CANOLA digest

THE SOURCE FOR CANADA'S CANOLA GROWERS

JANUARY 2013

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CANOLAdigest

Canada's canola industry thrives on research and innovation. This issue highlights research on beneficial insects, a study on optimizing inputs, and how the industry is working to ensure timely access to the latest canola innovations.

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Cover: Lacewing larvae are valuable beneficial insects that feed on lygus nymphs and aphids in canola crops.

Photo by Greg Sekulic.

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INPUTS, BUGS AND TWITTER

By Debbie Belanger

Canada's average canola yields for 2012 were 27.7 bushels per acre, down 19.2 percent from 2011. That's according to Statistics Canada's November 2012 report. It's pretty disappointing. That's why Canola Council of Canada (CCC) agronomists put their heads together with other experts to come up with the "Top Yield Robbers of 2012". What were the top four and what can we learn from them? Check out the "Diagnostic Dilemmas" article on page 25.

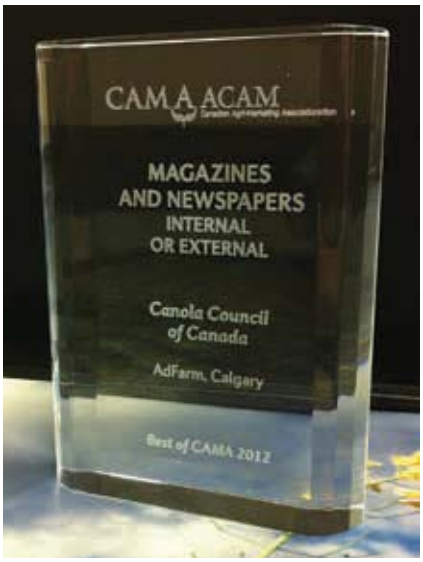
Actually, this edition of *Canola Digest* is packed with some of the latest research and information on canola agronomy. For instance, *Canola Watch* editor Jay Whetter offers a fascinating look at the top canola growing regions in each Prairie province, and how growers in these regions have learned to push their land to reach its potential. As CCC agronomist Greg Sekulic says in the article "Pushing Yields" (page 16), "We hope to see all growers optimize the yield potential their land provides."

Recent research is shedding new light on the effect of adding and removing inputs to both empty and full input systems. In the article "How Do Inputs Add Up?" on page 13 read about the findings of this four year canola-barley cropping sequence study, and how this could apply to your operation.

This edition is packed with some of the latest research and information on canola agronomy.

Another enlightening article, on page 6, explains how beneficial insects can put the bite on crop pests. While there can be a lag time before beneficial populations rise enough to control insect pests, this article points out the advantages of encouraging and preserving beneficial insect populations.

Do you tweet? Not about what you're having for lunch, but about things like getting pests identified or asking agronomy questions pertinent to your farm. In our farmer panel this month (page 20) five growers discuss why they jumped on Twitter. As Taylor Snyder from Glendon, Alberta says, "Advanced growers, the ones pushing technology in the field to get top-end yields, are also on Twitter. Twitter gives me a chance to communicate with these growers."



*For the second year in a row, **Canola Digest** took top honours in the magazine category at the Canadian Agri-Marketing Association awards gala, held in Saskatoon in November 2012.*

On a related topic, guest contributor Shaun Haney offers his top picks for the best apps built specifically for farmers in Western Canada. Check his suggestions in "Information at Your Fingertips" on page 34.

I hope you enjoy this edition of *Digest*. Happy reading and all the best in 2013!

Letters and comments are welcome: editor@canoladigest.ca

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By Bruce Barker

BENEFICIALS PUT THE BITE ON CROP PESTS

Savings are hard to measure, but can be in the millions of dollars.

Beneficial insects, predators and parasitoids can keep many insect levels in check, and can come riding to the rescue during insect outbreaks. While there can be a lag time before beneficial populations rise enough to control insect pests, every effort should be made to encourage and preserve beneficial insect populations. Diamondback moth is a case in point.

Lloyd Dosdall, professor at the University of Alberta (U of A) looked at historic diamondback moth outbreaks in Alberta since 1995. Two large outbreaks, in 1995 and 2001, resulted in millions of hectares of canola being sprayed, while large outbreaks in 2003 and 2005 resulted in relatively few acres being sprayed – saving canola farmers millions of dollars.

"We sample canola crops for beneficial insects every year. I truly believe that the difference in 2003 and 2005 was *Diadegma*, the parasitic wasp that feeds on diamondback moth," said Dosdall.

Diadegma insulare is a small (6 mm long) ichneumonid wasp with reddish-brown legs and abdomen. It is a natural pest of diamondback moth, but is not known to overwinter in Canada. In 2003 and 2005, *D. insulare* arrived on winds from southern North America at the same time as its host, the diamondback moth. In 2005, *D. insulare* were especially plentiful. There are up to four generations per year, corresponding to the number of diamondback moth generations on the Prairies.

Diamondback moth larvae are parasitized by *D. insulare*. After mating, the female *D. insulare* lays one egg into a diamondback moth larva. It pupates inside the cocoon made by the mature diamondback moth larva, replacing the host pupal covering with its own cocoon.

D. insulare also helps reduce the feeding damage by diamondback moth. Research at the U of A showed that parasitized larvae of diamondback moth consumed less foliage than their non-parasitized counterparts.

Year	Hectares sprayed	Cost of spraying
1995	1.25 million	$42 million
2001	2.10 million	$86 million
2003	200,000	$4 million
2005	150,000	$3.5 million

Source: Dosdall, ACPC Webinar, 2010

MANY PESTS AND MANY BENEFICIAL INSECTS

While *D. insulare* provides a vivid example of how beneficial insects can contribute to profitable canola production, it is one of many beneficial insects that are friends to canola growers. Natural enemies of pests include predators and parasitoids, which can feed on pests from within, or attached to their skin.

Hector Carcamo, a research scientist at Agriculture and Agri-Food Canada (AAFC) at Lethbridge, Alberta says there are many different generalist predators in the crop canopy including orb weaving, flower and jumping spiders (Tetragnathidae, Philodromidae and Salticidae), the well known aphid-feeding ladybird beetles and lacewings, nabid bugs, pirate bugs, syrphid and chloropid flies among others. He says that like the ground predators, those on the foliage are usually opportunistic feeders preying on a variety of pests and other beneficials.

Hundreds of species of spiders and ground beetles (Carabidae) are known to occur on the Prairie grassland ecoregion. Rove beetles (Staphylinidae) have even more species than ground beetles in North America.

The natural parasitoid, *Aleochara bilineata*, a specialized rove beetle, is the dominant natural enemy of root maggots in canola. Adults of *A. bilineata* are voracious eaters of root maggot eggs and larvae. Under optimum conditions, a single pair of *A. bilineata* adults destroys 1,200 root maggot eggs and 128 larvae in their lifetime. Larvae of *A. bilineata* also destroy developing pupae of root maggots.

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*In Western Canada, the parasitoid **Diadegma insulare** is often responsible for terminating outbreaks of diamondback moth (Photo: Lloyd Dosdall)*

*Pupae of **Diadegma** (Photo: Lloyd Dosdall)*

Flower spider consuming a lygus bug (Photo: Henri Goulet)

*Wasp (**Peristenus digoneutis**) attacking a lygus nymph (Photo: Scott Bauer, USDA-ARS)*

***Aleochara bilineata**, a specialized rove beetle, is the dominant natural enemy of root maggots in canola. On average, one adult consumes 23 eggs or 2.6 larvae per day.*

Lacewing larvae eat lygus nymphs and aphids in canola crops. The larvae can consume seven lygus nymphs in a 24 hour period.

Examples of Beneficial Insect Parasitoids Found in Prairie Crops

Order	Family	Species	Host Pest	Crop
Hymenoptera (wasps)	Ichneumonidae	*Diadegma spp.*	Diamondback moth	Crucifers
		Banchus flavescens	Bertha armyworm	Crucifers
	Myrmiridae	*Anaphes iole*	Lygus bugs	Alfalfa
	Braconidae	*Peristenus species*		
Diptera (flies)	Tachinidae	*Athrycia cinerea*	Bertha armyworm	Canola
Coleoptera (beetles)	Staphylinidae	*Aleochara bilineata*	Cabbage root maggot	Crucifers
		A. verna	Cabbage root maggot	Crucifers

Ladybird beetles (larvae shown here) are voracious predators in cropping systems, feeding primarily on aphids, insect eggs and insect larvae.

***D. insulare** provides a vivid example of how beneficial insects can contribute to profitable canola production.*

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Carabid beetles also feed on juvenile root maggots, and many other species of agricultural pests. Research found that carabid beetles reduced root maggot egg populations by 50 percent. They also have been found to feed on wheat midge, diamondback larvae, pea leaf weevil eggs and cutworms.

A recent study near Lethbridge using cages that restricted access to foliage and ground predators in canola showed that diamondback moth larval mortality is increased by the action of both ground dwelling predators and foliage predators. Carabid beetles, wolf spiders and daddy-long-legs (Opiliones) were the most common predators.

"Overall the combined role of the ground and foliage generalist predators is considered to be instrumental in preventing some herbivorous insects from reaching pest status in our Prairie crops and could be enhanced by more conservation farming practices," says Carcamo.

GIVE BENEFICIALS A HELPING HAND

Greg Sekulic, an agronomy specialist with the Canola Council of Canada for the Peace region says that one of the most important messages for helping beneficials is to only spray insecticides when it is absolutely critical. Research has established economic thresholds for some insect pests, where the cost of the insecticide and application is offset by the reduction in crop damage.

"The economic threshold is not a profitable number. It is where you break even on controlling the insect pest," says Sekulic. "I am disturbed by the amount of sub-threshold spraying that was done in 2012. It is economically wasteful, but also very damaging on beneficial insect populations."

Economic thresholds for lygus bug and bertha armyworm in canola are well researched, and have very well established economic thresholds based on peer-reviewed research. The thresholds for lygus bug are currently being updated by Carcamo and Jennifer Otani

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TIGHT CANOLA ROTATIONS INCREASE ROOT MAGGOT DAMAGE

In Western Canada, the crucifer-feeding *Delia* root maggot complex is most common in northern and central Alberta, and in the Parkland regions of Saskatchewan and Manitoba. While the degree of damage is historically related to environmental factors, new research at AAFC found that tight canola rotations resulted in greater root maggot infestation and higher yield losses.

"Crop rotation had more impact on root maggot severity than it did on yield loss, but we did also see yield loss when canola was grown in tight rotations," says research scientist Neil Harker with AAFC at Lacombe, Alberta. He collaborated with researchers Lloyd Dosdall of the University of Alberta, fellow AAFC researchers John O'Donovan, Bob Blackshaw, Yantai Gan and Eric Johnson, and University of Saskatchewan researcher Randy Kutcher.

The three-year research trial was conducted in Western Canada from 2008 through 2010 at five locations including Lacombe and Lethbridge, Alberta, and Melfort, Swift Current and Scott, Saskatchewan. Crop rotations included three years of continuous canola, canola-wheat-canola, canola-peas-barley, wheat-canola-wheat, barley-canola-peas and peas-barley-canola. Two canola varieties, one Liberty Link and one Roundup Ready, were assessed.

The research found that root maggot damage increased as the study progressed for the continuous canola rotations. After three years, in 2010, the continuous Roundup Ready variety had the highest mean root maggot damage rating at 2.67, followed by the continuous Liberty Link plots at 2.33.

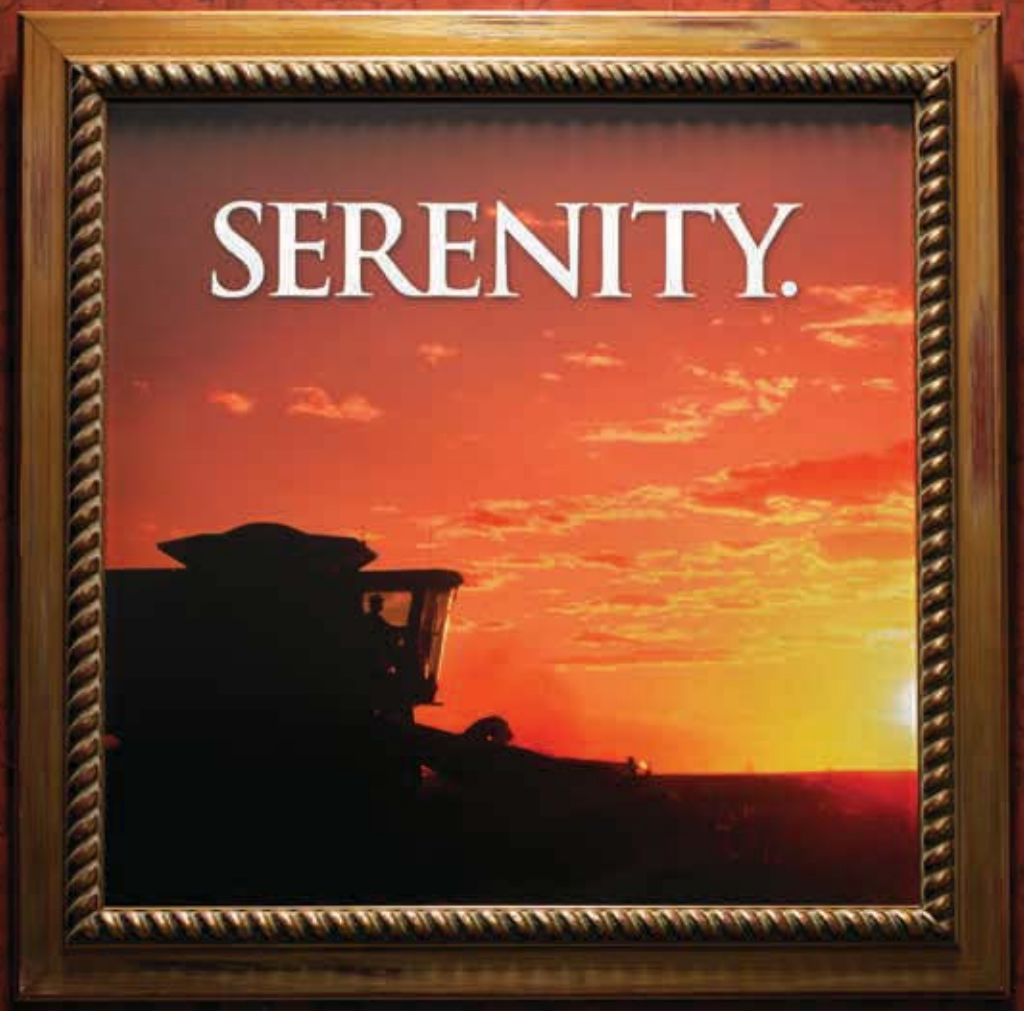
The canola-wheat-canola rotation reduced root maggot damage ratings to 2.29 for the Liberty Link canola and to 2.23 for the Roundup Ready canola in 2010. The peas-barley-canola rotation had further reductions in root maggot damage ratings.

Crop rotation	2010 Mean Root Maggot Damage*	2010 Crop Yield (tonnes/ha)
LL-LL-LL	2.33	2.57
RR-RR-RR	2.67	2.56
LL-wheat-LL	2.29	3.01
RR-wheat-RR	2.23	2.84
Peas-barley-LL	2.04	3.47
Peas-barley-RR	2.27	3.12
LSD (0.05)	0.29	0.44

*Based on 0 to 5 root damage rating scale.

With tighter rotations, yield was also lower. Overall, the yield reductions in continuous canola averaged 0.3 to 0.4 tonnes/ha. (5.36 to 7.14 bu./ac.). Using average 2010 canola crop prices of $461/tonne ($10.45/bu.), this amounts to approximately $138 to $184/ha. ($56.01 to $74.61/ac.). Harker explains that some of the yield loss with tighter rotations could have been from increased root maggot damage, but also from other factors such as disease.

"Yield was substantially better with the three-year rotation," says Harker. "But the most common rotation is now a canola-wheat-canola rotation. From this research, I don't know that you can say a one-year rotation away from canola is good enough to reduce root maggot damage. We know from other research that a longer rotation helps reduce disease as well." ●



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with AAFC, to reflect current canola farming practices that rely on more vigorous and higher yielding hybrid cultivars that may tolerate insects better and require even less spraying – potentially good news for beneficials.

When economic thresholds have not been grounded in peer-reviewed literature, entomologists have established nominal thresholds based on field observations and experiences in other growing areas. Spring cutworms, diamondback moth, flea beetles and cabbage seedpod weevil have nominal thresholds.

Another important consideration for minimizing insecticidal impact is timing of the application, as some parasitoid wasps are more active during the warmest and brightest portion of the day. Spraying in the early morning or in the evening can reduce their mortality. This is of particular importance to protect honey bees as well.

Targeting only a portion of the field may also be possible if the spatial distribution of the pest allows it, or if the grower can incorporate a trap crop as part of the management system to lure the pest to a certain area. Carcamo says this technique can work for the cabbage seedpod weevil. This pest can be concentrated in earlier flowering border strips of canola where it can be sprayed in an area of less than 10 percent of the field, thereby sparing the rest of the beneficials. ●

Bruce Barker is a freelance writer who specializes in agricultural production, located in Bragg Creek, Alberta.

STRIPED FLEA BEETLES ON THE MOVE

Historically, striped flea beetles were more predominant in the northern half of Alberta and the northern edges of the Parkland regions of Saskatchewan and Manitoba. Crucifer flea beetles were more common in the other regions of the Prairies. While flea beetle species predominance is still site specific, a five-year AAFC survey has found that striped flea beetles are moving south and are most common in areas of the Prairies approximately above the 51 degree latitudinal line.

Research at the University of Alberta and ongoing research at AAFC Saskatoon conducted by Dr. Bob Elliott found that striped flea beetles responded differently to the neonicotinoid insecticides found in canola seed treatments. In certain conditions, crucifer flea beetles had higher mortality than striped flea beetles. This may partially explain the shift in flea beetle species towards striped flea beetles.

"Most of the Canadian research on flea beetles in crucifer crops has been conducted on crucifer flea beetles, and our management recommendations are based on that species," says AAFC research scientist Julie Soroka at the Saskatoon Research Centre.

Soroka explains that striped flea beetles emerge earlier in the spring than do crucifer flea beetles, and will develop into the next generation earlier as well. As a result, seeding canola very early may not provide an escape from flea beetle attack. On the other hand, crops that are seeded very late may be attacked by newly emerging, new generation adult striped flea beetles instead of, or as well as, overwintered crucifer flea beetles.

Preliminary research also suggests that striped flea beetles may eat more on a per beetle basis than do crucifer flea beetles. "In our survey, the sites with high numbers of flea beetles had crucifer flea beetle as the predominant species. However, fewer numbers of striped flea beetles may eat as much as greater numbers of crucifer flea beetles," says Soroka. "It is a good thing our economic thresholds [for foliar insecticide application] are based on plant damage and not insect numbers."

What it all means is that canola growers need to continue to scout their fields, identify the species and remain vigilant in assessing feeding damage to determine economic thresholds. ●

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Striped (above) and crucifer (below) flea beetles.

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HOW DO INPUTS ADD UP?

By Heidi Dancho

A recent study proves the importance of optimizing fertilizer, herbicides and genetics to produce high and stable yields.

"When canola is properly managed, yield improving inputs – like better genetics, fertility and herbicides, are additive; they build on each other to improve yield," says Eric Johnson, weed biologist with Agriculture and Agri-Food Canada (AAFC) in Scott, Saskatchewan.

"The result is that by combining them, we produce even higher yields," confirms Stewart Brandt, former AAFC researcher and current research manager with the Northeast Agricultural Research Foundation in Melfort, Saskatchewan.

With funding through the Prairie Canola Agronomic Research Program, Johnson and Brandt led a four year canola-barley cropping sequence study to determine the effect of adding and removing inputs to both empty and full input systems. Researchers examined the impact of full and 50 percent rates of fertilizer, herbicide and seed, as well as removing fertilizer and herbicide completely, and replacing a hybrid with an open pollinated variety.

"When canola is properly managed, yield improving inputs are additive; they build on each other to improve yield."

– Eric Johnson

Canola input study at Scott, Saskatchewan shows the difference between the full input treatment plot (left) and empty input plot (right).

In addition to illustrating how inputs build on each other to improve yield, the study demonstrated the risk of input reductions on canola yield and yield variability over time.

FERTILIZER AND HERBICIDES

"The study showed that there is some opportunity for perhaps reducing fertilizer or herbicides inputs for one year without a huge impact on yield, but if you continue to do this, it definitely increases your risk and greatly reduces yields," says Johnson.

For example, the study found that while cutting fertilizer rate by 50 percent had no effect on yield in year one, it resulted in yield reductions of eight, 14 and 22 percent respectively in years two to four. Removing fertilizer completely resulted in yield reductions of 17, 23, 30 and 38 percent respectively. Eliminating herbicides did not result in lower yields in year one, however it severely reduced yield in years two to four by 31, 60 and 76 percent respectively.

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Johnson notes that they didn't see much of a yield impact from reducing fertilizer or herbicide rates in year one because these fields have been very well managed in the past. "They are primarily long term zero till fields, which likely had some build-up of mineralizable nitrogen that the canola was able to take advantage of throughout the growing season," he says. "In terms of cutting back on herbicides, growers need to keep in mind that we started with a clean field, and had optimum fertilizer rates, high plant populations and a high-yielding hybrid variety that provided good weed competition in year one."

"Since we're in a period of good prices, this is not the time for canola producers to be making any cuts on inputs," says Johnson. "You want to build your soil and try to keep your weed populations low so you could potentially have an opportunity to make a reduction if prices drop and margins become much tighter."

For Kelly Baillargeon, a canola grower near Edam, Saskatchewan, optimizing fertilizer and herbicide rates has paid off. "Every time we've done just a single pass of herbicide instead of two we've been disappointed with the results," he says. "I know some guys are putting lots of money into micronutrients and other lower returning inputs, but may end up overlooking things like weed control."

ASSESSING THE ECONOMIC IMPACT

Elwin Smith, a bioeconomist with AAFC in Lethbridge, Alberta, is currently working on an economic analysis of the input study, which he expects to be ready in mid-2013. So far, Smith reports that the financial returns are matching the yield results. For example:

- Without weed control, returns were very low or negative, and got worse over time. Other inputs could not compensate for poor weed control.
- Four-year average results showed 40 percent higher returns from planting a hybrid variety versus an open pollinated variety.
- Four-year average results showed that cutting fertilizer rates by 50 percent reduced overall returns by 20 percent.

While fertility is essential for profitable canola production, Smith also noted that, "Relative to cereal crops, weed control and genetics are more important for canola; and when canola prices are attractive, any management decisions that help improve yield will pay off even more." ●

For fertilizer, they switched to variable rate technology to maximize production. "Although we're averaging about the same or slightly more fertilizer than in the past, now we put it in the areas that have a greater yield potential, and don't worry so much about lower producing areas," says Baillargeon.

The study also found that canola production systems that optimize inputs result in the most stable yields over the years. "In the past, it's been thought that inputs actually increase a grower's economic risk but this shows that their risk is actually minimized by the use of inputs," says Johnson. "So their yields are more stable and we aren't seeing as wide a variation as we do when inputs are cut."

Eliminating herbicides from the full input system resulted in the lowest, most variable yields. "Failure to control weeds can also compromise other inputs like fertilizer," says Brandt. "This occurs because weeds will 'hoard' nutrients they don't need because that makes them more competitive."

GENETICS AND SEEDING RATES

"We did find a yield advantage from a hybrid, which supports other research," says Johnson. In this study, replacing a hybrid with an open pollinated variety reduced yields by 11, 13 and 16 percent in years two to four.

"Although we didn't find an impact from seeding rate reductions in our study,

we got a pretty good plant population established which is the most important thing," says Johnson. "There's a lot of information showing the advantage of high seeding rates so growers should be following Canola Council recommendations in terms of target plant densities."

Tiffany Martinka, the Canola Council of Canada's agronomy specialist in eastern Saskatchewan, confirms that growers want to target seven to 10 plants per square foot. "Growers need to account for thousand kernel weight when determining their seeding rates, and follow good practices to increase seed survival," she says. This includes seeding into warm soils (between five and eight degrees Celsius) and slowing down seeding speeds to ensure uniform seed depth and placement.

"Failure to control weeds can also compromise other inputs like fertilizer."

– Stuart Brandt

"We definitely started slowing down our seeding speed, and recently purchased a paralink drill which gives us better control of seeding depth and packing pressure," says Baillargeon. "Seed placement with each opener is bang on now."

For Baillargeon, higher plant populations provided an advantage when he was faced with damage from cutworms and frost. Martinka says higher plant populations are very important when dealing with these types of challenges, and the 2012 growing season really tested that. "For example, if you start with less plants you may have to lower your insect threshold since it will take less insects to do the damage," she says. "It can also take up to three weeks longer for canola to mature if you have low plant counts."

Higher plant stands can also help with weed competition. "In 2012, many areas experienced higher weed populations and winds that will have blown weed seeds around," says Martinka. "This is just another good reason to place priority on establishing a good plant population next spring." ●

Heidi Dancho is a communications consultant with Synthesis Agri-Food Network in Winnipeg, Manitoba.

PUSHING YIELDS

By Jay Whetter

This article highlights the most productive canola regions in each Prairie province, and some tips on how to push land to its full potential – regardless of soil type or season zone.

The Canola Council of Canada's plan to reach 15 million tonnes of sustained production and sales by 2015 includes a target average yield of 40.5 bu./ac. Yield stumbled a bit in 2012 for many reasons (see the *Diagnostic Dilemmas* article), but the potential is there.

Reaching this overall average will depend on the best canola growing areas exceeding 40.5 bu./ac. by a wide margin, and on growers in all regions managing each field to reach its full potential.

Individual growers will balance the potential of their land with their appetite for risk, says Greg Sekulic, CCC agronomy specialist. "In general, growers with richer land will be able to take more risks knowing that the return on investment is more likely," he says. "After all, $150 in fertilizer costs the same whether you apply it on black soil with 10 percent organic matter or brown soil with two percent organic matter, but the return on investment will not be the same."

This article looks at the top canola growing regions in each Prairie province, and how growers in these regions have learned to push their land to reach its potential. But there is a message here for all growers, no matter their land type. "We hope to see all growers optimize the yield potential that their land provides," says Sekulic. "If you average 25 bu./ac., can you push it to 30 profitably? If you average 50, can you push it to 60? It's about making the most of the acres we have."

ALBERTA, RISK ZONE 11

The top yielding area for dryland canola in Alberta, based on five-year average yields from Agriculture Financial Services Corporation (AFSC) crop insurance data, is Risk Zone 11, which goes from Ponoka to Westlock. It has a five-year (2007 to 2011) average canola yield of 38.6 bu./ac.

"If you average 25 bu./ac., can you push it to 30 profitably? If you average 50, can you push it to 60? It's about making the most of the acres we have."

– Greg Sekulic

Within Zone 11, a smaller region centered around Sturgeon County north of Edmonton stands out in Alberta's Agroclimatic Atlas as having more than 125 frost free days, longer than any other part of Zone 11. Longer seasons tend to have higher yield potential.

Steve Visscher farms near the town of Legal in Sturgeon County. He knows he's in a good area for canola – in the black soil zone, with soil organic matter ranging from 5.5 percent to over 10 percent and pH generally six to seven. They also get moisture when they need it most years, and most years they don't have extreme heat.

When asked what he does to get the most out of his land, Visscher highlights his seeding process. "We have a good drill, a John Deere 1870 with independent openers, we keep canola seeding depth at 0.5 to 0.75 inches, we seed at the right temperature – not too early, and we apply the recommended fertilizer rates," he says. "We've also been zero till for 10 years."

Visscher's fertilizer program aims to match rates and blends with yield variability from field to field and within each field. "We started easing into variable rate technology three years ago, and we'll be doing almost all our acres in 2013," he says. He has two carts for his drill – a tow between and a tow behind – so he can carry all fertilizer components separately. Everything is blended on the go, as prescribed by his variable rate maps.

Colin Bergstrom, president and precision farming consultant with Point Forward Solutions in St. Albert, Alberta, develops Visscher's variable rate prescriptions based on field electrical conductivity (EC) measurements, topography and soil tests.

"The Legal area has some of the best land within Risk Zone 11. Growers will often get canola that yields near 60 bu./ac., and they're usually disappointed with yields in the 40s," Bergstrom says. But he adds that even in that good area, localized solonetzic areas make some fields quite variable in productivity. "In those areas that only produce half a crop, we fertilize accordingly to lower the risk."

Steve Visscher (right) with his son, Dane, at the CCC Combine Clinic in Westlock in 2010. Visscher says he gets the most out of his land by seeding shallow, not seeding too early and applying fertilizer at variable rates.

SASKATCHEWAN, RISK ZONE 18

The top yielding region for canola in Saskatchewan, based on Saskatchewan Crop Insurance Corporation (SCIC) data, is Risk Zone 18, which does a big ring around Saskatoon. The next best are Zones 23, 22 and 20, all in the northwest. A quick calculation puts the 2007-11 average canola yield for Zone 18 in the range of 36 to 39 bu./ac.

Brett Galambos works with Wendland Ag in Waldheim in the R.M. of Laird (#404) in the northwest of Zone 18. The R.M. is between the North and South Saskatchewan Rivers, Canada's version of the historic Fertile Crescent of Mesopotamia – "the land between two rivers."

Galambos says rich black soil is the biggest reason for good yield potential in his area. Organic matter is four to five percent and pH is slightly acidic. They also get favourable rain for the most part, which helps even marginal land "put out just like black soil," Galambos says. Finally, he credits farm management. "Guys have caught on to the fact they've got good dirt, and they know which fields they can push harder than others."

This leads to high expectations. "If they've had a poor crop for a couple years, they start to think 'maybe I'm missing something,'" he says. "As a result, pay-per-field or pay-per-hour agronomy work has seen big growth in the area in the past five years."

Wilmer Froese farms near the village of Laird and is a Wendland client. Galambos says Froese's land is some of the best in the R.M. "We certainly have had good results," says Froese.

But even the best land in a very good R.M. has variability. "I recognize that certain fields are better than others," he says. He has one quarter that is exceptional, this year yielding almost five bu./ac. more than his others. Another on higher ground has more rocks and had lower potential. However, he's been hauling manure onto that field, which "has improved productivity a lot."

Froese credits technology, especially new varieties, for an overall rise in production. "We couldn't grow 60-bushel canola crops 10 years ago," he says.

Zero tillage and good equipment are other factors. He bought a new drill this year and took it to a nearby Hutterite Colony for leveling. "They put it on a large concrete pad and leveled the drill shank by shank. Individual runs varied by up to an inch from one to the next," he says. This is huge when you're trying to seed canola consistently at 0.5 to one inch deep.

"A neighbour came by and said, "Your canola is so even," and it's all because my drill is level," says Froese. "It cost me $1,100 but it was well worth it."

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Canola Average Yields by Prairie Province (bu./ac.)

	2008	2009	2010	2011	2012	5-year avg
Manitoba	36.9	39.9	31.4	27.8	25.9	32.4
Saskatchewan	32.5	35.2	30.9	32.9	25	31.3
Alberta	36.9	32.7	38	39	34.9	36.3
Canada	34.7	35.3	33.3	34.2	28.3	33.2

Source: Agriculture and Agri-Food Canada, Market Analysis Group

TO BEAT VOLUNTEER CANOLA,

GIVE YOUR CROPS A FIGHTING CHANCE.

The wind that blew across the Prairies in mid-September 2012 took an estimated half million tonnes of canola with it. The canola was lying in swaths, well dried down, and easily shattered in the face of winds as high as 90 kilometers per hour.

The vast amount of seed spread by that wind means volunteer canola may be a serious problem next season. In east Saskatchewan, the hardest hit area, anywhere from five to 25 bushels per acre blew away.

"A five bushel per acre loss is equal to 50 times a grower's regular seeding rate. If he targets 10 canola plants per square foot, he could see 400 to 500 plants per square foot scattered across some fields," says Jamie Denbow, Market Development Specialist, Dow AgroSciences.

Clark Brenzil, Provincial Weed Control Specialist, Saskatchewan Ministry of Agriculture, says growers in affected areas should expect much higher volunteer canola densities in 2013. "The competitive effect it will have on the crop is likely to be much greater and at an earlier growth stage than in a normal situation," he says.

There are a number of strategies growers can follow to win the battle against volunteer canola.

Start now, by documenting what fields had canola on them, where it blew, and what herbicide tolerant system it was.

"Don't put yourself in a position where three years down the road you're asking yourself what you had growing in a field. Your ability to manage around that will be severely limited. Set yourself up to succeed," Denbow suggests.

Select crops for affected fields that provide multiple broadleaf weed control options. Avoid pulses, and do not grow canola back to back. Cereals are a better choice: "Cereals are a good rotation option following canola; and within cereals there are lots of broadleaf herbicide options that will be effective on volunteer canola," Brenzil says.

Starting the spring with a burndown application in affected fields will be a must. Brenzil says, "Any weeds that come up prior to the crop are going to compete more aggressively for available resources – light, moisture, and nutrients – than weeds that come up with or after the crop."

Adds Denbow, "Most of the volunteer canola will germinate in year one, so hit it with the best preseed option available – a herbicide with both soil-active and post-emergent qualities. The residual soil activity will help control secondary flushes."

It will also be important to control volunteer canola in-crop. Brenzil recommends growers time their post-emergent herbicide application at the early growth stages of the crop and volunteer canola to ensure they control it before it has a significant impact on yield. Also pay attention to the minimum crop stage requirements when selecting and applying herbicides.

Good fertilization and a heavier seeding rate will also help. "It's going to be a bit of a race as to who comes out of the ground first. We can favour crops to win by making sure we have good side-banded fertilization in close proximity to the row so the crop accesses it first. And make sure the seed isn't pushed so deep the canola comes up ahead of the crop," Brenzil says.

Growers will need to continue to be vigilant beyond 2013. Denbow suggests growers continue choosing cereals for several years and, when you do return to canola, choose a different herbicide tolerant system.

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MANITOBA, R.M. OF LOUISE

Manitoba crop insurance provides average yield by municipality. At 45.8 bu./ac., the R.M. of Louise along the U.S. border had the top 2007 to 2011 average canola yield in the province. The R.M. of Shell River in the northwest was second at 43.8 bu./ac.

"I'm not surprised," says Joe Wallace, who farms and runs a seed plant at Crystal City in the R.M. of Louise. "The nice clay loam soil is very forgiving. In 2012, with hardly any rain all summer and 30°C average highs, we still had guys with canola at 40 bu./ac. or more."

The topography is rolling, which helps with drainage. "In 2011, with the huge floods in Manitoba, again guys around here were still getting canola yields in the 40s," he says. On Wallace's farm, soil organic matter ranges from four to six percent and pH is neutral to slightly alkaline.

Joe Wallace

"We don't skimp on anything because we know the land is going to provide a return on investment," says Wallace. They regularly apply 130 lb./ac. of actual N, and have applied up to 160, along with 30 to 35 lb. of phosphorus and "always enough" sulphur. They soil test every year, and use variable rate fertilizer application. Most nitrogen goes on as anhydrous ammonia in the fall. Not many growers in the R.M. are zero tillers, he says.

Variety choice is important. "A lot of effort goes into selecting the highest yielding variety for the area," says Wallace.

Canola does so well in the R.M. that most growers are in a two year rotation with wheat, he says. Fungicide use is also common, with some growers applying twice – early season for blackleg and again during flowering for sclerotinia stem rot. ●

Jay Whetter is communications manager with the Canola Council of Canada. He is also editor of the CCC's free Canola Watch agronomy newsletter. Go to www.canolawatch.org and find the sign up box down the right column.

DO YOU TWEET?

By Jay Whetter

Every month, more and more growers join Twitter to share ideas, get pests identified and ask agronomy questions. What makes this tool so powerful is the almost instant response you get from a community of your peers. These five growers jumped in and learned on the go what "hashtag" means, who to "follow" and how to get a point across in 140 characters or less.

TAYLOR SNYDER

Glendon, Alberta
@farmerboy9870

Taylor Snyder says Twitter is the ideal platform for sharing new ideas. "Advanced growers, the ones pushing technology in the field to get top end yields, are also on Twitter," he says. "Twitter gives me a chance to communicate with these growers."

Twitter brings the whole world of agriculture to Snyder's iPhone office. "I've had good conversations on Twitter with growers in the U.K. asking about my experience with ESN (Environmentally Smart Nitrogen), for example," he says.

Snyder uses Twitter to get advice on new varieties, and on fungicide and herbicide timing. "If I have a weed problem, an agronomist or grower on Twitter will say, 'Add some of this and it will work', then I check the label, and sure enough, it's allowed," he says.

He first got on Twitter after a presentation at Farm Tech 2011 in Edmonton. "A bunch of us got on Twitter after that day, and then we arranged to hook up again at FarmTech 2012." By spreading out and taking in different presentations at FarmTech, and then tweeting the highlights, they shared the experience and got more out of the event.

Is 140 characters enough? "You make do," he says. "It really helps you condense the message. Some of it is almost like speaking in code, but farmers can usually understand the abbreviations."

SHANE THOMAS

Rosetown, Saskatchewan
@ShaneAgronomy

Shane Thomas is an agronomist with G-Macs Ag Team. He values the instant feedback and knowledge he can get through Twitter from growers and agronomists outside his immediate area. "Many companies and agronomists are on Twitter and if you have a question or are interested in reading information from not just local, but worldwide, then you have the opportunity to take advantage of that," he says.

"One of the better decisions I have made in my career was getting into Twitter."

– Shane Thomas

For instance, when the wind came up last September, he learned through the Twitter community how yield loss compared for standing versus swathed canola. "It is very rare that anyone would straight cut canola in my area, so I could use outside knowledge to enlighten growers in my area about ideas that could potentially save them yield losses if a situation like that occurs again."

Thomas's most popular tweet to date, posted August 3, 2012 with 27 retweets, was this: Seeing huge differences between canola fung apps w/ plane vs. ground sprayer. <10% infection ground, >25% plane, check >30%.#westcdnag

Sometimes Twitter writers have to be creative with language to get the point across in 140 characters, but the gist of this message is clear – Thomas's fungicide results are better when ground-applied.

"One of the better decisions I have made in my career was getting into Twitter," he says. "Getting to interact with individuals I otherwise wouldn't have and getting feedback on my ideas has made me a better agronomist." Thomas checks Twitter 10 to 12 times a day, a couple minutes at a time.

DEBRA MURPHY

Eastern Alberta
@AgDebra

Debra Murphy signed up for Twitter because it was free on her phone plan. "But it wasn't until @WheatlanderJay sent a link about a Twitter webinar that I started to realize the value of Twitter for agriculture," she says.

During harvest 2012, Murphy tweeted a picture of the barley stubble where next year's canola crop will be, with the questions, "How much trash is too much?

To chop or not to chop?" She was immediately involved in a conversation about straw management and heavy harrowing options and timing.

When scouting fields for bertha armyworm, Murphy tweeted people like @ABBugCounter for more information. "In fact, I found worms that I suspected to have nuclear polyhedrosis virus, which prompted some cool Twitter discussions. With this discovery, along with knowledge of thresholds and pre-harvest intervals – thanks to Twitter resources and links – I chose not to spray any insecticides," she says. "After swathing, I found many more infected bugs and determined that I had made the right choice."

"I live in a very remote area, but since I joined Twitter, I feel a part of something bigger – a community, a team."

– Debra Murphy

Twitter can also provide comfort. "When we were hit with wind and hail and our canola swaths were over 60 percent damaged, I looked to Twitter for reassurance, guidance and support," says Murphy. "A lot of farmers were struggling with wind, hail and fire damage at around the same time, and I found comfort in our discussions."

"It's really amazing how much Twitter has helped me," she says. "I live in a very remote area, but since I joined Twitter, I feel a part of something bigger – a community, a team. I am learning so much, and seeing the intense passion so many people have for our industry."

JASON REMPEL

Ste. Anne, Manitoba
@rumpus204

Jason Rempel started to actively use Twitter after a Canadian Young Farmers best management practices workshop last year. A group at the workshop saw the value in social media for ag producers, so they decided to get more involved.

"Now I have a large community I can tap into to get help with my headaches of the day," he says. "Twitter is really conducive to the smartphone office. With the concise messages, I can pose a question or provide an answer while dumping a load of grain, for example."

Or, if he's trying to modify a piece of equipment, Rempel can quickly describe his plan on Twitter and ask where he can get parts. "It will get a conversation going and I'll usually get answers."

This fall and winter, Rempel has been in conversations about fall fertilizer application and new canola varieties. "Growers will tweet about their experiences with certain varieties, and I'll definitely use that information in addition to other sources when making my seed decisions."

JOHN GUELLY

Westlock, Alberta
@WheatGeerJJ

John Guelly signed up for Twitter after hearing a presentation by Shaun Haney of RealAgriculture.com at Farm Tech in Edmonton. One of the biggest benefits to Twitter, Guelly says, is rapid response to agronomy issues. In 2011, a hail storm went through his area just before swathing and a lot of growers were wondering whether to swath that day or leave what was left of the crop to reach a more appropriate swathing stage. On short notice, Rick Taillieu from Alberta Canola Producers Commission and Doug Moisey, the Canola Council of Canada's agronomy specialist for the region at the time, used Twitter to organize a field walk around Westlock to discuss options.

"That was a big learning experience, and it was organized quickly through Twitter," says Guelly.

Another time he found a cutworm he couldn't identify and sent around a photo through Twitter. "Pretty soon we had a conversation going, and I learned the cutworm species, as well as prevention measures and control thresholds."

Guelly considers short messages to be a Twitter advantage. "I can breeze through them pretty quickly, and sort out what I want to read," he says. "If I want more information, many tweets include a link." ●

Jay Whetter is communications manager with the Canola Council of Canada. He is also editor of the CCC's free Canola Watch agronomy newsletter. Go to www.canolawatch.org and find the sign up box down the right column.

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CANADIAN CANOLA GROWERS ASSOCIATION

DIAGNOSTIC DILEMMAS

By Jay Whetter

Canola yields overall were disappointing in 2012. CCC agronomy specialists made a presentation at the Western Forum on Pest Management in Regina in October called "Top Yield Robbers of 2012" to explain why. Here are the top four reasons.

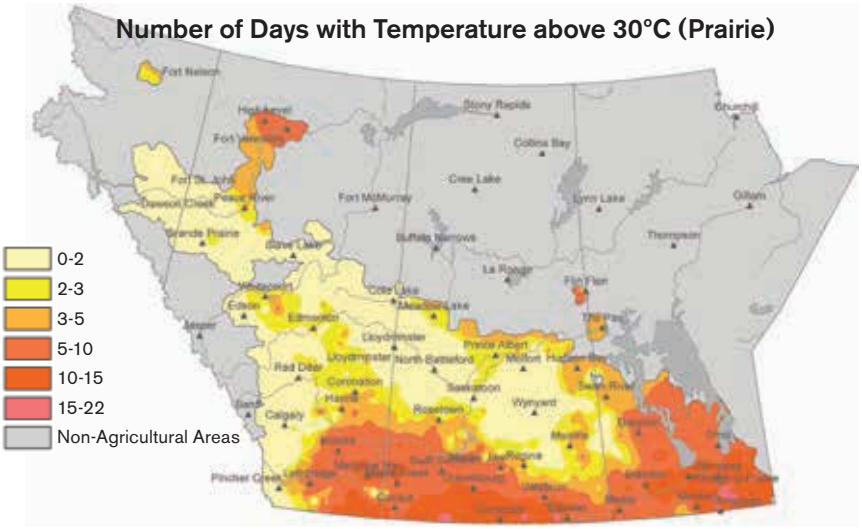
Canada's average canola yields for 2012 were 27.7 bushels per acre, down 19.2 percent from 2011, according to Statistics Canada's November report. The top four reasons, as described by Canola Council of Canada (CCC) agronomists, were heat, aster yellows, sclerotinia stem rot and wind.

"Given the cumulative stress of these pressures, along with insects, hail and others, the fact we got the yields we did is a testament to modern hybrid genetics," says Shawn Senko, CCC agronomy specialist. "The 28-bushel average is more than we got in a good year a decade ago."

However, it still helps to look back on the year and see where improvements could be made. Instead of specific field cases, this diagnostic dilemmas article will look at the top yield robbers, with suggested actions for 2013.

1. HEAT ON, YIELD OFF

Problem: At 27° to 30°C, pollen viability and length of flowering drop off, and seed and pod abortion increase. Canola will overproduce flowers to compensate for this, but after a week or more of high heat, canola yield potential cannot recover. Extended extreme heat upsets the hormone balance, causing mutation that can result in odd-looking flowers, tiny empty pods, distorted pods and strange seed growth within pods.



The reddest areas on this map had 10-15 days above 30°C in July. Canola yield potential can start to drop off with extended temperatures above 27°C. Source: AAFC

A lot of Manitoba and most of Saskatchewan south of the Trans Canada Highway had 10 to 15 days in July with highs above 30°C. Most of the Prairies had July temperatures two to four degrees hotter than normal. That stress alone could be enough to erase a couple million tonnes of potential yield. Drought stress and high nighttime temperatures, which many regions also had in July and August, made the situation worse.

Action for 2013: Many growers say early seeded canola had lower yields than later seeded canola. One theory is that early seeded canola plants which started off in cool, wet conditions were not physiologically ready for the rapid switch to hot and dry conditions (e.g. shallow roots, lush top growth, less waxy leaf cuticles), whereas later seeded canola was somewhat better adapted to the dry conditions. Despite this experience in 2012, the odds still favour earlier seeding. Research shows that seeding canola in early May will produce top yields seven years in 10 and seeding later in May will produce top yields three years in 10.

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IMAGE: ©2012 Agriculture & Agri-Food Canada

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2. YELLOWS, NOT GOODBYES

Problem: Aster yellows is not an issue most years, but 2012 was a bad year, with 10 percent of plants in the disease survey showing visual damage and 25 percent testing positive in DNA tests.

Agriculture and Agri-Food Canada (AAFC) biologist Chrystel Olivier gives these reasons:

- Milder winters allowed local leafhopper populations to survive and build up, and allowed more infected plants to overwinter. Leafhoppers carry aster yellows phytoplasma and their feeding transfers it to plants.
- Drought and a mild winter in the U.S. may have increased the abundance of the leafhopper and their level of infection.
- South winds arrived in the Prairies earlier in 2012, bringing leafhoppers with them.

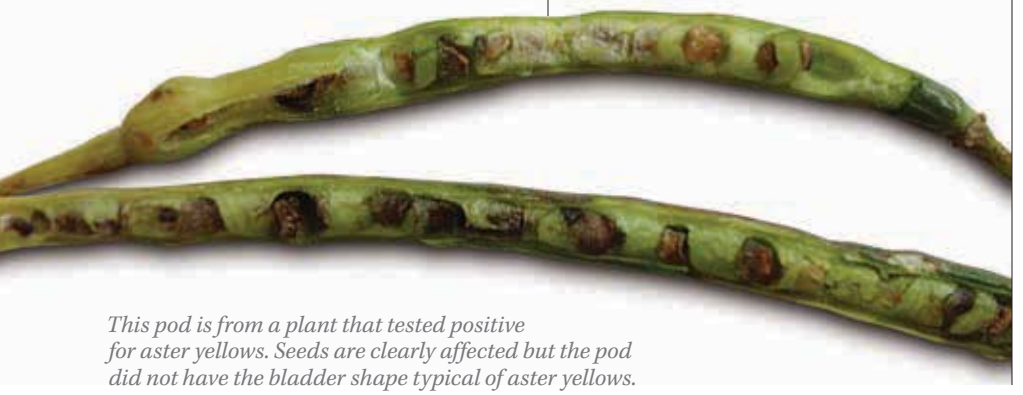
Hormone imbalance from extreme heat may have made some aster yellows symptoms worse or different than what we've been used to in canola. CanoLab 2013 will look at some of these relationships, by putting canola plants under various levels of temperature stress and then infecting some with aster yellows and leaving some uninfected to see how symptoms differ. "CanoLab is not research based, but we're doing these tests to start people thinking how cumulative stresses interact," says Dan Orchard, CCC agronomy specialist. (For more on CanoLab 2013 and aster yellows, do a search at **www.canolawatch.org**)

Action for 2013: Control weeds. Leafhoppers feed on many crops, and canola is not their first choice. A weedy canola field gives leafhoppers food choice and may make canola crops more attractive to them. Perennial weeds can also provide an overwintering host for the phytoplasma. "Perennial weeds and plants are potentially a strong disease reservoir for phytoplasma and the likelihood of aster yellows being transmitted from the reservoir to the crop is high," says Olivier.

Spraying leafhoppers may help reduce infection rates in canola, but developing an economic threshold is difficult because leafhoppers are not damaging the canola directly. A reliable prediction of economic benefit requires knowledge of the amount of phytoplasma transmission taking place from the insects to the crop, and of the amount of disease development likely to occur based on crop stage and environment.

A weedy canola field gives leafhoppers food choice and may make canola crops more attractive to them.

"We don't really want to recommend growers spray for leafhoppers because we don't know what's economic, but it would be helpful to have an early warning system to identify arrival of the leafhoppers and what percentage is carrying the phytoplasma," says Orchard. "We may find that if leafhoppers numbers are concentrated in ditches or tree lines near canola crops, then maybe a localized spray before the crop even emerges can be effective. But again, we don't really know."



This pod is from a plant that tested positive for aster yellows. Seeds are clearly affected but the pod did not have the bladder shape typical of aster yellows.

3 BUDGET FOR ROT PATROL

Problem: Central and northwestern Saskatchewan and eastern Alberta had a lot of rain through the critical period for sclerotinia stem rot. Disease levels were high, and many unsprayed fields were hit hard.

"Geography is not immunity," says Clint Jurke, CCC agronomy specialist. "Sclerotinia spores are in all canola growing regions of the Prairies, and if conditions are moist before, during and after flowering, you can expect costly infection."

Action for 2013: Put fungicide in your canola budget. You may not need to spray if conditions are clearly not conducive to sclerotinia – dry with low yield potential – but with a budget in place, you can act in a timely manner to get the best return on that fungicide investment.

Seeding rate can influence sclerotinia stem rot severity. Crops with a higher plant density usually have more even maturity and a shorter flowering period, making it easier to choose the correct spray timing for sclerotinia. Uneven crops and crops with low plant counts may be good candidates for a split spray, two applications.

"Sclerotinia spores are in all canola growing regions of the Prairies, and if conditions are moist before, during and after flowering, you can expect costly infection."

– Clint Jurke

4. WE HAVE SEEN THE WIND

Problem: Canola crops leave an average of two to three bushels per acre of seed in the field, but heavy winds that made a mess of mature canola fields in 2012 increased these losses significantly.

When dry swaths start to roll in the wind, you know yield loss will be high.

Action for 2013: Lay swaths so they point into prevailing winds. Consult Environment Canada or your own weather records for the direction with the greatest odds of high harvest season winds. Cut high and roll swaths so the sides of the windrow tuck into the stubble.

"A lot of growers who had canola swaths roll across the field and pile up in ditches are also talking about straight combining," says Tiffany Martinka, CCC agronomy specialist. Standing canola left for straight combining can also suffer heavy losses in the wind, so this decision cannot be taken lightly.

"However, if we determine that losses are about the same for both, at least with straight combining a grower only has to go over the field once."

Honourable mentions. Other yield loss factors for 2012 include a cool wet spring for some regions, a wide range of insects, and hail. Agriculture Financial Services Corporation in Alberta declared in November that 2012 was the worst year by far for crop production losses to hail. ●

Jay Whetter is communications manager with the Canola Council of Canada. He is also editor of the CCC's free Canola Watch agronomy newsletter. Go to www.canolawatch.org and find the sign up box down the right column.

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INNOVATION AND BIOTECHNOLOGY

By Brian Innes

In part three of our series on major access issues facing canola, this issue of *Canola Digest* explores innovation and biotechnology, and how the Canola Market Access Plan works to ensure predictable access.

Innovation. From biotechnology that improves seed genetics to new ways of protecting the crop against pests, innovation is what created canola and what drives grower profitability. But for Canadian growers to take advantage of this innovation, it must be accepted by the governments of our international markets.

"Herbicide tolerance has made canola more profitable on my farm," says Jody Klassen, a canola grower from Mayerthorpe, Alberta. "It's important that we have timely access to the latest technology to maintain our competitive edge in export markets."

With over 85 percent of canola exported, government policies on innovation and biotechnology in our export markets affect our ability to access these markets. Biotech traits need to be approved in each importing country.

It can be a complex challenge to provide a predictable environment for industry to invest in creating innovative technologies that improve grower profitability. For canola, it all hinges on market access. "New technology won't be much good if we can't sell our canola to key markets," says Klassen. That's why innovation and biotechnology are key components of the Canola Market Access Plan (CMAP).

"Our work through the CMAP is critical to maintaining our access to the international markets that return the most," says Jim Everson, vice president of corporate affairs for the Canola Council of Canada (CCC). "Transparent and science-based regulations are the key to predictable market access and for growers to have timely access to innovation."

Along with the government of Canada, the CCC works to promote Canada's system of science-based regulation for products of biotechnology through the CMAP. According to Everson, not all countries have a regulatory system that is as predictable as Canada's.

REGULATION OF NEW BIOTECH TRAITS

Members of the canola value chain have agreed that new biotech traits must be approved in our major export markets before being commercialized for Canadian growers. Like Canada, importing countries have their own approval systems, and the CCC policy assures continued market access for canola. However, not all countries have predictable science-based regulatory systems like Canada's. This delays approvals – and access to new technology for Canadian growers.

"New technology won't be much good if we can't sell our canola to key markets."

– Jody Klassen

"Getting approval for new biotech canola traits takes longer in the European Union and China than in Canada," says Conor Dobson, director of public and government affairs for Bayer CropScience. "The more we can do collectively to improve the regulation of biotech internationally, the faster we will be able to introduce new technologies that benefit growers."

Efforts under the CMAP are aimed at synchronizing the approvals of biotech traits in countries around the world. In cooperation with allies such as CropLife International and the Government of Canada, the CCC works to promote Canada's science-based regulatory system of biotech products. It involves sharing expertise and experiences with regulators from other countries, as well as putting canola priorities on the table for regular meetings between Canadian officials and regulators in our export markets.

"We use every opportunity we can to promote more effective regulation of biotechnology in our key export markets," says Everson. "For example, we've worked closely with the Canadian officials negotiating the Canada-European Union Comprehensive Economic and Trade Agreement so that everyone understands that without

"The more we can do collectively to improve the regulation of biotech internationally, the faster we will be able to introduce new technologies that benefit growers."

– Conor Dobson

effective biotech regulation, you can't achieve full, effective market access."

It's an area that will continue to grow in importance as new traits and technologies are introduced. Globally, the number of biotech traits is expected to continue growing from 30 in 2009 to over 100 in 2015 according the Joint Research Council of the European Commission. If a shipment of canola is tested for all biotech traits it contains, small amounts of other crops mixed in during handling could eliminate market access for that shipment in the absence of policies accounting for low level presence of unapproved biotech crops.

LOW LEVEL PRESENCE

The growing number of biotech traits combined with grain handling equipment that is used across commodities means the potential will increase for unapproved traits to end up in Canadian exports. It's important to develop effective policies that prevent a low level of a biotech trait that is approved in one country but not in the importing country from being a market access barrier.

Consider this example: A shipment of biotech soybeans is loaded into a vessel in Argentina and shipped to Costa Rica. That same vessel then travels to Montreal to be loaded with canola destined for Europe – but the hold was not entirely cleaned and there are a few bushels of Argentinean soybeans left in the bottom. The shipment of canola then arrives in Europe with an unintended low-level presence of soybeans approved in Argentina but not approved in Europe.

Without a low level presence policy, zero tolerance prevails and the shipment is rejected. Costs mount for both the exporter and the importer.

Even the risk of a low level presence of an unapproved trait imposes market access barriers – creating risk that disadvantages Canadian exporters. It's why working for low level presence policies in Canada and abroad is part of the CMAP.

"Effective low level presence policies are critical for predictable market access," says Everson. "Our industry, and the Government of Canada through the leadership of Agriculture and Agri-Food Canada Minister Gerry Ritz, are strongly advocating for policies that prevent low level presence from being a barrier to market access."

Efforts under the CMAP have included working closely with the Government of Canada to develop a Canadian low level presence policy – an important step towards influencing policies in our major export markets. The CCC is also working closely with industry allies such as the International Grain Trade Coalition and the Canada Grains Council to lead the development of international policies. Last year this included two high level meetings with government officials and industry representatives from 15 countries.

It's work that can be highly technical, but will have real benefits for Canadian exporters and their ability to pay top dollar for Canadian canola.

"If just nine seeds in a Super B can be detected, finding solutions that reduce the risk to exporters is important for everyone," says Klassen. "Our canola industry has been leading the world, and I'm glad to see we're rolling up our sleeves to address this issue too."

It may take some time to get there, but all agree that working to reduce market access barriers related to innovation and biotechnology is effort well spent. ●

Brian Innes is corporate affairs manager with the Canola Council of Canada in Ottawa.

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BIOFUELS – A GROWING MARKET

By Dennis Rogoza

The 2012 canola harvest may have been somewhat of a disappointment, but the trend line for future harvests is clear. As more canola acres are planted and productivity per acre increases, the growing market for biofuels in Canada, the U.S. and Europe will become even more important.

"Canola is recognized as a prime feedstock for the production of biodiesel," says Rick White, executive director of the Canadian Canola Growers Association. "This fact, combined with mandates in major fuel markets likes the U.S. and Europe, has resulted in a new and growing market for canola."

In 2012, the U.S. and European markets were characterized by twists and turns.

U.S. UPDATE

The U.S. drought brought significant political pressure in Washington to have the Environmental Protection Agency (EPA) reduce the mandated biofuel volumes under the Renewable Fuel Standard (RFS) 2 legislation. After due consideration, the EPA decided in November not to make any changes to reduce current biodiesel or ethanol volumes. This was good news for the industry.

The EPA also announced earlier this year that it would increase annual mandated biodiesel volumes to 1.3 billion U.S. gallons starting in 2013.

With the elimination of the U.S. biodiesel tax credit, these mandates have established a volume floor for the industry, providing economic stability for many biodiesel producers.

This is important for Canadian canola as its largest biofuel related export market has been the U.S., which is home to several small plants and two world-scale plants in North Dakota and Washington State that have been using canola for a number of years. These U.S. plants supply markets in the U.S. and Western Canada. Based on U.S. Department of Agriculture data, it is estimated that Canadian canola seed equivalent exports to these plants will be about 750,000 tonnes for 2012.

CANADA UPDATE

Canadian biofuel markets continued to move forward in typical steady-as-she-goes fashion, reflecting the successful implementation of western and Federal mandates. All four western provinces now have their own biodiesel mandates. Discussions are in the early stages with several provinces about increasing the minimum mandated blend levels over the next few years.

The policy driver for Canadian governments remains the same – meeting greenhouse gas reduction goals. A clear added benefit to this new, stable Canadian market for canola is its support for Canadian agriculture.

continued on page 33

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continued from page 31

Milligan Biofuels in Foam Lake, Saskatchewan continued its expansion and now purchases about 60,000 tonnes per year of non-food grade canola. This provides a valuable market for this seed, and the production of about 20 million litres per year of pure biodiesel. Later in 2013, ADM will open its large 265 million litres per year biodiesel production plant adjacent to its current crush facility in Lloydminster. The ADM plant is expected to serve Canadian, U.S. and European markets.

EUROPEAN UPDATE

Although canola is not yet a large exporter to Europe, the biofuels market mandated by the EU Renewable Energy Directive (RED) appears to have significant market potential in coming years.

"In some respects this market is one of the most challenging for canola," says Patti Miller, president of the Canola Council of Canada. "A key reason is that the EU has imposed sustainability criteria on all feedstocks that require audits all the way from inside the farm gate to the end user in Europe. Another reason is that EU regulators created market uncertainty in 2012 by proposing significant changes to the RED regulations which will change the competitive positioning of feedstocks."

This adds costs and complexity, and makes for an uncertain future market in the EU. The observation from the canola supply chain over the past year is that once the details for the EU market are understood, the export process is fairly straightforward. The biggest challenge is having growers ensure their agronomic and management practices meet EU requirements.

Currently, Canadian exporters use the International Sustainability and Carbon Certification (ISCC) system, which enables them to export seed and oil to the EU. The good news is that audits conducted of growers under this system have resulted in all growers being certified. The less fortunate news is that these audits have also shown that record-keeping by some growers needs to be improved.

View the CCC's video on the Canola Market Access Plan.

"Sustainability criteria are now coming down the track not just from Europe but also Canadian and U.S. food markets," says Brian Chorney, a canola grower in southern Manitoba and long-time biodiesel advocate. "For those growers who follow best management practices and have implemented Environmental Farm Plans, there is little to be concerned about in terms of meeting sustainability criteria. Of concern is the potential of having multiple certification systems."

Both the domestic and foreign biofuel markets are important for several reasons. Unlike many commodity markets, the biofuels markets are based on government mandates, which means that, at least in North America, they are relatively stable. Over the longer term, there will be growing pressure to reduce carbon emissions from the transportation sector. Canola-based biodiesel has about 90 percent fewer lifecycle carbon emissions compared to fossil diesel, so this should translate into longer term, added markets for canola.

The biofuels marketplace is in its infancy compared to the 100 year history of fossil fuels. Just as has been the case for the fossil oil industry, new technologies will drive change as the world moves increasingly to renewable fuels.

One sector that has stepped up the pace of innovation is the aircraft and airline industry in their demonstration of renewable based jet fuel. In 2012, the German airline Lufthansa flew over 1,000 commercial flights using a 50/50 blend of conventional jet fuel and bio-based jet fuel. As they say, change is in the air! ●

Dennis Rogoza is an advisor on sustainability issues for the Canola Council of Canada.

INFORMATION AT YOUR FINGERTIPS

By Shaun Haney

A growing number of farmers are benefiting from the tools and convenience offered by the new world of mobile technology. Guest contributor Shaun Haney offers some tips on using mobile apps to help with crop marketing and more.

Having to convince farmers about the value of smartphones is so 2010. Farmers are now looking for new and better apps to help them manage their farm operations. Whether you are 20 or 60 years old, apps can play an integral part in improving communication and productivity, and increase the accuracy of farm business decisions. The goal of all of this is higher profitability on the farm.

The app has truly brought the desktop to the palm of our hand. Initially, many apps had single operation functionality. There are three things that have made the possibility of agriculture-based apps a reality on the farm or ranch today:

- **New smartphone processing power:** With the ability to squeeze quad core chips with 2 GHz processing speed into an ultra-thin phone design, programmers have been able to essentially create mobile desktop-like software.
- **Cloud data servers:** Cloud storage allows for data to synchronize in real time. Apps with the capability to access data no different than a desktop truly unleashes the power of an agriculture-based app.
- **Increase in 4G and LTE networks in rural areas:** Creating dynamic agriculture apps is pointless without the proper levels of bandwidth. This is especially true for apps that require heavy two-way data transfer.

Smartphones and apps provide the opportunity to manage your email, calendar and contacts while away from your desktop. Being tied to your desktop to make your calls and enter data into a spreadsheet is history in the new world of mobile technology. What better industry to prosper from the benefits of mobile technology than agriculture? Farmers and livestock producers require significant time in their offices, which are in the barns and fields. As mobile technology has evolved and high-speed data networks have become available in rural areas, farmers can now access the advantages of mobile like never before. You no longer have to be in Toronto or Vancouver to access high-speed 4G data networks.

A great example of using apps or mobile sites on the farm is in terms of crop marketing. Being able to gather real-time information without having to make a phone call creates significant value for the producer. Not too long ago, farmers waited for the weekly farm publication to update them on prices. Good marketing decisions begin with accurate real-time information, which today's mobile technology provides you.

Here is a list of some of the best apps built specifically for farmers in Western Canada:

"Being able to check on local grain prices is very valuable – it puts the information at my fingertips."

– Lee Markert

- **Farm at Hand:** Provides seed to sale record-keeping of your farm operation. Developed in Saskatchewan, this app presents some really good, simple enterprising solutions. Find out more at **www.farmathand.com**
- **Scoutdoc:** An iPad app that allows for the collection of field scouting information, Scoutdoc allows farmers to upload images, take notes, add action items and e-mail the Scoutdoc report to the hired man or agronomist. Find out more at **www.scoutdoc.com**
- **Alberta Canola Producers Commission Mobile site:** This is actually not an app but a great mobile site that allows you to get commodity quotes in a very mobile-friendly fashion. I recommend adding it as a bookmark to your phone's home screen so that it is easily accessible like an app. Check it out at **www.m.canola.ab.ca**
- **RealAgriculture.com:** Go ahead and call me biased, but I think you will really enjoy our app built for BlackBerry, Android and Apple (iPad and iPhone). See all of the RealAgriculture.com stories and videos on your mobile device. Find out more at **www.realagriculture.com/mobileapp**
- **DTN Progressive Farmer:** This is a very deep iPad app that provides a wealth of information. There is news, market information and weather all in one place. The DTN Progressive Farmer app is very visually appealing with great colours and market graphics. I have heard some producers complain that this app has too much content and could be simpler for the user.

Some apps that are built for general audiences provide applicable solutions on the farm as well. Here is a list of consumer apps that have a farm application:

- **Weather Channel** or **The Weather Network:** Depending on your needed features or operating platform, either of these two weather apps provides you with the weather forecasting you need on the farm.
- **Evernote:** A non-ag app that allows for cloud-based note-taking. Your notes can be verbal, text or an image. The ability to add tags and save files in different notebooks allows for easy access to your notes from virtually any mobile device and even the desktop.
- **Google Drive** or **Dropbox:** Both are great cloud storage options for your farming operation. Just imagine being able to access that spreadsheet or Word document while on the go and not having to save the file in alternative locations. Other great functions with both apps include the ability to manage who has access to the files and to share their location with anyone in the world.
- **Drivesafe.ly:** Allows you to listen to text messages while you are driving or operating machinery. This app really does provide the opportunity for farmers to stay focused on what they are doing with or without auto-steer.
- **Twitter:** A must for farmers that want to stay on top of the latest in Western Canadian agriculture. I recommend that you follow the #westcdnag hashtag or check out some of the @shaunhaney agriculture lists to follow the people pertaining to Prairie agriculture.

The amount of information at your fingertips has increased greatly with the advent these apps and others.

"Mobile apps have really helped me manage some of my farm activities while I am out of the office," says Lee Markert, farmer and seed grower, from Vulcan, Alberta. "Tasks tend not to pile up, because I can do things on the go as if I was in the office."

He adds, "Being able to check on local grain prices is very valuable – it puts the information at my fingertips. I am a more informed marketer because of it."

Managing a farming operation requires significant multi-tasking and organizational skills. These apps are just examples of some of the ways you can use mobile technology to be more effective on the farm. Smartphones and tablets provide tools to help farmers achieve their operational and farm business goals. ●

Shaun Haney is the founder of RealAgriculture.com, Canada's only web-only ag media company. Find him on Twitter at @shaunhaney.

Good marketing decisions begin with accurate real time information which today's mobile technology provides you.

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ALBERTA Canola PRODUCERS COMMISSION

ABreport

WHAT WOULD YOU DO IF HALF THE WORLD'S POPULATION WAS FIVE HOURS AWAY?

By Ward Toma, General Manager, Alberta Canola Producers

Many of us on the Canadian Prairies know the time it takes to drive somewhere, but not the distance: Calgary is a three-hour drive from Edmonton, Saskatoon is five. Winnipeg is a two-hour flight; Ottawa is a five-hour flight. I've made those drives and flights many times over the years, but the population I've driven through or flown over has never amounted to more than 15 million people.

By contrast, if you take a five-hour flight from Hong Kong you will be within reach of over half the world's population. According to the U.S. Census Bureau, that's 3.5 billion people. Look at it this way: that is 3.5 billion *consumers* of goods, services, energy and food. To the New West Partnership members, that's what the Asia-Pacific region is.

The New West Partnership is a strategic trading alliance of Canada's three most western provinces – Saskatchewan, Alberta and British Columbia. They work collaboratively in their efforts to open markets and support industry in developing and eventually growing export trade to countries in the Asia-Pacific region.

In September 2012, the Partnership conducted an agriculture mission to the area, providing an opportunity for various agriculture and food sector people to meet food importers and government officials in Hong Kong, Beijing, Tokyo, Shanghai and Seoul. For the canola industry, and other sectors like beef, pork, barley and wheat, honey and blueberries, these are very important markets and future areas of growth.

Each stop on the mission had a similar agenda – a group briefing by local Canadian Embassy or Consular staff accompanied by provincial or industry in-country staff on trends and market access issues affecting the overall ag and food sector. These people are valuable resources for industries or companies looking to do business in the region. They know the language, the ins and outs of government regulations, and which companies or businesses are interested in buying or are already buying and want more.

Meeting these folks is a terrific way to answer questions, address concerns and, sometimes, put a face to a name. They can arrange face-to-face meetings with clients or purchasing groups and government representatives. This is very important in cultures where personal relationships can be the foundation of years of successful business.

The day after the briefings, the New West Partnership would host a seminar with each of sectors on the mission, providing information about their industry, products and ability to meet buyer needs. Government representatives and interested businesses were invited and the turnout was very good at each of the stops. The type of questions asked at all of the events indicated that local participants are very knowledgeable about Canadian agriculture. They had done their homework and did not shy away from asking tough questions publically or privately.

These countries are Confucianism-based societies where personal relationships between those doing business must be well established and maintained over time. The members of the New West Partnership understand this and these missions facilitate relationships between the agricultural export businesses and government representatives in the New West Partnership and their new partners in Asia. ●

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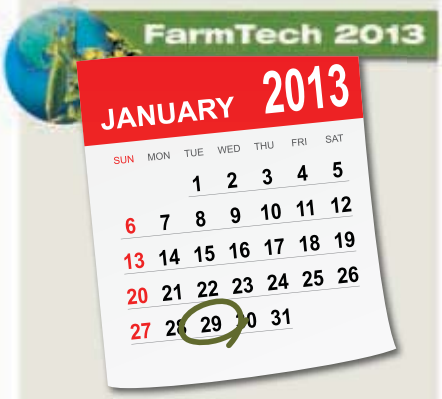
ANNUAL GENERAL MEETING

Tuesday, January 29, 2013

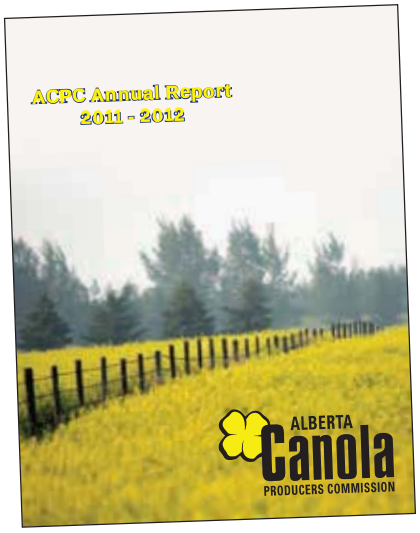
2:45 pm

Edmonton EXPO Centre at Northlands



ACPC ANNUAL REPORT

Visit **www.canola.ab.ca** to download ACPC's 2011-2012 Annual Report, or request a copy by calling 1-800-551-6652. ●

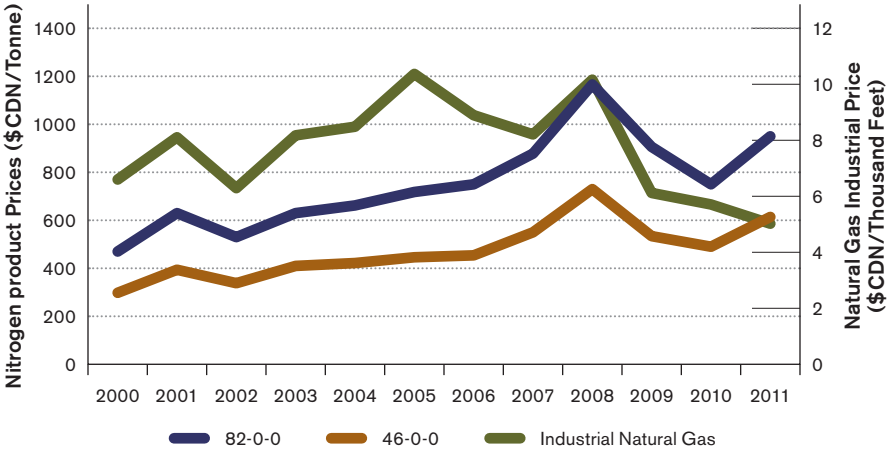


NITROGEN PRICE DRIVERS

By Karla Bergstrom, Policy Analyst, Alberta Canola Producers

When nitrogen fertilizer prices are high, many farmers have a tendency to blame natural gas because it is a key component in the production of urea, ammonia and UAN. The truth is nitrogen has not been tracking feedstock prices for the last number of years as shown in the Alberta Agriculture and Rural Development graph. The real culprit is capitalism. Nitrogen fertilizer prices are driven by strong supply and demand pulls in the global market.

Alberta Nitrogen Fertilizer Prices vs. Natural Gas Industrial Price



Source: Statistics and Data Development Branch (ARD) and U.S. Energy Information Administration.

The North American demand for nitrogen was at an all-time high last spring because of record seeding intentions for corn and canola. Corn and canola production have high nutrient requirements. This increase in demand for nitrogen fertilizer is not just a local problem, it is occurring globally across all crops because of higher yields and crop prices. Unfortunately for farmers, this translates into higher fertilizer prices that cut into their margins.

Fertilizer is the biggest single cash expense in crop production, and it always will be, as long as big yields require big nutrients. High fertilizer prices are frustrating to farmers, but the reality is Canadian fertilizer consumption is very low from a global perspective (about two percent). Although Canada is a net exporter of nitrogen fertilizer, Canadian farmers have to compete for supply with international buyers such as China, the largest purchaser of urea in the world. Another competitor is the U.S. – with corn prices in the seven to eight dollar range, seeding intentions and fertilizer demand will most likely be high again this spring.

Back in 2008, when natural gas prices were at record highs, a number of old, rundown fertilizer plants were permanently closed. This reduced the North American nitrogen supply and had a ripple effect on price. Progress is currently underway on the farmer-owned nitrogen fertilizer plant in the northern U.S. plains, but that production is still a few years away from coming on-stream. Farmers of North America are organizing farmer support for a new nitrogen plant in Western Canada. Only the future can tell if ProjectN is successful in moving farmers further up the fertilizer value chain. In the meantime, Western Canadian farmers are legitimately concerned about Agrium's retail market share.

Essentially, this all means it is business as usual for farmers. Follow the market, talk to your local retailer, and pre-purchase product as part of your operation's business risk management strategy. ●

SaskCanola

SKreport

REPORT TO OUR GROWERS

Catherine Folkersen
SaskCanola

Welcome to 2013 at SaskCanola! We have two new directors on the board: Wayne Truman of Redvers and Doyle Wiebe of Langham were acclaimed to our board in the fall of 2012. This is great news for your organization and eases the sting of having to say farewell to Tim Wiens of Herschel and Tyler Markusson of Foam Lake. Thank you both for your service and enthusiasm for the agriculture industry. It has been my pleasure to work with you and my door is always open for a cup of coffee or a chat. Of course that offer is open to any canola producers – we are always interested in your thoughts and ideas.

In September 2012 SaskCanola travelled to China and Japan with the New West Partnership to meet canola buyers from government and industry. The Chinese and Japanese delegations were very hospitable, gracious and knowledgeable about Canada, our agriculture industry and your recent crop. We have an incredible richness of productive land and they have many people looking for high quality food products, so the Chinese and Japanese traders were eager to discuss our industry and opportunities for increased trade. At SaskCanola we don't engage in trade but we do want to understand our customers' needs so that we can ensure your canola is always viewed as a high quality ingredient for culinary uses.

We are very pleased with the high value and long term seed market in Japan but we would also like to see Japan lower its very high tariffs on the importation of oil so Canada can ship canola oil to Japan in addition to seed. China is still worried about blackleg in canola becoming an issue for their rapeseed crop and we are working with their scientists and regulators on solutions. Both of these examples show that, in spite of a great product, there will always be issues to discuss and hopefully, resolve.

I have never travelled with a trade mission and my experience was enriched by the representatives from other agriculture groups who really showcased the ingenuity and richness of our agriculture industry in Western Canada. It was a real pleasure to meet such wonderful statesmen and women who were there to share Canadian agriculture with their customers. My thanks to the provincial Ministries of Agriculture personnel who worked so hard to develop such a great trade mission, hats off to you.

I look forward to seeing you at our producer meetings next month!

Catherine Folkersen
Executive Director

2012 DR. KEITH DOWNEY SCHOLARSHIP WINNERS

SaskCanola continues to support the growth and future success of the canola industry by providing four SaskCanola Dr. Keith Downey scholarships, each valued at $2,000, to the families of registered canola producers. We are pleased to announce that the four recipients of the 2012 Dr. Keith Downey Scholarships are: **Kelsey Dale** from Plunkett, **Andrea Lowenberger** from Wynyard, **Braeden Syrotech** from Burr and **Andrea De Roo** from Fairlight.

All winners expressed appreciation for the funding assistance that their scholarship will bring to furthering their respective agriculture studies.

The SaskCanola Dr. Keith Downey Scholarships are made available on an annual basis to the immediate family of registered Saskatchewan canola producers who are enrolled in undergraduate post-secondary agriculture education in a recognized Canadian institution in the second, third or fourth years of their program. Congratulations to this year's recipients!

Information about the 2013 Dr. Keith Downey Scholarships will be posted May 17, 2013 on our website at **www.saskcanola.com**. ●

PHOTO (bottom): ©iStockphoto.com/ooyoo

STRAIGHT CUTTING POTENTIAL – A WORK IN PROGRESS

By Pat Flaten

Gone are the days when producers never even considered straight cutting their canola. General practice continues to be swathing, yet even swathing is no longer the gleaming practice given our windy experiences last fall.

One of the key drivers is that so many producers are straight combining everything else but canola. It just feels like a waste to spend the time swathing, when you could be doing something else, especially with increasingly large acreage to cover.

The pieces may be slowly coming together. First, we have on-farm ingenuity by producers who believe they are successful with it already, even if only on a portion of their land. Then, the seed industry is responding with genetics. Benefits would be found for both straight cut and swathed canola. Equipment manufacturers are also adapting.

SaskCanola has been investing in many aspects of straight cutting, from assessing pod sealants to doing an early assessment of equipment, and comparing a few seed varieties. You can find this information on our website under the research tab at **www.saskcanola.com**.

A current project (supported by Manitoba Canola Growers Association) has just completed its second year of assessing canola varieties for straight cutting potential. Chris Holzapfel, research manager of the Indian Head Agricultural Research Foundation, is leading this project which benefits from cooperating with Agri-Arm sites at Scott and Swift Current.

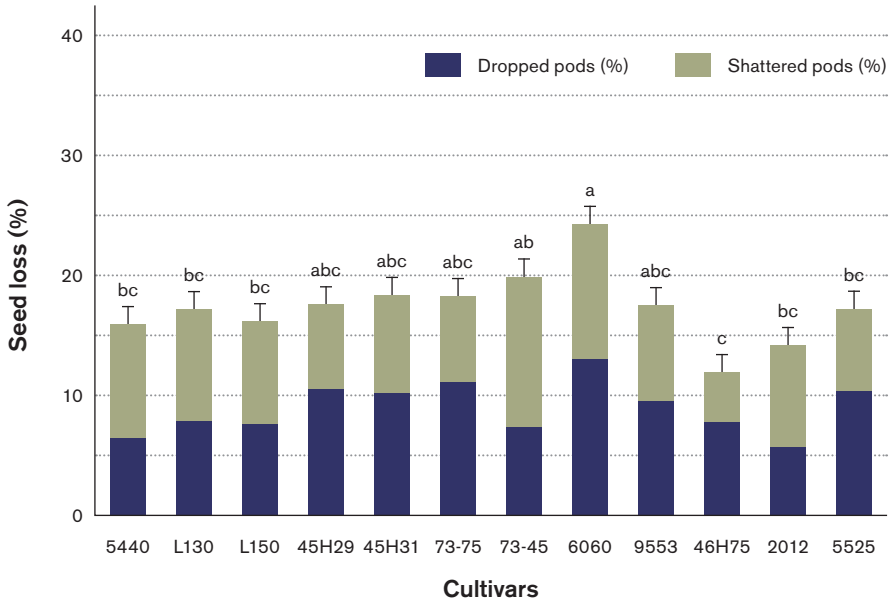
In 2011 and 2012, 12 canola varieties representing all three herbicide management systems were included in the side by side small plot experiment. The trial assessed seed losses at two times, when combined at an ideal time versus several weeks after, so as to increase the potential for losses and detect the differences between cultivars. Losses were assessed based on both pod shatter and pod drop. Losses in 2011 were within the range of 0.5 to 13 percent, depending on the specific cultivar and site. However, as you can imagine, due to August and September wind damage in 2012 'late' straight cutting losses amounted to 10 to 70 percent.

Figure 1 represents the combined data from three sites in each of two years. The letters above each bar indicate whether there is a statistical difference between varieties. Any time two varieties have the same letter over them, they are not considered to be statistically different. If the varieties have different letters over them (e.g. if one bar has an 'a' over it and another has a 'b'), they are statistically separated enough to be considered different. It is important to recognize that the relative cultivar performance was not always consistent from one site to the next and this figure only represents the averaged results.

SaskCanola will continue to invest in this area. There is much work still to do when it comes to minimizing the risks of harvest loss, especially those of straight cutting. ●

Figure 1

Average Percentage Canola Seed Losses of canola for five site-years grown at Indian Head, Scott and Swift Current in 2011 and 2012. Error bars represent the standard error of the treatment means.



SaskCanola

REGIONAL PRODUCER MEETINGS

Plan to attend one of the following Producer Meetings and get the latest in crop production information.

Melfort – February 26
Humboldt – February 27
Rosetown – February 28
Swift Current – March 1
North Battleford – March 7

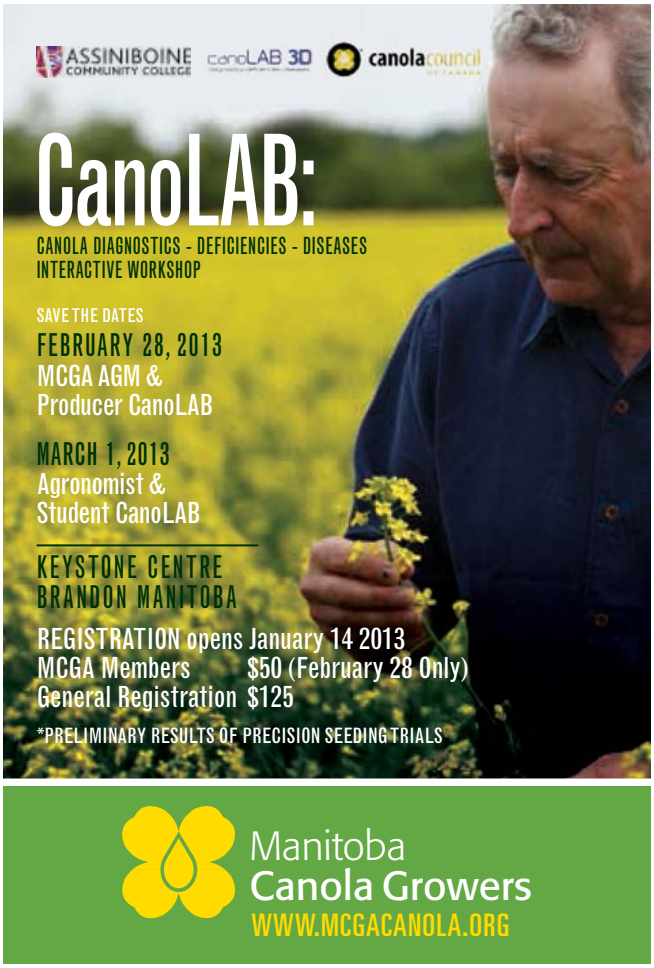
Program details and pre-registration can be found by going to:
www.saskcanola.com ●

MANITOBA CANOLA GROWERS ANNUAL GENERAL MEETING

The Manitoba Canola Growers Association's (MCGA) Annual General Meeting (AGM) will be held on Thursday, February 28 at Brandon's Keystone Centre in the UCT Pavilion. For 2013, MCGA is showcasing a Producer CanoLAB in conjunction with the AGM. The CanoLAB will start at 9:00 a.m, followed by the AGM at 10:30 a.m. The CanoLAB will resume after the AGM. Canola growers will get a discount on the registration fee for the CanoLAB. The AGM is free.

At the AGM, members will receive a review of the past year of MCGA. They will be able to ask questions about the financial statement, Presidential report and all other reports. Check out the new guidelines and worksheets for resolutions on MCGA's website **www.mcgacanola.org** or call Liz at 204-982-2122 for the guidelines and worksheets. All resolutions will be posted to MCGA's website by Monday, February 18, 2013 in accordance to our resolutions procedures. Forms can be faxed to 204-942-1841 or emailed to **rossb@mcgacanola.org**. ●

CanoLAB demonstration.



THE MANITOBA CANOLA GROWERS ARE PROUD TO SPONSOR SPORT IN MANITOBA

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If you are interested in helping us cheer on the team you can join us on our sponsorship day on March 9, 2013. E-mail us at **web@mcgacanola.org** for your chance to get FREE tickets for you and your family.

Canola Junior Championships

Congratulations to all the curlers who competed at this years Canola Junior Championships in Brandon January 3-7, 2013. We are proud to support such an elite group of young athletes as they compete to represent our province. ●

YOUNG MANITOBA FOOD INNOVATOR RECEIVES SCHOLARSHIP

By Wendy Elias-Lopez

The Manitoba Canola Growers Association (MCGA) believes in supporting young industry hopefuls who are the future of agriculture. The scholarship program run by MCGA is equally valuable to both MCGA and its recipients.

Take the winner of this year's University of Manitoba Scholarship, Ryan Murphy for example. While currently hard at work completing his last year of studies at the University of Manitoba Faculty of Agricultural and Food Science, Murphy has set high aspirations for himself; aspirations the MCGA has no doubt he will soon achieve.

Murphy works hard during the school year, serving as a Team Leader in Logistics and Production for NuEats Food Innovation, a company that develops and produces innovative food products that showcase the culture of food innovation. He has been involved in the development of novel food products and packaging, including a roasted buckwheat snack and a beta-glucan fruit bar. He has conducted research projects with a focus on extracting value-added components from agri-food materials.

"We are strong supporters of young people in all areas of our industry – they are our decision-makers of tomorrow."

– Ed Rempel

Apart from his academic and professional life, he also enjoys curling, golf, strategy gaming and stock trading. It was his commitment to academics while engaging in extracurricular activities that made him a desirable candidate for the scholarship. One of the conditions of the scholarship is that the recipient demonstrates involvement in extracurricular activities and maintains a minimum grade point average of 3.5.

Murphy is also first-rate ambassador of the *Be Well* philosophy MCGA promotes. The concept of living well, eating well and being well is about passion, balance and a strong foundation – something Murphy is all too familiar with. It takes balance and motivation to do all that he does academically, professionally and recreationally but he finds time for it all with the help of those close to him.

"I am inspired by the people around me – my friends, family, professors and peers," says Murphy. He knows exactly what keeps him focused. "I am driven by a deep fascination with how the world works."

His graduation at the end of this academic year is a testament of Murphy's on its own, as this degree usually takes four years to complete but he is completing it in three. His education won't end there; after he graduates he intends to pursue a Master's degree in food science.

"In 10 years, I hope to be taking a leadership role in bringing new food products to the marketplace."

– Ryan Murphy

Where does he see himself in 10 years? "In 10 years, I hope to be taking a leadership role in bringing new food products to the marketplace," says Murphy.

It's exactly this vision and determination the MCGA proudly supports through its scholarship program. "MCGA feels very strongly that we need to develop young leaders and this scholarship is one way to do this," says MCGA President, Ed Rempel. "We are strong supporters of young people in all areas of our industry – they are our decision-makers of tomorrow."

The scholarship is valued at $2,100 and is given out on a yearly basis. For more information, visit the Manitoba Canola Growers Association website at **www.mcgacanola.org**. ●

EVERYONE LOVES A WINNING COOKIE!

Bakers from across Canada submitted their best, crossed their fingers and hoped to be the lucky winner of **#mycookiesarethebest** – a contest hosted by the Food Bloggers of Canada in partnership with the Manitoba Canola Growers Association.

You too can bake their prize winning cookies by visiting **www.blog.canolarecipes.ca** for the recipes. Leave a comment on the blog post "My Cookies Are The Best!" telling us which cookie you want to make and you will be entered for a chance to win one of our *Be Well* Prize packs!

Be Well…Ellen & Jenn ●

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SURVEYS SAY CANOLA OIL PERFECT FOR CANOLAINFO MARKETS

By Brent Connett

American, Mexican and Indian consumers are choosing healthier cooking oils and methods.

Consumer surveys conducted this year in the United States, India and Mexico show that canola oil is in line with public trends toward healthier cooking oils and methods in these markets where CanolaInfo promotes canola oil. All surveys were commissioned by the Canola Council of Canada (CCC) to benchmark consumer awareness, use and perceptions of canola and other vegetable oils.

The United States is the Canadian canola industry's largest customer for oil and canola oil is the number two consumed oil there, as it is in Mexico. In India, canola oil is a new product, but its potential is huge given that this country is one of the largest edible oil markets in the world. India has high rates of heart disease and diabetes – just like the U.S. and Mexico – so its population could benefit from the low saturated fat in canola oil.

UNITED STATES

The U.S. survey, conducted by Cogent Research in March 2012, showed that consumers' healthful perception of canola oil has increased significantly since the last Cogent survey in 2008. It now occupies a space closer to olive oil and is clearly differentiated from other types of cooking oils included in the poll that are perceived as less healthy, including vegetable, sunflower, peanut, sesame, coconut, soybean and grapeseed oils. The increase in canola oil's healthy perception this year was considerably higher than for olive oil in the same period.

"Across the entire sample polled, perceptions of cooking oils generally diminished compared to 2008, especially for vegetable, sunflower, peanut, sesame and soybean oils," notes Shaunda Durance-Tod, CanolaInfo manager at the CCC. "Consumers are also now more likely to purchase a product made with canola oil versus one made with another type of cooking oil."

Cooking Oil Usage

There has been a decrease in the number of Americans using cooking oil at large, from 85 percent in 2008 to 78 percent in 2012. Those who have used cooking oil in the previous six months are typically using it about three times per week.

Canola oil purchase and use is fairly equally distributed across geographic regions, including the Northeast, South, Midwest and West. It is most frequently used among consumers in the South and Midwest regions (by more than one-third). Northeasterners are reported to frequently use olive oil, and are the least likely to use canola oil.

When consumers were asked how they use cooking oil, 84 percent said they use it for sautéing and 65 percent claimed to use it for pan-frying. Compared to 2008, there is a shift from deep- and pan-frying to sautéing and salad dressings.

"This shift in culinary preferences is a perfect match for canola oil's versatility and heart-healthy qualities," says Durance-Tod.

There is also a change in the type of recipes Americans want to prepare. They are making more low-fat and low-calorie

continued on page 46

PHOTO: ©iStockphoto.com/ mitgirl

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meals that use fresh ingredients, while "quick and easy" meals that use packaged ingredients seem to be decreasing. Those who have recently used canola oil are more often preparing gourmet and low-fat meals compared to infrequent users.

Other Influences

The survey noted that American Heart Association and U.S. Food and Drug Administration (FDA) endorsements carry less weight in cooking oil purchasing decisions for consumers than they did four years ago. However, canola oil's qualified health claim authorized by the FDA, which associates the product with reduced risk of heart disease, still significantly increases consumers' likelihood of purchasing (72 percent) and paying more for (65 percent) canola oil and products made with it.

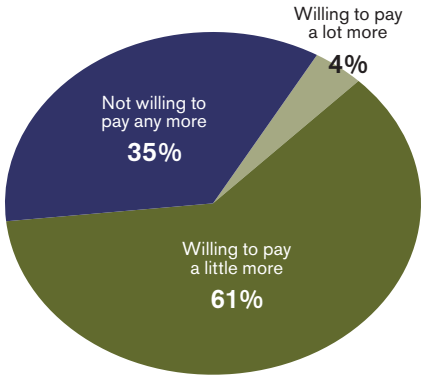
Overall, there is a significant trend among U.S. consumers toward healthier lifestyle attitudes, such as avoiding smoking, belonging to a gym and minimizing stress, compared to those polled in 2008. About 77 percent of canola oil users exercise at least once per week, a significant increase compared to four years ago. They are also more likely to seek advice on cooking and food.

Consumers most often cited family and primary care physicians and dietitians as influencers when it comes to nutrition and healthy cooking. Other key sources of information on these topics are newspapers, magazines, general websites and food television shows. About eight percent of primary grocery shoppers turn to social media for culinary information, especially to Facebook.

"In view of these results, the future of canola oil in the U.S. marketplace looks bright," says Durance-Tod. "Consumer interest in healthier cooking oils and methods practically allows canola oil to sell itself."

MEXICO

When it comes to cooking oils, Mexican consumers know what they want, but they may not know how to find it at the grocery store. According to a March-April 2012 survey by The Nielsen Company, more than a third of the country's consumers don't know what type of cooking oil is in the brand they use even though the type is now more important than the brand.



About two-thirds of U.S. consumers who are likely to purchase a product with canola oil's health claim are willing to pay a little more for it.

Mexican consumers polled said the two most important attributes of cooking oil are that it is low in saturated fat and contains omega-3 fat. These attributes characterize canola oil, which has the least saturated fat and most omega-3 fat of all common cooking oils.

"The survey shows that canola oil offers consumers in Mexico what they seek in cooking oil," says Durance-Tod. "But they need to be informed of that."

Conducted among 1,000 consumers in Guadalajara, Mexico City and Monterrey, the survey showed that almost 50 percent of consumers are not aware of the type of cooking oil they use and only 12 percent know the difference between canola oil and other types of oils.

Known use of canola oil by consumers increased from nine to 13 percent since a Nielsen study in 2009, but they are confused about which type of oil corresponds to specific brands. Meanwhile, the type of oil has become more important to consumers – almost as much as price and more so than brand.

"There is a need to inform consumers about different types of fats and oils," says Durance-Tod. "Selecting a cooking oil that's low in saturated fat like canola, for example, can help reduce the risk of cardiovascular disease when used in place of saturated fat. This is especially important in a country where heart disease is the leading cause of death."

Almost 60 percent of consumers polled said they would be willing to switch to canola oil, which was generally perceived as being one of the healthiest oils and as having the best flavour (neutral).

INDIA

In India, a shift to healthier cooking methods offers a big opportunity for canola oil consumption, according to results from an April 2012 survey by The Nielsen Company. The survey, conducted among more than 1,900 consumers in Mumbai, Delhi, Bangalore and Kolkata, showed that sautéing (78 percent) and pan-frying (71 percent) have increased in popularity, while boiling (61 percent) and deep-frying (69 percent) have declined.

Moreover, Indian consumers value health (55 percent) more than taste (45 percent) when it comes to selecting cooking oil. Since a Nielsen study in 2009, 15 percent have changed their primary cooking oil because it was not healthy, versatile or pleasant tasting/smelling when heated. About one-fifth of the survey respondents said they would be willing to pay between 10 and 30 percent more for a healthier oil.

Awareness of canola oil in India is low, because it is a new product there. However, after survey participants heard a description of its characteristics and benefits read aloud, 84 percent said they were willing to try the product. They liked that canola oil is heart-healthy, free of cholesterol and comes from Canada.

"India has had tremendous growth in a middle class that has the means and health awareness to purchase a product like canola oil," says Durance-Tod. "With the largest incidence of diabetes and heart disease in the world, India can benefit from the availability of heart-healthy canola oil. When used in place of sources of saturated fat, canola oil can reduce the risk of heart disease." ●

Brent Connett is account supervisor for CanolaInfo at Inkovation, Inc. in Chicago, Illinois.

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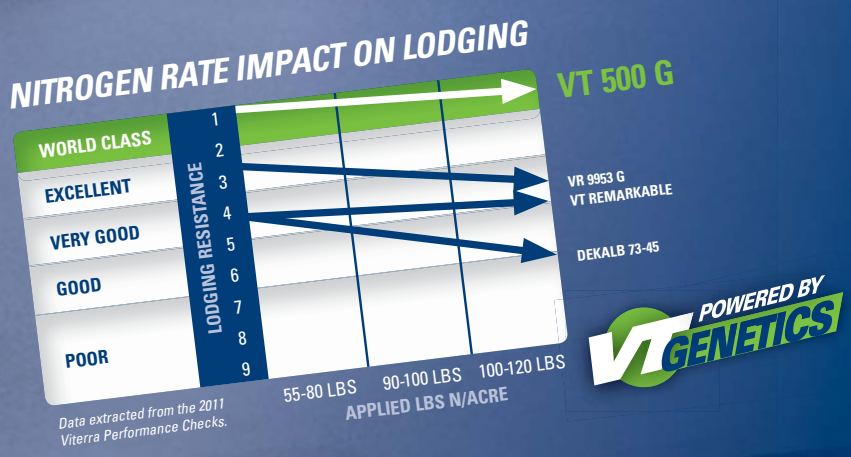

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42.2 bu/ac	41.1 bu/ac

1.1 bu/ac increase
59% WINS | **17** Proving Ground Comparisons

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2.8 bu/ac increase
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www.pioneer.com/yield

Canola yield data summary averaged across 3 years (2010-2012). Yield data collected from large-scale, grower managed Proving Ground trials across Western Canada as of November 30th, 2012.
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