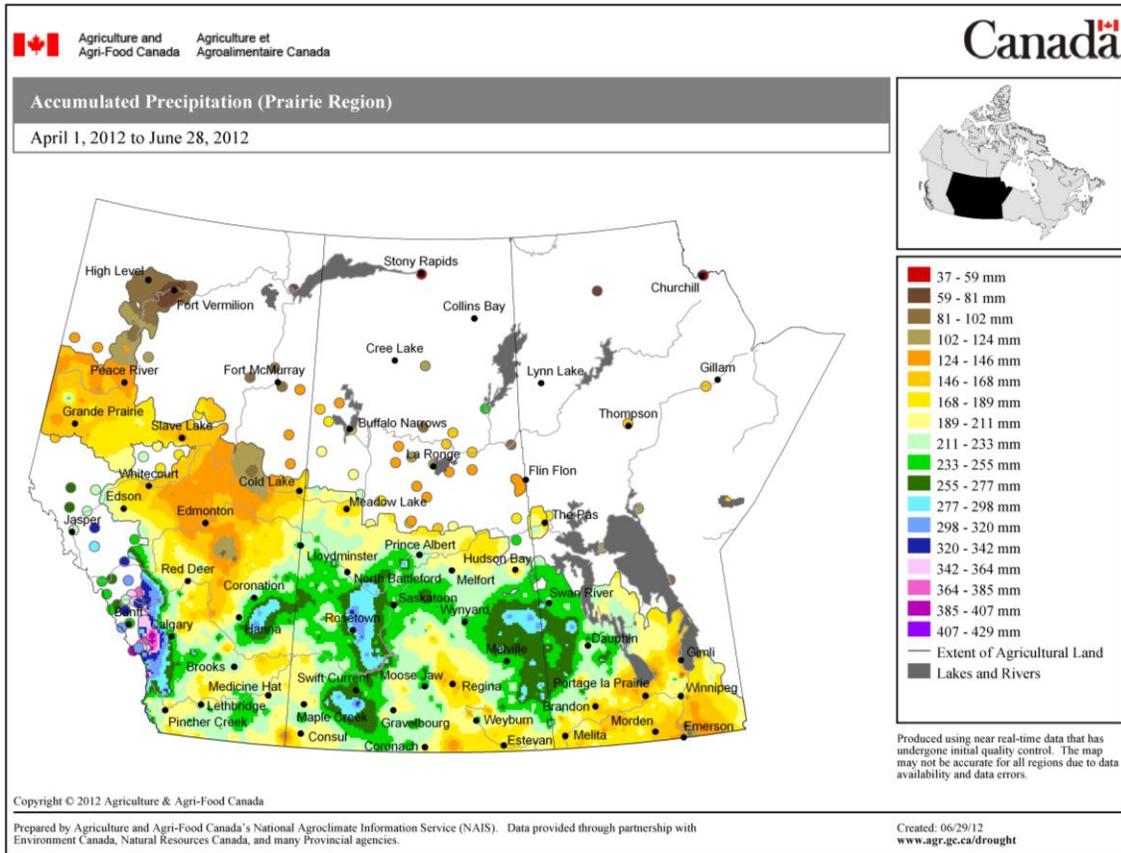


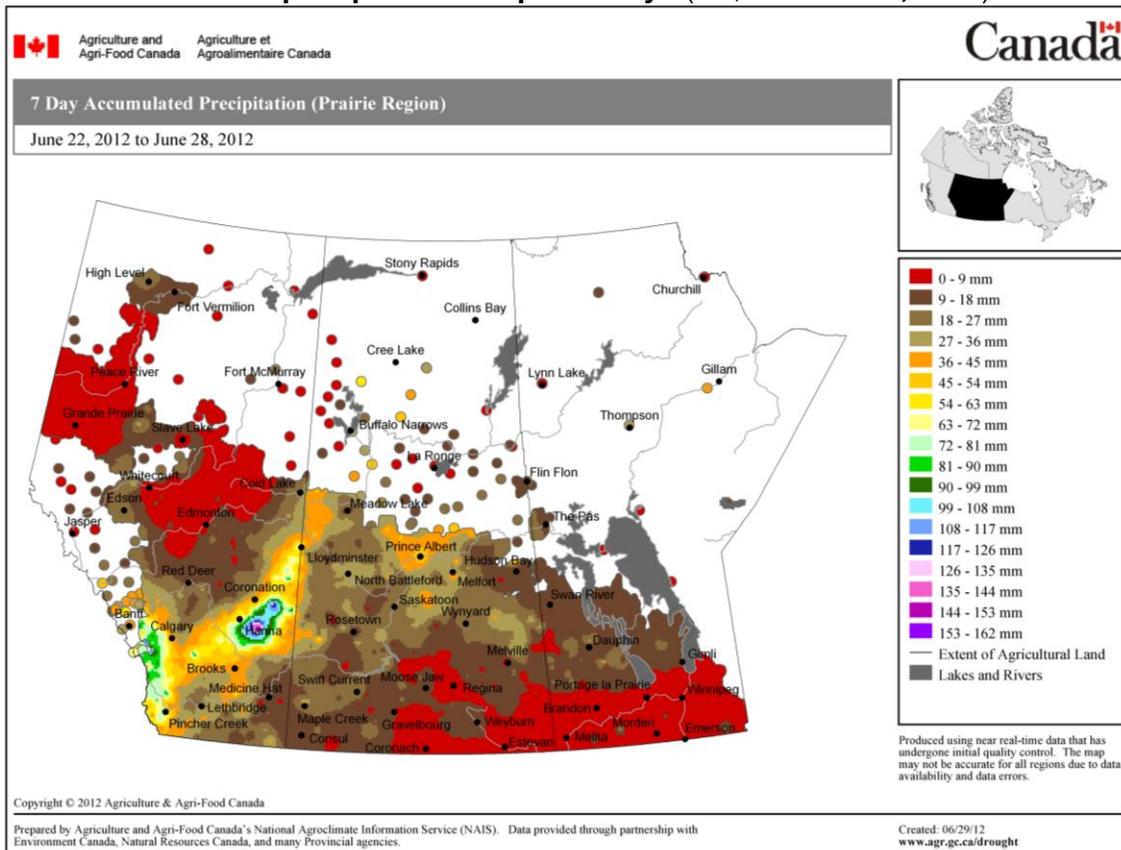
Prairie Pest Monitoring Network Weekly Updates – June 22-29, 2012

Weiss, Giffen, Olfert – AAFC Saskatoon & Otani – AAFC Beaverlodge

1. Weather synopsis – Here is the accumulated precipitation for the growing season (i.e., April 1-June 28, 2012):

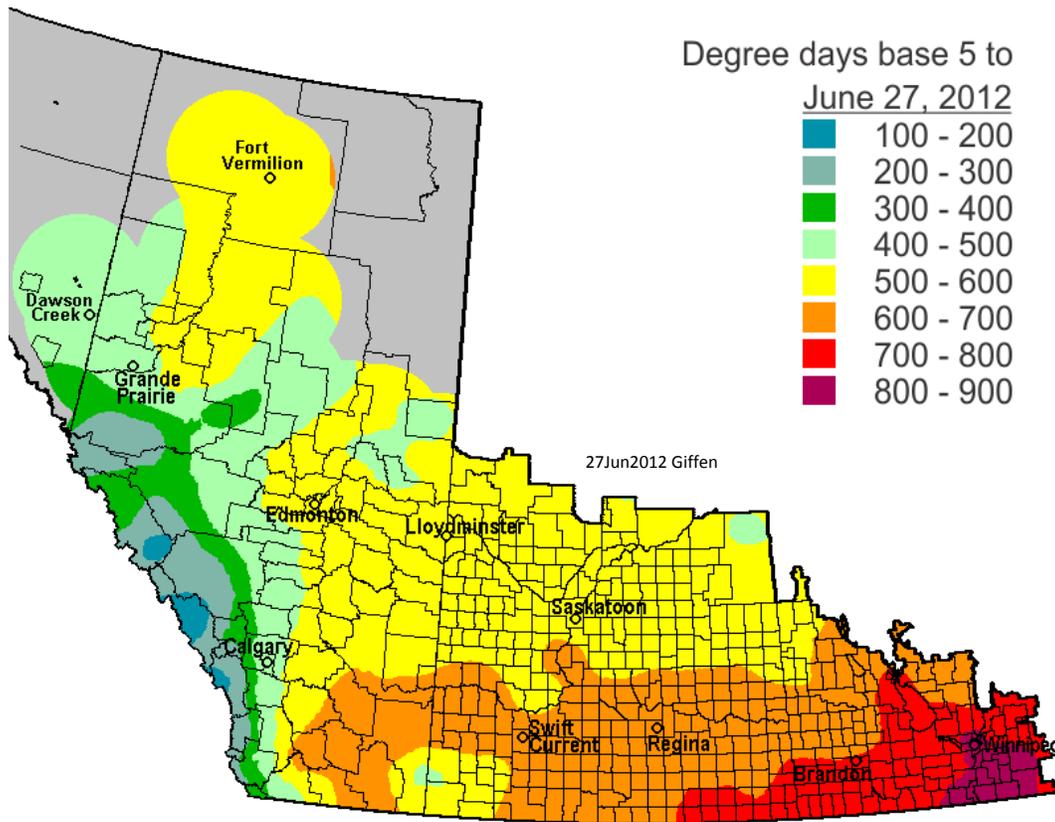


While below is the accumulated precipitation the past 7 days (i.e., June 22-28, 2012):

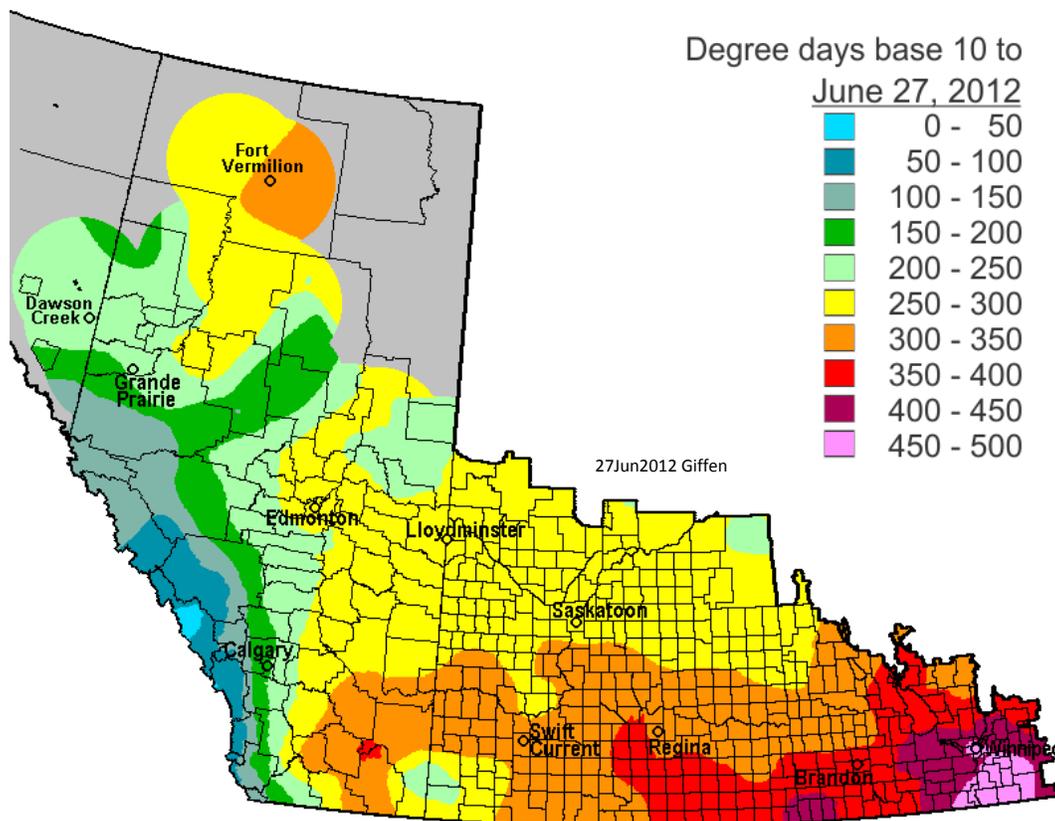


This is an update on the growing season in terms of **heat units**. David Giffen (AAFC-Saskatoon) is now utilizing Agri-Environment Services Branch (AESB) data plus the "Earth Networks Weather Data Feed for AAFC". The additional weather stations bring the total usable reporting sites from 273 to 791 – wow!!

Here are the maps for across the prairies starting with **Degree Days, Base 5°C (April 1 – June 27, 2012)**:



....and for **Degree Days, Base 10°C (April 1 – June 20, 2012)**:



2. Wind trajectories and Diamondback Moth (DBM) – As more reports of DBM larvae occur across the prairies this week, it's worthwhile considering the following excerpt from Manitoba Agriculture's J. Gavloski from the June 29 edition of the [Manitoba Insect and Disease Update](#), "One of the enquiries this week was regarding producers wondering about tank-mixing an insecticide with their fungicide application to get early control on diamondback moth. This is discouraged for several reasons.

Canola can compensate very well for loss of buds and flowers, as long as growing conditions are reasonably good. So unless levels of diamondback moth are extremely high, often it is best to hold on and assess what levels of diamondback moth are present when canola goes into the pod stage. Unless we are having a year where the crop experiences stress, such as drought, it is the pod stage that is most critical to protect from diamondback moth feeding, particularly if larvae start to feed on the pods. The plants don't have the same ability to compensate during pod stage as they might earlier in the growing season.

Another reason to avoid spraying too early for diamondback moth, particularly if levels of larvae are below economic threshold, is because some years parasitoids can become quite effective and result in diamondback moth populations declining. It is best to give this process a chance rather than tank-mix with an insecticide out of convenience. Recall how the diamondback moth population in Manitoba crashed last August because of a parasitoid called *Cotesia*. Heavy rains can also cause large declines in diamondback moth populations, something we may already be seeing in some areas this year.

A third reason to consider only applying insecticides to flowering canola if absolutely necessary is because of pollinators. Although canola is self-compatible to a large extent, insect pollination does increase the yield of canola. Honey bees can travel substantial distances to get nectar and pollen from canola, so by avoiding applying insecticides during flowering you eliminate the risk of bee kills, plus help maximize the yield benefits that bees and some other pollinators (some species of flies, etc.) can provide to canola."

Keep your eyes open for this beneficial wasp below that attacks and parasitizes DBM larvae. The following photos are courtesy of Dr. Lloyd Dossall at the University of Alberta.



Fig. 1. *Diadegma insulare* adult and early instar Diamondback moth larvae on canola leaf (upper left), magnified view of *D. insulare* adult (upper right), and *D. insulare* pupa (N=2) within Diamondback moth pupal silk cocoon adhered to underside of canola leaf (lower left). Photos courtesy of Dr. Lloyd Dossall (University of Alberta).

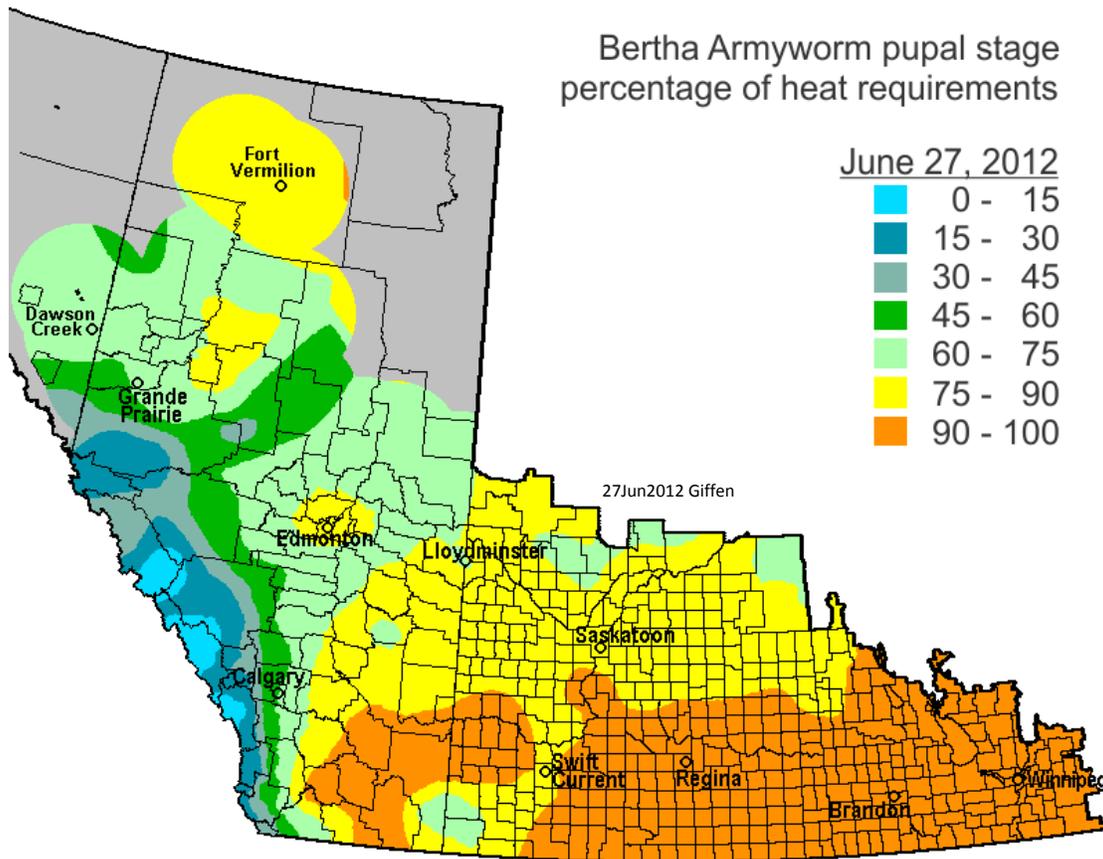
3. Cabbage seedpod weevil (*Ceutorhynchus obstrictus*) – Monitoring for seedpod weevil is critical as canola starts to flower so that means it's sweep-net season! Sites in southern Alberta and southwest Saskatchewan are beginning to report low densities of weevil in fields this week.

More information on Cabbage seedpod weevil biology and pest management, including correct sampling methods, is located [here](#) or you can link to the [Alberta](#), or [Saskatchewan](#) fact sheets. **NEW:** An excellent video for all sweep-net samplers is now available on Alberta Agriculture and Rural Development's [webpage](#). Click on the YouTube video for how-to tips.

For those of you in **Alberta**, here again is the link to [report your sweep-net data](#) for immediate mapping. For those of you in **Saskatchewan**, Agriculture and Agri-Food Canada staff hope to be surveying this week (weather permitting).

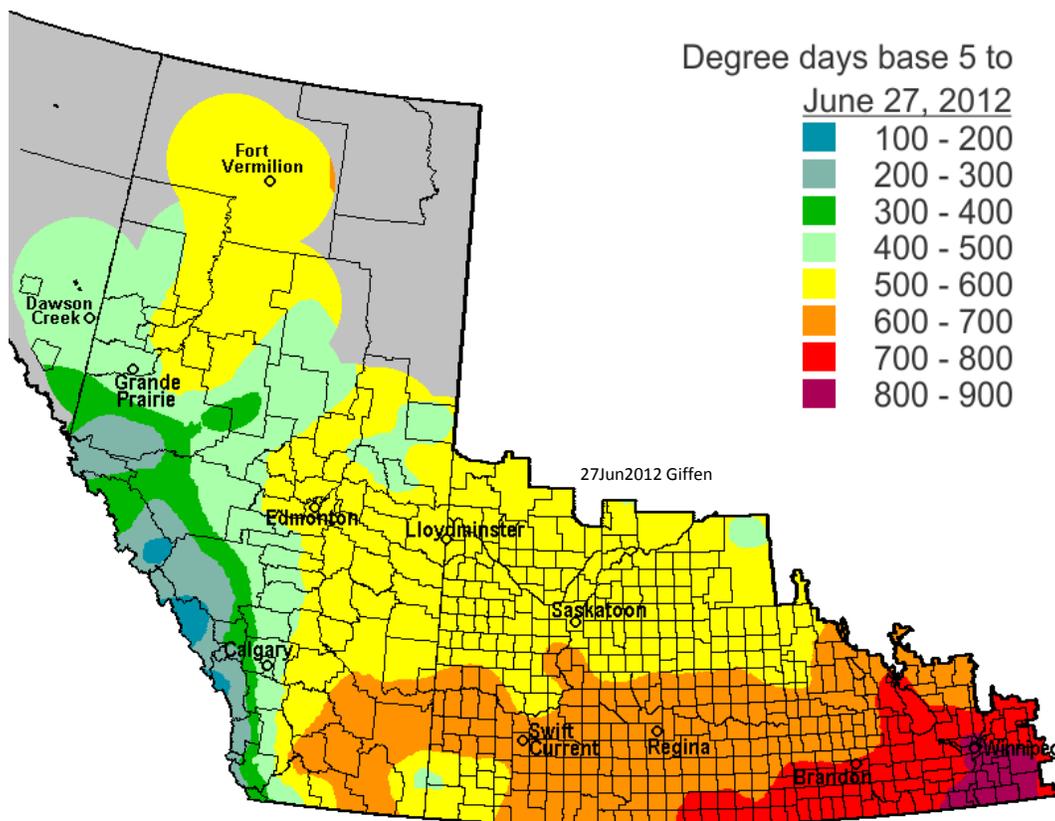
4. Grasshopper (*Melanoplus sanguinipes*) simulation model output – No simulation maps are available this week but the time has come for scouting for nymphs of the main pest species. Biological and monitoring information can be linked by clicking [here](#) or you can access the Manitoba [crops](#) or [forages](#) fact sheets, [Saskatchewan](#), [Alberta](#) or [British Columbia](#) fact sheets.

5. Bertha armyworm (*Mamestra configurata*) –The updated map below indicates the percentage of heat requirements acquired for pupation (e.g., moth emergence occurs at 100% of heat requirements). Areas highlighted in orange and yellow are predicted to collect moths in pheromone traps this week.



Bertha armyworm moths have been spotted in traps in Manitoba, Saskatchewan, and [Alberta](#). More information on Bertha armyworm biology and pest management is located [here](#) or your provincial fact sheet can be link by clicking [Manitoba](#), [Saskatchewan](#), [Alberta](#), or [British Columbia](#).

6. Wheat midge (*Sitodiplosis mosellana*) - Remember that 10%, 50% and 90% emergence of adult wheat midge should occur after **693, 784 and 874** degree-days (base 5°C), respectively. Based on the current map below, **areas marked in red and purple have now accumulated sufficient heat units for midge to pupate and fly.**



When monitoring wheat fields, be particularly watchful for the synchrony between flying midge and anthesis. Additional wheat midge biology and monitoring information can be located by clicking [here](#) or linking to your provincial fact sheet. The most current publication related to wheat midge on the Canadian prairies was published by [Elliott, Olfert, and Hartley](#) in 2011. Also peruse the [Saskatchewan fact sheet](#) for additional information on biology, monitoring, pest management and beneficial species exerting control on wheat midge populations.

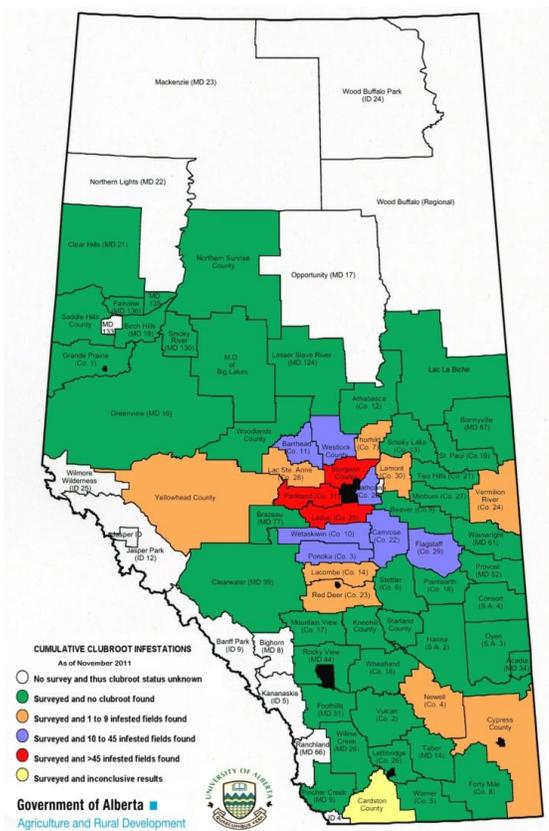
7. Cereal leaf beetle (*Oulema melanopus*) – No update on this pest so far but the most current publication related to cereal leaf beetle on the Canadian prairies was published by [Kher, Dossdall, and Cárcamo](#) in 2011. Additional pest biology and monitoring information can be located by clicking [here](#).

8. Lygus bugs (*Lygus* spp.) – Warm, dry June weather can coincide with *Lygus* occurring in late rosette and bolting canola. Sweep-net monitoring should start for this economically significant pest although be mindful that the economic threshold, for healthy vigorously growing canola, is applied at late flower and early pod stages. Biological and monitoring information can be linked by clicking here or you can access the [Manitoba](#), [Alberta](#) or [British Columbia](#) fact sheets.

9. Clubroot is a significant disease of cole, canola and mustard crops. It is a soil-borne microorganism and can be transferred from affected fields. As more within-field monitoring takes place in canola fields across the prairies, be mindful of this disease when monitoring.

In Alberta – Several fields in the central Alberta area have been identified since 2003. Refer to this map and also link to Alberta Agriculture and Rural Development's fact sheet located [here](#).

In British Columbia – A BC Grain Producers' Association [2011 report](#) indicates soil from the BC Peace was sampled and screened using PCR at the BC Ministry of Agriculture Plant Diagnostic lab and no samples showed evidence of contamination.



According to the Canola Council of Canada's most current clubroot information:

In Saskatchewan - In 2011 two new fields were found to have clubroot infected plants in the Rural Municipalities of Aberdeen and St. Louis. For more information on these findings, click [here](#).

In Manitoba - In 2012, MAFRI has stated that "asymptomatic clubroot" was found in 2011 canola disease survey in two unrelated fields. DNA from *P. brassicae* was found in these random soil samples but further testing failed to produce clubroot symptoms in plants. For more information on this recent finding click [here](#).

10. Previous and current Weekly Updates are posted to the web and can be perused by clicking [Weekly Updates](#).