Manitoba Crop Pest Update
Issue 11: August 2, 2023

Manitoba Agriculture

Summary

Insects: Aphids are being controlled in small grain cereals in some fields, particularly later seeded fields that are still in the more vulnerable stages. Lots of lady beetle larvae have also been noticed in some of the crops with a lot of aphids, as well as aphid mummies (parasitized aphids). There have been three reports of insecticide applications for **bertha armyworm** in canola over the past week, in the Cypress River/Baldur area. Some canola fields have been sprayed for **diamondback moth** and **Lygus bugs** in the Eastern region, and for diamondback moth in the Interlake region. **Flea beetles** have been noticed feeding, sometimes in high levels, in canola that is near the end of flowering or has podded. **Spider mites** were sprayed in a field of soybeans in the Central region. Some insecticide applications for **banded sunflower moth** have occurred in the Eastern region. **Grasshoppers** are numerous in crops in some areas, and pastures in some areas have been sprayed for grasshoppers.

Weeds: As harvest starts on the earliest seeded crops, producers are reminded to avoid putting resistant weeds through the combine in order to slow down their spread. Combining resistant weeds will move those seeds around on the field they are in plus move resistant weed seeds around the farm as the combines move from field to field. Waterhemp continues to be found in the southeast part of Manitoba but farmers are urged to look for this weed in all fields across the province.

Entomology

Aphids in cereals: Aphids populations have become quite high in many fields of small grain cereals. 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.

While assessing aphid levels, you may see predators feeding on the aphids, or aphid mummies (parasitized aphids). If levels are high you may see a lot of the shed white cuticles, which are left behind after the aphids moult. Don't count these, they are a shed cuticle, not a live aphid. Although most aphids may be wingless still, some may develop wings. Mature aphids can have a wingless form or winged form.

Aphid "mummies" are swollen, dead aphids that have been tanned and hardened due to parasitoids. Don't count these towards your threshold counts either. Parasitic wasps have laid eggs in these aphids, and the wasp larvae lives inside the aphid. You may see a noticeable hole in some of the aphid mummies, in which case the parasitoid has emerged from the aphid mummy.

There are different species of aphids that can be found on cereals as well. This year we are seeing English grain aphid, oat-birdcherry aphid, and greenbugs in Manitoba. A factsheet describing some of the different species of aphids on cereals, their biology, monitoring, thresholds and management can be found at: https://www.gov.mb.ca/agriculture/crops/insects/aphids-on-cereals.html

Weeds

Waterhemp continues to be found in new fields in the southeast part of the province. As it grows much taller than other weeds and its easy to see it in soybeans, dry beans, cereal crops and canola. Investigate any weed sticking up above these crops, there are others that can be taller than the crop right now (lamb's quarters, biennial wormwood) but we are most concerned about waterhemp as its resistant to many herbicide groups. As a Tier 1 weed regulated under the Noxious Weeds Act, waterhemp must be destroyed when found, without exception. All of the waterhemp found so far is glyphosate resistant as it's been found in soybean fields where only glyphosate had been sprayed. Waterhemp previously found in Manitoba was resistant to glyphosate (Group 9) as well as Group 2 and 14 chemistry. Continue scouting for this weed especially in soybean and corn fields where the only herbicide sprayed was glyphosate.

On the left picture we see a waterhemp plant (right side) beside a smaller redroot pigweed plant. The middle and right pictures show a waterhemp plant on the edge of a wheat field and waterhemp in the ditch along the edge of that same wheat field. The ditch and a strip of the wheat was mowed to destroy these waterhemp plants.

This picture shows the level of infestation in a soybean field in southeast Manitoba. These glyphosate resistant waterhemp plants must be destroyed to prevent seed set, as each plant can have hundreds of thousands of seeds.

Forecasts

Bertha armyworm: The adult monitoring for bertha armyworm is now complete. Traps were removed from fields after counts for the week of July 23-29 were done. Cumulative counts generally all remained in the low risk range in the traps for bertha armyworm, except for a trap near Waskada, which had moved into the uncertain risk range. The highest cumulative trap count was 411 near Waskada in Southwest Manitoba.

Table 1. Highest cumulative counts of bertha armyworm (*Mamestra configurata*) in pheromone-baited traps for five agricultural regions in Manitoba from June 4 to July 29, 2023.

Region	Nearest Town	Trap Count
Northwest	The Pas (East)	219
	Durban	122
	The Pas (West)	107
	Inglis	104
	Minitonas	79
Southwest	Waskada	411
	Cypress River	234
	Miniota	205
	Rossburn	134
	Whitehead	128
Central	Lowe Farm	181
	Emerson	159
	Greysville	38
	Gretna	28
	Altona	21
Eastern	Whitemouth	188
	Stead	94
	Beausejour	69
	Ste. Anne	53
	Tourond	15
Interlake	Meadows	279
	Hodgson	221
	Poplarfield	219
	Selkirk	188
	Arborg	177

← Highest cumulative count

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

Look for the larvae of the bertha armyworm on the ground when out scouting canola fields. So far there have been three reports of insecticide applications for bertha armyworm, all in the Cypress River/Baldur area. Note that traps can suggest low risk for an area, yet economic levels of larvae still show up in some fields in the area.

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-revised-may2023.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 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 2024.

The protocol and data sheet for the grasshopper survey is at: https://www.gov.mb.ca/agriculture/crops/insects/pubs/grasshopper-survey-protocol-revised-july2023.pdf

Identification Quiz:

Question: This beetle was noticed on a pat of cattle dung. What is it? There is a hint in what it was found on.

Answer: This is a species of dung beetle called *Aphodius pedellus*. It was introduced from Europe, and is likely now present wherever cattle are grazed in Canada. They are one of the most common dung beetles in Canada.

There are 23 species of dung beetles in Manitoba. There are three general categories of dung beetles; dwellers, tunnellers and rollers. Dwellers spend their entire life in dung, and they can break down a manure pat in a few weeks or months. There are 20 species of dung beetles in Manitoba that are dwellers, and 38 species in Canada. They are rarely over 15 mm, and most are less than 8 mm. The species in this photo is a dweller.

Both “tunnellers” and “rollers” arrive to a fresh dung pat as adult beetles, ready to tear it apart. Tunnellers dig tunnels beneath the dung pat, and bury the dung at the end of the tunnels. They aerate soil, and make soil more porous to water. There are 2 species of tunnellers in Manitoba, and three species in Canada.

The rollers are the best known type of dung beetle by many, as they are often seen in nature documentaries. Adults of rollers form balls of dung from fresh manure, which they then roll some distance from the pat prior to burial. In Canada, species of rollers belong to a group (genus) of beetles called *Canthon*. There is 1 species in Manitoba, and 6 species in Canada.

Compiled by:

Manitoba Agriculture Pest Management Specialists:

John Gavloski, Entomologist
Phone: (204) 750-0594

David Kaminski, Field Crop Pathologist
Phone: (204) 750-4248

Kim Brown, Weeds Specialist
Phone: (431) 344-0239

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.