

Issue 11 – August 1, 2024

Manitoba Crop Pest Update



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Summary

Insects: Levels of **aphids in cereals** have increase in some areas; so far the only reports of spraying are of limited acres in oats in the Eastern and Northwest regions, and wheat in the Northwest region. Predators and parasitoids of aphids are also being noticed in some cereal fields. Some **thrips** feeding on wheat is evident in the Northwest region. **Bertha armyworm** larvae above threshold were found and sprayed for in the Holland to Glenboro area. High levels of **pea aphids** are still being noticed in some fields of peas and faba beans. Most pea crops will have progressed through the more susceptible stages, but some later fields are still being watched. As they get larger, **grasshoppers** have become more noticeable in some areas, particularly along headlands and field edges. Damage to crops and control have not been extensive at this point. **Fly** control in pastures remains a concern.

Disease: To date, most of the pathology reports have focussed on cereal crops. While we have some preliminary reports from the Fusarium head blight survey, Sclerotinia is beginning to catch the eye of folks in the field. Although most of the reports are from canola fields, we need to be on the lookout for infection in field peas, edible beans, and sunflowers.

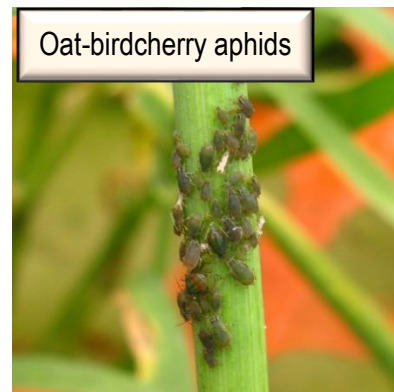
Weeds: Warm-season weeds like pigweeds, foxtails, barnyard grass and kochia are flourishing with the heat we've been receiving. New waterhemp infestations are being found and everyone needs to be watching for this weed. Contact myself, Kim Brown, or any of our regional staff if you have any suspicious pigweeds and we will get them tested to determine if its waterhemp. Lots of wild oats this year, some may have emerged after spraying. Test the seed to see if it's resistant (see last weeks Crop Pest Update for information on gathering and testing wild oat seed).

Entomology

Scouting for Aphids in Cereals

Aphids populations have become high in some fields of small grain cereals. In many fields the crop will be too advanced for the aphids to do economic damage, but less advanced crops may still be susceptible. Stage of the crop is an important consideration regarding whether the aphids can potentially do economic damage. The economic threshold for aphids in cereals is 12 to 15 aphids per stem prior to the soft dough stage.

In some fields predators of aphids are quite noticeable, as is evidence of parasitism. It is good to take note of this as well when monitoring for aphids in cereals.



Report compiled by John Gavloski, David Kaminski, Kim Brown
Entomologist, Field Crop Pathologist, Weeds Specialist, Manitoba Agriculture
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Information on the species of aphids present in cereals, how to monitor for them, thresholds and management can be found in the Manitoba Agriculture factsheet on “Aphids on Cereals” at: [aphids-on-cereals-factsheet-revised-november2023.pdf \(gov.mb.ca\)](https://www.gov.mb.ca/agriculture/factsheets/aphids-on-cereals-factsheet-revised-november2023.pdf)

Predators in action

Agronomists and farmers have been commenting on the levels of predators and parasitoids in some of the crops. We saw a large number of green lacewings, at multiple stages, while looking for insects in corn this week. Levels of lady beetle larvae are also quite high in some cereal crops. Parasitized aphids are also quite noticeable in some fields. Below are a couple of photos submitted showing some predators in action.



Photo by Logan Pizzey



Photo by Christine Kilpatrick
– Field 2 Field Agronomy

Cannibalism in lady beetles.
When aphids become scarce, due to the efforts of our natural enemies, this built up population of natural enemies still has to feed.

The lady beetle larva in this photo is eating a lady beetle pupa.

At the Horticulture Diagnostic School on Thursday, we made the mistake of putting too many lady beetle larvae in a container with too few aphids, and had to watch in horror as one of the larger lady beetle larvae ate a smaller one.

Lacewing larva with Lygus nymph
The lacewing larva on the right has a Lygus bug in its mandibles, and in the video of this was dragging its prey, possibly to try to find a safe place to consume it.

The large mandibles of lacewings have channels or grooves in them, and they actually suck the fluids out of their prey through these channels.

For more informations on the many beneficial insects that at times keep our crop feeding insects in check, and what and how much they can consume, see: [beneficial-insects-predators-and-parasitoids-revised-june2024.pdf \(gov.mb.ca\)](https://www.gov.mb.ca/agriculture/factsheets/beneficial-insects-predators-and-parasitoids-revised-june2024.pdf)

Plant Pathology

Sclerotinia

Hot dry conditions have been the story over the past few weeks in most regions of Manitoba, to the point where the accumulation of growing degree days has caught up to what's "normal", hastening the maturity of many crops. While that may reduce the risk of Sclerotinia infection in later seeded canola, the extent and severity are becoming evident in crops that completed flowering a week ago.



White mold on pods beginning to clump and form sclerotia.
Credit – Sheila Elder



White mold under the canopy of winter field pea intercrop with canola.
Credit – Jennifer McCombe-Theroux



A diagnostic puzzle: Many growers and agronomists are reporting sporadic plants in wheat fields with heads that are completely white – both main stems and tillers – with no green left in leaves or stems. My working hypothesis is that such plants grew from seeds that ended up at a shallower depth. In this picture, the sub-crown internode (between the red and green arrows) is very short. The red arrow also indicates where the seed germinated; below it are the primary roots. Once they have established a viable plant, the secondary roots (above the green arrow) take over. They expanded in wet conditions in the spring and would not have explored the soil profile. Further root growth occurred at the node (blue arrow) to brace the plants.

With recent hot, dry conditions, these roots are unable to access deeper soil moisture and the plants are simply shutting down. The plants are well anchored and difficult to pull up; heads do not slide out of the leaf sheaf as they would if wheat stem maggot was to blame for the white heads. Close inspection shows decay along the secondary roots (brown arrow) as common root rot sets in. Doing actual counts of affected plants usually shows an incidence of less than one percent.

Fusarium Head Blight (Preliminary Survey Results)



We have already visited more than 20% of the 130 targeted wheat fields, most of them in southernmost Rural Municipalities. So far, the highest incidence within a field was 30%, although the severity on infected heads was <25% - mostly one or two spikelets per head. This picture shows the chalky white Fusarium damaged kernels (FDK) that you might find within those infected spikelets. Most of these will be very shrivelled at maturity and might not show up in the harvested grain sample. However, knowing the extent of Fusarium infection can inform appropriate wind settings on the combine so that FDK are blown out with the chaff.

Weeds

Waterhemp moving west and north

Waterhemp has been confirmed north and west of Ste Claude and a suspected infestation has been found in the Neepawa – Gladstone area. Look in bare patches or edges of fields like in the two pictures below, as well as glyphosate-resistant crops like soybean and corn. Be diligent in scouting and contact me if you suspect you have waterhemp. Plants must be destroyed before they set seed.



Newly emerged waterhemp in a wheat crop (left) and larger waterhemp plants on the edge of a canola crop (right) next to the ditch.

Below: Larger waterhemp plants and a big patch of waterhemp on the edge of a canola crop.





Forecasts

Armyworms

Armyworm counts have been low in the Southwest and Northwest regions throughout the trapping period. In the Central, Eastern and Interlake regions, counts generally increased and peaking during a three week period from about June 2 – 22 (see Figure below). Late-June counts for these regions were lower, as were counts in July.

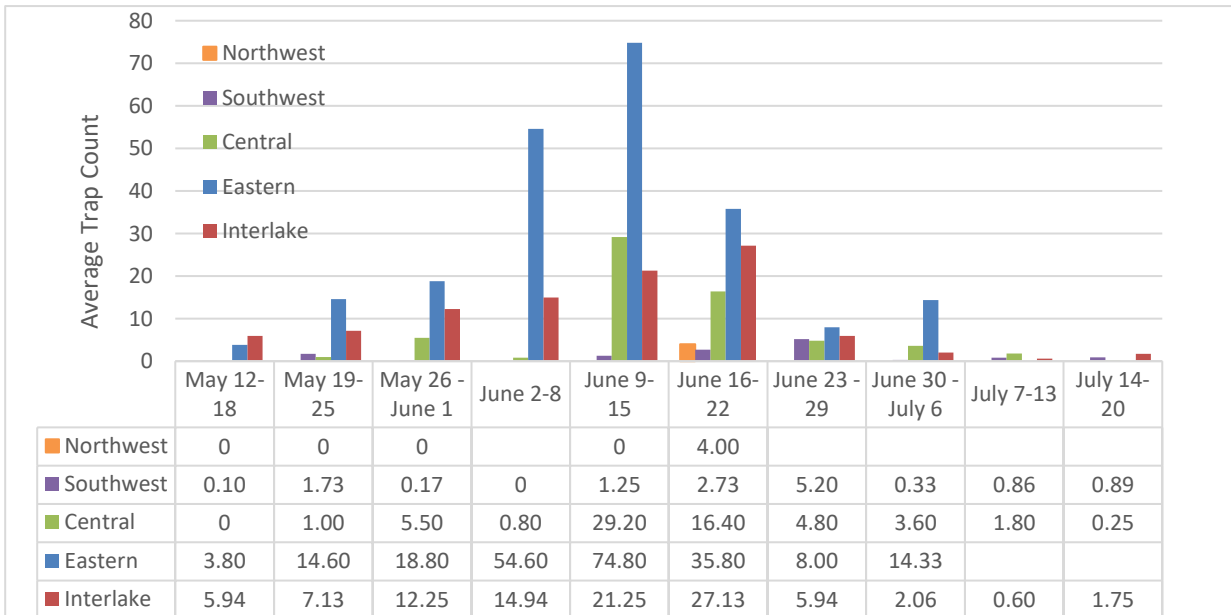


Figure 1. Average weekly trap counts for true armyworm per agricultural region in Manitoba

Highest counts in each region of Manitoba and a monitoring summary are updated weekly on the Insect Page of the Manitoba Agriculture website at: <https://www.gov.mb.ca/agriculture/crops/insects/pubs/true-armyworm-trap-results-2024-07-31.pdf>

A map showing armyworm counts from Manitoba, Eastern Canada, and several Northeast U.S. states is available at:

<https://experience.arcgis.com/experience/7164d23d488246d198dcf7a07d8c9021/page/Home/?views=Welcome>.

Go to the link “TAW”. The “Play” button at the bottom can be set so the map automatically advances (click middle arrow), or set to “Stop” and the arrows at either side of the button used to go forward or backward a week at a time.

Bertha Armyworms

The population of adult moths of bertha armyworms are being monitored during the flight and egg-laying period in June and July using pheromone-baited traps. Bertha armyworms have been found in 79 out of 82 traps that counts were reported from so far. Counts remain in the low risk category in most traps, although in a trap near Killarney and a trap near The Pas the cumulative counts are in the uncertain risk category. Cumulative counts are generally higher in the western part of Manitoba. Trap counts peaked this year in mid- to late-July (see Figure 2 below).

The highest cumulative trap count so far is 365 from a trap near Killarney in the Southwest region.

Larvae of bertha armyworm are being found in some areas, so make sure to look for feeding from and larvae of bertha armyworm when scouting canola fields.

Table 2. Highest cumulative counts of bertha armyworm (*Mamestra configurata*) in pheromone-baited traps for five agricultural regions as of August 1, 2024.

Region	Nearest Town	Trap Count
Northwest	The Pas North	308
	The Pas East	100
	Bowsman North	90
	Grandview	79
	Durban	75
Southwest	Killarney	365
	Birtle	164
	Whitehead	159
	Decker	158
	Cypress River	149
Central	Horndean	76
	Morris	64
	Haywood	63
	Altona	60
	Rosenfeld	54
Eastern	Whitemouth	56

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

← Highest cumulative count

	Stead	52
	Beausejour	37
	Tourond	20
	Ste. Anne	17
Interlake	Silver Bay	115
	Teulon East	110
	Pleasant Home	84
	Lundar	83
	Gimli	71

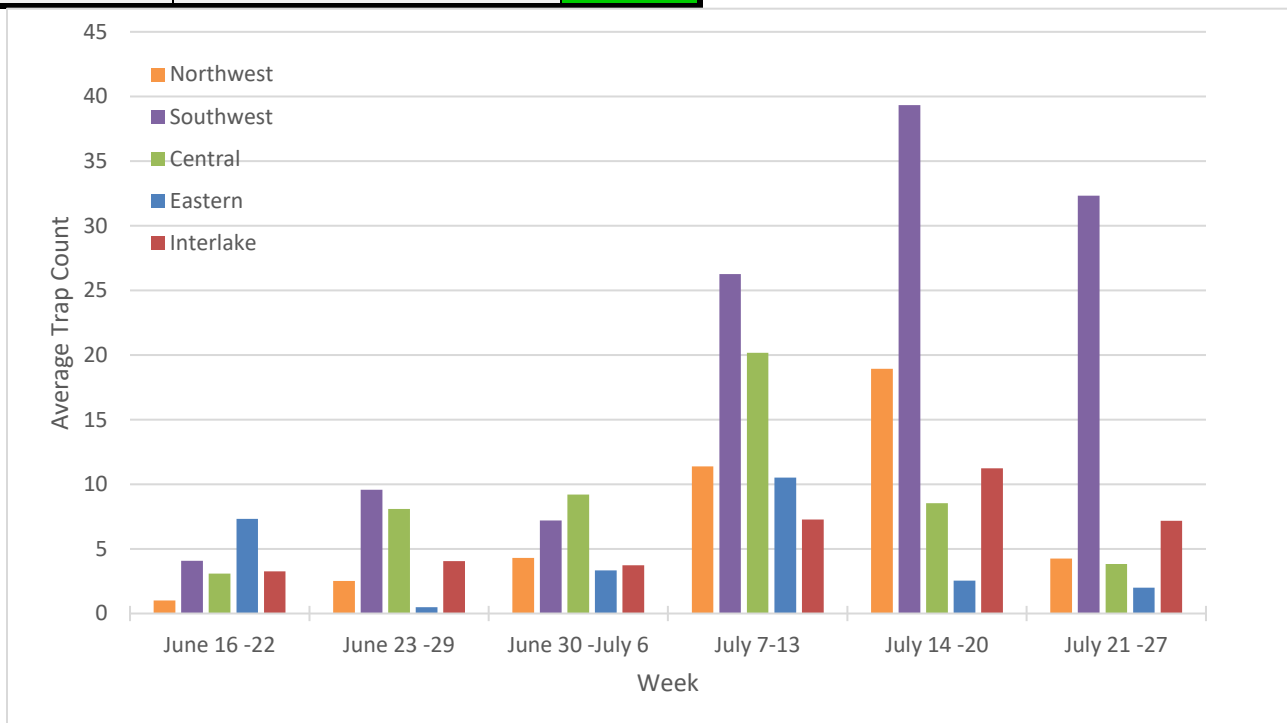


Figure 2. Average weekly trap counts for bertha armyworm per agricultural region in Manitoba.

Highest counts in each region of Manitoba and a monitoring summary are updated weekly on the Insect Page of the Manitoba Agriculture website at: [bertha-armyworm-monitoring-2024-07-31.pdf \(gov.mb.ca\)](https://www.gov.mb.ca/agriculture/crops/insects/pubs/bertha-armyworm-monitoring-2024-07-31.pdf)

Information on the biology of bertha armyworm and monitoring larval levels can be found at: <https://www.gov.mb.ca/agriculture/crops/insects/pubs/bertha-armyworm-factsheet.pdf>

Grasshopper Survey: A reminder for those participating in the grasshopper survey that counts are done during August, when the majority of grasshoppers are in the adult stage.

Agronomists and farmers who would also be interested in estimating grasshopper numbers in or around any of the fields they are in, and having this information included in the survey, are encouraged to see the survey protocol (at the link below) for more details of the survey and where to send data. Your counts would be welcomed.

Estimates of grasshopper levels can be collected during regular farm visits. "Estimates" of grasshopper populations is stressed as it will not be possible to accurately count grasshoppers along a field edge or ditch area as they will be moving around as you get near the area of the count. But estimates of what is present gives us some idea of the relative numbers that are present in different areas.

Data from the survey, along with weather data during the egg laying period of the grasshoppers, will be used to produce a forecast for 2025.

The protocol and data sheet for the grasshopper survey is at: [grasshopper-survey-protocol-revised-2024-07.pdf \(gov.mb.ca\)](https://www.gov.mb.ca/grasshopper-survey-protocol-revised-2024-07.pdf)

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 one of the following Manitoba Agriculture Pest Management Specialists.

John Gavloski, Entomologist (204) 750-0594
David Kaminski, Field Crop Pathologist (204) 750-4248
Kim Brown, Weed Specialist (431) 344-0239