

# CANOLA Digest

THE SOURCE FOR CANADA'S CANOLA GROWERS

SEPTEMBER 2011

SEED & STORAGE

Bins of burning canola • Straight talk on combining • Precision seed placement

## BAG STORAGE

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# CANOLA digest

As your canola harvest comes in, proper conditioning and storage should be top of mind. This issue highlights the importance of monitoring, and the benefits and risks of bag storage.



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*Cover: Digvir Jayas at the University of Manitoba checks canola as part of his bag storage study. The plastic cap provides a probe access point so researchers can check canola regularly without damaging the plastic. Photo by Jay Whetter.*

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# PROTECTING YOUR HARVEST

By Debbie Belanger



Welcome to the fall edition of *Canola Digest*. Looking back, it was a wet, difficult spring in many parts of the country but most growers were able to get a crop in.

Harvest and storage are top of mind now, and in this issue of *Digest*, we take a closer look at these parts of the farm operation.

We start with our cover story about those long white bags that are turning up on farms across the West. The Stewart brothers of Poplar Point, Manitoba have found their grain bagger and unloader are a valuable part of their grain storage system, but they had one experience that has made them rethink their choice when it comes to canola. Digvir Jayas from the University of Manitoba hopes to have more answers for farmers on whether and how these storage bags might be integrated into a farm operation.

As another storage article understates, seeing smoke coming out of stored canola is never a good experience. Bill Sandilands from Carstairs, Alberta shares his firsthand experience with thousands of bushels of overheated canola. As he says, "If you're willing to grow it, make sure you're willing to watch it."

Something you don't read about much is theft. Of course, canola theft has been an issue for years, but a lot of these crimes go unreported. In this *Digest* article, the RCMP explains why it's worth reporting and offers some tips to protect your valuable harvest.

Our Farmer Panel features four growers talking about straight combining. Most Prairie growers still consider straight combining too risky for canola, preferring to swath to reduce the potential for shattering losses. But after comparing swathing and straight

combining, some have decided to get rid of their swather altogether.

It seems seed purchases are happening sooner every year. So in this edition we take a look at hybrid varieties – the leading choice for today's growers. Seed developers weigh in on what it takes to bring a new hybrid from the lab to the field.

Want to get the most out of your seed investment? In this article, Canola Council of Canada (CCC) agronomist Doug Moisey advises that to get a good stand, you need to pay attention to the finer details. "That's what makes you the money," he says, emphasizing that precision placement at seeding is the most important factor in increasing seed survival.

Finally, we offer you a story that should make every grower proud. A new economic impact study released by the CCC reveals that Canadian grown canola and its end products contribute an average of \$15.4 billion annually to the Canadian economy. We are responsible for 228,000 jobs in Canada which translates into \$8.2 billion in wages annually.

As Elgin, Manitoba grower Rob Pettinger says, "It's rewarding to be part of a farming industry that has a positive story and is growing."

A stylized handwritten signature in black ink.



Farmers' properties are surrounded by the flooded Red River north of St. Jean Baptiste, Manitoba. In August, the Federal government announced \$448 million in federal-provincial funding to help farmers and ranchers in the Prairie provinces address challenges caused by excess moisture.



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By Jay Whetter

# IS BAG STORAGE A FIT FOR YOUR OPERATION?

While dry and cool canola can be safely stored in bags for a short time, bin storage may be more suitable for a high value crop that requires conditioning and aeration.

**T**he Stewart brothers' grain bagger and unloader are a valuable part of their grain storage system – most of the time. Cam, Alex and John Stewart from Poplar Point, Manitoba, are convinced that bags are for short-term storage.

"If you can get grain out by the first week of January, bag storage works really, really well," says John.

This was the plan for their 10,000-bushel bags of wheat. They were going to deliver sunflowers in January, clearing up bins for the wheat they had in three bags. But the sunflowers were rejected by the planned buyer, so it wasn't until the end of February and early March that the bins were emptied. In that time, a late-February winter thaw, run-off and rain surrounded the bags in water. "We thought we had them on a ridge, but the ridge wasn't high enough," says John.

As a result of wet spring conditions the Stewarts were not able to empty the bags until mid-June, creating some challenges. Water got into the bottom of the bags, probably by entering through the folded ends and through holes from rodents, creating a one foot deep layer of "completely solid" wheat along the bottom.

Whenever an eagle or hawk sunk its claws into the bag or a coyote scratched at the bag, a small amount of wheat would be exposed. For every hole, there

was a cluster of rotten wheat that ranged in volume from a cup to a five gallon pail. Some growers are managing to minimize damage from wildlife by placing fencing around the bags.

Another challenge was that sunlight's ultraviolet rays weakened the plastic over time. When they cut the brittle plastic to unload the bag, the bag opened up like a zipper.

The bag unloading system requires free-flowing grain and a bag that remains intact until the unloader cuts the plastic. So with wheat crusted at the bottom of brittle bags, the Stewarts had to empty the 10,000-bushel bags with a grain vac.

Now, as a rule, the Stewarts empty the grain bags as soon as bin space opens up. Since canola is so much more valuable and benefits from conditioning in an aeration bin, they won't put canola in a bag.

## A CAUTIOUS APPROACH

Marc Hounjet, who farms with his brother and father at Prud'homme, Saskatchewan, participated in a Saskatchewan project in 2009 and 2010 to monitor canola stored in bags. He put 11,000 bushels of tough canola in a storage bag in November 2009. They were short of bin space, and rather than put grain on the ground, Hounjet decided to try the heavy plastic storage bags.



*Marc Hounjet*

Canola went into the bag at 12 percent moisture and 10°C. Hounjet monitored the temperature regularly to make sure the canola wasn't heating. The temperature fell throughout the winter, which is a good sign, and it was down to 3°C but still tough when unloaded in March. Overall it was a good experience.

Kim Stonehouse, regional crops specialist with Saskatchewan Ministry of Agriculture in Tisdale and project lead, says proper sealing of the bag is critical to keeping out moisture. You want to quickly patch animal holes, too. But he'd still be cautious about putting canola in bags. "When we did the study,



canola was \$8 per bushel. Now canola is \$12 to \$13 per bushel, which means you've got \$120,000 out there at risk."

The risk is that moisture can get into the bag or that you won't be able to get to the canola when you need to unload it. "The key to storing canola in a bag is to monitor the grain very closely and be prepared to move it at the first sign of trouble," Stonehouse says.

Digvir Jayas, a grain storage specialist in Biosystems Engineering and vice-president of research at the University of Manitoba, leads a two-year Canola Council of Canada (CCC) funded study into the feasibility of bag storage for canola under Prairie conditions. In year one, canola went into bags in the fall at three moisture levels: eight, 10 and 14 percent.

With canola at eight percent moisture, Jayas did not detect any deterioration in quality after nine months in the bag. Canola at 10 percent moisture also seems safe, he says, but at that level, he would only store canola in bags for a limited time. Jayas did see "lots of mould and hot spots" at 14 percent moisture. "That moisture content is certainly too high for safe storage of canola in bags for any period of time," he says. This



Grain bags cost \$600 to \$800 each, but they require a loading machine (shown above) and an unloader.

research will provide clearer insight and a better understanding of the fit of bag storage for canola.

### BENEFIT VERSUS RISK

Grain storage bags can work well if managed correctly. Bags can greatly reduce hauling time from the combine, especially when time is tight – which it always seems to be at harvest. In years with surplus production, bags are a quick solution compared to the time and cost of putting up extra bins. The bag loader and unloader, which are two separate machines, cost about \$80,000. The 8,000- to 12,000-bushel bags are \$600 to \$800 each.

If hot spots are detected in bags, the best way to manage the situation is to empty the grain and transfer it to another bag or bin. Canola should be

aerated after harvest to cool the mass and, if necessary, remove moisture. Even though "dry" is 10 percent, canola should be at eight percent moisture and cooler than the outside air for safe long-term storage. Bags can be probed for moisture and temperature, but may not be easily emptied (think winter snow or soft fields) if trouble should start.

Even though Hounjet has the bags and has had a positive experience storing canola in them, he does not intend to put canola in bags unless the alternatives are worse. If you are going to use them, he says, just make sure you probe regularly and make sure you can access them with truck and unloader any month of the year. ●

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



Bags are at risk of animal and bird damage, which should be patched to prevent serious water damage and further tearing.

# TWO BINS OF BURNING CANOLA

By Jay Whetter

Seeing smoke coming out of stored canola is never a good experience, but sometimes it takes a disaster for growers to appreciate the importance of conditioning canola and checking bins regularly.

**B**ill Sandilands had an experience this winter that he never wants to repeat. The canola grower from Carstairs, Alberta, started to empty a 5,000-bushel Westeel flat-bottom bin of canola and was shocked to find the canola smoking.

The first 2,000 bushels or so were too hot to touch, then the grain started to run cold. The top of the bin, which empties first, had heated. In the end, the top 2,000 bushels were 40 to 60 percent heated – damaged kernels were black throughout. Sandilands managed to find a local buyer who paid a heavily discounted price. But the bad news didn't end there.

Beside this bin was another 5,000 bushel bin of canola. Sandilands thought he better check this one, too. Again, the first grain coming out was smoking and hot. But instead of cooling off, the grain stopped flowing altogether. Sandilands looked inside the bin and found a solid core of burned canola about 12 feet wide and all the way to the top.

Instead of putting his life on the line by entering the bin with a pick and hammer, he attached a long steel pole of drill pipe to his front end loader and, working through the front door of the bin, chipped away all day. Once the core was knocked down and it was safe to enter the bin, Sandilands took

a jackhammer and worked away at the chunks until pieces were small enough to vacuum into a truck.

"It took me 50 to 80 man hours to empty the bin," he says.

His reward, besides salvaging the bin, was minimal. Canola that flowed freely out of the bin was 40 percent heated, with the solid core completely scorched. Amazingly, Sandilands worked through a broker in Lethbridge and found a buyer in Vancouver. He loaded two super Bs and sent it off to Vancouver, but both loads were rejected. Sandilands paid the freight both ways.

"I have no idea why they didn't look at my sample ahead of time," he says. In the end he got \$1 a bushel for those 4,000 bushels of burned canola.

So what caused those bins to heat in the first place? The canola was dry and not excessively warm when it went in, but green counts were 10 percent or higher.

It was harvested in late October and was scheduled for delivery in February. When February rolled around the buyer bumped back the delivery date to April. Sandilands decided at that time to make sure the canola was okay – that's when he discovered the mess.

"I learned the hard way the importance of checking your canola," he says. "I should have rotated the grain.

I opened the doors and flipped the lid to look inside, but I should have taken out the grain and rotated it. If you're willing to grow it, make sure you're willing to watch it."

## HIGH GREEN, HIGH OIL, HIGHER RISK

Digvir Jayas, a grain storage specialist in Biosystems Engineering and vice president of research at the University of Manitoba, knows that high green counts increase the risk of heating. But he doesn't have the research to say exactly why that is.

Jayas also says that as oil content increases, safe storage moisture levels decrease. He recommends eight percent moisture for safe long-term storage of current higher-oil varieties. He is in the middle of a Canola Council of Canada (CCC) funded study to uncover more precise storage recommendations for canola as its oil content gets higher.

## NEW BIN CABLE MONITORS MOISTURE

Checking bins requires a physical transfer of canola from one bin to another. "Hand probing through doors or roof hatches is unreliable for finding hot spots near the core of the bin," says CCC senior agronomy specialist Jim Bessel. "A good rule is to move one-third of the canola out of a full bin. But if

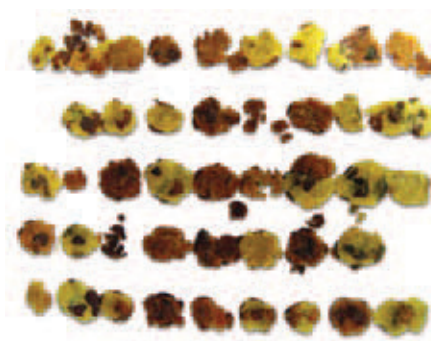




### GRADING TOLERANCES VERY LOW FOR HEATING

No.1 Canada canola is allowed only 0.1 percent heated seed. Tolerances are 0.5 percent heated for No.2 and 2.0 percent for No.3. Anything above that is considered “sample”. The Canadian Grain Commission’s grading guide says “heated” refers only to seeds that are distinctly or badly bin-burned. Heated seeds are black or dark chocolate brown when crushed and may have a heated odour. Seeds that are light tan when crushed are “heated” if they have an odour or are in combination with dark brown or black seed. Light tan seeds are “damaged” (not considered heated) if they have no odour and are not in combination with other more severely damaged seed. ●

*Left: The OPI-Integris moisture cable monitors moisture content and temperature of stored grain. Below: A solid core of burned canola in Bill Sandilands’ bin, Carstairs, Alberta.*



*When crushed, heated seeds are black or dark chocolate brown and may have a heated odour.*

green counts are high or you have a sense that the bin is at risk, transfer the whole bin.”

Electronic bin monitoring cables can detect rising temperatures within a 10-foot radius of the cable, providing an extra level of security. OPIsystems has a new bin cable that captures temperature as well as moisture by measuring the relative humidity in the air space between grain kernels. The grower enters the grain type into the monitor, and the monitor provides a seed moisture reading accurate to within 1.5 percentage points.

You can use a handheld StorMax monitor to get these readings, or OPI’s new Integris system that sends alerts by email, text message or computer screen pop-up whenever grain temperature or moisture hits a programmed upper limit or changes too fast. IntegrisPro provides fan control, turning on aeration fans automatically when needed.

Technology can help growers monitor stored canola, but whether growers go high tech or no tech, nothing can replace the peace of mind of turning over bins and monitoring regularly – especially if canola has green seeds or moisture above eight percent. ●

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





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# FARMER PANEL ON BOARD WITH STRAIGHT COMBINING

By Jay Whetter

Most Prairie growers still consider straight combining too risky for canola, preferring to swath to reduce the potential for shattering losses. And for many of them, the idea of waiting for standing crop to dry down without getting damaged adds stress to an already tense time of year. But 15 percent of Prairie growers willingly take on this extra stress and risk. Here are the stories of four of them.



## CLIFF SIME

Fort Saskatchewan, Alberta

Cliff Sime started straight combining canola 20 years ago, a time when his swather didn't have an opening large enough to handle a heavy canola crop. It was frustrating, so he thought he'd give straight combining a try. On a quarter section of canola, he swathed 60 acres and straight combined 100. The straight combining was no better or worse than swathing, but it saved him an extra pass.

Over the next 15 years, Sime compared swathing and straight combining, noting that in only one year did swathed canola actually outperform the straight combined canola. All other years, results were a draw or favoured straight

combining. Five years ago, Sime got rid of his swather for good.

He still gets nervous straight combining if the crop is thinner and not well knitted. "The best crops for straight combining are thick ones with a lean," says Sime.

Sime uses a flex header with a pickup reel. A key feature is the flex header's extended distance between the cutterbar and auger. "Without that, you would have canola shelling before it had a chance to get onto the platform," he explains. He also uses the widest header he can get, enabling fewer passes to reduce the overall shattering losses caused by the header crop divider.

He says shattering losses seem higher when you look at the ground after combining, but based on weigh wagon comparisons, Sime "firmly believes" there is a yield advantage to straight combining. His green seed has also been down. Other variables, such as improved Roundup Ready and InVigor varieties he grows, may have contributed to lower green counts, but he thinks straight combining is definitely a factor.

Sime has two retired farmers driving combines for him, who didn't want to straight combine canola when they were first hired. "They didn't think it was a good practice," says Sime, but he convinced them to do it. "And now both

say they should have been straight cutting themselves."

His advice to growers trying straight combining for the first time: "Try a little every year. Every year is not the same, and if it doesn't work one year, it may work the next."



## CRAIG RIESE

Lockport, Manitoba

Craig Riese straight combined canola for the first time during an extremely wet fall in 2004. Getting through the field with the swather was frustrating, he says. Finally he just gave up and left the remaining few canola acres for straight combining. "It worked," he says.

In 2006, based on his initial positive experience and the logistical challenge





*“For us, the time and effort of swathing make straight combining worthwhile.”*

– Riese

of getting all the canola swathed on time – “We were swathing 24 hours a day and I wasn’t getting any sleep,” Riese says – they straight combined 30 to 40 percent of the crop. Then in 2007 they straight combined 100 percent and have never looked back.

“I won’t jump up and down and say there’s a yield benefit. There might be a slight benefit, but I don’t do it for yield and quality,” he says. “For us, the time and effort of swathing make straight combining worthwhile.”

He runs a John Deere combine and has tried all the headers – rigid, draper and flex. He prefers the flex header for the extra space between the knife and auger to catch canola seed if it shells out. He likes the “positive feed” that the auger provides. “With the draper, I could never combine as fast as I can with the flex header,” he says.

Riese grows InVigor canola because he likes to spray pre-harvest glyphosate to even out the crop and shorten the days to harvest. He sprays about the time everyone else is swathing and hopes to start combining about two

weeks later. “I wouldn’t straight combine canola without glyphosate,” he says.

His losses to shelling are “negligible,” he says. The worst year was in 2009 when he had to delay combining while waiting for the field to dry out. He figures he lost two to four bushels per acre to shelling, but so did growers with ripe swaths blowing in the wind – they couldn’t get their combines on the field either.

Fall hail also presents a higher risk to standing canola. Riese lost 90 percent of a field to hail one year, estimating that neighbours who had canola in windrows lost 75 to 80 percent.

“I don’t deny that we’re more exposed to risk,” Riese says, “but we’ve been happy with how well canola stands up to the wind. Here in the Red River Valley, we apply a lot of nitrogen and generally produce thick, well-knitted canola crops that are well suited to straight combining.”

His advice to first time straight combiners: Start with one field. Swath half and straight combine half and compare results. If you plan to straight combine canola, prepare to drop everything when conditions are right for harvest. “When the canola’s ready, you have to go.”

continued on page 16

## SEED COMPANIES PREPARE FOR STRAIGHT COMBINING

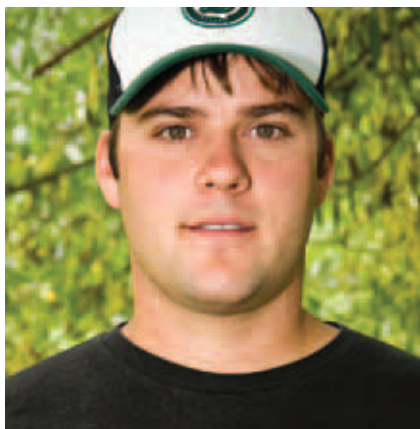
In the Canola Council of Canada’s 2009 grower agronomy survey, 14.6 percent of growers said they straight combined canola. Another 4.3 percent said they “sometimes” straight combined. Of the same growers surveyed, 13.8 percent planned to increase the number of acres they straight combined and another 17 percent were undecided.

Canola seed companies see this trend increasing and are working on varieties with improved shattering tolerance, a key characteristic to minimize losses before and during harvest.

Pioneer Hi-Bred is working on varieties with improved shattering tolerance and has screened existing products for shatter sensitivity. Pioneer Hi-Bred encourages growers to talk to their seed reps about varieties better suited to this practice.

Bayer CropScience plans to launch an InVigor hybrid with seed pod shatter tolerance in 2013.

Dave Kelner, Monsanto’s technology development lead for Western Canada, says Monsanto has been evaluating the straight cut potential of its germplasm for the past couple of years, and has identified hybrids that show promise. But he acknowledges that variety alone isn’t enough. “There is risk associated with the practice and each field should be evaluated on a case by case basis to assess the potential for straight cutting,” he says. ●



### CHUCK WEINKNECKT

Yorkton, Saskatchewan

Chuck Weinknecht and his father, Glen, have been straight combining canola for five years. The past three years they swathed part of their canola every year for comparison, but their straight combined canola always did better. “We’re not going to be swathing canola anymore. The past three years, every time we swathed we regretted it,” Weinknecht says, noting that new hybrids seem fairly well suited to straight combining.

*The past three years they swathed part of their canola every year for comparison, but their straight combined canola always did better.*

The Weinknechts use a Massey Ferguson combine with a flex header. The header is up off the ground, so not in flex mode, but Chuck likes the extra space between the knife and auger for bringing in crop. A rigid header works, too, he says, but they had to go slower with that type. He runs the reel as slowly as possible to reduce shattering. The header doesn’t have side cutters.

Weinknecht’s advice: “Don’t panic when you see white shelled pods at the field edges. Wind damage tends to be isolated at the field edges, but inside the canopy there is virtually none.”



### DWAYNE MARSHMAN

Rockyford, Alberta

Dwayne Marshman doesn’t own a swather anymore. Marshman, who farms with his wife, Mary, and daughter and son-in-law, Kim and Ben Salt, straight combines all his canola.

He uses a John Deere CTS combine with a MacDon 962 draper header. Last year Marshman bought a second CTS combine because harvest was delayed until October and he wanted to get the crop in the bin. This combine had a 25’ auger header, and a pickup reel and lifters, which Marshman wants for straight combining canola, but it didn’t have the extra space behind the knife that his draper provides. “In the end, I’m not sure there was a lot of difference in loss,” he says.

The MacDon header does have one simple feature that sets it apart in terms of performance: the divider boards. The divider boards on the MacDon header push canola down instead of trying to split it apart, allowing the header to combine in any direction. “If the crop is leaning, the auger header would try to split the crop. Canola plants would catch under the reel arm causing the crop to bunch and not feed properly,” Marshman says. “We had to open every field with the draper header.”

Marshman’s straight combining system relies on a couple of key steps: **1. Varieties make a difference.** When trying a new canola variety, Marshman plants a

30-acre test plot to make sure it straight combines as well as his other varieties.

**2. Pre-harvest glyphosate at one litre per acre (based on 360 gram formulation).** They spray around the early swathing stage, which is about 30 days before the typical combining date. This gives ample time for crop and weed dry down, and evens out the crop for faster combining.

Their average yield in 2010 was 60 bushels per acre with zero green seeds, minimal dockage and an average weight of 54 lb/bu. A big part of Marshman’s marketing plan is to have high quality canola – straight combining helps him achieve this, he says.

But straight combining canola is not without its challenges, he notes. “You have to be prepared to drop what you’re doing and go combine canola when the conditions are right,” says Marshman, recalling their quick action to save a 100-acre canola field a couple years ago. First the field wasn’t drying down, then it became very windy for a couple days, drying down the crop quickly and creating significant shattering losses.

“We harvested a 35-bushel crop but it probably should have been 45,” he says. Wind damage is a risk for all harvest-ready canola. “The wind blew swaths everywhere. Guys with a swathed crop would have lost lots, too.”

If you’re straight combining canola, harvest begins when the plant itself will go through the combine. If the plants are too tough to combine efficiently, Marshman does something else for a while. This can make for some nervous waiting, but “until the crop is actually ready to harvest, it can take a lot of wind without shelling,” he says.

Hail is a major worry. “A hailstorm in September can cause significant damage,” says Marshman. “So you should be prepared with extra insurance or be in a position to take the extra possible loss.” ●

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



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# PRECISION PLACEMENT PAYS OFF

By Donna Fleury

Want to get the most out of your seed investment? Pay attention to the finer details – that’s what makes you the money.

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ptimizing seed emergence and stand establishment is more than a way to maximize yield. It sets up the crop for the rest of the season and can make a difference to how it responds to the potential pressures of pests, frost, moisture and other climate conditions.

“In the spring we set ourselves up for what is going to happen for the rest of the year which ultimately affects what and how we harvest, so getting the most out of your seed investment is important,” says Doug Moisey, Canola Council of Canada (CCC) Agronomy Specialist for North-Central Alberta. “Precision placement at seeding is the most important factor for increasing seed survival. Speed is one of many

factors – although there is no ideal speed, whatever speed places the seed in a proper manner with seed to soil contact is the best strategy.”

Even though canola seed genetics are the best they have ever been, emergence is generally estimated to be 35 to 50 percent (it can be as high as 70 percent). “We cannot determine what emergence will be prior to seeding, so lowering seeding rates is risky,” explains Moisey.

“Seed is a safety factor and probably one of the cheapest forms of insurance to a good crop, allowing for issues such as frost, insects and diseases. The recommended seeding rate is an achievable plant population of five to 10 plants per square foot, with a target

of eight to 10 plants at 20 days after emergence. The standard recommendation is a seeding rate of five pounds per acre, but seed size has to be taken into account. However, if you can achieve the target plant stand at 3.5 pounds per acre because you are going slow, watching soil temperature and precision placing the seed, then go ahead,” says Moisey.

Darcy Sarafinchan farms 3,000 acres near Vegreville, Alberta and seeded 1,800 acres of canola this year. “For me, the most important factors include making sure the drill is level, and seeding to a depth of 0.5 to one inch and at a speed of less than five miles per hour,” he says. “Seeding rate is also important





and I target five pounds per acre. If only 60 percent of the seed is going to germinate, then you are basically starting at three pounds per acre, which doesn't leave any room for error for bugs or frost or any other factors."

Sarafinchan also checks seeding depth regularly, seeds early and uses a relatively high well-balanced fertility program to maximize yield. "This year I had to spray for flea beetles as well. In the end it is a number of things that make seedling survival a success."

Recently, researchers at Agriculture and Agri-Food Canada (AAFC) found that canola seedling emergence was generally 50 percent or less, even when using certified seed with over 90 percent germination. "These results were a surprise to us, so we decided to take a closer look at what was going on," explains Dr. Neil Harker, Research Scientist with AAFC at Lacombe, Alberta.

*"In the end it is a number of things that make seedling survival a success."*

– Sarafinchan

"We initiated a four-location western Canada study that compared three factors: open pollinated versus hybrid varieties, two seeding depths of one centimetre (0.5") and four centimetres (1.5"), and two seeding speeds of four and seven miles per hour," says Harker. The study used a Conservapak seeder with one centimetre knife openers. Funding for the study was initially by the Prairie Canola Agronomic Research Program and was completed under the Canola/Flax Science Cluster. Coordinated by the CCC, the science cluster is funded by industry and the federal government.

Research results confirmed that seeding depth was the biggest factor influencing emergence, and shallower was better. "Although farmers think they are achieving a half inch depth, often



*Stands of 10 plants per square foot (100 per square metre) are ideal as they provide a cushion for loss due to frost, diseases or insects. To determine plant stand per square metre, use a hoop equivalent to one-quarter of a square metre, count the number of plants inside and multiply by 4. Several counts per field are required to get a good average.*

## NEW STUDY COMPARES OPENERS AND IMPACTS OF SPEED

Based on the results of the Agriculture and Agri-Food Canada (AAFC) Lacombe-based seeding speed and depth study, researchers have launched a new study to focus on a wide range of openers and seeding speeds.

"The previous study worked with a one centimetre knife opener drill, so we wanted to expand that work to determine if speed was as important with lower disturbance openers," explains Dr. Bob Blackshaw, Research Scientist with AAFC at Lethbridge, Alberta. "We are conducting both small plot replicated trials and on-farm strip trials at five locations in western Canada across different soil types."

At each small plot location, seven different openers are being tested, three low disturbance, two medium disturbance, two high disturbance and two ground speeds, four and six miles per hour. "We are partnering with Mike Bevans and Blaine Metzger of the AgTech Centre in Lethbridge to conduct the trials," says Blackshaw. "The AgTech Centre has developed a tool bar that allows us to use the same seed drill for everything, but with different openers. That minimizes the confounding effects of using different drills, and makes the openers the only equipment variable."

"For the farm-scale research component, farmers will be using their own drill and three different speeds if possible on one of their fields," says Blackshaw. "We have also asked them to do a side-by-side strip trial if they have two different drills on the farm or can partner with a neighbour with a different drill. Researchers will conduct canola emergence counts, and where possible, yield measurements at harvest."

This is a two-year study, so results will be available after the 2012 crop year. This study is funded by the Canola/Flax Science Cluster, which is part of the Canadian Agri-Science Clusters Initiative of AAFC. Industry funding for the canola portion of the Science Cluster is derived from CCC's core funds, and additional project funding is provided by SaskCanola, Manitoba Canola Growers Association and Alberta Canola Producers Commission. ●

continued on page 20



A western Canada AAFC research study confirmed that seeding depth was the biggest factor influencing emergence. The trial on the left was seeded at 4 mph at a 1 cm depth, while the trial on the right was seeded at 4 mph at a 4 cm depth.

20

they are not,” says Harker. “Using larger, wider seeders in variable topography soils can leave the seed deeper than planned.” Although shallow seeding showed the best results, in drier years at dry locations such as Scott or Swift Current, growers sometimes have to seed to moisture. In Lacombe and some of the northern and bigger canola growing areas, seeding shallow is still the best option under most conditions.

The study didn’t find an optimum speed, but Harker notes that monitoring seed depth and placement is the key. With some high disturbance seeding equipment, higher speeds can result in the back shanks throwing soil on what has been seeded in the front, placing the seed deeper than desired. “We recognize that growers are under pressure, especially in a year like this one, to get the crop seeded early to maximize yield potential and profits, so they have to balance speed with necessity,” adds Harker.

The consequences resulting from low and spotty emergence are not just about yield. “If you are willing to put on an extra herbicide to control weeds in the open spaces resulting from poorer emergence, you can still achieve yield,” explains Harker. “However, not only is it an extra cost, it also exerts extra selection pressure for weed resistance.”

Canola compensates for poor emergence and lower plant stands by growing larger,

bushier plants to fill in the open areas. “This means more days of flowering, often delaying flowering into the hot, dry period, and delaying maturity, which increases the risk of frost and green seed,” says Harker. “The result can be lower quality and grade and much lower profit.”

“Lower plant stand and density also increases risks for diseases and insects,” adds Moisey. “An insect outbreak will typically result in more insects per plant and higher pressure with lower plants stands. Larger bushier plants and longer flowering increases the risk of diseases such as sclerotinia, and later crops are at a higher risk to other insects such as diamond back moth or bertha armyworms.”

*“Paying attention to the finer details – that is what makes you the money.”*

– Moisey

Ensuring seeding equipment is properly set up and fine-tuning the adjustments so that the machine is level is important. This includes checking openers for wear points, and replacing worn openers or re-surfacing the tips when needed. Paired row or double shoot systems in particular are designed with a certain angle to create a shelf that separates the seed from the fertilizer. Over time,

that wears down and the seed rolls down into the fertilizer row, where it does not survive very well.

At St. Paul, Alberta, Leo Cote farms 1,600 acres and seeded 600 acres of canola this year. “Keeping the seeding rate up is very important. I use a rate of 5.5 pounds per acre, which helps compensate for some losses from frost and provides for even maturity,” says Cote. “Seeding as shallow as moisture will allow us, and at slow speeds less than four miles per hour is our best strategy.”

Cote checks seeding depth regularly, as it can vary from field to field. “It’s not just about seeding depth, it is how much soil ends up on top of the seed and packed on top of the row that is important to be checking,” adds Cote. “The seed is a big investment for us, so seeding shallow and slow helps us achieve a good seedling survival rate.”

Moisey emphasizes that constant vigilance, like what Sarafinchan and Cote do in their operations, is the best practice for optimizing seed survival. “When seeding, be prepared, know your equipment and be vigilant about checking seeding depth and flow. Paying attention to the finer details – that is what makes you the money.” ●

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



# Throwing it all away?

If you treat your bins for storing canola with malathion, you could be throwing away more than your own canola investment.

That's because your canola's high oil content could allow it to absorb residues from bin walls even if the seed isn't treated directly. And if traces of malathion exceeding the Maximum Residue Limits are found in your canola, it could result in the rejection of shipments, millions of dollars in costs and increased monitoring.

Fortunately, following proper canola storage practices can keep your canola investment safe and insect free without insecticide. These practices include:

- Managing your harvest to minimize chaff, immature seeds, weed seeds and foreign materials.
- Keeping stored canola seed cool and dry throughout the bin (generally below 15 °C and 8% moisture).
- Using only properly applied and approved bin treatments (like diatomaceous earth).
- Waiting at least six months before using malathion-treated bins for canola.

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# STOLEN CANOLA: THE THIEVERY PEST

By Ali Hyde

Tips on safeguarding your harvest.

22

While strong canola and grain prices are welcomed across the Prairies, they may also add another worry to the mix – theft.

Canola theft has been an issue for years, but since many theft cases go unreported due to the perception that stolen crops and thieves can't be tracked, it may not be top of mind. The RCMP encourages farmers to practice theft prevention and is developing options to help identify seed if theft does occur.

*Cropgard Coded  
Flakes and decals*



A recent research project at the Canadian Grain Commission (CGC) found that chemical analysis might help identify canola samples. “In our study, we found that only 0.3 percent of the samples of the same variety were chemically similar,” explains Veronique Barthet of the CGC.

The RCMP recommends that farmers take a sample of their crops, date it and seal it for their records. “If theft should happen, the RCMP may be able to use the sample during their investigation,” says Constable Luanne Gibb of Killarney, Manitoba. “If a farmer’s crop is stolen we may be able to compare the sealed sample against a suspicious crop sample and determine if the chemical components are the same.”

Constable Gibb urges farmers to think about ways to prevent theft and to follow procedures if it

does happen. “If you believe you have been a victim of grain theft you are advised to check your records and then call the RCMP to report it,” she says. “This will allow the RCMP to gain evidence if needed and proceed with investigating your claim. An open line of communication between police and community is beneficial so that we can solve crime.” ●

*Ali Hyde is a communications summer student with the Canola Council of Canada.*

## TIPS TO SAFEGUARD A CROP

### Ideal Location and Security

Grain stored in remote locations is vulnerable to theft. Consider locating bins closer to the home yard site, securing with locks and checking regularly. “With large bins, a missing tandem load of canola may not be noticed right away,” says Constable Gibb. “Farmers tend to chalk it up to their own bookkeeping, blaming themselves and not consider the possibility that the canola was stolen.” Keeping bins in a well-lit, centralized location and blocking road access also helps deter thieves.

### Communicate with your Neighbours

Farmers should communicate with their neighbours and be aware of what’s happening in their area, including plans to be away for vacation. One of the best preventative methods is a neighbourhood watch commitment says Constable Gibb. “Farmers need to be vigilant in communicating with neighbours and reporting suspicious activity. If you see someone moving an auger late at night and not during harvest, that is suspicious behavior.” If you see this type of activity, she strongly recommends you call 911. Do not confront the culprit as it is a significant risk.

### Consider using Grain Confetti

Cropgard Security developed Cropgard Coded Flakes, typically referred to as “grain confetti”. These tiny, numbered squares of newsprint with code numbers are registered to the owner, who mixes them into the grain and adds warning decals to deter thieves. Grain confetti confirms at the elevator if the seller is the rightful owner. ●





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# HYBRID CANOLA TAKES AN INTERNATIONAL JOURNEY

By Carla Pouteau

Hybrid varieties are the leading choice for today's growers. Discover their path to commercialization and what it takes to get these valuable traits into the field.

**H**ybrid canola was first introduced to the marketplace in the early 1990s. Adoption of this technology by farmers has been swift despite the associated higher seed costs. In 2010, approximately 85 percent of the canola planted was a hybrid.

"Farmers are sharp – they recognize the value of hybrid seed on their farms," says Murray Hartman, Oilseed Specialist with Alberta Agriculture and Rural Development. "Farmers want the yield increase associated with hybrids and know that hybrids tolerate weeds and other stresses better." Hartman notes that hybrids are more competitive and work in concert with herbicide tolerant systems which result in cleaner canola crops with less dockage.

Over the past number of years, the value of the canola crop has helped with the rapid adoption of this technology. So why are higher seed costs associated with hybrids?

"Canola varieties have a relatively short life cycle, averaging about three years,"



*After pollination, the male plants are flail mowed out of Cargill SCO's hybrid seed production fields in Idaho Falls.*

says Dave Kelner, Monsanto's Technology Development Lead for western Canada. As a result, Kelner explains, "as a seed company, we have to think a number of years ahead to ensure the steps are in place to bring varieties to market as soon as possible."

Because each variety faces such a short life cycle, those with the greatest potential for yield or specialty traits must be identified quickly. "We think of hybrid development as narrowing varieties through a funnel," explains Kelner. "A number of processes are happening in parallel – inbred development and hybrid testing, trait integration and seed production. They need to come

together at the same time to launch the best products with the traits of interest."

In recent years, companies have been entering into licensing agreements with each other to share various traits. "That exchange is beneficial for the entire industry because the overall objective is to increase production," says Rod Merryweather, Bayer CropScience's North American Director – Oilseeds and Traits Operations.

Hybrid seed is the first generation of seed produced from a controlled cross between two parents. The combination of parent genes results in a hybrid that

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performs better than either parent alone. This is where the term hybrid vigour comes from.

Hybrid seed production is highly focused on maintaining genetic purity throughout every step of its development.

“Sampling and testing is crucial,” says Jerry Cass, Seed Production Manager for Cargill Specialty Canola Oil (SCO) based in Idaho Falls, Idaho. “This is to ensure a very high level of hybridity – which means the variety produced contains DNA from the desired parents only.”

Companies involved in canola breeding follow the same general path to commercialization. “Early research and development start in a technology centre (often in a greenhouse or growth chamber) where genetic material is evaluated and various traits are being introduced,” says Shawn Foster, Nexera Parent Seed Agronomist with Dow AgroSciences. These traits are categorized as production traits (e.g. disease tolerance) and end-use traits (e.g. oil complex). These technology centres work closely with plant breeders who are busy developing high-yielding platforms for such traits to be inserted into. It is the job of the plant breeder to get the desired traits into a hybrid that is agronomically sound.

Once the plant breeders have a hybrid that looks promising, it begins to travel down the path to registration and commercialization. This path involves small plot trial entry into pre-registration trials and then eventually regional variety trials grown in the region where the hybrid will be commercialized.

In the meantime, the new hybrid undergoes steps to begin producing seed for commercial availability. The first generation of seed is often produced under tents (approximately 30 by 60 feet) to ensure no outcrossing occurs. Female plants are developed to be male sterile. “They do not produce pollen and must accept pollen from another plant (male),” explains Foster.

Then these female plants and male plants are planted in alternating strips in commercial fields (approximately 160 to 240 acres) by farmers under contract.

*A canola hybrid has taken a bit of a journey before it is bagged and in farmers’ hands.*

This production is done by many of the same farmers year after year, “because they have to have specialized equipment, access to irrigation, follow a detailed production protocol and meet isolation requirements,” says Cass. “We require three miles of isolation to prevent cross pollination.”

Cargill SCO conducts this work in Idaho Falls and other seed companies do so in southern Alberta or the BC interior. “These areas are attractive because irrigation provides production stability and the ability to manage some risk,” says Darrel Armstrong, Pioneer Hi-Bred’s Supply Planning Manager for Canola, “But they are also well suited for canola production with a moderate climate and limited other commercial production so as to meet isolation requirements.” Bees (both honey and leaf cutter) are used to ensure maximum pollination so apiarists are also contracted.

During this production step, while the male plants are allowed to pollinate the females, they are not allowed to set seed themselves. “Once pollination is complete the males are destroyed,” says Cass. “A flail type mower works best because it can remove the plants clear down to the ground. And by using dividers on tractors, the male and females are separated to ensure only the males are removed.”

After the growing season winds down in North America, canola breeding companies move on to contra season production – the production of hybrid seed in the southern hemisphere. Contra season production is a valuable tool because two production cycles per year “help bring hybrids to the marketplace sooner, help manage North American production risk (such as hail) and allow us to evaluate material year-round,” says Foster.

Cargill, Bayer CropScience, Dow AgroSciences, Monsanto and Pioneer Hi-Bred conduct contra season production in Chile. “The growing season in Chile fits nicely between harvest and seeding here in western Canada so production can be brought back, packaged and ready for spring seeding,” says Merryweather.

A canola hybrid has taken a bit of a journey before it is bagged and in farmers’ hands. “The investment companies make in the canola industry is quite significant, particularly around hybrid development and seed production which explains why seed costs have increased over the past decade,” says Kelner. “Growers are realizing that value.” ●

*Carla Pouteau is a freelance writer and farms near Mariapolis, Manitoba.*



*Monsanto’s hybrid seed production in Chile.*

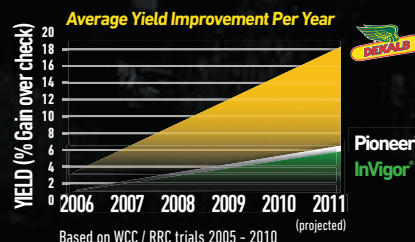




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# CANOLA: AN ECONOMIC POWERHOUSE

By Crystal Klippenstein

A new study reveals some big numbers when it comes to calculating the economic impact of canola in Canada.

28

Canola is the world's only "Made in Canada" crop and since it was first commercially planted in the 1970s, it has grown into an economic engine that contributes so much more than seed, oil and meal to Canada.

In fact, a new economic impact study released by the Canola Council of Canada (CCC) reveals that Canadian grown canola and its end products contribute an average of \$15.4 billion annually to the Canadian economy.

In its journey from seed to market, canola certainly travels through many hands. It's estimated that the canola industry is responsible for 228,000

Canadian jobs, which translates into \$8.2 billion annually in wages. These jobs include work in sectors such as genetics supply, farming, seed handling, transportation, crushing, refining and end uses.

In June 2011, Cory McArthur joined the CCC as vice-president of market development, bringing 15 years of experience in Canadian and global agricultural marketing, with particular focus on the grower and developer aspect of the canola value chain.

"Since starting at the CCC I've come to realize all of the other important steps in the canola value chain, how well they

*"To our export markets, that shows a nation dedicated to reliable, top-quality canola supply."*

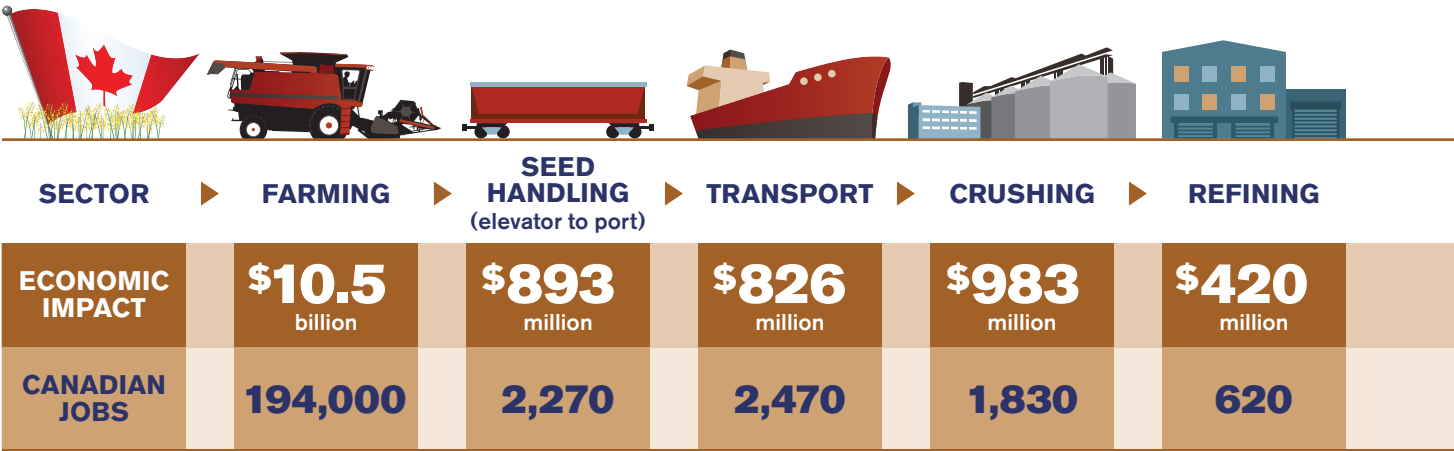
– McArthur

work together and how complex canola really is, both inside and outside of Canada's borders," says McArthur.

Canola's value to Canada begins at the seed level in genetics supply. The report suggests that 35,000 to 40,000 tonnes of canola seed are used annually to plant the Canadian canola crop.

## TOTAL<sup>1</sup> ANNUAL ECONOMIC IMPACT OF CANOLA INDUSTRY SECTORS IN CANADA

(average 2007-2009 in Canadian dollars)



<sup>1</sup>includes both direct and indirect economic benefits    <sup>2</sup>includes 1,140 jobs in the genetics supply sector



Of course the biggest piece of the economic impact pie goes to growing canola, which generates \$10.6 billion in Canadian economic activity each year. It's often noted that canola is the number one crop in farm cash receipts – Statistics Canada reported that in 2010, canola provided nearly \$5.6 billion to Canada's 43,000 growers – but there's a lot more to the canola farming industry than grower profit.

Rob Pettinger, a grower based in Elgin, Manitoba and president of the Manitoba Canola Growers board of directors says that there are several reasons why he grows canola. "I grow canola because it fits our rotation well, the varieties out there are wonderful for weed control and economically, it has been the best crop for my operation in terms of returns."

Pettinger adds that canola has become an important part of his farm and though wet conditions prevented him from seeding it this year, he generally seeds 50 percent of his acres to canola. "The spinoff from canola farming to the industry as a whole and to Canada is huge," he says. "It's rewarding to be part of a farming industry that has a positive story and is growing."

Without grower investment in canola, the entire value-chain would not exist. Canadian canola works its way through several important sectors that add value to the seed. Crushing, for instance, represents almost one-third of Canadian economic activity in the milling and grain processing sector. Canola seed

## CANOLA MEAL FOR THE DAIRY INDUSTRY

Approximately 60 percent of processed canola seed ends up as meal. Across the globe, canola meal is regarded as a premium feed protein source and is used in the Canadian dairy industry because it's a cost-effective feed ingredient and in feeding trials has been shown to increase milk production by up to one litre per cow per day.

The economic impact study confirms that canola meal offers tremendous value to the dairy industry. It reports that in Canada, canola meal use for dairy cattle has the largest economic impact in the East, primarily Quebec and Ontario, where 75 percent of Canada's dairy population is located. ●

## SUMMARY OF TOTAL ECONOMIC IMPACT OF THE CANOLA INDUSTRY IN EACH PROVINCE

British Columbia:	\$550 million
Alberta:	\$5 billion
Saskatchewan:	\$5.4 billion
Manitoba:	\$3.3 billion
Ontario:	\$816 million
Quebec:	\$252 million



share of the total Canadian oilseed crush is 76 percent.

Most of the economic benefits from canola are experienced in western Canada, where the majority of canola is grown. In fact, farming and oilseed crushing have the largest combined impact on the economies of Canada's top-three canola growing provinces: Alberta, Saskatchewan and Manitoba.

In its journey to the end-user, canola also goes through the refining sector so that crude oil can be processed into margarine, shortening, salad and cooking fats and oils for human consumption. In addition to the \$420 million in economic activity generated in this refining sector, there is the value of processed canola oil for food end-uses in Canada, which the study pegs at \$508 million.

McArthur highlights how important a role exports play in Canadian canola sectors and the economy. "We export 85 percent of Canadian-grown canola and roughly half of that is crushed and processed here in Canada," he says. "It's a big piece of economic activity."

As canola seed, meal and oil move from farm or crush locations to ports for export, they incur handling charges and fees which add to canola's overall contribution to the economy. Transporting canola seed and products

*"It's rewarding to be a part of a farming industry that has a positive story and is growing."*

– Pettinger

contributes \$826 million annually. On average, 74 percent of the total direct transportation contribution is due to canola seed, oil and meal being sent to export destinations.

McArthur says the report will be invaluable when speaking to customers from current and potential export markets. "These numbers demonstrate how important the entire canola value chain is to Canada," he says. "To our export markets, that shows a nation dedicated to reliable, top-quality canola supply."

*The Economic Impact of Canadian Grown Canola and its End Products on the Canadian Economy* was released by the CCC in July 2011 and can be viewed at [www.canolacouncil.org](http://www.canolacouncil.org). The study was conducted by LMC International, a leading independent economic and business consultancy for the agribusiness sector. It was prepared as part of the Canola Market Access Plan, through Agriculture and Agri-Food Canada's Agricultural Flexibility fund. ●

*Crystal Klippenstein is a communications coordinator at the Canola Council of Canada.*



## END USES TOTAL

**\$1.6**  
billion

**\$15.4**  
billion

**26,550**

**228,000<sup>2</sup>**  
(+ \$8.2 billion  
in paid wages)

# A GREAT MEAL FOR LIVESTOCK

By Debbie Belanger

Research is driving efforts to promote greater use of canola meal in livestock and poultry diets.

30

Let's do the math. If Canadian farmers are going to meet the canola industry's target of producing 15 million tonnes of canola by 2015, that means 9 million tonnes of meal will need a market. Or for achieving a Canadian crush volume of 7.5 million tonnes, 4.5 million tonnes is meal.

That is an entirely realistic goal because canola meal is a valuable feed ingredient. In dairy cattle, research trials have shown that canola meal increases milk production by one litre of milk per cow per day. It also has benefits for other livestock and poultry.

The goal is to demonstrate those benefits to the animal feed industry. And that means conducting research.

"The large dairy operations in our key markets – the United States and China – rely on feed companies, nutritional consultants and veterinarians to provide their dairy cattle with the optimal nutrition and feed mix," says Les Nernberg, Canola Meal Manager with the Canola Council of Canada (CCC).

"So we need to make sure we are providing these people with up-to-date research and technical information to make their feed ingredient purchasing and feed formulation decisions."

For that reason the CCC is allocating and coordinating \$4.1 million in canola meal research over three years to examine how to better use canola meal in livestock and poultry diets.

*The research will also demonstrate that high energy canola meal can be used very effectively at high inclusion levels in swine and poultry feeds.*

The first study builds on the overall analysis that demonstrated the one-litre-per-cow-per-day benefit of canola meal. The study is seeking to better explain the statistically significant increase. Specifically, the research is examining the responses of dairy cattle fed canola meal-based diets versus dairy cows fed soybean meal, corn distillers' grains, or



wheat distiller-based diets. With growth in the ethanol industry, distillers' grains, the by-product of the distillation process, are becoming increasingly used in livestock diets and in some cases can be complementary to canola meal.

Once the study is completed, Nernberg hopes to provide information to key people in the dairy industry on how canola meal can be more accurately formulated into dairy cow diets.

Another study is examining the effects of using high levels of canola meal from black napus and a yellow seed coated variety (canola juncea) on animal performance. The study



includes broilers, layers, turkeys, late stage nursery pigs, grow-finish pigs and backgrounding beef cattle. There can be limitations to using high levels (>25 percent) of canola meal in feed for these animals, such as effects on growth and carcass composition, and the study is addressing these issues.

The research will also demonstrate that high energy canola meal can be used very effectively at high inclusion levels in swine and poultry feeds.

“Including more canola meal into the feed formula is one way of increasing overall demand for canola, so this research is important from the point of view of increasing market demand for our canola growers’ and crushers’ product,” says Nernberg.

The third study has potential future implications for the canola genetics a farmer may have access to, and other possible processing technologies that may be applied to canola meal to increase its value.

By altering the carbohydrate composition of canola meal, it is possible to increase energy content – a key consideration in formulating animal diets. The research is determining the important energy yielding and energy detracting carbohydrate components of canola meal. With a more accurate understanding of these components, future research may allow canola breeders to develop

high energy canola varieties – providing more varieties or more valuable varieties from which growers can choose.

Canola plant breeders at the Agriculture and Agri-Food Canada (AAFC) Saskatoon research station are currently developing a number of varieties of yellow napus for nutrient component (fibre, carbohydrate) analysis. This plant breeding work, along with the development of enzyme and processing technologies, may also assist in increasing the energy content of canola meal. That will ultimately improve the utilization of canola meal in animal diets.

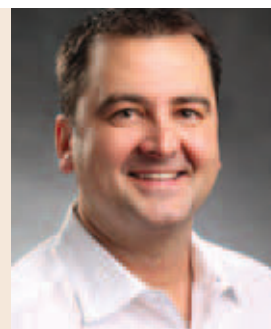
This research is made possible through funding from AAFC’s Agri-Science Clusters Initiative with the canola meal research projects representing just one part of the overall funding provided to the CCC. In total, the CCC is coordinating \$20 million in canola research in the areas of agronomy, oil, meal and human health. Of that, \$5.7 million is being funded by the canola industry through the canola levy of each tonne of canola delivered, crushed or exported.

“I am very excited about the research that’s going on right now,” says Nernberg. “I have no doubt that as the results of these studies are generated, we will be able to increase demand for canola meal, and that’s good news for canola growers.” ●

*Debbie Belanger is editor of Canola Digest.*

*“Including more canola meal into the feed formula is one way of increasing overall demand for canola.”*

*– Nernberg*



## MEET LES

When it comes to meal, Les Nernberg is the ticket. As Canola Meal Manager with the Canola Council of Canada since August 2010, Les is responsible for directing activities aimed at increasing the use of canola meal in markets around the world. That means managing global market development and promotion of meal, developing and managing canola meal research projects, and coordinating technical education and extension activities.

Les was born and raised on a small, mixed grain and beef farm in Inglis, Manitoba. He received his B.Sc. degree in Agriculture – Animal Science and M.Sc. in Animal Nutrition from the University of Manitoba. He has been actively involved in the western Canadian feed industry for more than 13 years as a technical sales representative and animal nutritionist.

Les brings to his work both a true passion for animal nutrition and a deep understanding of canola meal. “I feel very fortunate to be part of the canola industry during this time of great growth and opportunity,” he says. ●



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# ABreport



## LEADERS WANTED FOR THE ALBERTA CANOLA PRODUCERS COMMISSION

The Alberta Canola Producers Commission (ACPC) is seeking four canola growers to serve as Directors. Directors are needed for **regions 2, 5, 8 and 11** this year.

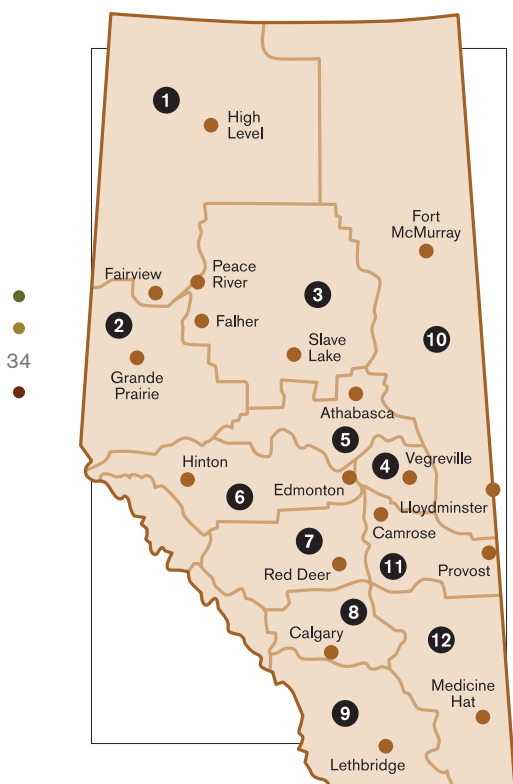
Alberta is divided into 12 regions, and each region elects a director to represent the growers of that region. The Board of Directors meet as a whole four times each year. The Board is guided in its decisions by the recommendations from four committees: Agronomic Research, Market Development, Grower Relations and Extension, and Administration.

### Who may become a director of ACPC?

Anyone who has paid the ACPC a service charge on canola sold since August 1, 2009 is an eligible producer and can stand for election as a Director. An eligible producer can be an individual, corporation, partnership or organization. Eligible producers must produce canola within the defined region in order to be nominated, but do not have to reside within the region. For detailed descriptions about the ACPC regions where elections are being held visit [www.canola.ab.ca](http://www.canola.ab.ca) or call the ACPC office at 1-800-551-6652.

Nominations for the position of Director must be filed in writing at the ACPC office, #170, 14315-118 Avenue, Edmonton, Alberta, T5L 4S6, or by fax 780-451-6933 on or before October 31, 2011.

For more information, contact Ward Toma, ACPC General Manager at 1-800-551-6652 or email [ward.toma@canola.ab.ca](mailto:ward.toma@canola.ab.ca).



## GET THE CLOSING CANOLA PRICES BY TWITTER OR TEXT

In July, ACPC launched a new **@ACPCgrainprices** twitter account that delivers the closing canola prices from ICE Futures Canada every day.

Twitter users simply need to follow **@ACPCgrainprices**. If you would like to receive the closing grain prices via text message simply text **follow ACPCgrainprices to 21212**. There is no charge for the service, but standard text messaging services will apply.

ACPC also has a separate **@AlbertaCanola** twitter account that provides news and event updates. To receive those updates by text message, text **follow AlbertaCanola to 21212**. Again, text message charges will apply.

**Grain Prices**

brought to you by  
**ALBERTA Canola**  
Producers Commission



twitter





## COMBINE CLINIC VIDEOS

Almost 400 growers attended the Combine Performance Clinic held in Westlock on July 18 and 19, 2011. The event was organized by the Canola Council of Canada and co-hosted by the Alberta Canola Producers Commission.

Each day started with Les Hill from the Prairie Agricultural Machinery Institute (PAMI) giving a detailed presentation on how to reduce combine losses. Participants then spent the afternoon with representatives from the participating combine manufacturers who provided additional information specific to their combines.

If you missed the clinic you can visit [www.youtube.com/albertacanola](http://www.youtube.com/albertacanola) and watch an interview with Les Hill as he covers his top eight tips for reducing combine losses.

There are also interviews with each of the five combine manufacturers that helped make the combine clinic a huge success:

- Case IH
- Claas
- John Deere
- Massey Ferguson
- New Holland ●



## WHAT IS A CANOLA GUY DOING AT A DAIRY SEMINAR IN CHINA?



By Ward Toma, General Manager  
Alberta Canola Producers Commission

Why is a canola guy at a dairy seminar? My answer, that milk is another great product produced by canola, surprised my dairy industry colleague. He thought cows produced milk.

Well okay, cows do produce milk; but cows that munch on canola meal produce more milk than cows that don't. The Canola Council of Canada (CCC) identified the opportunity of the growing Chinese dairy industry and organized feeding trials at five Chinese dairies to gain a foothold in this market. The five dairies participating in the field studies: Sanyuan, Mengniu, Yili, Bright and Weigang represent over 70 percent of the milk production in China. The results were part of the Dairy Nutrition and Genetics Workshop coordinated by Alberta Agriculture and Rural Development (ARD) in Beijing and Hohhot, Inner Mongolia this past May that I attended on behalf of ACPC.

The results of the studies were presented by Dr. Ruojun Wang, CCC's representative in China along with Professor Han of Nanjing Agricultural University and Professor Sumei of Inner Mongolia Agricultural University. Some of the results of the trials included increased milk production, feed cost savings, or performance that equalled cows fed soybean meal-based diets. In two of the trials, the replacement of soybean meal with canola meal resulted in an average of one kilogram added milk production. Another study provided a feed cost savings of 0.85 yuan per cow per day, equalling over \$1 million CDN per year when applied to the overall production system. With these trial results many of the farms are now purchasing and utilizing canola meal as part of their feed formulas.

In addition to ACPC, other speakers included Dr. Masahito Oba, Assistant Professor of Dairy Nutrition at the University of Alberta, and Les Nernberg, Canola Meal Manager for the Canola Council of Canada. The workshop was well attended with over 100 Chinese dairy nutritionists and dairy farm managers.

The ACPC greatly appreciates the invitation from ARD to participate in the seminar and the work of the CCC in helping the canola industry gain access to the Chinese demand for our product. ●

# SKreport



## EXECUTIVE DIRECTOR'S DESK

Welcome back to *Canola Digest*. The last time *Digest* arrived in your mailbox, plans for seeding were underway even though the province was blanketed in snow and the fear of more spring precipitation was on everyone's mind. The spring was indeed challenging. Many parts of Saskatchewan had less precipitation than most years, and the southeast saw reductions in acres planted due to excessive moisture and flooding. It is our hope that the warmth of summer and an extended fall will bode well for the harvesting of the acres that were seeded.



*Catherine Folkersen*  
SaskCanola

At SaskCanola the crop year end (July 31) finished on a positive note. The new generation canola variety trials were seeded this spring with support from the four western canola producer groups and participation by Bayer CropScience, BrettYoung Seeds, Canterra Seeds, Cargill, Dow AgroSciences, FP Genetics, Monsanto, SeCan and Viterra. New popcorn bags featuring heart-healthy canola oil messaging were unveiled at Mosaic Stadium. SaskCanola spent time in rural and urban schools teaching about canola, its healthy oil and role as an environmentally responsible farm crop.

Our office also welcomed Tracy Jones as the new Policy Manager. As all farmers know, many factors create profitability in farming – a solid research agenda, proactive market development, clear communication with consumers and of course understanding how agriculture policy affects farmers. To ensure policy options that are good for farmers get discussed by all levels of government, Tracy will manage emerging issues and respond with ideas, suggestions and solutions to issues facing Saskatchewan canola growers.

Usually at this time of year SaskCanola puts out the call for interested registered producers to run in the annual election. When this issue was going to press we were waiting for changes to the Canola Development Plan Regulations that would allow for an election *every second year*. Chair Brett Halstead stated “the cost of running an election annually is significant and rather than electing two new members every year, the organization will run an election every second year and elect four directors to the board.” The board will also expand to eight directors from six. By the time you read this we may have the new regulations in place – check our website for the announcement of this change to your canola organization.

We welcome your input so drop us a line at [info@saskcanola.com](mailto:info@saskcanola.com).

Have a safe and successful harvest.

Sincerely,



Catherine Folkersen,  
Executive Director

## SASKCANOLA WELCOMES TRACY JONES TO THE NEW POSITION OF POLICY MANAGER



Raised on a mixed farm near Tilston, Manitoba, Tracy received her Bachelor of Science in Agribusiness from the University of Manitoba. Prior to joining SaskCanola in June 2011, she worked as an Agri-Industry Development Officer with the Agriculture and Food Council of Alberta. Commenting on her new role with SaskCanola, Tracy stated, “This is a very exciting time to be working in the agriculture sector, especially the canola industry. Crop prices are strong while research and innovation is improving efficiency for producers; however there are still many complex issues that impact farmers. I look forward to working with our producers as we shape the new policy portfolio for SaskCanola.” ●



## FRANCK AND KARI GROENEWEG NAMED SASKATCHEWAN'S OUTSTANDING YOUNG FARMERS FOR 2011

SaskCanola congratulates Franck and Kari Groeneweg on being named Saskatchewan's Outstanding Young Farmers for 2011. Franck is a member of the SaskCanola Board and serves as the Chair of the Research Committee.

Franck and Kari will compete in Canada's Outstanding Young Farmers 2011 national event to be held in Brandon, Manitoba, November 15 to 20, 2011. We wish them all the best.

*The following is an excerpt from the media release issued by Canada's Outstanding Young Farmers Program:*

Big dreams, international connections and business planning all contribute to the success of Franck and Kari Groeneweg's farm business, and are behind the Edgeley couple's recognition as Saskatchewan's Outstanding Young Farmers (OYF) for 2011. The Groenewegs were chosen at a banquet held June 24th during the recent Western Canada Farm Progress Show in Regina.

As a boy growing up on a farm in France, Franck Groeneweg dreamed of owning his own large farm someday. After gaining farm experience in the United States, starting and selling a successful tractor parts business, and meeting and marrying his Western Canadian wife Kari, Franck was well on his way to realizing his dream. In 2002, they purchased land in Edgeley, Saskatchewan, the beginning of what would grow to be their 9,000 acre grain farm, Green Atlantic Farms.

"Franck and Kari demonstrate the drive and determination that feeds Canada's agricultural industry," says Derek Janzen, 1st Vice President, West, with Canada's OYF program. "Innovation and efficiency is top of mind, and they balance their successful farm business with a focus on their family and community. We are fortunate to welcome the Groenewegs to the OYF alumni."

Franck and Kari have four children – Luke (7), Julia (5), Emma (3) and Solange (1). ●



## MOSAIC STADIUM 'POPS' WITH CANOLA OIL!

Through SaskCanola's partnership with the Saskatchewan Roughriders, Mosaic Stadium changed its popcorn oil and topping to heart-healthy canola oil!

To celebrate this change, SaskCanola and the Riders were pleased to introduce a Canola/Rider popcorn bag which was launched at the SaskCanola Game Day on July 9, 2011.

"The change to canola oil at Mosaic Stadium reflects our proud partnership with the Riders and our commitment to promote healthy lifestyles, especially for all of Riderville!" said Brett Halstead, Chair of SaskCanola. "The development of a special popcorn bag helps further the 'Kickoff to Good Health' campaign we have with the team to inform consumers and Rider fans alike about the health and nutrition benefits of the "number 1" heart-healthy oil...canola oil."

The new popcorn bag featuring Rider players Chris Getzlaf, Shomari Williams and Weston Dressler carries the health and nutritional benefits of canola oil. It will be used throughout the 2011 football season at Mosaic Stadium concessions.

Jim Hopson, Rider President/CEO spoke to producer guests at the Game Day event stating that he wouldn't be surprised if fans take the unique popcorn bag home once the contents are gone.

"It has been great to work with SaskCanola as a partner over the past two seasons to bring awareness about the nutritional and health benefits of canola oil to our fans," says Hopson. "We needed to take that to heart ourselves and have canola products used at our stadium." ●

# MBreport



## ARE YOU A LEADER?

Interested in the future of canola and the issues of the industry? The Manitoba Canola Growers Association (MCGA) is seeking members to stand for election to the Board of Directors. This is a great way to get involved with an organization that is at the cutting edge of the canola industry. MCGA oversees the distribution of research funds, promotes Canadian canola and represents canola growers in industry matters.

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Directors represent all canola growers in Manitoba and direct the operations and programs of MCGA. Each Director attends regular meetings of the Board, committee meetings and canola-related functions as required.

Eight members from around the province are elected to the MCGA Board. Four members are elected as Directors every two years and serve a term of four years. Directors can continue to serve on this Board for three consecutive terms (for a total of 12 years).

An eligible member is a member who has paid an MCGA canola check-off deduction and not asked for a refund. The returning officer will receive a list of members as of July 31 of the previous fiscal year to determine the eligibility of the member.

Nominations should be submitted to the main business office, 400-167 Lombard Avenue, Winnipeg, R3B 0T6, on or after October 15 and not later than 4:30 pm on October 31. Nomination forms must be signed by six eligible MCGA members and must be accompanied by a short biography (limited to 150 words or less).

Mail-in ballots will be mailed out by November 22, 2011, and must be returned on or before December 12, 2011. If less than five nominations for Director are received by 4:30 pm October 31, these nominees will be deemed elected by acclamation. New Directors will assume their responsibilities following the Annual General Meeting (date and location to be announced shortly).

If you are interested in running for Director please call Bill Ross at 204-982-2120 or one of the election committee members: Brian Chorney 204-482-4997, Wilfred Harder 204-746-8005 or Ernie Sirski 204-638-1833. The new bylaws outlining the election of Directors and the nomination form can be found on our website [www.mcgacanola.org](http://www.mcgacanola.org).

## ON THE ROAD TO THE CULINARY OLYMPICS

By Shel Zolkewich

Being part of a team is a wonderful thing. But being part of a team where food is the focus could be the most wonderful thing of all. Just ask members of Culinary Team Manitoba. The nine-member team, along with seven coaches, can regularly be found at foodie events working to build Manitoba's reputation as a destination for fine food.

Earlier this year, MCGA joined the team in a sponsorship role to encourage its members to explore the culinary latitude of canola oil.

In October 2012, six members of Culinary Team Manitoba will head to Erfurt, Germany to compete in the Internationale Kochkunst Ausstellung, a chef competition commonly called the World Culinary Olympics. Held every four years, it's the largest and most traditional culinary event of its kind.

Chef Mary-Jane Feeke, pastry chef for Culinary Team Manitoba and owner of Benjamin's Gourmet Foods in Selkirk, said fundraising and practice sessions are in full swing for next year's big event. "This is a vital part of keeping local chefs current with the world's food trends as well as a way to showcase what Manitoba and Canada have to offer in product and chef talent," she says. The road to the Culinary Olympics provides a perfect opportunity for Manitoba's top chefs to use canola as their fat of choice as they test and tweak recipes and methods over the next year.

Since the relationship between MCGA and Culinary Team Manitoba began in January, members of both teams have been sharing their love of food. Members of the culinary team have joined MCGA at food demonstrations, tastings and events throughout the province including the Red River Exhibition, Ag in the City held at The Forks in Winnipeg and the opening of the Manitoba Canola Growers Culinary Theatre at Assiniboine Community College in Brandon.

To keep up with Culinary Team Manitoba and learn more about its members, visit [www.culinaryteammanitoba.com](http://www.culinaryteammanitoba.com).

*Chef Mary Jane Feeke, pastry chef  
for Culinary Team Manitoba.*





## VROOM VROOM! CANOLA-FUELED JET CAR HEATS UP GIMLI DRAGWAY

By Claudine Gervais

You're at a racetrack, so you anticipate it will be loud. But as a first-time visitor you don't really know what loud is until you feel the revving of a jet engine making your entire body vibrate with sound. Then you see the flame shoot out from the back of the racecar, as bright as the field of canola where the fuel for the powerful engine began.

Kevin Therres is the driver of the *Prairie Gold*, a racer at the Gimli Dragway in Gimli, Manitoba on a hot Saturday in July. Therres and wife Gwen, who head up the Prairieland Motorsports crew, are from Humboldt, Saskatchewan. It makes sense that a boy who grew up on the Prairies and who has raced since the age of 16

is behind the wheel of a racecar fueled by a locally-grown crop.

The *Prairie Gold* is fueled by biodiesel, made from 100 percent canola. It is the only one of its kind in North America. Known as a "funny car," the vehicle has a one-piece fibreglass or carbon fibre body – in the case of the *Prairie Gold*, a Corvette. It doesn't have a door but lifts and pivots over the frame of the vehicle and its J60 Pratt & Whitney jet engine.

People often ask Therres if fuel made from 100 percent canola really works – and he tells them the *Prairie Gold* can run a quarter mile in 6.3 seconds at 254 miles per hour (409 km/hr). It burns approximately 24 gallons of biodiesel per run. The crew travels with 250 gallons of

the Milligan Bio-Tech biodiesel, enough for 2,500 miles.

Nothing goes to waste in the making of the fuel, as processing the non-food grade canola results in byproducts including glycerin and livestock feed ingredients. It burns cleaner than traditional fossil fuels, resulting in less engine wear.

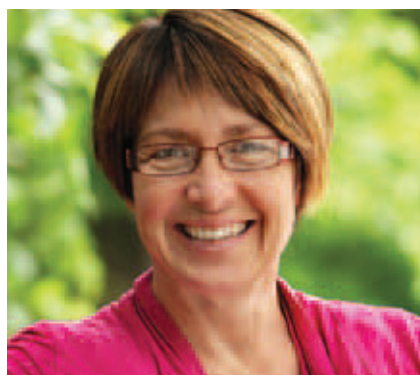
Ed Rempel, vice president of the MCGA, one of the sponsors of the *Prairie Gold*, says the track is a great place to showcase canola biodiesel. "Nothing produces excitement like a 7,500 horsepower jet-engine powered dragster going 250 miles per hour," says Rempel. "Canola producers know what biodiesel can do, but this showcases it to a whole new audience." ●



## MEET OUR MEMBER RELATIONS COORDINATOR

As the new Member Relations Coordinator for MCGA, I am excited about meeting as many of our canola growers as I can over the next year. These are exciting times in the canola industry and as growers we are the foundation for the success we are experiencing. I look forward to sharing with you all the amazing things that MCGA is doing for the growers of Manitoba.

Roberta Galbraith can be reached at galbraithr@mcgacanola.org or by phone at 204-805-1609. ●



Visit our fresh new website at [www.mcgacanola.org](http://www.mcgacanola.org) and keep it bookmarked for all the latest news!



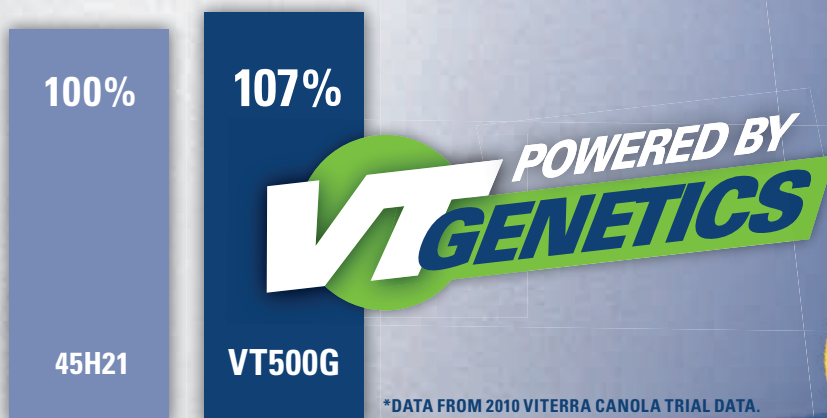
# VT500G

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Viterra's big yielding GENRR canola hybrid, **VT500G**, is the direct result of our own robust breeding program. The prefix **VT** means that this hybrid is bred by Viterra with the exclusive science and technology of **VT Genetics**. With VT500G you get the power of an elite performer that stands strong and delivers big yields. Visit [seed.viterra.ca](http://seed.viterra.ca) to find out more.

Watch for the 2011 Viterra Canola Trial Data available this fall.

### YIELD PERFORMANCE



\*DATA FROM 2010 VITERRA CANOLA TRIAL DATA.



**WHAT IT TAKES**  
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# THINKING OUTSIDE THE CLASSROOM

By Clare Pierson

Student teams compete in inaugural Heart-Healthy Product Development Competition.

Imagine yourself as a university student with a full class schedule, extracurricular activities and, of course, a social life. Now, add a food product development competition to your to-do list – a competition that will require months of trial and error testing, teamwork, long hours and an extensive project proposal.

Impressive? Inspirational? Motivating? Answer: All of the above and exactly what nine student teams from around the U.S. tackled for the inaugural Institute of Food Technologists (IFT), IFT Student Association (IFTSA) and CanolaInfo Heart-Healthy Product Development Competition this year. The top three finalist teams then had to present their innovative creations at IFT's Wellness 11 Conference, March 23 and 24, 2011 in Rosemont, Illinois, including posters, oral presentations, and taste tests for the judges. The students had to give an overview of their product and describe its nutritional value, sensory evaluation, safety information, sustainability and marketability.

The goal of this competition was to showcase how the food industry can position itself to help consumers comply with the *Dietary Guidelines for Americans 2010*, including less than 10 percent of total calories from saturated fat. Students were asked to create heart-healthy food products low in saturated fat, free of *trans* fat and made with canola oil.

"We know the food industry is striving to develop new products that meet consumer demand for healthier foods, so the competition showcased how canola oil can be a solution to reduce both saturated and *trans* fats," said Shaunda Durance-Tod, Manager of CanolaInfo, which established and sponsored the contest.

## BEST IN SHOW

Winning first place was a three-member graduate student team from Louisiana State University (LSU) with their product Ze-Ti, a shelf-stable bubble tea, which is not currently available as a pre-packaged product.



*Ze-Ti bubble tea*

*FruiTeeze frozen dessert*

*HeartVest chicken patty*

Tapioca pearls were coated with canola oil to keep them fresh, mixed with mango purée and placed in a separate compartment at the top of the drink for stirring into green tea just before drinking. The product was high in vitamin C and potassium, and low in fat and sodium. Ze-Ti was pitched as retailing for \$3 with a shelf life of 70 days. It would be marketed as a grab-and-go, vegan- and lactose-friendly drink that would appeal to generations X and Y as part of a "zen" lifestyle. "It's Bubble-Tea-licious!" was the catchy slogan the team put forward as the basis of its marketing campaign.

"The competition was challenging, taking into account other factors that might not be our expertise such as marketing. Everyone on the team did a great job of getting out of their comfort zone and doing their research in order to have a more complete view of the product – from idea to marketing strategy," said Adriana Soto, team chair from LSU's Department of Food Science.

continued on page 42

“Our ability as a team to use each person’s strengths and balance out their weaknesses was essential,” added Darryl Holliday, LSU team member. “I feel we won because we were successful in our concept and really believed in our product.”

The winning LSU team received \$3,500 and complimentary registration to the 2011 IFT Annual Meeting & Food Expo in New Orleans.

The second place team of six from Rutgers University created HeartVest, a frozen chicken patty made with vegetables, fruit, whole grains and canola oil, with the idea that eating it would be to “invest in the heart.” “It was a good feeling to get the right ingredients together after much trial and error,” said Malathi Srilakshmi Vakkalanka, Rutgers team chair.

This graduate student team received \$2,500 for winning second place. Team members said they worked on their product for three to four months, mostly at night after a full day of classes, and even admitted to working on their product on New Year’s Eve. Now that’s dedication!

The third place undergraduate duo from Texas Tech presented FruiTeeze, a banana purée and chocolate frozen dessert, using canola oil for a smooth texture, as a healthier alternative to ice cream. The team said the product’s mouthfeel, sweet flavour and nutrient-dense components would appeal to the dessert-loving consumer interested in a better-for-you option.

The twosome, who received \$1,000 for third place, faced a significant challenge in transporting their frozen dessert from Texas to Chicago. Even fully equipped with dry ice and the right packaging, major flight delays posed problems. “In the real world, we’d be able to use temperature-controlled trucks,” noted Emily Wolter, Texas Tech team member. Still, the judges were impressed with the duo’s understanding of supply chain management and the delicious taste of FruiTeeze.

To see a video about the 2011 contest, go to [www.canolainfo.org/industry/index.php](http://www.canolainfo.org/industry/index.php).

## HANDS-ON LEARNING

IFTSA President-Elect Matt Cael said a number of factors contributed to a surprising level of interest for the brand new competition. “It allowed students to practice and use skills they’re learning in the lab,” he said. “Plus it gave a real-life situation to contestants, which had them follow strict dietary and technical guidelines. It was as if a customer came to them for product development in the real world and gave technical specifications.”

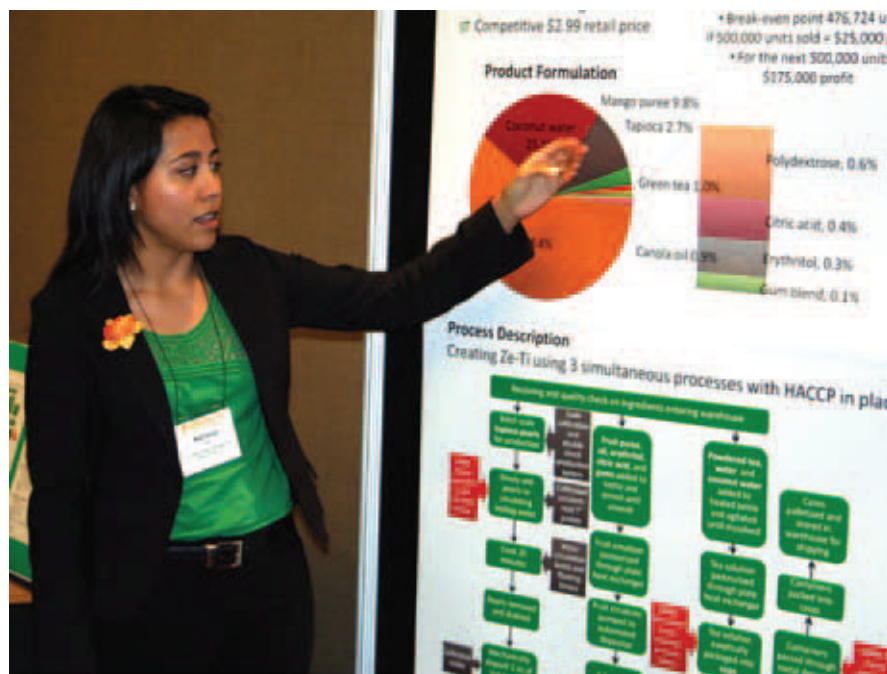
The judges and competitors were also extremely pleased with the participation. “I was thrilled with the response and ingenuity of the students,” said Marilyn Schorin, Ph.D., R.D., judge and IFT board member. “They not only incorporated healthful canola oil, they added whole grains, vegetables, fruit and legumes into an imaginative variety of snacks, entrées, beverages and desserts.”

Roger Clemens, Dr.P.H., judge and incoming IFT president, thinks the

contest will bloom, perhaps even garnering twice as many applicants next year as word continues to spread. “Students had to overcome technical difficulties with product development while addressing sustainability, marketing, supply chain and transportation issues. It was really a practical living experience and hopefully one that will last them a lifetime as they go into the dynamics of food science and nutrition to develop new products for better health.”

“This was a wonderful opportunity for CanolaInfo as a sponsor because it gave the students a chance to showcase their creativity and to translate the *Dietary Guidelines for Americans 2010* into heart-healthy products that we could actually see on grocery store shelves,” added Angela Dansby, judge and CanolaInfo Communications Manager. ●

Clare Pierson is a communications specialist for CanolaInfo in Chicago, Illinois.



Adriana Soto, chair of the winning Louisiana State University team, describes a poster presentation of Ze-Ti bubble tea to judges.



A waitress named Claire, wearing a light blue polo shirt and a white apron, is leaning over a diner counter talking to a man in overalls. The background shows a busy diner with other patrons and shelves.

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and beans.”

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