

JULY / AUGUST 2011

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Ian Richardson finds his home in Newfoundland's dairy industry

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On the cover:

Ian Richardson encourages young farmers to work toward a sustainable, secure dairy industry in Newfoundland and Labrador.

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from the editor



As a farmer, I like hearing all the projections for an increasing world population and the growing economies within developing nations. Analysts paint a rosy picture of the world demand for food in the years ahead.

Just let the good times roll, right? No reason to change anything we're doing. A hungry world is going to want everything we can send them and they'll be willing to pay whatever it takes.

If you have some grey hair, you've heard many positive predictions that were never fully realized. So, it's natural and perhaps even healthy to be a bit skeptical.

Even if the demand projections do come to pass, something tells me that making money still won't be a snap. Strong prices will spur competing production in other countries and the cost of farm inputs will likely rise to squeeze returns.

While the future may indeed be bright, it will be the brightest for producers who can tailor their products according to the demands of consumers.

That's the theme for this edition – producing what the market wants.

It sounds simple. Just ask consumers what they want to buy and go about growing it. In reality, consumers want many different things. And many of us don't sell directly to consumers. We need to get our signals from other players along the marketing chain.

Governments and regulatory agencies have always played a role, and that role will likely expand. However, in this case, the market signal is usually what you can't do rather than what you should do.

The signals are sometimes conflicting or we may have doubts over whether a particular market direction will be sustained. Plus, changing how you produce or even what you produce requires investment. We hope you enjoy the stories in the pages ahead.

We welcome feedback. Just email kevin@hursh.ca.

A handwritten signature in black ink that reads "Kevin Hursh".



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Food safety

protocols tighten

“Give consumers what they want.” Producers are given this advice all the time, but it’s easier said than done, especially in export markets.

Back in March, the European Union found unacceptably high levels of glyphosate in a shipment of organic Turkish lentils. You wouldn’t expect herbicide residue in an organic product, but an even bigger issue is that the glyphosate residue was above the EU’s maximum residue limit (MRL) for lentils.

According to the Canadian Special Crops Association, the EU’s MRL for glyphosate on lentils, organic or conventional, is only 0.1 parts per million (ppm). Their MRL for peas, wheat and canola is 10 ppm, and 20 ppm for soybeans.

Canada’s MRL for glyphosate on lentils is 4.0 ppm; in the U.S. it’s 5.0. That’s a huge difference compared to the EU limit of 0.1 ppm.

Clearly, the EU level for lentils is out of step with other developed nations and out of step with other crops they import. But the rules are the rules, and breaching them has ramifications for everyone trying to do business.

The EU’s fear of genetically modified (GM) crops has also been problematic. When minute traces of a GM flax variety known as CDC Triffid appeared in Canadian flax cargoes in Europe, there was a major market disruption.

Even though the GM flax was approved for human food consumption in Canada and the U.S., and even though it was detected at extremely small levels, this has been a huge problem for the Canadian flax industry. To access the European market, the Triffid content has to be

essentially zero. For traits fully approved in other developed nations, it would make sense for Europe to establish a low-level-presence tolerance level. Canadian authorities continue to work with Europe on the issue.

It’s all about keeping our food safe, while giving consumers what they want.

Other nations have their issues too – soil on pulse crops going to India, and restrictions on Canadian canola exports to China due to a disease called blackleg. More countries want more tests and assurances, whether it’s for herbicide residue, GM contamination, a disease, mycotoxin or heavy metal.

Sometimes there are very good reasons for wanting assurances and setting tolerances. In other cases, the fears are not rational or science-based. Behind the scenes, government and industry officials work to keep trade flowing.

When we’re advised not to do a pre-harvest glyphosate application until the crop is sufficiently mature, and not to treat canola bins for grain storage insects, there are very good reasons behind the advice. It’s all about keeping our food safe, while giving consumers what they want.

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.*

Develop value chains, not supply chains

Becoming part of a value chain might be a good way to improve your bottom line. All producers, except those who sell directly to a consumer, are part of some business's supply chain.

There is rarely much communication between buyers and sellers; most sales are conducted solely on the basis of quality, price and delivery date. Whether the producer makes any money on the sale is not necessarily part of the equation.

"Value chains are different," says Bryan Kosterski, a value chain specialist with the Agriculture Council of Saskatchewan in Saskatoon. "It's a partnership between producers, processors and marketers that's been created to improve quality, increase efficiencies, and develop and market differentiated products to make all partners more profitable."

Joining a value chain was a win-win solution for Victoria, B.C., vegetable producer Cory Matechuk and David Mincey, head chef at Camille's (a high-end restaurant in the same city). Becoming a supplier for the Island Chef Collaborative (ICC) gave Matechuk the help she needed to become a successful farmer.

Being part of the ICC value chain gave Mincey and his fellow chefs a set of enthusiastic, secure, stable suppliers who could meet their health, quality, quantity and price concerns. It's a classic example of how establishing solid lines of communication helps buyers and sellers solve problems.

Mincey wanted to feature the best local foods at his restaurant, but found that maintaining a stable supply was a challenge. On their side, the young farmers had a strong desire to grow high quality local food. Unfortunately, the constant struggle for financial survival was so stressful that they would leave the



industry after just a few years. Mincey convinced a group of his peers that the ICC could help preserve local farmers by making them more financially viable.

"We identify new farmers who are struggling to find outlets for their produce and hook them up with three or four chefs," Mincey says. "Between them, they can buy every single vegetable that farmer can produce. This increases the likelihood we'll keep that farmer around." They also provide grants to help farmers defray infrastructure and equipment costs.

"We really didn't have a clue about how to market our vegetables when we started," Matechuk says. "David had to come out to our property every Tuesday through the growing season and show us the size of vegetables he was looking for. He was a great mentor; he helped us to be farmers instead of gardeners. We now earn 85 per cent of our income from the farm, and Camille's is by far our single biggest customer."

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.*

Increase product success rate

In addition to being useful for existing products, value chains can also be a very effective way to establish markets for new products. According to Bryan Koterski, a value chain specialist with the Agriculture Council of Saskatchewan, about 10,000 new food products are introduced every year in Canada. Only about 1,000 are successful.

Dean Andres, owner of Prairieland Bison and Andres Exports in Windthorst, Sask., has been building markets for bison meat. He works closely with a number of producers in Western Canada to assemble enough animals for his customers in Canada, the United States and Europe.

Whole Foods, the big organic supermarket chain in the U.S., prominently features bison meat on its shelves; Andres recruited a number of bison producers into his value chain to meet that demand.

“It took years to develop that market and to assemble enough producers for an adequate supply,” Andres says.



“Whole Foods has established a production protocol for their bison suppliers. We work closely with producers to make sure they are aware of everything they need to do to meet the requirements. Traceability is an important one. Humane treatment of animals matters too. We often take buyers out to meet the producers in our network to see how the animals are fed.”

The strategy has been so successful that there’s now a market for far more bison than is available. Andres is not presently accepting new customers, but is doing everything he can to help producers increase their herds to serve his existing customers. **LM**

Find a Value Chain Initiative

The provincial and federal governments are trying to encourage more producers, retailers and food service providers to become involved in value chains. Each province has established a Value Chain Initiative. The best way to find information on what is happening in your province is to search for the term online.

“If you develop a product and don’t know where it’s going, who needs it and the price point they’re looking at per serving, you could have problems,” says Bryan Koterski, a value chain specialist with the Agriculture Council of Saskatchewan.

You can start researching how the retail grocery and food service sectors operate through a series of

guidebooks published by the Saskatchewan Grocery and Food Service Value Chain Initiative. They cover topics such as building private label brands and pricing strategies.

Koterski says that while the guidebooks were produced with Saskatchewan producers and processors in mind, the information is useful for those in other parts of Canada, too. You’ll find the guides at www.saskvaluechain.ca.

To contact a value chain representative in your province, visit www.canadianvaluechainnetwork.ca. **LM**

Go east, young man

Ten years ago, Ian Richardson looked to Newfoundland and saw opportunity. The young Prince Edward Island farmer knew his father's hog and beef operation could not sustain the two of them. With no options to do what he wanted to do in his home province, he followed up on a lead he'd heard – that dairy quota was available right next door.

Newfoundland and Labrador flipped from a have-not to a have province in 2008, when the financial books came into the black with the help of revenue generated by offshore oil exploration. Still, it's had a hard time shaking a reputation for employment problems, collapse of the fishery and the migration of Newfoundlanders to the mainland.

Since 2001, when Newfoundland and Labrador joined the national Milk Marketing Plan, the province's dairy industry has been expanding. Provincial allocation of a quota target of 31 million litres of industrial milk production annually by 2016 meant a doubling of production.

So Richardson felt he had indeed found a land of opportunity for agriculture, and travelled with his father Mike to check it out more closely. That led to touring the dairy farm of someone who was ready to retire but had no one to take over; Ian made the investment and purchased the 60 Ayrshire cows. He's since grown his herd to 100 milking cows. And as for the big move – he hasn't looked back.

“At the time, everybody thought I was crazy,” Richardson recalls. “I was only 21, but I knew growing up that I wanted to be a farmer. I love it here.”

Richardson's farm is near Deer Lake, about 300 kilometres north of Port aux Basques, where the ferry from North Sydney, N.S., lands.

One element that made a big impression on him when he was considering the move was the array of support services from the provincial government.

Extension services and agricultural assistance programs are supportive and encouraging to farmers, Richardson says; the farming community knows that help is never far away.

“The biggest challenge is, the equipment doesn't last long because you're farming in rock,” he says. Frequent upgrades or adjustments to equipment are necessary.

According to the Dairy Farmers of Newfoundland and Labrador, there are 40 dairy producers in the province. Newfoundland has been self-sufficient in fluid milk production since the late 1990s and ships small amounts of unprocessed milk to Nova Scotia. Its average of 140 cows per farm is the largest herd size average in the country. And as the industry expands, Richardson notes that it's not immune to the same challenges agriculture as a whole is encountering across Canada – an aging population.

As the former chair of the Canadian Young Farmers Forum, Richardson says it's time for every young person involved in agriculture to step up and start planning for the future. The leadership and skill development group provides excellent business training, he says, and gives young farmers a firm footing in their industry.

“It builds better business people and better-rounded individuals,” Richardson says of the forum, “and gives youth training they may not otherwise have.” With those skills comes the confidence to move into leadership roles – and the ability to maintain a sustainable industry, he says.

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.*



Consumers demand sustainability

Based in Saskatoon, Sask., Al Scholz is an agricultural consultant, author and futurist with extensive experience in the food industry.

You have a caution for producers of agricultural commodities. Explain why you believe it's increasingly important to differentiate products.

A product is defined as a commodity when all units of production are virtually identical. Take the example of No. 2 wheat. Since it's all bulked together and essentially the same, buyers want the lowest cost. Commodity producers can only be price takers.

To be a differentiated product, it must be perceived to be different from competitor products. Note that organic milk is not necessarily a differentiated product, unless it's different from other organic milk. Only by branding a product as better in some way than other products in the class is there true differentiation. Sellers typically have some control over the price of differentiated products.

In agriculture's traditional commodity markets, being the lowest-cost producer is the only way to gain margin. Branding is almost impossible to do. Some call this a race to the bottom.

There's more discussion about sustainability measurements than ever. Is this a way to differentiate products and add more value?

Sustainability is the new trend and it's here to stay. It's what consumers are thinking about. We need to understand what this means for farming.

Urban consumers are becoming well informed and more discriminating about their food choices. They are getting the smart phone apps and information to monitor food production.

There is a new environmental impact tool showing up across the global food chain. It is called "life cycle

assessment" or LCA. It provides direction on the way we farm, how food is processed and transported – and how consumers make their food purchase decisions.

LCA can convert every food product into a single number that reflects everything including the carbon footprint of tractors, equipment, production inputs, chemicals, livestock feed, treatment of workers – the works.

This will be the "new math" used in business and farming across the globe.

How quickly will this impact the marketplace?

LCA is rapidly being adopted by agriculture and food production systems. Leading firms are already using it. For example, a California research group known as GoodGuide (www.goodguide.com) has developed software that allows shoppers to point their cell phone camera at the bar code of a product. The picture is sent to the GoodGuide server and within seconds, a three-bar rating is sent back for that very item. It reveals in red, yellow or green the relative impact of that product's life cycle in terms of environment, health and society.

We shouldn't view this as a threat. This LCA tool can provide opportunities for Canada's farms to gain measurable premiums in the marketplace, if the right adjustments and adaptations are followed.



Al Scholz has agricultural work experience in Canada and a number of other nations. Learn more at www.awellfedworld.com.



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The rise of the supermarket empire

As supermarket chains work to reduce procurement costs while increasing efficiency and competitiveness, they're seeking firms that can supply consistency and quality at the volumes required.

Organic lettuce – got it. Durian (a tropical fruit) – got it. Local cheese – got it. Milk – what kind? Eggs – large, brown or omega 3? No time to cook? Don't worry: just pick up something from the ready-to-eat section on the way home.

Retail grocery stores now stock a bewildering array of products on their shelves. Typically, there are over 50,000 different items per store and that's slowly changing the way you farm.

Canada's five major supermarket groups – the Jim Pattison Group, Loblaw, Metro, Safeway and Sobeys – as well as Costco and smaller regional players have been bracing for ferocious competition as Wal-Mart expands into groceries. Even though the retail giant has only been in the grocery business for a decade in the United States, some observers say it's captured as much as 35 per cent of the American market.

Competition among grocers gives producers and processors tremendous opportunities to develop new products, says Thomas Reardon, a professor who has studied the rise of supermarkets globally and teaches in the Agricultural, Food, and Resource Economics department at Michigan State University.

Loblaw has been buying carrots from Ron Gleason of Hillside Gardens in Bradford, Ont., for their private

label for the past seven years. Both sides win with the arrangement, Gleason says. Loblaw gets a reliable local supplier working with them, ensuring their quantity, quality and food safety concerns are met in a timely manner, and Gleason gets a large loyal customer.

Encouraging local food

Wal-Mart has been a lightning rod for criticism on many fronts, but also an industry leader in food retail. Wal-Mart Canada has a strong commitment to fresh, local Canadian produce – making up to 30 percent of annual produce purchases locally.

"It's important to us to buy locally, because it helps support the economy and it keeps our carbon footprint low," says Sam Silvestro, Wal-Mart Canada's director of produce.

"I just hope they keep in mind that our northern climate and cost of labour makes us the highest-cost producer in North America," says Brian Gilroy, chairman of the Ontario Fruit and Vegetable Growers' Association. "We keep hearing that people do want to buy local, and yet very little effort is being made to enhance the position of the primary producer. We're willing to be innovative, but there are limits as to what we can do to offset things like the dramatic increases in minimum wage and electricity and fuel costs."



Costco Wholesale Canada accounts for 16.2 per cent of all Canadian sales of fresh beef, says Claude Gravel, assistant general manager for fresh meats. The company markets 55 per cent of all AAA beef in Canada.

“We’re quality driven prior to price driven,” Gravel explains. “We try to set the quality standard for fish, lamb, pork, beef or whatever we sell. We’ve got high standards.”

“If there’s a quality issue, we won’t sell it. If there’s none available, we prefer to tell our members (customers) why, rather than downgrade quality.”

“We’ll work with our vendors and even help them find ways to drop costs,” Gravel says. When the company noticed a shortage of AAA meat at the start of the barbecue season, it worked with feedlots to fix the problem. “Everybody has to be profitable. I expect the vendor to make money and I expect to make money too. We’ll limit our margins and pass the savings on to our members.”

Safe food

Major retail grocery and restaurant chains are on the front line of public opinion. Whenever there is a big food safety scare, it creates a public relations and marketing nightmare. To minimize their exposure, most have started demanding that everyone in their food

supply chain meet their quality, environmental and sustainability requirements.

Loblaw, for example, insists its private-label suppliers comply with the Global Food Safety Initiative, an alliance formed by eight of the world’s largest food retailers. Andrew Clappen, vice-president of Food Safety and Quality Control, defended the move in a *Globe and Mail* interview by saying that Loblaw isn’t just a retailer. “In our minds, we’re the manufacturer as well. Because they’re our brands, we’re absolutely accountable for everything to do with them.”

The Canadian Horticulture Council had decided about ten years ago that they had to get out in front of the food safety issue if growers were to avoid facing a kaleidoscope of retailer standards and protocols. Along with industry and the Canadian Food Inspection Agency, they set up the CanadaGAP program, which complies with the Global Food Safety Initiative.

“Loblaws was the first retailer to officially endorse the CanadaGAP Certification, requiring their suppliers to be following and using the standard,” says Heather Gale, national program manager for CanadaGAP. “Retailers have to be able to assure their customers they are sourcing the safest possible product.”

Gleason recognizes this and says that Hillside Gardens continually improves their food safety systems.



However, he doesn't view this as an inconvenience, but sees it as an opportunity to boost sales by tailoring his operation to meet customer needs. "Just learning what it takes to make a customer like that happy has a bit of a learning curve," Gleason says. "They are under the gun so we just try to make dealing with us as easy as possible."

Increased competition

Developing countries haven't been sitting idle, according to Michigan State University's Professor Reardon. He says they've been earning their stripes in their home markets. China is a prime example. It has successfully undercut the Australians in the production of red globe grapes. They came in with a slightly lower quality but a much lower price and an extreme willingness to meet safety and quality standards. The same strategy can be observed with Latin America and Chile taking markets away from North American producers.

Retailers have to be able to assure their customers they are sourcing the safest possible product.

Developing countries are becoming formidable competitors and better exporters to the European and North American markets as well.

At Hillside Gardens, Gleason advises growers who want to establish a direct relationship with a supermarket chain to make sure they are ready for the business. "Don't promise more than you can deliver, because they have very little patience for failure," he cautions. "Listen closely to what they are saying because having a good relationship with your customer positions you for future success."

BY LORNE McCLINTON

Compliance gets easier

Farm software packages can help suppliers meet food safety standards. For example, the features of Farm Credit Canada's field and crop management program, Field Manager PRO, include:

- keeping all field and crop records, from seeding to storage
- over 30 reports to help make more informed decisions
- traceability reporting
- auto-populates CanadaGAP forms

For more information, visit www.fccsoftware.ca.



FEATURE

Growing nanotechnology

Imagine guilt-free ice cream with all the taste and half the fat, or getting your daily dose of every vitamin from a piece of bread. It's almost Star Trek in nature, but it's becoming possible with new innovations in nano-food.

There are already 600 food items on the market that are taking advantage of advances in nanotechnology. The concept of nano-food is to take certain molecules of a food item apart and reassemble them according to

a pre-determined formula for a specific nutritional or other purpose. For example, Tip Top Bread in Australia inserts nano-capsules of omega-3 fatty acids into the bread for added nutrition.

Nanotechnology can alter the colour or texture of food as well.

“The key aspect of nano is that when you decrease the size, they are going to achieve some functions, new properties, new phenomena that cannot be observed on a regular, large scale,” says Dr. Qingrong Huang, a food scientist at Rutgers University in New Jersey and leading researcher on nanotechnology.

There are already 600 food items on the market that are taking advantage of advances in nanotechnology.

The potential is enormous and the market for it continues to grow. A study from technology information specialist Cientifica predicts that the nano-food market will surge to \$5.8 billion by 2012 (up from just \$410 million in 2006).

Products already on the market include Unilever’s half-fat ice cream and Toddler Health’s oat chocolate nutritional drink mix, which is fortified with iron that has increased reactivity and bioavailability.

Functional foods have a significant nutritive value and contain bioactive particles that can be disassembled by scientists. The beneficial particles can then be placed into nano-capsules to be inserted into other food items. For example, if you’re lactose-intolerant, you can get all the benefits of milk from a granola bar.

“One of the problems is that nutrients are very difficult for the body to absorb, so if you can convert them into nano-form you can fortify them into food products where they can be easily dissolved,” Huang explains.

Food could be formulated to release exactly the right amount of nutrients based on the chemistry of each individual’s body – interactive food.

One day, seeds used by farmers may be modified by nano-particles in the same way organisms are now

genetically modified. People in developing countries could receive all the vitamins they need in whatever crop they produce through the use of nano-modified seeds.

How does this affect the average Canadian farmer when most of the manipulating will likely go on in laboratories once the commodity has been sent to the processor?

The concept of particle farming is emerging. Instead of farming a commodity, producers could farm a specific ingredient contained in the crop. You may still grow corn, but it’ll be primarily for the proteins and oils to be extracted via nanotechnologies rather than for the grain itself.

The concept of nano-food is still new and discussion on the topic is limited. While research information is available, doubts remain about the application of nanotechnologies to food. There’s obviously a lot of interest in fat-free yet tasty and nutritional food – think of the consumer demand for that – but also caution about using nanotechnology to achieve it.

“If Nestlé were to consider the application of nanotechnology in its products, consumer acceptance would be a prerequisite, and any application would have to meet Nestlé’s stringent requirements in the areas of food quality and safety,” says a Nestlé spokesperson in an email.

“Right now, the main issue is that there are many unknowns,” Huang says. People are concerned about food safety and long-term effects.

The Star Trek notion of instant food production in a molecular reformulator is beyond futuristic. But cutting-edge technology such as nano-food is a topic that farmers should keep their eyes on. It could alter the way food is both produced and consumed.

BY HUGH MAYNARD AND CHRISTINA FRANC

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. Christina is a communications co-ordinator for Qu’anglo Communications and Consulting. She is also studying journalism at Carleton University.



Traceability: Quebec aims for farm-to-table

A decade ago, the word traceability was not in the farmer's dictionary. Today, along with mysterious-sounding abbreviations such as HACCP and ISO, it has become an integral part of a producer's management regime for food safety. From radio-frequency ID tags in a calf's ear at birth through to bar codes on boxes of lettuce, traceability is beginning to permeate the agri-food chain.

Simply put, traceability is the ability to verify the history, location or use of a food item by means of a documentation system. A paper trail (of sorts) for agricultural produce has long existed, but the emergence of bovine spongiform encephalopathy (BSE) and avian influenza over the last two decades brought a new urgency to the extent and sophistication of traceability systems.

Countries needed a way to respond quickly to a food safety crisis, identifying and sourcing a food product anywhere along the multiple points of the production, processing, distribution and consumption chains. The consequence of not being able to do this was plain to see in the prolonged impact on U.K. consumers, and the dairy and beef sectors, during their BSE crisis.

In a Canadian context, Quebec was the first to move in a concerted fashion on the question of traceability with the creation of Agri-Traçabilité Québec (ATQ). At a provincial agri-food policy summit in 1999, led by then-premier Lucien Bouchard, the question was posed: if there was a BSE-type crisis in Quebec, could the sector adequately respond to the challenge? The answer: not really.



As a result, ATQ was founded in 2001 with a mandate to develop and implement a mandatory, multi-species traceability system in both the livestock and crop sectors. Financed and regulated by the Quebec government, it's managed by an independent multi-stakeholder board of directors. Not surprisingly, the word mandatory has not always been popular with farmers.

"If we want to manage a (food safety) crisis, everybody has to be on board, right from the farmer all the way through to consumers," says Linda Marchand, ATQ's executive director. If even a handful of farmers or distributors don't buy in to the system, the ability to track the source of a disease outbreak such as avian flu – or food contamination such as listeriosis – becomes compromised.

ATQ, now celebrating its first decade of operation, is gradually working its way through the food chain with the implementation of traceability systems in the cattle (dairy and beef), sheep and deer sectors, with pork about to join in as well. Pilot projects are underway for vegetables, eggs, poultry, lobsters and cut meats, which will cover the slaughterhouse and distribution segments of the food chain for meat. A traceability system from farm to table is the ultimate aim.

Marchand points out that the primary role of a traceability system is not to prevent a crisis, but to react quickly in containing and resolving the issue. "We have to be able to rapidly circumscribe and isolate the problem if we want to reduce the impacts of a food safety crisis. Farmers can't afford to deal with the costs of massive culling in affected herds, nor market losses."

Traceability systems are not only reactive but can also lay the groundwork for seizing opportunities. Quebec was the source of the first Canadian beef products exported to Japan after trade restrictions, imposed when BSE was discovered in Canada in 2003, were lifted – thanks to ATQ.

"We had verifiable proof of the birth date of our animals," says Josée Chalifoux, who operates a feedlot of 1,100 head in St-Charles-sur-Richelieu, south of Montreal. "Without that, we wouldn't have been able to export to Japan."

The credibility afforded by the paperwork trail resulted in a premium price when Chalifoux sold to the Zensho company, a major supplier of high-end beef products in Japan. Zensho was able to reassure its clientele – the consumer – of the food's safety.

ATQ is also finding opportunities beyond Quebec's borders and has created Agri-Traçabilité Internationale (ATI) to market and implement its traceability expertise elsewhere in Canada and abroad. ATI will shortly be working with the Canadian Pork Council to implement a national pork traceability system, and discussions are being pursued with Dairy Farmers of Canada and government departments in the Maritime Provinces and as far away as Chile.

Readers can find out more about ATQ and the agri-traceability system in Quebec at www.agri-tracabilite.qc.ca.

BY HUGH MAYNARD

Performance reporting

from farm to feed lot (and beyond)

A new voluntary web-based program, the Beef InfoXchange System (BIXS), will soon be capable of linking animal performance and production data to the radio-frequency identification tags that have been mandatory for Canadian cattle since 2006.

The program will provide a unique way to help the Canadian industry position itself for the future.

Cow-calf producers, feedlots and packers will be able to link information online, including carcass data, to the tags as they pass through the system. According to the Canadian Cattlemen's Association, the system will build efficiencies across the chain with fact-based marketing programs tailored to individual animal information.

Currently, most cow-calf producers have little idea how their animals perform once they leave the auction markets. BIXS will allow producers to see how their animals fare right through to slaughter. Participating large to mid-sized plants with EplusV equipment will be able to upload slaughter date, carcass weight, grade fat depth – everything down to the marbling score. In time, smaller plants will likely upload basic carcass grade data as well.

Participating cow-calf operators will be able to quickly and easily register an animal into their BIXS account online using the animal's tag number and birth date. They can also add individual animal performance,

genetic and health information. While BIXS can support traceability, that's not its primary focus.

The system was designed with farm functionality in mind, allowing producers to select groups of animals by how and when they were branded or vaccinated and with what specific products. To maintain confidentiality, users decide who sees what information.

Enrolment in the program is entirely voluntary according to Larry Thomas, national co-ordinator of the Canadian Beef Advantage Program. As well, producers won't need to be enrolled in the Verified Beef Production (VBP) program or the on-farm food safety program to participate in BIXS. (VBP is a promoted aspect of BIXS and the Canadian Beef Advantage Program.)

Thomas says BIXS has the potential to offer producers a lot of benefits. For example, it will be possible in coming years to highlight genomic factors or DNA markers of cattle.

"There is no program quite like it anywhere else in the world," Thomas says. "The program will provide a unique way to help the Canadian industry position itself for the future."

BY LORNE McCLINTON AND SUZANNE DEUTSCH

Lorne has worked in the communications field for the last 20 years, and divides his time between Quebec and his grain farm in Saskatchewan. Suzanne is a Quebec-based writer and photographer with solid experience writing for farm publications.

In search of the technology sweet spot

It's been nearly 30 years since genetically modified products were commercialized on a large scale. The first was synthetic insulin, which was a boon to diabetics through an increase in supply and reduction in cost.

This was followed shortly thereafter by bovine somatotropin. Remember BST? Never approved in Canada, it was surrounded by controversy and subject to all kinds of competing claims and concerns.

The synthetic hormone didn't wildly boost dairy production in the U.S., as once claimed, nor did it adversely affect the health of consumers who continued to drink milk. The lesson is that technology doesn't always deliver the dramatic impact – positive or negative.

It's going to take some technologies with the same dramatic success as insulin to help increase food production and preservation and feed a hungry world over the next 50 years. While management will always play a major role in enhancing food supplies, some technological breakthroughs will be needed to meet rising demand.

Drought and impoverished soils are already major barriers to crop productivity in many parts of the world, especially in developing countries. Genetically modifying crops to be more drought-tolerant and to require fewer nutrients for the same level of productivity could significantly improve yields.

Other emerging technologies include developments such as edible sealants. Intended to keep small quantities of food fresh – think how an apple browns and spoils once cut open – this type of product can also be used in communities that lack refrigeration to give longer shelf life to fresh foodstuffs.

An early food sealant was paraffin wax, which doesn't taste so good even as a thin film sprayed onto cut fruit. Reflecting advances in applied research, corn-based polymers may soon do the trick.

Worldwide, more people now live in cities than in rural areas. Urban agriculture will likely only be a supplement to total food production in the future, but intensive plot management and advanced hydroponics will help. That little extra might make a difference, and may also play an important role in ecosystems management through the recycling of grey water and bio-wastes.

Unfortunately, achieving drought-tolerance is proving much more complex than other genetic modifications to date, so it might not deliver the dramatic impact needed to make a difference in global food production. And it may not be acceptable for use in the open environment.

But for the sake of having a well-fed world, there are technological sweet spots that must be pursued.

BY HUGH MAYNARD



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Cultivating peace of mind

As professions go, farming can be a tough row to hoe.

Whether it's working with livestock and machinery or watching the markets and the weather, Canadian producers deal daily with a never-ending array of risks, challenges and calculations that can turn fortune into failure.

And it doesn't look like things are going to get any easier in the future. It's enough to drive someone, well, crazy.

That's why wellness expert Beverly Beuermann-King equates knowing how to deal with the stresses of farm life to using safety barriers on machinery.

"Growing up on a dairy farm in rural Ontario helped me to realize it takes a special person to live this way and be healthy," says Beuermann-King, now an educator, author and speaker on stress management in the home and workplace who is based in the Toronto area.

Finances, she adds, are a major source of worry for most modern farmers. Many must also juggle game-changing opportunities and decisions related to market demands and government policies.

"There are so many variables to consider," Beuermann-King says. "'Should we take a chance and buy more quota, or are the rules about to change?' And even when people pay off loans, it can feel like they're not getting ahead. That can be very stressful."

To cope with those stresses, Beuermann-King recommends the SOS principle – Situation, One's Self and Support.

"First you need to identify the source of stress," she says. "Is it a loan, a desire to buy, a lack of family balance, the weather – what?"

The next most important thing is keeping mind and body healthy by eating good foods and getting regular exercise. "A good night's sleep is critical," says Beuermann-King. "You need to be able to leave things undone. Sure you make hay when the sun shines, but the sun will likely shine tomorrow, too."

Beuermann-King also encourages producers to practise or develop activities and hobbies – anything and everything from fishing and stamp collecting to playing golf or playing with their kids. "Do anything that gets you away from stress," she says. "It refreshes you and gives you energy to confront your problems."

To solve problems – and vent frustration – Beuermann-King recommends producers turn to people they trust and feel comfortable with. "It could be a family member, a mentor, a religious figure, a childhood friend – even a financial planner," she says. "It can be anyone who can give you support and understand what you're dealing with."

The overall key, she says, is keeping life in perspective.

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.*

FCC honours agriculture's top women

If you're a young woman interested in an ag career, where can you find a role model? Check out the winners of the annual FCC Rosemary Davis Award – a program that recognizes women who shine as community and industry leaders. Many are groundbreakers in their sectors. They all have successful careers and are active on boards and committees. They're proud of our industry, yet humble about their accomplishments. And they're all passionate about agriculture.

Nominating is easy

In November, we'll call for nominations from every province and territory. Eligible nominees are at least 21 years old and actively involved in agriculture. Judging criteria includes leadership, community and industry contributions, and vision for the future of agriculture. This year, nominate a friend or colleague. Better yet, nominate yourself – you're worth it. www.fccrosemarydavisaward.ca

About Rosemary

Rosemary Davis was FCC's first female board chair. She's a successful agribusiness owner and operator in Ontario, a role model and a mentor for other women in the industry. Want to know more? Email prixrosemaryaward@fcc-fac.ca or call 1-888-332-3301.

Meet the winners



BERTHA CAMPBELL
Kensington, P.E.I.
*nurse, farm co-owner
and volunteer*



WYNNE CHISHOLM
Calgary, Alta.
*cow-calf producer, management
consultant and volunteer*



LILIANE COLPRON
Montreal, Que.
*businesswoman, agri-food
industry leader and visionary*



ROSSANA DI ZIO MAGNOTTA,
Vaughan, Ont.
*philanthropist, educator
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Val Marie, Sask.
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