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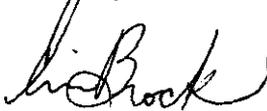
Barry Willis  
C/o Peace River Grain Industry Development Council  
Peace River Agriculture Development Fund  
P.O. Box 6641  
Fort St. John, BC  
V1J 4J1

April 9, 2008

Dear Mr. Willis:

Please find enclosed the Canola Council of Canada report that you requested. If there is anything missing or you need clarification on anything, please do not hesitate to contact John Mayko or myself. I will be away to our Crop Production team meeting in Winnipeg until April 18<sup>th</sup>, however, I am planning a trip to Ft. St. John once I get back. If it works out for you, I would like to stop by and say hello. I will make arrangements with you when I return. Although I will be away for the next week, I will be available on my cell phone, 780-933-0456. Please give me a call if you have any questions.

Sincerely,



Erin Brock

# 2007 Canola Colleges Focus on Insect Pests

**Tuesday, January 30, 2007**

Insects in canola is the theme for the Canola Council of Canada's three Canola Colleges this year. There will be one Canola College in each prairie province - **Saskatoon, SK, Tuesday, March 6; Brandon, MB, Thursday, March 8; and Nisku, AB, Tuesday, March 13.**

David Vanthuyne, Council agronomist in Eastern Saskatchewan, says the Colleges are planned to bring canola growers and their production advisors up to speed on insect pests, monitoring and control methods.

"Canola Colleges have continued to be an excellent source of valuable canola information", Vanthuyne says "As a result, they are very well attended. In fact, I'd recommend reserving your seat early!".

Space is limited to 90 people at each location. **Register on-line by visiting [www.canola-council.org](http://www.canola-council.org) and click on "Register! Canola College 2007"**. If you have questions, contact Nicole at 1-204-982-2103 or call toll-free 1-866-479-0853 today.

Speakers for the 2007 Canola Colleges include:

**Lloyd Dossdall** and **James Tansey**

, University of Alberta, re "A chronological timeline of pests and beneficials over the growing season"; **John Gavloski**, MAFRI, re "Effect of changes to canola production and quality on insects in canola". John will outline shifts in insect habits in relation to cropping practices.

**Owen Olfert**

with AAFC Saskatoon, will launch the new Prairie Wide Pest Monitoring Network emphasizing its benefit to producers and industry.

Provincial insect specialists, **Scott Meers**, Alberta Ag, **Scott Hartley**, Sask Ag and Food and **John Gavloski** with **Arvel Lawson**, MAFRI will discuss "Proper use of insect forecasting and monitoring tools", which will include interpretation of maps that Owen Olfert will describe. A Canadian Food Inspection Agency representative will update participants on "Emerging insects on the prairies and their potential impact on canola production".

A Canola Council regional agronomist will wrap up each session by providing an overview of canola storage issues with particular emphasis on avoiding use of malathion anywhere near canola or canola storage bins.

For more information in your area, contact: *John Mayko, Western Alberta: 780-764-259; Derwyn Hammond, Manitoba: 204-729-9011; Jim Bessel, North Central & North Eastern Saskatchewan: 306-373-6771; David Vanthuyne, Eastern Saskatchewan: 306-782-7799; Doug Moisey, East Central Alberta & West Central Saskatchewan: 780-645-3624; Matthew Stanford, Southern Alberta & South Western Saskatchewan: 403-758-6660*

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[Back to Media Releases](#)

# Chris Anderson Joins Canola Council Crop Production Team

**Wednesday, January 31, 2007**

Chris Anderson has joined the Canola Council of Canada's crop production team as Program Manager working out of the Winnipeg office.

Chris is responsible for the Canola Agronomic Research Program (CARP), pesticide harmonization issues and the Council's Canola Export Ready program. He will also be encouraging the integration of agronomic practices to increase oil percentages in canola seed.

Chris has an M.Sc. from the University of Manitoba. He has worked for Advanta Seeds and most recently was with Monsanto Canada in canola product development and quality assurance.

Media: For an interview with Chris or a photo, contact Diane Wreford at (204) 982-2108

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[Back to Media Releases](#)

# Register Now for Canola College 2007

Wednesday, February 14, 2007

Council of Canada agronomists are holding three Canola Colleges for producers and industry advisors in March across the prairies. This year's theme is "Insect Management". Topics include insect identification, scouting, beneficial and emerging new insects, pest monitoring programs and information sources available for growers and industry agronomists.

Canola Colleges 2007 are set for:

**Saskatoon, SK – Delta Bessborough Hotel, Tuesday, March 6/07**

**Brandon, MB – Victoria Inn, Thursday, March 8/07**

**Nisku, AB – Executive Royal Inn, Tuesday, March 13/07**

The fee is \$100 + GST and includes the presentations, lunch and updated canola information fact sheet package.

**Each day-long session merits 5.0 CCA Continuing Education Credits (pest management).**

To register on-line, visit [www.canola-council.org](http://www.canola-council.org)

and click on "Register! Canola College 2007". Registration is limited to 90 people per location so don't delay, book your seat now! Any questions contact Nicole Guay at 1-204-982-2103 or call toll-free 1-866-479-0853 today.

For more information on Canola College, contact a Canola Council of Canada agronomist:

Alberta: **Doug Moisey** (780)645-3624 [moiseyd@canola-council.org](mailto:moiseyd@canola-council.org)

Saskatchewan: **David Vanthuyn** (306)782-7799 [vanthuyd@canola-council.org](mailto:vanthuyd@canola-council.org)

Manitoba: **Derwyn Hammond** (204)729-9011 [hammondd@canola-council.org](mailto:hammondd@canola-council.org)

**John Mayko** (780)764-2593 [maykoj@canola-council.org](mailto:maykoj@canola-council.org)

## Canola College 2007 AGENDA

7:30 am	Continental Breakfast
8:00 am	Registration & Coffee
8:20 am	Welcome & Opening Comments
8:30 am	Prairie Wide Pest Monitoring Network Launch ( <i>Speaker: Owen Olfert, AAFC</i> )
9:10 am	Proper Use of Insect Forecasting and Monitoring Tools ( <i>Speaker: Lloyd Dosdall/James Tansey, U of A</i> )
10:10 am	Refreshment break
10:40 am	A Chronological Timeline of Pests and Beneficials ( <i>Speaker: MB – John Gavloski/Arvel Lawson(MAFRI), SK – Scott Hartley (AAFC), AB – Scott Meers (AB Ag)</i> )
12:00 pm	Lunch
1:00 pm	Role of the CFIA and Emerging Pest Issues ( <i>Speaker: MB – Brian Rex, SK – Dave Holden, AB – Pete Volney</i> )
2:00 pm	Refreshment Break
2:30 pm	Effect of Changes to Canola Production and Quality on Insects in Canola ( <i>Speaker: John Gavloski, MAFRI</i> )

3:30 pm                    **Canola Export Ready Program**  
*(Speaker: MB – Derwyn Hammond, SK – David Vanthuyne, AB –  
Doug Moisey, Canola Council of Canada)*

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[Back to Media Releases](#)

# Hands-On Air Drill Clinic & Canola Seeding-Ready Seminars Planned for Alberta

**Tuesday, March 06, 2007**

Canola growers will have a chance to work directly with manufacturers of direct seeding equipment to maximize performance from their air carts and air drills this spring.

The Canola Council along with Reduced tillage linkages is organizing a one-day clinic plus seminars on Tuesday, April 3, 8:45 a.m. – 4:15 p.m. at the Camrose Regional Exhibition (CRE).

**Register before March 27 by calling the CRE at 1-800-296-8112 or 780-672-3640. Cost is \$40 per person (includes lunch and GST).**

Confirmed equipment company participants are: Bourgault, Case /Concord, Ezee-On, John Deere, Morris, New Holland / Flexi-coil. Conserva Pak & Harmon have also been invited to attend. The companies will bring their equipment, their engineers and their technicians to train current and potential owners on:

- **Key maintenance points**
  - grease nipples, lubrication of bushings, ball joints, sensor settings, metering mechanisms, including lubrication points that may be overlooked and maintenance schedule recommendations for your machines.
- **Air cart specifications** - settings for canola, cereals and pulse crops, including dampers and air flow velocities.
- **Air drill specifications** - levelling, depth setting & opener performance under various soil conditions.

There will be two sets of hands-on machinery sessions indoors to allow growers to work with their current equipment and also check out another company's equipment.

There will be seminars running all day on April 3 as well. The Seeding-Ready Seminars will cover:

- Seed Quality with Sarah Foster & Kevin Zaychuk, 20/20 Seed Labs
- Stand Establishment with Doug Moisey, Canola Council of Canada & Rick Taillieu, Reduced Tillage LINKAGES
- Fertilizer Decision Making – Using the AFFIRM program with Roger Andreiuk, Reduced Tillage LINKAGES
- Understanding Market Signals - Neil Blue, Alberta Agriculture & Food

**For more information, contact:**

John Mayko, Western Alberta: 780-764-259;

Doug Moisey, East Central Alberta & West Central Saskatchewan: 780-645-3624;

Matthew Stanford, Southern Alberta & South Western Saskatchewan: 403-758-6660

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[Back to Media Releases](#)

# Keep Nitrogen Rates Up on Canola Despite High Fertilizer

Tuesday, April 03, 2007

With reports of urea fertilizer prices around \$550/tonne, growers may be tempted to reduce nitrogen rates on their canola for this coming season. John Mayko, senior agronomist with the Canola Council of Canada, says growers who cut N rates too much may end up cutting profits at the end.

Mayko points out that favourable soil moisture prospects for spring plus higher than average canola prices mean growers will need to use generous rates of nitrogen to achieve optimum net returns.

And he argues that with today's higher yielding hybrids, growers must be sure to provide enough nitrogen to optimize the yield potential of hybrid genetics.

Research conducted by Agriculture and Agri-Food Canada and Westco Fertilizer indicates improved nitrogen response curves for hybrid varieties compared to open pollinated varieties. This research shows that for a given rate of nitrogen, hybrids typically yield better than open pollinated varieties, and at moderate nitrogen rates, the yield response curves for hybrids are steeper than open pollinated varieties. It also indicates that if nitrogen rates are cut back, yield declines can be more pronounced on hybrids than open pollinated types.

Mayko advises growers to get a soil test this year to find out how much nitrogen will be available to canola over the growing season. "Only then can you make the right decision of how much to apply."

"Even if you pay \$0.60/lb for nitrogen, he says, "when canola is \$8.00 a bushel, for every 10 lb/ac reduction in nitrogen rates, you can afford to lose only ¾ of a bushel before it starts costing you money."

For more information on nitrogen rates for canola, go to:

[http://www.directfocus.com/canolamanual/chapter9.html#ch9\\_sec6d](http://www.directfocus.com/canolamanual/chapter9.html#ch9_sec6d)

[http://www.canola-council.org/PDF/apr28\\_CanolaFactsheet.pdf#zoom=100](http://www.canola-council.org/PDF/apr28_CanolaFactsheet.pdf#zoom=100)

[http://www.canola-council.org/PDF/Canola\\_Fact\\_Sheet\\_Oct27.pdf](http://www.canola-council.org/PDF/Canola_Fact_Sheet_Oct27.pdf)

For more information in your area, contact: *Derwyn Hammond, Manitoba, 204-729-9011*

*Jim Bessel, North Central & North Eastern Saskatchewan, 306-373-6771*

*David Vanthuyne, Eastern Saskatchewan, 306-782-7799*

*Doug Moisey, East-Central Alberta and Northwestern Saskatchewan, 780-645-3624*

*Matthew Stanford, Southern Alberta and Southwestern Saskatchewan, 403-758-6660*

*John Mayko, West-Central Alberta, 780-764-2593*

This media release is part of the Canola Council's Canola Advantage program. The program is supported regionally by:

Alberta Canola Producers Commission; Saskatchewan Canola Development Commission; Manitoba Canola Growers Association; Canola Council of Canada; Peace River Agriculture Development Fund; B.C. Ministry of Agriculture, Food and Fisheries

---

[Back to Media Releases](#)

# Keep Canola in Good Shape to Take Advantage of Higher Prices

**Monday, April 16, 2007**

Rising spring temperatures should send canola growers out to their bins to check for signs of possible seed deterioration. “We are concerned that as temperatures start to increase over the next few weeks, reports of spoilage and seed damage will also increase,” says Canola Council agronomist David Vanthuyne. “It doesn't need to happen.”

Vanthuyne explains that in spring when the sun warms the outside of the bin, air moves up near the outside wall of the bin and down through the centre of the seed. The cooler canola in the centre of the bin reabsorbs moisture and starts to respire.

“That's when you need to monitor the seed more regularly” Vanthuyne says. “Respiring seed produces heat and moisture favouring the growth of storage moulds and eventually the seed may become heat damaged.”

He tells growers to take out some of the canola from the centre of the bin. “That way,” he says. “you'll interrupt the increase in temperature and moisture in the central core.”

Vanthuyne says if moisture and temperature are properly maintained, it's possible to store quality canola seed two to three years.

Vanthuyne uses a chart to figure out what has to be done to keep stored canola in good shape for more than five months. He says if the temperature and moisture level of the canola fall within the spoilage area of the chart, either the seed moisture or temperature or both need to be reduced. For storage longer than five months, canola should be binned at a maximum of 8% moisture.

chart

## Canola Storage Time Chart

*For more information in your area, contact:*

Derwyn Hammond, Manitoba, 204-729-9011  
Jim Bessel, North Saskatchewan, 306-373-6771  
David Vanthuyne, Eastern Saskatchewan, 306-782-7799  
Doug Moisey, Parkland East, 780-645-3624  
Matthew Stanford, Chinook, 403-758-6660  
John Mayko, Parkland West, 780-764-2593

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B.C. Ministry of Agriculture, Food and Fisheries.

For more information, contact  
Diane Wreford (204) 982-2108  
[wrefordd@canola-council.org](mailto:wrefordd@canola-council.org)

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[Back to Media Releases](#)

# Canola Watch Gearing Up for the 2007 Season

**Monday, April 16, 2007**

The Canola Agronomy Network will begin distributing Canola Watch reports for the 2007 growing season in early May. The reports are emailed at no charge to anyone interested in the progress of the prairie canola crop.

“Our weekly reports over the past four seasons have been extremely successful in relaying key agronomic issues to all segments of the canola industry,” says David Vanthuyne, Canola Council of Canada agronomist for eastern Saskatchewan.

Vanthuyne says this proactive approach of providing just-in-time information is continuing to help many growers and industry agronomists stay on top of canola crop management. The Canola Watch reports provide details of what is occurring in the field and also give tips and information to identify and deal with issues as they arise, such as the bertha army worm infestations that occurred during July and August in 2006.

The Canola Agronomy Network includes more than 20 agronomists and prairie extension specialists, plus growers and industry retailers, who take part in weekly conference calls from late April to early September. Bases on those discussions, they then prepare the weekly Canola Watch reports. The reports are e-mailed to a growing list of over a thousand industry professionals and producers each week.

“Our number one focus is to provide canola growers and the people who advise them with in-season, just-in-time information,” says John Mayko, chair of the Network and the Canola Council of Canada’s senior agronomist for Parkland West.

“We are very pleased with the continued response and the enthusiasm of the people who have come on board,” says Mayko. He adds that the Network is always keen to hear comments and suggestions to improve the reports.

Certified Crop Advisor Credits will also be available as part of the subscription package.

Recipients of Canola Watch 2007 who have new grower customers are encouraged to contact the Council’s Winnipeg office to obtain an information package on key tips for growing canola. The package includes several important agronomic publications new growers will find useful when growing canola.

To add your name to the Canola Watch list, send an e-mail message to [admin@canola-council.org](mailto:admin@canola-council.org) and in the subject box, enter “Subscribe canola crop watch report”.

The reports are also available online at: [http://www.canola-council.org/growing\\_watchreports.html](http://www.canola-council.org/growing_watchreports.html).

For more information, contact:

Derwyn Hammond, Manitoba, 204-729-9011  
Jim Bessel, North Saskatchewan, 306-373-6771  
David Vanthuyne, Eastern Saskatchewan, 306-782-7799  
Doug Moisey, Parkland East, 780-645-3624  
Matthew Stanford, Chinook, 403-758-6660  
John Mayko, Parkland West, 780-764-2593

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[Back to Media Releases](#)

# Take Time to Seed Canola Right This Spring

**Friday, April 27, 2007**

Statistics Canada's prediction of record canola acres in western Canada this spring will translate into a lot of action on the fields very soon as growers will be rushing to seed as early as they can. That worries Canola Council of Canada agronomist Doug Moisey.

"There's important prep work that must be done before growers head for the field," Moisey says. "What shows up in the field next month starts now when growers pull out their seed drills for inspection."

Moisey urges growers to check their seeders thoroughly before going out into the field. "Look at front to back and side to side leveling, any possible leaks within the system and worn openers. Set fan speeds properly and watch for seed damage."

The Council's agronomist for Parkland East suggests that growers inspect the seed from the outer most run when they start seeding. Sampling is easy with what Moisey calls "tube sock technology". Just pull the hose off the outer-most run, tape a sock to the hose, and seed a hundred yards down the field.

"If you don't see any seed damage," Moisey says, "you should be okay but if you do see damage - excessive wind speed or splitters at the boot for example - get to the bottom of the problem right away."

Moisey reminds growers that optimum stand establishment is the goal. He recommends calibrating the seeder to reach target populations of 7-14 plants/ft<sup>2</sup>, taking into account seedling survival can range from 75% to 25%.

To ensure accurate calibration of the seed drill, make sure the speed matches the speed that will be used in the field, and that the distance traveled or sampled produces a large enough sample to be accurately weighed with the scale available. Sampling a greater number of drill runs will provide a larger sample over a shorter distance.

He says too many growers still seed too deep. Optimum seeding depth is 1/2"-1" below the press wheel furrow. Any deeper, Moisey says will "increase time to emergence; reduce plant populations; slow seedling growth; delay maturity, and increase the risk of seedling diseases."

Moisey also cautions growers to slow down! "It's very tempting to speed up - especially with more acres to cover - but it's very unlikely to pay in the long run", he says. Slowing down ensures uniform seed distribution and emergence, as well as maintaining proper seed to fertilizer separation in single pass seeding systems. He says if growers must speed up seeding, "they'll have to increase seeding rates to make up for lower seed survival".

Check Canol@Facts for detailed seeding tips for maximum stand establishment at:  
[http://www.canola-council.org/growing\\_publications.html](http://www.canola-council.org/growing_publications.html).

For more information, contact:

Derwyn Hammond, Manitoba, 204-729-9011  
Jim Bessel, North Saskatchewan, 306-373-6771  
David Vanthuyne, Eastern Saskatchewan, 306-782-7799  
Doug Moisey, Parkland East, 780-645-3624  
Matthew Stanford, Chinook, 403-758-6660  
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[Back to Media Releases](#)

# Weed Control Timing Critical for Canola

**Monday, April 30, 2007**

Timing weed control in canola isn't easy, but Canola Council agronomist Matt Stanford says it is much less of a struggle if you keep a few key principles in mind.

*#1*

Use a pre-seed burn-off treatment such as glyphosate for good early season weed control. Stanford says Canola Council trials have shown significantly higher yields – an average of 15% - after a pre-seed burn-off compared to no burn-off in direct seeding situations.

“For optimum weed control, wait as long as possible to apply the burn-off so the chemical can get to as many weeds as possible,” he says, “but be careful not to wait too long and go beyond the ideal seeding date. Even if the field looks quite clean, Stanford recommends a burn off with an untreated check strip to help evaluate the control's effectiveness.

*#2*

Consider pre-seeding tillage to help control some ‘canola unfriendly’ weeds such as cleavers, stinkweed and shepherd's purse, or ensure that the herbicide tolerant system chosen will provide effective control. Stanford says these winter annuals either have no control methods in conventional canola or can require additional herbicide costs for effective control in the crop. However, if erosion and adequate seedbed moisture are a concern in your area, pre-seeding tillage may not be advised.

“Light tillage in the fall can also be useful, giving 80 to 90% control of fall-germinated weeds,” Stanford says.

*#3*

Scout your fields. “Know what is growing and refer to previous weed records to get an idea of what weeds may be an issue later in the season,” Stanford says. “The more competitive the weed species, the fewer it takes to cut yields.”

*#4*

Concentrate on controlling early emerging weeds at the one to four-leaf crop stage, and worry less about the later emerging weeds. “Later emerging weeds may be unattractive and contribute to the seed bank,” he says, “but they have much less impact on yield than do weeds that show up early in the season.”

Stanford bases his recommendation on research done by the Alberta Research Council (ARC) on wild oats. ARC has shown that weeds that emerge before or with the crop cause greater yield loss than weeds that emerge after the crop. Fewer weeds tend to emerge after the crop has reached the four-leaf stage and those that do are usually weak and spindly.

Also, research done by Agriculture and Agri-Food Canada has shown that a second in-crop application of herbicide is rarely economical. Stanford points out that once canola reaches the four to five leaf stage and begins to “cabbage”, it becomes much more competitive, and weeds that emerge after this will have little impact on yield.

The Council's agronomist for southern Alberta and southern Saskatchewan says if growers choose a single herbicide application, they should time it to get the weeds ideally at the three to four leaf crop stage. “Time single herbicide applications early to keep the crop weed free at its most vulnerable stage. If producers feel that a second in crop application is required, assess weed densities and use thresholds to determine whether it is economical.”

For more information, contact:

John Mayko, Parkland West, 780-764-2593  
Derwyn Hammond, Manitoba, 204-729-9011  
Jim Bessel, North Saskatchewan, 306-373-6771

David Vanthuyne, Eastern Saskatchewan, 306-782-7799

Jackie Heck, Peace, 780-835-5261

Doug Moisey, Parkland East, 780-645-3624

Matthew Stanford, Chinook, 403-758-6660

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[Back to Media Releases](#)

# Choose the Right Sulphur for Canola This Spring

Wednesday, May 02, 2007

Most canola growers agree that the right amount of sulphur will go a long way toward increasing canola yields but Canola Council of Canada's senior agronomist John Mayko says choosing the most suitable form of sulphur can be confusing.

Mayko says there is a wide range of sulphur fertilizers that deliver the goods in different ways and each needs proper management. "Choose the right form and don't scrimp, even if you are looking for ways to offset higher nitrogen costs in your fertilizer blends this year."

To kick-start soil sulphur levels in the spring, Mayko recommends that producers use sulphate forms of sulphur fertilizer, such as granular ammonium sulphate or liquid ammonium thio-sulphate.

"It's especially important to use the sulphate forms of fertilizer on land where soil tests indicate sulphur levels are deficient to marginal," he adds.

Producers can also purchase elemental sulphur to use as fertilizer but Mayko warns not to expect an instant fix. He reminds growers that while elemental sulphur is often less expensive than sulphate sources, it may provide very little accessible sulphur for plants in the year of application.

"This is especially true if the prills or granules are not allowed to break down and disperse on the soil surface prior to incorporation," he says. "It takes time for the elemental granules to break down and become available to plants," Mayko says.

This breakdown will take longer if the product is applied in a band or seed-placed, as opposed to broadcasting. In fact, Mayko says growers who rely on elemental sulphur to supply the canola crop with sufficient sulphur in the first year, may actually see evidence of sulphur deficiency.

"Elemental sulphur does have a place", Mayko says. "It's a good source but it should only be used as a maintenance treatment in the years prior to seeding canola so it's important to know exactly how much of each type of sulphur is present in sulphur blends."

Mayko suggests that growers check with their fertilizer dealers to get a clear understanding of how much sulphate and elemental sulphur will be supplied per acre. He says these blends can be used as efficient sulphur sources "as long as there's enough ammonium sulphate in the product to supply sulphur during the growing season".

*For more information related to your area, contact: **Derwyn Hammond**, Manitoba (204) 729-9011; **Jim Bessel**, North Saskatchewan (306) 373-6771; **David Vanthuyne**, Eastern Saskatchewan (306) 782-7799; **Doug Moisey**, Parkland East (780) 645-3624; **Matthew Stanford**, Chinook (403) 758-6660; **John Mayko**, Parkland West (780) 764-2593*

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[Back to Media Releases](#)

# Spring Seeding Conditions Challenge Canola Growers

Wednesday, May 16, 2007

So you had hail on your young canola crop. Now what? Stay calm and wait a couple of days. That's the advice of Canola Council of Canada agronomy specialist Doug Moisey.

Canola's going in the ground but seeding conditions are challenging in many parts of the prairies this spring. Canola Council agronomist Doug Moisey encourages growers to avoid the temptation to speed up or cut corners.

Moisey says whatever the specific farm situation, there are a couple of main points about seeding canola that should be followed - seed shallow to facilitate rapid emergence, ideally at a depth of 1/2 to 3/4 of an inch, and seed slow enough for proper seed-soil contact and to ensure that most of the seed is placed at the ideal depth.

The Council's agronomist in Parkland East also recommends applying sufficient phosphorus fertilizer in the seed row to create a fast "pop-up" effect and to assist in hastening crop maturity, especially if conditions remain cool and wet.

Wet soil conditions have some growers thinking about broadcast seeding. Moisey suggests they think again. "In general," he says, "broadcast seeding is not recommended."

He points out that broadcast seeding usually results in lower yields compared to drill seeding. But – faced with wet conditions that limit equipment flotation plus the risk of fall frost, he concedes that some growers may wish to consider broadcast seeding. So – he has some tips for getting the best results from broadcast seeding.

1. Increase seeding rates slightly to compensate for non-uniform seed depth.
2. Consider lightly cultivating (2-4 cm) or harrowing to incorporate the seed into the soil if soil conditions allow, to prevent stranding of the seed if the weather turns dry. Avoid creating lumps or clods during cultivation or straw piles with harrows or cultivators.
3. If broadcasting fertilizer as well as seed, be aware that broadcast phosphorus is only about half as efficient as banded phosphorous. There can also be greater risk of denitrification on saturated soils, reducing N fertilizer efficiency. Adjust fertilizer rates accordingly, keeping in mind a realistic target yield based on the time of year and field conditions.

Moisey also advises growers to double check the maturity ranges of the canola varieties they still plan to seed, pointing out that the accumulation of temperature or Growing Degree Days (GDDs) has a major influence on days to maturity for canola. In the short and mid season zones of western Canada, maturity for *B. napus* varieties will range from 95 to 125 days, depending on the growing season heat accumulation. *B. rapa* varieties usually range from 80 to 115 days to maturity.

The Council agronomist suggests growers first find out how many days to maturity are required for the variety that is to be seeded - usually the variety will be rated as number of days earlier (minus) or later (plus), relative to the check variety.

Then, he says, using a typical first fall frost date, count back the days to maturity to estimate the cut-off date for seeding. For example, if the first frost is August 25 on average and maturity of the check in the area is 103 days, counting back gives an estimated planting cut-off date of May 17.

If the variety to be seeded is five days earlier in maturity than the check, Moisey explains that in a typical year, seeding up to May 22 would be acceptable for that variety. In some regions dates associated with lower fall frost risk levels (e.g. 25% or 10% probability of frost) can be used for a similar calculation, for growers with lower risk

tolerance. If the variety does not meet the requirements, he advises growers to ask their local retailer to suggest other suitable varieties.

Manitoba growers can check the following link to determine their frost-free days:

[www.gov.mb.ca/agriculture/climate/waa50s00.html](http://www.gov.mb.ca/agriculture/climate/waa50s00.html)

Alberta growers can check the following link to determine their frost-free days: [www1.agric.gov.ab.ca](http://www1.agric.gov.ab.ca)

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---

[Back to Media Releases](#)

# Hold Off on Reseeding - Canola Plants Could Recover from Frost

Thursday, May 17, 2007

It will take more than a couple of days before canola growers can accurately assess damage from recent frost. Canola Council of Canada agronomist Doug Moisey reminds growers that plant recovery in cool weather can be slow, but it's worth the wait.

"Hold on at least four to 10 days, depending on the severity of the frost and subsequent weather conditions, to determine the extent of the damage and whether or not the growing point has been killed," he says. "If there is any green colour at the growing point in the centre of the frozen leaf rosettes, the majority of the plants should recover and yields will be higher than if the field is worked and reseeded."

Canola seedlings will usually recover from a light spring frost that does not damage the growing point of the plant. A light frost that wilts the leaves but does not cause any browning causes minimal injury to the plants. Moisey says some yellowing or whitening of the leaves "shouldn't cause concern either, especially under dry conditions."

"Even if growers spot blackened cotyledons and/or leaves, they should still take no action for at least four days," Moisey says.

Under good growing conditions, green re-growth from the growing point should occur in four to five days. Under cold and/or dry growing conditions, re-growth can take up to 10 days.

The Council's agronomist for Parkland East advises growers to assess affected fields carefully, checking the percentage of plants killed, the percentage recovered, and the weed population for the time of year.

To evaluate a frost damaged field, Moisey says growers should walk a diagonal path across the field, evaluate all plants in 1/4 of a square metre (3 ft<sup>2</sup>) every 20 paces, and note each sample. This should result in 50-100 samples.

Then if 80% of the field has a minimum of 20-40 recovering healthy plants per square metre (2 to 4 per ft<sup>2</sup>) and a light and/or easily controlled weed population, Moisey advises not to reseed.

He explains that the surviving plants will take advantage of reduced competition for light, moisture and nutrients, and grow larger, producing more branches, pods and seeds per pod, thus compensating for the lost plants.

The surviving plants will take longer to mature than plants untouched by frost, but Moisey points out that a re-seeded crop will require an even longer frost-free period and be at greater risk for fall frost damage.

In 2004, a Canola Council case study of reseeding canola after frost showed a 7.4 bushel/acre yield loss compared to leaving the frosted crop. This equated to a \$72.00 /ac economic loss, including reseeding costs.

It could be a different story if the affected field has a larger weed population that cannot be controlled. Moisey says in that case, the reseeding threshold would increase because the weed competition limits the ability of the crop to compensate.

For further information go to the Canola Council website and check out the following Canol@Facts on assessing spring frost damage and managing poor canola stands:

[http://www.canola-council.org/PDF/may5\\_Canola\\_AssessingSpring.pdf#zoom=100](http://www.canola-council.org/PDF/may5_Canola_AssessingSpring.pdf#zoom=100)

[http://www.canola-council.org/PDF/Canola\\_Fact\\_Assessing\\_Frost.pdf#zoom=100](http://www.canola-council.org/PDF/Canola_Fact_Assessing_Frost.pdf#zoom=100)

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---

[Back to Media Releases](#)

# Canola Fields Seeded? Then it's Time to Start Scouting

Wednesday, May 23, 2007

Scout canola fields early and stick with it more than once a week all season. It can really pay off, according to Derwyn Hammond, Canola Council of Canada agronomist for Manitoba. Once canola seed is in the ground, there are lots of things to watch for - even before the crop emerges.

## Weeds

First, check for weeds, says Hammond. Early reports this year suggest that slow, early weed growth and ideal seeding conditions in Manitoba have led many growers to forge ahead without a pre-seeding burn-off. Seeding delays due to wet conditions in other areas such as northern Saskatchewan and central and northern Alberta may force growers there to do the same.

"In all of these areas, ample moisture will likely result in a flush of weed growth once soil temperatures warm, so effective early weed control through a pre-emergent burn-off or early in-crop herbicide application will be even more critical," Hammond says.

"Canola is not very competitive when it first emerges," he adds, "so it's really important to do counts to determine exactly which weeds you need to control in order to choose the appropriate rates and products to remove competition for moisture and nutrients."

Hammond reminds growers to watch tank mix choices carefully when doing pre-emergent burn-off. When mixing glyphosate with another chemical, growers "must remember to check the label to ensure there will be no residual effects on the crop they're going to seed," he says.

With effective control of weeds up to the four-leaf stage of canola and adequate canola plant densities, he says it's likely a second in-crop herbicide application will not be necessary.

## Stand Establishment

Hammond also advises growers to count canola plants since establishing proper plant populations is crucial to a having a competitive, healthy crop. Plant counts are the only way to know if you have achieved the optimum target of 7-14 plants per square foot, to ensure a competitive advantage over insects, weeds or early season frost.

If this target has not been achieved, growers can adjust their management or consider reseeding, he says. For more information on assessing and managing poor canola stands refer to the following Canol@Fact: [Tips for Assessing Spring Frost Damage in Canola](#).

## Insects

Watch for the following insects that can affect canola early in the season: flea beetles, diamondback moth larvae, cutworms, wireworms, and red turnip beetles.

Flea beetles and diamondback moth larvae can attack the leaves of young canola seedlings, reducing the leaf area for photosynthesis. Yields will start to decline with the loss of more than 25% of the leaf area, so consider chemical intervention at that point if the insects are still present, Hammond says. Watch for 'shot-holes' on untreated canola or wild mustard as an early sign that flea beetles have emerged.

Hammond says the diamondback moth rarely overwinters in western Canada, so feeding on canola seedlings is unusual. However, wind trajectory maps from Agriculture and Agri-Food Canada and Environment Canada suggest that ‘parcels’ of wind from southern USA and Mexico (where diamondback moth adults are active) have moved to points in northwest, central and eastern Manitoba, northern and southeastern Saskatchewan and central Alberta this year. While this indicates some risk, moth trapping will be required to confirm that moths have actually arrived in these areas, he says.

It may also be wise to scout early for less common insects such as the red turnip beetle, he adds. Catching this insect as it marches into canola along the perimeter of a field will allow for spraying of outside rounds, saving money and time.

Growers may also discover cutworm damage - plants cut off at the soil surface, with bare spots appearing mainly on light textured soils, hilltops and south facing slopes where soil temperatures are warmer. Dig with a trowel in the top 2 inches of soil and sift to uncover cutworms. (Digging in moisture means you’re too deep.) Dig first around freshly severed seedlings. Hammond recommends spraying in the evening or at night for cutworm when the economic threshold of 3-4 cutworms per metre square is reached.

## Seedling Diseases

Hammond says the tell-tale sign of disease is patchy emergence up to the four-leaf stage of the crop. Seeds or seedlings may decay prior to emergence, or the seedlings may emerge and appear normal. Rotting of the roots and hypocotyls will follow with the above ground parts of the seedling sometimes showing a purple or chlorotic discolouration. Affected seedlings will often topple over, wilt and die when the decay reaches the soil surface, or growth will stagnate at the two- to four-leaf stages.

Scouting throughout emergence is critical to catch seedling diseases, because the dead plants will decay and disappear quickly, making accurate identification of the cause impossible, says Hammond. If seedling disease appears to be the primary cause of an inadequate canola stand, he suggests forwarding samples of diseased plants to a lab to confirm which pathogen(s) are at fault. This may verify if changes in seeding practices or seed treatment options can help prevent future problems.

The following links contain information regarding diagnostic services available in Saskatchewan and Manitoba:

[http://www.agr.gov.sk.ca/docs/programs\\_services/CropProtection.asp](http://www.agr.gov.sk.ca/docs/programs_services/CropProtection.asp)

<http://web2.gov.mb.ca/agriculture/programs/index.php?name=aaa01s14>

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[Back to Media Releases](#)

# Top Dressing Fertilizer on Canola Could Pay This Year

**Monday, June 04, 2007**

Canola growers who reduced rates of fertilizer at seeding might want to look at top-dressing nitrogen and sulphur before the crop bolts.

Canola Council senior agronomist John Mayko says top-dressing to increase yields could definitely make sense this year.

“Many growers cut back on fertilizer because of higher costs, time shortages and unfavourable conditions” he says. “If those fields are well established at about the 4-6 leaf stage and growth potential is good, they may be good candidates to top dress fertilizer.”

Mayko says a plant tissue test may also be useful to identify nutrient deficiencies, provided samples are collected according to the testing lab’s protocols.

Mayko advises growers planning to top-dress nitrogen to use dribble-band liquid urea-ammonium nitrate or broadcast granular urea or ammonium sulphate. He also suggests using a nitrogen stabilizer - such as Agrotain or N-Serve - to reduce volatilization losses, especially with broadcast urea.

For top-dressing sulphur, the Council agronomist suggests ammonium sulphate or liquid ammonium thio-sulphate. “Just make sure the application equipment is right for the product,” he adds.

For example, Mayko says if growers are going with fertilizer fines, they need to use fixed-boom fertilizer broadcasters instead of spinner-type spreaders.

And of course, he says that “rates need to be adjusted based on whatever nitrogen or sulphur a grower has already put on this spring, keeping in mind available soil test levels relative to the desired yield targets, and a proper nitrogen to sulphur ratio of 5:1”.

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[Back to Media Releases](#)

# Scout Regularly for Flea Beetles in Canola Fields

**Monday, June 11, 2007**

If the canola is up, it's not too soon to start looking for flea beetles. Canola Council of Canada agronomist Matt Stanford advises growers to scout for flea beetles every couple of days, especially if the seed was not treated with insecticide.

Many fields have been seeded for over three weeks now. Stanford says because cool, wet conditions in some areas this spring slowed plant development, seed treatment protection is running out before plants are large enough to compensate for flea beetle feeding.

Depending on the rate of the active ingredient, insecticide seed treatments are designed to help knock out flea beetles for 21 to 30 days from the time the seed is placed in the ground.

He says growers should be scouting every day once they find any evidence of pitting or shot holes in the leaves, because flea beetle damage can quickly surpass the action threshold. Flea beetle feeding can reduce yield, lead to longer flowering period, later maturity and shorter plant height.

Stanford says it can make economic sense to use foliar insecticides when 25% defoliation has occurred if flea beetles are active, plants are growing slowly or are under stress, and crop stage is still four-leaf or less.

He says getting a good handle on the populations of flea beetles at swathing is "really the best available indicator of potential flea beetle problems in the spring." If numbers are high at harvest, there is potential for large overwintering populations.

Stanford recommends that growers who find moderate to heavy flea beetle pressure in the fall consider seed treatments with higher rates of insecticide the following spring. He also reminds growers that low beetle numbers in the fall do not guarantee that canola crops will avoid damage the next year, so spring scouting is still important.

For photos of flea beetle defoliation, go to: [www.canola-council.org/fleabeetlemonitoring.aspx](http://www.canola-council.org/fleabeetlemonitoring.aspx)

Industry, government, and Canola Council agronomists are participating in an AAFC flea beetle monitoring program this spring. The goal is to determine the geographic distribution of the crucifer and the striped flea beetle species. If you are able to determine the species of flea beetles found in your area, please contact your Canola Council agronomist.

For more information regarding species identification, please click on the following link:

[www.canola-council.org/fleabeetleident.aspx](http://www.canola-council.org/fleabeetleident.aspx)

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[Back to Media Releases](#)

# Scout for Pests in Canola Fields Today

**Monday, June 18, 2007**

There's no rest for canola growers once weed spraying is done. Canola Council of Canada agronomy specialist Derwyn Hammond says there are a number of pests that can still attack canola from the rosette to early flowering stage.

He advises growers to scout their canola fields every few days right now or risk missing the opportunity to prevent pests from stealing profits. Insects to watch for that can attack at this stage include alfalfa loopers, cabbage seedpod weevils, clover cutworms, diamondback moths, lygus bugs and root maggots.

Pest pressure around the perimeter of a canola field will not always be a good indication of what is going on in the interior of the field, so Hammond recommends establishing some quad track pathways to allow easy access while keeping trampling to a minimum. He says the best patterns are either corner to corner to form an X or in a W pattern across the field.

Take a copy of the "Canola Scouting and Sweep Net Identification Card" as a handy reference to accurately identify pest species. It is available through regional Canola Council agronomy specialists or at [http://www.canola-council.org/pub\\_insect.html](http://www.canola-council.org/pub_insect.html). Hammond says it contains lots of great photos and facts about proper sweeping and scouting procedures and the economic importance of insects which affect canola.

By now, Hammond expects most growers have set up on-farm traps for both diamondback and bertha armyworm moths. He warns growers not to rely totally on their own data because the moths can fly considerable distances to lay their eggs.

Hammond advises growers also to track the infestations of both insects through provincial agriculture websites or representatives. He says regional numbers will provide information on the arrival of the migratory diamondback moths from the south, as well as the high risk areas for bertha armyworm larval outbreaks later in the season.

Hammond warns that bertha armyworms may be the ones to watch in particular this year. "There were outbreaks of bertha armyworm larvae requiring spraying across the prairies last year, from central Alberta through to north-western Manitoba,"

He says. "Moth counts will be our first indication of how many of the pupae survived the winter, and whether the area affected is likely to expand. However, even if the moth counts are high, control measures may not always be needed. Scouting for the larvae will be necessary to make that decision."

Hammond also reminds growers that economic thresholds for insect pests may be lower this year because of improved canola prices. For example, a bertha armyworm larval population of 1 larva per square metre will typically consume about 0.058 bushels per acre. If a grower anticipates a price per bushel of canola between \$8 and \$9, and his cost for an application of insecticide is between \$9 and \$12 per acre (application + insecticide), that puts the appropriate threshold somewhere between 17 and 26 larvae per square metre.

Hammond also advises growers to start sweeping their canola fields after the bud stage to monitor for pests. The sweep net can be a quick way to capture a sample of what, if any, pests are present on the plants.

He warns however that when it comes to determining if pests are above economic thresholds, sweep net counts are only appropriate for cabbage seedpod weevils or lygus bugs. Studies suggest that canola compensates well for lygus feeding prior to early flowering, so first flower is a good time to start more detailed counts. This is also just prior to the ideal stage for controlling cabbage seedpod weevils (10-20% bloom), if required.

Early flowering is also the time for assessing the potential for sclerotinia stem rot infection, starting with scouting for apothecia (small golf tee shaped mushrooms that produce the spores) in fields where susceptible crops (e.g. canola, pulses, sunflowers) were grown last year.

The ample moisture in many areas this year may be ideal for spore production. For growers struggling with disease management decisions, Hammond recommends the “Canola Disease Identification and Sclerotinia Risk Assessment Card” available at [http://www.canola-council.org/PDF/canola\\_plant\\_disease\\_risk.pdf#page=1](http://www.canola-council.org/PDF/canola_plant_disease_risk.pdf#page=1), or through regional Canola Council agronomy specialists.

This Card contains information on predicting disease risk as well as photos to aid disease identification. Hammond says the sclerotinia stem rot checklist includes risk scores for six major factors that influence sclerotinia incidence and severity, including the years since the last host crop, disease incidence in that crop, rainfall in the past two weeks, the weather forecast, the density of the canola crop canopy and regional apothecia development.

Finally, Hammond suggests that if plants are not looking thrifty, growers should dig up a few and check the roots. A small spray bottle of water can be useful for cleaning off the dirt in order to check for root maggot channels or disease symptoms, he adds.

For more information on identifying specific pests, growers should check the Canola Growers Manual at [http://www.canola-council.org/growing\\_publications.html](http://www.canola-council.org/growing_publications.html) or the Canol@Grow section on the Council website for links to more information on insects and diseases: <http://www.canola-council.org/icp.aspx>.

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[Back to Media Releases](#)

# Hail Damaged Canola Needs Special Management

**Tuesday, June 26, 2007**

So you had hail on your young canola crop. Now what? Stay calm and wait a couple of days. That's the advice of Canola Council of Canada agronomy specialist Doug Moisey.

Moisey says "its difficult to tell anything at all about the potential for canola to recover from hail damage for the first couple of days". His advice – keep calm and let the crop recover for three to five days.

"One thing we've learned over the years", Moisey says, "is that young canola is amazingly tough. Don't panic. Let nature do her work. Growth will be delayed and growers will have to pick up on their management for the rest of the season."

Flowering fields can quickly turn from yellow to green with hail damage as young flower clusters are torn off. However, researchers at the Agriculture and Agri-Food Canada Saskatoon Station Centre have shown that canola plants have a remarkable ability to recover from hail damage at certain growth stages.

Canola plants injured in the seedling stage may have either one or both cotyledons missing, the seedling beaten down, or the stem broken at the soil line. Plants with both cotyledons broken or torn off, and those broken off below the cotyledons, usually do not survive.

Yield losses can be determined by the percent of the stand that the hail thinned out. An average stand of 120 to 140 plants/m<sup>2</sup> (109 to 127 per yd<sup>2</sup>) can be reduced to fewer than 40 plants/m<sup>2</sup> (36 per yd<sup>2</sup>) before yield losses exceed 10%.

Plants in the early vegetative stage are occasionally injured at the growing point and lost. However, the major injury is usually to the leaf canopy. Leaves only bruised or torn suffer partial loss, while those that are bruised on the main vein or torn, broken and wilted will be lost. Leaf area is very important for photosynthesis, therefore, leaf area loss will result in reduced seed yields.

The loss in seed yield is equal to about 25% of the leaf area loss. For example, if 50% of the leaf area was removed by hail, the estimated yield loss would be calculated as follows: 50% leaf area damaged or lost X 25% = 12.5% potential yield loss

Plants injured in the late vegetative or early flowering stages seldom die. A well established root system and the ability to develop secondary flower clusters help the plant recover. When buds and flowers are lost due to injury, the plant recovers rapidly by the development of flowers that normally would have been aborted. The plant also develops flowering branches from growth buds lower down on the plant, replacing, to a degree, the lost buds, flowers and pods.

Seed yield loss will depend on the percent of leaves and branches lost. *B. napus* varieties have shown a greater ability to recover from loss of flowering branches than *B. rapa* varieties.

Moisey says that growers first need to walk their hail-affected fields within a few days to check for the green growing point on the plants. He reminds growers to scout many areas of the field taking square foot or square meter readings where damage seems both light and extensive.

He says that ideal canola plant populations are above 5 plants/ft<sup>2</sup>, but herbicide tolerant varieties with good fertility and moisture can produce a successful crop with just 2-3 plants/ft<sup>2</sup>.

Canola stands with lower than optimal plant density will need careful management. Moisey says properly timed

weed and insect control will be critical to allow the crop to compensate for damage. It's likely that it will take the stands longer to mature, and maturity may be more variable throughout the field, so swathing timing will also be very important.

For more information on dealing with low plant density stands and time of swathing, go to the Canola Council website [www.canola-council.org/growing\\_publications.html](http://www.canola-council.org/growing_publications.html) or download the pdf versions of “Managing poor plant stands of canola” at [www.canola-council.org/PDF/Canola\\_Fact\\_Assessing\\_Frost.pdf](http://www.canola-council.org/PDF/Canola_Fact_Assessing_Frost.pdf) and the “Time of swathing guide” at [www.canola-council.org/PDF/swathing\\_04.pdf](http://www.canola-council.org/PDF/swathing_04.pdf).

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[Back to Media Releases](#)

# Keep Malathion Away from Stored Canola

**Monday, July 09, 2007**

The Canola Council of Canada warns growers to keep the insecticide malathion far away from their canola seed. Malathion is not registered for controlling insects in stored canola or to treat bins that will store canola this season.

Chris Anderson, the Council's program manager for crop production, says bins treated with malathion cannot be used to store canola for at least six months to one year.

Anderson explains that malathion applied directly to the seed or onto bin walls inevitably moves into canola seed. He warns that malathion residues detected in canola exported out of Canada could cost the industry, including farmers, millions of dollars in lost business.

"Every country sets limits on pesticide residues and exceeding those limits will result in rejected shipments and increased testing requirements," Anderson says. "For example, Japan enforces strict food safety laws that prohibit the entry of any commodity exhibiting pesticide residues above the allowable limit."

To help growers keep on track, the canola industry has created a canola bin sticker to remind growers not to use malathion in their canola bins. Anderson says growers should look for them in grain company monthly statements.

"These stickers will be an easy to use reminder of which bins were NOT treated with malathion and can be used for canola," Anderson says. "Once harvest hits, it can be tough to remember which bins were treated. The sticker will provide a handy reminder right there on the bin to help make sure there are no mistakes. Just remember - canola goes in "Canola Ready" bins."

Anderson says most stored canola doesn't need an insecticide treatment anyway because insects will not feed on sound, healthy canola seed. "However," he says, "if canola is in poor condition, moisture loving fungus feeders such as foreign grain beetles, psocids and mites will invade. The presence of these insects means it is time to condition your canola through aeration or drying - it does not mean it is time to apply an insecticide such as malathion."

He advises that prevention is the best course pointing out that canola that is reasonably free of chaff, other seeds and foreign material, put into clean bins and kept below 15°C and 8% moisture should store well and stay free of insects.

Starting with properly cleaned out bins and, if necessary, treating the bins with diatomaceous earth should help to keep insects out, Anderson says. If stored product insects do invade to feed on cereal grain mixed in with stored canola, there are effective control options such cold weather aeration, heated air drying and the use of pneumatic conveyors.

For more information about keeping canola Export Ready, go to [http://www.canola-council.org/pesticide\\_link2.html](http://www.canola-council.org/pesticide_link2.html).

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This media release is part of the Canola Council's Canola Advantage program.

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Manitoba Canola Growers Association

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[Back to Media Releases](#)

# Canola Insect Forecasting Maps Now Available Online

**Monday, July 16, 2007**

Canola growers can now access accurate up-to-date assessments of insect threats to their crops – at no cost, online. With the financial support of the three prairie canola producer groups and the federal government's Pest Management Centre, forecasting maps prepared by provincial and federal ag departments are now available 24-7 to help growers make informed decisions.

The maps show existing and emerging insect populations of common canola pests including bertha armyworm, diamondback moth, wheat midge and cabbage seedpod weevil, and their natural enemies. Growers will be able to check the status of pests and identify the potential risk at a particular time and within a certain region.

The maps will allow for timely risk warnings, which contribute to the development of risk-reduction strategies due to changes in agronomic practices, crops, and climate.

Bertha armyworm data is being gathered from canola fields across the prairies through pheromone traps installed in mid-June to determine the time, distribution, and density of moth flight. Moth counts are recorded weekly through to the end of July. The extent of natural enemies such as parasites and pathogens are also monitored.

Winds originating from southern USA and Mexico will be evaluated to assess the potential risk of diamondback moth, leafhoppers and aphids migrating to canola-growing regions of Canada. In addition, wheat fields will be sampled in fall to determine the distribution, density, and rates of parasitism of wheat midge cocoons in the soil.

For a closer look at the potential damage of diamondback moths, sentinel sites have been established across the prairies by installing pheromone traps in canola fields to determine the time, distribution, and density of moth migrations. Moth counts are recorded weekly to the end of July.

Canola insect forecast maps are available on these websites:

[http://www.agr.gov.sk.ca/document\\_level\\_3.asp?cat=6&cat2=38&cat3=64](http://www.agr.gov.sk.ca/document_level_3.asp?cat=6&cat2=38&cat3=64)

<http://www.gov.mb.ca/agriculture/crops/insects/index.html>

[http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/prm11487](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/prm11487)

[http://www.canola-council.org/growing\\_research.html](http://www.canola-council.org/growing_research.html)

For more information on identifying specific pests, growers should check the Canola Growers Manual at [http://www.canola-council.org/growing\\_publications.html](http://www.canola-council.org/growing_publications.html) or the Canol@Grow section on the Council website for links to more information on insects and diseases: <http://www.canola-council.org/icp.aspx>.

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[Back to Media Releases](#)

# Keep on Scouting Those Canola Fields

**Monday, July 23, 2007**

Scout canola crops from now right up to swathing. Canola Council of Canada agronomy specialist Derwyn Hammond says it's a matter of "working out the bugs"!

Hammond says scouting is "the only sure way to get a handle on the numbers of larvae from this year's hatch of bertha armyworm and second generation of diamondback moth, as well as later season diseases".

Scouting into the interior of fields will be particularly important this year because early stresses caused uneven crop development, which may contribute to greater variation in pest numbers throughout fields.

For those not eager to wade through chest high canola, Hammond suggests one alternative is to establish quad track pathways to allow easy access with minimum trampling. In fields sprayed earlier in the season with high clearance sprayers, he suggests following the tracks into the field as another option.

Hammond recommends that growers use the "Canola Scouting and Sweep Net Identification Card" as a handy reference with lots of pictures and scouting tips to accurately identify pest species. It is available through regional Canola Council agronomy specialists or at [http://www.canola-council.org/pub\\_insect.html](http://www.canola-council.org/pub_insect.html).

Hammond warns growers to be on the lookout for the second generation of diamondback moth larvae expected to feed during canola podding. The threshold for chemical control of diamondback moth at the podding stage is between 200 and 300 larvae per square metre, or 2 and 4 per plant assuming a plant population of 80 to 120 plants/m<sup>2</sup>.

To get a fairly accurate count, the Council agronomy specialist suggests taking a white plastic tub into several areas of the field and shaking a number of plants vigorously over it at each location to dislodge the small green larvae. The larvae will be up to 8 mm long and will wiggle vigorously or hang from slender silken threads when disturbed.

Because bertha armyworm moth counts have been relatively high in monitor traps so far this season, Hammond recommends even more frequent scouting in areas identified as moderate to high risk on the maps available through provincial agriculture websites or at <http://www.canola-council.org/PDF/Baw20075.pdf>.

To keep an eye on berthas, Hammond advises growers to sample at least three locations 50 m (164') apart per field, a minimum of 20 m (66') in from the field edge, and then determine the average. At each location, he says to mark out 1 m<sup>2</sup> (10 ft<sup>2</sup>) and beat the plants within the area to dislodge the larvae. Alternatively, he suggests a three sided quarter metre square or square foot can be used at even more locations in the field to give a better idea of the distribution of the larvae.

He says to count the dislodged larvae, carefully searching the soil and leaf litter to find any hiding in cracks or under leaves. Sprinkling baby powder or flour on the ground beforehand makes the larvae easier to see. The larvae range from green to brown to velvety black, with a yellow to orange stripe down each side and a brown head.

Hammond reminds growers that improved canola prices may lower the economic thresholds for insect pests this year. Each bertha armyworm larva per square metre typically destroys about 0.058 bushels per acre, so growers can use this number times the number of larvae per square metre times their estimated canola price/bushel to get an idea of how potential economic loss compares to their cost of applying insecticide.

He stresses that the threshold is a guideline, so "use common sense". For example, in warm and dry weather, earlier leaf senescence will force the worms up onto the pods, causing more pod damage.

If bertha armyworm larval populations exceed the economic threshold, Hammond says timing of insecticide applications becomes important. He recommends waiting until at least some of the larvae are three quarters to one inch long to ensure that most of the eggs have hatched. Spraying in the cool of early morning or late evening when the larvae are up on the plants feeding will improve efficacy, he adds.

Even though spraying at those times will have the least impact on beneficial pollinators, Hammond suggests contacting beekeepers in the area so they can take additional steps to protect their bees, especially for fields still in flower.

To ensure there are no chemical residues on harvested crop, Hammond reminds growers to follow the preharvest interval (PHI) - days from application to cutting of the crop – on the insecticide label before spraying. He says to protect export markets, “it’s imperative to use an insecticide with a shorter PHI” as swathing approaches.

Hammond also reminds growers that this is the time of year to watch for prematurely wilting or ripening plants within fields, as this may indicate disease. While sclerotinia is the most common cause, it is important to confirm that this is the problem.

He advises growers to break open the stems of any bleached white plants and look for hard black sclerotia forming inside the stem. If sclerotinia is the cause, record the percentage of plants infected and severity of symptoms because this is important information for assessing risk in future years.

If there are no sclerotia, some other possibilities are blackleg, fusarium wilt, clubroot or even root maggot damage. He says to dig up the plants to check the roots for rot, galls from clubroot, or root maggot feeding. If clubroot is confirmed, proper equipment sanitation to prevent spread will be critical. If high levels of root maggots are found, cultural control strategies such as increased seeding rates can be considered in future years.

Alternaria black spot is another disease to watch for, because severe infections will predispose pods to shattering, which may mean swathing a little earlier and avoiding straight combining.

For more information on identifying specific pests, growers should check the Canola Growers Manual at [http://www.canola-council.org/growing\\_publications.html](http://www.canola-council.org/growing_publications.html) or the Canol@Grow section on the Council website for links to more information on insects and diseases: <http://www.canola-council.org/icp.aspx>.

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[Back to Media Releases](#)

# Check Overall Seed Colour Change Before Swathing Canola

**Monday, July 30, 2007**

Stay off the swather until most of the canola turns. Canola Council of Canada agronomy specialist David Vanthuyne says many canola fields are going to mature at different stages this year. He advises growers to hold off swathing until sufficient seed colour change has taken place.

Vanthuyne says averaging out seed colour change on a number of plants in several locations within a given field will be the most profitable approach this year.

“Staging will be critical”, he says, “some plants may be at 60 to 70% seed colour change while others may only be at 20 to 30% seed colour change. The trick is to capture as much yield as possible by delaying swathing long enough, avoiding shattering losses, but allowing as much seed colour change as possible on less mature plants.”

“When seeds in the bottom half of the plant have changed colour,” Vanthuyne says, “seeds in the top, or last formed pods, will be firm and roll between the fingertips. At this stage of maturity the risk of locking in green seed can be minimized.”

To be considered sufficiently “colour changed”, green seeds must have at least small patches of colour or spotting. Seeds slowly turn from green to light yellow or reddish-brown to black, depending on the weather and variety. Seed colour change within pods on the main stem will advance about 10% every two to three days under normal environmental conditions.

“We’ve extended the swathing recommendation window to up to 60% seed colour change from our old recommendation of 30 to 40%”, Vanthuyne says. “Unfortunately this year, variations in maturity in many areas will make determining when to swath more difficult.”

The Canola Council agronomy specialist advises growers to start inspecting canola fields approximately 14 days after flowering ends.

“After assessing the main stem, look at seeds from pods on the side branches to ensure they are firm with no translucency, especially in fields with low plant populations where typically the plants have numerous branches,” Vanthuyne says.

Under normal growing conditions, sampling the field every two to three days and averaging the percent seed colour change will give growers an accurate assessment of the overall maturity of the crop. Plant densities, soil type, topography, variety choice and weather will affect the rate of seed maturation. Vanthuyne says it’s a good idea to walk out and sample at least five plants in different areas of the field.

Some varieties will show pod colour change long before the seeds do, while the opposite holds true as well. That’s why it’s so important to check for seed colour change, not pod colour change. Vanthuyne says that to catch most of the crop at or near the optimum stage, growers with large acreages may need to start swathing their earliest maturing fields prior to 40% to maintain an average seed colour change of 40 to 60% for the bulk of the crop.

Hot, dry and windy weather causes rapid seed moisture loss and seed colour change. “We’ve seen seeds on the main stem change from 10% to 50% in just a few days under these conditions,” he cautions.

Swathing late in the day and during the night will reduce shattering of riper plants and also minimize green seed issues by slowing the initial dry down of the swaths. “At the very least avoid swathing during the heat of the day,

especially at 30 plus degrees,” stresses Vanthuyne.

“Patience and averaging seed colour change will be the key this year,” says Vanthuyne.

For a free copy of the Canola Council’s **Time of Swathing Guide**, contact [admin@canola-council.org](mailto:admin@canola-council.org) or (204) 982-2100. An on-line version is available at: <http://www.canola-council.org/properstage.aspx>

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[Back to Media Releases](#)

# Pre-Harvest Interval Important Factor in Pesticide Choice

**Monday, July 30, 2007**

The Canola Council of Canada reminds growers to follow the pre-harvest interval instructions on pesticide labels. The Council's crop program manager Chris Anderson says as "harvest gets closer, growers need to pay even more attention to the pre-harvest interval".

He explains that the pre-harvest interval refers to the amount of time between applying a product and when harvest begins. For canola, that means pre-harvest intervals are based on the time between pesticide application and swathing or straight cutting.

This year, with bertha armyworm and diamondback moth counts climbing, growers may be considering late applications of insecticides to protect their yields. "With canola prices where they are right now, growers have extra incentive to protect their bushels," Anderson says. "but they need to make sure they are choosing the right product with the right pre-harvest interval."

The pre-harvest interval allows time for the particular pesticide residue to break down before a treated food or feed crop is harvested. Product labels list restrictions on rates and timing of applications that ensure the safety of the crop being harvested.

"The pre-harvest intervals don't come out of the air," Anderson says. "They are science-based and must be strictly followed." He notes that Canada has an "excellent reputation as a supplier of safe, reliable, quality products". Anderson says failing to follow label pre-harvest intervals could jeopardize that reputation and put canola markets at risk.

Growers should always check labels on products they plan to use before they apply the pesticide but there is a list of pre-harvest intervals for commonly used pesticides at: [http://www.canola-council.org/pre\\_harvest.html](http://www.canola-council.org/pre_harvest.html).

For more information on the canola Export Ready program, visit [www.canola-council.org](http://www.canola-council.org) or call 1-866-834-4378.

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[Back to Media Releases](#)

# Big Dollars at Stake in Spring and Summer Canola Storage

**Tuesday, March 25, 2008**

As spring temperatures increase, the Canola Council is encouraging growers to check their bins for signs of possible seed deterioration. With canola prices at record levels, leaving a 4,000 bushel bin valued at over \$50,000 dollars unchecked is a big mistake.

"We are concerned that as temperatures start to rise through April and May, reports of spoilage and seed damage will also increase," says Canola Council agronomy specialist David Vanthuyne. "That sort of quality loss doesn't need to happen.

Vanthuyne explains that in spring when the sun warms the outside of the bin, warm air moves up near the outside wall of the bin and down through the centre of the grain mass. The cooler canola in the centre of the bin re-absorbs moisture, creating a damp and warm area prone to rapid spoilage.

"That's when you need to monitor the seed more regularly", Vanthuyne says. "This area of the bin can favour the growth of storage moulds and eventually the seed may become damaged."

Aeration is the most effective way to stabilize temperature and moisture within a bin. At the very least, he advises growers to take out some of the canola from the centre of the bin. "That way," he says, "you'll interrupt any increase in temperature and moisture in the central core."

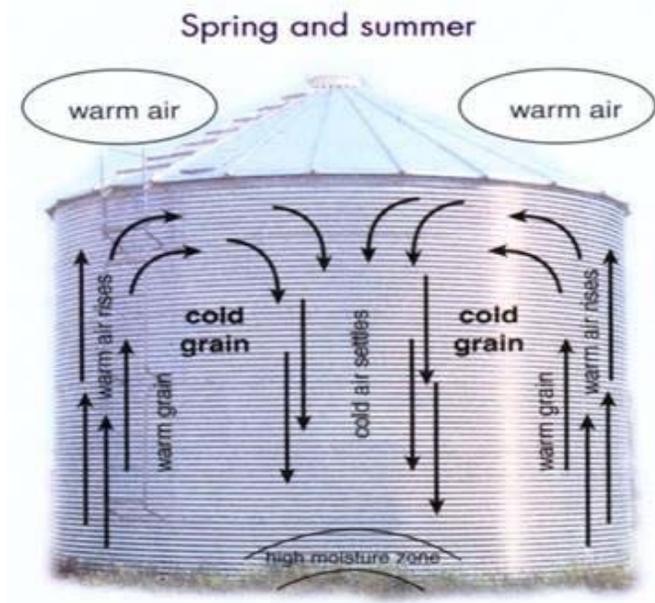
Vanthuyne says if moisture and temperature are properly maintained, it's possible to store quality canola seed for two to three years.

"The best approach is to stabilize the bin temperature between 10 to 15 degrees Celsius as summer approaches", advises Vanthuyne. This becomes even more critical with large storage structures which tend to be at greater risk for heating.

## **For more information in your area, contact:**

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## **Stored Grain Moisture Migration Spring and Summer**



*This press release is part of the Canola Council's Crop Production extension program. The program is supported regionally by: Alberta Canola Producers Commission; Saskatchewan Canola Development Commission; Manitoba Canola Growers Association; Canola Council of Canada; Peace River Agriculture Development Fund; and B.C. Ministry of Agriculture, Food and Fisheries.*

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[Back to Media Releases](#)

# Canola Watch

## 2007 Canola Watch Reports

### Canola Watch Report No. 1, 2007 Western Canada – May 2, 2007

#### In this issue:

(click the bookmark links below to move to specific sections of this report)

[Manitoba canola growers lead seeding progress](#)

[Soil moisture conditions fair to excessive](#)

[Soil temperatures generally good](#)

[Growers urged to soil test](#)

[Good control of early weed growth is key](#)

[Check previous herbicide use on fields planned for canola](#)

[Do not seed deregistered canola varieties](#)

[Seed shallow at rates to establish target plant populations](#)

[Broadcast seed only in emergency situations](#)

The Alberta Canola Producers Commission (ACPC) has developed an Alberta focused version of this report. Visit the ACPC website at: <http://www.canola.ab.ca>

#### Canola seeding

has begun in earnest across many areas of southwestern, central and eastern Manitoba as well as in southern Saskatchewan and southern Alberta. Some areas of south central Manitoba report up to 40% of the canola acres seeded. Seeding has started in some western parts of Saskatchewan near Kindersley, Rosetown and North Battleford, as well as parts of eastern Alberta near Coronation. But most of the rest of the areas are still wet and awaiting drying conditions before seeding can start. These areas are several days to over a week away from seeding, even with favourable weather. The majority of fieldwork to date in these areas has been field preparation such as rock picking, harrowing, soil sampling and fertilizer application.

#### Soil moisture conditions

range from fair to excessive across western Canada. Topsoil in parts of central, eastern and the Interlake regions of Manitoba, as well as southeastern Saskatchewan are getting dry, especially with recent drying winds. However, many other areas including northern and northeastern Saskatchewan, central Alberta north of Calgary, and most of the Peace region remain wet from the combination of heavy winter snowfall, slow spring melt, and recent rainfall throughout parts of central Alberta and northern Saskatchewan.

For current maps of moisture conditions from PFRA for western Canada, check the following links for precipitation since September 1 and April 1 respectively:

[http://www.agr.gc.ca/pfra/drought/prpay07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpay07_e.htm)

[http://www.agr.gc.ca/pfra/drought/prpgs07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpgs07_e.htm)

The latest crop report from Manitoba Agriculture, Food & Rural Initiatives is available at:

<http://web2.gov.mb.ca/agriculture/mwcr/index.php>

The latest crop report from Saskatchewan Agriculture, Food & Rural Revitalization is available at:

[http://www.agr.gov.sk.ca/docs/reports/crop\\_report/crprpt070430.asp](http://www.agr.gov.sk.ca/docs/reports/crop_report/crprpt070430.asp)

Additional moisture information for Alberta is available from Alberta Environment at:

<http://www3.gov.ab.ca/env/water/WS/data/precipmaps/weekly.pdf>

#### Soil temperatures are generally good

for this time of year in most areas of the prairies due to the seasonable temperatures in most regions over the past couple of weeks. Data collected from the Canola Council CPC trials has shown that allowing the soil to warm to at least 5

degrees C before seeding will encourage the crop to emerge quickly and more evenly. Quick, even emergence can help reduce problems throughout the growing season, from seedling disease to uniformity of maturity at harvest.

### **Soil testing is even more important this year.**

Many areas experienced record or near record crop yields last year for the second year in a row, drawing down the levels of available nutrients, especially nitrogen. As well, wet conditions in many areas over the fall, winter and spring may have led to nitrogen losses from de-nitrification. More than ever, growers need to do a **proper soil test** to determine levels of available nutrients especially in light of record fertilizer prices. Growers should soil test for nitrogen this spring to determine their soil nitrogen status at various depths in the soil profile. For further background information on the importance of spring soil testing, refer to the following Canol@Fact:

[http://www.canola-council.org/PDF/Canola\\_Fact\\_Sheet\\_Oct27.pdf](http://www.canola-council.org/PDF/Canola_Fact_Sheet_Oct27.pdf)

### **Winter annual weeds and volunteer canola**

are showing up in many areas due to the combination of favorable moisture conditions and reasonable soil temperatures. Growers are strongly encouraged to assess the number, growth stage and types of weeds present prior to burn-off applications. This will assist in determining the proper product or tank-mix as well as the rate that may be required. CleanStart® from Nufarm, a newly registered product containing carfentrazone + glyphosate, can be a useful tool in controlling Roundup Ready canola volunteers prior to a canola or pulse crop. Control of early germinating weeds is important in minimizing moisture and nutrient loss and reducing crop competition to establish a healthy and competitive crop stand. For more information on early season weed control, refer to the following web-link from Reduced Tillage Linkages: <http://reducedtillage.ca/docs/Pre-seed%20Weed%20Control%20revised%20April%202007.PDF>

### **Herbicide rotations**

need to be monitored for potential residual problems, especially in areas where dry soils are reported, and growing season precipitation was low last year. Look back at least two years to see what herbicide rotation has occurred. Potential problems may occur with repeated use of Group 2 herbicides. If there is a risk of herbicide carryover in a field, consider growing a less susceptible crop.

**Make sure seeded canola varieties are Canola Export Ready** – It is imperative that growers do not seed any deregistered varieties that may impact export markets. Refer to the Canola Council of Canada website link for more information on the Canola Export Ready program and on which varieties and pesticides are not approved for use in Canada:

<http://www.canola-council.org/seed/export-ready/export-ready.shtml>

### **Proper seeding depth and seeding rates**

are key for crop establishment. Although soil moisture conditions are favorable in most areas, growers need to ensure they **seed shallow**

to facilitate rapid emergence, ideally at a depth of ½ to ¾ of an inch. Keep any pre-seeding tillage shallow to help maintain the seedbed firmness and moisture. Make sure that **seeding rates** are high enough to establish the target of 7-14 plants/ft<sup>2</sup>. Watch your seed-placed fertilizer rates, especially if topsoil moisture conditions continue to dry out. Refer to the attached Canol@Fact ([plant\\_pop\\_profit.pdf](#)) for further information on establishing proper plant populations and to the attached Canol@Fact ([Canola\\_Charts.pdf](#)) for tables estimating plant populations under different survival levels.

As well, apply recommended rates of phosphorus fertilizer for the “pop-up effect” in cooler areas to ensure more uniform crop maturity.

### **Broadcast seeding**

may be tempting with the delay in seeding progress due to wet weather. In general, broadcast seeding is not recommended. Usually, broadcast seeding results in lower yields compared to drill seeding. However, producers faced with wet conditions that limit equipment flotation plus the risk of fall frost may wish to consider broadcast seeding. Here are some tips for enhancing the success of broadcast seeding.

- Increase seeding rates slightly to compensate for non-uniform seed depth.
- Consider lightly cultivating (2-4 cm) or harrowing to incorporate the seed into the soil if soil conditions allow.
- Avoid creating lumps or clods during cultivation or straw piles with harrows or cultivators.
- If broadcasting fertilizer as well as seed, be aware that broadcast phosphorus is only about half as efficient as banded phosphorus. There can also be greater risk of denitrification on saturated soils or volatilization from improper fertilizer incorporation, reducing N fertilizer efficiency. Adjust fertilizer rates accordingly, keeping in

mind a realistic target yield based on the time of year and field conditions.

Direct questions regarding this report to John Mayko, Senior Agronomist, Parkland West (West Central AB), with the Canola Council of Canada at [maykoj@canola-council.org](mailto:maykoj@canola-council.org) ph/fax: 780-764-2593.

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Kerry Clark, BC Ministry of Agriculture and Lands, [Kerry.Clark@gov.bc.ca](mailto:Kerry.Clark@gov.bc.ca), 250-784-2559

*The Canola Watch Report provides just-in-time information on canola production to growers and industry. Contributors to the Canola Agronomy Network are:*

*Manitoba Agriculture & Food; Manitoba Canola Growers Association; Agricore United; Saskatchewan Wheat Pool; United Farmers of Alberta; Saskatchewan Agriculture, Food & Rural Revitalization; Saskatchewan Canola Growers Association; Saskatchewan Canola Development Commission; Alberta Agriculture, Food & Rural Development; Alberta Canola Producers Commission; BC Ministry of Agriculture; Food & Fisheries; and the Canola Council of Canada.*

[« back](#)

# Canola Watch

## 2007 Canola Watch Reports

### #2 Western Canada – May 9, 2007

In this issue:

(click the bookmark links below to move to specific sections of this report)

[Manitoba canola growers continue to lead seeding progress](#)

[Soil moisture conditions good to excessive](#)

[Soil temperatures generally good](#)

[Growers urged to soil test](#)

[Good control of early weed growth is key](#)

[Book required canola herbicides including burn-off products](#)

[Check previous herbicide use on fields planned for canola](#)

[Do not seed deregistered canola varieties](#)

[Canola is emerging; start scouting fields 7-10 days after seeding](#)

[Seeding late? Stay cool and do it right!](#)

[Broadcast seeding not generally recommended](#)

[Celan trucks and equipment to prevent clubroot spread](#)

*The Alberta Canola Producers Commission (ACPC) has developed an Alberta focused version of this report. Visit the ACPC website at: <http://www.canola.ab.ca>*

### **Canola seeding**

continues to make good progress throughout most of Manitoba as well as in southern Saskatchewan and southern Alberta. Some areas of eastern Manitoba report up to 80% of the canola acres seeded. Some seeding has occurred in central and western parts of Saskatchewan as well as parts of east central Alberta. The remaining areas are still wet and awaiting drying conditions and are several days to over a week away from seeding, even with favourable weather. The majority of fieldwork to date in these areas has been limited to field preparation such as rock picking, harrowing, soil sampling and fertilizer application.

### **Soil moisture conditions**

range from good to excessive across most of western Canada. Many areas of Manitoba and southern Saskatchewan that were getting dry last week experienced welcome rains ranging from 5 mm to over 75 mm, although some pockets of dryness remain in parts of southern and central Saskatchewan. Most areas of Alberta and western Saskatchewan also received rains last week ranging from 10 mm to over 100 mm. Areas including northern and northeastern Saskatchewan, central Alberta north of Calgary, and most of the Peace region remain wet from the combination of recent rains and winter precipitation.

For current maps of moisture conditions from PFRA for western Canada, check the following links for precipitation since September 1 and April 1 respectively:

[http://www.agr.gc.ca/pfra/drought/prpay07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpay07_e.htm)

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Additional moisture information for Alberta is available from Alberta Environment at:

<http://www3.gov.ab.ca/env/water/WS/data/precipmaps/weekly.pdf>

### **Soil temperatures remain generally good**

for this time of year in most areas of the prairies due to the seasonable temperatures in most regions. Many areas report soil temperatures of over 5 degrees C, although some pockets of cooler temperatures remain. Data collected from the Canola Council CPC trials has shown that allowing the soil to warm to at least 5 degrees C before seeding will encourage the crop to emerge quickly and more evenly. Quick, even emergence can help reduce problems throughout the growing season, from seedling disease to uniformity of maturity at harvest.

### **Soil testing is even more important this year.**

The combination of record or near record crop yields last year and possible denitrification from wet conditions over the fall, winter and spring may have led to the likelihood of low soil nutrients, especially nitrogen. More than ever, growers need to do a **proper soil test**

to determine levels of available nutrients especially in light of record fertilizer prices. Growers should soil test down to 24 inches to determine their soil nitrogen status at various depths in the soil profile. For further background information on the importance of spring soil testing, refer to the following Canol@Fact:

[http://www.canola-council.org/PDF/Canola\\_Fact\\_Sheet\\_Oct27.pdf](http://www.canola-council.org/PDF/Canola_Fact_Sheet_Oct27.pdf)

**Winter annual weeds, volunteer canola, dandelion and quackgrass** are showing up in many areas due to the combination of favorable moisture conditions and reasonable soil temperatures. Growers are strongly encouraged to assess the number, growth stage and types of weeds present prior to burn-off applications. This will assist in determining the proper product or tank-mix as well as the rate that may be required. For those growers relying on post seeding pre-emergent burn-off applications, keep in mind that many areas are reporting canola emergence within a week of seeding, due to ample moisture and warm soils. Monitor carefully for emergence prior to spraying to avoid crop damage. Control of early germinating weeds is important in minimizing moisture and nutrient loss and reducing crop competition to establish a healthy and competitive crop stand. For more information on early season weed control, refer to the following web-link from Reduced Tillage Linkages:

<http://reducedtillage.ca/docs/Pre-seed%20Weed%20Control%20revised%20April%202007.PDF>

In light of the heavy weed pressure in many areas combined with near record canola acreage, growers are strongly encouraged to **book their required quantities of both burn-off and in-crop products** to ensure required quantities will be available when needed. There have been some reports of localized shortages of various herbicide burn-off products.

### **Herbicide rotations**

need to be monitored for potential residual problems, especially in areas where dry soils are reported, and growing season precipitation was low last year. Look back at least two years to check herbicide rotations. Potential problems may occur with repeated use of Group 2 herbicides. If there is a risk of herbicide carryover in a field, consider growing a less susceptible crop.

**Make sure seeded canola varieties are Canola Export Ready** – It is imperative that growers do not seed any deregistered varieties that may impact export markets. Refer to the Canola Council of Canada website link for more information on the Canola Export Ready program and on which varieties and pesticides are not approved for use in Canada:

[http://www.canola-council.org/export\\_ready.html](http://www.canola-council.org/export_ready.html)

**Emergence of canola seeded in late April and early May is occurring** in parts of Manitoba and southern Saskatchewan. **Remember to begin scouting fields by 7 to 10 days after seeding** to detect germination problems early. With ample moisture and warm soils, emergence can begin to take place within a week. Refer to the following Canol@Fact for more information: [http://www.canola-council.org/PDF/seed\\_to\\_21days.pdf#zoom=100](http://www.canola-council.org/PDF/seed_to_21days.pdf#zoom=100)

**Although seeding may be delayed** in many areas of Saskatchewan and Alberta compared to the last few years, **growers should not be pushing the panic button yet.** The combination of good to excellent soil moisture combined with favourable soil temperatures is ideal for rapid and even emergence as long as the proper seeding techniques are used. **Seed shallow**

to facilitate rapid emergence, ideally at a depth of ½ to ¾ of an inch. Keep any pre-seeding tillage shallow to help maintain the seedbed firmness and moisture. Make sure that **seeding rates** are high enough to establish the target of 7-14 plants/ft<sup>2</sup>. Apply recommended rates of phosphorus fertilizer for the “pop-up effect” in cooler areas to ensure

more uniform crop maturity. Watch your seed-placed fertilizer rates, especially if topsoil moisture conditions begin to dry out. Refer to the Canol@Fact ([http://www.canola-council.org/PDF/plant\\_pop\\_profit.pdf](http://www.canola-council.org/PDF/plant_pop_profit.pdf)) for further information on establishing proper plant populations and to the following link ([http://www.canola-council.org/PDF/Apr5%20Canola\\_Charts.pdf](http://www.canola-council.org/PDF/Apr5%20Canola_Charts.pdf)) for tables estimating plant populations under different survival levels.

### **Broadcast seeding**

may be tempting with the delay in seeding progress due to wet weather. In general, broadcast seeding is not recommended. Usually, broadcast seeding results in lower yields compared to drill seeding. However, producers faced with wet conditions that limit equipment flotation plus the risk of fall frost may wish to consider broadcast seeding. Here are some tips for enhancing the success of broadcast seeding.

- Increase seeding rates slightly to compensate for non-uniform seed depth. Consider lightly cultivating (2-4 cm) or harrowing to incorporate the seed into the soil if soil conditions allow. Avoid creating lumps or clods during cultivation or straw piles with harrows or cultivators.
- If broadcasting fertilizer as well as seed, be aware that broadcast phosphorus is only about half as efficient as banded phosphorous. There can also be greater risk of denitrification on saturated soils or volatilization from improper fertilizer incorporation, reducing N fertilizer efficiency. Adjust fertilizer rates accordingly, keeping in mind a realistic target yield based on the time of year and field conditions.

**Soil movement is the principal means of clubroot spread, so make sure field equipment and trucks are properly cleaned.** Wet conditions around the Edmonton area are likely to result in increased mud and soil on equipment. Growers in the clubroot affected areas of the Counties of Sturgeon, Parkland, Leduc and Strathcona should be especially vigilant about cleaning the soil off their equipment before moving from one field to another.

Direct questions regarding this report to John Mayko, Senior Agronomist, Parkland West (West Central AB), with the Canola Council of Canada at [maykoj@canola-council.org](mailto:maykoj@canola-council.org) ph/fax: 780-764-2593.

Direct specific questions regarding regional issues to one of the following Canola Council of Canada agronomists or provincial oilseed specialists:

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Jim Bessel, Senior Agronomist, North-central/eastern Saskatchewan, [besselj@canola-council.org](mailto:besselj@canola-council.org), 306-373-6771

Penny Pearse/Scott Hartley, Saskatchewan Agriculture, Food & Rural Revitalization, [ppearse@agr.gov.sk.ca](mailto:ppearse@agr.gov.sk.ca) / [shartley@agr.gov.sk.ca](mailto:shartley@agr.gov.sk.ca), 306-787-4671 / 306-787-4669

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Anne Vos, Acting Agronomist, Peace Region, [av@summit-ag.com](mailto:av@summit-ag.com), 780-835-4632

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Kerry Clark, BC Ministry of Agriculture and Lands, [Kerry.Clark@gov.bc.ca](mailto:Kerry.Clark@gov.bc.ca), 250-784-255

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[« back](#)

# Canola Watch

## 2007 Canola Watch Reports

### #3 Western Canada – May 16, 2007

In this issue:

(click the bookmark links below to move to specific sections of this report)

[Seeding close to wrapping up in some areas](#)

[Soil moisture conditions good to excessive](#)

[Reports of frost across the west](#)

[No panic on seeding delays](#)

[Reassess variety suitability](#)

[Broadcast seeding](#)

[Save seed tags](#)

[Localized fertilizer shortages](#)

[Good control of early weed growth is key](#)

[Canola is emerging; start scouting fields 7-10 days after seeding](#)

[Flea beetles reported](#)

[Wireworms and cutworms](#)

[Clean trucks and equipment to prevent clubroot spread](#)

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#### **Canola seeding**

progress continues to vary across the prairies. Furthest advanced are areas of Manitoba including the southwest, central and eastern areas, southwestern Saskatchewan and southern Alberta at about 80-90% complete. Most other regions have also reported some progress in seeding this week, although progress remains slow in northeastern Saskatchewan between Prince Albert and Nipawin, central Alberta from Red Deer to Edmonton and in many parts of the Peace region including Grande Prairie, Rycroft and Falher.

#### **Soil moisture conditions**

continue to range from good to excessive across most of western Canada. Variable precipitation (from trace to 30 mm) was received across many parts of the west. Areas including northern and northeastern Saskatchewan, central Alberta north of Calgary, and much of the Peace region remain wet with lots of areas of standing water.

For current maps of moisture conditions from PFRA for western Canada, check the following links for precipitation since September 1 and April 1 respectively:

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Additional moisture information for Alberta is available from Alberta Environment at:

<http://www3.gov.ab.ca/env/water/WS/data/precipmaps/weekly.pdf>

#### **Frost**

was reported in many areas across the west this past week, with some areas reporting lows as cold as -4 degrees C. Damage to emerging canola is reported to be light so far, due to the fact that most crops had not yet emerged. The

amount of frost injury will depend on moisture conditions, duration of the frost and coldest temperature reached, rate at which thawing occurs, the growth stage of the plants, and the amount of cold temperature hardening the plants have experienced. Canola seedlings will usually recover from a light spring frost that does not damage the plant's growing point. A light frost that wilts the leaves, but does not cause any browning, will not severely damage the plants. Some discoloration of the leaves may occur, usually a yellowing or whitening especially under drought conditions.

***Remember that a proper assessment of frost damage cannot be made for several days--until it can be determined whether new growth is appearing from damaged plants.***

Wait several days following the frost to determine the extent of the damage and whether or not the growing point has been killed. If there is any green colour at the growing point in the centre of the frozen leaf rosette, the plant should recover. Under good growing conditions, green re-growth from the growing point should occur in four to five days. Under poor growing conditions--cold and/or dry--this may take up to 10 days. Refer to the following Canol@Fact "Tips for assessing spring frost damage in canola" for more information:

[http://www.canola-council.org/PDF/may5\\_Canola\\_AssessingSpring.pdf#zoom=100](http://www.canola-council.org/PDF/may5_Canola_AssessingSpring.pdf#zoom=100)

**Although seeding remains delayed** in many areas of Saskatchewan and Alberta compared to the last few years, **growers should not be pushing the panic button yet.** The combination of good to excellent soil moisture combined with favourable soil temperatures is ideal for rapid and even emergence as long as the proper seeding techniques are used. **Seed shallow**

to facilitate rapid emergence, ideally at a depth of ½ to ¾ of an inch. Keep any pre-seeding tillage shallow to help maintain the seedbed firmness and moisture. Make sure that **seeding rates** are high enough to establish the target of 7-14 plants/ft<sup>2</sup>. Apply recommended rates of phosphorus fertilizer for the "pop-up effect" in cooler areas to ensure more uniform crop maturity. Watch seed-placed fertilizer rates, especially if topsoil moisture conditions begin to dry out.

Growers who still have significant acreages of canola left to seed should be **reassessing the maturity suitability of their chosen varieties.** The accumulation of temperature or Growing Degree Days (GDDs) has a major influence on days to maturity for canola. In the short and mid season zones of western Canada, maturity for *B. napus* varieties will range from 95 to 125 days, depending on the growing season heat accumulation. *B. rapa* varieties usually range from 80 to 115 days to maturity.

First, find out how many days to maturity are required for the variety that is to be seeded. Usually the variety will be rated relative to the check variety: number of days earlier (minus), later (plus). Using a typical first fall frost date, count back the days to maturity to estimate the cut-off date for seeding. For example, if the first frost is August 25 on average and maturity of the check in the area is 103 days, counting back gives a cut-off date of May 17. If the variety to be seeded is five days earlier in maturity than the check, this means that in a typical year, seeding up to May 22 would be acceptable for that variety. If the variety does not meet the requirements, ask your local retailer to suggest other suitable varieties.

Manitoba growers can check the following link to determine their frost-free days:<http://www.gov.mb.ca/agriculture/climate/waa50s00.html>

Alberta growers can check the following link to determine their frost-free days:[http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/agdex10](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex10)

The delay in seeding progress due to wet conditions has producers considering **broadcast seeding.** In general, broadcast seeding is not recommended. Usually, broadcast seeding results in lower yields compared to drill seeding. However, producers faced with wet conditions that limit equipment flotation plus the risk of fall frost may wish to consider broadcast seeding. Here are some tips for enhancing the success of broadcast seeding.

- Increase seeding rates slightly to compensate for non-uniform seed depth.
- Consider lightly cultivating (2-4 cm) or harrowing to incorporate the seed into the soil if soil conditions allow.
- Avoid creating lumps or clods during cultivation or straw piles with harrows or cultivators.
- If broadcasting fertilizer as well as seed, be aware that broadcast phosphorus is only about half as efficient as banded phosphorous. There can also be greater risk of denitrification on saturated soils or volatilization from improper fertilizer incorporation, reducing N fertilizer efficiency. Adjust fertilizer rates accordingly, keeping in mind a realistic target yield based on the time of year and field conditions.

While seeding, producers are encouraged to

**save the seed tags from bags of canola seed as well as a representative sample of the seed.** Using a plastic bag,

collect a seed sample from each of the bags or lot numbers and keep the blue tags. Document seeding rate and date seeded. Save the sample in a cool, dry place. This is especially invaluable when trying to assess an emergence or early crop development problem to determine whether the seed might be a contributing factor.

**Temporary shortages of fertilizer products including granular ammonium sulphate** have been reported in a number of areas. Growers who are unable to access sufficient product at the time of seeding be aware that they have other options. Post emergent top dressing of ammonium sulphate fertilizer has been shown to be effective when applied up to the 4-leaf stage of the crop. Earlier applications generally have greater efficacy due to the increased chances of receiving adequate precipitation for movement of the fertilizer to the crop roots.

#### **Weed growth continues to be prolific**

in many areas due to the combination of favourable moisture conditions and reasonable soil temperatures. Growers are strongly encouraged to assess the number, growth stage and types of weeds present prior to burn-off applications. This will assist in determining the proper product or tank-mix as well as the rate that may be required. For those growers relying on post-seeding, pre-emergent burn-off applications, keep in mind that many areas are reporting canola emergence within a week of seeding, due to ample moisture and warm soils. **Monitor carefully for emergence prior to spraying to avoid crop damage.**

In many areas of Manitoba, **burn-off products were not applied** due to the early seeding and relatively rapid emergence. Consequently, many of these areas have **weeds that have emerged before and along with the crop**. In these cases it is especially important for growers to **do an early in-crop herbicide application**. Control of early germinating weeds is important in minimizing moisture and nutrient loss and reducing weed competition to allow establishment of a healthy and competitive crop stand.

**Emergence of early seeded canola is occurring** in many areas. **Remember to begin scouting fields by 7 to 10 days after seeding**

to detect germination problems early. With ample moisture and warm soils, emergence can begin to take place within a week. Refer to the Canol@Fact "Factors affecting canola survival for seeding to 21 days after emergence" for more information: [http://www.canola-council.org/PDF/seed\\_to\\_21days.pdf#zoom=100](http://www.canola-council.org/PDF/seed_to_21days.pdf#zoom=100)

**When scouting fields with any stand establishment problems, check for the presence of the blue seed coat**, at or near the root of the seedling or the depth of seeding. This will indicate whether the affected plants are from the current years' seed, or whether the plants may be volunteers from previous years.

#### **Flea beetles**

have been reported in Manitoba near Roblin, St. Agathe, Carman and Portage, in Saskatchewan in the Qu'Appelle Valley, and in Alberta near St. Albert. Although most of the reports are on volunteer canola and wild mustard, early seeded fields in these areas are beginning to emerge, so pay particular attention in these cases, especially on fields with tight canola rotations or where no insecticide seed treatment was used. Agronomists are encouraged to note whether the flea beetles are two-striped or cruciferous. Check the following link for help in identifying the different species:

<http://www.canola-council.org/fleabeetleident.aspx>

If noted, please pass this information on to your local Canola Council agronomist.

#### **Wireworms and cutworms**

have been observed in parts of southwestern Saskatchewan and southern Alberta. Although numbers are low at this point, growers should be on the lookout for these pests. It is important to scout fields where wireworms have been seen or suspected in the past, as they can potentially spend four or more years of their life cycle as larvae in the soil.

Wireworms prefer cool, moist soil and tend to be actively mobile in the top 6 inches of the soil. Early in the growing season, they are attracted to the carbon dioxide produced in the germination process and will come to the surface to feed on emerging plants. This is the time when they will cause the most damage to crops, usually by shredding below ground plant tissue. Whole potatoes buried in marked locations in a field in the spring or from early to mid August will indicate whether wireworms are present. Bury the potatoes 10 to 15 cm deep then dig them up after a couple of weeks, and examine them for wireworm tunnels. Another suggested method for using grain bait stations to monitor wireworm is outlined in the following web link from OMAFRA:

<http://www.omafra.gov.on.ca/english/crops/pub811/6wire.htm#technique>

To sample for larvae, sieve the soil through a screen. Mark out areas 50 cm x 50 cm and sieve the soil to a depth of 15 cm (6 inches). Repeat in different areas of the field to determine an average number of larvae per square metre.

- Soil movement is the principal means of clubroot spread, so make sure field equipment and trucks are properly cleaned. Wet conditions around the Edmonton area are likely to result in increased mud and soil on equipment. Growers in the clubroot affected areas of the counties of Sturgeon, Parkland, Leduc and Strathcona should be especially vigilant about cleaning the soil off their equipment before moving from one field to another.

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[« back](#)

# Canola Watch

## 2007 Canola Watch Reports

### #4 Western Canada – May 24, 2007

In this issue:

(click the bookmark links below to move to specific sections of this report)

[Seeding progress variable](#)

[Soil moisture conditions still good to excessive](#)

[Frost damage light so far](#)

[Delayed seeding tips](#)

[Reassess variety suitability](#)

[Broadcast seeding](#) not generally recommended

[Consider fertilizer and herbicide post-seeding options](#)

[Check for soil crusting](#)

[Good control of early weed growth is key](#)

[Canola is emerging; start scouting fields 7-10 days after seeding](#)

[Flea beetles reported](#)

[Remember to work safely!](#)

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#### Canola seeding

progress remains variable across the prairies. Seeding is wrapping up across southwest, central and eastern areas of Manitoba and many southern parts of Saskatchewan and Alberta. Seeding progress was delayed by rains and snow in all provinces. Areas furthest delayed include northeastern Saskatchewan between Prince Albert and Nipawin, central Alberta from Red Deer to Barrhead and many parts of the Peace region including Grande Prairie, Rycroft and Falher. There have been reports of some growers returning their canola seed for earlier varieties and switching to alternate crops, principally barley.

#### Soil moisture conditions

continue to range from good to excessive across most of western Canada. Variable precipitation (from trace to 125 mm) was received across many parts of the west. Areas including northern and northeastern Saskatchewan, central Alberta north of Calgary, and much of the Peace region continue to remain wet with lots of areas of standing water.

For current maps of moisture conditions from PFRA for western Canada, check the following links for precipitation since September 1 and April 1 respectively:

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Additional moisture information for Alberta is available from Alberta Environment at:

<http://www3.gov.ab.ca/env/water/WS/data/precipmaps/weekly.pdf>

#### More frost

was reported in many areas across the west this past week, with some areas reporting lows as cold as -6 degrees C. Damage to emerging canola is reported to be light so far, due to the fact that most crops had not yet emerged. The

amount of frost injury will depend on moisture conditions, duration of the frost and coldest temperature reached, rate at which thawing occurs, the growth stage of the plants, and the amount of cold temperature hardening the plants have experienced. Canola seedlings will usually recover from a light spring frost that does not damage the plant's growing point. A light frost that wilts the leaves, but does not cause any browning, will not severely damage the plants. Some discoloration of the leaves may occur, usually a yellowing or whitening especially under drought conditions.

To evaluate a frost-damaged field, walk a diagonal path across the field and evaluate all plants in a 1/4 m<sup>2</sup> (3 ft<sup>2</sup>) area every 20 paces. This should result in 50 to 100 samples. Record your observation from each sample. Calculate the percentage of the field that has adequate plant recovery. For example, let's take a field where 80% of the field has a minimum of 20 to 40 recovering healthy plants per m<sup>2</sup> (2 to 4 per ft<sup>2</sup>) and a light weed population, and the remainder of the field has fewer plants (may even be none to spotty). This field likely still has a higher yield potential than one that is reseeded, especially if it's the end of May or first week of June. The surviving plants will take advantage of the reduced competition for light, moisture and nutrients and grow larger, producing more branches, pods and seeds per pod, compensating for the lost plants. With a moderate weed population that cannot be controlled effectively, the canola plant density should be higher (perhaps 60 to 70 recovered plants/m<sup>2</sup> or 6 to 7 per ft<sup>2</sup>), because weed competition will limit the ability of the canola to compensate. In either situation the surviving plants will require longer to mature (as much as five to eight days), but a re-seeded crop will require an even longer frost free period and have a greater risk of fall frost damage.

Wait several days following the frost to determine the extent of the damage and whether or not the growing point has been killed. If there is any green colour at the growing point in the centre of the frozen leaf rosette, the plant should recover. Under good growing conditions, green re-growth from the growing point should occur in four to five days. Under poor growing conditions--cold and/or dry--re-growth may take up to 10 days. Refer to the following Canol@Fact "Tips for assessing spring frost damage in canola" for more information:

[http://www.canola-council.org/PDF/may5\\_Canola\\_AssessingSpring.pdf#zoom=100](http://www.canola-council.org/PDF/may5_Canola_AssessingSpring.pdf#zoom=100)

**Remember, that a proper assessment of frost damage cannot be made for several days--until it can be determined whether new growth is appearing from damaged plants.**

**Although seeding remains delayed** in many areas of Saskatchewan and Alberta compared to the last few years, **growers can still take steps to speed maturity and offset some of these delays.** The combination of good to excellent soil moisture combined with favourable soil temperatures is ideal for rapid and even emergence as long as the proper seeding techniques are used. **Seed shallow** to facilitate rapid emergence, ideally at a depth of 1/2 to 3/4 of an inch. **Keep any pre-seeding tillage shallow** to help maintain the seedbed firmness and moisture. **Consider increasing seeding rates slightly**

to reduce individual plant branching. Make sure that seeding rates are high enough to establish the target of 7-14 plants/ft<sup>2</sup>. **Apply recommended rates of phosphorus**

fertilizer for the "pop-up effect" in cooler areas to ensure more uniform crop maturity, but watch seed-placed fertilizer rates to avoid seedling toxicity.

Growers who still have significant acreages of canola left to seed need to **reassess the maturity suitability of their chosen varieties.** The accumulation of temperature or Growing Degree Days (GDDs) has a major influence on days to maturity for canola. In the short and mid season zones of western Canada, maturity for *B. napus* varieties will range from 95 to 125 days, depending on the growing season heat accumulation. *B. rapa* varieties usually range from 80 to 115 days to maturity.

First, find out how many days to maturity are required for the variety that is to be seeded. Usually the variety will be rated relative to the check variety: number of days earlier (minus), later (plus). Using a typical first fall frost date, count back the days to maturity to estimate the cut-off date for seeding. For example, if the first frost is August 25 on average and maturity of the check in the area is 103 days, counting back gives a cut-off date of May 17. If the variety to be seeded is five days earlier in maturity than the check, this means that in a typical year, seeding up to May 22 would be acceptable for that variety. If the variety does not meet the requirements, ask your local retailer to suggest other suitable varieties.

Manitoba growers can check the following link to determine their frost-free days:

<http://www.gov.mb.ca/agriculture/climate/waa50s00.html>

Saskatchewan growers can check the following link to determine the average first fall frost date:

<http://www.saskcropinsurance.com/maps/other/fallfrost.shtml>

Alberta growers can check the following link to determine their frost-free days:

[http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/agdex10](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex10)

The delay in seeding progress due to wet conditions has producers considering **broadcast seeding**. In general, broadcast seeding is not recommended. Usually, broadcast seeding results in lower yields compared to drill seeding. However, producers faced with wet conditions that limit equipment flotation plus the risk of fall frost may wish to consider broadcast seeding. Refer to the previous crop watch report for further tips on enhancing successfulness of broadcast seeding: [http://www.canola-council.org/Canola\\_Watch\\_Report\\_2007\\_03.html](http://www.canola-council.org/Canola_Watch_Report_2007_03.html)

**Temporary shortages of fertilizer and herbicide products** have been reported in a number of areas. It is important for growers who are unable to access sufficient fertilizer products at the time of seeding to be aware that they have other options. Post emergent top dressing of ammonium sulphate fertilizer has been shown to be effective when applied up to the 4-leaf stage of the crop. Earlier applications generally have greater efficacy due to the increased chances of receiving adequate precipitation for movement of the fertilizer to the crop roots. It is important to use the proper type of application equipment based on the form of fertilizer being applied to ensure even distribution of product when broadcasting.

### **Soil crusting**

has been reported in a number of areas including southwestern and central areas of Manitoba and parts of southern Alberta including Lethbridge and Airdrie. The majority of crusting cases appear to have occurred after heavy rains. The larger, deeper and denser the crust, the more difficult it will be for the seedlings to emerge. Growers should be patient to evaluate the extent of the crop's ability to push through the crust prior to taking any remedial action. If hot and dry weather occurs after the crust develops, then often the crust becomes harder and more difficult to penetrate through. However, if some rain occurs afterwards, then the rain will tend to soften the crust and then the seedlings can emerge to the surface. Although remedial action such as light harrowing has sometimes been used to break up the crusting, growers should be very cautious of this practice especially if the seed is shallow and if germination has already occurred. Reduced tillage practices and keeping crop residues near the soil surface are useful in reducing the occurrence and severity of soil crusting.

### **Weed growth continues**

in many areas due to the combination of favourable moisture conditions and relatively warm soil temperatures. In many areas of Manitoba, the combination of early seeding and the lack of pre-emergent burn-off applications have led to many fields experiencing advanced weed growth compared to the crop stage. In these cases it is especially important for growers to **do an early in-crop herbicide application**. Control of early germinating weeds is important in minimizing moisture and nutrient loss and reducing weed competition to allow establishment of a healthy and competitive crop stand.

Growers are strongly encouraged to assess the number, growth stage and types of weeds present prior to burn-off applications. This will assist in determining the proper product or tank-mix as well as the rate that may be required. For those growers relying on post-seeding, pre-emergent burn-off applications, keep in mind that many areas are reporting canola emergence within a week of seeding, due to ample moisture and warm soils. **Monitor carefully for emergence prior to spraying to avoid crop damage.**

### **Emergence of earlier seeded canola continues in many areas. Remember to begin scouting fields by 7 to 10 days after seeding**

to detect germination problems early. With ample moisture and warm soils, emergence can begin to take place within a week. Refer to the Canol@Fact "Factors affecting canola survival for seeding to 21 days after emergence" for more information: [http://www.canola-council.org/PDF/seed\\_to\\_21days.pdf#zoom=100](http://www.canola-council.org/PDF/seed_to_21days.pdf#zoom=100)

**When scouting fields with any stand establishment problems, check for the presence of the blue seed coat**, at or near the root of the seedling or the depth of seeding. This will indicate whether the affected plants are from the current year's seed, or whether the plants may be volunteers from previous years.

### **Flea beetles continue to be reported**

near Dauphin and in the southwest region of Manitoba, in Saskatchewan near Moosomin and Meota, in Alberta near St.

Albert and in the BC Peace. Although most of the reports are on volunteer canola and wild mustard, early seeded fields have begun to emerge, so pay particular attention in these cases, especially on fields with tight canola rotations or where no insecticide seed treatment was used. Agronomists are encouraged to note whether the flea beetles are two-striped or cruciferous. Check the following link for help in identifying the different species:

<http://www.canola-council.org/fleabeetleident.aspx>

If noted, please pass this information on to your local Canola Council agronomist.

Following are tips for monitoring and assessing flea beetle damage of emerging crops. Scout fields daily in the spring, especially in areas with high flea beetle pressure last year, and assess damage to cotyledons and the first true leaves of seedlings. Continue scouting for the first 14 days after emergence, especially on sunny, calm days when temperatures exceed 14oC; scouting twice a day may be warranted when weather conditions are ideal for flea beetle feeding. Determine the extent and distribution of damage by observing plants at random while walking across the field, as well as checking all field and slough margins where the insects over-winter. Estimate the foliage damage, utilizing the visual aid at the bottom of the following web page to assist in assessing leaf area damage more accurately - <http://www.canola-council.org/fleabeetlemonitoring.aspx>. Flea beetles generally invade canola fields from the field edges. Damage and flea beetle numbers may be higher at the field edge than farther into the field.

Current seed treatment insecticides require flea beetles to feed on the canola in order to provide control, so seeing some flea beetle damage doesn't mean your seed treatment insecticide is not working. These insecticides have a limited window of efficacy and delayed emergence and growth due to cool, wet weather may allow feeding damage to build up.

Canola seedlings can withstand 50% leaf loss. However, flea beetles can locate attack and quickly injure or destroy seedlings shortly after emergence. Therefore, the action threshold for flea beetle feeding on canola is when there is 25% defoliation and flea beetles are present. Make sure to check the entire plant for signs of flea beetle feeding, the stem may also have signs of damage. Applying controls at 25% defoliation will reduce the risk of flea beetle damage reaching a level where yield loss and plant development are substantially reduced. If damage only exceeds threshold levels near the field edges, a foliar spray around the field edges may provide sufficient protection. However, on hot and calm days flea beetles are capable of moving farther distances and may cause significant damage further into the field.

When assessing economic thresholds, also consider growing conditions. When flea beetle feeding is combined with poor plant growth during hot, dry weather, canola can tolerate less feeding than if plants are growing rapidly under more ideal growing conditions.

Although seeding may be delayed this year due to the late spring and wet conditions, **remember to work safely**. There have been a number of cases of tow ropes and chains recoiling back into the glass of tractor cabs and also a report of a tractor using auto-steer crashing into a high tension electrical tower. Although luckily, no one was seriously hurt in these cases, remember to use caution when extricating stuck equipment and **stay alert!** Remember, it makes no sense to rush through seeding and not be around to enjoy the harvest.

Direct questions regarding this report to John Mayko, Senior Agronomist, Parkland West (West Central AB), with the Canola Council of Canada at [maykoj@canola-council.org](mailto:maykoj@canola-council.org) ph/fax: 780-764-2593.

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Anne Vos, Acting Agronomist, Peace Region, [av@summit-ag.com](mailto:av@summit-ag.com), 780-835-4632

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*The Canola Watch Report provides just-in-time information on canola production to growers and industry.*

*Contributors to the Canola Agronomy Network are:*

*Manitoba Agriculture & Food; Manitoba Canola Growers Association; Agricore United; Saskatchewan Wheat Pool; United Farmers of Alberta; Saskatchewan Agriculture, Food & Rural Revitalization; Saskatchewan Canola Growers Association; Saskatchewan Canola Development Commission; Alberta Agriculture, Food & Rural Development; Alberta Canola Producers Commission; BC Ministry of Agriculture; Food & Fisheries; and the Canola Council of Canada.*

[« back](#)

# Canola Watch

## 2007 Canola Watch Reports

### #5 Western Canada – May 30, 2007

In this issue:

(click the bookmark links below to move to specific sections of this report)

[Canola seeding nearing completion despite weather setbacks](#)

[Soil moisture conditions remain good to excessive](#)

[Continuing rains causing stress in canola fields](#)

[Consider top-dressing fertilizer](#)

[Frost damaged canola is recovering well](#)

[Seeding still delayed? Follow these tips.](#)

[Seed registered varieties only](#)

[Reassess variety suitability](#)

[Broadcast seeding not generally recommended](#)

[Check for soil crusting & compaction](#)

[Good control of early weed growth is key](#)

[Remember to read herbicide labels](#)

[Scout fields to check germination](#)

[Cutworms showing up already](#)

[Flea beetles reported](#)

The Alberta Canola Producers Commission (ACPC) has developed an Alberta focused version of this report. Visit the ACPC website at: <http://www.canola.ab.ca>

#### **Canola seeding**

progress remains variable across the prairies. Seeding is nearing completion across southwest, central and eastern areas of Manitoba and most southern parts of Saskatchewan and Alberta. Seeding progress continued to be delayed by rains in all provinces and snow in west-central Alberta between Calgary and Ponoka. Areas furthest delayed include northeastern Saskatchewan between Melfort and Carrot River, central Alberta between Olds and Ponoka and parts of the Peace region including Rycroft, Falher and Debolt. There continue to be reports of some growers returning their canola seed for earlier varieties and switching to alternate crops, principally barley in many areas and fescue in the Peace region.

#### **Soil moisture conditions**

continue to range from good to excessive across most of western Canada. Variable precipitation (from trace to 175 mm) was received across many parts of the west, with many areas of Manitoba and northern and eastern Saskatchewan receiving at least 50-75 mm. Areas reporting standing water increased over last week, including parts of central and eastern Manitoba, northern and eastern Saskatchewan, central Alberta north of Calgary, and many areas of the Peace region.

For current maps of moisture conditions from PFRA for western Canada, check the following links for precipitation since September 1 and April 1 respectively:

[http://www.agr.gc.ca/pfra/drought/prpay07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpay07_e.htm)

[http://www.agr.gc.ca/pfra/drought/prpgs07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpgs07_e.htm)

The latest crop report from Manitoba Agriculture, Food & Rural Initiatives is available at:

<http://web2.gov.mb.ca/agriculture/mwcr/index.php>

The latest crop report from Saskatchewan Agriculture, Food & Rural Revitalization is available at:

[http://www.agr.gov.sk.ca/docs/reports/crop\\_report/crprpt070527.asp](http://www.agr.gov.sk.ca/docs/reports/crop_report/crprpt070527.asp)

Additional moisture information for Alberta is available from Alberta Environment at:  
<http://www3.gov.ab.ca/env/water/WS/data/precipmaps/weekly.pdf>

### **Continuing rains**

in parts of eastern and northeast Saskatchewan and central and eastern Manitoba are causing stress from **excess moisture**. Excess moisture results in a lack of oxygen in the root zone that causes changes in plant colour such as yellowing or purpling, stunted growth, or **premature bolting** (small and spindly canola plants that are starting to bolt). The degree of damage will depend on several factors including crop stage, soil type and texture and time spent under water. For further information regarding the effects of excess moisture on canola growth, refer to the following link:  
<http://www.canola-council.org/excessmoisture.aspx>.

Areas with **excess moisture may also experience substantial nitrogen losses** from saturated soils in low-lying areas. If the excess water recedes fairly quickly and the canola recovers, growers may need to consider top dressing additional nitrogen to compensate. As well, growers who were conservative with their initial fertilizer applications for this crop or were unable to access sufficient fertilizer at the time of seeding and now find favorable to excellent growing conditions may also **consider topping up their nitrogen and sulphur rates by top dressing**. Growers concerned about the nutrient status of their crop should consider tissue testing, but for recently flooded canola it is important to remember to allow for the plant to recover and growth to stabilize before tissue testing takes place. Remember that topdressing N and S fertilizer can be successful up to the bolting stage--as long as rainfall occurs to move the fertilizer into the root zone. This helps alleviate any deficiencies and ensures optimum yields if sub-optimal fertilizer rates were applied or nutrient losses have occurred. Also, ensure rates and field conditions are appropriate to minimize any detrimental effects to the crop, such as leaf burn. If considering products like fines, ensure the application equipment available will allow consistent coverage.

### **More frost was reported**

in many areas across the west this past week, with some areas reporting lows as cold as -4 degrees C. Damage to emerging canola is mostly reported to be light so far, due to the fact that most crops had not yet emerged, but some damage to early seeded canola was reported in western Manitoba, with reseeding in a few cases. However, in many affected fields the canola plants appear to be recovering, with new growth at the growing points. The amount of frost injury will depend on moisture conditions, duration of the frost and coldest temperature reached, rate at which thawing occurs, the growth stage of the plants, trash cover and the amount of cold temperature hardening the plants have experienced. A light frost that wilts the leaves, but does not cause any browning, will not severely damage the plants. Some discolouration of the leaves may occur, usually a yellowing or whitening especially under drought conditions. Refer to the Canol@Fact "Tips for assessing spring frost damage in canola" for more information:  
[http://www.canola-council.org/PDF/may5\\_Canola\\_AssessingSpring.pdf#zoom=100](http://www.canola-council.org/PDF/may5_Canola_AssessingSpring.pdf#zoom=100)

**Remember, that a proper assessment of frost damage cannot be made for several days--until it can be determined whether new growth is appearing from damaged plants.**

**Although seeding remains delayed** in many areas of Saskatchewan and Alberta compared to the past few years, **growers can still take steps to speed maturity and offset some of these delays**. The combination of good to excellent soil moisture combined with favourable soil temperatures is ideal for rapid and even emergence as long as the proper seeding techniques are used.

- **Seed shallow** to facilitate rapid emergence, ideally at a depth of ½ to ¾ of an inch.
- **Keep any pre-seeding tillage shallow** to help maintain the seedbed firmness and moisture.
- **Consider increasing seeding rates slightly** to reduce individual plant branching. Make sure that seeding rates are high enough to establish the target of 7-14 plants/ft<sup>2</sup>.
- **Apply recommended rates of phosphorus** fertilizer for the "pop-up effect" in cooler areas to ensure more uniform crop maturity, but watch seed-placed fertilizer rates to avoid seedling toxicity.
- As well, **consider backing off nitrogen rates slightly** to reduce the delay in maturity at the end of the season.

**With ongoing seeding delays in some areas producers may be considering switching variety choices**. Limited supplies of certified seed of early napus and rapa varieties may make using bin run seed more tempting. Make sure

you are not choosing a de-registered variety. There are no glyphosate tolerant Polish canola options. Also, if you are using saved seed, try to get a germination test before you head to the field, and save a sample of the seed. It is also important to use a seed treatment registered for use on canola. No seed treatments containing lindane should be used. **Using de-registered varieties or seed treatments jeopardizes canola markets.** For more information look up the Canola Export Ready program on our website [http://www.canola-council.org/export\\_ready.html](http://www.canola-council.org/export_ready.html) or call toll-free 1-866-834-4378.

Growers who still have significant acreages of canola left to seed need to reassess the maturity suitability of their chosen varieties. The accumulation of temperature or Growing Degree Days (GDDs) has a major influence on days to maturity for canola. In the short and mid season zones of western Canada, maturity for B. napus varieties will range from 95 to 125 days, depending on the growing season heat accumulation. B. rapa varieties usually range from 80 to 115 days to maturity.

Manitoba growers can check the following link to determine their frost-free days:  
<http://www.gov.mb.ca/agriculture/climate/waa50s00.html>

Saskatchewan growers can check the following link to determine the average first fall frost date:  
<http://www.saskcropinsurance.com/maps/other/fallfrost.shtml>

Alberta growers can check the following link to determine their frost-free days:  
[http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/agdex10](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex10)

The continued delay in seeding progress has producers considering **broadcast seeding**. In general, broadcast seeding is not recommended. Usually, broadcast seeding results in lower yields compared to drill seeding. However, producers faced with wet conditions that limit equipment flotation plus the risk of fall frost may wish to consider broadcast seeding. Refer to the previous crop watch report for further tips on enhancing successfulness of broadcast seeding:  
[http://www.canola-council.org/Canola\\_Watch\\_Report\\_2007\\_03.html](http://www.canola-council.org/Canola_Watch_Report_2007_03.html)

### **Soil crusting**

and compaction continue to be reported in a number of areas including southwestern and central areas of Manitoba, eastern and northern Saskatchewan and parts of the Peace region. The majority of crusting cases appear to have occurred after heavy rains or seeding and packing of wet soils. The larger, deeper and denser the crust, the more difficult it will be for the seedlings to emerge. Growers should be patient to evaluate the extent of the crop's ability to push through the crust prior to taking any remedial action. If hot and dry weather occurs after the crust develops, then often the crust becomes harder and more difficult to penetrate through. However, if some rain occurs afterwards, then the rain will tend to soften the crust and then the seedlings can emerge to the surface. Although remedial action such as light harrowing has sometimes been used to break up the crusting, growers should be very cautious of this practice especially if the seed is shallow and if germination has already occurred. Reduced tillage practices and keeping crop residues near the soil surface are useful in reducing the occurrence and severity of soil crusting.

### **Weed growth continues**

in many areas due to the favourable moisture conditions. In many areas of Manitoba, the combination of early seeding and the lack of pre-emergent burn-off applications have led to many fields experiencing advanced weed growth compared to the crop stage, especially grassy weeds like wild oats. In these cases it is especially important for growers to **do an early in-crop herbicide application**. Control of early germinating weeds is important in minimizing moisture and nutrient loss and reducing weed competition to allow establishment of a healthy and competitive crop stand. However, because many of these areas have also experienced frost and standing water, it is important that growers **give the crop some time to recover from these stresses** before applying another stress in terms of herbicide application. Poor growing conditions also often lead to poor weed control as well. Refer to the attached Canol@Fact (**Timing is Critical to Profitable Weed Control.pdf**) for more information on weed control timing.

Growers are strongly encouraged to assess the number, growth stage and types of weeds present prior herbicide applications. Also, **remember to read the herbicide label**. With several herbicides available in various formulations (e.g. glyphosate), it is important that the correct rate of active ingredient is applied to ensure good weed control and crop tolerance.

For those growers relying on post-seeding, pre-emergent burn-off applications, keep in mind that many areas are reporting canola emergence within a week of seeding, due to ample moisture and warm soils. **Monitor carefully for emergence prior to spraying to avoid crop damage.**

**Slow emergence and lagging early growth open the door for** seedling diseases to affect the crop. Also, the delays in emergence may have affected the duration of protection following emergence for the seed treatment products.

**Remember that the time of protection is usually from the day of planting, not the day of emergence.** Remember to begin scouting fields by 7 to 10 days after seeding to detect germination problems early. With ample moisture and warm soils, emergence can begin to take place within a week. Refer to the Canol@Fact "Factors affecting canola survival for seeding to 21 days after emergence" for more information:

[http://www.canola-council.org/PDF/seed\\_to\\_21days.pdf#zoom=100](http://www.canola-council.org/PDF/seed_to_21days.pdf#zoom=100)

**When scouting fields with any stand establishment problems, check for the presence of the blue seed coat,** at or near the root of the seedling or the depth of seeding. This will indicate whether the affected plants are from the current year's seed, or whether the plants may be volunteers from previous years.

### **Cutworms**

have been noticed in parts of southwestern Saskatchewan near Stewart Valley. Be especially vigilant in areas that had cutworm damage last year. Scout canola fields from early-May to mid-June to determine whether areas with no seedlings have resulted from cutworm damage. Check the edges of bare areas for cut-off plants. Wilted, dead or cut-off plants (weed or crop seedlings) will be seen. Dig around the roots of these plants for cutworms. To collect cutworm larvae, a garden trowel and a soil sifter are useful tools. Cutworms may be found in **dry surface soil** down to about 5 cm (2") below the soil surface. The small, worm-like larvae curl up or attempt to hide in the debris. Cutworm control may only be necessary in small areas of the field, when bare patches appear and large numbers of the insect are still actively feeding. Be sure to note the size of the larvae you see in the field. Large specimens (over 25 mm long) will soon stop feeding and pupate and are also more difficult to kill. If cutworms are still small, and numerous enough to warrant control, apply one of the registered insecticides. Apply surface treatments in the evening, preferably under warm, moist conditions, as cutworms are active at night and these treatments will only control surface-feeding larvae. Do not disturb the soil for five days after treatment. Also refer to the Canol@Fact on cutworms:

[http://www.canola-council.org/PDF/May4\\_2FS\\_Controlling\\_Cutworms.pdf#zoom=100](http://www.canola-council.org/PDF/May4_2FS_Controlling_Cutworms.pdf#zoom=100)

### **Flea beetles continue to be reported**

in parts of southwestern, central and Interlake regions of Manitoba, in Saskatchewan near Indian Head, Kipling, Landis and Dorintosh and in Alberta near St. Albert. Although most of the reports are on volunteer canola and wild mustard, early seeded fields have begun to emerge, so pay particular attention in these cases, especially on fields with tight canola rotations, where no insecticide seed treatment was used or when the seed has been in the ground for a long time before emerging. Agronomists are encouraged to note whether the flea beetles are two-striped or cruciferous. Check the following link for help in identifying the different species: <http://www.canola-council.org/fleabeetleident.aspx>

If noted, please pass this information on to your local Canola Council agronomist.

For more tips on scouting for flea beetles, refer to last weeks Canola Watch report at:

[http://www.canola-council.org/Canola\\_Watch\\_Report\\_2007\\_04.html](http://www.canola-council.org/Canola_Watch_Report_2007_04.html)

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*The Canola Watch Report provides just-in-time information on canola production to growers and industry.*

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[« back](#)

# Canola Watch Reports

## 2007 Canola Watch Reports

### #6 Western Canada – June 6, 2007

In this issue:

(click the bookmark links below to move to specific sections of this report)

[Canola seeding nearing completion despite weather setbacks](#)

[Standing water creating local problems](#)

[Excess moisture stressing canola in some areas](#)

[Consider top-dressing fertilizer this year](#)

[Frost damage light so far](#)

[Let stressed plants recover before spraying for weeds](#)

[Remember to read and follow herbicide labels](#)

[Review spraying tips](#)

[Scout fields regularly](#)

[Watch for herbicide residue symptoms](#)

[Cutworms reported in Saskatchewan and Manitoba canola fields](#)

[Identify flea beetles for Council records](#)

[Gophers popping up](#)

The Alberta Canola Producers Commission (ACPC) has developed an Alberta focused version of this report. Visit the ACPC website at: <http://www.canola.ab.ca>

#### **Canola seeding**

is nearing completion across many areas of the prairies. Favourable weather in Alberta and Saskatchewan allowed for rapid seeding progress over the past week. Seeding continued in many areas including northern Saskatchewan, central Alberta and the Peace region. Some switching to earlier maturing *B. napus* and *B. rapa* varieties was reported in west-central Alberta and the Peace region. Although seeding progress was rapid this past week, there are still likely to be a substantial number of unseeded acres in west-central Alberta and the Peace because of wet field conditions.

#### **Soil moisture conditions**

continue to range from good to excessive across most of western Canada, although topsoil moisture conditions deteriorated in many parts of north-central Alberta. Variable precipitation was received across many parts of the west. Areas reporting standing water decreased from last week, but continue to be a problem in parts of eastern Manitoba including areas around Niverville, Landmark and Lac du Bonnet, parts of northern and eastern Saskatchewan, central Alberta between Olds and Lacombe, and parts of the Peace region including Rycroft, Eaglesham and Debolt.

For current maps of moisture conditions from PFRA for western Canada, check the following links for precipitation since September 1 and April 1 respectively:

[http://www.agr.gc.ca/pfra/drought/prpay07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpay07_e.htm)

[http://www.agr.gc.ca/pfra/drought/prpgs07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpgs07_e.htm)

The latest crop report from Manitoba Agriculture, Food & Rural Initiatives is available at:

<http://web2.gov.mb.ca/agriculture/mwcr/index.php>

The latest crop report from Saskatchewan Agriculture, Food & Rural Revitalization is available at:

[http://www.agr.gov.sk.ca/docs/reports/crop\\_report/crprpt070604.asp](http://www.agr.gov.sk.ca/docs/reports/crop_report/crprpt070604.asp)

Additional moisture information for Alberta is available from Alberta Environment at:

<http://www3.gov.ab.ca/env/water/WS/data/precipmaps/weekly.pdf>

### **Emergence is general**

throughout all regions on earlier seeded crop. Areas of north-central Alberta that were seeded later are reporting patchy emergence due to the rapid drying of the topsoil with recent hot weather and winds. However, **stress from excess moisture**

continues in parts of eastern and northeast Saskatchewan and eastern Manitoba. Excess moisture results in a lack of oxygen in the root zone that causes changes in plant colour such as yellowing or purpling, stunted growth, or **premature bolting**

(small and spindly canola plants that are starting to bolt). The degree of damage will depend on several factors including crop stage, soil type and texture and time spent under water. For further information regarding the effects of excess moisture on canola growth, refer to the following link: <http://www.canola-council.org/excessmoisture.aspx>.

Areas with **excess moisture may also experience substantial nitrogen losses** from saturated soils in low-lying areas. If the excess water recedes fairly quickly and the canola recovers, growers may need to consider top dressing additional nitrogen to compensate. As well, growers who were conservative with their initial fertilizer applications for this crop or were unable to access sufficient fertilizer at the time of seeding may also **consider topping up their nitrogen and sulphur rates by top dressing**, if crop establishment is good and growing conditions have improved. Growers concerned about the nutrient status of their crop should consider tissue testing, but for recently flooded canola it is important to remember to allow for the plant to recover and growth to stabilize before tissue testing takes place. Remember that topdressing N and S fertilizer can be successful up to the bolting stage--as long as rainfall occurs to move the fertilizer into the root zone. This helps alleviate any deficiencies and ensures optimum yields if sub-optimal fertilizer rates were applied or nutrient losses have occurred. Also, ensure rates and field conditions are appropriate to minimize any detrimental effects to the crop, such as leaf burn. If considering products like fines, ensure the application equipment available will allow consistent coverage.

### **Frost was reported**

in Saskatchewan near Tisdale and Lloydminster. Damage to emerging canola is mostly reported to be light so far, but some reseeded has occurred in parts of western Manitoba. Refer to the Canol@Fact "*Tips for assessing spring frost damage in canola*" for more information:

[http://www.canola-council.org/PDF/may5\\_Canola\\_AssessingSpring.pdf#zoom=100](http://www.canola-council.org/PDF/may5_Canola_AssessingSpring.pdf#zoom=100)

**Remember, that a proper assessment of frost damage cannot be made for several days--until it can be determined whether new growth is appearing from damaged plants.**

### **Prolific weed growth continues**

in many areas due to the favourable moisture conditions. Weed growth is especially heavy in direct seeded fields that have not received a pre or post-seeding burn-off application. In these cases it is especially important for growers to **do an early in-crop herbicide application**. Control of early germinating weeds is important in minimizing moisture and nutrient loss and reducing weed competition to allow establishment of a healthy and competitive crop stand. However, because many of these areas have also experienced frost and standing water, it is important that growers **give the crop some time to recover from these stresses**

before applying another stress in terms of herbicide application. Poor growing conditions also often lead to poor weed control as well.

Growers are strongly encouraged to assess the number, growth stage and types of weeds present prior herbicide applications. Also, **remember to read herbicide labels**. With several herbicides available in various formulations (e.g. glyphosate), as well as various possible tank-mix combinations, it is important that the correct rate and timing of product(s) are applied to ensure good weed control and crop tolerance. For specific weed-herbicide recommendations in canola, refer to page 40, Table 10, of the following MAFRI link:

<http://www.gov.mb.ca/agriculture/crops/cropproduction/pdf/gcp2007/weed.pdf>

For specific recommendations regarding tank mix options, refer to the following MAFRI link:

<http://www.gov.mb.ca/agriculture/crops/cropproduction/pdf/gcp2007/pesticidetankmixchart.pdf>

Review the following weed control and **spraying tips**:

- Control weed flushes early to maintain crop yield potential. For more information on the value of early weed control, check the following Canol@Fact: [http://www.canola-council.org/PDF/Jun13\\_Canola\\_Fact\\_Sheet.pdf](http://www.canola-council.org/PDF/Jun13_Canola_Fact_Sheet.pdf).

- Calibrate your sprayer for the specific product to be applied. For more information on how to properly calibrate your sprayer, check the following OMAFRA link:  
<http://www.omafra.gov.on.ca/english/engineer/facts/88-129.htm>
- Choose the proper nozzle to apply the product effectively and reduce the chances of damage to neighbouring crops from spray drift. Check the following SAFRR link:  
[http://www.agr.gov.sk.ca/docs/production/faq\\_choosingnozzles.asp](http://www.agr.gov.sk.ca/docs/production/faq_choosingnozzles.asp)
- Use adequate protection during spraying to reduce exposure.
- Water quality is key to achieving proper performance of many herbicides, particularly with glyphosate and many grassy weed products. For more information, check the following SAFRR link:  
<http://www.agr.gov.sk.ca/docs/production/waterquality.asp>
- Custom applicators (and growers in general) need to ensure they are applying the right product to the right field. Ensure legal land descriptions and field directions are 100% accurate to eliminate misapplication of products.
- Follow label directions for proper product rates and application techniques. Although good weed control has been reported using reduced product and/or water volume rates, remember that unless the product is applied in accordance with label directions, the applicator will have little recourse in the event of poor product performance or crop damage.
- Place a 4'X6' tarp on the ground prior to spraying to create a weed check. This will allow for performance comparisons.

**Remember to keep scouting fields on a regular basis** to detect crop development problems early. Consider establishing a scouting tramline by driving an ATV in an 'X' or 'W' pattern in the field to establish pathways for crop scouting. This will allow for easier scouting with minimal trampling at later crop stages, especially once the crop is blooming.

**When scouting fields with any stand establishment problems, check for the presence of the blue seed coat**, at or near the root of the seedling or the depth of seeding. This will indicate whether the affected plants are from the current year's seed, or whether the plants may be volunteers from previous years.

### **Herbicide residue symptoms**

have been reported in Manitoba on susceptible crops affected by the drought last summer. To assist in identification of herbicide residues on canola, refer to the following Canola Council Herbicide Residue Injury Guide at:  
<http://www.canola-council.org/PDF/toolbook.pdf#zoom=100>

### **Cutworms**

continue to be reported in parts of southwestern and southeastern Saskatchewan and in Manitoba near Elgin, Starbuck and Letellier. Be especially vigilant in areas that had cutworm damage last year. For more information on cutworms, refer to last week's Canola Watch report: [http://www.canola-council.org/Canola\\_Watch\\_Report\\_2007\\_05.html](http://www.canola-council.org/Canola_Watch_Report_2007_05.html).

Some of the reported incidences had cutworm sizes over 25 mm long, which are not good candidates for control, since these worms are close to pupating, so be sure of the size before considering control measures. Also refer to the Canol@Fact on controlling cutworms in canola:  
[http://www.canola-council.org/PDF/May4\\_2FS\\_Controlling\\_Cutworms.pdf#zoom=100](http://www.canola-council.org/PDF/May4_2FS_Controlling_Cutworms.pdf#zoom=100)

### **Flea beetles continue to be reported**

in parts of southwestern Manitoba, in many areas of Saskatchewan and in Alberta near Craigmyle, Lacombe, St. Albert and in the Peace region. Although many of the reports are on volunteer canola and wild mustard, pay particular attention in fields with tight canola rotations, where no insecticide seed treatment was used, or when the seed has been in the ground for a long time before emerging. Agronomists are encouraged to note whether the flea beetles are two-striped or cruciferous. Check the following link for help in identifying the different species:  
<http://www.canola-council.org/fleabeetleident.aspx>

If noted, please pass this information on to your local Canola Council agronomist. For more tips on scouting for flea beetles, refer to a previous Canola Watch report at:  
[http://www.canola-council.org/Canola\\_Watch\\_Report\\_2007\\_04.html](http://www.canola-council.org/Canola_Watch_Report_2007_04.html)

### **Gopher (Richardson's ground squirrel) damage**

was reported in areas of southern and north-western Saskatchewan. Refer to the following AAF link for further information on management and control: [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/agdex3471](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex3471)

Direct questions regarding this report to John Mayko, Senior Agronomist, Parkland West (West Central AB), with the Canola Council of Canada at [maykoj@canola-council.org](mailto:maykoj@canola-council.org) ph/fax: 780-764-2593.

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# Canola Watch Reports

## 2007 Canola Watch Reports

### #7 Western Canada – June 13, 2007

In this issue:

(click the bookmark links below to move to specific sections of this report)

[Canola seeding wraps up](#)  
[Excess moisture stressing canola in some areas](#)  
[Some reseeded due to frost damage](#)  
[Weed growth continues strong](#)  
[Remember to read and follow herbicide labels](#)  
[Watch for herbicide residue symptoms](#)  
[Is a second herbicide pass required?](#)  
[Crop development widely variable](#)  
[Scout fields regularly](#)  
[Cutworms continue](#)  
[Flea beetles more widespread](#)  
[Cabbage seedpod weevils noted in Alberta](#)  
[Gopher damage reported in Saskatchewan](#)  
[Consider top-dressing fertilizer this year](#)  
[Moisture maps and provincial crop reports](#)

The Alberta Canola Producers Commission (ACPC) has developed an Alberta focused version of this report. Visit the ACPC website at: <http://www.canola.ab.ca>

#### **Canola seeding**

is virtually complete across most areas of the prairies. Some canola seeding continued last week in areas including northern Saskatchewan, central Alberta and the Peace region. However, there are still likely to be a substantial number of unseeded acres in northeastern Saskatchewan, west-central Alberta and the Peace because of wet field conditions.

#### **Stress from excess moisture**

continues in eastern Manitoba, parts of eastern and northeast Saskatchewan and west-central Alberta between Didsbury and Lacombe. Excess moisture results in a lack of oxygen in the root zone that causes changes in plant colour such as yellowing or purpling, stunted growth, or **premature bolting** (small and spindly canola plants that are starting to bolt). The degree of damage will depend on several factors including crop stage, soil type and texture and time spent under water. For further information regarding the effects of excess moisture on canola growth, refer to the following link: [www.canola-council.org/excessmoisture.aspx](http://www.canola-council.org/excessmoisture.aspx).

#### **Frost was reported**

in many areas including Treherne and Somerset Manitoba, Tompkins, Langham, Biggar, Neilburg, Battleford and Glaslyn Saskatchewan, in many parts of north-central Alberta and in the Peace region between Manning and La Crete. Some reseeded of damaged canola has occurred in these regions. However, due to the lateness of the season, reseeded at this time should only be considered if there has been damage affecting widespread field areas resulting in a substantial reduction in the number of viable plants. In that case, affected fields should only be reseeded to early maturing canola varieties such as *B. rapa* (Polish) or to early maturing cereals such as barley. Refer to the Canol@Fact “Tips for assessing spring frost damage in canola” for more information: [Canola Assessing Spring](#)

**Remember, as long as the central growing point of most of the plants remains green, the likelihood of crop recovery is high.**

### **Prolific weed growth continues**

in many areas due to the favourable moisture conditions. Herbicide application has been delayed in many areas due to high winds and/or frequent rainfall. Weed growth is especially heavy in direct seeded fields that have not received a pre or post-seeding burn-off application. In these cases, it is especially important for growers to **do an early in-crop herbicide application**.

Control of early germinating weeds is important in minimizing moisture and nutrient loss and reducing weed competition to allow establishment of a healthy and competitive crop stand. However, because many areas have also experienced frost and standing water, it is important that growers **give the crop some time to recover from these stresses**

before applying another stress in terms of herbicide application. These stress conditions also often lead to poor weed control as well. On the other hand, the recent warm and humid weather in some areas can be good for weed control, but it will also result in increased herbicide uptake by the crop. Some issues with reduced crop tolerance and surfactant burn have already been reported in a few fields in Manitoba.

Growers are strongly encouraged to assess the number, growth stage and types of weeds present prior to herbicide applications. Also, **remember to read herbicide labels**. With several herbicides available in various formulations (e.g. glyphosate), as well as various possible tank-mix combinations, it is important that the correct rate and timing of product(s) are applied to ensure good weed control and crop tolerance. Also, ensure that **proper tank cleanout procedures**

are followed when switching herbicides and crops to reduce chances of subsequent crop injury. For further comments including specific weed-herbicide recommendations, tank-mix options and spraying tips, refer to last week's report at: [www.canola-council.org/Canola\\_Watch\\_Report\\_2007\\_06.html](http://www.canola-council.org/Canola_Watch_Report_2007_06.html)

### **Herbicide residue symptoms**

have been reported in Manitoba on susceptible crops affected by the drought last summer as well as in the north Peace region near La Crete. To assist in identification of herbicide residues on canola, refer to the following Canola Council Herbicide Residue Injury Guide at: [www.canola-council.org/PDF/toolbook.pdf](http://www.canola-council.org/PDF/toolbook.pdf)

Early seeded crops in many areas have received their first herbicide pass and **growers are considering a second application**. Prior to automatically applying the second herbicide pass, first consider whether or not the second pass is warranted given the remaining weed pressure. Also, if the canola canopy is starting to reach complete ground cover, the herbicide may not reach targeted weeds. Growers are cautioned when applying late first applications or the second applications of herbicides when the crop is in the bud stage; late spraying could potentially lead to crop stress and blanks on the main stem. Refer to the attached Canol@Fact (**Timing is Critical to Profitable Weed Control. PDF**) for more information on weed control timing including second applications and to the following Canol@Fact at [www.canola-council.org/PDF/May24\\_How\\_Many\\_Weeds.pdf](http://www.canola-council.org/PDF/May24_How_Many_Weeds.pdf) for more information regarding weed populations and economic thresholds.

### **Crop development varies widely**

based largely on when the crop was seeded. Some earlier seeded crops in Manitoba, north-western Saskatchewan and southern Alberta are at the bolting stage, whereas crops in other areas seeded within the last week or two have not yet emerged. Areas of north-central Alberta that were seeded later or were broadcast seeded continue reporting patchy emergence, especially on hill tops and solonchic areas.

**Remember to keep scouting fields on a regular basis** to detect crop development problems early. Consider establishing a scouting tramline by driving an ATV in an 'X' or 'W' pattern in the field to establish pathways for crop scouting. This will allow for easier scouting with minimal trampling at later crop stages, especially once the crop is blooming.

### **Cutworms**

continue to be reported near Hartney and Manitou MB, and Ituna SK and crop damage similar to cutworms has been reported near Neerlandia, AB. Be especially vigilant in areas that had cutworm damage last year. Before considering control, check the size of cutworms and whether they are actively feeding. Cutworms nearing 38 mm (1.5 inches) long are not good candidates for control, since these worms are close to pupating, so be sure of the size before considering control measures. Also, cut open the abdomen of any located cutworms. Green material in the abdomen indicates active feeding which makes these worms favorable for control, whereas the absence of green material may indicate that these

worms are close to pupating. For more information on cutworms, refer to the May 30 Canola Watch report: [www.canola-council.org/Canola\\_Watch\\_Report\\_2007\\_05.html](http://www.canola-council.org/Canola_Watch_Report_2007_05.html)

**Flea beetles continue to be reported throughout many areas.** Some insecticide spraying has occurred, with the worst damage being reported in fields with tight canola rotations, no insecticide seed treatments used, or when the seed has been in the ground for a long time before emerging. For help in assessing the amount of damage noted refer to the following link: [www.canola-council.org/fleabeetlemonitoring.aspx](http://www.canola-council.org/fleabeetlemonitoring.aspx). Agronomists are encouraged to note whether the flea beetles are two-striped or cruciferous. Check the following link for help in identifying the different species: [www.canola-council.org/fleabeetleident.aspx](http://www.canola-council.org/fleabeetleident.aspx)

. If noted, please pass this information on to your local Canola Council agronomist. For more tips on scouting for flea beetles, refer to a previous Canola Watch report at: [www.canola-council.org/Canola\\_Watch\\_Report\\_2007\\_04.html](http://www.canola-council.org/Canola_Watch_Report_2007_04.html)

### **Cabbage seedpod weevils**

have been noted throughout southern Alberta between Medicine Hat and Lethbridge in some canola fields as well as on volunteer canola and cruciferous weeds. Early seeded fields are at most risk at this time of year and should be scouted frequently, especially as the crop starts to bud, bolt and flower. For more tips on scouting and controlling cabbage seedpod weevil, refer to the following links:

[www1.agric.gov.ab.ca](http://www1.agric.gov.ab.ca)

[www.directfocus.com](http://www.directfocus.com)

### **Gopher (Richardson's ground squirrel) damage**

continues in areas of southern and north-western Saskatchewan. Some reseeded of fields has occurred as a result of the damage. Refer to the following AAF link for further information on management and control: [www1.agric.gov.ab.ca](http://www1.agric.gov.ab.ca)

### **Top dressing**

of nitrogen and/or sulphur is being considered by many growers especially in northern and eastern Saskatchewan. This practice should be considered by growers who were conservative with their initial fertilizer applications for this crop or were unable to apply sufficient fertilizer at the time of seeding. Top dressing may also be considered in areas with excess moisture that may have experienced substantial nitrogen losses from saturated soils in low-lying areas. If the excess water recedes fairly quickly and the canola recovers, growers may need to consider top dressing additional nitrogen to compensate. Growers concerned about the nutrient status of their crop should consider tissue testing, but for recently flooded canola it is important to remember to allow for the plant to recover and growth to stabilize before tissue testing takes place. Topdressing N and S fertilizer can be successful up to the bolting stage--as long as rainfall occurs to move the fertilizer into the root zone, but in general, the sooner the fertilizer application, the better the chances of receiving an economic crop response. Ensure rates and field conditions are appropriate to minimize any detrimental effects to the crop, such as leaf burn. If considering products like fines, ensure the application equipment available will allow consistent coverage.

### **Soil moisture conditions**

continue to range from fair to excessive across most of western Canada. Variable precipitation was received across many parts of the west. Heavy thundershowers and hail were experienced in parts of central Alberta including Hairy Hill, Loughheed and Stony Plain, although topsoil moisture conditions continue to deteriorate around Vegreville. Areas of standing water and/or saturated soils continue to be a problem in parts of eastern Manitoba including areas around Lac du Bonnet, LaSalle, Domain, Brunkild and Sanford and in central Alberta between Olds and Lacombe.

The latest crop report from Manitoba Agriculture, Food & Rural Initiatives is available at:

<http://web2.gov.mb.ca/agriculture/mwcr/index.php>

The latest crop report from Saskatchewan Agriculture, Food & Rural Revitalization is available at: [www.agr.gov.sk.ca](http://www.agr.gov.sk.ca)

Additional moisture information for Alberta is available from Alberta Environment at: [www3.gov.ab.ca](http://www3.gov.ab.ca)

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*The Canola Watch Report provides just-in-time information on canola production to growers and industry.*

*Contributors to the Canola Agronomy Network are:*

*Manitoba Agriculture & Food; Manitoba Canola Growers Association; Agricore United; Saskatchewan Wheat Pool; United Farmers of Alberta; Saskatchewan Agriculture, Food & Rural Revitalization; Saskatchewan Canola Growers Association; Saskatchewan Canola Development Commission; Alberta Agriculture, Food & Rural Development; Alberta Canola Producers Commission; BC Ministry of Agriculture; Food & Fisheries; and the Canola Council of Canada.*

# Canola Watch Reports

## 2007 Canola Watch Reports

### #7 Western Canada – June 20, 2007

In this issue:

(click the bookmark links below to move to specific sections of this report)

[Crop development varies](#)

[Variable precipitation received](#)

[Excess moisture stress affecting more areas](#)

[Hail damage could slow plant development](#)

[Scout fields regularly](#)

[Prolific weed growth continues](#)

[Herbicide residue symptoms reported](#)

[Is a second herbicide pass required?](#)

[Top dressing may make sense](#)

[Cutworms reported](#)

[Flea beetles damaging canola in Peace](#)

[Scout for cabbage seedpod weevils](#)

[Make sure those grasshoppers are actually canola pests](#)

[Lygus bugs can cause economic damage](#)

[Gopher damage reported in Saskatchewan](#)

[Assess sclerotinia risk](#)

*The Alberta Canola Producers Commission (ACPC) has developed an Alberta focused version of this report. Visit the ACPC website at: <http://www.canola.ab.ca>*

### **Crop development varies widely**

based largely on when the crop was seeded. Some earlier seeded crops in Manitoba, north-western Saskatchewan and southern Alberta are starting to bloom, whereas crops in other areas seeded in early June are just emerging. Patchy emergence continues to be an issue throughout many areas of north-central Alberta from Barrhead to Vegreville, with problems more evident on later seeded and broadcast seeded fields, especially on hill tops and sandy or solonchic areas.

The latest crop report from Manitoba Agriculture, Food & Rural Initiatives is available at:

<http://web2.gov.mb.ca/agriculture/mwcr/index.php>

The latest crop report from Saskatchewan Agriculture, Food & Rural Revitalization is available at:

[http://www.agr.gov.sk.ca/docs/reports/crop\\_report/crprpt070617.asp](http://www.agr.gov.sk.ca/docs/reports/crop_report/crprpt070617.asp)

### **Variable precipitation**

from trace amounts to over 175 mm was received across many parts of the west. For current maps of moisture conditions from PFRA for western Canada, check the following links for precipitation since September 1 and April 1 respectively:

[http://www.agr.gc.ca/pfra/drought/prpay07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpay07_e.htm)

[http://www.agr.gc.ca/pfra/drought/prpgs07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpgs07_e.htm)

Additional moisture information for Alberta is available from Alberta Environment at:

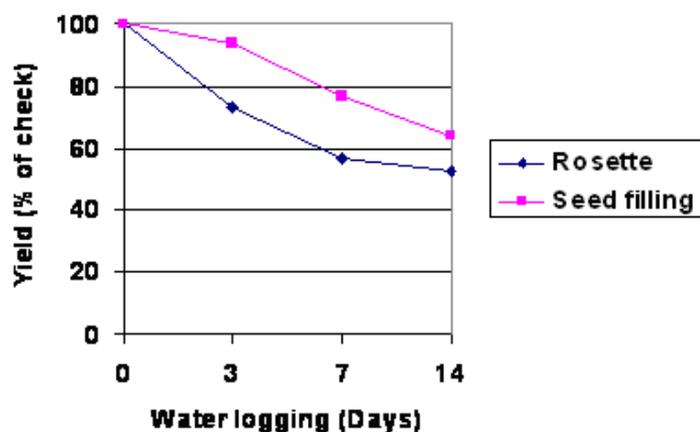
<http://www3.gov.ab.ca/env/water/WS/data/precipmaps/weekly.pdf>

**Excess moisture remains the largest crop development issue across western Canada.** Areas with excess moisture increased over the past week and now include most of Manitoba, southeastern, north-central and northeastern Saskatchewan and central Alberta between Didsbury and Ponoka. Wet soils slow down or stop gas exchange between the soil and atmosphere, causing an oxygen deficiency, reducing root respiration and plant growth. Canola is quite susceptible to waterlogging and yield reductions can occur after only three days of flooding. Symptoms include changes in plant colour such as yellowing or purpling, stunted growth, premature bolting (small and spindly canola plants that are starting to bolt) and older leaves turning purple and senescing more rapidly. For further information regarding the effects of excess moisture on canola growth, refer to the following link:

<http://www.canola-council.org/excessmoisture.aspx>.

The degree of damage and yield loss will depend on several factors including crop growth stage at the time of waterlogging, soil type and texture, duration of saturated soil and temperature (Figure 1). High temperatures combined with waterlogged soils may reduce yields further.

**Figure 1. Effect of Water Logging on Yield**



\*\*Canola Growers Manual, 2003 edition, page 405\*\*

Many nutrient deficiency symptoms including nitrogen and sulphur often occur on crops that are flooded. This is due to the fact that the roots are not functioning properly due to the lack of oxygen. Allow the crop to recover before assessing whether or not additional nutrients may need to be top-dressed. Remember that canola can respond well to top dressed sulphate fertilizer right up to bolting and early flower, while economic responses to nitrogen are most likely to occur if top dressing is done prior to the 4-6 leaf stage. Keep in mind the stage of the crop and also the relative growth of the crop. A crop developing poorly due to other stresses such as excess moisture or weed competition is not as likely to respond to additional nutrients as healthier crops.

### Hail

was also reported across many areas, usually in conjunction with relatively localized thunderstorms. Hail damage at this stage of the crop usually results in a delay in development, as the plant channels its resources into rebuilding the damaged parts before advancing growth. If possible, herbicide applications should be avoided until signs of recovery are evident to help ensure good crop tolerance and adequate uptake by the weeds present. Canola stands with lower than optimal plant density will need careful management. Properly timed weed and insect control will be critical to allow the crop to compensate. Maturity will also likely be extended.

**Remember to keep scouting fields on a regular basis** to detect crop development problems early. Consider establishing a scouting tramline by driving an ATV in an 'X' or 'W' pattern in the field to establish pathways for crop scouting. This will allow for easier scouting with minimal trampling at later crop stages, especially once the crop is blooming.

### Prolific weed growth continues

in many areas due to the favourable moisture conditions. Delays in herbicide application continue in many areas due to high winds and/or frequent rainfall. However, because many areas have also experienced hail or standing water, it is important that growers **give the crop some time to recover from these stresses** before applying another stress in terms of herbicide application. These stress conditions also often lead to poor weed control as well.

Growers are strongly encouraged to assess the number, growth stage and types of weeds present prior to herbicide applications. Also, **remember to read herbicide labels**. With several herbicides available in various formulations (e.g. glyphosate), as well as various possible tank-mix combinations, it is important that the correct rate and timing of product(s) are applied to ensure good weed control and crop tolerance. Also, ensure that **proper tank cleanout procedures**

are followed when switching herbicides and crops to reduce chances of subsequent crop injury. For further comments including specific weed-herbicide recommendations, tank-mix options and spraying tips, refer to the June 6th report at: [http://www.canola-council.org/Canola\\_Watch\\_Report\\_2007\\_06.html](http://www.canola-council.org/Canola_Watch_Report_2007_06.html)

### **Herbicide residue symptoms**

continue to be reported in the Peace region near Manning. To assist in identification of herbicide residues on canola, refer to the following Canola Council Herbicide Residue Injury Guide at:

<http://www.canola-council.org/PDF/toolbook.pdf#zoom=100>

Early seeded crops in many areas have received their first herbicide pass and **growers are considering a second application**. Prior to automatically applying the second herbicide pass, first consider whether or not the second pass is warranted given the remaining weed pressure. Also, if the canola canopy is starting to reach complete ground cover, the herbicide may not reach targeted weeds. Growers are cautioned when applying late first applications or the second applications of herbicides when the crop is in the bud stage; late spraying could potentially lead to crop stress and blanks on the main stem. Refer to the following Canol@Fact ([http://www.canola-council.org/PDF/Jun13\\_Canola\\_Fact\\_Sheet.pdf](http://www.canola-council.org/PDF/Jun13_Canola_Fact_Sheet.pdf)) for more information on weed control timing including second applications and to the following Canol@Fact at [http://www.canola-council.org/PDF/May24\\_How\\_Many\\_Weeds.pdf](http://www.canola-council.org/PDF/May24_How_Many_Weeds.pdf) for more information regarding weed populations and economic thresholds.

### **Top dressing**

of nitrogen and/or sulphur is being considered by many growers especially in northern and eastern Saskatchewan. This practice should be considered by growers who were conservative with their initial fertilizer applications for this crop or were unable to apply sufficient fertilizer at the time of seeding. Top dressing may also be considered in areas with excess moisture that may have experienced substantial nitrogen losses from saturated soils in low-lying areas. If the excess water recedes fairly quickly and the canola recovers, growers may need to consider top dressing additional nitrogen to compensate. Growers concerned about the nutrient status of their crop should consider tissue testing, but for recently flooded canola it is important to remember to allow for the plant to recover and growth to stabilize before tissue testing takes place. Ensure rates and field conditions are appropriate to minimize any detrimental effects to the crop, such as leaf burn. If considering products like fines, ensure the application equipment available will allow consistent coverage.

### **Cutworms**

continue to be reported in the southwestern region of Saskatchewan near Coderre, Eastend and Arelee and in Alberta near Mayerthorpe. Be especially vigilant in areas that had cutworm damage last year. Before considering control, check the size of cutworms and whether they are actively feeding. Cutworms nearing 38 mm (1.5 inches) long are not good candidates for control, since these worms are close to pupating, so be sure of the size before considering control measures. Also, cut open the abdomen of any located cutworms. Green material in the abdomen indicates active feeding which makes these worms favorable for control, whereas the absence of green material may indicate that these worms are close to pupating. For more information on cutworms, refer to the May 30 Canola Watch report:

[http://www.canola-council.org/Canola\\_Watch\\_Report\\_2007\\_05.html](http://www.canola-council.org/Canola_Watch_Report_2007_05.html)

### **Flea beetle damage**

continues to be reported in many areas of the Peace region, with lots of spraying occurring around Dawson Creek and Hines Creek. Crops at the 3-4 leaf stage should be able to begin outgrowing the damage, but fields at higher risk include those from short rotations or those without any seed treatment insecticides.

### **Cabbage seedpod weevils**

have been noted in southwestern Saskatchewan and throughout southern Alberta between Medicine Hat and Lethbridge. As earlier seeded fields are starting to flower, these fields are at most risk at this time of year and should be scouted frequently. For more tips on scouting and controlling cabbage seedpod weevil, refer to the following links:

[http://www1.agric.gov.ab.ca/\\$Department/deptdocs.nsf/all/agdex2538](http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/agdex2538)  
[http://www.directfocus.com/canolamanual/chapter10b.html#ch10b\\_sec7](http://www.directfocus.com/canolamanual/chapter10b.html#ch10b_sec7)

### Grasshoppers

have been reported in north-central Alberta near Barrhead, Alcomdale, Killam, Vermilion and St. Paul as well as parts of northwestern Saskatchewan. Although most damage from grasshoppers usually occurs on cereals and forage grasses, damage to canola can occur if other food sources are not present. Scout carefully to determine whether the species noted are actually pest species and whether damage is occurring to canola. For more information regarding identification of grasshoppers, refer to the following web link from Dr. Dan Johnson at the University of Lethbridge: [http://people.uleth.ca/~dan.johnson/htm/dj\\_gh\\_guide.htm](http://people.uleth.ca/~dan.johnson/htm/dj_gh_guide.htm)

### Lygus bugs

have been noted in southern Alberta and in the north Peace region near La Crete. Although economic damage from lygus occurs primarily in the pod stage, heavy populations at the bud and early bloom stage when the crop is suffering from additional stresses like drought can also cause economic damage. For more information on lygus, please refer to the following link: [http://www.directfocus.com/canolamanual/chapter10b.html#ch10b\\_sec13](http://www.directfocus.com/canolamanual/chapter10b.html#ch10b_sec13)

**More damage from gophers (Richardson's ground squirrel)** continues in areas of southern and northwestern Saskatchewan. Some reseeding of fields has occurred as a result of the damage. Refer to the following AAF link for further information on management and control: [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/agdex3471](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex3471)

Sclerotinia apothecia have been noted in fields in southeastern Manitoba. Wet fields combined with warm temperatures are favorable for sclerote germination and formation of apothecia. Where canola crops are entering the flowering stage, surrounding fields that produced host crops for sclerotinia (e.g. canola, pulses, sunflowers) last year are the primary candidates for scouting for apothecia.

Early seeded fields in many regions are now into bloom, with fungicide applications being considered. This is the time to scout individual fields to **assess the risk for sclerotinia development** and potential yield loss. The high levels of soil moisture in many areas combined with warm temperatures and crops at full ground cover, creates conditions that are conducive to sclerotinia development. Producers should carefully consider all of the factors highlighted in the sclerotinia stem rot checklist before making this decision. These factors include how heavy their crop canopy currently is, the amount of moisture received in the two weeks prior to flowering and potential for future rainfall, years since last host crop, disease incidence in the past, and the presence of apothecia in neighboring fields where host crops were grown previously. Target yield, fertility program and expected value of the canola crop are also points to consider. A publication called the **Canola Disease Identification and Sclerotinia Risk Assessment Card** is available to assist growers and crop scouts with this decision. It includes the stem rot checklist as well as pictures to aid in accurately identifying the apothecia of the sclerotinia fungus. A PDF version can be found at [http://www.canola-council.org/PDF/canola\\_plant\\_disease\\_risk.pdf#page=1](http://www.canola-council.org/PDF/canola_plant_disease_risk.pdf#page=1) or contact your local Canola Council agronomist.

Direct questions regarding this report to John Mayko, Senior Agronomist, Parkland West (West Central AB), with the Canola Council of Canada at [maykoj@canola-council.org](mailto:maykoj@canola-council.org) ph/fax: 780-764-2593.

Direct specific questions regarding regional issues to one of the following Canola Council of Canada agronomists or provincial oilseed specialists:

Derwyn Hammond, Agronomist, Manitoba, [hammondd@canola-council.org](mailto:hammondd@canola-council.org), 204-729-9011

Arvel Lawson, Manitoba Agriculture, Food & Rural Initiatives, [Arvel.Lawson@gov.mb.ca](mailto:Arvel.Lawson@gov.mb.ca), 204-745-0340

David Vanthuyne, Agronomist, Eastern Saskatchewan, [vanthuyd@canola-council.org](mailto:vanthuyd@canola-council.org), 306-782-7799

Jim Bessel, Senior Agronomist, North-central/eastern Saskatchewan, [besselj@canola-council.org](mailto:besselj@canola-council.org), 306-373-6771

Penny Pearse/Scott Hartley, Saskatchewan Agriculture, Food & Rural Revitalization, [ppearse@agr.gov.sk.ca](mailto:ppearse@agr.gov.sk.ca) / [shartley@agr.gov.sk.ca](mailto:shartley@agr.gov.sk.ca), 306-787-4671 / 306-787-4669

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Matthew Stanford, Agronomist, Chinook (Southern AB & SW SK), [stanfordm@canola-council.org](mailto:stanfordm@canola-council.org), 403-758-6660

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Murray Hartman, Alberta Agriculture, Food & Rural Development, [murray.hartman@gov.ab.ca](mailto:murray.hartman@gov.ab.ca), 403-782-8024

Kerry Clark, BC Ministry of Agriculture and Lands, [Kerry.Clark@gov.bc.ca](mailto:Kerry.Clark@gov.bc.ca), 250-784-2559

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# Canola Watch Reports

## 2007 Canola Watch Reports

### #9 Western Canada – June 27, 2007

In this issue:

(click the bookmark links below to move to specific sections of this report)

[Crop development continues to vary](#)

[Variable precipitation received](#)

[Excess moisture stress continues affecting more areas](#)

[Hail damage could slow plant development](#)

[Is a second herbicide pass required?](#)

[Top dressed fertilizer - is it needed?](#)

[Scout for cabbage seedpod weevils](#)

[Diamondback moth larvae in high numbers](#)

[Make sure those grasshoppers are actually canola pests](#)

[Assess sclerotinia risk](#)

[Determine appropriate bloom stage](#)

[Scout fields regularly](#)

The Alberta Canola Producers Commission (ACPC) has developed an Alberta focused version of this report. Visit the ACPC website at: [www.canola.ab.ca](http://www.canola.ab.ca).

#### **Crop development continues to vary widely**

based largely on when the crop was seeded. Earlier seeded crops in Manitoba, Saskatchewan and southern Alberta are well into bloom, whereas crops in other areas seeded in early June are at the seedling stage. Many areas of patchy emergence previously reported throughout north-central Alberta from Barrhead to Vegreville have been alleviated from recent rains, but the crop development within individual fields varies greatly, which will challenge crop management timing decisions for the remainder of the season. Although temperatures have been seasonal to warm in many southern areas, warmer temperatures are needed in more northern areas to enhance crop development, especially in areas affected by wet conditions.

The latest crop report from Manitoba Agriculture, Food & Rural Initiatives is available at:

<http://web2.gov.mb.ca/agriculture>

The latest crop report from Saskatchewan Agriculture, Food & Rural Revitalization is available at:

[www.agr.gov.sk.ca/docs/reports](http://www.agr.gov.sk.ca/docs/reports)

#### **Variable precipitation**

from trace amounts to over 125 mm was received across many parts of the west. For current maps of moisture conditions from PFRA for western Canada, check the following links for precipitation since September 1 and April 1 respectively:

[www.agr.gc.ca/pfra/drought](http://www.agr.gc.ca/pfra/drought)

[www.agr.gc.ca/pfra/drought](http://www.agr.gc.ca/pfra/drought)

Additional moisture information for Alberta is available from Alberta Environment at:

[www3.gov.ab.ca/env/water/WS/data](http://www3.gov.ab.ca/env/water/WS/data)

**Excess moisture continues as the largest crop development issue across western Canada.** Most of Manitoba, southeastern, north-central and northeastern Saskatchewan, central Alberta between Didsbury and Ponoka and the central Peace near Rycroft, Eaglesham and Fairview continue to suffer crop damage from wet conditions. Some areas report up to 20% of the seeded area lost from excess water damage. For more information on the effects of excess moisture, refer to last week's report at: [www.canola-council.org/canola\\_watch\\_report\\_2007\\_08.html](http://www.canola-council.org/canola_watch_report_2007_08.html).

**Hail continues**

to be reported across many areas, usually in conjunction with relatively localized thunderstorms. Manitoba was hit especially hard this past week with hail associated with tornados and intense thunderstorms. Hail damage at this stage of the crop usually results in a delay in development, as the plant channels its resources into rebuilding the damaged parts before advancing growth. If possible, herbicide applications should be avoided until signs of recovery are evident to help ensure good crop tolerance and adequate uptake by the weeds present. For more information on managing hail damaged canola, refer to the following Canola Watch press release: [www.canola-council.org/media\\_jun2607.html](http://www.canola-council.org/media_jun2607.html).

**Earlier seeded crops in most areas have completed herbicide application, but in many later seeded fields, growers are considering their second application**

of either glyphosate or Liberty. Prior to automatically applying the second herbicide pass, first consider whether or not the second pass is warranted given the remaining weed pressure. Also, if the canola canopy is starting to reach complete ground cover, the herbicide may not reach targeted weeds. Growers are cautioned when applying late first applications or the second applications of herbicides when the crop is in the bud stage, as late spraying could potentially lead to crop stress and blanks on the main stem. Refer to the following Canol@Fact ([www.canola-council.org/PDF/Jun13\\_Canola\\_Fact\\_Sheet.pdf](http://www.canola-council.org/PDF/Jun13_Canola_Fact_Sheet.pdf)) for more information on weed control timing including second applications and to the following Canol@Fact at [www.canola-council.org/PDF/May24\\_How\\_Many\\_Weeds.pdf](http://www.canola-council.org/PDF/May24_How_Many_Weeds.pdf) for more information regarding weed populations and economic thresholds.

**Top dressing**

of nitrogen and/or sulphur continues to be considered by many growers especially in northern and eastern Saskatchewan. This practice should be considered by growers who were conservative with their initial fertilizer applications for this crop, unable to apply sufficient fertilizer at the time of seeding, or in areas with excess moisture that may have experienced substantial nitrogen losses from saturated soils. If the excess water recedes fairly quickly and the canola recovers, growers may need to consider top dressing additional nitrogen to compensate. Growers concerned about the nutrient status of their crop should consider tissue testing, but for recently flooded canola it is important to remember to allow for the plant to recover and growth to stabilize before tissue testing takes place. Some growers have tissue tested and their test reports indicate deficiency in sulphur. However, prior to applying fertilizer to recently flooded crops ensure that adequate plant recovery is underway or is likely, given the soil conditions and upcoming weather. Some of these nutrient deficiencies may be caused by leaching or denitrification, but in other cases, the plant roots are shut down because of the lack of oxygen and therefore the plant will be incapable of accessing applied nutrients from the soil unless conditions improve.

**Cabbage seedpod weevil**

populations continue to increase in southwestern Saskatchewan and throughout southern Alberta between Medicine Hat and Lethbridge. Sweep counts in some early seeded canola report up to 15-20 weevils per sweep and spraying is becoming general. Fields starting to flower are at most risk at this time of year and should be scouted frequently. For more tips on scouting and controlling cabbage seedpod weevil, refer to the following links:

[www1.agric.gov.ab.ca/](http://www1.agric.gov.ab.ca/)

[www.directfocus.com/canolamanual](http://www.directfocus.com/canolamanual)

**Diamondback moth larvae**

are being found in fields across eastern Manitoba, southern and eastern Saskatchewan, and southeastern Alberta.

**Feeding damage has been noted to be heavy** in some fields, with some spraying occurring.

Spraying at early crop stages is unlikely to be warranted unless the larval populations and feeding damage are noticeably heavy and the crop is under stress and is having difficulty outgrowing the damage. In early crop stages, a proposed action threshold of 25-33% defoliation with continued larval feeding has been proposed by John Gavloski from MAFRI. However, in later vegetative stages prior to budding, it is likely that the action threshold can be higher, due to the fact that the crop vegetative growth is rapid at this stage, and in most cases, the crop will likely outgrow any appreciable damage. However, if larval feeding continues into the bud stage, with damage to early buds, then spraying is more likely warranted. If there are about 100 to 150 larvae per square metre feeding on buds, an insecticide application may be needed to minimize yield loss.

The following photo shows an example of bud damage from diamondback larval feeding (from Ward Toma, ACPC):



If diamondback larvae are beginning to pupate, control measures may be ineffective. Once pupation is complete, these newly emerged moths will lay the eggs of the next generation. If there are larvae in cocoons on the underside of leaves, producers may want to postpone control measures until the new generation has emerged.

Growers should use caution before spraying for diamondbacks at this early stage because spraying is likely to destroy beneficial parasitoids, which help in reducing damage from subsequent generations. For a picture of a parasitoid wasp of diamondback, refer to the following link: [www.canola-council.org/parasiticwaspsid.aspx](http://www.canola-council.org/parasiticwaspsid.aspx)

For more information on diamondback moth, refer to the following SAFRR link:  
[www.agr.gov.sk.ca/docs/production/Diamond.asp](http://www.agr.gov.sk.ca/docs/production/Diamond.asp)

### Grasshoppers

have been reported in central and northern parts of the Peace region. Although most damage from grasshoppers usually occurs on cereals and forage grasses, damage to canola can occur if other food sources are not present. Scout carefully to determine whether the species noted are actually pest species and whether damage is occurring to canola. For more information regarding identification of grasshoppers, refer to the following web link from Dr. Dan Johnson at the University of Lethbridge: [people.uleth.ca/~dan.johnson](http://people.uleth.ca/~dan.johnson)

Many early seeded fields in many regions are now well into bloom, with **fungicide applications being considered**. This is the time to scout individual fields to **assess the risk for sclerotinia development** and potential yield loss. The high levels of soil moisture in many areas combined with warm temperatures and crops at full ground cover, creates conditions that are conducive to sclerotinia development. Producers should carefully consider all of the factors highlighted in the sclerotinia stem rot checklist before making this decision. These factors include how heavy their crop canopy currently is, the amount of moisture received in the two weeks prior to flowering and potential for future rainfall, years since last host crop, disease incidence in the past, and the presence of apothecia in neighboring fields where host crops were grown previously. Target yield, fertility program and expected value of the canola crop are also points to consider.

A publication called the **Canola Disease Identification and Sclerotinia Risk Assessment Card** is available to assist growers and crop scouts with this decision. It includes the stem rot checklist as well as pictures to aid in accurately identifying the apothecia of the sclerotinia fungus. A PDF version can be found at [www.canola-council.org/PDF/canola\\_plant\\_disease\\_risk.pdf](http://www.canola-council.org/PDF/canola_plant_disease_risk.pdf) or contact your local Canola Council Agronomy Specialist.

If a producer's risk assessment based on checklist results and/or petal testing suggests that spraying may be warranted but they are still unsure, **splitting fungicide applications** may be an option. An initial reduced fungicide application at 20 to 30% bloom will help control early onset of the disease. If conditions become drier, a second application may not be needed. However, if this approach is taken and conditions remain wet and humid, a second application will be needed to maximize the benefits of spraying the fungicide. Producers should assess these factors and consult their local

agronomist or chemical representative to determine if a single or a split fungicide application is best for their particular situation.

For growers that have decided to apply a fungicide to control sclerotinia, determining the **bloom stage** of the crop is important. The optimum stage for a single fungicide application is when the maximum number of flowers is open but little if any petal drop has taken place, usually at or slightly above 30% bloom. Typically at this stage in *B. napus* canola there is an average of about 20 flowers open on the main stem, with some flowers open on secondary branches but little or no pod formation. For more information on bloom stage identification check the following link: [www.canola-council.org/sclerotiniachemical.aspx](http://www.canola-council.org/sclerotiniachemical.aspx).

Producers and dealers who are interested in using the **Canola Petal Test kits** to assist in gauging the level of sclerotinia in individual fields should order their kits from **the distributor, Discovery Seed Labs, (450 Melville Street in Saskatoon ph.306-249-4484)** ([www.seedtesting.com/contact.html](http://www.seedtesting.com/contact.html)), as soon as possible so that their kits can be sent out and ready when required.

**Remember to keep scouting fields on a regular basis** to detect crop development problems early. Consider establishing a scouting tramline by driving an ATV in an 'X' or 'W' pattern in the field to establish pathways for crop scouting. This will allow for easier scouting with minimal trampling at later crop stages, especially once the crop is blooming.

Direct questions regarding this report to John Mayko, Senior Agronomy Specialist, Parkland West (West Central AB), with the Canola Council of Canada at [maykoj@canola-council.org](mailto:maykoj@canola-council.org) ph/fax: 780-764-2593.

Direct specific questions regarding regional issues to one of the following Canola Council of Canada agronomists or provincial oilseed specialists:

- Derwyn Hammond, Agronomist, Manitoba, [hammondd@canola-council.org](mailto:hammondd@canola-council.org), 204-729-9011
- Arvel Lawson, Manitoba Agriculture, Food & Rural Initiatives, [Arvel.Lawson@gov.mb.ca](mailto:Arvel.Lawson@gov.mb.ca), 204-745-0340
- David Vanthuyne, Agronomist, Eastern Saskatchewan, [vanthuyd@canola-council.org](mailto:vanthuyd@canola-council.org), 306-782-7799
- Jim Bessel, Senior Agronomist, North-central/eastern Saskatchewan, [besselj@canola-council.org](mailto:besselj@canola-council.org), 306-373-6771
- Penny Pearse/Scott Hartley, Saskatchewan Agriculture, Food & Rural Revitalization, [ppearse@agr.gov.sk.ca](mailto:ppearse@agr.gov.sk.ca) / [shartley@agr.gov.sk.ca](mailto:shartley@agr.gov.sk.ca), 306-787-4671 / 306-787-4669
- Doug Moisey, Agronomist, Parkland East (East Central AB & NW SK), [moiseyd@canola-council.org](mailto:moiseyd@canola-council.org), 780-645-3624
- Matthew Stanford, Agronomist, Chinook (Southern AB & SW SK), [stanfordm@canola-council.org](mailto:stanfordm@canola-council.org), 403-758-6660
- Anne Vos, Acting Agronomist, Peace Region, [av@summit-ag.com](mailto:av@summit-ag.com), 780-835-4632
- Murray Hartman, Alberta Agriculture, Food & Rural Development, [murray.hartman@gov.ab.ca](mailto:murray.hartman@gov.ab.ca), 403-782-8024
- Kerry Clark, BC Ministry of Agriculture and Lands, [Kerry.Clark@gov.bc.ca](mailto:Kerry.Clark@gov.bc.ca), 250-784-2559

*The Canola Watch Report provides just-in-time information on canola production to growers and industry.*

*Contributors to the Canola Agronomy Network are:*

*Manitoba Agriculture & Food; Manitoba Canola Growers Association; Agricore United; Saskatchewan Wheat Pool; United Farmers of Alberta; Saskatchewan Agriculture, Food & Rural Revitalization; Saskatchewan Canola Growers Association; Saskatchewan Canola Development Commission; Alberta Agriculture, Food & Rural Development; Alberta Canola Producers Commission; BC Ministry of Agriculture; Food & Fisheries; and the Canola Council of Canada.*

# Canola Watch Reports

## 2007 Canola Watch Reports

### #10 Western Canada – July 5, 2007

In this issue:

(click the bookmark links below to move to specific sections of this report)

[Crop development varies widely](#)

[Variable precipitation received](#)

[Excess moisture major problem](#)

[Is a second herbicide pass required?](#)

[Scout fields regularly](#)

[Wilted plants may be more than heat-stressed](#)

[Spraying continues for cabbage seedpod weevils](#)

[Timing important for diamondback moth control](#)

[Make sure those grasshoppers are actually canola pests](#)

[Bertha armyworm moth populations building](#)

[Root maggots reported in AB](#)

[Localized slug damage noted](#)

[Assess sclerotinia risk](#)

[Determine appropriate bloom stage before you spray](#)

The Alberta Canola Producers Commission (ACPC) has developed an Alberta focused version of this report. Visit the ACPC website at: <http://www.canola.ab.ca>

**Crop development continues to vary widely.** Earlier seeded crops in Manitoba, Saskatchewan and southern Alberta are into full bloom and early podding, whereas crops in other areas seeded in early-mid June are at the seedling stage. Seasonal temperatures have advanced the crop in most areas, but parts of central and northern Saskatchewan and Alberta are 1-2 weeks behind last year in terms of average crop stage.

The latest crop report from Manitoba Agriculture, Food & Rural Initiatives is available at:

<http://web2.gov.mb.ca/agriculture/mwcr/index.php>

The latest crop report from Saskatchewan Agriculture, Food & Rural Revitalization is available at:

[http://www.agr.gov.sk.ca/docs/reports/crop\\_report/crprpt070702.asp](http://www.agr.gov.sk.ca/docs/reports/crop_report/crprpt070702.asp)

The latest crop report from Alberta Agriculture & Food is available at:

[http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/sdd11486](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/sdd11486).

### Variable precipitation

from trace amounts to over 125 mm was received across many parts of the west. Many areas continue to suffer from excess moisture, but other areas such as southern Alberta and the Peace near Lacrete and Beaverlodge are getting quite dry and would welcome some rainfall soon. For current maps of moisture conditions from PFRA for western Canada, check the following links for precipitation since September 1 and April 1 respectively:

[http://www.agr.gc.ca/pfra/drought/prpay07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpay07_e.htm)

[http://www.agr.gc.ca/pfra/drought/prpgs07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpgs07_e.htm)

Additional moisture information for Alberta is available from Alberta Environment at:

<http://www3.gov.ab.ca/env/water/WS/data/precipmaps/weekly.pdf>

**Excess moisture continues to be the most common crop development issue across western Canada.** Most of Manitoba, southeastern, north-central and northeastern Saskatchewan, central Alberta between Didsbury and Ponoka

and the central Peace near St. Isadore, Rycroft, Eaglesham and Fairview continue to suffer crop damage from wet conditions. The wet conditions continue to delay weed and disease spraying operations. For more information on the effects of excess moisture, refer to the June 20 report at:

[http://www.canola-council.org/canola\\_watch\\_report\\_2007\\_08.html](http://www.canola-council.org/canola_watch_report_2007_08.html)

In some later seeded crops in Alberta and Saskatchewan, **growers are considering their second application** of either glyphosate or Liberty. Prior to automatically applying the second herbicide pass, first consider whether or not the second pass is warranted given the remaining weed pressure. Also, if the canola canopy is starting to reach complete ground cover, the herbicide may not reach targeted weeds. Growers are cautioned when applying late first applications or the second applications of herbicides when the crop is at or past the bud stage, as late spraying could potentially lead to crop stress and blanks on the main stem. Refer to the following Canol@Fact

([http://www.canola-council.org/PDF/Jun13\\_Canola\\_Fact\\_Sheet.pdf](http://www.canola-council.org/PDF/Jun13_Canola_Fact_Sheet.pdf)) for more information on weed control timing including second applications and to the following Canol@Fact at

[http://www.canola-council.org/PDF/May24\\_How\\_Many\\_Weeds.pdf](http://www.canola-council.org/PDF/May24_How_Many_Weeds.pdf) for more information regarding weed populations and economic thresholds.

**Remember to keep scouting fields on a regular basis** to detect crop development problems early. Consider establishing a scouting tramline by driving an ATV in an 'X' or 'W' pattern in the field to establish pathways for crop scouting. This will allow for easier scouting with minimal trampling at later crop stages, especially once the crop is blooming.

The hot weather forecast for many areas this week may identify plants within a field that are wilting prematurely. These prematurely wilted plants should be dug up to determine the cause of the wilting, which could be caused by **clubroot**, as well as other factors such as sclerotinia and root maggots. For more information on identifying clubroot, refer to the following link: [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/agdex8593](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex8593)

### **Extensive spraying for cabbage seedpod weevils**

continues in southwestern Saskatchewan and throughout southern Alberta south of Hwy. 1. Sweep counts in many fields report up to 15-20 weevils per sweep. For more tips on scouting and controlling cabbage seedpod weevil, refer to the following links: [http://www1.agric.gov.ab.ca/\\$Department/deptdocs.nsf/all/agdex2538](http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/agdex2538)  
[http://www.directfocus.com/canolamanual/chapter10b.html#ch10b\\_sec7](http://www.directfocus.com/canolamanual/chapter10b.html#ch10b_sec7)

### **Diamondback moth larvae**

continue to be found in fields across central Manitoba, southern and eastern Saskatchewan, and southeastern Alberta. Numbers of up to 6 larvae per plant have been noted in Saskatchewan and insecticide spraying has occurred. However, larvae in Manitoba were noted to be entering the pupal stage, so growers in all areas should be withholding spraying when the larvae begin pupating. The pupal stage lasts from five to 15 days depending on environmental conditions, then adult moths of the next generation emerge, begin laying eggs and the cycle repeats, with the eggs hatching in about five or six days. Growers should then be on the alert for damage from this next generation.

Growers should use caution before spraying for diamondbacks at this early stage because spraying is likely to destroy beneficial parasitoids, which help in reducing damage from subsequent generations. For a picture of a parasitic wasp of diamondback, refer to the following link: <http://www.canola-council.org/parasiticwaspsid.aspx>

For more information on diamondback moth, refer to the following SAFRR link:

<http://www.agr.gov.sk.ca/docs/production/Diamond.asp>

### **Grasshoppers**

continue to be reported in many parts of the Peace region. Although most damage from grasshoppers usually occurs on cereals and forage grasses, damage to canola can occur if other food sources are not present. Scout carefully to determine whether the species noted are actually pest species and whether damage is occurring to canola. For more information regarding identification of grasshoppers, refer to the following web link from Dr. Dan Johnson at the University of Lethbridge: [http://people.uleth.ca/~dan.johnson/htm/dj\\_gh\\_guide.htm](http://people.uleth.ca/~dan.johnson/htm/dj_gh_guide.htm)

### **Monitoring of bertha armyworm moths**

is taking place across the prairies, with increasing moth numbers reported in some areas. Once the bertha armyworm moth maps are developed, their web links will be reported in future Canola Watch reports.

### Heavy root maggot populations

are being reported in some fields near Vermilion, AB. Although there are no effective methods of in-crop control, there are some agronomic practices that can be used to try to reduce damage in future years. For further information on root maggots, refer to the root maggot section in the following link:

[http://www.directfocus.com/canolamanual/chapter10b.html#ch10b\\_sec16](http://www.directfocus.com/canolamanual/chapter10b.html#ch10b_sec16)

### Slugs

have been reported in north-central Alberta near Barrhead, Neerlandia and Westlock. Damage from slugs has been noted occurring as either complete plant disappearance or feeding of leaf tissue. Slugs are not normally a problem in canola crops in western Canada and the reasons for this local outbreak are currently under investigation. There are no registered insecticides for slug control in western Canada, so growers should not be spraying insecticides for this purpose.

The high levels of soil moisture in many areas combined with warm temperatures and crops at full ground cover, creates conditions that are conducive to **sclerotinia development**. However, with warmer and drier weather in the forecast for many areas, risk levels may change, so producers should carefully consider **all** of the factors highlighted in the sclerotinia stem rot checklist before making this decision. These factors include how heavy their crop canopy currently is, the amount of moisture received in the two weeks prior to flowering and potential for future rainfall, years since last host crop, disease incidence in the past, and the presence of apothecia in neighboring fields where host crops were grown previously. Target yield, fertility program and expected value of the canola crop are also points to consider.

A publication called the **Canola Disease Identification and Sclerotinia Risk Assessment Card** is available to assist growers and crop scouts with this decision. It includes the stem rot checklist and pictures to aid in accurately identifying the apothecia of the sclerotinia fungus. A PDF version can be found at [http://www.canola-council.org/PDF/canola\\_plant\\_disease\\_risk.pdf#page=1](http://www.canola-council.org/PDF/canola_plant_disease_risk.pdf#page=1) or contact your local Canola Council Agronomy Specialist.

If a producer's risk assessment based on checklist results and/or petal testing suggests that spraying may be warranted, **splitting fungicide applications** may be an option. An initial reduced fungicide application at 20 to 30% bloom will help control early onset of the disease. If conditions become drier, a second application may not be needed. However, if this approach is taken and conditions remain wet and humid, a second application will be needed to maximize the benefits of spraying the fungicide. Producers should assess these factors and consult their local agronomist or chemical representative to determine if a single or a split fungicide application is best for their particular situation.

For growers who have decided to apply a fungicide to control sclerotinia, determining the **bloom stage** of the crop is important. The optimum stage for a single fungicide application is when the maximum number of flowers is open but little if any petal drop has taken place, usually at or slightly above 30% bloom. Typically at this stage in *B. napus* canola there is an average of about 20 flowers open on the main stem, with some flowers open on secondary branches but little or no pod formation. Some early seeded fields are **past the 50% bloom stage and into pod formation, and are now too advanced for effective fungicide application**. For more information on bloom stage identification check the following link: <http://www.canola-council.org/sclerotiniachemical.aspx>.

Direct questions regarding this report to John Mayko, Senior Agronomy Specialist, Parkland West (West Central AB), with the Canola Council of Canada at [maykoj@canola-council.org](mailto:maykoj@canola-council.org) ph/fax: 780-764-2593.

Direct specific questions regarding regional issues to one of the following Canola Council of Canada agronomists or provincial oilseed specialists:

- Derwyn Hammond, Agronomist, Manitoba, [hammondd@canola-council.org](mailto:hammondd@canola-council.org), 204-729-9011
- Arvel Lawson, Manitoba Agriculture, Food & Rural Initiatives, [Arvel.Lawson@gov.mb.ca](mailto:Arvel.Lawson@gov.mb.ca), 204-745-0340
- David Vanthuyne, Agronomist, Eastern Saskatchewan, [vanthuyd@canola-council.org](mailto:vanthuyd@canola-council.org), 306-782-7799
- Jim Bessel, Senior Agronomist, North-central/eastern Saskatchewan, [besselj@canola-council.org](mailto:besselj@canola-council.org), 306-373-6771
- Penny Pearse/Scott Hartley, Saskatchewan Agriculture, Food & Rural Revitalization, [ppearse@agr.gov.sk.ca](mailto:ppearse@agr.gov.sk.ca) / [shartley@agr.gov.sk.ca](mailto:shartley@agr.gov.sk.ca), 306-787-4671 / 306-787-4669
- Doug Moisey, Agronomist, Parkland East (East Central AB & NW SK), [moiseyd@canola-council.org](mailto:moiseyd@canola-council.org),

780-645-3624

- Matthew Stanford, Agronomist, Chinook (Southern AB & SW SK), [stanfordm@canola-council.org](mailto:stanfordm@canola-council.org), 403-758-6660
- Anne Vos, Acting Agronomist, Peace Region, [av@summit-ag.com](mailto:av@summit-ag.com), 780-835-4632
- Murray Hartman, Alberta Agriculture, Food & Rural Development, [murray.hartman@gov.ab.ca](mailto:murray.hartman@gov.ab.ca), 403-782-8024
- Kerry Clark, BC Ministry of Agriculture and Lands, [Kerry.Clark@gov.bc.ca](mailto:Kerry.Clark@gov.bc.ca), 250-784-2559

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# Canola Watch Reports

## 2007 Canola Watch Reports

### #11 Western Canada – July 11, 2007

In this issue:

(click the bookmark links below to move to specific sections of this report)

[Canola crop development is highly variable](#)

[Good moisture in many areas](#)

[Scout fields regularly](#)

[Clubroot confirmed at Bassano](#)

[Cabbage seedpod weevil counts dropping](#)

[Timing important for diamondback moth control](#)

[Make sure those grasshoppers are actually canola pests](#)

[Bertha armyworm moth populations building; check maps](#)

[Root maggots reported in AB](#)

[Assess damage risk before spraying for sclerotinia](#)

[Missing pods may be stress-related](#)

The Alberta Canola Producers Commission (ACPC) has developed an Alberta focused version of this report. Visit the ACPC website at: <http://www.canola.ab.ca>

**Crop development continues to vary widely.** Earlier seeded crops in Manitoba, Saskatchewan and southern Alberta are into full bloom and early podding, whereas crops in other areas seeded in early-mid June are at the rosette to bolting stage. Warm weather last week allowed crops to develop quickly, but parts of central and northern Saskatchewan and Alberta are 1-2 weeks behind last year in terms of average crop stage. Localized hail has been reported in many areas ranging from pea sized to golf ball sized. Remember it will take several days to determine if a crop might recover from hail damage. Crops that have been severely damaged but are able to recover will be significantly delayed.

An overview of prairie vegetation conditions is available at (use the “start the prairies application” button on the left hand side): [http://www26.statcan.ca/ccap/ccaphome\\_en.jsp](http://www26.statcan.ca/ccap/ccaphome_en.jsp)

The latest crop report from Manitoba Agriculture, Food & Rural Initiatives is available at: <http://web2.gov.mb.ca/agriculture/mwcr/index.php>

The latest crop report from Saskatchewan Agriculture, Food & Rural Revitalization is available at: [http://www.agr.gov.sk.ca/docs/reports/crop\\_report/crprpt070709.asp](http://www.agr.gov.sk.ca/docs/reports/crop_report/crprpt070709.asp)

#### **Good moisture was reported in many areas,**

especially those that received precipitation over the past two weeks. Warm conditions reduced the area suffering from excess moisture, but other areas such as southern Alberta, southwest Saskatchewan, northern Alberta near Loughheed, Castor and Killam and the Peace near Lacrete and Beaverlodge are getting quite dry and would welcome some rainfall soon. For current maps of moisture conditions from PFRA for western Canada, check the following links for precipitation since September 1 and April 1 respectively:

[http://www.agr.gc.ca/pfra/drought/prpay07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpay07_e.htm)

[http://www.agr.gc.ca/pfra/drought/prpgs07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpgs07_e.htm)

Additional moisture information for Alberta is available from Alberta Environment at: <http://www3.gov.ab.ca/env/water/WS/data/precipmaps/weekly.pdf>

**Remember to keep scouting fields on a regular basis** to detect crop development problems early. Consider

establishing a scouting tramline by driving an ATV in an 'X' or 'W' pattern in the field to establish pathways for crop scouting. This will allow for easier scouting with minimal trampling at later crop stages, especially once the crop is blooming. Although counts of some pests are currently declining, second generations will begin to appear soon and continued vigilance is necessary.

### **Clubroot has been identified**

in an irrigated field near Bassano, AB. Ron Howard from AB Agriculture and Food initially identified the disease on infected plants and it was later confirmed using the new PCR test. This is the first confirmed report of clubroot in this area and it highlights the need for good equipment sanitation and ongoing scouting. Clubroot is a soil borne disease that mostly moves between fields in soil carried on contaminated equipment.

The hot weather forecast for many areas this week may identify plants within a field that are wilting and ripening prematurely. These wilted plants should be dug up to determine the cause of the wilting, which could be caused by clubroot, or other factors such as sclerotinia or root maggots. For more information on identifying clubroot, refer to the following link: [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/agdex8593](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex8593)

### **Spraying for cabbage seedpod weevils**

has just about wrapped up in southwestern Saskatchewan and throughout southern Alberta south of Hwy. 1. Sweep counts in many later fields have been declining and careful scouting is needed to ensure treatment is worthwhile. Remember that the second generation of cabbage seedpod weevil will emerge later in the season so scouting in affected regions needs to be continued. For more tips on scouting and controlling cabbage seedpod weevil, refer to the following links: [http://www1.agric.gov.ab.ca/\\$Department/deptdocs.nsf/all/agdex2538](http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/agdex2538)  
[http://www.directfocus.com/canolamanual/chapter10b.html#ch10b\\_sec7](http://www.directfocus.com/canolamanual/chapter10b.html#ch10b_sec7)

### **Diamondback moth larvae**

continue to be found in fields across central Manitoba, southern and eastern Saskatchewan, and southeastern Alberta, but in most areas they have entered the pupal stage as noted by the presence of cocoons on canola plants. Growers in all areas should be withholding spraying when the larvae are pupating. The pupal stage lasts from five to 15 days depending on environmental conditions, then adult moths of the next generation emerge, begin laying eggs and the cycle repeats, with the eggs hatching in about five or six days. Growers should then be on the alert for damage from this next generation.

Growers should use caution before spraying for diamondbacks at this early stage because spraying is likely to destroy beneficial parasitoids, which help in reducing damage from subsequent generations. For a picture of a parasitic wasp of diamondback, refer to the following link: <http://www.canola-council.org/parasiticwaspsid.aspx>

For more information on diamondback moth, refer to the following SAFRR link:

<http://www.agr.gov.sk.ca/docs/production/Diamond.asp>

### **Grasshoppers**

continue to be reported in many parts of northern Alberta including the St. Paul and Vermillion areas and the Peace region. Although most damage from grasshoppers usually occurs on cereals and forage grasses, damage to canola can occur if other food sources are not present. Scout carefully to determine whether the species noted are actually pest species and whether damage is occurring to canola. For more information regarding identification of grasshoppers, refer to the following web link from Dr. Dan Johnson at the University of Lethbridge:

[http://people.uleth.ca/~dan.johnson/htm/dj\\_gh\\_guide.htm](http://people.uleth.ca/~dan.johnson/htm/dj_gh_guide.htm)

### **Monitoring of bertha armyworm moths**

is taking place across the prairies, with increasing moth numbers reported in some areas. Areas that have reported high bertha armyworm moth counts include eastern and southwestern MB, southeastern SK, and north-central AB. Moth counts this week are lower in many areas when compared to last week, which would indicate that the peak of the moth flight may have passed in these areas. For further information regarding bertha armyworm, please refer to the following link: [http://www.directfocus.com/canolamanual/chapter10b.html#ch10b\\_sec6a](http://www.directfocus.com/canolamanual/chapter10b.html#ch10b_sec6a)

Prairie wide bertha armyworm moth maps are being developed, and web links for the respective provinces are as follows:

For more information on bertha armyworm counts in Manitoba, please refer to the following MAFRI link:

<http://www.gov.mb.ca/agriculture/crops/insects/bertha/index.html>

For more information on bertha armyworm counts in Saskatchewan, please refer to the following SAFRR link:

<http://www.agr.gov.sk.ca/docs/production/images/berthaArmywormMap20070704.pdf>

For more information on bertha armyworm counts in Alberta, please refer to the following link:

[http://www1.agric.gov.ab.ca/\\$Department/deptdocs.nsf/all/prm11487/\\$FILE/baay7w5h.png](http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/prm11487/$FILE/baay7w5h.png)

*Remember these maps are an indication of risk in a region. Field scouting is still required to ensure economic damage does not occur in individual fields.*

### **Heavy root maggot populations**

are being reported in many fields in central and northern Alberta and parts of the Peace region. Although there are no effective methods of in-crop control, there are some agronomic practices that can be used to try to reduce damage in future years. For further information on root maggots, refer to the root maggot section in the following link:

[http://www.directfocus.com/canolamanual/chapter10b.html#ch10b\\_sec16](http://www.directfocus.com/canolamanual/chapter10b.html#ch10b_sec16)

### **Fungicide spraying for sclerotinia control**

has been reported in most areas. The high levels of soil moisture in many areas combined with warm temperatures and crops at full ground cover, create conditions that are conducive to **sclerotinia development**. However, with warmer and drier weather in the forecast for many areas, risk levels may change, so producers should carefully consider **all** of the factors highlighted in the sclerotinia stem rot checklist before making this decision. These factors include how heavy their crop canopy currently is, the amount of moisture received in the two weeks prior to flowering and potential for future rainfall, years since last host crop, disease incidence in the past, and the presence of apothecia in neighboring fields where host crops were grown previously. Target yield, fertility program and expected value of the canola crop are also points to consider.

A publication called the **Canola Disease Identification and Sclerotinia Risk Assessment Card** is available to assist growers and crop scouts with this decision. It includes the stem rot checklist and pictures to aid in accurately identifying the apothecia of the sclerotinia fungus. A PDF version can be found at

[http://www.canola-council.org/PDF/canola\\_plant\\_disease\\_risk.pdf#page=1](http://www.canola-council.org/PDF/canola_plant_disease_risk.pdf#page=1) or contact your local Canola Council Agronomy Specialist.

If a producer's risk assessment based on checklist results and/or petal testing suggests that spraying may be warranted, **splitting fungicide applications**

may be an option. An initial reduced fungicide application at 20 to 30% bloom will help control early onset of the disease. If conditions become drier, a second application may not be needed. However, if this approach is taken and conditions remain wet and humid, a second application will be needed to maximize the benefits of spraying the fungicide. Producers should assess these factors and consult their local agronomist or chemical representative to determine if a single or a split fungicide application is best for their particular situation.

For growers who have decided to apply a fungicide to control sclerotinia, determining the **bloom stage** of the crop is important. The optimum stage for a single fungicide application is when the maximum number of flowers is open but little if any petal drop has taken place, usually at or slightly above 30% bloom. Typically at this stage in *B. napus* canola there is an average of about 20 flowers open on the main stem, with some flowers open on secondary branches but little or no pod formation. Some early seeded fields are **past the 50% bloom stage and into pod formation, and are now too advanced for effective fungicide application**. For more information on bloom stage identification check the following link: <http://www.canola-council.org/sclerotiniachemical.aspx>.

### **Missing pods and blank areas on the stem**

have been noted in several areas. These gaps usually occur as a result of stress. Although there is no remedial action that can be taken, it is important to try to identify the cause in order to take steps to prevent similar problems in future crops. For more information on possible causes please refer to the following link:

<http://www.canola-council.org/PDF/Canola%20Fact%20Sheet%20-%20Missing%20Pods.pdf>

Direct questions regarding this report to John Mayko, Senior Agronomy Specialist, Parkland West (West Central AB), with the Canola Council of Canada at [maykoj@canola-council.org](mailto:maykoj@canola-council.org) ph/fax: 780-764-2593.

Direct specific questions regarding regional issues to one of the following Canola Council of Canada agronomists or provincial oilseed specialists:

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- Arvel Lawson, Manitoba Agriculture, Food & Rural Initiatives, [Arvel.Lawson@gov.mb.ca](mailto:Arvel.Lawson@gov.mb.ca), 204-745-0340
- David Vanthuyne, Agronomist, Eastern Saskatchewan, [vanthuyd@canola-council.org](mailto:vanthuyd@canola-council.org), 306-782-7799
- Jim Bessel, Senior Agronomist, North-central/eastern Saskatchewan, [besselj@canola-council.org](mailto:besselj@canola-council.org), 306-373-6771
- Penny Pearse/Scott Hartley, Saskatchewan Agriculture, Food & Rural Revitalization, [ppearse@agr.gov.sk.ca](mailto:ppearse@agr.gov.sk.ca) / [shartley@agr.gov.sk.ca](mailto:shartley@agr.gov.sk.ca), 306-787-4671 / 306-787-4669
- Doug Moisey, Agronomist, Parkland East (East Central AB & NW SK), [moiseyd@canola-council.org](mailto:moiseyd@canola-council.org), 780-645-3624
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- Kerry Clark, BC Ministry of Agriculture and Lands, [Kerry.Clark@gov.bc.ca](mailto:Kerry.Clark@gov.bc.ca), 250-784-2559

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*Contributors to the Canola Agronomy Network are:*

*Manitoba Agriculture & Food; Manitoba Canola Growers Association; Agricore United; Saskatchewan Wheat Pool; United Farmers of Alberta; Saskatchewan Agriculture, Food & Rural Revitalization; Saskatchewan Canola Growers Association; Saskatchewan Canola Development Commission; Alberta Agriculture, Food & Rural Development; Alberta Canola Producers Commission; BC Ministry of Agriculture; Food & Fisheries; and the Canola Council of Canada.*

# Canola Watch Reports

## 2007 Canola Watch Reports

### #12 Western Canada – July 18, 2007

In this issue:

(click the bookmark links below to move to specific sections of this report)

[Canola crop development enhanced by recent heat](#)  
[Good soil moisture in many areas but heat stress evident](#)  
[Concern about flower blast from recent heat](#)  
[Identify cause of wilting & prematurely ripening plants](#)  
[Diamondback moth larvae low](#)  
[Make sure those grasshoppers are actually canola pests](#)  
[Bertha armyworm moth populations building;](#)  
[Check Bertha maps: numbers are cumulative](#)  
[Root maggots reported in AB](#)  
[Spraying for sclerotinia winding down](#)  
[Keep scouting fields regularly](#)

The Alberta Canola Producers Commission (ACPC) has developed an Alberta focused version of this report. Visit the ACPC website at: <http://www.canola.ab.ca>

**Crop development has been enhanced by the recent heat.** Earlier seeded crops in Manitoba, Saskatchewan and southern Alberta are into full pod and starting to mature, whereas crops in other areas that were seeded late are at bolting to early flower. Hot weather in Alberta and much of Saskatchewan helped to advance the crop, but parts of central and northern Saskatchewan and Alberta are still behind last year in terms of average crop stage. Localized hail has been reported in many areas ranging from pea sized to grapefruit sized. Crops that are damaged at the late bloom and pod stage are unlikely to recover from moderate to severe damage, but crops with a significant amount of bloom may still be able to recover somewhat from light to moderate damage, although maturity will likely be delayed.

An overview of prairie vegetation conditions is available at (use the “start the prairies application” button on the left hand side): [http://www26.statcan.ca/ccap/ccaphome\\_en.jsp](http://www26.statcan.ca/ccap/ccaphome_en.jsp)

The latest crop report from Manitoba Agriculture, Food & Rural Initiatives is available at:  
<http://web2.gov.mb.ca/agriculture/mwcr/index.php>

The latest crop report from Saskatchewan Agriculture, Food & Rural Revitalization is available at:  
[http://www.agr.gov.sk.ca/docs/reports/crop\\_report/crprpt070716.asp](http://www.agr.gov.sk.ca/docs/reports/crop_report/crprpt070716.asp)

**Good soil moisture conditions remain in many areas, but the recent heat has begun to stress the crops, especially in southwestern Saskatchewan and southern Alberta.** As well, many areas in west-central Saskatchewan including Meota and Unity and east-central Alberta including Vegreville, Killam and Paradise Valley are getting quite dry and would welcome some rainfall soon. For current maps of moisture conditions from PFRA for western Canada, check the following links for precipitation since September 1 and April 1 respectively:

[http://www.agr.gc.ca/pfra/drought/prpay07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpay07_e.htm)

[http://www.agr.gc.ca/pfra/drought/prpgs07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpgs07_e.htm)

Additional moisture information for Alberta is available from Alberta Environment at:  
<http://www3.gov.ab.ca/env/water/WS/data/precipmaps/weekly.pdf>

**There have been concerns of flower blast due to the heat from the past week.** High humidity and good soil moisture have helped to minimize the damage, but in areas with depleted surface moisture, damage is increasing.

During heat stress, flowers are less receptive to pollen and the duration of pollen release and viability is reduced. Air temperatures in excess of 30 degrees Celsius during flowering can result in flower abortion and reduced pod formation. Gaps (no pod formation) on the main stem are good indicators that flower blasting has occurred. However, hail, lack of available sulphur, late herbicide applications or feeding from insects such as lygus bugs, bertha armyworm and diamondback moth larvae may also result in gaps on the main stem. Further information is available in the following Canol@Fact:

<http://www.canola-council.org/PDF/Canola%20Fact%20Sheet%20-%20Missing%20Pods.pdf>

The continuing hot weather forecast for many areas this week may **identify plants within a field that are wilting and ripening prematurely**. These wilted plants should be dug up to determine the cause of the wilting, which could be caused by clubroot, or other factors such as sclerotinia or root maggots. For more information on identifying clubroot, refer to the following link: [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/agdex8593](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex8593)

### **Diamondback moth larvae**

continue to be reported in many areas, but numbers remain low at this point in most cases. Growers should be on the alert for damage from the next generation of larvae that will begin feeding on the leaves, and then move up onto the pods at the later crop stages. For more information on diamondback larvae, refer to the following link:

<http://www.canola-council.org/Diamondbackmoth.aspx>

### **Grasshoppers**

continue to be reported in parts of north-central Alberta near the North Saskatchewan River and in many parts of the Peace region. Although most damage from grasshoppers usually occurs on cereals and forage grasses, damage to canola can occur if other food sources are not present. Scout carefully to determine whether the species noted are actually pest species and whether damage is occurring to canola. For more information regarding identification of grasshoppers, refer to the following web link from Dr. Dan Johnson at the University of Lethbridge:

[http://people.uleth.ca/~dan.johnson/htm/dj\\_gh\\_guide.htm](http://people.uleth.ca/~dan.johnson/htm/dj_gh_guide.htm)

### **Monitoring of bertha armyworm moths continues**

across the prairies, with high moth numbers reported in some areas. Areas that have reported high bertha armyworm moth counts include southwestern and central MB and central SK. Control for bertha armyworm occurs at the larval stage, usually when the larvae begin feeding on the pods. Spraying for moths is not an effective control method and will likely do more harm in terms of destroying any beneficial insects in the crop. For further information regarding bertha armyworm, please refer to the following link:

[http://www.directfocus.com/canolamanual/chapter10b.html#ch10b\\_sec6a](http://www.directfocus.com/canolamanual/chapter10b.html#ch10b_sec6a)

### **Prairie-wide bertha armyworm moth maps**

are being developed and web links for the respective provinces are as follows:

For more information on bertha armyworm counts in Manitoba, please refer to the following MAFRI link:

<http://www.gov.mb.ca/agriculture/crops/insects/bertha/index.html>

For more information on bertha armyworm counts in Saskatchewan, please refer to the following SAFRR link:

<http://www.agr.gov.sk.ca/docs/production/images/berthaArmywormMap20070711.pdf>

For more information on bertha armyworm counts in Alberta, please refer to the following link:

[http://www1.agric.gov.ab.ca/\\$Department/deptdocs.nsf/all/prm11487/\\$FILE/7-17-7baw.png](http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/prm11487/$FILE/7-17-7baw.png)

**The moth numbers represented in the above maps are cumulative**, in that the moth numbers reported in each reporting period are added up and the total to date is reported. Trap counts are still being collected and added to the maps, so for areas still showing low risk, it is important to keep checking for updates because those numbers may still increase.

*Remember these maps are an indication of risk in a region. Field scouting is still required to ensure economic damage does not occur in individual fields.*

### **Heavy root maggot populations**

continue to be being reported in many fields in central and northern Alberta and parts of the Peace region. Although there are no effective methods of in-crop control, there are some agronomic practices that can be used to try to reduce damage in future years. For further information on root maggots, refer to the root maggot section in the following link:

[http://www.directfocus.com/canolamanual/chapter10b.html#ch10b\\_sec16](http://www.directfocus.com/canolamanual/chapter10b.html#ch10b_sec16)

## Fungicide spraying for sclerotinia control

is wrapping up in most areas due to the advancing crop stage. However, later crops that have recently begun to bloom may still be at risk, especially in areas with good soil moisture and relatively dense crop canopies. However, with changing weather conditions, risk levels may change, so producers should carefully consider **all** of the factors highlighted in the sclerotinia stem rot checklist before making this decision. These factors include how heavy their crop canopy currently is, the amount of moisture received in the two weeks prior to flowering and potential for future rainfall, years since last host crop, disease incidence in the past, and the presence of apothecia in neighboring fields where host crops were grown previously. Target yield, fertility program and expected value of the canola crop are also points to consider. Refer to the publication called the **Canola Disease Identification and Sclerotinia Risk**

### Assessment Card

which is designed to assist growers and crop scouts with this decision. It includes the stem rot checklist and pictures to aid in accurately identifying the apothecia of the sclerotinia fungus. A PDF version can be found at

[http://www.canola-council.org/PDF/canola\\_plant\\_disease\\_risk.pdf#page=1](http://www.canola-council.org/PDF/canola_plant_disease_risk.pdf#page=1) or contact your local Canola Council Agronomy Specialist. For more information on canola bloom stage identification check the following link:

<http://www.canola-council.org/sclerotiniachemical.aspx>

If a producer's risk assessment based on checklist results and/or petal testing suggests that spraying may be warranted, **splitting fungicide applications**

may be an option. An initial reduced fungicide application at 20 to 30% bloom will help control early onset of the disease. If conditions become drier, a second application may not be needed. However, if this approach is taken and conditions remain wet and humid, a second application will be needed to maximize the benefits of spraying the fungicide. Producers should assess these factors and consult their local agronomist or chemical representative to determine if a single or a split fungicide application is best for their particular situation.

**Remember to keep scouting fields on a regular basis** to detect crop development problems early. Consider establishing a scouting tramline by driving an ATV in an 'X' or 'W' pattern in the field to establish pathways for crop scouting. This will allow for easier scouting with minimal trampling at later crop stages, especially once the crop is blooming. Although counts of some pests are currently declining, second generations will begin to appear soon and continued vigilance is necessary.

Direct questions regarding this report to John Mayko, Senior Agronomy Specialist, Parkland West (West Central AB), with the Canola Council of Canada at [maykoj@canola-council.org](mailto:maykoj@canola-council.org) ph/fax: 780-764-2593.

Direct specific questions regarding regional issues to one of the following Canola Council of Canada agronomists or provincial oilseed specialists:

- Derwyn Hammond, Agronomist, Manitoba, [hammondd@canola-council.org](mailto:hammondd@canola-council.org), 204-729-9011
- Arvel Lawson, Manitoba Agriculture, Food & Rural Initiatives, [Arvel.Lawson@gov.mb.ca](mailto:Arvel.Lawson@gov.mb.ca), 204-745-0340
- David Vanthuyne, Agronomist, Eastern Saskatchewan, [vanthuyd@canola-council.org](mailto:vanthuyd@canola-council.org), 306-782-7799
- Jim Bessel, Senior Agronomist, North-central/eastern Saskatchewan, [besselj@canola-council.org](mailto:besselj@canola-council.org), 306-373-6771
- Penny Pearse/Scott Hartley, Saskatchewan Agriculture, Food & Rural Revitalization, [ppearse@agr.gov.sk.ca](mailto:ppearse@agr.gov.sk.ca) / [shartley@agr.gov.sk.ca](mailto:shartley@agr.gov.sk.ca), 306-787-4671 / 306-787-4669
- Doug Moisey, Agronomist, Parkland East (East Central AB & NW SK), [moiseyd@canola-council.org](mailto:moiseyd@canola-council.org), 780-645-3624
- Matthew Stanford, Agronomist, Chinook (Southern AB & SW SK), [stanfordm@canola-council.org](mailto:stanfordm@canola-council.org), 403-758-6660
- Anne Vos, Acting Agronomist, Peace Region, [av@summit-ag.com](mailto:av@summit-ag.com), 780-835-4632
- Murray Hartman, Alberta Agriculture, Food & Rural Development, [murray.hartman@gov.ab.ca](mailto:murray.hartman@gov.ab.ca), 403-782-8024
- Kerry Clark, BC Ministry of Agriculture and Lands, [Kerry.Clark@gov.bc.ca](mailto:Kerry.Clark@gov.bc.ca), 250-784-2559

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*Canada.*

# Canola Watch Reports

## 2007 Canola Watch Reports

### #13 Western Canada – July 25, 2007

In this issue:

(click the bookmark links below to move to specific sections of this report)

- [Heat advances canola crop](#)
- [Heat stress causing flower blasting](#)
- [Good soil moisture in many areas](#)
- [That 'sulphur deficiency' could be aster yellows disease](#)
- [Diamondback moth larvae numbers low](#)
- [Bertha armyworm larvae starting to hatch](#)
- [Check Bertha maps: numbers are cumulative](#)
- [Timing of bertha control critical](#)
- [Allow for adequate pre-harvest intervals](#)
- [Assess seed colour change before swathing](#)
- [Keep malathion far away from canola bins](#)

The Alberta Canola Producers Commission (ACPC) has developed an Alberta focused version of this report. Visit the ACPC website at: <http://www.canola.ab.ca>

**Crop development continues to be spurred on by the persistent heat.** Earlier seeded crops in Manitoba, Saskatchewan and southern Alberta are fully podded and starting to mature, whereas crops in other areas that were seeded late are at early to full flower.

An overview of prairie vegetation conditions is available at (use the “start the prairies application” button on the left hand side): [http://www26.statcan.ca/ccap/ccaphome\\_en.jsp](http://www26.statcan.ca/ccap/ccaphome_en.jsp)

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The latest crop report from Saskatchewan Agriculture, Food & Rural Revitalization is available at: [http://www.agr.gov.sk.ca/docs/reports/crop\\_report/crprpt070723.asp](http://www.agr.gov.sk.ca/docs/reports/crop_report/crprpt070723.asp)

**Concerns about heat stress are common across western Canada.** There are many reports of flower blasting (orange or white flower petals) due to the heat. Bloom periods have been shortened. Dryland crops in southern Alberta are very short with few pods. As well, reports of pod shrinking (pods looking like they are shrink-wrapped around the seed) are occurring in many areas. High humidity and good soil moisture have helped to minimize the damage in some areas, but in areas with depleted surface moisture, damage is severe. During heat stress, flowers are less receptive to pollen and the duration of pollen release and viability is reduced. Air temperatures in excess of 30 degrees Celsius during flowering can result in flower abortion and reduced pod formation. Gaps (no pod formation) on the main stem are good indicators that flower blasting has occurred. However, hail, lack of available sulphur, late herbicide applications or feeding from insects such as lygus bugs, bertha armyworm and diamondback moth larvae may also result in gaps on the main stem. Further information is available in the following Canol@Fact:

<http://www.canola-council.org/PDF/Canola%20Fact%20Sheet%20-%20Missing%20Pods.pdf>

#### **Soil moisture conditions remain favorable**

in many areas of Manitoba, northern and eastern Saskatchewan and west-central Alberta between Calgary and Wetaskiwin **but topsoil moisture is very dry**

in many areas of southern Saskatchewan and Alberta as well as parts of west-central Saskatchewan and east-central Alberta. Many areas would welcome a rain to replenish topsoil moisture and provide some respite from the continuing

heat. For current maps of moisture conditions from PFRA for western Canada, check the following links for precipitation since September 1 and April 1 respectively:

[http://www.agr.gc.ca/pfra/drought/prpay07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpay07_e.htm)

[http://www.agr.gc.ca/pfra/drought/prpgs07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpgs07_e.htm)

Additional moisture information for Alberta is available from Alberta Environment at:

<http://www3.gov.ab.ca/env/water/WS/data/precipmaps/weekly.pdf>

There have been a few reports from Saskatchewan regarding **aster yellows** disease that may have been mistaken for sulphur deficiencies or herbicide damage. Aster yellows is caused by a phytoplasma, a plant pathogenic micro-organism. The phytoplasma inhabits the phloem (nutrient-carrying vessels) of infected plants and is carried from plant to plant by sap-sucking leafhoppers. Now is the time of year that aster yellows symptoms will start showing up in the field and looking more conspicuous because infected plants tend to stand taller and are discoloured compared to non-infected plants. There aren't any preventative or control measures that producers can do to manage or prevent aster yellows in canola. Following is the link to SAF's factsheet on aster yellows:

<http://www.agr.gov.sk.ca/docs/production/asteryellows01.asp>

### **Diamondback moth larvae**

continue to be reported in many areas, but numbers remain below thresholds at this point in most cases. Growers should be on the alert for damage from the larvae that will begin feeding on the leaves, and then move up onto the pods at the later crop stages. For more information on diamondback larvae, refer to the following link:

<http://www.canola-council.org/Diamondbackmoth.aspx>

**Bertha armyworm larvae have begun to hatch and develop in many areas** including western and central MB and central SK. Growers in all areas affected by bertha armyworms last year, as well as areas reporting bertha armyworm moth activity this year should be on the lookout for their emergence and development. Control for bertha armyworm occurs at the larval stage, usually when the larvae begin feeding on the pods. Spraying for moths is not an effective control method and will likely do more harm in terms of destroying any beneficial insects in the crop. Spraying should be delayed until the larvae have reached the third or fourth in-star stage, as it is the last two in-stars stages that cause the most damage. As well, delaying spraying to the later stages will allow for the majority of the bertha eggs to hatch, thereby reducing the need for a subsequent insecticide application. For further information regarding bertha armyworm, please refer to the following link: [http://www.directfocus.com/canolamanual/chapter10b.html#ch10b\\_sec6a](http://www.directfocus.com/canolamanual/chapter10b.html#ch10b_sec6a)

For more information on **bertha armyworm counts in Manitoba**, please refer to the following MAFRI link:

<http://www.gov.mb.ca/agriculture/crops/insects/bertha/index.html>

For more information on **bertha armyworm counts in Saskatchewan**, please refer to the following SAFRR link:

<http://www.agr.gov.sk.ca/docs/production/images/berthaArmywormMap20070711.pdf>

For more information on **bertha armyworm counts in Alberta**, please refer to the following link:

[http://www1.agric.gov.ab.ca/\\$Department/deptdocs.nsf/all/prm11487/\\$FILE/7-17-7baw.png](http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/prm11487/$FILE/7-17-7baw.png)

### **Moth numbers in the maps are cumulative -**

the moth numbers reported in each reporting period are added up and the total to date is reported. Trap counts are still being collected and added to the maps, so for areas still showing low risk, it is important to keep checking for updates because those numbers may still increase.

*Remember these maps are an indication of risk in a region. Field scouting is still required to ensure economic damage does not occur in individual fields.*

**Timing of insecticide application for bertha control is critical.** It is important to ensure that the larvae are up on the middle to upper parts of the plant and feeding on the pods. If the larvae are still feeding on leaf material in the lower canopy or the leaf litter on the ground, there will be poorer control. Avoid spraying during high temperatures (above 25 degrees C), as the larvae are likely to be in the lower levels of the canopy. Use rates appropriate to the stage of the larvae. Most insecticides recommend a range of rates. Use higher rates when faced with high populations and/or larger stages. Also at the latest stage, ensure that the larvae are actively feeding. Larvae at the latest stage may be inactive on the ground as they prepare to pupate.

Before considering any further applications of fungicides or insecticides, **remember to allow for the required pre-harvest interval** for any products being considered. Growers need to ensure that the appropriate preharvest

interval is followed to eliminate chances of excess residues appearing in the harvested seed, and damaging markets. Refer to the following links for information on pre-harvest intervals for some common pesticides and description of the importance of following pre-harvest intervals: [http://www.canola-council.org/pre\\_harvest.html](http://www.canola-council.org/pre_harvest.html)  
 Early seeded crops in parts of southern Alberta and Saskatchewan are nearing maturity. Growers need to **ensure that seed colour change** is occurring when **assessing the proper time to swath**. The colour of mature plants and pods will vary among varieties as they mature. Some will appear ripe on the outside before the seeds are mature, so avoid using plant colour as a gauge to proper timing. Open up pods on the main stem and look at the colour of the seeds to accurately assess swathing timing. Refer to the following link for more information on swathing in hot, dry weather: [http://www.canola-council.org/media\\_jul2606.html](http://www.canola-council.org/media_jul2606.html)

Recent research indicates that

**the optimum stage to swath for both yield and quality is up to 60% seed colour change.** This enables many growers to start swathing at 30% to 40% seed colour change without sacrificing significant yield or quality. It widens the "swathing days" window for all growers, including those with large canola acreages. **When conditions are hot and dry, avoid swathing.** Swath during cool evening hours, at night or early in the morning to allow plants to dry down at a slower rate. This reduces the chance of green seed. To learn more about proper harvest field assessment, refer to the revised Canola Council publication "Canola Time of Swathing Guide" or the following link: [http://www.canola-council.org/pub\\_swathing.html](http://www.canola-council.org/pub_swathing.html)

At this time of the year, growers are preparing their bins for storage of the upcoming harvest. It is important to note that malathion and other similar insecticides should not be used to treat grain bins for insects prior to storing canola. Although this practice is common for cereal crops, oilseed crops like canola can absorb the malathion from the bin surfaces and the resulting residues have been found in crop delivered to elevators. Therefore, **DO NOT use malathion to treat bins destined to store canola from the upcoming harvest.** Refer to the following link for further information: [http://www.canola-council.org/pesticide\\_link2.html](http://www.canola-council.org/pesticide_link2.html)

Direct questions regarding this report to John Mayko, Senior Agronomy Specialist, Parkland West (West Central AB), with the Canola Council of Canada at [maykoj@canola-council.org](mailto:maykoj@canola-council.org) ph/fax: 780-764-2593.

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- David Vanthuyne, Agronomist, Eastern Saskatchewan, [vanthuyd@canola-council.org](mailto:vanthuyd@canola-council.org), 306-782-7799
- Jim Bessel, Senior Agronomist, North-central/eastern Saskatchewan, [besselj@canola-council.org](mailto:besselj@canola-council.org), 306-373-6771
- Penny Pearse/Scott Hartley, Saskatchewan Agriculture, Food & Rural Revitalization, [ppearse@agr.gov.sk.ca](mailto:ppearse@agr.gov.sk.ca) / [shartley@agr.gov.sk.ca](mailto:shartley@agr.gov.sk.ca), 306-787-4671 / 306-787-4669
- Doug Moisey, Agronomist, Parkland East (East Central AB & NW SK), [moiseyd@canola-council.org](mailto:moiseyd@canola-council.org), 780-645-3624
- Matthew Stanford, Agronomist, Chinook (Southern AB & SW SK), [stanfordm@canola-council.org](mailto:stanfordm@canola-council.org), 403-758-6660
- Anne Vos, Acting Agronomist, Peace Region, [av@summit-ag.com](mailto:av@summit-ag.com), 780-835-4632
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# Canola Watch Reports

## 2007 Canola Watch Reports

### #14 Western Canada - August 1, 2007

In this issue:

(click the bookmark links below to move to specific sections of this report)

[Heat advances canola crop rapidly](#)

[Heat stress causing flower blasting](#)

[Moisture running out in many areas](#)

[Aster yellows disease found in many fields](#)

[Late season insect control tips](#)

[Lygus in Alberta and north western Saskatchewan](#)

[Diamondback moth larvae widespread](#)

[How to tell diamondback larvae from bertha armyworms](#)

[Adjust your thresholds for more than one pest](#)

[Bertha armyworm larvae starting to hatch](#)

[Check bertha maps: numbers are cumulative](#)

[Timing of bertha control critical](#)

[Allow for adequate pre-harvest intervals](#)

[Assess seed colour change before swathing](#)

[Keep malathion far away from canola bins](#)

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**Crop development continues to be spurred on by the persistent heat.** Flowering has pretty much wrapped up except for later seeded fields in west central Alberta, the Peace River region and north central / eastern Saskatchewan. Swathing has begun on early seeded crops.

An overview of prairie vegetation conditions is available at (use the “start the prairies application” button on the left hand side): [http://www26.statcan.ca/ccap/ccaphome\\_en.jsp](http://www26.statcan.ca/ccap/ccaphome_en.jsp)

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The latest crop report from Saskatchewan Agriculture, Food & Rural Revitalization is available at: [http://www.agr.gov.sk.ca/docs/reports/crop\\_report/crprpt070730.asp](http://www.agr.gov.sk.ca/docs/reports/crop_report/crprpt070730.asp)

**Concerns about heat stress are common across western Canada.** There are many reports of flower blasting (orange or white flower petals) due to the heat. Bloom periods have been shortened. Dryland crops in southern Alberta are very short with few pods. As well, reports of pod-shrinking (pods looking as though they are shrink-wrapped around the seed) are occurring in many areas.

High humidity and good soil moisture have helped to minimize the damage in some areas, but in areas with depleted

surface moisture, damage is severe. During heat stress, flowers are less receptive to pollen and the duration of pollen release and viability is reduced. Air temperatures in excess of 30 degrees Celsius during flowering can result in flower abortion and reduced pod formation. Gaps (no pod formation) on the main stem are good indicators that flower blasting has occurred. However, hail, lack of available sulphur, late herbicide applications or feeding from insects such as lygus bugs, bertha armyworm and diamondback moth larvae may also result in gaps on the main stem.

Further information is available in the following Canol@Fact:

<http://www.canola-council.org/PDF/Canola Fact Sheet - Missing Pods.pdf>

**Soil moisture has been significantly reduced by hot dry conditions** in many areas and **topsoil moisture is very dry** in many areas of southern Saskatchewan and Alberta as well as parts of west-central Saskatchewan and east-central Alberta. Most areas would welcome a rain to replenish topsoil moisture and provide some respite from the continuing heat. For current maps of moisture conditions from PFRA for western Canada, check the following links for precipitation since September 1 and April 1 respectively:

[http://www.agr.gc.ca/pfra/drought/prpay07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpay07_e.htm)

[http://www.agr.gc.ca/pfra/drought/prpgs07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpgs07_e.htm)

Additional moisture information for Alberta is available from Alberta Environment at:

<http://www3.gov.ab.ca/env/water/WS/data/precipmaps/weekly.pdf>

**Unusually large numbers of aster yellows-affected plants** have been reported in many areas of Manitoba, Saskatchewan and north eastern Alberta. This disease may have been mistaken for sulphur deficiencies or herbicide damage. Aster yellows is caused by a phytoplasma, a plant pathogenic micro-organism. The phytoplasma inhabits the phloem (nutrient-carrying vessels) of infected plants and is carried from plant to plant by sap-sucking leafhoppers. Infected plants are more conspicuous because they tend to stand taller and are discoloured compared to non-infected plants. Although highly visible usually aster yellows is not present in sufficient numbers to cause economic losses. There are no preventative or control measures that producers can do to manage or prevent aster yellows in canola. Following is the link to SAF's factsheet on aster yellows:

<http://www.agr.gov.sk.ca/docs/production/asteryellows01.asp>

#### **Late season insect control tips:**

Before deciding to spray late season insect pests there are a number of additional factors to keep in mind.

##### Scout

– While regional monitoring, local forecasts and reports of what the neighbours are doing can provide helpful clues as to what might be in your fields, **there is no substitute for getting out there and looking.**

##### Use Thresholds

– Economic thresholds are available for most pests. These thresholds are often based on large scale, regional models. Remember to adjust those thresholds for your conditions, the yield potential, and your expected price.

##### Crop stage

– if you are close enough to harvest time, the crop will become less attractive for most insects after it has been swathed and begins to dry down. If you are only a few days from swathing this may be a more economical choice. Keep in mind that if you are close to swathing time, there may not be any products with a short enough **pre-harvest interval** (see pre-harvest interval section). Always keep the preharvest interval in mind when choosing control products.

##### Water volumes

– increasing sprayer water volumes will allow for better control by improving coverage and canopy penetration. This is especially important as many insects will “hide” within the canopy making it more difficult to get good control.

##### Method of application

– In most circumstances, either aerial spraying or application with a high clearance sprayer will work equally well.

##### **High counts of Lygus bugs**

have been reported in southern, central and north eastern Alberta and north western Saskatchewan. So far only isolated fields have been sprayed but counts near or exceeding economic thresholds have been found. Growers should still be scouting for lygus bugs. For more information on lygus bugs, refer to the following link:

<http://www.canola-council.org/lygusbugs.aspx>

##### **Diamondback moth larvae**

continue to be reported in many areas, and some hot spots in central Saskatchewan have reached economic thresholds resulting in fields being sprayed. Growers should be on the alert for damage from the larvae that begin feeding on the leaves, and then move up onto the pods at the later crop stages. Chemical control is not effective on cocoons so it is important to spray only actively feeding larvae. For more information on diamondback larvae, refer to the following

link: <http://www.canola-council.org/Diamondbackmoth.aspx>

Both bertha armyworms and diamondback moth larvae have been found in many fields. With both pests present in some fields it is important to **differentiate diamondback moth larvae from bertha armyworms** especially when trying to determine if thresholds are being reached. A couple of tips for distinguishing between the two are:

- Diamondback moth larvae will hang from “threads” when disturbed in the canola where bertha army worms will not.
- Diamondback larvae will wriggle backwards vigorously if tapped on the head while bertha armyworms will tend to curl up (don’t forget to try both ends if you can’t tell the head from the tail).

### **Adjust your thresholds**

when many pests are present. Feeding damage by more than one insect pest at the same time can create more stress on plants. While neither pest may trigger an economic threshold on its own, the combined damage could be reducing yields faster. In this case remember to adjust your economic thresholds to account for the increased damage. A good “rule of thumb” for adjusting thresholds when two pests are present in significant populations is to reduce the threshold for each pest by 25%.

**Bertha armyworm larvae have begun to hatch and develop in many areas** including western and central MB and central SK and north eastern Alberta. Growers in all areas affected by bertha armyworms last year, as well as areas reporting bertha armyworm moth activity this year, should be on the lookout for their emergence and development. Control for bertha armyworm occurs at the larval stage, usually when the larvae begin feeding on the pods.

Spraying for moths is not an effective control method and will likely do more harm in terms of destroying any beneficial insects in the crop. Spraying should be delayed until the larvae have reached the third or fourth in-star stage, as it is the last two in-stars stages that cause the most damage. As well, delaying spraying to the later stages will allow for the majority of the bertha eggs to hatch, thereby reducing the need for a subsequent insecticide application. For further information regarding bertha armyworm, please refer to the following link:

[http://www.directfocus.com/canolamanual/chapter10b.html#ch10b\\_sec6a](http://www.directfocus.com/canolamanual/chapter10b.html#ch10b_sec6a)

For more information on **bertha armyworm counts in Manitoba**, please refer to the following MAFRI link:

<http://www.gov.mb.ca/agriculture/crops/insects/bertha/index.html>

For more information on **bertha armyworm counts in Saskatchewan**, please refer to the following SAFRR link:

[http://www.agr.gov.sk.ca/docs/production/BerthaArmyworm\\_map.asp](http://www.agr.gov.sk.ca/docs/production/BerthaArmyworm_map.asp)

For more information on **bertha armyworm counts in Alberta**, please refer to the following link:

[http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/prm11487/\\$FILE/baay7w7c.png](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/prm11487/$FILE/baay7w7c.png)

### **Moth numbers in the maps are cumulative -**

the moth numbers reported in each reporting period are added up and the total to date is reported. Trap counts are still being collected and added to the maps, so for areas still showing low risk, it is important to keep checking for updates because those numbers may still increase.

*Remember these maps are an indication of risk in a region. Field scouting is still required to ensure economic damage does not occur in individual fields.*

**Timing of insecticide application for bertha control is critical.** It is important to ensure that the larvae are up on the middle to upper parts of the plant and feeding on the pods. If the larvae are still feeding on leaf material in the lower canopy or the leaf litter on the ground, there will be poorer control. Avoid spraying during high temperatures (above 25 degrees C), as the larvae are likely to be in the lower levels of the canopy. Use rates appropriate to the stage of the larvae. Most insecticides recommend a range of rates. Use higher rates when faced with high populations and/or larger stages. Also at the latest stage, ensure that the larvae are actively feeding. Larvae at the latest stage may be inactive on the ground as they prepare to pupate.

Before considering any further applications of fungicides or insecticides, **remember to allow for the required pre-harvest interval** for any products being considered. Growers need to ensure that the appropriate pre-harvest interval is followed to eliminate chances of excess residues appearing in the harvested seed, and damaging markets. Refer to the following links for information on pre-harvest intervals for some common pesticides and description of the importance of following pre-harvest intervals: [http://www.canola-council.org/pre\\_harvest.html](http://www.canola-council.org/pre_harvest.html)

Early seeded crops in parts of southern Alberta and Saskatchewan are nearing maturity. Growers need to **ensure that seed colour change** is occurring when **assessing the proper time to swath**. The colour of mature plants and pods will vary among varieties as they mature. Some will appear ripe on the outside before the seeds are mature, so avoid using plant colour as a gauge to proper timing. Open up pods on the main stem and look at the colour of the seeds to accurately assess swathing timing. Refer to the following link for more information on swathing in hot, dry weather: [http://www.canola-council.org/media\\_jul2606.html](http://www.canola-council.org/media_jul2606.html)

Recent research indicates that

**the optimum stage to swath for both yield and quality is up to 60% seed colour change.** This enables many growers to start swathing at 30% to 40% seed colour change without sacrificing significant yield or quality. It widens the "swathing days" window for all growers, including those with large canola acreages. **When conditions are hot and dry, avoid swathing during the hottest part of the day.** Swath during cool evening hours, at night or early in the morning to allow plants to dry down at a slower rate. This reduces the chance of green seed. To learn more about proper harvest field assessment, refer to the revised Canola Council publication "Canola Time of Swathing Guide" or the following link: [http://www.canola-council.org/pub\\_swathing.html](http://www.canola-council.org/pub_swathing.html)

At this time of the year, growers are preparing their bins for storage of the upcoming harvest. It is important to note that malathion and other similar insecticides should not be used to treat grain bins for insects prior to storing canola. Although this practice is common for cereal crops, oilseed crops like canola can absorb the malathion from the bin surfaces and the resulting residues have been found in crop delivered to elevators. Therefore, **DO NOT use malathion to treat bins destined to store canola from the upcoming harvest.** Refer to the following link for further information: [http://www.canola-council.org/pesticide\\_link2.html](http://www.canola-council.org/pesticide_link2.html)

Direct questions regarding this report to John Mayko, Senior Agronomy Specialist, Parkland West (West Central AB), with the Canola Council of Canada at [maykoj@canola-council.org](mailto:maykoj@canola-council.org) ph/fax: 780-764-2593.

Direct specific questions regarding regional issues to one of the following Canola Council of Canada agronomy specialists or provincial oilseed specialists:

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Jim Bessel, Senior Agronomy Specialist, North-central/eastern Saskatchewan, [besselj@canola-council.org](mailto:besselj@canola-council.org), 306-373-6771

Penny Pearse/Scott Hartley, Saskatchewan Agriculture, Food & Rural Revitalization, [ppearse@agr.gov.sk.ca](mailto:ppearse@agr.gov.sk.ca) / [shartley@agr.gov.sk.ca](mailto:shartley@agr.gov.sk.ca), 306-787-4671 / 306-787-4669

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Murray Hartman, Alberta Agriculture, Food & Rural Development, [murray.hartman@gov.ab.ca](mailto:murray.hartman@gov.ab.ca), 403-782-8024

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*The Canola Watch Report provides just-in-time information on canola production to growers and industry.*

*Contributors to the Canola Agronomy Network are:*

*Manitoba Agriculture & Food; Manitoba Canola Growers Association; Agricore United; Saskatchewan Wheat Pool; United Farmers of Alberta; Saskatchewan Agriculture, Food & Rural Revitalization; Saskatchewan Canola Growers Association; Saskatchewan Canola Development Commission; Alberta Agriculture, Food & Rural Development; Alberta Canola Producers Commission; BC Ministry of Agriculture; Food & Fisheries; and the Canola Council of Canada.*

# Canola Watch Reports

## 2007 Canola Watch Reports

#15 Western Canada – August 9, 2007

In this issue:

(click the bookmark links below to move to specific sections of this report)

[Scattered showers bring some reprieve from heat](#)

[Concerns about damage from heat stress continue](#)

[Recent moisture may assist with ripening and curing](#)

[Aster yellows disease found in many fields](#)

[Late season insect control tips](#)

[Lygus spraying in Alberta](#)

[Diamondback moth larvae moving to pods](#)

[How to tell diamondback larvae from bertha armyworms](#)

[Adjust thresholds if there's more than one pest](#)

[Bertha armyworm spraying underway in some areas](#)

[Timing of bertha control critical](#)

[Late season diseases showing up](#)

[Allow for adequate pre-harvest intervals](#)

[Assess seed colour change before swathing](#)

[Consider pre-harvest weed control](#)

[Thinking about straight cutting?](#)

[Keep malathion far away from canola bins](#)

The Alberta Canola Producers Commission (ACPC) has developed an Alberta focused version of this report. Visit the ACPC website at: <http://www.canola.ab.ca>

**With the exception of southern Alberta, scattered rain showers in most areas have brought a bit of a reprieve from the persistent heat.** Crop development continues with the only reports of flowering coming from the Peace River region. Swathing is now underway on early seeded crops in most southern regions and is most advanced in southern Alberta and southwestern Saskatchewan where most non-irrigated fields are swathed already.

An overview of prairie vegetation conditions is available at (use the “start the prairies application” button on the left hand side): [http://www26.statcan.ca/ccap/ccaphome\\_en.jsp](http://www26.statcan.ca/ccap/ccaphome_en.jsp)

The latest crop report from Manitoba Agriculture, Food & Rural Initiatives is available at: <http://web2.gov.mb.ca/agriculture/mwcr/index.php>

The latest crop report from Saskatchewan Agriculture, Food & Rural Revitalization is available at: [http://www.agr.gov.sk.ca/docs/reports/crop\\_report/crprpt070730.asp](http://www.agr.gov.sk.ca/docs/reports/crop_report/crprpt070730.asp)

**Concerns about damage from heat stress continue across western Canada.** There are many reports of shortened bloom periods, as well as blanks (missing pods) on stems and pod-shrinking (pods looking as though they are shrink-wrapped around the seed) are occurring in many areas, particularly on later maturing fields. Reports from southern Alberta indicate that dryland crops are very short with few pods.

High humidity and good soil moisture have helped to minimize the damage in some areas, but in areas where surface

moisture was depleted, damage is severe. During heat stress, flowers are less receptive to pollen and the duration of pollen release and viability is reduced. Air temperatures in excess of 30 degrees Celsius during flowering can result in flower abortion and reduced pod formation. Gaps (no pod formation) on the main stem are good indicators that flower blasting has occurred. However, hail, lack of available sulphur, late herbicide applications or feeding from insects such as lygus bugs, bertha armyworm and diamondback moth larvae may also result in gaps on the main stem.

Further information is available in the following Canol@Fact:

<http://www.canola-council.org/PDF/Canola%20Fact%20Sheet%20-%20Missing%20Pods.pdf>

**Recent moisture from scattered showers in most regions** was welcome but has likely come too late or in insufficient amounts to have a big impact on yield. However, it may aid seed development in later maturing fields and will certainly improve conditions for ripening in fields that are nearly ready to swath or curing in those fields already swathed. For current maps of moisture conditions from PFRA for western Canada, check the following links for precipitation since September 1 and April 1 respectively:

[http://www.agr.gc.ca/pfra/drought/prpay07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpay07_e.htm)

[http://www.agr.gc.ca/pfra/drought/prpgs07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpgs07_e.htm)

Additional moisture information for Alberta is available from Alberta Environment at:

<http://www3.gov.ab.ca/env/water/WS/data/precipmaps/weekly.pdf>

**Unusually large numbers of aster yellows-affected plants** continue to be reported in many areas of Manitoba, Saskatchewan and north eastern Alberta. This disease may have been mistaken for sulphur deficiencies or herbicide damage. Aster yellows is caused by a phytoplasma, a plant pathogenic micro-organism. The phytoplasma inhabits the phloem (nutrient-carrying vessels) of infected plants and is carried from plant to plant by sap-sucking leafhoppers. Infected plants are more conspicuous because they tend to stand taller and are discoloured compared to non-infected plants. Although highly visible, aster yellows is not usually present on a large enough percentage of plants to cause economic losses. There are no preventative or control measures that producers can do to manage or prevent aster yellows in canola. Following is the link to SAF's factsheet on aster yellows:

<http://www.agr.gov.sk.ca/docs/production/asteryellows01.asp>

### **Late season insect control tips:**

#### Scout

– While regional monitoring, local forecasts and reports of what the neighbours are doing can provide helpful clues as to what might be in your fields; **there is no substitute for getting out there and looking.**

#### Use thresholds

– Economic thresholds are available for most pests. These thresholds are often based on large scale, regional models. Remember to adjust those thresholds for your conditions, the yield potential, and your expected price.

#### Crop stage

– If you are close enough to harvest time, the crop will become less attractive for most insects after it has been swathed and begins to dry down. If you are only a few days from swathing, this may be a more economical choice.

Keep in mind that if you are close to swathing, there may not be any products with a short enough **pre-harvest interval**

(see pre-harvest interval section). Always keep the preharvest interval in mind when choosing control products.

#### Water volumes

– Increase sprayer water volumes to allow for better control by improving coverage and canopy penetration. This is especially important as many insects will “hide” within the canopy making it more difficult to get good control.

#### Method of application

– In most circumstances, aerial spraying or application with a high clearance sprayer will work equally well.

#### **Increasing levels of lygus bugs**

(from 40 to 80 per 10 sweeps) are being reported in southern Alberta in the highway 1 corridor from Calgary to Brooks, and in the northwest around Vegreville, Camrose, Olds and Trochu. There are concerns about crop damage from lygus, but growers need to carefully assess crop stage before considering insecticide application. In some cases, there may not be an adequate pre-harvest interval for insecticide application, and growers may be better off to advance their time of swathing to reduce lygus damage. Use a sweep net to determine lygus pressure. Economic thresholds at the podding stage will be around 20 in a 10-sweep sample, but consult the following link for more details:

<http://www.canola-council.org/lygusmonitoring.aspx>.

However, be aware of the lygus stage. If a large number of nymphs are very small (aphid-sized), wait a week and

sample again. The larger the lygus, the higher the potential damage. Lygus will do less damage to firm seed than watery, immature seed. Also sample in the good areas of the field as higher numbers will be found in poor or thin areas. "Sap spots" seen on pods are also a good indicator of lygus damage. For more information on lygus bugs, refer to the following link: <http://www.canola-council.org/lygusbugs.aspx>

### **Diamondback moth larvae**

continue to be reported in many areas. Growers should be on the alert for damage from the larvae that begin feeding on the leaves, and then move up onto the pods at the later crop stages. Chemical control is not effective on cocoons so it is important to spray only actively feeding larvae. For more information on diamondback larvae, refer to the following link: <http://www.canola-council.org/Diamondbackmoth.aspx>

Both bertha armyworms and diamondback moth larvae have been found in many fields. With both pests present in some fields, it is important to **differentiate diamondback moth larvae from bertha armyworms** especially when trying to determine if thresholds are being reached. A couple of tips for distinguishing between the two are:

- Diamondback moth larvae will hang from "threads" when disturbed in the canola where bertha armyworms will not.
- Diamondback larvae will wriggle backwards vigorously if tapped on the head while bertha armyworms will tend to curl up. Don't forget to try both ends if you can't tell the head from the tail!

### **Adjust your thresholds**

when many pests are present. Feeding damage by more than one insect pest at the same time can create more stress on plants. While neither pest may trigger an economic threshold on its own, the combined damage could be reducing yields faster. In this case, remember to adjust your economic thresholds to account for the increased damage. A good "rule of thumb" for adjusting thresholds when two pests are present in significant populations is to reduce the threshold for each pest by 25%.

**Bertha armyworm larvae have reached the thresholds for spraying in some areas** including parts of northwestern, southwestern and central MB and central SK and southern Alberta near Vulcan. Growers in all areas affected by bertha armyworms last year, as well as areas reporting bertha armyworm moth activity this year, should continue to scout for their emergence and development. Check out the following links for the risk maps of based on cumulative moth counts. *Remember these maps are an indication of risk in a region. Field scouting is still required to ensure economic damage does not occur in individual fields.*

For more information on **bertha armyworm counts in Manitoba**, please refer to the following MAFRI link:

<http://www.gov.mb.ca/agriculture/crops/insects/bertha/index.html>

For more information on **bertha armyworm counts in Saskatchewan**, please refer to the following SAFRR link:

[http://www.agr.gov.sk.ca/docs/production/BerthaArmyworm\\_map.asp](http://www.agr.gov.sk.ca/docs/production/BerthaArmyworm_map.asp)

For more information on **bertha armyworm counts in Alberta**, please refer to the following link:

[http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/prm11487/\\$FILE/baay7w7c.png](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/prm11487/$FILE/baay7w7c.png)

Control for bertha armyworm occurs at the larval stage, usually when the larvae begin feeding on the pods. Spraying should be delayed until the larvae have reached the third or fourth in-star stage, because they do the most damage during the final two in-stars. As well, delaying spraying to the later stages will allow for the majority of the bertha eggs to hatch, thereby reducing the need for a subsequent insecticide application. For further information regarding bertha armyworm, please refer to the following link:

[http://www.directfocus.com/canolamanual/chapter10b.html#ch10b\\_sec6a](http://www.directfocus.com/canolamanual/chapter10b.html#ch10b_sec6a)

**Timing of insecticide application for bertha control is critical.** It is important to ensure that the larvae are up on the middle to upper parts of the plant and feeding on the pods. If the larvae are still feeding on leaf material in the lower canopy or the leaf litter on the ground, there will be poorer control. Avoid spraying during high temperatures (above 25 degrees C), because the larvae are likely to be in the lower levels of the canopy. Use rates appropriate to the stage of the larvae. Most insecticides recommend a range of rates. Use higher rates when faced with high populations and/or larger stages. Also at the latest stage, ensure that the larvae are actively feeding. Larvae at the latest stage may be inactive on the ground as they prepare to pupate.

Reports of **late season diseases** are starting to come in, including high levels of sclerotinia in untreated fields in part of Manitoba, northern Saskatchewan and central Alberta; fusarium wilt in susceptible varieties in central MB and the

Peace region; clubroot around Edmonton and St. Albert; and alternaria in northwestern SK and north central Alberta. During fall scouting for proper swath timing and late insect scouting producers should watch for abnormal areas that have wilted, or for **prematurely ripening plants** within canola stands that are otherwise healthy. These areas may be indicators of these diseases that restrict water and nutrient uptake by plants. It is important to accurately identify what is causing the damage and properly document the information for future reference and decision making. Identification of clubroot will allow growers to take steps to limit soil (and associated spore) movement to other fields through equipment sanitation. Fields with alternaria will be poor candidates for delayed swathing and should not be straight combined as pods will be prone to shattering. Before considering any further applications of fungicides or insecticides, **remember to allow for the required pre-harvest interval** for any products being considered. Growers need to ensure that the appropriate pre-harvest interval is followed to eliminate chances of excess residues appearing in the harvested seed, and damaging markets. Refer to the following links for information on pre-harvest intervals for some common pesticides and description of the importance of following pre-harvest intervals: [http://www.canola-council.org/pre\\_harvest.html](http://www.canola-council.org/pre_harvest.html)

Early seeded crops in parts of southern Alberta and Saskatchewan are nearing maturity. Growers need to **ensure that seed colour change** is occurring when **assessing the proper time to swath**. The colour of mature plants and pods will vary among varieties as they mature. Some will appear ripe on the outside before the seeds are mature, so avoid using plant colour as a gauge to proper timing. Open up pods on the main stem and look at the colour of the seeds to accurately assess swathing timing. Refer to the following link for more information on swathing in hot, dry weather: [http://www.canola-council.org/media\\_jul2606.html](http://www.canola-council.org/media_jul2606.html)

Recent research indicates that **the optimum stage to swath for both yield and quality is up to 60% seed colour change**. This enables many growers to start swathing at 30% to 40% seed colour change without sacrificing significant yield or quality. It widens the "swathing days" window for all growers, including those with large canola acreages. **When conditions are hot and dry, avoid swathing during the hottest part of the day**. Swath during cool evening hours, at night or early in the morning to allow plants to dry down at a slower rate. This reduces the chance of green seed. This strategy will also help in situations where hail damage or diseases such as alternaria, black spot or sclerotinia have predisposed the plants to shattering. Growers may need to consider swathing earlier in these situations as well, but should try to wait for at least 20 to 25% seed colour change if possible. To learn more about proper harvest field assessment, refer to the revised Canola Council publication "Canola Time of Swathing Guide" or the following link: [http://www.canola-council.org/pub\\_swathing.html](http://www.canola-council.org/pub_swathing.html)

With swathing and harvest of other crops approaching, consider a valuable weed control tool to set up for next year's canola crop--**pre-harvest glyphosate**.

It's the most consistent and effective treatment for many perennial weeds, providing an effective and economical alternative to in-crop applications. In early fall, perennial weeds are moving nutrients down into roots and rhizomes to prepare for winter. This is when they are most vulnerable to herbicide translocation to the roots and better control is possible. Keep in mind that generally the use of pre-harvest glyphosate on crops grown for seed should be avoided.

There are a number of **growers considering straight cutting** their canola this year. To be successful, consider the following factors:

#### **Crop Canopy**

– the crop should be well knitted and slightly lodged to reduce the chance of pod shelling and pod drop. Remember that pod integrity (including petiole strength which influences pod drop) can be affected by frost and drought.

#### **Disease**

– the crop should be relatively free from diseases including blackleg, fusarium wilt, sclerotinia and alternaria. These diseases can cause premature ripening, which can in turn cause pod shattering.

#### **Hail**

- Crops affected by hail are poor candidates for straight cutting due to the probability of greater disease infection through damaged tissue and reduced pod integrity from physical damage. Also, any late season hail often causes greater levels of damage to standing crops than swathed crops.

Growers who have decided to straight combine some of their canola may also be considering pre-harvest weed control or desiccation. If a Roundup Ready canola variety has been grown, a pre-harvest glyphosate application will assist in some dry down of green weeds and offer perennial weed control, but it will not dry down the crop. For other types of canola, it will be even more critical not to apply the product too early. Apply when the crop has 30% or less seed

moisture content. At this stage, the pods are green to yellow and most seeds have turned from green to yellow or brown. Wait three full days (72 hours) after application before cutting to allow thorough translocation of the herbicide to ensure extended long-term weed control. If applying any pre-harvest chemicals prior to harvest with ground rig sprayers, the use of crop dividers can reduce the amount of crop loss due to trampling and shattering. In addition, traveling back and forth in the direction of prevailing crop lean will further reduce losses. For a faster acting desiccant like Reglone, it is even more important to delay application to allow seeds to reach physiological maturity. The recommended stage is when 60 to 75% of seed has turned brown.

At this time of the year, as growers prepare their bins for storage of the upcoming harvest, it is important to note that oilseed crops like canola can absorb malathion from bin surfaces and the resulting residues have been found in crop delivered to elevators. Therefore,

**DO NOT use malathion to treat bins destined to store canola from the upcoming harvest.** Refer to the following link for further information: [http://www.canola-council.org/pesticide\\_link2.html](http://www.canola-council.org/pesticide_link2.html)

Direct questions regarding this report to John Mayko, Senior Agronomy Specialist, Parkland West (West Central AB), with the Canola Council of Canada at [maykoj@canola-council.org](mailto:maykoj@canola-council.org) ph/fax: 780-764-2593.

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Anne Vos, Acting Agronomy Specialist, Peace Region, [av@summit-ag.com](mailto:av@summit-ag.com), 780-835-4632

Murray Hartman, Alberta Agriculture, Food & Rural Development, [murray.hartman@gov.ab.ca](mailto:murray.hartman@gov.ab.ca), 403-782-8024

Kerry Clark, BC Ministry of Agriculture and Lands, [Kerry.Clark@gov.bc.ca](mailto:Kerry.Clark@gov.bc.ca), 250-784-2559

*The Canola Watch Report provides just-in-time information on canola production to growers and industry.*

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# Canola Watch Reports

## 2007 Canola Watch Reports

#16 Western Canada – August 15, 2007

In this issue:

(click the bookmark links below to move to specific sections of this report)

[More canola crop closer to maturity](#)  
[Recent moisture may assist ripening and curing](#)  
[Early frost may have damaged some canola crops](#)

[Aster yellows disease found in many fields](#)  
[Late season diseases showing up](#)  
[Insect pressures ease](#)  
[Adjust spraying thresholds for two pests at once](#)  
[Scout for prematurely ripening plants](#)  
[Allow for adequate pre-harvest intervals](#)  
[Assess seed colour change before swathing](#)  
[Consider pre-harvest weed control](#)  
[Thinking about straight cutting?](#)  
[Reduce risk of wind blown swaths](#)  
[Keep malathion far away from canola bins](#)  
[Keep stored canola cool](#)

The Alberta Canola Producers Commission (ACPC) has developed an Alberta focused version of this report. Visit the ACPC website at: <http://www.canola.ab.ca>

**Crop development** ranges widely depending largely on the seeding date. Swathing ranges from mostly complete in central and eastern Manitoba to a week to 10 days away from starting in parts of west-central Alberta and the Peace, except for many Polish (*B. rapa*) crops which have been swathed in the Peace. Combining of canola continued in central and eastern Manitoba as well as southern areas of Saskatchewan and Alberta.

Most regions received some moisture and a return to cooler temperatures last week, with rainfall amounts ranging from a trace to over 50 mm. The moisture will help to fill out the pods on crops still standing and will help to cure crops already swathed. Isolated but in some cases severe hail was reported in many areas, with some of the worst reports from around Dauphin MB, near Canora and Kamsack SK and near Wetaskiwin AB.

An overview of prairie vegetation conditions is available at (use the “start the prairies application” button on the left hand side): [http://www26.statcan.ca/ccap/ccaphome\\_en.jsp](http://www26.statcan.ca/ccap/ccaphome_en.jsp)

The latest crop report from Manitoba Agriculture, Food & Rural Initiatives is available at:  
<http://web2.gov.mb.ca/agriculture/mwcr/index.php>

The latest crop report from Saskatchewan Agriculture, Food & Rural Revitalization is available at:  
[http://www.agr.gov.sk.ca/docs/reports/crop\\_report/crprpt070812.asp](http://www.agr.gov.sk.ca/docs/reports/crop_report/crprpt070812.asp)

**Recent moisture from scattered showers in most regions** was welcome but has likely come too late or in insufficient amounts to have a big impact on yield. However, it may aid seed development in later maturing fields and will certainly improve conditions for ripening in fields that are nearly ready to swath or curing in those fields already

swathed. For current maps of moisture conditions from PFRA for western Canada, check the following links for precipitation since September 1 and April 1 respectively:

[http://www.agr.gc.ca/pfra/drought/prpay07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpay07_e.htm)

[http://www.agr.gc.ca/pfra/drought/prpgs07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpgs07_e.htm)

Additional moisture information for Alberta is available from Alberta Environment at:

<http://www3.gov.ab.ca/env/water/WS/data/precipmaps/weekly.pdf>

### **Frost was reported this past week**

in parts of the Peace region including St. Isadore, Tangent and Fairview and in north-central Alberta near Two Hills. Although the frost damage was light in many of these areas, some low lying areas likely experienced more damage.

**Growers need to be patient to accurately determine the level of damage after a frost.** To determine when to swath frost damaged canola, check the extent of damage 2-3 days after the frost.

The condition of the frost affected areas will likely fall into one of three main categories, with appropriate swathing strategies for each category. Carefully assess each field and note which scenario the majority of the plants fall into.

**Scenario 1: when there is little evidence of frost damage.** The pods remain mostly green or tan-green, with few, if any, white spots on the outside of the pods. The seeds inside are mostly intact. Check the colour of the inside of the seeds as well. If the outside of the seeds are starting to turn, the insides should be yellow or a light lime-green. If seeds are still green on the outside and the inside of the seeds are still watery, the outside seed coats should remain intact and turgid. In these cases, leave the crop to mature until enough seed colour change occurs.

**Scenario 2: when there are only white specks on the outside of the pods,** or only a few seeds in immature pods that are not intact, or only a few seeds in the upper plant parts are prematurely browning. Premature browning occurs when the outside of the seed has been damaged by the frost and the inside of the seed remains dark green. Check the following link for a photo of moderate crop damage, including premature browning of seed vs. normal seed:

<http://www.canola-council.org/production/Frost/frost.html>

In these cases, the fields should be left and monitored on a daily basis to evaluate further crop changes. If no further damage is evident, the remaining crop may continue to fill and mature. If the seeds continue to deteriorate and/or pod integrity declines, begin swathing to conserve seed volume.

**Scenario 3: when there is considerable whitening of the outside of the pods for a majority of the plants.** Check the previous link for a photo of severe crop damage. In this case, the pods will begin to shrink and desiccate rapidly, and swathing should begin immediately using the dew to reduce pod shelling and pod drop to conserve any seeds in those pods. In all cases, monitoring should be done daily or every other day to evaluate further crop development and conditions, especially if warmer temperatures and sunshine return.

For more information on assessing frost damaged canola refer to the following link:

[http://www.canola-council.org/PDF/sept20\\_canola\\_fact\\_sheet\\_r3.pdf](http://www.canola-council.org/PDF/sept20_canola_fact_sheet_r3.pdf)

**Unusually large numbers of aster yellows-affected plants** continue to be reported in many areas of Manitoba, Saskatchewan and northeastern Alberta. This disease is sometimes mistaken for sulphur deficiencies or herbicide damage. Aster yellows is caused by a phytoplasma, a plant pathogenic micro-organism. The phytoplasma inhabits the phloem (nutrient-carrying vessels) of infected plants and is carried from plant to plant by sap-sucking leafhoppers. Infected plants are more conspicuous because they tend to stand taller and are discoloured compared to non-infected plants. Although highly visible, aster yellows is not usually present on a large enough percentage of plants to cause economic losses. There are no preventative or control measures that producers can do to manage or prevent aster yellows in canola. Following is the link to SAF's factsheet on aster yellows:

<http://www.agr.gov.sk.ca/docs/production/asteryellows01.asp>

Reports of **late season diseases** continue to come in, including high levels of **sclerotinia** in untreated fields in parts of

Manitoba, northern Saskatchewan, central Alberta and the BC Peace; **clubroot** around Edmonton, Leduc and St. Albert; **alternaria** in northwestern SK and north central Alberta; and **fusarium wilt** and **blackleg** in south central Manitoba. Fields that received earlier hail damage appear to be more prone to secondary disease development.

For more information on later season insects and their control, refer to last week's Canola Watch report at:

[http://www.canola-council.org/canola\\_watch\\_report\\_2007\\_15.html](http://www.canola-council.org/canola_watch_report_2007_15.html)

### **Insect pressures**

have decreased in most areas this past week. Lygus bugs continue to be found in parts of southern Alberta between Calgary and Brooks and in north-central Alberta near Boyle. Bertha armyworms remain a concern in parts of northwestern Manitoba, in Saskatchewan near Watson, Wadena, Norquay and Preeceville and in areas northeast of Calgary. Diamondback larvae continue to be reported in many parts of central Alberta. Both bertha armyworms and diamondback moth larvae have been found in many fields. With both pests present in some fields, it is important to **differentiate diamondback moth larvae from bertha armyworms** especially when trying to determine if thresholds are being reached. A couple of tips for distinguishing between the two are:

- Diamondback moth larvae will hang from "threads" when disturbed in the canola where bertha armyworms will not.
- Diamondback larvae will wriggle backwards vigorously if tapped on the head while bertha armyworms will tend to curl up. Don't forget to try both ends if you can't tell the head from the tail!

As well, an infrequent insect, the salt marsh caterpillar has been reported in many areas of central and northern Saskatchewan, central Alberta as well as the Peace region. Being an infrequent pest, there are no current thresholds developed. In the absence of further information, growers should consider using similar thresholds as bertha armyworm since the larvae are similar in size and feeding patterns. For more information on salt marsh caterpillar refer to the attached pdf file which was obtained from the University of New Jersey at <http://www.cook.rutgers.edu/>.

### **Adjust your thresholds**

when many pests are present. Feeding damage by more than one insect pest at the same time can create more stress on plants. While neither pest may trigger an economic threshold on its own, the combined damage could be reducing yields faster. In this case, remember to adjust your economic thresholds to account for the increased damage. A good "rule of thumb" for adjusting thresholds when two pests are present in significant populations is to reduce the threshold for each pest by 25%.

During fall scouting for proper swath timing and late insect scouting, producers should watch for abnormal areas that have wilted or for **prematurely ripening plants**

within canola stands that are otherwise healthy. Post swathing (within approximately 3 days after swathing) is another ideal time for disease scouting. Prematurely ripening areas may be indicators of these diseases that restrict water and nutrient uptake by plants. It is important to accurately identify what is causing the damage and properly document the information for future reference and decision making. Identification of clubroot will allow growers to take steps to limit soil (and associated spore) movement to other fields through equipment sanitation. Fields with alternaria will be poor candidates for delayed swathing and should not be straight combined as pods will be prone to shattering.

Before considering any further applications of fungicides or insecticides, **allow for the required pre-harvest interval** for any products being considered. Remember that pre-harvest interval refers to the time from when the product is applied to when the crop is cut (straight cut or swathed). Growers need to ensure that the appropriate pre-harvest interval is followed to eliminate chances of excess residues appearing in the harvested seed, and damaging markets. Refer to the following links for information on pre-harvest intervals for some common pesticides and description of the importance of following pre-harvest intervals: [http://www.canola-council.org/pre\\_harvest.html](http://www.canola-council.org/pre_harvest.html)

With more crops nearing maturity, growers need to **ensure that seed colour change** is occurring when **assessing the proper time to swath**. The colour of mature plants and pods will vary among varieties as they mature. Some will appear ripe on the outside before the seeds are mature, so avoid using plant colour as a gauge to proper timing. Open up pods on the main stem and look at the colour of the seeds to accurately assess swathing timing.

Recent research indicates that

**the optimum stage to swath for both yield and quality is up to 60% seed colour change.** This enables many

growers to start swathing at 30% to 40% seed colour change without sacrificing significant yield or quality. It widens the "swathing days" window for all growers, including those with large canola acreages. **When conditions are hot and dry, avoid swathing during the hottest part of the day.** Swath during cool evening hours, at night or early in the morning to allow plants to dry down at a slower rate. This reduces the chance of green seed. This strategy will also help in situations where hail damage or diseases such as alternaria black spot have predisposed the plants to shattering. Growers may need to consider swathing earlier in these situations as well, but should try to wait for at least 20 to 25% seed colour change if possible. To learn more about proper harvest field assessment, refer to the revised Canola Council publication "Canola Time of Swathing Guide" or the following link:

[http://www.canola-council.org/pub\\_swathing.html](http://www.canola-council.org/pub_swathing.html)

With swathing and harvest of other crops approaching, consider a valuable weed control tool to set up for next year's canola crop--**pre-harvest glyphosate.**

It's the most consistent and effective treatment for many perennial weeds, providing an effective and economical alternative to in-crop applications. In early fall, perennial weeds are moving nutrients down into roots and rhizomes to prepare for winter. This is when they are most vulnerable to herbicide translocation to the roots and better control is possible. Keep in mind that generally the use of pre-harvest glyphosate on crops grown for seed should be avoided.

There are more **growers considering straight cutting** their canola this year. To be successful, consider the following factors:

### **Crop Canopy**

– the crop should be well knitted and slightly lodged to reduce the chance of pod shelling and pod drop. Remember that pod integrity (including petiole strength which influences pod drop) can be affected by frost and drought.

### **Disease**

– the crop should be relatively free from diseases including blackleg, fusarium wilt, sclerotinia and alternaria. These diseases can cause premature ripening, which can in turn cause pod shattering.

### **Hail**

- Crops affected by hail are poor candidates for straight cutting due to the probability of greater disease infection through damaged tissue and reduced pod integrity from physical damage. Also, any late season hail often causes greater levels of damage to standing crops than swathed crops.

Growers who have decided to straight combine some of their canola may also be considering **pre-harvest weed control or desiccation.** If a Roundup Ready canola variety has been grown, a pre-harvest glyphosate application will assist in some dry down of green weeds and offer perennial weed control, but it will not dry down the crop. For other types of canola, it will be even more critical not to apply the product too early. Apply when the crop has 30% or less seed moisture content. At this stage, the pods are green to yellow and most seeds have turned from green to yellow or brown. Wait three full days (72 hours) after application before cutting to allow thorough translocation of the herbicide to ensure extended long-term weed control. If applying any pre-harvest chemicals prior to harvest with ground rig sprayers, the use of crop dividers can reduce the amount of crop loss due to trampling and shattering. In addition, traveling back and forth in the direction of prevailing crop lean will further reduce losses. For a faster acting desiccant like Reglone, it is even more important to delay application to allow seeds to reach physiological maturity. The recommended stage is when 60 to 75% of seed has turned brown.

There were reports of **wind blown swaths**

in areas of eastern Manitoba. Many of the worst affected fields were swathed at right angles to prevailing winds. Growers with fields remaining to be swathed are highly encouraged to **swath their fields parallel to the prevailing winds** to reduce the risk of wind blown swaths and resulting crop loss from shelling. **Cut as high as possible (just below the lowest pods) and consider using a swath roller** to help anchor the swath into the stubble.

At this time of the year, as growers prepare their bins for storage of the upcoming harvest, it is important to note that oilseed crops including canola can absorb malathion from bin surfaces and the resulting residues have been found in crop delivered to elevators. Therefore,

**DO NOT use malathion to treat bins destined to store canola from the upcoming harvest.** Refer to the following link for further information: [http://www.canola-council.org/pesticide\\_link2.html](http://www.canola-council.org/pesticide_link2.html)

For those growers combining canola during warm temperatures, **canola storage can also be a concern even at seed moisture levels of 8% or lower.** This can be compounded by the presence of insects such as grasshoppers and ladybugs in the grain. Be aware that canola binned at high temperatures may be susceptible to heating and spoilage even though it may test dry, particularly if it contains green material such as weed seeds, chaff or insects. **Use aeration to bring down the temperature of the binned canola.** For more information on safe storage and conditioning canola, check the following link: [http://www.canola-council.org/media\\_aug2306.html](http://www.canola-council.org/media_aug2306.html)

Direct questions regarding this report to John Mayko, Senior Agronomy Specialist, Parkland West (West Central AB), with the Canola Council of Canada at [maykoj@canola-council.org](mailto:maykoj@canola-council.org) ph/fax: 780-764-2593.

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# Canola Watch Reports

## 2007 Canola Watch Reports

#17 Western Canada – August 22, 2007

In this issue:

(click the bookmark links below to move to specific sections of this report)

[Crop maturity slowed by cooler weather](#)

[Frost may have damaged some canola crops](#)

[Assessing frost damage](#)

[Late season diseases showing up](#)

[Insect pressures vary](#)

[Adjust spraying thresholds for multiple pests at once](#)

[Allow for adequate pre-harvest intervals](#)

[Scout for prematurely ripening plants](#)

[Assess seed colour change before swathing](#)

[Swathing timing with uneven growth](#)

[Swathing early to avoid frost?](#)

[Consider pre-harvest weed control](#)

[Desiccation tips](#)

[Assess crop conditions prior to considering straight cutting](#)

[Straight cutting tips](#)

[Reduce risk of wind blown swaths](#)

[Keep malathion far away from canola bins](#)

[Keep stored canola cool](#)

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**Crop development** continues to range widely depending largely on seeding date and area. Cool, wet weather over the past week limited the rate of crop advancement across many areas. Swathing ranges from virtually complete in central and eastern Manitoba to a week to 10 days away from starting in parts of west-central Alberta and the Peace, except for many Polish (*B. rapa*) crops which have been swathed in the Peace. Combining continued in central and eastern Manitoba as well as southern areas of Saskatchewan and Alberta.

Most regions received some moisture and a continuation of cooler temperatures last week, with rainfall amounts ranging from a trace to over 165 mm. The moisture will help fill out pods on crops still standing and will help cure crops already swathed. Isolated, but in some cases severe hail was reported in some areas including Grenfell, Odessa, Admiral, Leader and Imperial, SK as well as Viking and Woking, AB.

An overview of prairie vegetation conditions is available at (use the “start the prairies application” button on the left hand side): [http://www26.statcan.ca/ccap/ccaphome\\_en.jsp](http://www26.statcan.ca/ccap/ccaphome_en.jsp)

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For current maps of moisture conditions from PFRA, check the following links for precipitation since September 1 and April 1 respectively:

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[http://www.agr.gc.ca/pfra/drought/prpags07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpags07_e.htm)

Additional moisture information for Alberta is available from Alberta Environment at:

<http://www3.gov.ab.ca/env/water/WS/data/precipmaps/weekly.pdf>

### **Frost was reported this past week**

at Insinger, Leroy and Porcupine Plain, SK as well as in parts of western Manitoba. Although the frost damage was light in many areas, some low lying areas likely experienced more damage, especially at Porcupine Plain, which had frost on two consecutive nights.

**Be patient to accurately determine the level of damage after a frost.** To determine when to swath frost damaged canola, check the extent of damage 2-3 days after the frost. The condition of frost affected areas will likely fall into one of three main categories, with appropriate swathing strategies for each category. Carefully assess each field and note which scenario the majority of the plants falls into.

### **Scenario 1: There is little evidence of frost damage.**

The pods remain mostly green or tan-green, with few, if any, white spots on the outside of the pods. The seeds are mostly intact. Check the colour of the inside of the seeds as well. If the outsides of the seeds are starting to turn, the insides should be yellow or a light lime-green. If seeds are still green on the outside and the insides of the seeds are still watery, the outside seed coats should remain intact and turgid. In these cases, leave the crop to mature until enough seed colour change occurs.

**Scenario 2: There are only white specks on the outside of the pods;** only a few seeds in immature pods are not intact; or only a few seeds in the upper plant parts are prematurely browning. Premature browning occurs when the outside of the seed has been damaged by the frost and the inside of the seed remains dark green. Check the following link for a photo of moderate crop damage, including premature browning of seed vs. normal seed:

<http://www.canola-council.org/production/Frost/frost.html>

In these cases, the fields should be left and monitored on a daily basis to evaluate further crop changes. If no further damage is evident, the remaining crop may continue to fill and mature. If the seeds continue to deteriorate and/or pod integrity declines, begin swathing to conserve seed volume.

**Scenario 3: There is considerable whitening of the outside of the pods on most of the plants.** Check the previous link for a photo of severe crop damage. In this case, the pods will begin to shrink and desiccate rapidly, and swathing should begin immediately using the dew to reduce pod shelling and pod drop to conserve seeds. In all cases, monitoring should be done daily or every other day to evaluate further crop development and conditions, especially if warmer temperatures and sunshine return.

For more information on assessing frost damaged canola refer to the following link:

[http://www.canola-council.org/PDF/sept20\\_canola\\_fact\\_sheet\\_r3.pdf](http://www.canola-council.org/PDF/sept20_canola_fact_sheet_r3.pdf)

Reports of **late season diseases** continue, including: high levels of **sclerotinia** in untreated fields in parts of Manitoba, northern Saskatchewan, central Alberta and the B.C. Peace; **aster yellows** across all areas; **clubroot** around Edmonton, Leduc and St. Albert, AB; **alternaria** in northwestern SK and north central AB; and **fusarium wilt** and **blackleg** in south central MB. Fields that received hail damage appear to be more prone to secondary disease development. Although there is nothing that can be done at this point in the season, records of disease incidence can assist in rotation and other management decisions for next year.

### **Insects reported this week include:**

*Bertha armyworms* remain a concern in parts of western Manitoba and across many areas of Saskatchewan.

*Diamondback larvae*

continue to be reported in many parts of SK as well as parts of south central Alberta including Rumsey and Torrington.

### *Flea beetles*

have been reported in parts of southern MB, southern and western SK and southern AB. Crops still left standing in these regions should be closely watched as flea beetle pressure is likely to increase as the remaining fields (food sources) are swathed.

### *Cabbage seedpod weevil*

numbers (second generation) are increasing in southern AB. Again, fields left standing are at most risk and should be monitored closely and frequently.

For more information on later season insects and their control, refer to a previous week's Canola Watch report at: [http://www.canola-council.org/canola\\_watch\\_report\\_2007\\_15.html](http://www.canola-council.org/canola_watch_report_2007_15.html)

### **Adjust thresholds**

when many pests are present. Feeding damage by more than one insect pest at the same time can create more stress on plants. While neither pest may trigger an economic threshold on its own, the combined damage could be reducing yields faster. In this case, remember to adjust economic thresholds to account for the increased damage. A good rule of thumb for adjusting thresholds when two pests are present in significant populations is to reduce the threshold for each pest by 25%.

Before considering any further applications of pesticides, **allow for the required pre-harvest interval** for any products being considered. Remember that pre-harvest interval refers to the time from application to when the crop is cut (straight cut or swathed). Ensure the appropriate pre-harvest interval is followed to eliminate chances of excess residues appearing in the harvested seed and damaging markets. Refer to the following links for information on pre-harvest intervals for some common pesticides and a description of the importance of following pre-harvest intervals: [http://www.canola-council.org/pre\\_harvest.html](http://www.canola-council.org/pre_harvest.html)

During fall scouting for proper swath timing and late insect scouting, watch for abnormal areas that have wilted or for **prematurely ripening plants**

within canola stands that are otherwise healthy. Post swathing (within approximately 3 days after swathing) is another ideal time for disease scouting. Prematurely ripening areas may be indicators of diseases that restrict water and nutrient uptake by plants. It is important to accurately identify what is causing the damage and properly document the information for future reference. Identification of clubroot will allow growers to take steps to limit soil (and associated spore) movement to other fields through equipment sanitation. Fields with alternaria will be poor candidates for delayed swathing and should not be straight combined as pods will be prone to shattering.

The hot and dry weather earlier this summer has caused purpling and premature plant colour change in many canola fields. This is a relatively normal response to stress and growers need to **ensure that seed colour change** is occurring when they **assess the proper time to swath**. The colour of mature plants and pods will vary among varieties. Some will appear ripe on the outside before the seeds are mature, so avoid using plant colour as a gauge to proper timing. Open up pods on the main stem and look at the colour of the seeds to accurately assess swathing timing.

Recent research indicates **the optimum stage to swath for both yield and quality is up to 60% seed colour change**. This enables many growers to start swathing at 30% to 40% seed colour change without sacrificing significant yield or quality. It widens the "swathing days" window for all growers, including those with large canola acreages. When conditions are hot and dry, avoid swathing. Swath during cool evening hours, at night or early in the morning to allow plants to dry down at a slower rate. This reduces the chance of green seed.

When assessing seed colour, also check seed firmness. Under cool conditions, seeds near the top of the plant may continue to fill and become firm before the lower seeds begin to turn colour. Also, be conscious of disease-infected or hail-damaged fields and do not let the premature ripening of the diseased or damaged plants influence the time of swathing. Realize that the bulk of the yield is likely still coming from the healthy plants. A better strategy than swathing early to capture more yield is to swath during dew periods to prevent shattering of the damaged plants. To learn more about proper field assessment, refer to the revised Canola Council publication "Canola Time of Swathing Guide" or visit the Canola Council website: [http://www.canola-council.org/pub\\_swathing.html](http://www.canola-council.org/pub_swathing.html)

**There continue to be many questions regarding swathing timing for canola fields** with variable growth caused by uneven emergence or stress from early season flooding. Growers should assess where the majority of their yield will

come from and manage accordingly. If the majority of the field is still green, swathing should start when adequate seed colour change occurs in these areas. In fields where green and mature areas are more equal in size, be sure that seeds in the green areas are firm and no longer translucent. Delay swathing as long as possible to allow for seed colour change to start in the green areas. To minimize losses in the ripe areas, consider swathing in the evening or early morning.

Growers **considering early swathing in anticipation of frost to avoid or reduce green seed levels** need to remember that swathing prior to 15-20% seed colour change will likely reduce some yield potential. Also, canola has to dry down sufficiently to reduce freezing damage and it may need to be swathed for several days before this stage is reached, especially if conditions are cool and damp.

With swathing and harvest of other crops approaching, consider a valuable weed control tool to set up for next year's canola crop--**pre-harvest glyphosate**.

It's the most consistent and effective treatment for many perennial weeds, providing an effective and economical alternative to in-crop applications. In early fall, perennial weeds are moving nutrients down into roots and rhizomes to prepare for winter. This is when they are most vulnerable to herbicide translocation to the roots and better control is possible. Keep in mind that generally the use of pre-harvest glyphosate on crops grown for seed should be avoided.

Growers who have decided to straight combine some of their canola may also be considering **pre-harvest weed control or desiccation**. If a Roundup Ready canola variety has been grown, a pre-harvest glyphosate application will assist in some dry down of green weeds and offer perennial weed control, but it will not dry down the crop. For other types of canola, it will be even more critical not to apply the product too early. Apply when the crop has 30% or less seed moisture content. At this stage, the pods are green to yellow and most seeds have turned from green to yellow or brown. Wait three full days (72 hours) after application before cutting to allow thorough translocation of the herbicide to ensure extended long-term weed control. If applying any pre-harvest chemicals prior to harvest with ground rig sprayers, the use of crop dividers can reduce the amount of crop loss due to trampling and shattering. In addition, traveling back and forth in the direction of prevailing crop lean will further reduce losses. For a faster acting desiccant like Reglone, it is even more important to delay application to allow seeds to reach physiological maturity. The recommended stage is when 60-75% of seed has turned brown.

There are more **growers considering straight cutting** their canola this year. To be successful, consider the following factors:

### **Crop Canopy**

– The crop should be well knitted and slightly lodged to reduce the chance of pod shelling and pod drop. Remember that pod integrity (including petiole strength which influences pod drop) can be affected by frost and drought.

### **Disease**

– The crop should be relatively free from diseases including blackleg, fusarium wilt, sclerotinia and alternaria. These diseases can cause premature ripening, which can in turn cause pod shattering.

### **Hail**

- Crops affected by hail are poor candidates for straight cutting due to the probability of greater disease infection through damaged tissue and reduced pod integrity from physical damage. Also, any late season hail often causes greater levels of damage to standing crops than swathed crops.

### **Straight cutting**

has been successfully done with all types of headers, but most consistent success has come from the use of flex headers or rigid headers with extensions such as the Biso header attachment. Draper headers can work well also, but take care with the transition areas from the drapers to the feeder house, as gaps in these areas can allow for seed loss to occur. With any headers, adjust the reel as far back as possible, so that any seed shattered by the reel has a chance of being recovered by the table below. Adjust reel speed to match ground speed and keep the reel as high as possible to reduce the chances of shattering seed. Combine as soon as crop condition will allow. This will reduce the time the crop is prone to damage in the field. As a result the crop may be tough or damp, especially if no preharvest glyphosate or desiccant was used. This will likely require more threshing power as well as increase the moisture content of the seed. Ensure that adequate aeration or drying facilities are available to condition the crop properly for storage.

There were more reports of **wind blown swaths**

this week. Many of the worst affected fields were swathed at right angles to prevailing winds. Growers with fields still to swath are encouraged to **swath their fields parallel to prevailing winds** to reduce the risk of wind blown swaths and resulting crop loss from shelling.

**Cut as high as possible (just below the lowest pods) and consider using a swath roller** to help anchor the swath into the stubble.

At this time of the year, as growers prepare bins for storage, it is important to note that oilseed crops including canola can absorb malathion from bin surfaces, and the resulting residues have been found in crop delivered to elevators. Therefore, **DO NOT use malathion to treat bins destined to store canola from the upcoming harvest**. Refer to the following link for further information: [http://www.canola-council.org/pesticide\\_link2.html](http://www.canola-council.org/pesticide_link2.html)

For those growers combining canola during warm temperatures, **canola storage can also be a concern even at seed moisture levels of 8% or lower**. This can be compounded by the presence of insects such as grasshoppers and ladybugs in the grain. Be aware that canola binned at high temperatures may be susceptible to heating and spoilage even though it may test dry, particularly if it contains green material such as weed seeds, chaff or insects. **Use aeration to bring down the temperature of the binned canola**. For more information on safe storage and conditioning canola, check the following link: [http://www.canola-council.org/media\\_aug2306.html](http://www.canola-council.org/media_aug2306.html)

Direct questions regarding this report to John Mayko, Senior Agronomy Specialist, Parkland West (West Central AB), with the Canola Council of Canada at [maykoj@canola-council.org](mailto:maykoj@canola-council.org) ph/fax: 780-764-2593.

Direct specific questions regarding regional issues to one of the following Canola Council of Canada agronomy specialists or provincial oilseed specialists:

Derwyn Hammond, Agronomy Specialist, Manitoba, [hammondd@canola-council.org](mailto:hammondd@canola-council.org), 204-729-9011

Arvel Lawson, Manitoba Agriculture, Food & Rural Initiatives, [Arvel.Lawson@gov.mb.ca](mailto:Arvel.Lawson@gov.mb.ca), 204-745-0340

David Vanthuyne, Agronomy Specialist, Eastern Saskatchewan, [vanthuyd@canola-council.org](mailto:vanthuyd@canola-council.org), 306-946-3588

Jim Bessel, Senior Agronomy Specialist, North-central/eastern Saskatchewan, [besselj@canola-council.org](mailto:besselj@canola-council.org), 306-373-6771

Penny Pearse/Scott Hartley, Saskatchewan Agriculture, Food & Rural Revitalization, [ppearse@agr.gov.sk.ca](mailto:ppearse@agr.gov.sk.ca) / [shartley@agr.gov.sk.ca](mailto:shartley@agr.gov.sk.ca), 306-787-4671 / 306-787-4669

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Matthew Stanford, Agronomy Specialist, Chinook (Southern AB & SW SK), [stanfordm@canola-council.org](mailto:stanfordm@canola-council.org), 403-758-6660

Anne Vos, Acting Agronomy Specialist, Peace Region, [av@summit-ag.com](mailto:av@summit-ag.com), 780-835-4632

Murray Hartman, Alberta Agriculture, Food & Rural Development, [murray.hartman@gov.ab.ca](mailto:murray.hartman@gov.ab.ca), 403-782-8024

Kerry Clark, BC Ministry of Agriculture and Lands, [Kerry.Clark@gov.bc.ca](mailto:Kerry.Clark@gov.bc.ca), 250-784-2559

*The Canola Watch Report provides just-in-time information on canola production to growers and industry.*

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# Canola Watch Reports

## 2007 Canola Watch Reports

#18 Western Canada – August 29, 2007

In this issue:

[Harvest progress slowed by cooler weather](#)  
[Frost may have damaged some canola crops](#)  
[Wait a few days to assess frost damage](#)  
[Late season diseases showing up](#)  
[Growers asked to report new blackleg strains](#)  
[Scout often to check for crop disease](#)  
[Assess seed colour change before swathing](#)  
[Avoid swathing when seeds are translucent and watery](#)  
[Swathing early to avoid frost?](#)  
[Assess crop conditions before deciding to straight cut](#)  
[Straight cutting tips](#)  
[Reduce risk of wind blown swaths](#)  
[Fungus feeders found in freshly harvested canola](#)  
[Use diatomaceous earth products correctly](#)  
[Keep malathion far away from canola bins](#)  
[Keep stored canola cool and dry](#)

*The Alberta Canola Producers Commission (ACPC) has developed an Alberta focused version of this report. Visit the ACPC website at: <http://www.canola.ab.ca>*

### **Harvest is progressing slowly in many areas**

due to the generally cool weather and precipitation of this past week. Swathing is just getting started in parts of west-central Alberta and the Peace region, whereas combining is up to 60% done in parts of central and eastern Manitoba. Cool weather continues to delay maturity and seed colour change in standing crops and rain delays continue to limit combining progress in many areas.

Most regions received some moisture and a continuation of cooler temperatures last week, with rainfall amounts ranging from a trace to over 60 mm. Hail was reported in some areas of central and eastern Manitoba as well as across many areas of western and east-central Saskatchewan.

An overview of prairie vegetation conditions is available at (use the “start the prairies application” button on the left hand side): [http://www26.statcan.ca/ccap/ccaphome\\_en.jsp](http://www26.statcan.ca/ccap/ccaphome_en.jsp)

The latest crop report from Manitoba Agriculture, Food & Rural Initiatives is available at:  
<http://web2.gov.mb.ca/agriculture/mwcr/index.php>

The latest crop report from Saskatchewan Agriculture, Food & Rural Revitalization is available at:

[http://www.agr.gov.sk.ca/docs/reports/crop\\_report/crprpt070825.asp](http://www.agr.gov.sk.ca/docs/reports/crop_report/crprpt070825.asp)

The most recent crop report from Alberta Agriculture and Food is available at:

<http://www.gov.ab.ca/acn/200708/219388E83E90E-E64B-1ADF-29551428876161F9.html>

For current maps of moisture conditions from PFRA, check the following links for precipitation since September 1 and April 1 respectively:

[http://www.agr.gc.ca/pfra/drought/prpay07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpay07_e.htm)

[http://www.agr.gc.ca/pfra/drought/prpgs07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpgs07_e.htm)

Additional moisture information for Alberta is available from Alberta Environment at:

<http://www3.gov.ab.ca/env/water/WS/data/precipmaps/weekly.pdf>

### **Frost was reported this past week**

in many areas of western Saskatchewan including Meadow Lake, Leask, Battleford, Biggar and Herschel, as well as central Alberta and the Peace region. Although the frost damage was light in many areas, some low lying areas likely experienced more damage. Frost damage evidence was reported from the Quill Lake region of Saskatchewan which experienced a frost about two weeks ago.

**Wait a few days to accurately determine frost damage.** To determine when to swath frost damaged canola, check the extent of damage 2-3 days after the frost. The condition of frost affected areas will likely fall into one of three main categories, with appropriate swathing strategies for each category. Carefully assess each field and note which scenario the majority of the plants falls into.

### **Scenario 1: There is little evidence of frost damage.**

The pods remain mostly green or tan-green, with few, if any, white spots on the outside of the pods. The seeds are mostly intact. Check the colour of the inside of the seeds as well. If the outsides of the seeds are turning brown, the insides should be yellow or a light lime-green. If seeds are still green on the outside and the insides of the seeds are still watery, the outside seed coats should remain intact and turgid. In these cases, leave the crop to mature until enough seed colour change occurs.

**Scenario 2: There are only white specks on the outside of the pods;** only a few seeds in immature pods are not intact; or only a few seeds in the upper plant parts are prematurely browning. Premature browning occurs when the outside of the seed has been damaged by the frost and the inside of the seed remains dark green. Check the following link for a photo of moderate crop damage, including premature browning of seed vs. normal seed:

<http://www.canola-council.org/production/Frost/frost.html>

In these cases, the fields should be left and monitored on a daily basis to evaluate further crop changes. If no further damage is evident, the remaining crop may continue to fill and mature. If the seeds continue to deteriorate and/or pod integrity declines, begin swathing to conserve seed volume.

**Scenario 3: There is considerable whitening of the outside of the pods on most of the plants.** Check the previous link for a photo of severe crop damage. In this case, the pods will begin to shrink and desiccate rapidly, and swathing should begin immediately using the dew to reduce pod shelling and pod drop to conserve seeds. In all cases, monitoring should be done daily or every other day to evaluate further crop development and conditions, especially if warmer temperatures and sunshine return.

For more information on assessing frost damaged canola refer to the following links:

[http://www.canola-council.org/PDF/sept20\\_canola\\_fact\\_sheet\\_r3.pdf](http://www.canola-council.org/PDF/sept20_canola_fact_sheet_r3.pdf)

[http://www.agr.gov.sk.ca/docs/production/frost\\_greenseed.asp](http://www.agr.gov.sk.ca/docs/production/frost_greenseed.asp)

Reports of **late season diseases** continue, including: high levels of **sclerotinia** in untreated fields in parts of Manitoba, northern Saskatchewan, central Alberta and the B.C. Peace; **aster yellows** across all areas; **clubroot** around Edmonton, Leduc and St. Albert, AB; **alternaria** in northwestern SK and north central AB; and **fusarium wilt** and **blackleg** in south central MB. Fields that received hail damage appear to be more prone to secondary disease development. Although there is nothing that can be done at this point in the season, records of disease incidence can assist in rotation and other management decisions for next year.

### **To keep track of new strains of blackleg,**

growers who notice elevated blackleg levels in MR and R rated varieties are encouraged to collect samples and have them tested to determine what strain is present. Interested growers should e-mail Dr. Dilantha Fernando at [fernando@cc.umanitoba.ca](mailto:fernando@cc.umanitoba.ca) for sampling and shipping instructions.

During fall scouting for proper swath timing, watch for abnormal areas that have wilted or for **prematurely ripening**

## plants

within canola stands that are otherwise healthy. Post swathing (within approximately 3 days after swathing) is another ideal time for disease scouting. Prematurely ripening areas may be indicators of diseases that restrict water and nutrient uptake by plants. It is important to accurately identify what is causing the damage and properly document the information for future reference. Identification of clubroot will allow growers to take steps to limit soil (and associated spore) movement to other fields through equipment sanitation. Fields with alternaria will be poor candidates for delayed swathing and should not be straight combined as pods will be prone to shattering.

The hot and dry weather earlier this summer has caused purpling and premature plant colour change in many canola fields. This is a relatively normal response to stress and growers need to **ensure that seed colour change** is occurring when they **assess the proper time to swath**. The colour of mature plants and pods will vary among varieties. Some will appear ripe on the outside before the seeds are mature, so avoid using plant colour as a gauge to proper timing. Open up pods on the main stem and look at the colour of the seeds to accurately assess swathing timing.

When assessing seed colour, also check seed firmness. Under cool conditions, seeds near the top of the plant may continue to fill and become firm before the lower seeds begin to turn colour. **Avoid swathing when a significant portion of the seed in the top pods and side branches remain translucent and watery**. Also, be conscious of disease-infected or hail-damaged fields and do not let the premature ripening of the diseased or damaged plants influence the time of swathing. Realize that the bulk of the yield is likely still coming from the healthy plants. A better strategy than swathing early to capture more yield is to swath during dew periods to prevent shattering of the damaged plants. To learn more about proper field assessment, refer to the revised Canola Council publication "Canola Time of Swathing Guide" or visit the Canola Council website: [http://www.canola-council.org/pub\\_swathing.html](http://www.canola-council.org/pub_swathing.html)

In normal years, the optimum stage to swath for both yield and quality is up to 60% seed colour change on the main stem. However, as the season progresses there are an increasing number of reports of crops that were planted early where the seeds are all firm and intact for a week or longer, but little to no seed colour change has taken place. **If the short-term weather forecast remains cool and/or cloudy with a high risk of frost then it may be better to begin swathing these fields as early as 10% seed colour change. The risk of yield loss from early swathing will be reduced if all the seed is firm, but the risk of grade loss from frost damage if the crop is left standing is relatively high.**

In many of these cases, the crops have been in the ground for up to 120 days and the seeds may be physiologically mature, although outside seed colour remains green. Growers considering early swathing to avoid or reduce green seed levels from frost need to remember that **swathing prior to 15-20% seed colour change will likely lose some yield potential**. Also, the canola has to dry down sufficiently to reduce freezing damage and the canola may need to be swathed for several days before this stage is reached, especially if conditions are cool and damp.

Remember that under cool and wet conditions, swath curing will take longer than usual. Expect to have the crop in the swath for at least three weeks to allow for curing and as much de-greening as possible before combining. It is important to utilize swath rollers to anchor the swaths into the remaining stubble in order to limit the potential for wind damage to the swaths. However, growers are encouraged to avoid excessive packing from swath rollers, allowing as much air movement through the swath as possible to facilitate curing and limit disease spread in the swath.

## More growers are considering straight cutting

their canola this year. To be successful, consider the following factors:

### Crop Canopy

– The crop should be well knitted and slightly lodged to reduce the chance of pod shelling and pod drop. Remember that pod integrity (including petiole strength which influences pod drop) can be affected by frost and drought.

### Disease

– The crop should be relatively free from diseases including blackleg, fusarium wilt, sclerotinia and alternaria. These diseases can cause premature ripening, which can in turn cause pod shattering.

### Hail

- Crops affected by hail are poor candidates for straight cutting due to the probability of greater disease infection through damaged tissue and reduced pod integrity from physical damage. Also, any late season hail often causes greater

levels of damage to standing crops than swathed crops.

### **Straight cutting**

has been successfully done with all types of headers, but most consistent success has come from the use of flex headers or rigid headers with extensions such as the Biso header attachment. Draper headers can also work well, but take care with the transition areas from the drapers to the feeder house, as gaps in these areas can allow for seed loss to occur. With any headers, adjust the reel as far back as possible, so that any seed shattered by the reel has a chance of being recovered by the table below. Adjust reel speed to match ground speed and keep the reel as high as possible to reduce the chances of shattering seed. Combine as soon as crop condition will allow. This will reduce the time the crop is prone to damage in the field. As a result the crop may be tough or damp, especially if no preharvest glyphosate or desiccant was used. This will likely require more threshing power as well as increase the moisture content of the seed. Ensure that adequate aeration or drying facilities are available to condition the crop properly for storage.

There were more reports of **wind blown swaths**

this week. Usually the worst affected fields were swathed at right angles to prevailing winds. Growers with fields still to swath are encouraged to **swath their fields parallel to prevailing winds** to reduce the risk of wind blown swaths and resulting crop loss from shelling.

**Cut as high as possible (just below the lowest pods) and consider using a swath roller** to help anchor the swath into the stubble.

There are reports from parts of central and western Saskatchewan regarding **insects in newly harvested canola**.

Although there were concerns that these insects were rusty grain beetles, initial reports indicate that these insects are fungus feeders not rusty grain beetle. These beetles feed on fungus that grows on crop residue or damp seeds. Fungus feeding insects and mites cannot survive in dry grain. Chemical control is not necessary for fungus feeding pests in stored grain. Do not apply malathion or other chemical insecticides to your canola. Conditioning grain to ensure that it is dry and cool should be all that is needed to control such pests. Information to help identify and control insect pests of stored grain can be found at the following links: [http://res2.agr.ca/winnipeg/storage/pages/princ\\_e.htm](http://res2.agr.ca/winnipeg/storage/pages/princ_e.htm)

<http://www.gov.mb.ca/agriculture/crops/cropproduction/faa06s00.html>

There have been some questions from growers wondering about mixing **diatomaceous earth products** such as "Protect-It" or "Insecto" into their canola for insect control. These products **should only be used to treat bin floors and walls prior to storing grain, as they are not registered for use on stored canola. Proper conditioning of the grain to "dry" moisture content and cool temperatures should be all that is required to control these fungus feeders.**

At this time of the year, as growers prepare bins for storage, it is important to note that oilseed crops including canola can absorb malathion from bin surfaces, and the resulting residues have been found in crop delivered to elevators. Therefore, **Do NOT use malathion to treat bins destined to store canola from the upcoming harvest.** Refer to the following link for further information: [http://www.canola-council.org/pesticide\\_link2.html](http://www.canola-council.org/pesticide_link2.html)

For those growers combining canola during warm temperatures, **canola storage can also be a concern even at seed moisture levels of 8% or lower.** This can be compounded by the presence of insects such as grasshoppers and ladybugs in the grain. Be aware that canola binned at high temperatures may be susceptible to heating and spoilage even though it may test dry, particularly if it contains green material such as weed seeds, chaff or insects. **Use aeration to bring down the temperature of the binned canola.** For more information on safe storage and conditioning canola, check the following link: [http://www.canola-council.org/media\\_aug2306.html](http://www.canola-council.org/media_aug2306.html).

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# Canola Watch Reports

## 2007 Canola Watch Reports

#19 Western Canada – September 6, 2007

### Final Report for 2007 Season

In this issue:

(click the bookmark links below to move to specific sections of this report)

[Harvest progress most variable in years](#)  
[Frost may have damaged some canola crops](#)  
[Late season diseases showing up](#)  
[Growers asked to report new blackleg strains](#)  
[Assess seed colour change before swathing](#)  
[Avoid swathing when seeds are translucent and watery](#)  
[Let canola cure in the swath longer](#)  
[Watch for stubble greening after swathing](#)  
[Reduce risk of wind blown swaths](#)  
[Keep malathion far away from canola bins](#)  
[Use diatomaceous earth products correctly](#)  
[Keep stored canola cool and dry](#)  
[Post harvest weed control may be an option this year](#)  
[Fall soil testing is useful management tool](#)  
[Final Canola Watch report for the 2007 season](#)  
[Watch for CCA Exam](#)

The Alberta Canola Producers Commission (ACPC) has developed an Alberta focused version of this report. Visit the ACPC website at: <http://www.canola.ab.ca>

**Harvest progress differs greatly among regions with the widest variation in recent years.** Many areas of central and eastern Manitoba are finishing combining while areas of west-central Alberta and the Peace region are only about 20% swathed. Showers and cooler weather have tended to delay maturity and subsequent harvest. Reports of smaller than normal seed size have been widespread across all areas where significant combining has occurred.

An overview of prairie vegetation conditions is available at (use the “start the prairies application” button on the left hand side): [http://www26.statcan.ca/ccap/ccaphome\\_en.jsp](http://www26.statcan.ca/ccap/ccaphome_en.jsp)

The latest crop report from Manitoba Agriculture, Food & Rural Initiatives is available at:  
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The latest crop report from Saskatchewan Agriculture, Food & Rural Revitalization is available at:  
[http://www.agr.gov.sk.ca/docs/reports/crop\\_report/crprpt070903.asp](http://www.agr.gov.sk.ca/docs/reports/crop_report/crprpt070903.asp)

For current maps of moisture conditions from PFRA, check the following links for precipitation since September 1, 2006 and April 1, 2007 respectively:

[http://www.agr.gc.ca/pfra/drought/prpay07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpay07_e.htm)

[http://www.agr.gc.ca/pfra/drought/prpgs07\\_e.htm](http://www.agr.gc.ca/pfra/drought/prpgs07_e.htm)

Additional moisture information for Alberta is available from Alberta Environment at:  
<http://www3.gov.ab.ca/env/water/WS/data/precipmaps/weekly.pdf>

**Frost was reported this past week**

in parts of northwestern Saskatchewan including Spiritwood, Medstead, Rapid View, Pierceland and Unity. Although the frost damage was light in many areas, some low lying areas likely experienced more damage.

**Wait a few days to accurately determine frost damage and decide on an appropriate course of action.** For more information on assessing frost damaged canola refer to the following links:

[http://www.canola-council.org/PDF/sept20\\_canola\\_fact\\_sheet\\_r3.pdf](http://www.canola-council.org/PDF/sept20_canola_fact_sheet_r3.pdf)

[http://www.agr.gov.sk.ca/docs/production/frost\\_greenseed.asp](http://www.agr.gov.sk.ca/docs/production/frost_greenseed.asp)

Reports of **late season diseases** continue, including: high levels of **sclerotinia** in untreated fields in parts of Manitoba, northern Saskatchewan, central Alberta and the B.C. Peace; **aster yellows** across all areas; **clubroot** around Edmonton, Leduc, St. Albert and Westlock, AB; **alternaria** in northwestern SK and north central AB; and **fusarium wilt** and **blackleg**

in south central MB. Fields that received hail damage appear to be more prone to secondary disease development. Although there is nothing that can be done at this point in the season, records of disease incidence can assist in rotation and other management decisions for next year.

**To keep track of new strains of blackleg,**

growers who notice elevated blackleg levels in MR and R rated varieties are encouraged to collect samples and have them tested to determine what strain is present. Interested growers should e-mail Dr. Dilantha Fernando at [fernando@cc.umanitoba.ca](mailto:fernando@cc.umanitoba.ca) for sampling and shipping instructions.

During fall scouting for proper swath timing, watch for abnormal areas that have wilted or for **prematurely ripening plants**

within canola stands that are otherwise healthy. Post-swathing (within approximately 3 days after swathing) is another ideal time for disease scouting. Prematurely ripening areas may be indicators of diseases that restrict water and nutrient uptake by plants. It is important to accurately identify what is causing the damage and properly document the information for future reference. Identification of clubroot will allow growers to take steps to limit soil (and associated spore) movement to other fields through equipment sanitation. Fields with alternaria will be poor candidates for delayed swathing and should not be straight combined as pods will be prone to shattering.

In normal years, the optimum stage to swath for both yield and quality is up to 60% seed colour change on the main stem. However, as the season progresses, there are an increasing number of reports of crops that were planted early where the seeds are all firm and intact for a week or longer, but little to no seed colour change has taken place. **If the short-term weather forecast remains cool and/or cloudy with a high risk of frost then it may be better to begin swathing these fields as early as 10% seed colour change. The risk of yield loss from early swathing will be reduced if all the seed is firm, but the risk of grade loss from frost damage if the crop is left standing is relatively high.**

In many of these cases, the crops have been in the ground for up to 120 days and the seeds may be physiologically mature, although outside seed colour remains green. Growers considering early swathing to avoid or reduce green seed levels from frost need to remember that

**swathing prior to 15-20% seed colour change will likely reduce some yield potential.** Also, the canola has to dry down sufficiently to reduce freezing damage and the canola may need to be swathed for several days before this stage is reached, especially if conditions are cool and damp.

When assessing seed colour, also check seed firmness. Under cool conditions, seeds near the top of the plant may continue to fill and become firm before the lower seeds begin to turn colour. **Avoid swathing when a significant portion of the seed in the top pods and side branches remain translucent and watery.** Also, be conscious of disease-infected or hail-damaged fields and do not let the premature ripening of the diseased or damaged plants influence the time of swathing. Realize that the bulk of the yield is likely still coming from the healthy plants. A better strategy than swathing early to capture more yield is to swath during dew periods to prevent shattering of the damaged plants. To learn more about proper field assessment, refer to the revised Canola Council publication "Canola Time of Swathing Guide" or visit the Canola Council website: [http://www.canola-council.org/pub\\_swathing.html](http://www.canola-council.org/pub_swathing.html)

Remember that under cool and wet conditions, swath curing will take longer than usual. Expect to have the crop in the swath for at least three weeks to allow for curing and as much de-greening as possible before combining. It is important

to utilize swath rollers to anchor the swaths into the remaining stubble in order to limit the potential for wind damage to the swaths. However, growers are encouraged to avoid excessive packing from swath rollers, allowing as much air movement through the swath as possible to facilitate curing and limit disease spread in the swath.

#### **More growers are considering straight cutting**

their canola this year. For further guidelines and tips about straight cutting refer to last week's Canola Watch report at the following link:

[http://www.canola-council.org/canola\\_watch\\_report\\_2007\\_18.html#straight](http://www.canola-council.org/canola_watch_report_2007_18.html#straight)

There have been some reports of **green seed**

in canola (3-8% at 7-14 days after swathing) this past week. Given that we are still early into the harvest season, growers should

**leave their canola in the swath for a longer period of time to allow for more curing, and give rainfall or heavy dews a chance to reactivate the de-greening enzymes within the seed.**

The hot and dry weather of this past season has resulted in **stubble remaining green and in some cases, re-growing after swathing.** In these situations,

**monitor for the presence of any green material that may be mixing with the grain while combining as this material may create a potential hot spot within the bin.** This green material is likely to cause pockets of localized high moisture within the grain mass in storage, so it is important that the grain is adequately conditioned.

For those faced with

**green material growing through the stubble and into the swaths, combine as soon as possible, after the seed has adequately cured.** Although this may not eliminate problems with green and wet plant material mixed with the grain, it can reduce the amount of contamination. **Do not consider using unregistered herbicides to kill this green material** as this will possibly leave residues on the grain, which may endanger some of our markets.

There were more reports of **wind blown swaths**

this week. Usually the worst affected fields were swathed at right angles to prevailing winds. Growers with fields still to swath are encouraged to **swath their fields parallel to prevailing winds** to reduce the risk of wind blown swaths and resulting crop loss from shelling.

**Cut as high as possible (just below the lowest pods) and consider using a swath roller** to help anchor the swath into the stubble.

At this time of the year, as growers prepare bins for storage, it is important to note that oilseed crops including canola can absorb malathion from bin surfaces, and the resulting residues have been found in crop delivered to elevators.

Therefore, **Do NOT use malathion to treat bins destined to store canola from the upcoming harvest.** Refer to the following link for further information: [http://www.canola-council.org/pesticide\\_link2.html](http://www.canola-council.org/pesticide_link2.html)

There have been some questions from growers wondering about mixing **diatomaceous earth products** such as

“Protect-It’ or ‘Insecto’ into their canola for insect control. These products **should only be used to treat bin floors and walls prior to storing grain, as they are not registered for use on stored canola.**

For those growers combining canola during warm temperatures, **canola storage can also be a concern even at seed moisture levels of 8% or lower.** This can be compounded by the presence of insects such as grasshoppers and ladybugs in the grain. Be aware that canola binned at high temperatures may be susceptible to heating and spoilage even though it may test dry, particularly if it contains green material such as weed seeds, chaff or insects. **Use aeration to bring down the temperature of the binned canola.** For more information on safe storage and conditioning canola, check the following link: [http://www.canola-council.org/media\\_aug2306.html](http://www.canola-council.org/media_aug2306.html)

#### **Post-harvest weed control**

may be an option this year due to the early harvest in some areas. Post-harvest weed control will help maximize canola returns next year by controlling hard to kill weeds such as dandelions. Research conducted at the University of Manitoba indicated that superior control of dandelions is achieved with fall herbicide application instead of spring control. Managing weeds after harvest will help limit weed seed populations in the following years. A few tips for maximizing post-harvest weed control are:

- cut stubble high to leave as much plant material as possible,
- spread straw and chaff adequately to leave plants exposed and
- spray when new plant growth is evident or when leaves are present.

**Fall soil testing is a very useful tool** in order to assess required fertility levels for next year. The proper sample time in the fall is after the soil surface temperature drops to less than 7°C. At this temperature, soil processes such as mineralization (breakdown of soil organic matter into plant available nutrients) that cause changes in soil nutrients proceed quite slowly and therefore changes in plant available nutrient levels are normally not great. By sampling in the fall, there is sufficient time to properly process samples, provide test results and recommendations and develop a fertilizer program for this fall or next spring. It allows more time to order fertilizer, to take advantage of typically lower fall fertilizer prices and spread the workload out over two seasons.

**This is the final Canola Watch report for the 2007 season.** We hope you have found these weekly reports informative, interesting and useful. We will email you a survey soon so you can tell us exactly what you think of Canola Watch. We want to do even better next year! The 2007 series is posted on the Canola Council website at [http://www.canola-council.org/watch\\_2007.html](http://www.canola-council.org/watch_2007.html).

To add to the value of Canola Watch reports, the Canola Watch Team will be **developing a follow-up exam for subscribers who are Certified Crop Advisors interested in receiving CCA education credits**. We will be emailing out the notice within approximately one month.

Direct questions regarding this report to John Mayko, Senior Agronomy Specialist, Parkland West (West Central AB), with the Canola Council of Canada at [maykoj@canola-council.org](mailto:maykoj@canola-council.org) ph/fax: 780-764-2593.

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*The Canola Watch Report provides just-in-time information on canola production to growers and industry.*

*Contributors to the Canola Agronomy Network are:*

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