

Manitoba Crop Pest Update

Issue 10: July 14, 2021

Summary

Insects: Grasshoppers continue to be the biggest insect concern in crops, but levels vary in different regions. Some headlands, pastures and cereal fields were sprayed for grasshoppers. Scouting for aphids in small grain cereals continues.

Diseases: There have not been many disease issues this summer given the hot, dry conditions. However, under these conditions there are specific pest issues that come to light. Such was the case last week when a new case of soybean cyst nematode (SCN) was discovered in a soybean field believed to be suffering from iron deficiency chlorosis. The risk of rusts in cereals remains very low due to lack of development in the Nebraska-Kansas area and few air currents from the south.

Weeds: It's been a challenging year for in-crop weed control, from extremes of temperature to days and days too windy to spray. Weeds that escaped in-crop control are starting to get some size on them and are becoming visible above the crop. Rains have been infrequent but the last few events have caused some weed flushes, and we're seeing lots of smaller weeds below the canopy. We are hearing many complaints of poor weed control, weeds got hardened off due to environmental conditions, especially hot dry weather, which made control more difficult.

Entomology

Nationwide monitoring project for European corn borer:

People are starting to look for European corn borer eggs, larva and feeding damage. Despite its name, European corn borer has a very broad host range. Aside from corn, you can find them in crops such as potatoes, hemp, quinoa, millet, dry beans and many other crops. Little information is available on European corn borer on some of its host crops. A harmonized monitoring protocol has been created, so those monitoring for European corn borer can enter their counts of egg masses, larvae and feeding damage into a free Survey123 app (available for both desktop and mobile devices). This harmonized protocol has been designed to complement protocols that are already in use to make management decisions in order to generate data to compare ECB presence across all of Canada and across host crops. From this, levels of European corn borer on various hosts can be tracked. If you are scouting for



European corn borer, consider using this harmonized protocol and enter your data using the Survey123 app. Feedback on the protocol, and ways it could be improved would be appreciated, as this is the first year for using this. More details on the protocol for monitoring eggs and larvae of European corn borer can be found at:

<https://fieldcropnews.com/2021/06/nationwide-monitoring-pilot-project-for-european-corn-borer/>

At the end of the growing season, maps illustrating the results of the monitoring program will be made available on the Great Lakes and Maritimes Pest Monitoring Network and Prairie Pest Monitoring Network websites, among others. Data will be used to answer questions about the preferred host crops of European corn borer in Canada and its distribution and relative abundance across Canada.

I am also looking for European corn borer eggs for a study on European corn borers. If anyone does notice eggs of European corn borer, please let me know (see contact information for John Gavloski at the end of the update).

Soybean Aphid: The first confirmed sighting of soybean aphid in Manitoba was on July 8th, south of Homewood. Numbers were very low. The agronomist who found them reported they were only discovered because of high amounts of lady beetles.

Grasshoppers in pastures - Thresholds and Management Tips: Regarding economic threshold for grasshopper control in pastures, different studies give slightly different answers but generally about 20 to 30 grasshoppers/m² would be needed for control to be economical. A study in Alberta on grasshopper control on rangelands in southern Alberta suggests “spraying was rarely profitable unless grasshoppers were at very high outbreak levels (>30/m²). (Journal of Range Management. 1993. 458-462).

A study from the U.S. had slightly lower recommendations but indicated “financial justification for treating grasshopper outbreaks depends upon grasshopper density, rangeland productivity, climatic factors, livestock cost and return relationships, and the efficacy of treatment options.” (Journal of Agricultural and Resource Economics. 1992. 56-65).

If the grasshoppers do need to be managed on the pasture, there are several insecticides registered for grasshopper control in pastures. These are listed on page 638 of the Guide to Field Crop Protection:

<https://www.gov.mb.ca/agriculture/crops/guides-and-publications/pubs/insect-2021-guide-crop-protection.pdf>

For baits, Eco Bran is an option and can work well. Foliar sprays include Coragen, Decis/Poleci, Matador/Silencer/Labamba (for unimproved pasture), Sevin, Malathion 85E, Dibrom, and Cygon/Lagon. Coragen is a semi-selective option (kill grasshoppers, but not some other groups of insects, such as bees), has very good residual, but will cost more than some of the other options.

Applying insecticides in strips is an option in pastures. This has been researched on rangelands, where treated and untreated strips were alternated, and about 80-95% control was achieved. This was the most economical method of using insecticides to manage grasshoppers in the study.

The following factsheet has some information on some of our pest and non-pest species of grasshoppers, grasshopper biology, monitoring and management:

<https://www.gov.mb.ca/agriculture/crops/insects/grasshoppers.html>

Grasshopper development: Model simulations were used to estimate grasshopper development as of July 11, 2021. Above normal temperatures have been responsible for advanced development of nymphs across Manitoba. Simulations indicate that 10-50% of the population should be adults. Grasshopper populations across southern Manitoba are predicted to be mostly adults.

Grasshopper development -Percent adults
July 11, 2021

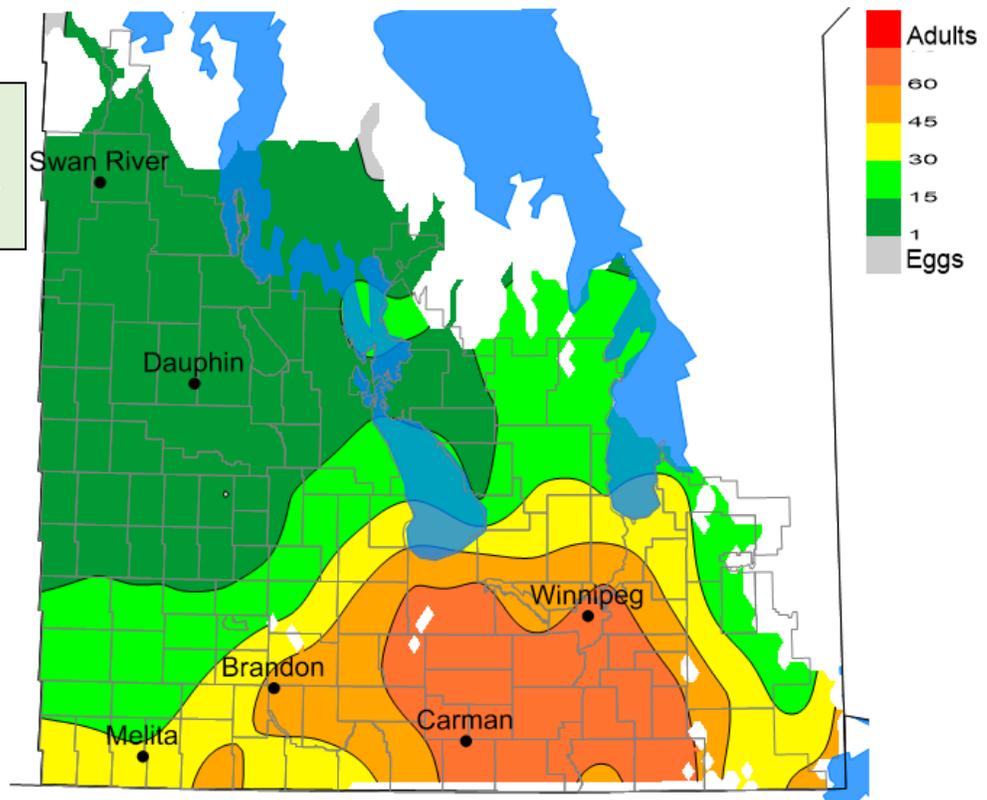


Figure 1. Predicted grasshopper (*Melanoplus sanguinipes*) adult development across Manitoba as of July 11, 2021.”



Agriculture and Agri-Food Canada

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Plant Pathology

Soybean Cyst nematode (SCN) feeds on soybean roots, causing yellowed leaves, stunted plant and yield loss.

The field that had SCN was located in the RM of Thompson, near the RM of Dufferin. The first symptoms showed a few weeks ago and resembled IDC symptoms but they did not improve over time. Upon inspection of the roots, cysts could be found easily. They have been confirmed in the lab by the University of Manitoba to be soybean cyst nematode. Growers and agronomists are encouraged to dig up plants from areas that look suspicious, soak and wash the roots and examine them closely, looking for the white cyst on the roots. They can contact me if they would be interested in further testing.



The photos below are what drew us to sample these areas.



Dennis Lange, Pulse Specialist

Weeds

Larger weeds that are quite visible now are long beyond the stage where they could be controlled with a herbicide. If at all possible control annual weeds before they set seed, individual plants or small patches can be hand-rogued. Mowing may be an option for larger patches or patch spraying to kill the plants, it may be worth sacrificing the crop in those areas. Wild oats should be tested for resistance, wait until seeds are mature to harvest them.

New flushes of weeds are coming thanks to recent rains, by this time of the year most crops are beyond their staging window and can't be sprayed based of Pre-Harvest Intervals (check the "Restrictions" section of the product pages in the Guide to Crop Protection). Normally we'd rely on canopy closure and crop competition to choke out these new weeds, however this year with tough growing conditions our crops are not as competitive as we'd hoped. These issues are popping up all over the province, it's been a difficult year for weed control on a number of fronts.

Forecasts

Bertha Armyworm (*Mamestra configurata*). A network of pheromone-baited traps are monitored across the Canadian prairie provinces in June and July to determine levels of bertha armyworm adult moths, and forecast risk of their potentially being economic levels of larvae somewhere in the region. Traps are set up in 99 locations in Manitoba. The traps do not determine risk for the field specifically that the trap is in, but can estimate regional risks, which can help prioritize scouting for larvae. We are over half way through the trapping period, and all the counts in Manitoba are still in the low risk category. The highest cumulative trap count so far is 220 near Snowflake in Central Manitoba. There have been no reports of bertha armyworm larvae yet.

Table 1. Highest cumulative counts of bertha armyworm (*Mamestra configurata*) in pheromone-baited traps for five agricultural regions in Manitoba as of July 14, 2021.

Region	Nearest Town	Trap Count
Northwest	Durban	37
	Makaroff	36
	Bowsman	31
	Grandview	29
Southwest	Boissevain	102
	Minto/Fairfax	49
	Foxwarren	34
	Dunrea	30
Central	Snowflake	220

0-300 = low risk - green
 300-900 = uncertain risk - yellow
 900-1,200 = moderate risk
 1,200+ = high risk

← Highest cumulative count

	Pilot Mound	40
	Dunrea	39
	Darlingford	31
Eastern	Ste. Anne	20
	Stead, River Hills	10
	Beausejour	9
	Hadashville	6
Interlake	Arborg	11
	Vidir	7
	Fisher Branch	7
	Grosse Isle	1

Highest counts from bertha armyworm traps in each region and a monitoring summary are updated twice weekly (Fridays and Tuesdays) on the Insect Page of the Manitoba Agriculture and Resource Development website at: <https://www.gov.mb.ca/agriculture/crops/insects/bertha-armyworm-forecast.html>

Armyworms (*Mythimna unipuncta*). A network of 29 pheromone-baited traps are being monitored from early-May until mid-July to determine how early and in what levels populations of armyworms have arrive. So far counts have generally been quite low. The highest count is 27, from a trap near Elgin in the Southwest.

Table 2. Highest cumulative counts of armyworms in pheromone-baited traps for five agricultural regions in Manitoba as of July 13, 2021.

Region	Nearest Town	Trap Count
Northwest	0 in all four traps so far	
Southwest	Elgin	27
	Justice	21
	Fairfax	17
	Brookdale	10
Central	St. Leon	20
	Glenboro	2
	Kane, Austin, Calorie	1
Eastern	Beausejour	11
	Lac du Bonnet	8
Interlake	Gimli	0

← Highest cumulative count

A map showing armyworm counts from Manitoba, Eastern Canada, and several Northeast U.S. states is available at: <https://arcg.is/0Lry5a>. Go to the link "TAW". So far there have been no reports of larvae of armyworms being found in Manitoba.

Identification Quiz:

Question: What is the insect at the bottom of the photo that is dragging away a young larva of a Colorado potato beetle to devour?



Photo by Tracy Shinnars-Carnelley, Peak of the Market

Answer: This is a lacewing larva. Larvae of green lacewings will eat eggs and larvae of Colorado potato beetles, and will prey on many other insects and mites. There are many species of lacewings; 26 species of green lacewings and 43 species of brown lacewings in Canada.

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To **report observations** on insects, plant pathogens, or weeds that may be of interest or importance to farmers and agronomists in Manitoba, please send messages to the above contacts.

To be placed on an **E-mail list** so you will be notified immediately when new Manitoba Crop Pest Updates are posted, please contact John Gavloski at the address or numbers listed above.