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farm management  
stories

# AgriSuccess



The Keddys: creating a new revenue stream in Nova Scotia



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NOVEMBER / DECEMBER 2013

### On the cover:

The Keddys built their farm on strawberries and raspberries, but when a chance came to try out a new kind of crop, they diversified – without realizing how many years it would take to get the new crop just right. (Page 4)

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## from the editor



We always try to take a positive and upbeat tone and that's usually pretty easy to accomplish given the relatively strong agricultural economy of recent years. However, as you scan our list of stories in this edition, you'll notice some are waving a caution flag.

Rising interest rates (someday), herbicide-resistant weeds, the risk of accidents, disability and death. We didn't plan to be quite so morose. In our defence, these stories all deal with important topics and we've tried to be solution-oriented.

We also have some great information pieces on how to protect your farm from exchange rate fluctuations and how to establish a reasonable work-life balance.

In addition, we feature an expert answering some of the most common spray application questions. Sprayers are winterized and parked right now, but for field crop operators, the sprayer has become the most used piece of equipment on the farm.

And to balance the above-mentioned topics, we have a number of stories that are uplifting and motivational. Hops have blossomed into a new opportunity for a small number of Ontario growers and in Nova Scotia, young farmer Philip Keddy has found a way to make sweet potatoes a thriving enterprise.

While most of us are unlikely to ever grow hops or sweet potatoes, it's interesting to see how new cropping opportunities develop. Many of the same principles apply to other crops.

Please do us a favour. After you read through this edition, send an email telling us which stories you enjoyed the most and why. If there are some you didn't like or agree with, we want to know that. Feedback really helps us with story selection for upcoming editions. And if you have any story suggestions, we'd love to hear that too. My email is [kevin@hursh.ca](mailto:kevin@hursh.ca) and I'm on Twitter @kevinhursh1.



FOREIGN CURRENCY

we buy we sell

2602

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# Currency hedges

## can protect your bottom line

The world's currency markets have been on a roller coaster ride in recent years. In the past 12 months alone, the Canadian dollar has been worth as little as US\$0.94 and as much as US\$1.04. That's nearly a 10 per cent swing in only one year. Since many farms operate with profit margins below 10 per cent, currency swings of this magnitude can make the difference between profit and loss.

Exchange rates are the ratio at which the currency of one country can be exchanged for that of another, explains Brendan McGrath, national corporate risk manager for Western Union Business Solutions in Victoria, B.C. Between them, Canada and the U.S. form the largest trading block in the world. Every day, around US\$1.3 billion worth of goods flow back and forth across the border. Every one of those sales requires a foreign exchange transaction. However, this is only a drop in the bucket compared to the global currency market. It's estimated that nearly US\$4 trillion are exchanged globally every single day.

A currency's value is determined by the laws of supply and demand and can change by the microsecond.

Traditionally, Canadians have been used to having the value of our dollar slowly rising and falling against the U.S. dollar, as a ship does with the tide. It happened at such a slow pace that farmers adapted and made changes to their operations to adjust without even being aware of what they were doing. Sudden changes, though, can wreak havoc with your bottom line; they affect the price of everything you buy and sell.

Changes have the most direct impact if you're selling your farm's production to a U.S. or other international customer, or hedging your sales on one of the U.S. exchanges. For example, imagine you're a Canadian farmer who decides to lock in a price for wheat by buying a December 2013 futures contract on the Kansas City Board of Trade for US\$7.16 a bushel. If the currency rates in the coming months swing by as much as they have in the recent past, the price for the same bushel of wheat could vary anywhere between \$6.77 and \$7.44, depending on the exchange rate.

"If you're buying and selling something priced in a different currency, it's very important to have a currency hedging policy in place," McGrath says. "No one knows where the currency markets are going – it's a big psychological game."



## Currency hedging options

Producers have three options. The first is to do nothing. Sometimes you'll do well, and other times you won't.

Buying a currency option is another possibility. An option, as the term suggests, gives a person the right, but not the obligation, to buy currency at a specific price if you happen to need it. However, buying an option costs money and that's why most people prefer to use the third option, taking out a non-deliverable forward.

"Non-deliverable forward (NDF) contracts are becoming very popular with farmers since there are no fees involved to use them," McGrath says. "You may have to put up a deposit for the forward contract, like a security deposit, but other than that there are no fees for them. Basically the price is built into the margin or spread that we charge."

Say a hog producer wants to sell 1,000 hogs in three months and locks in the current US\$85 price on the Chicago Mercantile Exchange. To mitigate the risk of the USD falling in value, the producer can enter into an NDF to sell US\$85,000 and buy back Canadian dollars in three months at the current rate.

If, in three months, the Canadian dollar changes from \$1.04 to \$1.02, the producer will still receive the US\$85,000 he contracted for the hogs, but instead of receiving the C\$88,400 he was expecting, he will only receive C\$86,700. However, the NDF contract would close out at the same time and make up the difference. The gain on the NDF would fully offset the loss in receipts.

## Manage risk – don't speculate

Producers should only enter currency markets to eliminate their exposure to currency fluctuations, says McGrath. If you use them to speculate to potentially increase profits, you might quickly find yourself in financial trouble.

"Use the currency markets as a risk management tool," McGrath advises. "A lot of people try to gamble with them and end up getting caught on the wrong side. Instead of protecting the bottom line they wind up costing their business money."

McGrath says if you feel you really want to participate in the market but still want to protect yourself, you can always buy a currency option. Options allow you to lock in your downside exposure and still give you a bit of opportunity to gain if there is any upside.

Producers are advised to get professional advice if they aren't familiar with the currency hedging tools.

**BY LORNE McCLINTON** / Lorne has worked in the communications field for the last 20 years as a journalist, photographer, scriptwriter and corporate writer. He divides his time between Quebec and his grain farm in Saskatchewan.

# Sweet success with sweet potatoes

Finding a new revenue stream when the next generation joins the farm business is a challenge many farm families face. Philip Keddy and his father Charles were no different.

Recognizing the right opportunity, and not giving up on the potential that opportunity holds, turned the Keddys' challenge into a firm future for 29-year-old Philip. In the last seven years, Philip has grown the Nova Scotia farm from a sweet potato test site into one of the few commercial sweet potato farms in Atlantic Canada.

Keddy's Nursery's roots are in strawberries. They harvest about 19 million bare root strawberry plant cuttings a year, with about two-thirds of those exported to the United States. Located in the Kentville area of the Annapolis Valley, the nursery is also a stronghold for commercial raspberry cuttings.

Charles Keddy started the farm in the early 1970s and it's the life that Philip has always known. After school and summer vacations were spent working with his father. Philip says going into the family business wasn't as much a career choice as a happy migration after earning his agricultural business diploma and agriculture technologist diploma in plant science from the former Nova Scotia Agricultural College, now part of Dalhousie University. He's now the farm manager.

"I couldn't picture doing anything else," he says.

At the time Philip returned to the farm, a local agricultural research facility was seeking sites for test plots of sweet potatoes. It's not a traditional Atlantic Canadian crop, due to the cool soil temperatures in the region and resulting shorter growing season, and its intolerance to frost.

However, the Annapolis Valley of Nova Scotia, known for horticulture production, is a micro-climate in which researchers – and the Keddys – saw an opportunity to try out this new crop. For Philip, the prospect was too good to overlook.

"The farm was built on strawberries and raspberries," he says. "We always said it would be good to diversify, so this was our chance. Our farm was maxed out with land for rotation, labour and cold storage buildings."

Philip also knew that his father, now in his early 60s, wasn't retiring for a while and would be on hand for technical support.

During the first couple of years of the trial, they grew plots of about one-half acre with several varieties. Once the trial ended, they spent the following two years expanding to about three acres and worked on learning more about the intricacies of the crop and its production.

"We were very small and learning the techniques," Philip recalls. "We weren't getting much yield."

Philip went to work, using plastic row covers to warm the soil and growing their customer base at the Halifax Farmers Market through a local vendor who already travelled there weekly.

He seemed to be hitting his stride in the 2010-11 production year. Tuber size was good, the plastic row covers were doing their job, other intricacies were resolved





"We were either going to continue on and build a proper warehouse or we were going to get out of sweet potatoes altogether."



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and production was expanded to six acres. “We were finally getting a good-size crop and covering our costs,” Philip says.

That all changed in the fall when much of the crop was lost due to being improperly stored. Disheartened, Philip and his father recognized it was a turning point for them.

“We had to decide: we were either going to continue on and build a proper warehouse or we were going to get out of sweet potatoes altogether. We had come to a crossroads.”

They opted to jump in fully, and in 2012 stored their expanded 12-acre crop in a newly built \$300,000 climate-controlled warehouse. This year they harvested 21 acres.

As their sweet potato business grew, so did the opportunity to work with gardening centres and smaller producers. When Keddy’s Nursery receives their green cuttings in the spring from North Carolina, they also bring in sweet potato slips for other growers.

The business is now at the point where Philip is working to find the sweet spot between delivering a high quality product and reducing his cost of production.

Sweet potatoes are labour-intensive and need special care in Atlantic Canada. Due to the plant’s fragility, they’re hand-planted in June after all danger of frost has passed, and hand-harvested in the fall around the second week of October, before the soil gets too cool. The crop is then cured in the new storage facility, which runs at 29 C at 90 per cent humidity for the first 10 days.

The hand-planting, hand-harvesting and plastic row covers for 21 acres are costly, Philip points out, but necessary to produce a high quality product.

“If you want a good product at the end of the day, you have to take all of the steps along the way to care for it,” he says.

Still, getting the cost of production down opens the door to increased competitiveness and expanded commercialization.

“It’s great to grow local products, but if we can’t compete, there’s no point in growing it. We really focus on what it costs to grow an acre of sweet potatoes and look at competition with the United States and Ontario.”

Last year, he secured a contract to sell to the Sobeys grocery store chain and shipped about 4,000 40-pound cases. He’s on track to sell at least that again this year, as well as supply some regional farmers markets.

Philip says producers often put test plots in to help with research and it can take many years for the product to reach commercialization. He’s successfully growing a crop that’s unique to the region and urges producers to take their time and work through production questions when learning about a new crop.

“It took a lot of years to learn how to grow sweet potatoes, but we didn’t give up,” he says. And, growing a new crop helped him find and refine his role on the family farm, build self-confidence and take on more responsibility, all at once.

**BY ALLISON FINNAMORE** / *Allison specializes in cultivating words. Based in New Brunswick, she is an agriculture and business communicator with nearly two decades of experience. She contributes to publications nationwide and works to help industry promote farming and rural living.*

**PHOTO** / Previous page: 1 – Strawberry plant cutting



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# Fight back against herbicide resistance

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It isn't a new problem. Herbicide-resistant weeds were being found in Canada back in the late '80s. But the problem is steadily growing in severity and it's now having a dramatic influence on agronomic practices.

The most recent wake-up call came with the discovery of glyphosate-resistant kochia in southern Alberta and its subsequent spread into Saskatchewan. An estimated 90 per cent of the kochia population is already resistant to Group 2 chemistry, so now there are multiple types of resistance within the population of that prolific weed.

According to the University of Guelph, 29 species of herbicide-resistant weeds have been found in Ontario. Resistance has been documented in seven herbicide groups. Glyphosate resistance has occurred in giant ragweed and Canada fleabane.

Considered by many observers to be the world's greatest herbicide, glyphosate could be rendered virtually useless if resistance continues to spread.

Glyphosate is relatively inexpensive. Rather than tank mixing with another herbicide with a different mode of action, it was cheaper and easier to just use a heavier rate of glyphosate. That thinking is rapidly evolving.

For years, we've been told the importance of rotating from one herbicide group to another to protect against the development of resistance. While that's still important, scientists now believe that whenever possible, two products with different modes of action should be used together.

Once resistance develops in a weed population, there's no magic solution. While it may seem that many new herbicide solutions come onto the market each year, this largely involves new mixtures and formulations along with

generic products that have different trade names. In reality, there are very few new modes of action in the developmental pipeline.

Biological agents may have a role to play, particularly when combined with herbicides. Unfortunately though, biological products tend to have relatively low efficacy on weeds. As well, the application rates may not be practical for field-scale situations.

Crop breeding may be able to deliver new herbicide tolerance traits such as dicamba-tolerant soybeans, but agronomic management is the primary weapon at our disposal. This starts with crop rotation, which facilitates the use of different in-crop herbicides. Crop rotation is also a valuable tool since it can reduce disease build-up.

While herbicide-resistant weeds receive a lot of attention, the same principles apply to diseases. Use a fungicide with the same mode of action time after time, and eventually the disease organisms are going to become resistant.

Weed control has become a new ball game and disease control is going the same direction. We have to farm smart to stay one step ahead.

**BY KEVIN HURSH** / *Kevin is a consulting agrologist and journalist based in Saskatoon, Sask. He also operates a grain farm near Cabri, Sask., growing a wide array of crops.*





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# Preparing for higher interest rates

If, as many analysts believe, the unprecedented and prolonged period of record low interest rates is coming to an end, there's added importance to your future borrowing and interest rate strategies.

On June 19, 2013, the U.S. Federal Reserve said it would continue its economic stimulus, buying \$85 billion in bonds each month, but it hinted that the stimulus might be decreased in 2014 provided the country's economic recovery continues. That suggestion was enough to cause a modest boost in longer-term interest rates.

Even though the trendsetting Bank of Canada rate has not budged, borrowers in this country have been affected. Longer-term fixed rates have increased slightly. That's because variable rates are based on the Bank of Canada's overnight rate, but the marketplace sets fixed rates, as J.P. Gervais, Chief Agricultural Economist at Farm Credit Canada, explains.

"Fixed rates could move up well before we see any meaningful move in variable rates," he says. "Don't read too much into ongoing stability in the Bank of Canada rates."

It's relatively safe to predict rising interest rates. Rates have nowhere to go but up. The question is: when will they rise, and by how much? Most economists expect the increase to be slow and modest, but there are no guarantees.

Following the high-interest-rate years of the early '80s, total farm debt in Canada remained fairly constant at around \$23 billion until 1994. Since then, there have been steady year-over-year increases.

In 2000, Canadian farm debt stood at \$38.8 billion. For the end of 2013, Statistics Canada is estimating \$72 billion. With strong income statements overall, servicing the debt has not been an issue for the vast majority of producers. However, even a modest interest rate rise will generate a significant increase in this farm expense category.

## Variable or fixed?

As the graph below illustrates, the difference between variable and fixed interest rates is ever changing.



Source: Bank of Canada

Some producers say they'll stick with variable rates rather than fixed even though rates are going to eventually increase. They argue that except for short periods of time, variable rates provide them with the lowest overall borrowing costs. A fixed term may look good for a while, but eventually it will need to be renewed and by then rates could be less attractive.

"Most of my loans are variable," says Shane Debock, a grain and cattle producer from near Barrhead, Alta. "I have one fixed-rate loan because variable and fixed were the same rate at the time. Overall though, and even in high interest rate times, I believe you'll do better with variable rates."

Curtis Hoffmann, a grain producer from Oyen, Alta., looks at it differently. "For me, anything that cannot be paid off in the next two years is locked in." That way, if rates go up, he can make adjustments with little risk.





Hoffmann says variable rates sometimes offer savings, but he considers it risky with interest rates expected to eventually rise.

### Structured approach

There's really no way to know for sure when to switch from a variable rate to a fixed term. Nor is there any way to know the length of the term you should choose.

You can, however, mitigate your risk by making sure that you don't have too many terms expiring at the same time.

"You'll never know which rate decision is right," Vern Wittig says. Wittig worked as a commercial lender for many years before becoming a full-time grain farmer near Quill Lake, Sask. "I think it's important to pick fixed-rate terms to have an equal percentage of your debt maturing each year."

When Wittig takes out a new loan, he looks for maturity gaps and picks the term accordingly. He uses the same approach with land rental agreements.

"You may think that you'll wait for rates to start rising and then lock in fixed terms, but it's tough to lock in during a rising market. Since no one can truly predict interest rates, don't let it consume your time."

Wittig has variable rate exposure on his operating loan, but he doesn't do variable rates on land or equipment loans. He worries that interest rate hikes could prove difficult for some highly leveraged farmers to manage.

### A more sophisticated approach

Choosing a fixed term even though the rate is higher is like paying a premium for interest rate protection. There are potential protection mechanisms that avoid this premium.

"Consider holding an ETF (Exchange Traded Fund) that shorts U.S. treasuries," Rob Rigetti suggests. A self-described financial markets junkie, this grain farmer from Moose Jaw, Sask., points out that U.S. treasury bonds trade at an inverse to interest rates.

"This isn't for everyone. You need some cash available to do it and you'd want to work through a broker to ensure you are buying the correct product," Rigetti explains. He also points out that the value of this approach could diminish if American and Canadian interest rates diverge.

FCC's Gervais confirms this approach could be viable, but points out that it makes risk management more complex.

### Sensitivity analysis

For producers with a significant debt load, it's important to calculate what interest rate increases would mean to their cash flow and profitability. What would an interest rate hike of two percentage points mean? What about three or four?

Armed with this information and with knowledge of your future plans, you'll be in a better position to design appropriate interest rate strategies.

#### Total Farm Debt as of December 31, 2012

	(billions of dollars)
Canada	\$72.2
Ontario	\$19.1
Alberta	\$16.0
Quebec	\$12.1
Saskatchewan	\$ 9.9
Manitoba	\$ 7.5
British Columbia	\$ 5.4
Atlantic	\$ 2.2

Source: Statistics Canada

BY KEVIN HURSH



## FEATURE

# Learn to balance work and life

It's likely a comment most of us have made at some point in our work lives: "Just let me finish this, then I'll take a break."

"This" could be anything: seeding a specific field, spraying the current row, inputting numbers on a balance sheet. The list is endless. Around the farm, the work is never done.

Add to that the fact that for most Canadian farms, home is also the workplace. Leaving the office – and any problems – at the door can be a challenge.

Kerry Froese is a broiler chicken farmer in Abbotsford, B.C., and chairperson of the Canadian Young Farmers' Forum. He sees no separation between his farm and his home.

"Farming is my life," says the 36-year-old. "It's what I do, it's what I am." But for his own health and that of his family, Froese knows it's important to consciously make a

split. "When coming home for the day, I try to leave any negative outside. It's important to leave your work boots in the mudroom," he says.

Patricia Katz, a life-balance strategist based in Saskatoon, Sask., says making the division between work and home gives farmers a chance to refresh themselves and can be instrumental in avoiding burnout and reducing stress.

"If the only way to ever allow yourself to back off is if you're caught up and done, then part of what you need is a mind shift to pause," Katz says. "Pausing for renewal is an investment in being able to continue, not a reward for being done."

She says farmers notoriously work towards taking a break after a specific goal is reached, but get sidetracked with other tasks along the way. Katz recommends that instead, farmers borrow from structured religion and the idea of a day of rest.



“You don’t earn it and it comes if you are ready or not,” she says of a day of rest. “We need to stop waiting to be caught up and build in some points of pause during the work. And if a day seems impossible, start with five minutes, then 15, then an hour and build up to longer breaks.”

Glen Blahey, agricultural health and safety specialist with the Canadian Agricultural Safety Association, agrees.

“The drive to get the job done can sometimes lead to overlooking personal wellness,” Blahey says. “Producers tend to push themselves and don’t take a break.” Often, it can be personal care – especially proper nutrition and hydration – that suffers.”

“Farmers can’t be so determined to get the job done that they overlook their own well-being. Self-care is critically important in the big picture of work-life balance,” he says. “It’s OK to get off the equipment, rehydrate and feed your body.”

Blahey also notes that during busy times like planting, spraying or harvesting, there’s great value in taking a break and catching a quick nap.

“You should try to avoid working 18 to 20 hours a day without giving your body a chance to rejuvenate,” he says.

That may be easier said than done for some, though. Agriculture seems to attract those with a strong work ethic. Taking a break before a task is completed just doesn’t feel right for many farmers.

Katz says that’s where partners in farming may need to help out. Whether it’s business partners, spouses, children, siblings or parents – arriving at the hard-working farmer’s side with a cup of coffee or a hot meal and some time to chat can provide the right opportunity for a break, Katz says. The unexpected pause can bring a welcome respite for the farmer.

Technology is often cited as a reason why many Canadians – farmers or not – are seeing increased stress levels and longer work hours. Always on and always connected can make it hard to disconnect from work. But Froese has instead put technology to work for him and it plays an important role in freeing him up so he’s able to get out and relax.

“In the age of technology, we can make sure that everything is happening without being there,” he says. He finds tools like in-barn cameras, climate control and computerized feeding are technological advantages that let him get off the farm for some down time.

However, some elements of the farm can’t be replaced by technology, he points out. Having a reliable staff that can look after the farm while he’s away is key, Froese says. So is embracing the long hours of work when there are tasks that can’t be delayed.

“Good people, good technology and getting the work done when it’s there to be done are essential,” Froese says.

The experts agree that setting boundaries and taking breaks throughout the day and during specific tasks are essential, but they also take a big picture view of life on the farm and the importance of building downtime into the farm schedule.

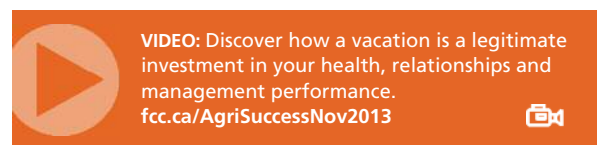
For Katz, that means finding ways to relax for extended periods of time. We all rejuvenate in different ways, and some farmers may refresh their minds by doing something completely off-farm. Others may enjoy puttering in the shop, cleaning out a barn or moving snow in the yard.

Renewal isn’t a one-size-fits-all recipe. An extrovert farmer who spends a day alone on a tractor may crave busy social gatherings, while the introvert who’s spent a day in meetings may recharge by heading out to check on the animals.

For those whose minds are full of ideas and are challenged to shut off their thinking, Katz says hobbies that require full mental presence and therefore create a total and complete distraction can be revitalizing. Everyone needs to find “what tops your tank,” Katz says.

But finding that perfect form of relaxation can be tricky if you’re out of practice. She suggests farmers consider trying what they’ve always daydreamed about doing “someday,” or revisit activities they participated in before the farm work got so busy.

It’s true. Taking a break – whether it be an hour for lunch, starting a hobby or relishing the regularity of routine farm jobs – is good for you. Not to mention your farm business and farm family, too.



BY ALLISON FINNAMORE



Hops have unique management, production and harvesting requirements.

## FEATURE

# Hops: good medicine for Ontario farmers

Even Ontarians who'd fully grasped the culture shift created by the local food movement were stunned when the Liquor Control Board of Ontario (LCBO) announced craft beer sales had skyrocketed 45 per cent in 2012. Normally, sales gains in the relatively predictable alcohol industry are measured in just a few percentage points at a time. Craft beer, produced by microbreweries, is seen as an extension of local food, and its popularity is growing just as fast.

The craft beer phenomenon is opening doors for a group of 30 small-acreage, specialized Ontario farmers growing hops for this new market. Hops, along with malting barley, are a key ingredient in beer. They impart a distinct flavour and aroma that is a signature among the province's 47 craft beer brewers – so much so that with many brands, the variety and degree of “hoppiness” is the beer's most distinguishable feature, one around which entire marketing campaigns are built.



## “We’d take Ontario hops in a heartbeat.”

Ontario producers have a long way to go before they can meet craft brewers’ needs. Currently, they only supply a fraction of the market. Most hops are imported from the U.S. in the dried form. However, the demand by brewers for local product is certainly there. “We’d take Ontario hops in a heartbeat,” says Mike Laba, marketing director for Muskoka Brewery of Bracebridge, Ont. “Suppliers are showing great promise.”

There’s a lot of work to do. Hops aren’t a quick-in, quick-out commodity. Nor, at \$8,000 to \$17,000 per acre for start up, are they cheap. It takes three years before hop vines (called “bines”) reach maturity and begin producing fruit-bearing cones. As well, hops have unique management, production and harvesting requirements.

They grow on 16 to 18-foot-high wooden trellises, require constant pruning and are harvested with specialized equipment. And once they come off the vine, post-harvest processing is a challenge.

Fresh “wet” hops, the kind that have gained traction with microbrewers, must be processed within 24 hours or quality rapidly falls off. If they are destined for the dry-hop market (typically, for larger brewers) they must be dried properly and packaged.

As with other local food ingredients, quality and consistency are paramount, says Evan Elford, new crop development specialist with the Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs.

“One of our biggest issues right now as the industry develops is making sure we have a quality product going into the market each year from the individual growers, and ensuring brewers and consumers are happy with the product,” he says.

Elford is one of a team of provincial specialists supporting the hop industry’s growth. He and others are in the midst of a three-year research project involving field tests as well as a grower and brewer survey to better understand the sector’s needs.

“We need to recognize that brewer demands will change as brewing styles change. So part of the current research is to assess not only where the industry is currently, but also where it’s headed,” he says.

Growers need support to develop the sector’s potential. Only six members of the fledgling Ontario Hop Growers’ Association, which includes almost all of the 30 hops producers, are full-time farmers. Most grow hops on one or two acres, and spend most of their time working at off-farm jobs.

For example, association vice-president Melanie Doerksen is a chef and educator. She co-ordinates the artisanal culinary arts graduate program at Fanshawe College in London, Ont., about an hour from the 40-acre Delhi region farm she and her husband Tim Wilson have owned for the past three years.

She’s also a local food promoter, and plans to use the farm’s hop production to feed a new venture: that is, an on-farm brewery even smaller than a microbrewery, called a nano-brewery (featuring small-batch products not intended for sale through the LCBO). The venture, to be called the Charlottesville Brewing Company, will include an on-farm restaurant and could be open as early as 2015.

Doerksen and Wilson are doubling their hops acreage so they have a ready supply for their nano-brewery.

“We’re starting small, but there aren’t many nano-breweries, and if we can supply good food and beer, we’ll do well,” Doerksen predicts.

Meanwhile, one of the biggest hops producers in the area, Remi Van de Slyke, can’t keep up with the demand for his hops, which he started producing eight years ago when local beers were still in their infancy. Since then, he’s become one of a small number of shareholders in a microbrewery called Railway City Brewing Company in nearby St. Thomas.

Its increasingly popular products, such as Dead Elephant beer made with Cascade variety hops from Van de Slyke’s farm, is now sold in the LCBO.

Van de Slyke is bullish on the hops industry. “In this area we have the climate, the soil, the demand from microbreweries, and we’re the type of farmers who grow these kinds of crops,” he says. “We’re very optimistic.”

**BY OWEN ROBERTS** / *Owen, a native of Mitchell’s Bay, Ont., teaches agricultural communications at the Ontario Agricultural College, University of Guelph and is director of research communications for the university. He is also a freelance journalist and broadcaster.*

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## ASK AN EXPERT

# Expert urges increase in spray technology research

Tom Wolf, a well-known spray application expert, answers some of the most common spray application questions.

### What are the most common application questions you get from producers?

That's an easy one: everybody wants to know which nozzles to put on their sprayer. I'm seeing a lot of interest in coverage and drift, and a big part of that involves the right nozzle, pressure and volume. After a bit of back and forth where I ask a lot of questions about products, travel speeds, etc., we usually arrive at a low-drift tip that best suits their needs. I also get a lot of questions on fungicide application, especially the use of double nozzles and higher water volumes.

Applicators are concerned about canopy penetration and coverage. We're seeing a big fungicide push from Crop Life companies as well, and many producers from the traditionally drier parts of the Prairies are now fighting the disease for the first time.

### What are some of the biggest misconceptions about nozzles and product application?

It seems that parts of the application industry are still plagued to some degree by wishful thinking. People want to be able to use little water, travel fast and not be concerned about drift. They want to believe that there is a nozzle or sprayer that can make that possible. And the answer, unfortunately, is that such an application method does not exist in our market. Less water requires that we use finer sprays to get at least the same coverage. And that can create drift and evaporation problems. Faster speeds can be problems for drift, dust and canopy penetration. Drift control is usually achieved with coarser sprays. Again, that may require more water. So we need to use common sense and use best practices to do the job right.



**You said that the ideal application system does not exist “in our market.” What are we missing out on?**

Air assist. We aren't using air assist to its potential like some other countries. Properly designed and implemented, air assist can control drift from finer droplets, and it can improve canopy penetration. It's not without its own sets of challenges, but for some reason, it's not catching on in North American agriculture. We've also left shrouds in the shop corner. They allowed us to control drift with finer sprays, but aren't compatible with our current love affair for high-speed booms. There are some new products in Europe that use innovative shields to open canopies and reduce drift, but it looks like they are only used at slower speeds. We need sprayer manufacturers to spend more time researching what happens at the boom, and less on the drivetrain and suspension.

**How quickly is application technology evolving?**

Not unlike the seeding and harvesting side, spray technology is evolving and being adopted faster than a research program can keep up. I've been in the business for about 25 years now. I started when shrouds were new, before self-propelled sprayers, when we had two boom sections (right and left) and when one nozzle manufacturer controlled most of the market with just a handful of different products. We now have countless nozzle types, rate control, turn compensation and more.

But despite all the change, much of it is still surprisingly incremental. Outside of the low-drift nozzle and pulse width modulation for flow control, both of which we first saw in 1996, we don't have a game-changer. If we focused a bit more engineering effort on atomization, we would see very exciting things in short order. Producers need to create that demand.

**Where should producers look to get their questions answered?**

Over the past 25 years, we've seen a general worldwide withdrawal from a research commitment in sprayer technology. We do have excellent technical programs at the Ag Tech Centre in Lethbridge, Alta., and at the U of Guelph in Ridgetown, Ont., but we have a country with 100,000 farmers spread out over five time zones and innumerable cropping systems. We have a burgeoning ag industry with lots of excitement, lots of opportunities, lots of young people and lots of learning required. Producers need to be vocal that this information is necessary and important.

**TOM WOLF**

*Tom studied spray technology for 25 years as a scientist with Agriculture Canada. Now an independent researcher based in Saskatoon, Sask., Tom conducts spray-related research and training across Canada. Follow @nozzle\_guy on Twitter.*

**PHOTO / Previous page: 1 – Tom Wolf, The Nozzle Guy**



# Don't discount the risk of disability

The types of insurance that farmers take out are a good reflection of how they view risk. Most farmers have fire insurance on buildings and other farm assets, but fewer have disability insurance for themselves, even though the risk of being injured in a farm accident is much higher than that of losing a barn or machinery shed to flames.

There are consequences to not insuring for disability, according to certified financial planner Brian Burlacoff of Sun Life, especially when borrowed money is involved. Not only is there loss of family income and reduced cash flow for the farm's operations, but there's the possibility of defaulting on loans.

Burlacoff says disability insurance doesn't replace life insurance but is a complement to help bridge the time during which a producer may not be able to work. He notes that even if disability payments don't replace all of the lost income, lenders are more likely to be flexible with loan or mortgage payments if they can see there is at least some income during the recovery period.

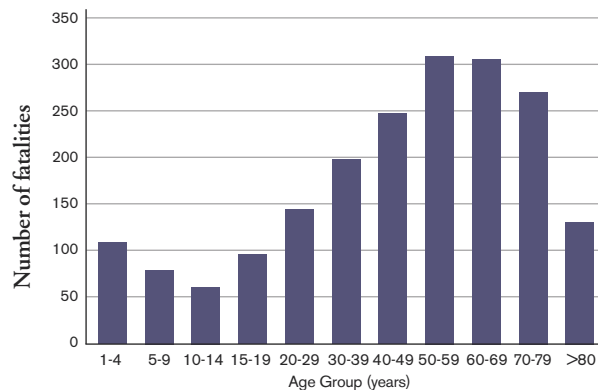
For farmers – especially male farmers – the risks are high, as farming is consistently among the top professions for work-related fatalities (along with mining and construction). That rate increases exponentially to five to 10 times the Canadian average as farmers age past 50.

Farmers also face a five to 10 per cent chance of suffering a non-fatal injury each year, defined as requiring medical attention or resulting in lost work time. This is five times higher than the Canadian average. The International Labour Organization lists farmers at 2.1 on their relative risk index, with office workers as low as 0.2, reinforcing the fact that the more labour intensive the work, the more likely there is to be an injury.

While the type and amount of coverage has a lot to do with insurance rates, Burlacoff says the amount of physical

## Agriculture fatality rates by age group, 1990-2008

The overall fatality rate was 21.9 deaths per 100,000 farm population



Source: Canadian Agricultural Injury Reporting (CAIR).

labour by a farmer will play a role in establishing individual premiums. The more the farmer is a manager, supervising others doing the physical labour on the farm, the less risk there is of a work-related accident. The rates, therefore, are potentially lower.

Even so, most farm managers engage in some amount of physical labour. Such is the nature of the work. Since producers are typically owner-operators and mostly not (or not adequately) covered by provincial work compensation schemes, disability insurance is an important tool in mitigating the consequences of a work-related injury on the farm. Given the potential severity of those consequences, the risk of disability is one farmers need to manage rather than discount.

**BY HUGH MAYNARD** / *Hugh is a specialist in agricultural communications based in Ormstown, Que. A graduate in farm management from Macdonald College (McGill University), Hugh is a seasoned journalist and broadcaster.*



## SAFETY ON THE FARM

# Fewer, but still too many farm fatalities

Numbers don't lie. But numbers from different sources can tell much different stories.

Take workplace safety for example.

A recent study by Statistics Canada shows that farming is not the most dangerous job sector in Canada if you consider workplace deaths and injuries together. That dubious title goes to manufacturing, with the construction and transportation industries close behind.

But if you look only at fatalities, as Statistics Canada also did, agriculture accounted for the highest percentage of the nearly 12,000 Canadians who were killed on the job over the past decade.

Compare that to the results of another recent report, this one by Canadian Agricultural Injury Reporting (CAIR), a federally-funded source of national farm injury data (see page 19). It found that farming fatalities declined by nearly 30 per cent over the same period.

Titled *Agricultural Fatalities in Canada 1990-2008: A summary of 19 years of injury data* ([cair-sbac.ca](http://cair-sbac.ca)), the report shows an average of 118 people died on Canadian farms each year during the 1990s.

That's one farming-related death every three days.

After 2000, however, the number dropped to an average of 89 deaths per year.

"Although our goal of zero deaths is the only acceptable number, the new numbers are encouraging," says Marcel Hacault, executive director of the Canadian Agricultural Safety Association.

"We're definitely seeing evidence of a greater commitment to managing safety risks on farms. Farmers are beginning to build safety plans into their business operations and we're seeing increased interest in safety training courses for agricultural employees."

"Changing a safety culture is slow work," Hacault adds. "But these new numbers do show progress."

The new numbers also show, however, that farmers – particularly elderly farmers, farmers with children, and owner-operators with employees – shouldn't be lulled into a false sense of security.

Though farmers aged 50-59 and 60-69 represented the most deaths during the CAIR study period (312 and 309 deaths, respectively), the age group with the highest death rate (deaths expressed as a percentage of the total) was 80 and older (130 deaths).

A reported 14 per cent of all victims were children of farmer-operators, and 11 per cent were hired workers.

Machine-related accidents – particularly rollovers, run-overs and entanglements – accounted for 1,381 agriculture fatalities in Canada during the study period, or nearly 70 per cent of the total.

The remaining 30 per cent (or 594 deaths) were caused by people being struck by animals or objects, drowning (involving mostly young children), falls and exposure to toxic substances.

Notably, tractors were associated with 37 per cent of all farm fatalities.

So while the numbers may be showing some improvement, a lot more farm safety awareness is needed.

**BY MARK CARDWELL** / *Mark is a writer and freelance journalist who lives in the Quebec City region. He is a regular correspondent for a dozen newspapers, magazines, trade and specialty publications in Canada, the United States and Europe.*



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Rick will show you how your attitude can help you overcome challenges. He'll inspire you to dream big, make a difference and achieve success.

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Michelle is always looking to help farm managers get more out of their performance. As a Manitoba farm girl, she knows agriculture. As CEO of Painchaud Performance Group, she knows talent management.

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# Be an **AG**vocate

## Help tell the real story of Canadian agriculture

Most of us in agriculture see the great opportunities in front of us and are optimistic for the future. But we tend to be a humble group and when we do speak up, it's often in reaction or defence. To reach its full potential, ag needs everyone in the industry to be proactive and start speaking first. You don't need a podium or soap box, just a desire to share your ag pride with the world.

Sure, there are challenges in ag that shouldn't be ignored. But we also need to let people know that ag is a vital and forward-thinking industry, ripe with opportunity; that we care about the environment, animal welfare and producing safe, healthy food for a growing world; and that we have the facts to back this up.

## Here are just a few:

### There are opportunities in Canadian ag

One in eight Canadian jobs are in ag and agri-food. Three jobs are waiting for every ag graduate in Ontario.

### Ag is concerned about the environment and resource management

It takes 50,000 fewer gallons of water to grow an acre of corn today than in 1990.

### Canadian ag is a global leader

Canada is the world's largest producer of canola, peas, lentils, mustard seed, wild blueberries and flax seed.

### Canadian ag isn't run by huge corporate farms

98 percent of Canadian farms are family-owned and operated.

### Canadian food is affordable and safe

The average Canadian spent about 10% of their household budget on food in 2009, down from 19% in the 1960s.

Agriculture More Than Ever is an industry-driven cause to improve perceptions, dispel myths and create positive dialogue about Canadian ag. Together we can share the facts, stories and people that make our industry special.

It's up to all of us and it's easier than you think.

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