect actions in the next month or quarter?

This provides a means to ensure that everyone is communicating. Observing farm businesses that use approaches like this leads to the conclusion that a range of learnings can come from them. People with different areas of responsibility learn from each other and often work together to find better ways to do things.

This provides a process to decide what to do when people aren't performing. If failure to deliver on time persists, it's possible the person isn't in the right organi-

zation or the right job within it. This demonstration of performance issues provides the opportunity to reassign people if they are not in the right position.

One question, alluded to in the introduction, that often arises about this process is, what if I don't have the discipline as the manager to do this consistently?

In my personal experience, this problem can be addressed by giving the responsibility to someone else in the organization who has the right personality traits to ensure regular meetings actually happen and that the process is followed.

It works and demonstrates to the organization that you are serious about the process, even if you're not initially good at it.

### FINAL COMMENT

This is just one approach to developing disciplined management processes to implement a plan. There are others. Successful ones are common sense, but then most good management practices are. **CG**

**Larry Martin** is a principal in Agri-Food Management Excellence, which runs the Canadian Total Excellence in Agricultural Management (CTEAM) program. [www.agrifoodtraining.com](http://www.agrifoodtraining.com)

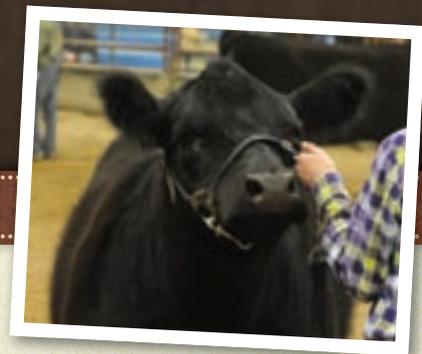
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# 'Insurance' spraying

A new study says most farmers can generate more profit by cutting back on crop protection. But wait... is it really that simple?

BY GERALD PILGER

**T**oday, we all recognize “recreational tillage” as a phrase we use to criticize farmers who haven’t been paying attention to how we’ve learned that we can put an end to a lot of excessive tillage, thereby reducing soil erosion, fuel and equipment costs, and manpower requirements.

But now we need to ask: Is “recreational spraying” joining “recreational tillage?”

Without question, farmers are spending a lot more time spraying pesticides, with many of us making multiple passes a year over every field. But are all those sprayer hours and investments in pesticides justifiable?

This is a critical question given the increasing demand by consumers for reductions in pesticides in both their foods and the environment. Consumers are worried when they see reports of pesticide residues in their food and even water. In France in 2013, the General Directorate of Health reported seven per cent of French citizens “had been supplied, at least once, with drinking water that was over the maximum authorized pesticide concentration.”

Because of consumer pressure, France has adopted the ECOPHYTO national action plan which calls for a 50 per cent decrease in pesticide use by 2025. (Initially, the target date for this reduction was 2018.)

To find out what impact this ruling may have on agricultural production, a group of agronomists in France tackled the question of pesticide overuse, and they have now released their eye-opening findings in the paper “Reducing pesticide use while preserving crop productivity and profitability on arable farms” published in the journal *Nature Plants* in March of this year.

Specifically, they wanted to find out whether substantial reductions in pesticide use are possible without having an impact on crop productivity and profitability.

The five scientists on the team analyzed pesticide usage, the productivity and the profitability of 946 conventional farms across the country. All farms in the study were non-organic and applied pesticides and fertilizers, although pesticide usage varied widely between farms.

The scientists also compared the actual usage of

herbicides, fungicides, insecticides and other products including growth regulators and rodenticides against the recommended application rates of these products for the specific crop rotation system used on each farm.

The researchers found that only 59 farms (just six per cent of the farms in the study) would likely experience a decline in productivity if pesticide usage decreased.

They also found, where there were productivity losses, it was almost always because of herbicides. Reducing fungicides or insecticides had little impact on productivity except on intensively farmed crops like potatoes and sugar beets.

Even so, 55 per cent of the farms could cut back herbicide usage with little impact on productivity.

More importantly, 39 per cent of farms would actually be more productive if they reduced their pesticide usage. (These farms were often livestock producers applying large amounts of pesticides to crops like corn that are grown for feed.)

The cost of pesticide overuse becomes even clearer when the scientists looked at farm profitability. The paper states: “We found that pesticide use could be reduced without a significant impact on profitability in 67 per cent of the surveyed farms.”

As well, in 11 per cent of the farms, pesticide use reduction could even significantly increase profitability.

The conclusion of this study was: “Our results suggest that pesticide use could be substantially reduced without any financial cost, but also without any financial interest, for most of the French arable farmers.”

However, this does not mean it would be cost-free. The study found that to achieve this pesticide reduction would require changes in “crop rotation, soil tillage practices, cultivars, sowing dates and density, fertilizer, and so on.”

Switching to non-chemical control of weeds increases the risk of production losses, they found, whereas introducing non-chemical control of disease tends to increase productivity but decrease profitability.

Insecticide usage and its impact on productivity and profitability correlated closely with oilseed rape in the crop rotation. Reducing the frequency of oilseed rape had lower insecticide costs and higher productivity and profitability.

The bottom line is that reducing pesticides increases the complexity of decision-making and management on the farm.

In other words, it requires more and better management, and it requires changing away from current farm management practices. Plus, it reintroduces risks that modern conventional farming systems, with their use of chemical controls, had largely mitigated.

Such a change would not be easy for risk-averse farmers.

### **NORTH AMERICAN STATUS**

Many will argue that this study has little relevance in North America since we don't use nearly as much pesticide as is applied in Europe. There are two problems with this argument.

First, zero tillage, technological advances in sprayers, and rapid adoption of fungicides and other new pesticide products (including organic and biological products) are driving a rapid increase in pesticide use in North America. Second, consumer rejection of pesticides is global, and a push to reduce pesticide usage in Europe will prompt calls for reductions elsewhere, including Canada.

In 2012, Diana Yates at the University of Illinois reported in the *Western Farm Press* that Michael Gray, a crop scientist at Illinois, had surveyed 2011 corn and soybean fields for pests in 47 counties in the state and found key insect pests to be at or near zero in many counties. In Yates's report Gray stated: "I've never seen anything like it in 22 years of doing this kind of research. From an insect diversity perspective, it's a biological desert in many of those fields."

Instead of using integrated pest management practices, Gray found growers rely on multiple chemical applications. Farmers tended to throw everything in their arsenal at pests in an attempt to achieve total pest control each and every year.

Instead of an integrated pest management program, Illinois farmers have adopted what Gray called an insurance pest management program. According to Gray, risk-averse Illinois corn growers saw investing \$20 or \$25 per acre in an additional pesticide application as cheap insurance when they have already invested an average \$850 an acre in fertilizer, seed, crop insurance, machinery, and land rent (or ownership) costs for their corn crop.

This "insurance" attitude is further entrenched by farm lenders, agronomists, and advisers all pushing farmers to maximize yields, abetted by constant pressure from retailers and chemical manufacturers to use more pesticides.

Make no mistake. I'm not endorsing or arguing for organic production. Numerous studies have shown lower productivity with organic production. Most suggest productivity falls in the range of 19 to 25 per cent, according to a recent UBC paper by Verena Seufert and Navin Ramankutty. These University of British Columbia researchers have compared the results of a large

number of organic and conventional research studies. Rather, the French study and Gray's work simply encourage farmers to restrict the use of pesticides to when they are truly needed.

As a farmer, are you ensuring the need of the pesticide before application? Do you actually scout your fields to determine if and what pest infestation is present before spraying? Do you select the pesticide you are applying for the actual pests present, or do you use a broad-spectrum product to get whatever might be out there?

Do you know the threshold infestation level of a pest that makes control economical, or do you simply spray if the neighbours spray for the pest? Do you leave a control or untreated check in the field for each pesticide you apply to see the effect of not spraying? If not, how do you know if the investment you made in the pesticide was economical?

Overuse of pesticides not only increases cost of production but also increases the risk of resistance issues, and it increases the distrust by the consumer of the safety of the food we produce. It can even shut North American farmers out of important export markets for our production.

## **The bottom line is that reducing pesticides increases the complexity of decision-making and management on the farm**

Farmers love to complain about the cost of pesticides and the time they now spend in the sprayer. But are all those products and hours really needed? Only each individual farmer can answer that question for their own farm. But unfortunately, it is a question many farmers are not even asking themselves.

Unless farmers minimize the use of pesticides to the level at which consumers see that the increased production and lower food costs that are made possible with pesticides outweigh the negatives of pesticide usage (including food security and higher prices), governments and society will force the change on us through legislation such as France has already adopted.

On a final note, farmers alone cannot and should not be expected to reduce pesticide use. For a reduction to occur we are going to need investments by government and industry for the development of more pest-resistant crops and alternative cropping systems.

Consumers, too, are going to have to be better educated on the importance of pesticides if productivity is to be maintained and a growing world population is to be fed. **CG**

# When the in-laws cross the line

**“Y**ou cannot imagine what it’s like to live close to your parents-in-law.” I often hear this from clients. But I can. When I was young, my brother and his wife were neighbours of the family home. As a farmer’s spouse, I lived across from my parents-in-law for 30 years. Eventually, I became a mother-in-law myself.

As a farm psychologist, I’ve also seen and heard hundreds of family stories. I’ve developed some experience regarding in-law conflicts in cohabitation situations.

Living near in-laws isn’t easy, no matter which side of the fence you’re on.

Are such conflicts common in the general population? According to Cambridge University psychologist Terri Apter, three out of four couples experience significant conflict with their in-laws. It seems to be much more prominent between daughters-in-law and mothers-in-law because only 15 per cent of men — compared to 60 per cent of women — complain about their mother-in-law.

According to Apter, words used to describe the relationship include: uncomfortable, strained, infuriating, depressing, draining, and awful.

To my knowledge, we do not have statistics specific to agriculture-business families, but it’s easy to guess that the situation is even worse. If you’re getting along with your in-laws, consider yourself very fortunate.

One client said, “We do not choose the in-laws, we undergo (or we have to live with) them.” For some people, the challenge will be really hard. It is quite easy to get along and limit conflicts when visiting the in-laws a few times a year. The in-laws are accommodating, in theory, at least. Everyone has their zones of intimacy, and you do not see everything that happens.

As my mother often told me, “What you don’t see or hear won’t hurt you.” So because you limit the interactions, you limit the conflicts. And if things are too difficult, the visits can be shortened or spaced — or both.

In an agricultural context, life is different. In addition to working together, we remain very close, so we can see a lot of things. “She’s not gone yet. It’s been five

times this week.” Or, “How come he hasn’t come out to work? It’s been an hour since he had dinner. He gets up late to go to the barn since he’s with her.”

Sometimes your parents might interfere in their role as grandparents. “You should not buy her this toy,” or “you should dress her like that.” Maybe they even interfere in your financial management, saying things like, “Why did you renovate the kitchen? It was fine as it was.”

When should we say something, and when should we be silent? It’s not always easy to tell. However, the more mature and healthy the relationship, the more we can talk about our mutual expectations, concerns and limits, and this can help us manage our differences.

Many reasons can explain conflicts with in-laws:

- A know-it-all and/or take-charge mother- or father-in-law — or daughter- or son-in-law.
- A parent’s belief that no one is good enough for their son or daughter.
- Differing philosophies on how to raise children.
- Gender roles.
- Standards about cleanliness.
- Work-life balance.
- Money lending or spending.
- Pressure to conform to religious or cultural norms.
- A parent trying to give marital advice.

Does the behaviour of others matter to me? It depends. What if your son decides to have his child baptized? What if he does not? It is not your business.

What if the bride decides to paint the kitchen red? Not your business. What if she decides to sign little Tommy up for ballet lessons? Not your business.

But what happens when the cost of the lifestyle of your successor jeopardizes the future of the company you’ve built? That’s your business.

Regarding salary and benefits, working conditions, and the responsibilities of the partners, there must be clear and accepted rules. These should fit into the company’s vision. Afterward, how everyone decides to enjoy their salaries and their vacation is their personal choice. However, if you

become the guardian of your cherished grandchildren, it is up to you to convey your limits.

In short, if the choices of others have real consequences on your life, or if you believe that someone’s physical or mental health is in danger, then the issue is your concern. It is your responsibility to discuss it constructively.

The stronger the relationship and the stronger your ability to discuss difficult subjects constructively, the more topics you’ll be able to discuss. However, in theory, everyone should know the difference between what belongs to me (my expectations, my values, my fears), what belongs to the other (his needs, his values, his rights), and what belongs in the relationship.

But what happens when it’s not so clear? Life is rarely black and white. Sometimes it’s hard because, as parents, we can see that certain choices could jeopardize the mental health of people we love (our children or grandchildren).

The mature position that will increase your success in communicating with others in general and the in-laws specifically is an affirmative style. Affirmative people are able to clearly state their opinions and feelings. They can firmly advocate for their rights and needs while respecting the rights of others. They are able to value themselves, their time, their money, and their physical needs.

“Good fences make good neighbours.” This is especially true with in-laws. Learn how to set healthy boundaries. At the end of the day, you can only control yourself — what you want, what you say or don’t say, what you do or don’t do, the way you say or do things. You definitely have no control of others’ expectations, behaviour, or feelings, but you can change the way you react to the situation. **CG**



**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. Contact her at: [pierrette@pierrettedesrosiers.com](mailto:pierrette@pierrettedesrosiers.com) [www.pierrettedesrosiers.com](http://www.pierrettedesrosiers.com)

# One end is another beginning

**BY LIZ ROBERTSON, MA., CAFA  
EXECUTIVE DIRECTOR**

January 1 may be the start of the calendar year but for me, the feeling of renewal that comes with a new growing season, warmer weather, summer barbecues and friend-and-family-get-togethers feels much more like a start to a new year than when it is minus 30 and dark by 4 p.m!

For me, a hallmark to the start of summer is CAFA's popular Farm Management Update in Woodstock on June 8, which in fact is at the end of CAFA's fiscal year. This event consistently delivers stimulating speakers who create a lot of discussion among the farm advisors attending. This year CAFA is holding the event with the Ontario Institute of Agriologists, which is also a new collaboration for the OIA. Its annual general meeting is on June 9 followed by an afternoon of local agribusiness tours for OIA and CAFA members.

*"I know of no single formula for success. But over the years I have observed that some attributes of leadership are universal and are often about finding ways of encouraging people to combine their efforts, their talents, their insights, their enthusiasm and their inspiration to work together." — Queen Elizabeth II*



CAFA's Farm Updates provide high-level professional development and this year's Woodstock update will encourage discussion and thought around timely and future issues including:

- Craig Klemmer, FCC's principal agricultural economist, will provide an economic outlook for Ontario agriculture.
- Dan Wright of the Canadian Seed Trade Association will provide more insight into what everyone is talking about: "Growing Canadian agriculture and seed through international trade and partnerships."
- Frank Kennes, vice-president of agriculture and commercial services for Libro Credit Union, will share insights on what lenders see for the future of the family farm.
- Kim Ly, principal of Borders Immigration Consultancy, will pose the question to ask your farm clients: "Temporary foreign workers — are you in compliance?"
- Allison Graham, an author and founder of Elevate Biz, will discuss "Building your army of allies — the evolution of profitable relationships."

- Dr. Rene Van Acker, dean of the Ontario Agriculture College, will ask "Who will be the next generation of farm advisors?" He has a pretty good idea of who the next generation of farmers will be!
- Jennifer Christie, 4-H network summit event chair and founder of Women's Ag Network, will discuss the answer to the question heard more often lately: "Can I talk to the woman in charge?"
- Management consultant Monica Clare will provide a firsthand look at "A consultant's family business transition: the inside story."
- Larry Keating, president and CEO of NPC and a popular consultant and speaker on cyberthreats, will discuss "Ransomware, phishing scams and the increasing cyber threat for professionals."
- Rob Hannam of Synthesis Agri-Food Network will describe the Advanced Farm Management Program and why farm advisors need to be encouraging their clients to keep educating themselves in farm management.

Even as this update closes CAFA's fiscal year, it is the start of sharing new ideas and concepts, building new relationships and preparing as we can for what lies ahead. The more you can acquire knowledge and improve skills, the more value you can offer. Continuous improvement never signals an end, only new opportunity.

## FOR MORE INFORMATION PLEASE CONTACT

Liz Robertson at CAFA 1-877-474-2871  
or [info@cafanet.com](mailto:info@cafanet.com) or visit [www.cafanet.ca/  
farm-management-agenda-woodstock/](http://www.cafanet.ca/farm-management-agenda-woodstock/)

Or

Terry Kingsmill, P.Ag. OIA Registrar,  
519-826-4226 or [registrar@oia.on.ca](mailto:registrar@oia.on.ca) or  
[www.oia.on.ca](http://www.oia.on.ca)

# All the farm's a play

Mark Crawford finds life on the farm an ideal apprenticeship for success as a side-splitting Canadian playwright

BY STEPHANIE MCDONALD

**T**hese days, Mark Crawford says he's at a point in his career where his family no longer worries about him in what can be a crazy profession. And for good reason.

This summer his fourth play in four years, *Boys, Girls, and Other Mythological Creatures*, is premiering in Ontario, and his first play, *Stag and Doe* is on stage in Kincardine, Ont., after having had seven productions in less than two years, ranking it as one of the most produced plays in Canadian theatre over the past decade.

*Bed and Breakfast* also played at the Centaur Theatre in Montreal this spring, and *The Birds and the Bees* will be produced five times over the next year in theatres from Kamloops, B.C., to Victoria-by-the-Sea, P.E.I., after opening at the Prairie Theatre Exchange in Winnipeg at the end of March.



**“We’re so inundated with American TV that sometimes we don’t give value to the place where we live.”**

— Mark Crawford

Crawford continues to act, meanwhile, and recently wrapped up a month of performing in two Shakespeare plays at the Winter Garden Theatre in Toronto, and he also moved from Toronto to Stratford so he's back closer to the family farm and the rural Ontario that he writes about in his plays.

It's been an impressive five years, transitioning from actor to actor-playwright. Beyond the positive reviews and sold out shows, for Crawford there are great rewards in creating work that brings people out to the theatre, especially for those who may not regularly go. “It's cool to just give people a really fun night out, and to be a part of that, to give them a different experience. A fun night has great value, especially in the crazy times we're living in.”

It's also, it turns out, a good time to be a farm-based, rural Canadian playwright, or artist of almost any kind.

Partly, that's because the stage is ready for rural plays. In fact, if you're from rural Canada and watching a Crawford play, you feel like you're in on the secret. “It's part of the whole movement of Canadian theatre that came out of the early '70s about actually

going back into places where real people live and making plays about them. It carries on in that tradition,” Crawford says. “We shy away from acknowledging specific cultures within our bigger culture. I think a place like Newfoundland has really embraced that but the rest of the country maybe shies away from it.” That's something Crawford's plays are helping to change.

“It's important to say, ‘hey, where you live and who you are, and your life and your community have value.’”

Crawford's plays may be set in a specific place, based on the family's farm just outside the small Ontario town of Glencoe, population 2,100 or 2,200 depending on which sign you read, but the themes are universal. *Stag and Doe* had a successful run at the Neptune Theatre in Halifax last year even though they don't have *Stag and Does* in Nova Scotia. Some at the theatre worried that people wouldn't come to the show or understand what it was about. But, “ultimately it's about weddings and it's about small communities and in Nova Scotia they have lots of those things,” Crawford says. “And people always fall in love and people always screw up.”

But rural Canadians also have unique insights into stereotypes, especially since so many city dwellers make so many generalizations about country hicks.

At bottom, it may be why Crawford thinks so much about stereotypes when he writes his plays. He says he's interested in “peeling back the layers of characters and revealing more than we first assume.”

That might lead to showing rural characters who are more sophisticated and complicated than the stereotypical straw-chewing yokel that you might see wearing overalls in someone else's play, but there's more to it than that. In fact, his shattering of audience assumptions works both ways. In *The Birds and the Bees*, for instance, he says “the rural characters are revealed to have deep and complicated inner lives — romantic and sexual — but also the one character who's not from a rural community first appears as a bike-riding, juice-cleansing, ultra-nerd, but by the end we see him as a very smart, deep-thinking, compassionate, fully rounded character.”

The stereotypes go both ways, Crawford says, and the theatre is the perfect place to set them up and then crash them all together for all to see.

But on top of that, there's another reason why growing up on the farm is good training for a young artist, Crawford says.



From coast to coast in farm country, four Mark Crawford plays will have crowds in stitches this summer.

If you want a primer for being an artist, growing up as a farmer can be good preparation for the realities of an actor or playwright's life because, as he says, "sometimes there's money that's coming in, sometimes there's no money, sometimes you're just in incredible debt, sometimes you can pay off that debt. And you plant a crop and hope to hell it grows and you get paid seven months from now."

Rural southern Ontario is the backdrop for each of Crawford's plays. It is a place, he says, with its own, largely unacknowledged traditions, its own way of speaking and its own way of looking at the world.

It was one of these unique rural traditions, his brother's *Stag and Doe*, that provided the inspiration for his first play. A *Stag and Doe* (also called a *Buck and Doe* or *Jack and Jill*) is an event held by a young, soon-to-be-married couple to raise money to cover the costs of their wedding. Anyone can attend, and lots do, as it's sometimes the only thing happening on a weekend night in a small town.

Crawford started writing in the summer of 2012 while acting at the Blythe Festival, a theatre close to Lake Huron. For the previous decade, he had worked full time as an actor. That is, he says, "as much as anyone in the Canadian theatre works full time."

The Blythe Festival was founded in 1975 largely to produce plays that reflect the culture of southwestern Ontario. It's a place where there is always a lot of writing happening and Crawford was inspired. He thought back to his brother's *Stag and Doe* in 2004, which he had helped out with. "I always thought it was a really

funny, weird, very specific cultural rite of passage," Crawford says. "I thought, 'maybe there's a play in there somewhere.'"

Two years later, *Stag and Doe* premiered at Blythe. The play takes place in the kitchen of a community hall in a small town in southwestern Ontario. A couple is preparing for their *Stag and Doe* later the same day when a distraught bride-to-be enters and demands to use the hall, as the tent she was going to get married in had blown away in a storm. Being a small town, the characters have an entangled history. Combine this with the usual stresses of weddings, booze, and a catering crew that has landed in jail, and you have the ingredients for a wickedly funny play.

Watching *Stag and Doe*, it's obvious that it could only have been written by someone who grew up on a farm, with the dialogue peppered with references to 4-H, heifers, and catering by the United Church Women. One character runs home to do chores, gossip gets shared at the liquor store, and it's no surprise to find out that folks are connected in all sorts of ways — whether it's the sharp-tongued lady at the store who turns out to be the maid-of-honour's aunt, or another who used to babysit the grocery store cashier.

There's nothing simple or inherently boring about rural life, Crawford says.

"Sometimes we're so inundated with American TV that we don't always give value to the place where we live," he says. "I do think it's important to say 'your place in the world is equally important as all the stuff we see that takes place in New York City.'" **CG**

## THE SCOOP about naloxone

**W**ith the increased incidence of overdoses of opioids like fentanyl, you may have heard about naloxone, sold under the brand name Narcan.

Your first thought was probably that this issue doesn't concern you at all.

But before you dismiss it completely, take a minute to learn a little bit more. You'll be glad you did.

### Even if you think no one you know could ever overdose on opioids, it can still make sense to have naloxone on hand

Opioids or narcotics are excellent pain relievers, and about 15 per cent of Canadians use them in prescriptions to treat painful conditions like arthritis and cancer. But, of these people, about two per cent abuse the drugs.

On top of this, there is illicit or illegal use of opioids, which seems to be increasing every year. It is difficult to know exactly what the incidence of "street" use of opioids is, but estimates are about 11 per cent of Canadians have tried them at least once.

The bottom line is that opioids are widely used and available.

Between this illegal use and the possibility that a person who uses narcotics for a painful condition may accidentally take too many tablets, there is a risk of overmedication or overdose.

That's why it may be a great idea to have naloxone available.

Naloxone acts only at opioid receptors to rapidly reverse opioid effects, especially respiratory depression which is the cause of death in overdose. It has no other effects, and thus, if an opioid is not involved in the overdose, it will have no effect.

Naloxone acts for about 30 minutes, which gives you time to call 911 or get to the hospital.

Naloxone is a non-prescription drug which you can purchase from any pharmacy, and many pharmacies will have naloxone kits which contain information about its use and everything you need to administer the antidote.

Injectable naloxone is available as ampules and pre-loaded syringes, but the pre-loaded syringes are sometimes in short supply.

Giving the injection is not difficult and it can be done in the upper thigh right through blue jeans. A nasal spray formulation is also available and certainly much easier to administer, but also is in short supply.

In the event of an overdose, you certainly want to call 911 and tell the operator that someone is not breathing. Because respiratory depression is possible, you will want

to check for breathing and you may need to do rescue breathing.

If they are breathing, place them in a recovery position, that is lying on their side, and of course stay with them and keep them warm.

The methods of coping with an opioid overdose you see in movies and on television are usually incorrect. Don't slap or forcefully try to stimulate them, you could cause further harm.

And, putting an overdose victim in a cold shower or bath could cause them to fall, drown, or even go into shock. Trying to make them vomit can result in aspiration of stomach contents. Obviously, you should only inject naloxone.

If you or anyone in your family takes opioid pain relievers, a naloxone kit might be a good idea to have in your home.

And, sometimes parents have one, just in case their children or children's friends are accidentally exposed to opioids. The adage that an ounce of prevention is worth a pound of cure is true when it comes to naloxone! **CG**



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

### NEXT ISSUE

Anticoagulants keep the blood from clotting in a variety of conditions ranging from atrial fibrillation to deep vein thrombosis. Warfarin is the anticoagulant that you may recognize, but regular blood testing is needed. Next time, we'll talk about the newest anticoagulants which eliminate the need for blood work and are more convenient to take.

# The Hansons celebrate... and the neighbours join in too

Sometimes a secret is just too good to keep

**A**fter an afternoon of lawn darts, frisbee, lounging in lawn chairs and drinking cold drinks, 31 members of the Hanson family and another 42 assorted friends and neighbours were sitting around borrowed tables on the Hansons' lawn, digging into their buffet dinner of steak, baked potatoes, homemade buns, 11 different salads and hot dogs for the kids.

"Maybe we should have the toasts before dessert," Donna said quietly to her daughter-in-law, Elaine, while they stood by the food table, covering plates and bowls of leftover food to keep the flies and kids out. "I don't like the looks of that cloud in the west."

"I'll take your word for it," Elaine said, taking another sip of wine. "You've been here a lot longer than me!"

Donna had been on the Hanson farm with her husband Dale for exactly 40 years, and everyone was gathered to celebrate their anniversary.

Elaine and her husband Jeff had originally planned a small dinner party for the occasion.

"Just us, your sister and her boyfriend, and your grandfather and Helen," Elaine had said. "It will be a nice, relaxing, after-seeding break."

But one thing had led to another.

"Your sister says she's flying home in mid-June," Jeff's aunt Margaret said accusingly when she phoned from Ontario. "You'd better not be having an anniversary party without inviting me."

With Dale's sister and her partner on the guest list, Elaine and Jeff thought they'd better invite Donna's family from Yorkton. "No use leaving out Mom's cousins."

Then, when Jeff and Elaine went out for dinner and a movie to cel-

brate a successful seeding season, their kids told the babysitter about the party. The next morning the babysitter's mother phoned Elaine. "I heard you're having a party for Jeff's parents. I assume it's a potluck. What can we bring?"

Since there was obviously no stopping a party with this much momentum, Jeff phoned the Rec to book the folding tables and chairs, and Elaine drove to Regina to stock up on food, drinks and paper plates.

Of course, Dale and Donna knew all about the party long before Jeff came home with two coolers filled with steak. The woman behind the counter at the post office had mentioned it casually when she handed Donna a parcel.

## Jeff kept one eye on the sky as he handed the floor, "or, I guess, the grass" to his sister Trina

"Should we tell the kids we know?" Donna asked Dale.

"Nah," Dale kidded. "They'll make us help."

Donna had given Dale a light smack with the rolled up *Western Producer* in protest, but she decided not to say anything, on the grounds that, "people like a surprise."

It wasn't easy for them to keep up the pretense, especially when Donna caught Elaine baking six saskatoon pies, or when Dale found seven large folding tables under a tarp in the shop. It was even harder when Elaine and Jeff's three-year-old daughter Jenny skipped across the yard singing, "I know a secret about a party."

They finally stopped pretending when Dale's sister Margaret and her partner turned up in the yard in a rental car.

"It's nice being back on the farm," Margaret said. "But I wish

you wouldn't keep changing things. It's so different. It almost doesn't seem like home."

Dale bit his tongue to keep from pointing out that Margaret hadn't lived on the farm for almost 45 years, but Donna saved the situation by taking Margaret on a tour of Jeff and Elaine's new house.

Next, Dale and Donna's daughter, Trina, arrived. She had a week off from her job with an ag chemical company in North Carolina. She'd brought her new boyfriend, Tom, a southerner from Georgia, home to meet the family. Donna was so happy to see Trina happy that she hugged them both hard, and Tom blushed politely.

By late afternoon, there were so many neighbours' and relatives' cars

parked in the yard that one man driving by in a farm truck stopped to make sure he wasn't missing an auction sale.

The steaks were good and the guests were hungry, but Donna was right about the clouds. Jeff kept one eye on the sky and one on the crowd as he introduced himself as the MC, then handed the floor, "or, I guess, the grass," over to his sister Trina to give the first toast.

Before Margaret was halfway through the second toast, which was a little longer than anyone thought necessary, the wind had picked up. The guests stacked empty plastic cups and kept one hand on their paper plates.

"Can I fly my kite?" six-year-old Connor asked his father while Margaret droned on.

CONTINUED ON PAGE 66



## REFLECTIONS

BY ROD ANDREWS  
RETIRED ANGLICAN BISHOP

"I think it's too windy," Jeff whispered back. "You'd better help me gather up the garbage."

Margaret still wasn't finished toasting when the wind gusts strengthened. Ruffling tablecloths almost drowned out her speech.

Jeff got everyone's attention. "We're going to move to Plan B," he said. "I moved the machinery out of the shed yesterday, just in case."

In an impressive show of efficiency, the Hanson family moved 73 people and chairs, seven tables, eight coolers, a box of anniversary presents and 21 desserts into the shed in less than 10 minutes. Soon Margaret was back at the front of the crowd, midway through her toast again when a cat came in the shed door.

Jenny saw it first. "Greyso can hunt!" she shouted and pointed. Margaret lost her audience when everyone in the shed turned to see the headless mouse in the cat's teeth.

"Oh, no!" Elaine shouted, setting down her wine to chase the cat out of the shed.

When Margaret finally finished, Dale's father Ed went up to the front. Nobody was quite sure what sort of jokes and sarcasm Ed might think were appropriate, but he surprised everyone with a sincere, warm tribute to his daughter-in-law who had given so much to the farm for 40 years, and even tolerated him. "Which wasn't always easy," he said, drawing a bigger laugh than the cat.

"I've got a toast," Elaine whispered loudly to Jeff.

"Are you sure?" he said, glancing down at the wine glass she'd refilled, again.

She hiccupped loudly, then reconsidered. "Maybe not."

Eventually it was Dale and Donna's turn to stand up and close out the night.

"I'm glad all of you could be here today to celebrate with us," Dale started off.

"Hooray, Grandpa," Connor cheered from where he was standing on his chair.

"When Donna married me, she promised to stick with me through good times and bad. We've had lots of both," he went on. "She took on a lot, agreeing to marry a farmer and spend her life out here. Not everyone would do that, and no one could do it as well as Donna. We're both glad you could be here to celebrate with us today." Then the crowd shouted and jeered until they kissed.

"Too bad about the wind," Margaret said, from where she was sitting with her feet up on a box, anxiously eyeing the floor for more stray mice.

"We're used to having to move on to Plan B," Donna said, smiling happily.

"Or sometimes Plan C," Dale said.

Then Donna finished with a special thank you for Elaine and Jeff. "This was a great surprise."

**I** am planning a training flight with a student pilot. We are hoping for good weather. He scans the Internet to see if storm cells are developing. Radar shows large cells building in the west. Tops range to 20,000 feet. We won't fly that way today.

Severe weather challenges pilots and farmers. People who fly airplanes, or till the soil, know the dangers lurking in summer clouds. Tornadoes, turbulence, hail and severe updrafts and downdrafts are not friendly.

Hurricanes, earthquakes, volcanic eruptions, tsunamis and other weather phenomena fascinate and frighten us. Their destructive force seems to come out of nowhere to wreak havoc on people and property.

If your house is flattened, or your barn blows down, you experience first hand the immense forces residing in nature. They are real and dangerous. When nature unleashes its power on us, life is changed. In an instant the world is turned upside down. Severe summer storms release enormous energy leaving an unrecognizable landscape and devastated communities in their wake.

Science helps us understand the systems behind this release of energy. Nevertheless, we are usually caught by surprise by the manifestations of severe weather. We are reminded of our fragile existence within creation.

A farmer needed extra help. He advertised the position and interviewed several likely candidates. He warned them all: "The winds are very strong here and the hours are long." He asked, "Can you cope with working in strong wind?" The farmer was disappointed when he offered the job to some good prospects and they turned him down. He advertised again. Only one young man applied. The farmer warned him about the long working hours and the persistent strong wind. "I can sleep when the wind blows," the young man said. This simple reply confused the farmer, but he was desperate for help and the man was hired. He was a diligent worker through the harvest season.

Autumn ended and the first cold winter storm came late one night. The farmer woke to hear howling winds outside. His house shook and he was concerned for the safety of his property. He grabbed his coat and pulled heavy boots on his feet. He went to the bunkhouse and woke his employee from a deep sleep. He was disappointed to find the man in bed at a time like this. "Hurry and get up," he pleaded. "We need to tie everything down." The worker responded, "When you hired me I said I will sleep when the wind blows." The farmer turned into the wind and rain. To his surprise the hay stacks were covered and tied with rope, the cattle were in the barn, the chickens in their coop and the pigs in their pen. Everything loose had been secured. Farm machinery was in the shed. Then the farmer remembered the man's promise, "I will sleep when the wind blows."

Another weather story. A bishop made a winter tour of his diocese by rail. After an evening service in a small town, he stayed in the local hotel. The rate was low but so was the amount of heat provided. In the morning the bishop was wakened by the whistle of the train taking him to his next stop. He rushed to the railway station carrying the pitcher of water from his room. It was frozen solid. The station agent asked, "Why do you have the water pitcher from the hotel?" The bishop sputtered, "My teeth are in there."

*Suggested Scripture: Isaiah 25:1-5, Mark 4:35-41*

**Rod Andrews** is a retired Anglican bishop. He lives in Saskatoon.

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

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