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TRACE YOUR FUTURE

Saskatchewan restaurant owner Don Agar (on the right on the cover) hears first-hand the consumers' interest in where food comes from. This is not a fad-driven quaint curiosity about farm life. The desire to trace food origins is more an issue of food safety and "that's not going to go away," Agar says.

On the cover: Randy Heuchert (left) and Don Agar (right). Photo: Jerry Humeny, Black Box Images.

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The Editor's Desk

Jay Whetter

Make a plan

Environmental Farm Plan programs are still going strong — even if they haven't been getting much attention recently. I hadn't noticed anything about them for years and thought they were done. They're not.

What drew my attention to Environmental Farm Plans (EFPs) again after a long silence was the article in this issue on Alberta's sustainability pilot project. In that article, Karla Bergstrom, policy analyst with Alberta Canola Producers Commission (ACPC), comments that all pilot project participants who had completed an EFP were much more prepared for the on-farm assessment.

Greg Sears, the ACPC vice chair who farms at Sexsmith, is also quoted in the article, encouraging growers who have not yet done an EFP to consider it. "All growers should be proactive in this type of approach to their farming operation," Sears says about sustainability programs, and then adds, "Completing an EFP is a great place to start."

Do a Google search with EFP and your province, and you'll find the contact information. I found active provincial programs in Alberta, Saskatchewan, Manitoba and Ontario.

Paul Watson is program director for Alberta EFP. He highlights the close connection between EFPs and sustainability assessment, with many of the same issues covered — including habitat protection, working environment, farmer health assessment, pesticide use and record keeping. One thing that needs adding is the ability to document improvements on the farm, but that will come, he says.

"We're working on making an EFP program that meets international sustainability standards so the provincial programs and growers involved can move forward in a consistent manner," Watson says.

The Saskatchewan EFP webpage mentions the Farm Stewardship Program, which provides funding to assist in implementing specific projects to improve a farm's environmental footprint. This was an early feature of the EFP when it started in 2005. Despite a few funding restructures, this side benefit continues — at least in some provinces. The Saskatchewan site also notes that when individual EFPs reach 10 years of age, producers will be required to review and update their plan in order to continue to qualify for the Farm Stewardship Program.

Growers will have personal and business reasons to look into EFPs and sustainability programs. How these two programs will weave together is uncertain, but for growers unfamiliar with the potential demands of a sustainability program, going through an EFP would seem a good place to start. ●

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Saturated fats at four percent and potential new recommendations for omega-3 fatty acid intake provide growth opportunities for specialty canola oil.

By Treena Hein

Lower sats and more omega 3

Canola oil is the second most widely used oil among North American food makers — and for good reason. Canola oil contains heart-healthy omega-3, 6 and 9 fatty acids, and is very versatile with its high smoke point and neutral flavour. Specialty high-oleic canola oil offers additional benefits, such as an even higher smoke point, greater oxidative stability and longer fry life — attributes valued highly by the food service industry and food processors.

Dow AgroSciences anticipates strong growth to continue for its high-oleic Nexera canola. "The use of canola by the U.S. food industry has tripled over the past 10 years and it's now at 16 percent of all oil used," says Dave Dzisiak, Dow's grains and oils commercial leader. "Since trans fat labelling became required in 2004, canola oil consumption has increased from six to 12 pounds per year per person in the U.S., making it the second largest oil used. Most is from prepared foods and food service applications. These require a more durable oil with high stability — and that's high oleic."

Dzisiak points to a low Canadian dollar, high-yielding genetics and new high-efficiency Canadian crush plants as factors contributing to growth in high-oleic canola. "It all means that high-oleic canola growers in Canada can be cost-competitive with American high-oleic soybean growers," he says. "We know the demand for high stability oils could be much more than the volume it is today, and canola uniquely can scale up to meet that demand. Other crops like corn, sunflower or cottonseed can't really expand for oil production."

In the coming year, Dzisiak says Dow will be launching new Nexera canola hybrids with a "great disease package," including clubroot resistance, further improved blackleg resistance and strong improvements in yield and maturity.

Cargill is making plans to open up opportunities for its Victory high-oleic canola to go to non-Cargill crushers, says Willie Loh, Cargill vice president of market development for oils and shortenings. "Our Victory canola with Roundup Ready and Liberty Link is now commonly grown and ubiquitous in Western Canada," he says. "So, if you're a crusher, you can now access 100 percent of your draw area. That means better markets for growers, and it will help attract more growers to our varieties than before."

Willie Loh, Cargill vice president of market development for oils and shortenings, calls omega-3 oil "an exciting new market for the canola industry."

Dave Dzisiak, Dow's grains and oils commercial leader, says that since trans fat labelling became required in 2004, canola oil consumption has increased from six to 12 pounds per year per person in the U.S.

Malcolm Devine, global innovation lead at Nuseed, a company new to Western Canada, says "Nuseed is active in testing and developing a broad range of canola products in Canada that will have great applicability, both in terms of agronomic benefits and their ability to meet downstream consumer needs."

Lower saturated fat

The saturated fat content of high-oleic canola is presently between seven and eight percent, but new varieties will be a little over four percent. The market is primarily for fried foods, says Loh, and because these foods contain the most oil, they will benefit most from having low saturated fat content.

"Our food customers will have an improved label and nutritional fact panel, and the benefit to the consumer is obvious," Loh says. "We as an industry have been able to take trans fat and saturated fat out of public consumption by the tonnes, and this is the next step."

Cargill is now in advanced trials of the low saturated version of their high-oleic Victory platform. Loh notes that it will be a high-yield variety with the best blackleg resistance in Canada.

"We anticipate in the next few years that federal governments in Canada and the U.S. will catch up with other developed nations and provide daily recommendations for intake of omega 3. We'll be ready for that."

—Dave Dzisiak

Dow is also developing high-oleic canola with lower saturated fat content. Dzisiak does not characterize the market as large, but notes there are a few applications where lower saturated fat is in demand. "It enables a manufacturer to differentiate its brand," he explains. "If a food product has less than 3.5 percent saturated fat per serving, it can be labelled as having zero."

Opportunities for omega 3s

The benefits of long-chain omega-3 fatty acids in human health are well documented, and canola breeders are now working on canola with substantial amounts of omega 3s in the oil. Two specific target fatty acids are eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA).

"Omega-3 fatty acids play an important role in heart and brain health, child and infant development, inflammation management and other health functions," says Devine. "World projections suggest demand will outstrip the production that can be sustainably supplied by wild fish, so an alternative land-based source of long-chain omega-3 oil will be critical. The crop of choice for this, for many obvious reasons, is canola."

Nuseed is collaborating with the Australian Commonwealth Scientific and Industrial Research Organization and the Grains Research Development Corporation to develop canola that produces long-chain omega-3 oil at levels equal to that of wild fish. In late 2013, the team achieved levels of DHA equal to those in wild fish oil, using a plant-to-plant transfer of marine microalgae genes into canola. Regulatory clearance is being sought and small-scale field trials are being conducted. Devine says the product will first be commercialized in Australia, with other markets such as Canada and the U.S. to follow.

"The aim is to have seed available for production by the end of this decade," Devine says. "If the innovation proves successful, it is estimated that one hectare of this canola has the potential to deliver an amount of DHA equivalent to what can be produced from 10,000 one-kilogram fish."

Dow also has a well-advanced program to incorporate omega-3 fatty acids into its Nexera platform. "We anticipate in the next few years that federal governments in Canada and the U.S. will catch up with other developed nations and provide daily recommendations for intake of omega 3," says Dzisiak. "We'll be ready for that. It will be a great addition to the canola portfolio. Innovation in canola has been a strong tradition. This is another example of that."

Cargill is teaming up with BASF to breed canola of its own that contains more omega 3. "It's already in regulatory field trials and we expect to establish a whole production system for our own hybrids," says Loh. "It's an exciting new market for the canola industry. Agriculture is a highly-efficient and infinitely scalable system for omega-3 oil production."

Loh sees canola with high amounts of omega 3 as a major development. "The future is very bright for canola and canola farmers," he says. ●

Treena Hein is an award-winning science writer and educational resource consultant.

Four growers talk about four separate specialty canola oil programs, adding to the market opportunities available for Canadian canola.

By Jay Whetter

Special opps

"We are locked in early, but if the price goes up through the year, that means the contract price will be better next year."

—Kyle Lanti

Kyle and Trudy Lanti

High Level, AB

Kyle and Trudy Lanti are coming off their driest year in memory, but they still expect to break even on their 2,400 acres of high-erucic acid rapeseed (HEAR). That's saying something, because all their other crops were in a money-losing situation, with yields that didn't come close to covering their fixed and variable costs.

The Lantis have been growing HEAR for Bunge for years. Kyle's dad first heard about the opportunity at a tradeshow. Back then, the idea of a premium price and on-farm pick-up sealed the deal. Bunge continues to offer both (the Lantis got $75 over the ICE November canola futures for all their 2015 production). "We are locked in early, but if the price goes up through the year, that means the contract price will be better next year," Kyle says.

"We figure we always come out ahead growing HEAR," he says.

On-farm pick-up is a big attraction in High Level, which is a long way from any canola processing facilities. In fact, Bunge takes HEAR all the way back to its plant at Nipawin, SK.

"They pick up four to six loads a month, and they tell us about a month in advance the exact day they'll be coming," Kyle says. They have always committed to that promised pick-up day, which is helpful, he adds. "We try to take a holiday every winter, and we can plan around their pick-up dates."

Bunge takes everything the Lantis produce from the contracted acres, and everything is picked up by August so the bins are empty for a new crop, he says.

HEAR varieties are Roundup Ready and Bunge offered a hybrid for the first time this year. "With the drought, it wasn't a good year to test its performance," Kyle says, but he says all HEAR varieties have been pretty competitive with regard to yield. "We used to grow other canola varieties to compare yield, but they've always been right up there, so now we just grow HEAR.

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"Early season vigour is improved with new hybrids, and delivery opportunities are more predictable now with Richardson in Yorkton setting aside one week per month for specialty oil canola processing."

—Keith Dalgleish

Rob Bletsky
Canora, SK

Rob Bletsky grows Clearfield canola for the non-GMO market. The program is through Viterra, which picks up in the yard and delivers to its crush facility in Ste. Agathe, MB.

Bletsky has been in the program for five years. "I wanted to add a different type of weed control chemistry to my rotation," he says. He had been entirely Roundup Ready, and his canola acres are now split half and half between the two systems.

He likes the fact that spraying is easy. He can take care of the weed situation in one pass with residual Clearfield products. "Group 2 resistant weeds haven't been an issue in this area," he says. "There is potential that it could become an issue, but Clearfield is expecting to come out with new products to address this in the next few years."

Bletsky grows Pioneer Hi-Bred Clearfield varieties 46H75 and 45H76 for the program. These are top Clearfield varieties, he says, adding that the yield potential combined with the price premium has "worked for us."

Keith Dalgleish
Grandview, MB

Keith Dalgleish grows Clearfield Nexera canola for the premium and also for the harvest options. "I try to work everything around straight cutting, and with Clearfield canola I can apply pre-harvest glyphosate and desiccate the crop," he says.

The premium price offered first motivated him to grow the specialty crop, and the premium is more attractive now than it used to be because Nexera hybrids yield about the same as leading conventional hybrids.

Clearfield also gives him another option to rotate herbicides, he says.

Dalgleish says two early challenges with Nexera were lower early-season vigour and inconsistent delivery. "Early season vigour is improved with the new hybrids, and delivery opportunities are more predictable now with Richardson in Yorkton setting aside one week per month for specialty oil canola processing."

Mike Heinrich
Davidson, SK

Mike Heinrich grows Cargill Victory specialty canola as well as standard canola varieties. The standard canola he can sell any time to address cash-flow needs throughout the year, but specialty canola is an extra moneymaker for him.

"I need an edge, and this IP (identity-preserved) program gives me that marketing edge," he says.

When Heinrich signs his Cargill Specialty Canola Oils contract, usually in August or September for the following year, he has to select a delivery schedule. He has chosen November, April and August delivery months. The contract includes on-farm pick-up.

"I like the guarantee of movement in this predetermined window, and the logistics have always worked in my favour," he says.

Heinrich also likes the "risk free pricing". He can lock in a price up to July 15 without worrying about production problems. "If I don't have production due to establishment issues or bugs, I don't have to buy out of a big contract."

Cargill offers Victory hybrids in both Roundup Ready and InVigor Liberty Link systems, and Heinrich grows both types to diversify his weed management. "New Victory hybrids come along almost annually, and lately yield performance has been consistently near the top." ●

Jay Whetter is the editor of Canola Digest.

"I like the guarantee of movement in this predetermined window, and the logistics have always worked in my favour."

—Mike Heinrich

Trace yo

Being transparent and open about farming practices is — or will soon be — part of doing business. Traceability is your opportunity to shine.

By Jay Whetter

Randy Heuchert farms south of Floral, SK, a village made famous more as the birthplace of Gordie Howe than by its sweet-smelling name. Nobody in nearby Saskatoon and definitely nobody in Detroit or New York or Tokyo really cares about what Heuchert does on his Floral farm. Right? He's a million miles removed from most of the people who eat what he produces. Right? Yet, get this: the "rest of the world" does care. In fact, earth-conscious and food-safety-conscious consumers care more than ever about the crop rotation, nutrition and protection decisions Randy Heuchert makes on his farm — even if they have no clue where his farm is.

ur future

Heuchert sees this, which is why he participates in the Canola Council of Canada's (CCC) Canola Camp program to teach North American chefs and food writers about canola. (See the article on Canola Camp at the back of this issue.) He also hosts farm tours that Cargill and other companies organize.

"I want to show these visitors the passion I have for farming and growing food," Heuchert says. This transparency is part of his business plan. "I do this so I have a market for my crops."

He keeps records of all field operations for each field, and uses recommended rates and products. He's happy to provide this production information to end users who ask for it. "I have nothing to hide," he says.

Don and Carmen Agar run Agar's Corner, a catering business and restaurant in Floral. He and Heuchert went to school together. From his side of the food business, Agar hears first-hand the consumers' interest in where food comes from. This is not a fad-driven quaint curiosity about farm life. The mounting desire to trace food origins is more an issue of food safety, Agar says. "That's not going to go away."

While the cord between consumers and the farm may be getting longer, it is getting stronger. As an example, Cargill launched its first traceable high-oleic canola oil supply chain on October 1 of this year.

"Fewer people are directly connected to the farm anymore. More are five or six generations removed, and they don't understand what crops are grown in North America, or what the crops look like," says Kristine Sanschagrin, marketing manager of Cargill Specialty Seeds and Oils. Cargill's initiative will offer customers the opportunity to make that connection, and rebuild trust in their food supply.

Sanschagrin cites results from an April 2015 survey that found 65 percent of all consumers are "really interested"

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in where their food comes from, yet only 34 percent of those surveyed feel farmers are transparent about their practices, and only 30 percent feel food companies are transparent.

Cargill, a company that works closely with growers, food processors and food service companies on both sides of the supply chain, saw a good business case to create a traceability program that will increase transparency. "The food business had been focused on making supply chains more reliable and finding lowest cost ingredients," Sanschagrin says. "Now they're looking for traceability."

This does not mean big changes for growers already producing specialty canola for Cargill, nor does it mean increased watchfulness on Cargill's part, Sanschagrin says.

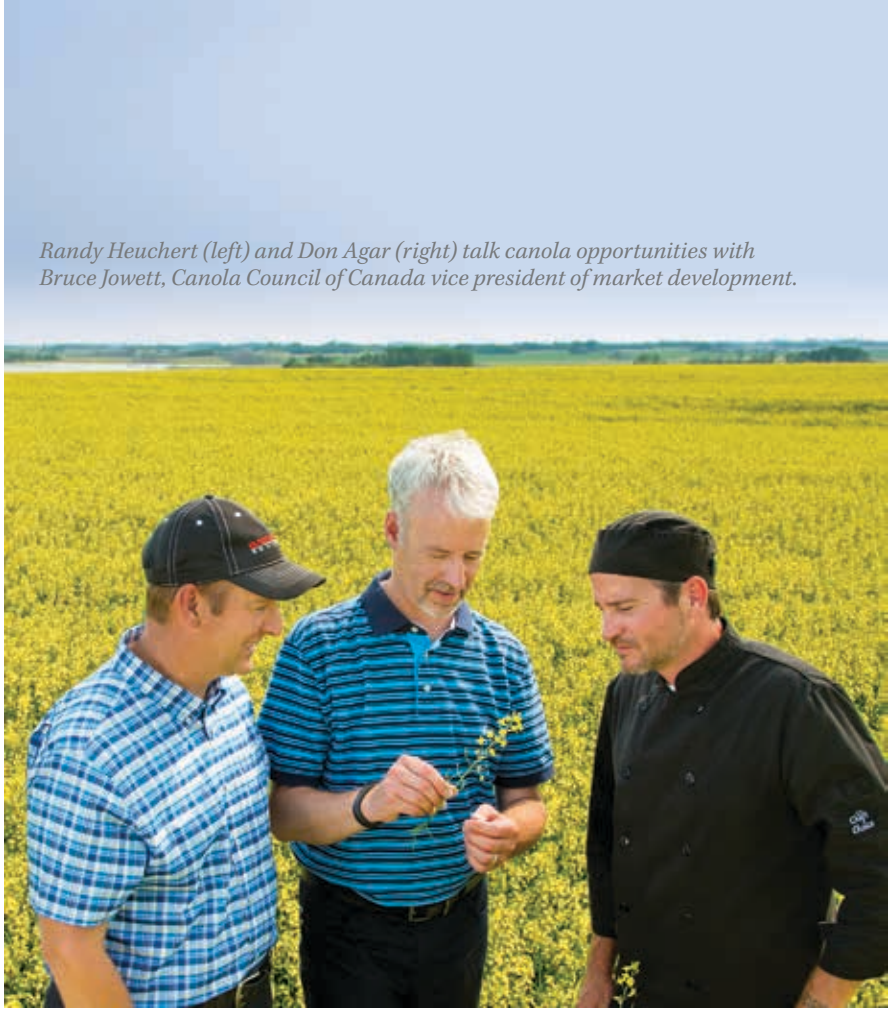
The mounting desire to trace food origins is more an issue of food safety. "That's not going to go away."

—Don Agar

What it will mean is increased communication. "We have to be diligent about educating consumers, our food-service operators, and food ingredient manufacturers that we're good stewards of the land," she says. "We as an industry need to continue to tell this story."

Governments are also getting involved. The *Safe Foods for Canada Act* (SFCA), which received Royal assent in November 2012, underlines the effort to strengthen food safety.

"While current legislation does not require food manufacturers and other regulated parties to have traceability systems — though many of the medium to large manufacturers already have these systems in place — the SFCA legislation will provide the Canadian Food Inspection Agency (CFIA) with strengthened authorities to develop regulations related to tracing and recalling food, and the appropriate tools to take action on potentially unsafe food commodities," says Gordon Carson, regulatory affairs manager with the CCC. The U.S. has similar legislation in the works.



Randy Heuchert (left) and Don Agar (right) talk canola opportunities with Bruce Jowett, Canola Council of Canada vice president of market development.

PHOTO: Jerry Humeny

As part of the inspection modernization piece of the Act, the CFIA is currently consulting with industry on proposed regulations to apply the international standard for traceability established by Codex Alimentarius. The Codex standard calls for each company in the supply chain to be able to track food forward to their immediate customer and backward to their immediate supplier.

"These requirements are aimed at enhancing consumer protection during a food safety incident by providing for more accurate information to facilitate the rapid identification of the origin and movement of a food through the supply chain," Carson says.

He adds that all Canadian oilseed processors already have audited traceability systems in place.

"For canola growers, I really don't see anything changing much," Carson says. "Right now, the majority of elevator companies and processors keep records on deliveries as part of their corporate HACCP plans, along with the variety declarations paperwork."

"When all is said and done, there might be a little more formality required for documents and records at the delivery points, but it shouldn't change much else," he says.

Back on his farm, Randy Heuchert is ready. He believes consumers, chefs, food processing companies and retailers have a right to ask farmers about production practices and land stewardship, and he makes decisions as though they're always watching. "This will not change the way I farm," he says. ●

Jay Whetter is the editor of Canola Digest.

"The food business had been focused on making supply chains more reliable and finding lowest cost ingredients. Now they're looking for traceability."

—Kristine Sanschagrin

As global companies adopt sustainability standards, Alberta grower groups ran a sustainability pilot project to test grower preparedness. Here's what they found.

By Donna Fleury

Sustainability improves market access

Increasingly, multinational food companies and consumers are demanding sustainably sourced ingredients and products from their supply chains. The movement has given rise to various international sustainability programs with on-farm requirements. In March 2015, Alberta Canola Producers Commission (ACPC), Alberta Barley, Alberta Pulse and Alberta Wheat partnered in the Alberta Crops Sustainability Certification Pilot Project to see how Alberta growers are positioned to meet the sustainability standards many global companies are adopting.

"Farmers recognize that consumers want to know more about the food they eat, where it comes from, and how it's grown. The pilot project is one initiative that will help farmers tell their story because they want consumers to know about the good things they are doing in their operations," says Karla Bergstrom, policy analyst with ACPC. "They are very proud of the safe and healthy food they grow."

The partners were pleased to have 32 producers participate in the pilot that assessed farms in eight management areas: agrochemicals, fuel, soil, water, energy, biodiversity, waste and labour. The farmers answered a series of questions about sustainability at the start and end of the project, which also included an on-farm assessment to benchmark against three international sustainability standards. Sustainability standards include three pillars: environment, economics and social or human capital.

Results are now being analyzed and a debriefing meeting is planned for this fall. One positive thing that stood out in the preliminary results, Bergstrom says, is that all the participants who had completed their Environmental Farm Plan (EFP) were much more prepared for the on-farm assessment. The pilot assessment also gave participants tangible feedback on areas of improvement based on best practices.

"Another highlight was growers are doing a good job of their agronomic practices, maintaining good field records, minimizing tillage, crop scouting and soil testing," she says. "One thing for

ACPC director Stuart Holmen says a down-the-road benefit to participating in a sustainability program will be access to particular markets.

certain is agriculture is moving into a data-rich environment. It will be important for farmers to keep good records, now more than ever, as sustainability standards will be increasingly required from buyers."

Stuart Holmen, ACPC director who farms near Lloydminster, took part in the pilot. "We have been participating in a sustainability program for ADM for the past three years, so the assessment was basically the same process," says Holmen. "I think we are moving into an era where people want to know more about everything. I want to know more about my farm and my practices and consumers want to know more about where their food is coming from and how it is produced."

The sustainability assessment helps answer these questions and showcases good things already happening on the farm, Holmen says. "Most of the practices on the checklist we are doing already, it's just putting some documentation behind those practices, which doesn't take a lot of time or cash costs."

Greg Sears, another pilot participant and ACPC vice-chairman, farms north of Grande Prairie. "In many cases we don't have data that reflects how well we are doing on our operations, so something like a sustainability audit can help with everything from environmental performance to the safety of our workers to how our operations impact our neighbours, both good and bad," says Sears.

"All growers should be proactive in this type of approach to their farming operation."

—Greg Sears

The assessment didn't take a lot of time, he says, but a more in-depth audit program might. He can see that additional costs might be required in the future to upgrade administrative and tracking processes and possibly some equipment.

Both Holmen and Sears believe there are benefits to participating in a sustainability program. "It's simply a way to showcase the good things we are doing and the benefits down the road will be access to particular markets," says Holmen.

Sears agrees that this is going to become a right of entry into the marketplace based on current trends. "I don't see gaining an additional price benefit, but it is going to become the way we run our businesses in the future," he says.

Sears believes all growers should be proactive in this way. "Completing an EFP is a great place to start. It has benefits above and beyond the outcomes of any traceability or sustainability program… it's something that we need to keep on the radar as farmers, as an association and as an industry," he says.

"Over the next year, the four commissions will work together to plan out the next steps," explains Bergstrom. "The final report has some good information but it has also raised more questions that need to be answered."

The Alberta Wheat Commission also participated in another joint project with Agricultural Research and Extension Council of Alberta (ARECA) to benchmark Alberta's EFPs against the three sustainability programs used in the pilot. A video has been released for industry on sustainability (https://www.youtube.com/watch?v=Kp5o2dF-n8k), and two more videos focused on producers and consumers will be released shortly.

Bergstrom adds that ACPC and the other groups will be looking for opportunities to provide information about the sustainability pilot project through extension events, such as presentations at upcoming winter grower meetings.

They will also work on strategies to help prepare producers to participate in sustainability programs. "We recognize that we are major exporters of food and it is important to look after our markets," Bergstrom says. "This pilot project and other activities have helped our organization and directors get a deeper understanding and have a better conversation around sustainability, so we will be prepared to deliver on market requirements for sustainability."

For more on the pilot project, see this ACPC video: **albertacanola.com/video/alberta-crops-sustainability-certification-pilot-project/**. ●

Donna Fleury, P.Ag., is a freelance writer from Millarville, AB, specializing in agriculture and the environment.

CRSC UPDATE

The Canadian Roundtable for Sustainable Crops (CRSC) is a national, multi-stakeholder initiative dedicated to advancing sustainable production practices and outcomes across Canada's cereals, oilseeds, pulses and special crops sector. Serving as a forum for cross-commodity collaboration and coordination, participants include the major grains and oilseeds value chains, producer groups, environmental non-governmental organizations (NGOs), the crop input industry and customers. Efforts involve assessing and responding to sustainable agriculture issues and opportunities facing the grains sector, and showcasing Canada's performance in sustainable production. The canola industry is represented on the CRSC's steering committee, research and assessment committee, communications committee and pilot project committee.

Agriculture and Agri-Food Canada has committed to providing $1.077 million towards the CRSC's work on establishing metrics for sustainable crop production, to be carried out over three years. The Crop Sustainability Metrics Platform will allow Canadian suppliers to respond with knowledge and authority to global marketplace demands for agriculture commodities that meet established sustainability criteria and, in turn, position Canada as a recognized world leader in the sustainable production of agriculture commodities. ●

Helpful insects far outnumber the pest insects in Prairie crops. Conserving these beneficials is not just the right thing to do, it's likely the profitable thing to do.

By Gregory Sekulic

Hundreds of insects working for you

Two carabid beetles make short work of a cutworm so you don't have to. Providing a place for beetles and other beneficial insects to live can have a large impact on the amount of pest species these beneficials consume.

There are 970 identified species of native bees in Canada, many found in or near canola fields. Canola farmers provide a home for an incredibly diverse group of insects. This diversity isn't limited to pollinators. Hundreds more species of arthropods call the agro-ecosystem home. Of this huge group, only a couple dozen would be considered pests.

The rest are — at worst — neutral. Hundreds are considered beneficial. By that, we mean they feed on or otherwise parasitize the pest species we have. In short, the insects found in and around canola are more likely to be helping than hurting; either through pollination (honeybees, native bees, hoverflies), parasitism of pest species (parasitic wasps) or predation (carabid beetles, lady beetles, lacewings, spiders). The question then follows: If they're helping, what value do they bring?

In recognition of this, a small working group has been formed consisting of the Canola Council of Canada, Ducks Unlimited Canada, Pulse Canada, the Pollinator Partnership, the Canadian Fertilizer Institute, CropLife Canada, and various entomologists and ecologists from universities and government departments across Canada. The goal is to help answer exactly that question: What is the value of a conserved, diverse landscape?

In order to complete their life cycle, these myriad species of insects require undisturbed areas that contain food, water and shelter. In other words, fencerows, tree bluffs, wetlands and perennial forage. These areas are threatened due to farm consolidation and drainage in an effort to be more efficient with larger equipment. The benefit of this consolidation is it prevents fertilizer and herbicide overlaps and reduces fuel consumption. Additionally, it allows more acres to be farmed to provide income.

This, then, becomes a simple equation. Is the value provided by the insects colonizing these uncultivated and awkwardly shaped areas lesser or greater than the value of the crops those same acres could grow?

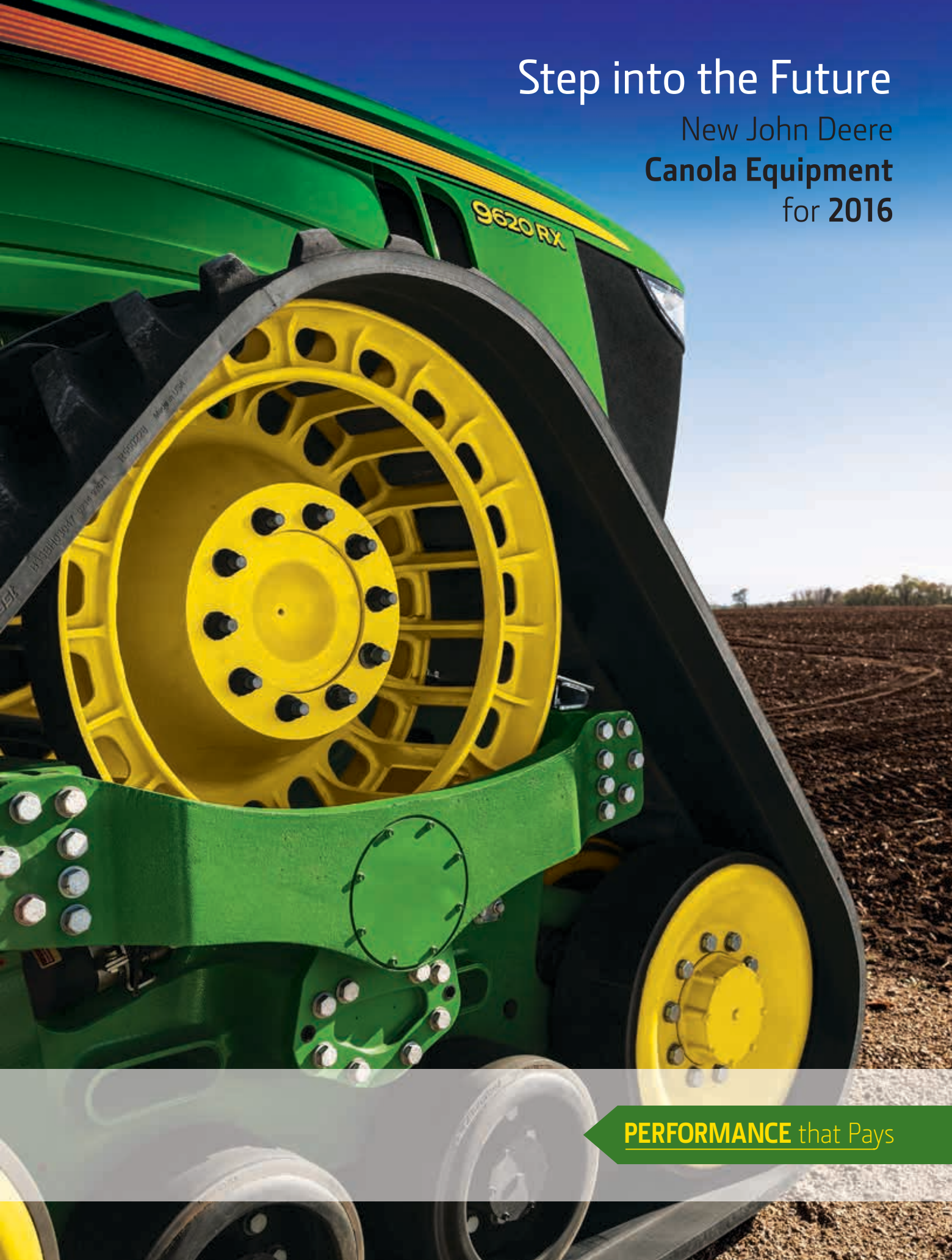
Preliminary data suggest there could be financial incentive for farmers to maintain or enhance natural areas in close proximity to cropland. Work done in Northern Alberta found that canola yield and profit could be maximized with 30 percent of the area of a field being uncultivated or natural, within 750 meters of a field edge. These yield benefits are attributable to increased pollination efficiency, more effective predation and parasitism of pests by species like the pictured carabid beetle, and increased water holding capacity in the agro-ecosystem. Global research on the abundance of beetles in "beetle banks" — the uncultivated, grassy areas within fields — suggests there is an abundance of carabids, most of which are generalist predators of our pest species.

Over the next few years, this group will help guide research to fine-tune these preliminary results and then work with each other to promote conservation practices which are beneficial, sustainable and, most importantly to the farmer, profitable. ●

Preliminary data suggest there could be financial incentive for farmers to maintain or enhance natural areas in close proximity to cropland.

Gregory Sekulic is the Canola Council of Canada agronomy specialist for the Peace region. He is also the pollinators and beneficial insects lead for the CCC crop production and innovation team.

PHOTO: Vincent Hervet



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JOHN DEERE

Soil erosion, nutrient imbalance, organic carbon change and salinization have all improved in Western Canada over the past generation, largely due to changed tillage practices.

By Donna Fleury

Canada scores well on soil management

The United Nations Food and Agriculture Organization created the Intergovernmental Technical Panel on Soils (ITPS) in 2013 to provide scientific and technical advice and guidance on soil issues to the Global Soil Partnership. Dan Pennock, professor emeritus at the University of Saskatchewan, is Canada's representative on the 27-member ITPS panel.

"One of the first priorities for the panel was to develop and produce a summary of the state of world soils, which will be produced as a report and a major contribution of the ITPS for the 2015 International Year of Soils," explains Pennock. "Each region was tasked with completing a soil management scorecard on 10 threats to soil function and summarizing the results into a chapter of the report. One of my roles was to coordinate the response for Canada."

Overall, the western Canadian story is positive, and a good story in particular from the canola perspective, Pennock says. "Of the 10 threats, the four most important ones for North America generally are soil erosion, nutrient imbalance, organic carbon change and salinization. For Western Canada, the condition of all four areas is improving largely because of changes in tillage practices that occurred over the last 25 years," he says. "Greatly improved residue management and decreased tillage have had a very positive effect in Western Canada, particularly for soil erosion and soil organic carbon change."

Other scorecard threats include soil contamination, acidification, waterlogging and compaction, most

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"The scorecard trends show that our crop production system on the Prairies, including canola, is either sustainable or approaching sustainability accordingly to the ITPS definition."

—Dan Pennock

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of which are either of little concern in Western Canada or showing improvement, such as oil sands soil impacts. Urban sprawl taking up farmland is another major threat in many countries, including those in Europe, but it occurs to a lesser extent in Western Canada.

"Soil biodiversity is the final of 10 threats, and although it is the most important issue for the public because it is linked to concerns about pesticide usage, it is the area with the weakest scientific information available," says Pennock. "Attempts to harness soil microbiology to improve crop production is a main focus of a lot of research, however none of the regions in the world have good information. Methods are improving, but this complex area is challenging to measure."

The ITPS has identified soil biodiversity as the area that should have the greatest research emphasis to help address this area of significant public concern.

"The scorecard trends show that our crop production system on the Prairies, including canola, is either sustainable or approaching sustainability accordingly to the ITPS definition," says Pennock. "This positive story is largely driven by changes producers themselves were responsible for, including reduced tillage and better residue management, which had a very positive influence overall in terms of soil management. The only caveat is this cropping system has also led to higher pesticide use, of which we don't have complete information yet."

For organizations such as SaskCanola, sustainable agriculture has been identified as a key priority under its new strategy. It is also included in the Canola Council of Canada's (CCC) strategic plan — one of their three priorities is a sustainable, reliable supply.

SaskCanola notes that producers should be proud of the practices they have adopted, which helped Western Canada to score well in areas such as soil erosion and others. This scorecard will give Canada a starting point or benchmark in soil sustainability.

Going forward, SaskCanola's research committee will look toward areas highlighted by ITPS to help guide investment to ensure that Saskatchewan canola producers continue to be part of a sustainable soil management system.

The final ITPS report will be released on December 4, 2015 on World Soil Day. The Canadian summary will be included in the North American region chapter of the report. "In the future if soil sustainability becomes a larger issue, these trends should benefit western Canadian producers in terms of export markets," says Pennock. "However, the number one payoff for producers is not about labeling, it is about the soil becoming more resilient and better able to support crop production into the future." ●

Donna Fleury, P.Ag., is a freelance writer from Millarville, AB, specializing in agriculture and the environment. The website for the Global Soil Partnership is www.fao.org/globalsoilpartnership/.

The four most important threats to soil in North America are soil erosion, nutrient imbalance, organic carbon change and salinization. For Western Canada, the condition of all four areas is improving, largely because of changes in tillage practices over the last 25 years.

Countries often set their own limits on the amount of pesticide residue on food and feed. As the exporter, our responsibility is to meet their needs.

By Maxim Legault-Mayrand

What's being done about MRLs?

You've made it through the growing season and your canola is in the bin. But have you thought about where it's going to end up and what requirements it will need to meet around pesticide residues? International markets are increasingly sensitive to crops exceeding the legal tolerances for pesticide residues. These legal tolerances are known as maximum residue limits (MRLs). Many efforts are underway to mitigate the risks posed by pesticide residues.

"We are working to ensure growers have access to tools to protect their canola from pests as well as access to markets to sell it to," says Brian Innes, vice president of government relations of the Canola Council of Canada (CCC). "Each member of the value chain has a role in meeting the requirements of our export customers."

This includes life science companies who work with governments in export markets to establish MRLs before they commercialize products; growers who apply crop protection products according to the label; and the CCC, which monitors domestic and international developments and shares information among the value chain.

As part of its role, the CCC encourages life science companies to practice responsible stewardship by voluntarily commercializing their products in a way that meets the needs of export markets. This means that necessary MRLs will be established in key markets before products are sold to farmers. It is CCC policy to only support the use of pesticides that allow the Canadian canola industry to meet the needs of our major markets.

To prevent potential trade issues, the CCC monitors what pesticide products are registered and used in Canada as well as the MRL requirements in export markets. The CCC also shares information with life science companies about the important export markets for canola where MRLs need to be established, taking into account current sales and future growth potential.

Sharing information with the whole value chain helps all parties align their priorities and prevent surprises down the road.

The CCC is also working with industry allies and the Government of Canada to help shape international policies that could reduce the trade risk caused by MRLs. Last year, the CCC joined the newly formed MRL task force, a cross commodity effort aimed at improving growers' timely access to crop protection products by mitigating market access associated with pesticide risk residues.

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Brian Innes, CCC vice president of government relations.

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"We have seen great value in bringing together industry and government to tackle this issue," says the co-chair of the MRL task force, Gord Kurbis, director of market access and trade policy at Pulse Canada. "The task force has contributed to more open dialogue on the need for harmonized international MRLs."

The complexity of MRLs in today's global economy is a daunting challenge for all agricultural commodities. Increasingly, regulatory authorities are establishing their own MRLs instead of following international standards created through Codex Alimentarius Commission, a standard-setting body of the Food and Agriculture Organization of the United Nations and the World Health Organization. This situation creates a real headache when MRLs differ from country to country, or in some cases don't exist at all.

"When a country hasn't established an MRL for a particular crop or product combination, a zero- or near-zero tolerance can be applied," says Kurbis. "It would be far better if countries, including Canada, recognized credible science-based standards such as Codex or established mutual recognition agreements with their trading partners."

"All members of the value chain need to stay coordinated. Responsible commercialization and proper pesticide application go hand in hand to meet international market requirements."

—Brian Innes

In the absence of mutual recognition agreements, there can be significant delays between when a pesticide is registered for use in Canada and when MRLs are established. In Japan, for example, getting an MRL takes about two years from the time the product is registered in Canada. With Codex, it takes about four years.

One solution increasing in popularity is a global joint review for pesticides. This is where governments work together when reviewing applications to register new pest control products. This can help establish MRLs at similar times in multiple countries.

"Global joint reviews are a positive step forward, but there is still a long way to go before MRLs are harmonized across the globe," says Innes.

While progress is being made on more effective policies, the CCC continues to promote grower practices that meet MRLs and encourage all links of the value chain to be mindful of export markets. "All members of the value chain need to stay coordinated. Responsible commercialization and proper pesticide application go hand in hand to meet international market requirements," Innes concludes. ●

Maxim Legault-Mayrand is market access manager with the Canola Council of Canada. He is based in Ottawa.

WHAT ARE MAXIMUM RESIDUE LIMITS?

Maximum residue limits (MRLs) are the upper legal levels of pesticide residues for food or feed.

Each country has rules around pesticide residues. Canadian canola needs to meet not only Canadian requirements, but also those of the countries we export to.

To comply with these requirements, Canada's canola industry needs to use best practices to prevent trade irritants and meet customer needs. ●

SPRAY TO SWATH

Swathing or straight combining too soon after spraying can result in unacceptable residue levels in your seed. Always follow the rates and timings on your pesticide labels and ensure you're sticking to the correct pre-harvest interval. Check out the handy calculator at **www.spraytoswath.ca**.

Producing export-quality canola starts with planting the best seed and managing it carefully throughout the year. Importers are always on the lookout for deregistered varieties, pesticide residues and blackleg residues. Importing countries will turn contaminated shipments away, causing millions of dollars in losses and placing future business at risk. Here are some quick reminders on how to keep it clean all year long. You can find even more information and tips at **www.keepingitclean.ca/canola**

SCOUTING FIELDS

Early detection is an important step in pest management, so scout fields regularly for disease symptoms, weeds or insect infestations. Keep an eye on blackleg symptoms and prevalence to determine if your blackleg management plan is effective.

SPRAYING

When selecting pesticides for spring weed control:

1. Check the label to ensure the product is registered in Canada for use on canola.
2. Ensure the product won't be a concern for canola exporters. Even though a product may be registered for use on canola, it may result in unacceptable residues in key export markets.
3. Follow the label for rates and timing.

BIN PREPARATION

Choose your canola storage bins carefully. Clean them to ensure they're free of treated seed or animal proteins. Do not use malathion to treat your bin or prepare canola for storage. Its residue can last up to six months.

SEED CHOICES

Select only certified treated canola varieties rated resistant or moderately resistant to blackleg. Consider rotating varieties to bring a mix of blackleg resistance genes to the field over time, which may prevent or delay the breakdown of resistance.

CROP ROTATION

When planning your crop rotations, ensure you maintain a break between canola crops to allow time for residue to decompose. If blackleg is already established in your field, we recommend a minimum two to three year break.

KEEP CANOLA COOL AND DRY

Can't dry canola immediately after harvest? Help prevent spoilage by continuously aerating and moving it between bins. Make sure your bin remains cool and dry throughout the winter to avoid spoilage, mould or insect issues.

SEEDING

Don't seed deregistered varieties of canola or any seed produced from a deregistered variety. Importing countries can detect unregistered varieties at one part per billion, the equivalent of nine seeds in a super-B truck. Visit **www.keepingitclean.ca/canola** for a list of deregistered varieties.

A University of Alberta study encourages growers to run their own numbers to see how best management practices can improve net returns.

By Dawn Trautman

BMPs for profitability

Under good management, agricultural lands provide more than just food. They provide ecological services, including improved water quality and carbon sequestration. Management practices that are beneficial to the environment and practical for the producer are known as best management practices (BMPs).

Research done at the University of Alberta in 2011 examined the on-farm wealth implications of adopting various cropping and non-cropping BMPs. Model farms were identified to represent typical dryland cropping operations in Alberta in various soil zones. The base crop rotation was spring wheat, canola and barley on all farms, with the additional option of summerfallow in the Brown and Dark Brown soil zones and durum wheat in the Brown soil zone.

Rotation leads the way

Well-managed crop rotations can improve soil quality, fertility and farm profitability. The study added alfalfa, field pea, a cover crop and oats to the base rotation, and found that rotating cereals with a broadleaf crop such as oilseeds or pulses helps control weeds and reduce herbicide resistance. Introducing leguminous crops in rotation reduces nitrogen input in the year the crop is grown and also in the subsequent year. Oats require fewer inputs compared to other cereal crops. Generally, there is an annual net financial benefit to diversifying crop rotations, improving pest and disease management, and diversifying income (see table).

The U of A study also looked at residue management. Leaving crop residue on a field can reduce wind erosion and improve soil organic matter levels. For the study, since the baseline case assumes that crop residue is sold each year, the net financial benefit of this BMP is negative, with the "cost" being the forgone opportunity of selling straw each year. However, it should be noted that long-term soil health and baseline nutrient benefits are not necessarily fully represented on the model farms.

Adopting BMPs is like adopting technology. Even when scientific trials prove it to work, trying to determine whether a practice pays or not is tricky business.

How to do your own analysis

Every farm and every field varies in productive ability. But you can't manage what you don't measure, and recording farm management decisions takes some of the guesswork out of assessing the benefits of BMP adoption.

When determining the potential return on investment of a BMP, input and output prices are readily available for comparison. To calculate the annual cash flow from crop A, first take the area of land under production and multiply it by the final yield from crop A to get the final production amount. The production amount of crop A multiplied by the market price, gives you the gross revenue amount. Subtracting the input costs will result in the net revenue. Use the same method for all crops grown in your baseline

Annualized net benefit per hectare ($/ha/year) of crop rotation BMP adoption, by soil zone.

CROP ADDITION TO ROTATION	BROWN	DARK BROWN	BLACK	DARK GREY
Alfalfa (3 year stand)	N/A	64	48	32
Field pea	42	28	-2	5
Green cover crop	5	10	N/A	N/A
Oats	N/A	N/A	29	6

scenario. Then consider how BMP adoption will impact yield A and cost A variables.

Apply these changes, keeping in mind they may be positive or negative, depending on the BMP and other factors at play at the time. Finally, compare the difference in production under the baseline scenario with production under the BMP scenario, keeping external factors, such as growing conditions, constant. If adopting a BMP has a separate up-front cost (such as a machinery purchase), remember to subtract this cost from the net cash flow. After a while, you may wish to compare the sum of BMP adoption over time. The same methods apply, with a simple discounting formula applied to the annual cash flow in order to translate all dollars to the current period of time.

Establishing a baseline is no small feat. The data points are many and often overwhelming. Taking advantage of resources offered by crop insurance or fee-for-service companies might pay dividends in terms of optimizing on-farm production. The goal is to leverage natural capital so you can increase productivity by improving soil health and managing pests and diseases effectively. The end result is improved farm wealth. ●

Dawn Trautman led the 2011 study at the University of Alberta. She now works for Livestock Gentec in Edmonton.

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1. Which of the following *Canola Digest* topics are interesting or valuable to you?

	ALWAYS OR USUALLY READ	SOMETIMES READ	RARELY READ	NEVER READ
Crop production	○	○	○	○
Processor and customer updates	○	○	○	○
Market development, market access	○	○	○	○
Provincial producer organization pages	○	○	○	○
CanolaInfo	○	○	○	○

2. What other topics would you like to see in the magazine?

_____

3. How do you prefer to receive information about the following topics? (Please check all that apply.)

	SOCIAL MEDIA	EMAIL	WEBSITE	MAGAZINE	LIVE	PODCAST	VIDEO
Agronomy	○	○	○	○	○	○	○
New products	○	○	○	○	○	○	○
Provincial canola organizations	○	○	○	○	○	○	○
Canola Council of Canada activities	○	○	○	○	○	○	○
Trade issues and market development	○	○	○	○	○	○	○

4. Are there any other ways you would prefer to receive information about the above topics?

_____

5. What style of magazine writing to you prefer?

- ○ Very short with just the basic information
- ○ One page is enough for any topic
- ○ I want detailed information; base article length on details required
- ○ Bullet points
- ○ Visuals first, words second (use graphs and photos to communicate the message)

Comments

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6. What is your favourite news and information source? Why?

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There is no end to the investments a grower can make in a crop, from machinery to nutrients to crop protection to time. The key is to focus on inputs in which the reward exceeds the risk most of the time.

By Angela Brackenreed

Will that input pay off?

Farmers understand better than most the concept of risk and reward. The whole idea of planting a seed, leaving it exposed to the unforgiving elements, then hopefully harvesting a crop months later, is risky business. The potential rewards, personally and financially, are what keep many growers farming for decades.

When looking at various input and agronomic examples, the pendulum of risk and reward swings quite drastically from "no brainer" to "no way".

For the canola production examples discussed in this article, risk is defined as the likelihood of a response on a scale from low to high. Reward is the projected financial return on a scale from low to high. These are plotted in the four-quadrant illustration on this page. The quadrant growers hope to stay out of is the bottom right — high risk and low reward. A simple example of this would be swathing prior to any seed colour change.

We'd all like to make choices that are low risk and high reward, but if an input is sold this way, you may be smart to question whether it is too good to be true. There are practices that do fall under this category though: consider the low risk and clear reward of early weed removal.

I talked to young producer and certified crop adviser Scott Keller, who has a grains and oilseeds operation near New Norway, AB. Keller told me how he tries to manage risks and capitalize on rewards.

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Early weed control and the first 50 lb./ac. of nitrogen would be considered low risk and high reward inputs for canola. How would you plot other inputs?

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Nitrogen rates

The high reward from applied nitrogen is clear and generally undisputed, but with this nutrient largely tied to yield goals, there is the risk of environmental conditions hindering yield, and the risk of market fluctuations. For Keller, the most important step to reducing risk is to consistently soil sample and set realistic yield goals. "Nitrogen rates basically start with a yield goal. I try not to exceed 10 percent of what is realistic," he says.

"The price of nitrogen is obviously a factor, but the price of canola trumps everything when it comes to nitrogen rates. My cost of production looked a lot rosier when we had $13/bu. canola and nitrogen at $0.75/lb. than it does with nitrogen at $0.50/lb. and canola at $8.50/bu.," Keller says. "Yes, it's higher risk, it's all bigger dollars, but the potential for return is much better."

Growers have ways to manage nitrogen risk. Keller recalls a year when his break-even on canola was "pretty high," so he made the decision to cut back on nitrogen rates by up to 10 percent. "It just wasn't a year when it was smart to swing for the fences," he says, but he knew he would have the opportunity to top-dress if his break-even price changed.

"My cost of production looked a lot rosier when we had $13/bu. canola and nitrogen at $0.75/lb. than it does with nitrogen at $0.50/lb. and canola at $8.50/bu. Yes, it's higher risk, it's all bigger dollars, but the potential for return is much better."

—Scott Keller

Seeding rates

Canola seed is a significant portion of total input costs. "As a percentage of my variable costs this past year, seed was 26 percent," Keller says.

Simply knowing the thousand-seed weight of each lot can greatly reduce risk. There could be cases with small seed when shaving seeding rates would be worthwhile, and other cases when the usual 5 lb./ac. is not going to be enough to reach target plant stands of 7 to 10 per square foot.

"With some of the bigger seed, even with good emergence, you might be (seeding) close to 7 lb./ac.," Keller says. With some rates adjusted lower, his average seeding rate in 2015 was 5.2 lb./ac.

Knowing seed survival rates and what steps impact survival is another way to manage the risk and reward of seed. "If you don't have an idea of your seed survival, you're just shooting in the dark with your rates, and that's risky," Keller says.

Long-term view

Risk and reward scenarios for a particular input usually have to be taken over the long term. In some years, an input or practice that usually provides good rewards may not pencil out, while low reward practices do pay off in others.

Diversifying crop rotations or the genetics in that rotation, for example, may not appear to provide immediate returns. However, there is potential for long-term rewards in the big picture, like higher returns as a result of better weed and disease management.

"We've gone from a poor rotation to what I think is a solid rotation, but we're still in transition, so I'm not totally reaping the benefits yet," Keller says.

He talked about the risk associated with trying new crops. He doesn't have a lot of experience with peas and faba beans, but sees the long-term reward of these pulse crops. So he's adding them to the rotation while his core crops, canola and malt barley, are still quite profitable.

Keller's more diversified rotation has already improved harvest logistics. It is less chaotic now, and he can harvest the same acres with just one combine. "We used to run two combines to be sure we could get our barley off in good condition. That's pretty darn inefficient," he says.

With a long-term outlook, Keller will also make investment in his land even if the reward takes years to materialize. Building phosphate and potash levels is worth the investment for him, and not doing so is actually the riskier move. He's 34 and expects to farm for at least 20 more years. He points out that he would be the one paying for things like low residual phosphate down the road.

Input and agronomic decisions alone require a constant balancing act of risk and reward, and this doesn't even factor in "big ticket items" like the return on investment of a new combine or the volatility of commodity markets.

Every producer has a different tolerance level for risks and different ways of managing them, but every input decision can be plotted into one of these four quadrants of risk and reward. The first 50 lb./ac. of nitrogen might be low risk, high reward. But where does the next 50 lb./ac. fit? What about fungicide for sclerotinia stem rot management? Or straight combining canola? ●

Angela Brackenreed is the Canola Council of Canada agronomy specialist for Manitoba.

This article, the second in a series on agonizing agronomy decisions, looks at the value of adapting nitrogen practices to suit unique conditions.

By Taryn Dickson

Are my profits and N practices aligned?

"Don't treat every field the same," responds Chuck Weinknecht, a canola grower from the Yorkton-Melville region of Saskatchewan, when asked for his best fertility advice. "Our land is variable so each field has to be treated differently and managed accordingly."

A profitable nitrogen program is based on a whole host of agronomic practices, related to the 4Rs — right source, rate, time and place — that maximize your crop response and economic return, says Jeff Schoenau, professional agrologist and soil science professor at the University of Saskatchewan. "Those same practices are also going to minimize environmental damage potential because you're getting the most nitrogen in the crop, and that's where you want it."

Weather is always a wild card, but managing the factors you can control will set you up for success.

Right rate

Soil tests help make the rate decision less agonizing.

Weinknecht soil tests every field. "We have land we could consistently grow 50 bu./ac. canola on, so we fertilize for 50 bu./ac. We also have poor land where we'll grow 37 bu./ac. canola and we fertilize accordingly."

Warren Ward, CCC agronomy specialist for Eastern Saskatchewan and agronomic fertility lead, adds that rates may need to be adjusted upward in the year following bumper crops. "At these times, your nutrient removal rates will exceed your applied rates, putting you in a situation of net loss of soil nutrients."

Chuck Weinknecht

Warren Ward

Economics drive fertility decisions. "There is a difference between maximum economic yield and maximum yield," explains Schoenau. "The first few dollars you spend will give you the biggest return, and in a perfect world you keep applying until the last dollar spent gives you a dollar worth of increased yield. You really need to know where you are on the response curve (see Figure 1) and knowing your production costs will help with your final decision."

Software programs can help growers work the economics into the equation. One example is Manitoba Agriculture, Food and Rural Development's (MAFRD) Nitrogen Rate Calculator.

"Prices are what drive people's use of rate and sources," says John Heard, MAFRD crop nutrition specialist. "When canola prices are high, the economic signal is to fertilize for maximum yield. But if canola prices go down and fertilizer costs don't, the point on the curve moves."

For those who have the option, variable rate applications can be a good tool.

"We know some areas of the field that are sandy and some are saline, so being able to turn down the fertilizer application in those instances is a good management tool," says Weinknecht. "Being able to do variable rate is helping (our farm) especially as we grow as an operation."

Variable rate can also manage the risk of nutrient loss associated with specific areas within a field, Heard says.

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continued from page 38

When fields have clear variability in yield potential, matching fertilizer rates to yield potential zones could lead to improved profitability.

"Determining which area of the field has the least and greatest chance of losing nitrogen fertilizer may be even more important than yield potential in some fields," he says.

Schoenau emphasizes the importance of good input data when developing reliable variable rate prescriptions. "Long-term yield data, soil information and remote sensing information is all really valuable," he says.

Right source

Choosing the right source of nitrogen is often based on equipment availability, logistics and weather conditions at the time of application. Anhydrous ammonia (82-0-0), ammonium sulphate (21-0-0-24), urea (46-0-0) or urea ammonium nitrate (28-0-0) may be the right choice. Inhibitors and coatings are also an optional tool, but haven't shown much benefit for Weinknecht in cool springs.

"The coated urea products with slow release can reduce losses of nitrogen to leaching and denitrification especially when fertilizers are applied in advance of crop demand, and are most effective under wet conditions," says Schoenau. "If you have to broadcast urea, urease inhibitors will reduce the volatilization."

They won't increase yields, Heard says, they just help in specific nitrogen loss situations. "They're an option when you have to put your nitrogen on at less than ideal timing or placement," he says.

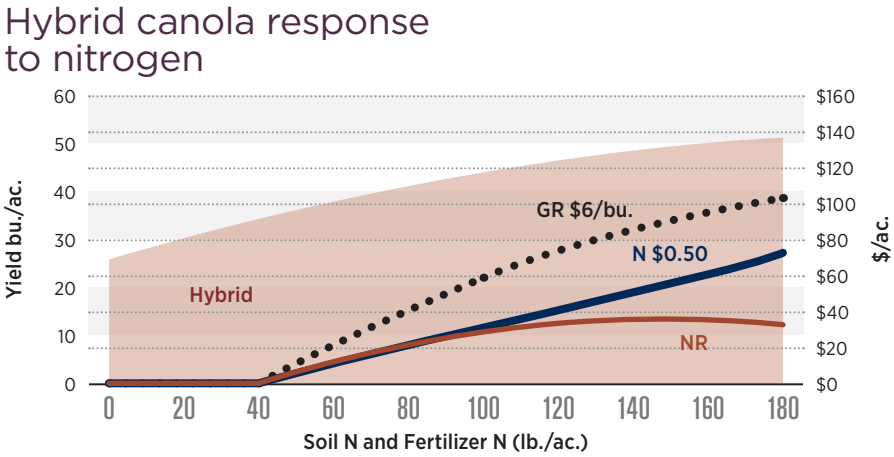

Figure 1. An example of a nitrogen response curve for canola production. This is from MAFRD. To use MAFRD's Excel-based Nitrogen Calculator, go to www.gov.mb.ca/agriculture and search "nitrogen calculator."

> **"We know some areas of the field that are sandy and some are saline, so being able to turn down the fertilizer application in those instances is a good management tool."**
>
> —Chuck Weinknecht

The source you select may also be impacted by the other macronutrients selected to go down with it.

"I encourage growers to not just consider nitrogen alone, but as part of the total nutrient balance," says Schoenau. "You need to have adequate sulphur, phosphorus and other nutrients to maximize the benefits from added nitrogen. Otherwise, you can end up with some pretty substantial depletions of these other nutrients that will eventually hold back yield."

Right place

The ideal placement of fertilizer may be closely linked to the source, but making sure the nutrients are available when the crop needs them is paramount.

Nitrogen is mobile in the soil and seedlings can be injured by excessive seed row nitrogen, so side or mid-row banding can be good alternatives. Alternatively, broadcasting saves on time and labour, but can have greater losses.

"If logistics limit you on the timing aspect, you can compensate by adjusting somewhere else, such as application rates, seeding rate or using different sources."

—Warren Ward

"Banding protects against nitrogen immobilization by crop residue," says Heard, "which helps improve the efficiency of the fertilizer application."

Right time

Finally, the timing of application must be considered in order to optimize the rate, source and place.

"Manitoba research has shown it is hard to beat nitrogen placement at the time of seeding," says Heard. This timing leaves a small window for losses.

Weinknecht will use split applications if conditions are favourable for it.

"Split applications can be a good risk management tool," agrees Schoenau. "Especially in dry springs where you don't have a lot of stored soil moisture and things are looking a bit grim. It is a way to go in afterwards if things improve and ensure the field has an adequate supply of available nitrogen."

Post emergence applications can be dribble banding of liquid fertilizer, or broadcasting with a urease inhibitor to reduce potential volatilization losses. When it comes to timing, early is better for a post-emergent application. "If you want to see a good yield response, you don't want to leave it too long," Schoenau says.

After you've made all your decisions, accurately record your yields to help with decision-making for next year, and to assess how you did this year.

Using his schooling and work as an agronomist, Weinknecht runs annual variety and fertility trials, along with a high-yield canola trial. "We aim for 80 bu./ac. canola. It's a lot of intensive management and extra costs, but we are learning and growing with the process on our farm."

As the Canola Council of Canada has found with its Ultimate Canola Challenge program, interesting findings can come out of on-farm research.

"Pooling the information from well-coordinated, local nitrogen trials (like replicated on-farm tests) can improve on provincial recommendations, if you have access to it," Heard says.

Ward says the most important approach to the 4Rs of fertility management is to work within your capabilities. "This may mean managing tradeoffs so that if logistics limit you on the timing aspect, you can compensate by adjusting somewhere else, such as application rates, seeding rate or using different sources." ●

Taryn Dickson is resource manager for the Canola Council of Canada's crop production and innovation department. For more on the CCC's UCC go to www.canolacouncil.org/crop-production/ultimate-canola-challenge/

Powered by new survey results, the CCC has developed promotional tactics and targeted messages to expand the use of canola meal in other key U.S. dairy regions.

By Carson Callum

Beyond California

The United States dairy industry is the most important market for Canadian canola meal. Several years of promotional work in the U.S. has raised the perceptions of canola meal and differentiated it as a superior feed ingredient for dairy cattle. Its use in dairy cattle rations has proven time and time again to result in an increase of approximately one litre of milk per cow per day.

Currently, 95 percent of all Canadian canola meal exports are into the U.S. Approximately 40 percent of these go into the California dairy market. The remaining 60 percent enter into top dairy-producing states in the Midwest and northeast, although that amount is increasing due to greater availability and promotional efforts in these regions.

To help inform these efforts, the Canola Council of Canada (CCC) engaged with a market research team in 2011 to understand perceptions among U.S. dairy consultants and nutritionists with regard to canola meal in dairy feed. The results showed a high level of awareness and acceptance among survey respondents, with canola meal perceived to have excellent protein quality and amino acid profile. Those surveyed also noted some challenges regarding soluble protein content, fibre content and concerns with physical appearance and availability.

This past spring, the CCC conducted a new survey intended to determine the awareness, usage and perception of canola meal between dairy nutritionists and producers in the top dairy-producing states in the southwest, upper Midwest and northeast of the U.S. The aim was to ensure the CCC is employing appropriate tactics in our promotional strategies and to better understand any differences in messaging between geographies.

The survey allowed the CCC to develop steps of canola meal adoption by nutritionists and producers, to see where each region is in terms of usage and perceptions. These steps allowed for key messages to be used based on geographical area. The steps are:

1. Awareness. They have heard the name "canola meal".

2. Familiarity. They have heard the name and know it's a protein ingredient.

3. Understand basic attributes. They know basic nutrient specs for canola meal, may have tried it out in software programs, and have inquired about availability.

4. Trial use. They began including canola meal in ration formulation at a conservative level (about one pound per day) and gathered feedback on performance measurements such as feed costs, ease of handling and cow performance.

5. Expanded use. They are happy with the product and use it on a more regular basis if canola meal is priced

continued on page 44

Canola meal's use in dairy cattle rations has proven time and time again to result in an increase of approximately one litre of milk per cow per day.

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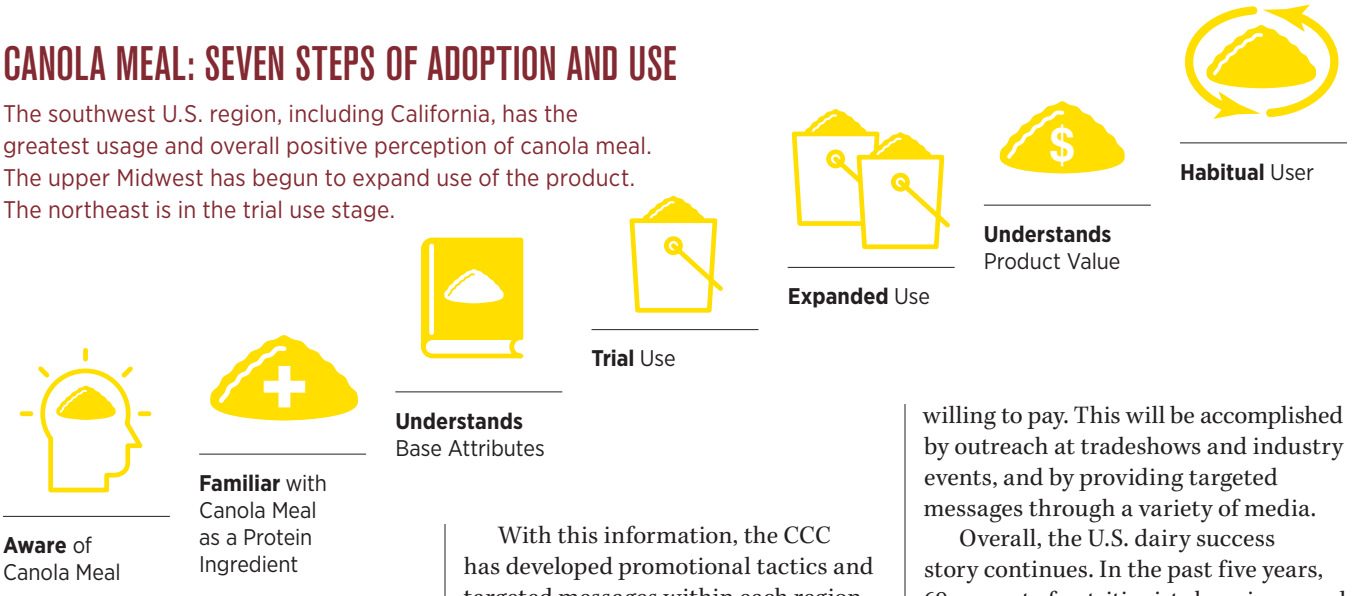
CANOLA MEAL: SEVEN STEPS OF ADOPTION AND USE

The southwest U.S. region, including California, has the greatest usage and overall positive perception of canola meal. The upper Midwest has begun to expand use of the product. The northeast is in the trial use stage.



accordingly (at 75 percent the value of soybean meal).

6. Understand product value. They are willing to push inclusion levels and able to hear messaging on the true value of canola meal (characteristics beyond crude protein).

7. Habitual user. They are very unlikely to pull canola meal out of ration formula unless they experience drastic changes to availability and price. They understand the value of canola meal compared to other protein ingredients.

Results from this market research provided insight on the usage differences between regions. As the previous study had shown, the southwest region, including California, has the greatest usage and overall positive perception of canola meal. The upper Midwest region has begun to expand use of the product. The northeast region is in the trial use stage.

The survey also gave a good representation of the current perceptions of canola meal within the U.S. Key strengths are its consistent quality, good protein content, favourable amino acid profile and ability to increase milk production. Main challenges with canola meal are its cost per unit of protein and availability. Although canola meal is a popular ingredient in California, there still exists a challenge with a preference for other protein sources in the upper Midwest and northeast.

With this information, the CCC has developed promotional tactics and targeted messages within each region to move them up the steps of adoption. Canola meal is an excellent feed ingredient for dairy cattle, and the survey confirmed that. To overcome the challenges, the CCC will work at increasing the perceived value of canola meal compared to other protein ingredients, and at increasing the cost per unit of protein the nutritionist or producer is willing to pay. This will be accomplished by outreach at tradeshows and industry events, and by providing targeted messages through a variety of media.

Overall, the U.S. dairy success story continues. In the past five years, 69 percent of nutritionists have increased the use of canola meal. With the canola industry's strategic plan of 52 by 2025, we need to capture and maintain the high value meal markets within the U.S. ●

Carson Callum is canola meal manager at the Canola Council of Canada.

The Canola Council of Canada has new displays to promote canola meal at dairy events across the U.S.

Temporary legislated minimum mandates and a smaller 2014 harvest helped improve grain movement for 2014-15. However, ATC data show that railway service to grain shippers remains highly variable and is still not responsive to a time-sensitive supply chain.

By Steve Pratte

Balancing the shipper-railway relationship

In the 2014-15 crop year, the western Canadian grain handling and transportation system demonstrated its ability to move product. Canadian grain producers welcomed this, while seeing record carry-in stocks and another strong harvest.

The relative fluidity of grain movement was a positive development compared to the crop year that preceded it. Canadian Grain Commission shipping statistics show a rise in grain deliveries over the previous year, with producer deliveries to elevators, process facilities and producer car shipments to terminals reaching over 50.8 million tonnes, compared to 50.6 million tonnes the previous year.

"The improvement in grain shipping volumes was certainly influenced by the government's mandated minimum volume requirements," says Rick White, CEO of Canadian Canola Growers Association (CCGA). "With these requirements in place from August 2014 until the end of March 2015, as well as downturns in other commodity sectors, railway network capacity opened up to more grain. But what continues to concern us is high variability in the level of rail service to grain shippers, especially regarding timeliness of car delivery."

Grain farmers and agricultural shippers have recognized this problem for years, but been unable to quantify it at an aggregate level — until now. Confirming this lack of timeliness is the Ag Transport Coalition (ATC), a collaborative grain industry driven project that brings a new level of transparency to the grain shipping supply chain.

The ATC reports weekly on responsiveness of rail service, comparing grain shipper car orders to the actual cars spotted by the railways. The report also covers corridor movement (direction), timeliness of car pick-up in country (when the elevator "releases" the car to the railway) and drop-off at terminal (when the car is "constructively placed" by the railway for terminal unload). The data covers over 90 percent of western Canadian grain traffic and is compiled by a third party.

Kelly McIntyre

ATC's reporting shows that, although over 90 percent of total cars ordered during the year are eventually delivered (see the chart), CN only supplied 62 percent and CP just 36 percent of the cars in the weeks for which they were ordered. "There's a commonly held assumption among shippers that 'western Canadian grain will move eventually' and that certain corridors receive consistently better service," says Kelly McIntyre, farmer in Fairview, AB and board member of CCGA. "Ag Transport Coalition data confirms that."

From a producer's perspective, it is important to recognize that the underlying regulatory framework in Canada is virtually unchanged since the problems of 2013-14. The relationship between the shipper of the grain and the rail service provider is the same. Although the problem caused a flurry of discussion and temporary legislative backstops, all pertinent elements of the government's policy response expire on August 1, 2016.

Adding balance

Two underlying issues — both fundamental to the chronic timeliness and predictability challenges mentioned above — must be addressed to achieve a more balanced relationship between shippers and the railways. Many grower groups and the grain industry's Crop Logistics Working Group III (representing 18 entities) have identified these two fundamental elements in their advice to government following the 2013-14 problems, and in the recent stakeholder consultation associated with *The Canada Transportation Act* review.

"There's a commonly held assumption among shippers that 'western Canadian grain will move eventually' and that certain corridors receive consistently better service. Ag Transport Coalition data confirms that."

—Kelly McIntyre

First, a strengthened definition of "adequate and suitable" service in the common carrier obligations contained in *The Canada Transportation Act* is required. Defining service as "that which meets the shipper's needs" addresses the capacity issue in a way that is not prescribed by government, but instead compels the service provider to do what they need to in order to carry the traffic presented to them. Railway service obligations must meet the transportation needs of the shipper and, ultimately, the customer at the end of the supply chain.

Second, there must be explicit provision to include reciprocal penalties in arbitrated Service Level Agreements. Reciprocal penalties for non-performance when specific service obligations are breached will hold parties in the supply chain financially responsible to each other within a commercial agreement. "Contracts are critical and the long-standing imbalance is a glaring hole in the grain shipper-rail service provider relationship," says White. "The railways hold the shippers accountable through tariff charges, but the shippers have no recourse when the ordered cars are not provided. That needs to change."

Without addressing these two overarching issues, the relationship between shipper and rail service provider will remain commercially unbalanced. Without legislation that increases railway accountability, there is little that can be done to address chronic service disruptions, and practically no way for shippers to hold their rail service providers accountable.

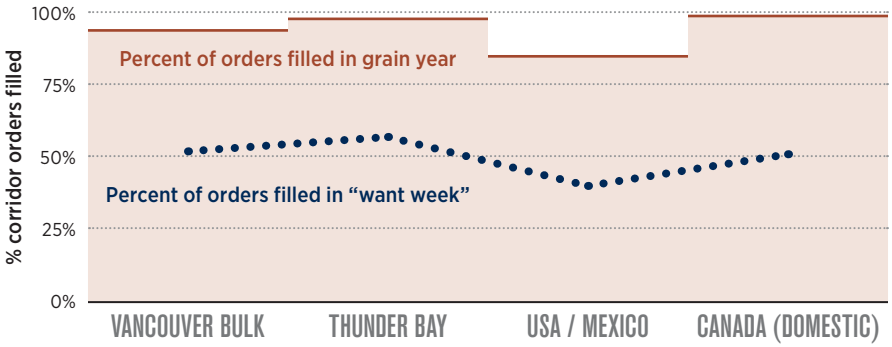
When rail service fails to consistently meet the needs of shippers, farmers are directly affected by reduced delivery options. "This puts immense financial pressure on the farmer," says McIntyre. "It also affects our industry's ability to compete in international markets. If unresponsive rail service causes delays in deliveries, Canada's reputation as a reliable exporter will be affected."

Efficient, responsive rail transportation is critical to the success of an export-reliant industry like canola, and to the success of the farmers who grow it. Data from initiatives such as ATC serve an important role in helping stakeholders work toward this goal. ●

Steve Pratte is policy manager with the Canadian Canola Growers Association.

Unfilled hopper car orders by major corridor

(CN and CP combined, grain year 2014-15)



Source: Ag Transport Coalition, Grain Year 2014-15 Year End Summary

QUICK LINKS ON GRAIN TRANSPORTATION

The Canadian Canola Growers Association (CCGA) is a member association of the Ag Transport Coalition. Along with four other agriculture groups, the CCGA developed the fact sheet: *Real Facts on Grain Transportation*. It's available at **www.ccga.ca**.

To learn more about the Ag Transport Coalition or to sign up for weekly and monthly reports, visit **www.agtransportcoalition.com**. ●

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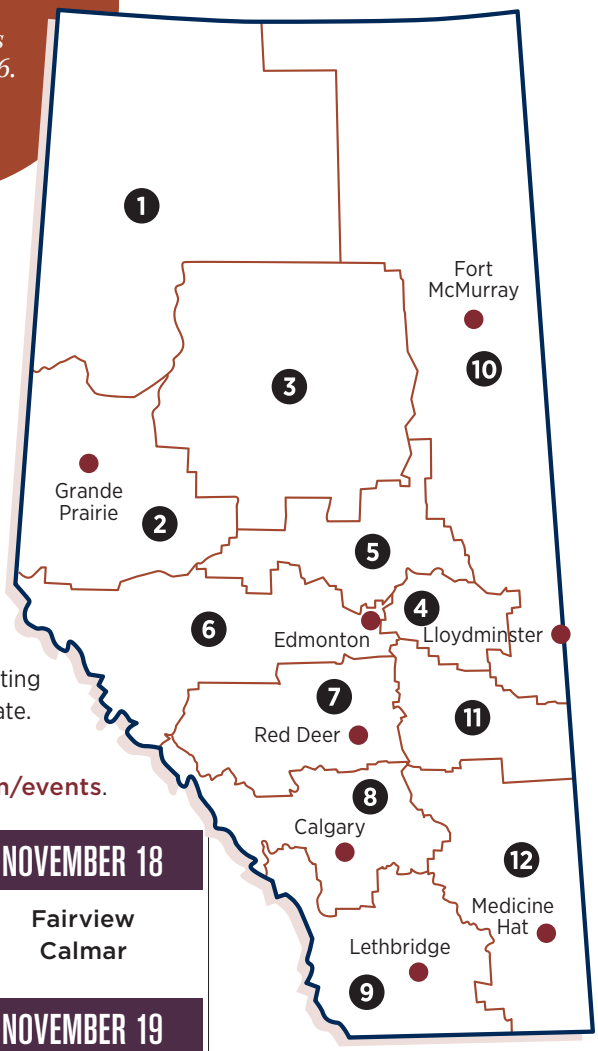

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PHOTO: Jimsonweed by 123Roof, Wikimedia.org

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SEPTEMBER 10, 2015

Leaders wanted to represent Alberta canola growers

The Alberta Canola Producers Commission is seeking four canola growers to serve on the board of directors for a 3 year term

SEPTEMBER 3, 2015

Canola Council clarifies concerns around appearance of jimsonweed

Growers and agronomists are encouraged the keep an eye out for jimsonweed, however health concerns around potential toxicity in canola oil are unfounded

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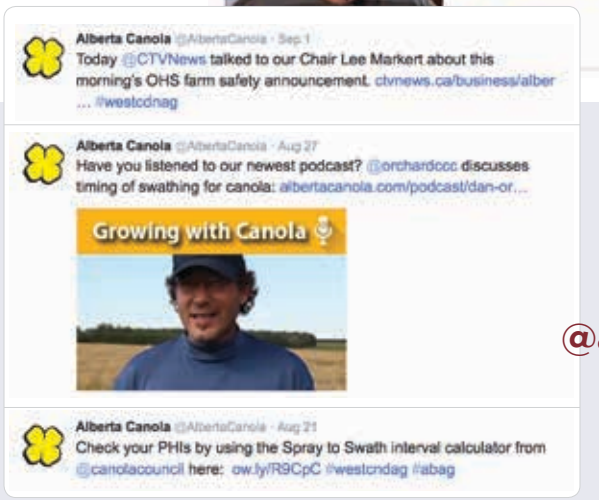

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Jimsonweed in Alberta

This fall, jimsonweed, also known as devil's trumpet, was found in Alberta. Jimsonweed is a naturalized annual herb found across most of southern Canada. It thrives in hot, dry climates. It's a common ornamental in parts of the Prairies and Eastern Canada, and grows all over the U.S.

"While jimsonweed itself can be poisonous, the heating process in canola oil and meal processing denatures toxic alkaloids, so there isn't a health concern in processed canola products," says Curtis Rempel, vice president of crop production and innovation at the Canola Council of Canada (CCC). "It's also important to remember that it's the dose that makes the poison, and the high LD50 of scopolamine, the major toxic alkaloid in jimsonweed, even further supports the fact that this weed isn't a concern in canola oil or meal."

However, it is important that producers handle this weed carefully to prevent further spread and potential health risks to livestock and humans. Proper handling information can be found on the Alberta Agriculture and Forestry website. For updates, search "jimsonweed" at **albertacanola.com**. While you are there, join our mailing list to receive important news and event updates. ●

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SASKCANOLA'S ANNUAL GENERAL MEETING

The Saskatchewan Canola Development Commission's Annual General Meeting (AGM) will be held prior to the start of CropSphere at TCU Place on Monday, January 11, 2016 at 1:00 p.m. Canola growers may attend the AGM without registering for CropSphere. Please visit **www.saskcanola.com** for more information closer to the date. ●

SaskCanola Awards Prestigious Scholarships to University of Saskatchewan Graduate Students

SaskCanola is pleased to announce that we have awarded the prestigious Dr. Roger Rimmer Award for Excellence in Graduate Research to four graduate student researchers for the 2015-16 year. The scholarship program offers $18,000 per year for a maximum of two years to students entering or continuing studies in a M.Sc. or Ph.D. program at the University of Saskatchewan. The recipients' thesis projects must deal with an important aspect of the development, management, or utilization of canola, as determined by the SaskCanola Board of Directors.

Four deserving recipients were chosen based on their thesis projects' suitability:

- **Chuyuan Zhang** studying the *Effect of feeding yeast-fermented canola meal on the nutrient digestibility and growth performance of rainbow trout and Nile tilapia*
- **Miles Buchwaldt** studying the *Transcriptome analysis to identify genes for tolerance of abiotic stress in B. napus*
- **Edyta Sieminska** studying the *Genetic variation and biology of the pheromone communication channel in Bertha armyworm, Mamestra configurata*
- **Shirin Seifbarghi** studying the *Resistance to Sclerotinia sclerotiorum necrosis inducing proteins in canola*

"Research is vital to the growth of the agriculture industry. It is imperative that we continue to challenge status quo by investing in cutting-edge research to create even more value for canola," says Janice Tranberg, SaskCanola Executive Director. "We are proud to support these innovative graduate students in their endeavours, and we look forward to the benefits this research will create for farmers in the future."

"The Dr. Roger Rimmer Award for Excellence in Graduate Research allows us to strengthen the future of our industry by supporting youth who have a passion for agriculture and want to pursue an education and career in this rewarding industry," explains Dale Leftwich, SaskCanola Board Chair. ●

"We are proud to support these innovative graduate students in their endeavours, and we look forward to the benefits this research will create for farmers in the future."

—Janice Tranberg

COUNTDOWN TO CROPSPHERE 2016

The countdown to CropSphere 2016 is now on!

The conference will take place January 12 to 13, 2016, at TCU Place in Saskatoon, and will once again be brought to you by host groups SaskOats, SaskBarley, SaskCanola, SaskFlax, Saskatchewan Pulse Growers and Sask Wheat.

This year will mark the third annual CropSphere conference, which has already garnered positive attention, winning a Tourism Saskatoon award earlier this year for being a leader in Saskatoon events and tourism.

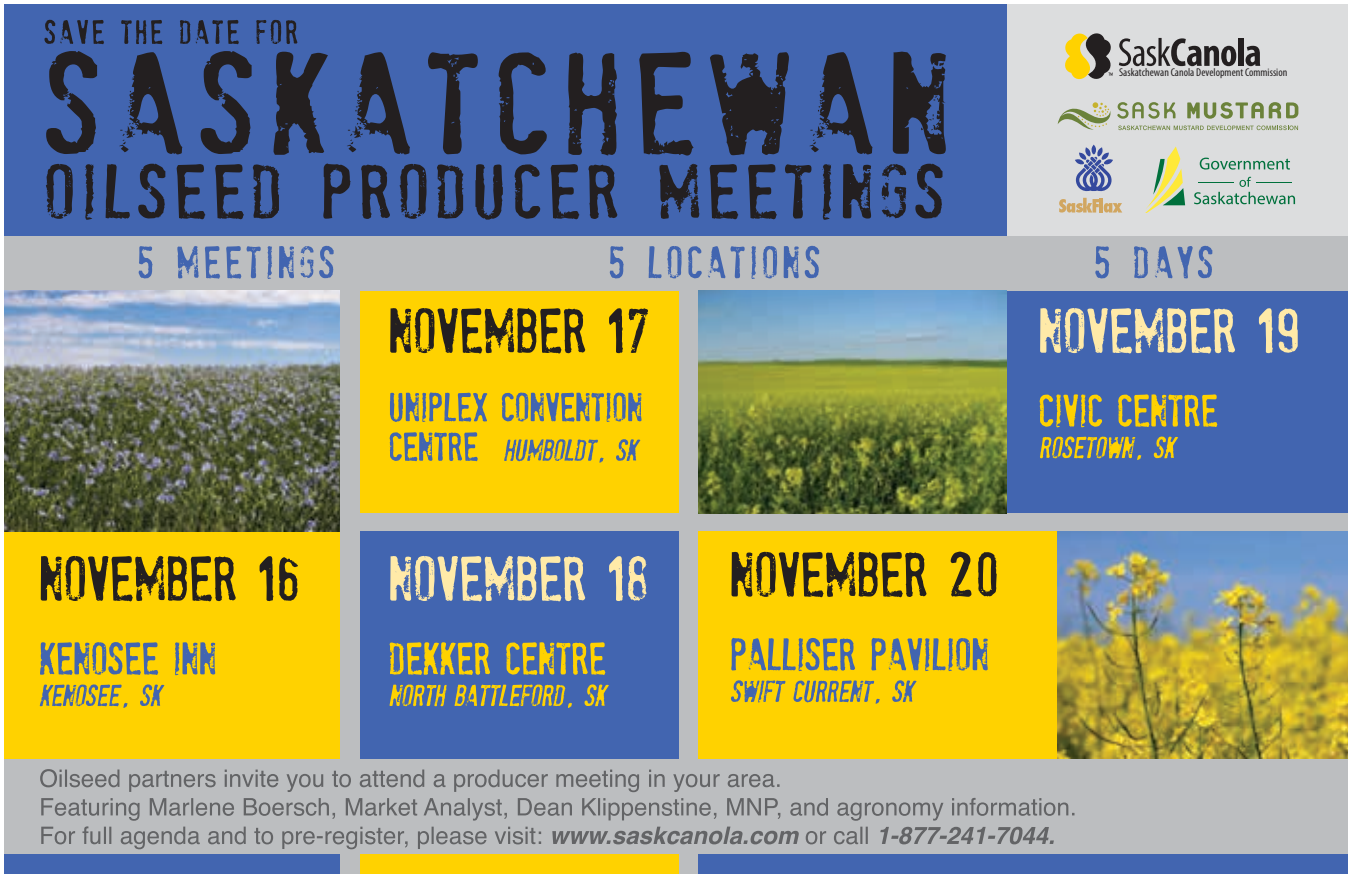
"We are a new conference but we continue to make improvements each year to make this event more valuable for attendees," says Janice Tranberg, Executive Director for SaskCanola. "This year we have been busy planning a very high-quality program that is focused on providing Saskatchewan producers with top-notch agronomic information and a competitive edge."

Early registration for CropSphere 2016 will be available until November 15, 2015, at a rate of $150. For more registration, agenda and event information, please visit **www.cropsphere.com**. Stay connected by following us on Facebook and Twitter **@cropsphere** ●

Stay Connected with SaskCanola

Subscribe for SaskCanola producer updates by signing up at **saskcanola.com/about/contact.php**

Save the Date for Saskatchewan Oilseed Producer Meetings



Dr. Steve Savage shares his #farmtofood message.

#CANOLACONNECT CAMP

By Ellen Pruden

We are privileged today to have access to more information than ever before. It comes at a price. We need to stop and think about everything we read in 140 characters, find in a post or watch on video. Is it accurate?

For many topics related to agriculture, there are more myths than truths. This is especially true when the topic is doubled haploids, hybrids, molecular breeding and other plant breeding terms.

When you can learn from the experts who do plant breeding, why not ask them questions directly?

Monsanto Canada opened their doors for us to tour their facility with the #CanolaConnect campers. We brought questions, biases and pressures from our online communities in hopes of understanding something only university students may learn: How are plants bred for farmers?

All of the #CanolaConnect City attendees have been to the farm with us over the past three years. Now it's time for agriculture in the city.

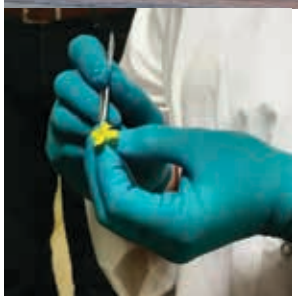
How can you have big conversations about topics like plant breeding, conventional growing systems and GMOs that will stretch yourself? We did it by surrounding our campers and mentors with perspectives they would not normally have access to — like touring Monsanto, talking to canola farmer Pat Orsak and learning from scientist Dr. Steve Savage.

For us, it always comes back to our consumers and farmers. They make the decisions to eat it and grow it. Both groups have choice and both want the best options.

At Canola Eat Well, our job is to grow the #farmtofood conversation. We represent canola farmers in Manitoba and we are their voice. Less than two percent of Canadians are farmers and we, as consumers, are losing our farm memories.

At one time, everyone had an uncle, grandpa or cousin that lived on the farm and we would visit. Today, there are fewer connections to the farmers who grow food we purchase in the grocery store. At Canola Eat Well, we want to change that. We want to make connections with farmers. ●

Growing the #FarmToFood conversation.



An integral part of our #CanolaConnect camps is hands-on experience. It's the opportunity to learn about a topic by trying it. Each camper tried breeding techniques on a canola plant as part of the tour.

#CanolaConnect Camp, an initiative of Canola Eat Well, is a Manitoba Canola Growers program with partnership from Alberta Canola. It brought together twenty-eight alumni campers from Alberta, Manitoba and Ontario to grow, engage and connect with agriculture in Winnipeg. We collaborated with agriculture partners Monsanto, Canadian International Grains Institute and Agriculture in the Classroom Manitoba to deliver hands-on programming that focused on technology, trade and transportation. ●

Comedian Dave Hemstad at CropConnect

Mark your calendars and plan to attend CropConnect February 10 and 11, 2016. This two-day conference features a variety of sessions on agronomy, marketing, the science of agriculture and more.

This year's CropConnect Banquet will feature comedian Dave Hemstad, a regular guest on the Debaters on CBC Radio. Comedy fans will recognize him from his numerous appearances on Just for Laughs, the Halifax Comedy Festival and more.

Visit the conference website at **www.cropconnectconference.ca** for full program details. ●

CropConnect Conference

Canola Day Agenda

TUESDAY, JANUARY 19, 2016

Keystone Centre
Main Program Area
Brandon, MB

9:00 a.m.

Canola Agronomy Review
Angela Brackenreed, regional agronomy specialist, Canola Council of Canada

9:45 a.m.

STARS: Two Things You Need To Do When You Call 911
STARS Staff

10:00 a.m.

Canola Council of Canada Update
Patti Miller, president, Canola Council of Canada

10:30 a.m.

Canadian Canola Growers Update
Rick White, chief executive officer, Canadian Canola Growers Association

11:00 a.m.

Canola Market Update
Glen Hodgson, senior vice-president and chief economist, the Conference Board of Canada

CONNECT WITH US

Connect with the Manitoba Canola Growers at one of these upcoming events.

NOVEMBER 15-17, 2015
Manitoba Farm Women's Conference
Winkler, MB

JANUARY 26-27, 2016
Manitoba Young Farmers Conference
Winnipeg, MB

JANUARY 6-10, 2016
Canola Junior Curling Provincial Championships
Rivers, MB

FEBRUARY 10-11, 2016
CropConnect Conference
Winnipeg, MB

JANUARY 19, 2016
Canola Day at Manitoba Ag Days
Brandon, MB

FEBRUARY 11, 2016
MCGA Annual General Meeting
Winnipeg, MB

JANUARY 19-21, 2016
Manitoba Ag Days
Brandon, MB

MARCH 9-10, 2016
CanoLAB
Brandon, MB

You can always connect with MCGA through our newsletters, twitter and Facebook. Start at the website **www.canolagrowers.com** to sign up, follow and "like" us. ●

canolainfo.org

CanolaInfo presents four days of all things canola every July for journalists, health professionals, chefs and other influencers.

By Angela Dansby and Alison Neumer Lara

Canola Camp influences the foodie influencers

Not every summer camp includes riding in a horse-drawn wagon, walking through blooming canola fields, posing for pictures inside a giant tractor wheel and dining in the best local restaurants. Welcome to Canola Camp.

Hosted by CanolaInfo — the global canola oil promotion program of the Canola Council of Canada (CCC) — Canola Camp brings together 12 to 15 journalists, health professionals, chefs and other influencers in Saskatoon, Saskatchewan each July. They come together to learn about the health and culinary benefits of canola oil directly from growers and industry professionals. Most come from the United States, but some are from Canada, Mexico and China, countries that are major consumers of Canadian canola oil and where CanolaInfo has promotion programs.

This year's Canola Camp was held July 9 to 12, and featured interactive local experiences: square dancing at Champêtre Country, visiting a historic dude ranch, and visiting a 2,000-acre family farm that grows canola. Campers discussed biotechnology and modern farming techniques. They toured a busy farmers' market showcasing local products. Of course, they also enjoyed meals prepared with canola oil and regional ingredients by several of the province's top chefs.

"I was already well-versed in canola's nutritional benefits as a spokesperson for CanolaInfo, but at camp I learned the bigger story of canola," says Sarah-Jane Bedwell, registered dietitian. "Nothing compares to being in those beautiful, yellow fields and talking to farmers firsthand. As a dietitian, I also loved all the delicious, healthy foods made with canola oil by talented chefs."

The experience is enlightening for campers and benefits the canola industry by expanding the base of canola "ambassadors" explains Shaunda Durance-Tod, registered dietitian and CanolaInfo program manager at the CCC. She is also one of the camp "counselors".

"The chance for total immersion in all things canola — from field to plate — helps people gain a new perspective on where canola oil comes from and why it's so special," Durance-Tod says. "By learning the facts from the source, touching the plants and tasting the food, they head home and back into the professional food world as well-informed canola advocates."

Critical to this understanding was a tour of the Heuchert family farm, where a father-son-grandson team explained their year-round operation and the 100-day evolution of a canola plant from seeding to harvest, a progression illustrated by 11 plants at various stages of growth. While viewing hulking farm equipment, campers also learned about technological advances in air seeders and combines, such as GPS and delicate sensors, which allow farmers to manage their fields more safely and efficiently.

"It was obvious how much the farmers care and how hard they work," says Bedwell. "I was surprised to learn how short the growing season is and how high-tech, yet safe, the farming practices are."

Through such a unique, hands-on experience, campers gain the education to answer questions they may be asked by colleagues, media or consumers about canola production, origins and benefits.

"It was obvious how much the farmers care and how hard they work. I was surprised to learn how short the growing season is and how high-tech, yet safe, the farming practices are."

—Sarah-Jane Bedwell

Maureen Petrosky, U.S. media personality and lifestyle expert, seen here tasting oils, says it was wonderful to be able to have open conversations and full access to both farmers and a scientist at Canola Camp.

Above: Bruce Jowett (left), CCC vice president of market development, helps registered dietitian Sarah-Jane Bedwell (centre) crush canola seeds. Below: Eleven canola plants demonstrated the 100-day progression of a canola plant from seeding to harvest.

Seeds of knowledge

Great summer camps also depend on great counselors. Each year at Canola Camp, three Canadian canola farmers representing the primary canola-growing provinces of Saskatchewan, Alberta and Manitoba serve as "counselors" to describe how and why they grow canola and field questions related to agronomy. In addition, CCC staff and CanolaInfo representatives share their knowledge about canola in seminars and presentations covering the origins, processing, nutritional and culinary benefits, different types of canola oil and more.

To begin, Bruce Jowett, CCC vice president of market development, led a "Canola 101" seminar on the history of canola in Canada and its importance to the national economy and global exports. Durance-Tod explained the many nutritional advantages with supporting research, a topic near and dear to the group of accomplished dietitians and food journalists.

"I was impressed by this group's thoughtful questions, which showed a really good understanding of the health benefits — something we always want campers to take away," says Durance-Tod.

Farm to fork

Later, during an educational panel discussion, farmer counselors addressed investment, sustainability and innovation. An expert on plant biotechnology informed the group about the latest advances in his field. A lively discussion followed, allowing campers to get answers to some challenging questions they face from consumers.

"Canola Camp is fun, but it's also an important opportunity to bring together people who are involved at the other end of the food industry," says Dale Leftwich, a Saskatchewan canola grower who participated on the panel. "I could immediately tell that each camper was serious about learning what farmers go through to produce food safely. They were interested in dispelling myths the public might have about what it means to be a farmer today."

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That was certainly true for participant Maureen Petrosky, a lifestyle expert, U.S. media personality and author.

"Canola Camp was fascinating," she says. "With all of the concern over biotechnology, it was wonderful to be able to have open conversations and full access to both farmers and a scientist while there."

"I could immediately tell that each camper was serious about learning what farmers go through to produce food safely. They were interested in dispelling myths the public might have about what it means to be a farmer today."

—Dale Leftwich

It wasn't all work and no play. The panel discussion followed a rustic lunch of farm-fresh dishes made with canola oil at family-owned Agar's Corner, which operates from an Eaton's catalogue house located near canola fields. That evening, campers enjoyed a multi-course menu at the Riverside Country Club prepared by Darren Craddock, two-time winner of Saskatoon's Gold Medal Plates. Lunch the next day at the prestigious Saskatoon Club included orecchiette pasta with morel mushrooms in a canola oil-based vinaigrette and local fruit tarts made with a canola oil crust from executive chef Anthony McCarthy, also a winner in Saskatoon's Gold Medal Plates. Campers, all die-hard foodies, kept their phones ready to snap pictures.

"These campers are as passionate about enjoying food as we are about growing it," sums up Leftwich. ●

Angela Dansby and Alison Neumer Lara are CanolaInfo communications manager and U.S. account supervisor, respectively, via public relations firm Inkovation, Inc., based in Chicago, Ill. CanolaInfo is the non-profit, global promotion program of the Canola Council of Canada. The CanolaInfo team is supported by Canada's canola growers, crop input suppliers, exporters, processors, food manufacturers and governments.

Canola Campers were lucky enough to lunch one day on this earthy dish of wild mushrooms and handmade gnocchi created by Anthony McCarthy, the award-winning executive chef of the Saskatoon Club. Canola oil is key to the dish, he says. "It transports flavours so well without taking away from the integrity of the natural ingredients."

POTATO GNOCCHI WITH WILD MUSHROOM SALAD

By Anthony McCarthy

SERVES 6

POTATO GNOCCHI

500 g russet potatoes
pinch salt
1 whole egg plus
1 egg yolk
500 g semolina flour

MUSHROOM SALAD

2 Tbsp canola oil
100 g thick-sliced pancetta or quality bacon, cubed
1 shallot, peeled and finely diced
25 g confit* or roasted garlic, coarsely chopped
100 g morel mushrooms (or best available substitute)
100 g chanterelle mushrooms (or best available substitute), torn in smaller pieces
2 sprigs fresh thyme (or your favourite herb)
100 g peas, preferably fresh shelled (or frozen)
salt and pepper
100 g micro greens or baby arugula
50 ml cold-pressed canola oil
zest and juice of half a lemon

1. Prepare gnocchi: Bake potatoes whole in their skins until completely cooked. Scoop out interior, coarsely chop and squeeze through ricer onto the counter. Make a well in the middle and add salt and eggs. Combine. Work in flour until it is completely incorporated.
2. Form dough into gnocchi. Store in extra semolina flour and set aside. (May be frozen.) When ready to prepare mushrooms, set pot of salted water to boil to cook gnocchi.
3. In medium frying pan, heat canola oil on medium-high and cook pancetta for 2 to 3 minutes. Add shallot and garlic and cook 2 to 3 minutes. Add mushrooms and thyme.
4. At this point, gnocchi may be dropped into boiling water, making sure to first shake off excess flour using a sieve. Cook for 2 minutes.
5. To frying pan, add peas and turn heat to low. Add gnocchi and 2 Tbsp cooking water, stirring quickly to create the sauce. Add salt and pepper.
6. In a bowl, toss greens with cold-pressed oil, lemon juice and zest.
7. Spoon gnocchi onto serving plate, top with greens and serve immediately.

*Cook's Tip: To prepare confit garlic, cook two or three bulbs of whole garlic submerged in canola oil at 300°F for about 1 hour, or until soft and the cloves pop out. To store, cover cloves with oil in a jar and refrigerate.

IT'S A PROVEN FACT

(that 25 years adds up to a lot of facts)

FACT #1: Proven® Seed is the total, all-around package for success in canola and cereal crops. It's NEW genetics and seed varieties. It's also 25 years of groundbreaking research — plus leading agronomics, field trials and distribution networks.

FACT #45: Proven Seed is integrated all the way from R&D to the farm — through breeding, production, seed treating, distribution and retail. Which means quality seed you can count on.

FACT #74: Proven Seed has over 25 years of continuous research in Western Canada. The CPS R&D team includes more than 50 dedicated staff in Canada and Australia with three research farms and 35 research sites across the Prairies.

FACT #88: Clubroot is a potentially devastating soil-borne disease that causes swelling or galls to form on roots in canola, ultimately killing the plant. The next generation of advanced CPS-bred *Brassica napus* canola hybrids demonstrate high levels of resistance to clubroot pathotype 5X, and will mark a first in the fight against the growing threat of this disease.

FACT #133: The Proven Performance Trials program is the largest retail comparison program in Western Canada. With over 200 trials in 2015, the Proven Seed portfolio is put to the test by farmers to ensure it performs best where it counts — on large-scale, producer-managed fields. See for yourself at provenseed.ca/performance-trials.

FACT #29: Seed production is a priority for Proven Seed. We work with CSGA growers to produce, clean and test our seed to ensure the highest level of quality control. Through an accredited seed laboratory, we screen every seed lot extensively for disease, purity and germination — to give you confidence in your seed investment.

FACT #46: Proven Seed PV 533 G is a new Genuity® Roundup Ready® hybrid allowing you to push your yield potential, while getting excellent standability and blackleg resistance. PV 533 G is a great choice for your best performing fields. See for yourself at provenseed.ca/canola.

FACT #10: Proven Seed set the bar in standability. New hybrids, like PV 200 CL, build on this world class standard while offering high yield potential and a non-GMO premium contract option with the Clearfield® production system.

FACT #51: Manage your acres and harvest timing. PV 531 G brings strong yields, excellent standability and early maturity so growers can manage harvest windows without sacrifice. Suitable for the short growing zones of the Prairies, this Genuity® Roundup Ready® hybrid lives up to the name Proven Seed.

FACT #47: Proven Seed products are only available at CPS retail locations across Western Canada. Your CPS advisor will guide you through seed, fertility and crop protection requirements to find a solution tailored for your farm. Find a retailer near you at provenseed.ca/find-a-retailer.

PROVEN WHERE IT COUNTS — *ON A FARM NEAR YOU.*

See for yourself at provenseed.ca

Proven SEED

Crop Production Services CPS

PIONEER PROTECTOR SCLEROTINIA

PIONEER PROTECTOR CLUBROOT

NEW PIONEER PROTECTOR HarvestMax

NEW PIONEER PROTECTOR PLUS

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