

Issue 6 – June 27, 2024

Manitoba Crop Pest Update



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Summary

Insects: Foliar insecticide applications for **flea beetles** were reported from all agricultural regions over the past week. **Cutworm** control was reported on several crops this past week; corn in the Eastern and Interlake regions, oats in the Interlake, and canola in the Eastern region. Cutworms are still sporadically affecting canola and sunflowers in the Central region. Insecticides were applied to control **true armyworms** in some forage seed fields in the Interlake. Larvae of true armyworms have also been noticed in cereals in the Central region, but at numbers below threshold. There has been some spraying for **alfalfa weevil** in the Interlake. Limited control of **grasshoppers** along field edges has occurred in the Central region.

Disease: Various fungal diseases in cereals, including stripe rust, are being reported widely and the severity of some of them has led fungicide application to begin in earnest. Be careful that it is a fungal, not a bacterial disease, when considering this course of action. Most winter wheat has completed flowering and is now beyond the vulnerable stage for FHB infection. Many early-seeded spring cereals have already headed out.

Weeds: Weed control efforts continued to be hampered by high winds and rain events last week. Late-seeded crops continue to be sprayed while more mature canola and corn crops are receiving their second spray or have moved on to fungicide spraying. We continue to see the value of preemergent residual herbicides as those applications have worked very well this year. Weed control has generally been good other than large weeds which may have escaped as they were beyond proper staging for control.

Entomology

Armyworms – How to Monitor and What to Look For.

When scouting cereals and forage grasses, pay attention for armyworms and signs of their feeding. Just to clarify, the species we are talking about here is sometimes also called true armyworm (*Mythimna unipuncta*) and not bertha armyworm, fall armyworm or any of the other types of armyworms.

Scouting tips:

- The older larvae are nocturnal and like to hide during the day. Look for them on the soil, under debris, lumps of soil, in soil cracks, etc.
- For feeding injury, look for feeding along the margins of leaves, which may progress to whole leaves being consumed.
- The inflorescence is seldom damaged unless leaf foliage is scarce but, in some grasses, notably timothy, the green heads are often



Report compiled by John Gavloski, David Kaminski, Kim Brown
Entomologist, Field Crop Pathologist, Weeds Specialist, Manitoba Agriculture
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consumed by the older larvae even when foliage is abundant. If you grow or scout timothy fields, make sure to keep an eye on the level of armyworm feeding.

- Pay special attention to patches of lodged plants if there is any lodging in the field. Levels of armyworm larvae may be higher in these areas.
- If you see flocks of birds such as gulls coming out of your cereal or forage grass fields, check in the areas where you see this activity. An easy source of insect food, such as armyworms, may be the reason they are there.

A factsheet with more information on monitoring, identifying, and making management decisions on armyworms is available at: [armyworms-factsheet-revised-january2024.pdf \(gov.mb.ca\)](#)

Flea Beetles

Insecticide resistance testing. A sample of flea beetles from the Northwest region was submitted to the University of Alberta for testing on whether there is any potential resistance to pyrethroid insecticides. The majority of foliar insecticides applied to control flea beetles are pyrethroids. The sample was submitted because the canola seemed to have healthy and active flea beetles feeding in fields that had previously had a pyrethroid foliar insecticide applied for flea beetles.

There was no sign of resistance in the beetles tested. All beetles in the full rate and half rate treatments were killed within 24 hours, whereas all the flea beetles in the control group (no insecticide applied) survived. Thus, there is no evidence of pyrethroid resistance by flea beetles in Manitoba. It looks like flea beetle levels that seem to re-establish post foliar insecticide applications are new flea beetles moving in.

Factsheet on Beneficial Insects.

A factsheet on “Maximizing the Value of Beneficial Insects on the Farm: Predators and Parasitoids” has been revised. With the revised version additional information on some of our more common species of lady beetles and ground beetles found in crops has been included. Information on robber flies has been added and additional information on parasitic wasps and flies included. The factsheet is available at: [beneficial-insects-predators-and-parasitoids-revised-june2024.pdf \(gov.mb.ca\)](#)

Plant Pathology

Stripe Rust on Spring Wheat

Less than one week after reporting that stripe rust was found in North Dakota, it has been spotted by a keen-eyed agronomist here in Manitoba. The variety, SY Manness (rated as I or Intermediate for stripe rust) was at the full flag, silken boot stage of development.



Photo Credit: Stephanie Stinson, Field 2 Field Agronomy

A key graphic from the Cereal Rust Bulletin courtesy Dr. Kelly Turkington

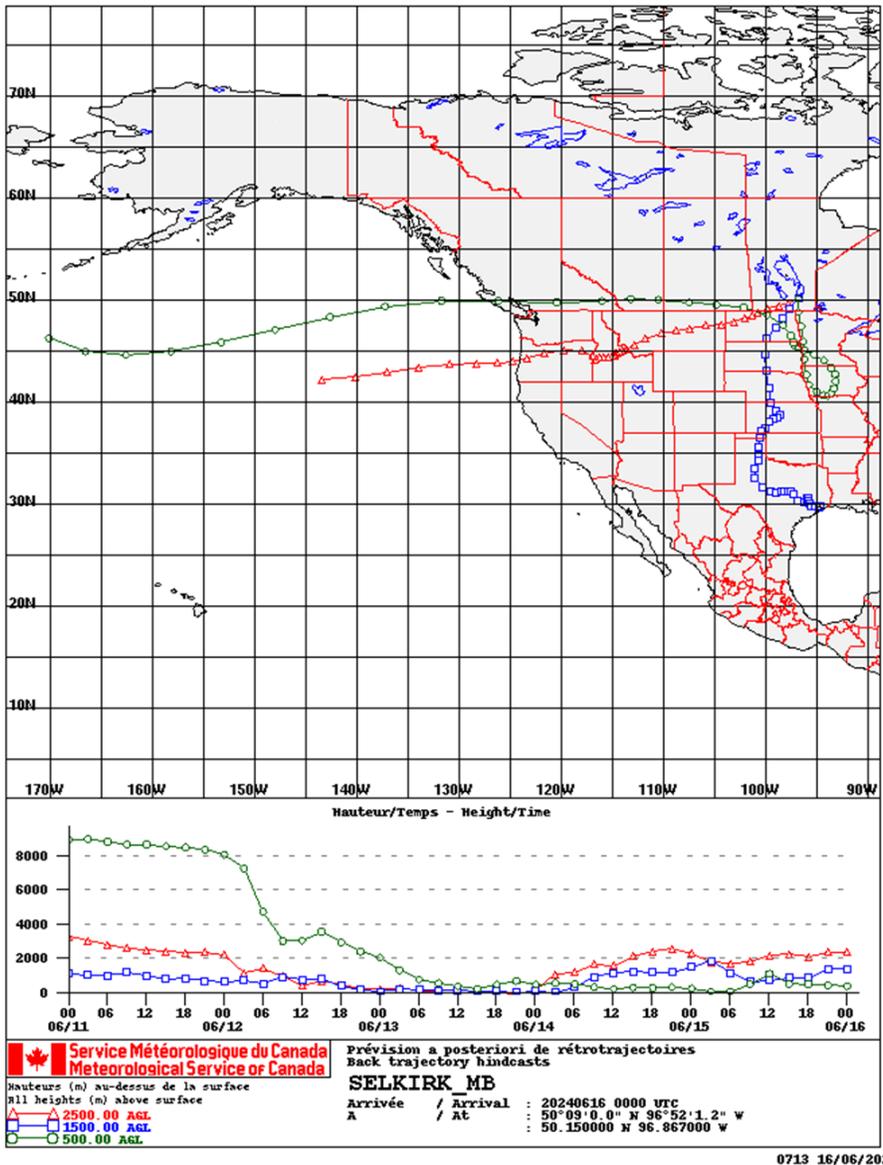


Figure 4. Reverse trajectories for Selkirk, MB for the period of June 11-16, 2024.

Here is some key messaging about possible route for stripe rust from Pacific Northwest region of the US, a traditional hot spot for the stripe rust pathogen. From the latest edition of: PRAIRIE WIND TRAJECTORY AND CEREAL RUST RISK REPORT for June 11-17, 2024 - T.K. Turkington *et al.*

“Between June 11 and June 16 these three conditions were met for fields near Winnipeg and Selkirk, Manitoba. Over a five-day interval, reverse trajectories originated from a number of USA source regions that may result in pathogen introduction to prairie crops. The ECCC wind dispersal model predicted that on June 15, 2024 three trajectories passed over the Winnipeg area. These trajectories originated from Oregon, Idaho, Texas, Oklahoma, Kansas and Nebraska (Figure 4). This type of result is rare. In most cases, reverse

trajectories originate from one or two of these states prior to crossing the Prairies. Pathogen risk may increase when trajectories are close to ground level. Reverse trajectories that originated over Texas, Oklahoma, Kansas, and Nebraska (blue line) were 500 to 1500 m above ground level and these then passed over the Great Plains and into Manitoba (June 11-15). Lastly, rain totals near Winnipeg were 25 mm (June 15 and 16) and may have resulted in the potential downward movement of pathogens. **These results suggest that potential risk of introduction of stripe rust could be high over this past weekend (June 15 and 16, 2024) for the Selkirk/Winnipeg region of Manitoba.”**

Other cereal leaf spots are coming in thick and fast. Be sure you are dealing with a fungal disease (not a bacterial disease) when considering fungicide application. Here are two examples:



Bacterial blight on oats, and a single fungal lesion, lower right



Wheat leaf with Septoria complex lesions; note spore-producing structures (pycnidia)

Weeds

Weed Escapes

Continue to scout fields after herbicide application to look for weeds that have escaped control. With the challenging spray conditions this year many weed applications were delayed and some weeds were too big to be controlled. Frequent rains have caused weed flushes and some have grown after herbicides have been applied. If weeds were sprayed within the recommended window of application, then herbicide resistance needs to be considered. Some weeds can be tested for resistance in the vegetative stage (just need a small amount of fresh green tissue) while others need to be grown from seed and you have to wait until they mature. Contact your agronomist or Manitoba Agriculture staff for information on weed resistance and how to sample weeds and get them tested.

Waterhemp



Be on the lookout for waterhemp now and scout carefully to determine which pigweeds are in your field. The pigweeds are very difficult to tell apart at early growth stages, but redroot pigweed is hairy while others are smooth. If you suspect you have waterhemp, contact your agronomist or Manitoba Agriculture staff and develop a plan to destroy these weeds. Waterhemp will still be relatively small at this

Note the hairs on the seedling redroot pigweed on the left compared to the waterhemp seedling on the right

time and should still be susceptible to some herbicide groups. Waterhemp plants previously found in Manitoba were found to be resistant to combinations of herbicide groups 2, 9, 14.

Forecast

Diamondback moth

A network of pheromone-baited traps are being monitored across Manitoba in May and June to determine how early and in what levels populations of diamondback moth occur. Diamondback moths have been found in 75 out of 92 traps that counts were reported from. Trap counts have generally been low so far in the Northwest and Southwest regions. Some moderate to high counts have occurred in the Eastern, Central and Interlake regions. Traps counts in the Central and Eastern regions peaked over the weeks of June 2-8 and June 9-15, and have since decreased. Trap counts in the Interlake have been at moderate levels for a few weeks.

The highest cumulative trap count so far is 233 from a trap near Riverton in the Interlake region.

Table 1. Highest cumulative counts of diamondback moth (*Plutella xylostella*) in pheromone-baited traps for five agricultural regions in Manitoba as of June 27, 2024.

Region	Nearest Town	Trap Count
Northwest	Roblin	19
	Shell Valley	18
	Grandview, Makaroff	17
	Grandview, The Pas North	15
	Grandview	7
Southwest	East Brandon	21
	Rivers	14
	Pierson	11
	Melita	10
	South Belmont	8
Central	First week with weekly trap counts greater than 25: May 26 – June 1	
	Fannystelle	196
	Elm Creek	152
	Rosenort	127
	Rosenfeld	119
	Starbuck	105
Eastern	First week with weekly trap counts greater than 25: May 5-11	
	Stead	222
	Hadashville	128
	Beausejour	62
	Tourond	26
	Whitemouth	12
Interlake	First week with weekly trap count greater than 25: May 12-18	
	Riverton	233
	Hodgson	175

← Highest cumulative count

Ledwyn	134
Memville	82
Arborg	60

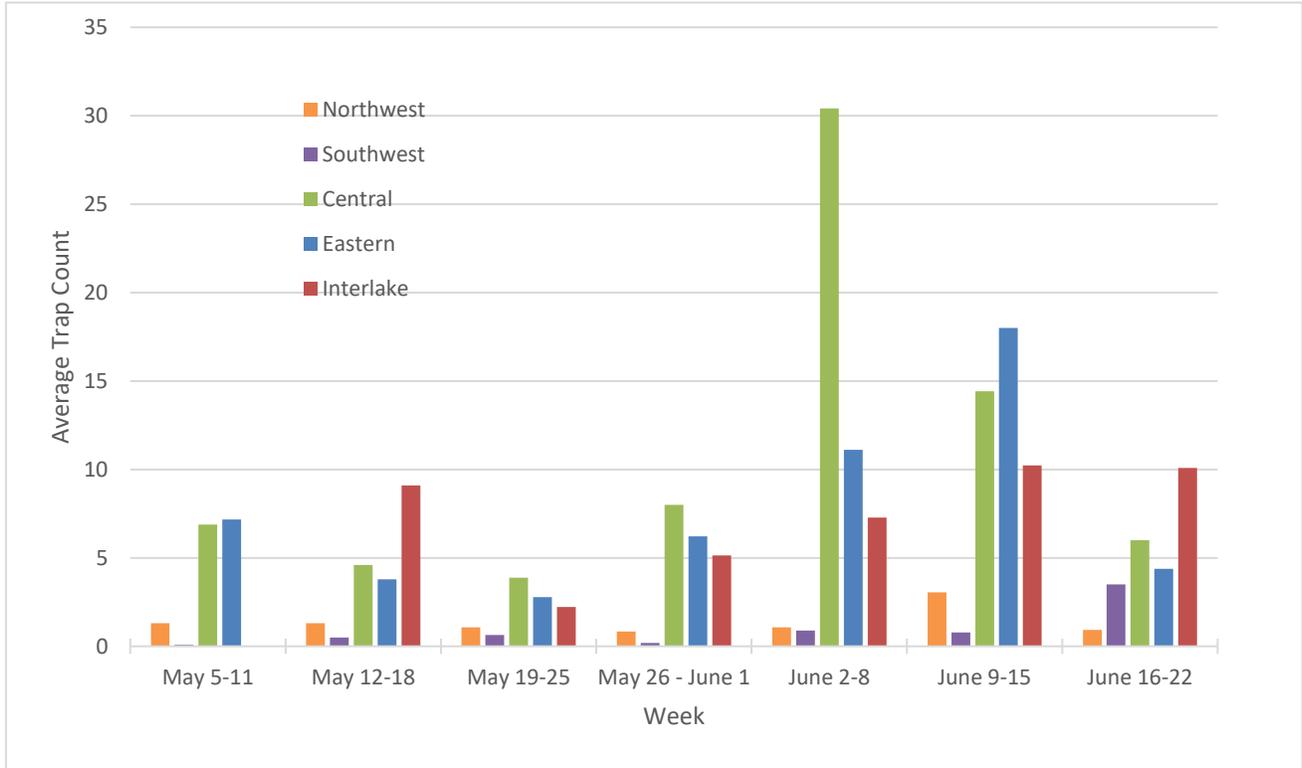


Figure 3. Average weekly trap counts for diamondback moth per agricultural region in Manitoba

Larvae of diamondback moth have been noticed in some regions, but no high levels have been reported yet. Look for diamondback moth larvae when doing crop scouting in canola or other cruciferous crops, particularly in the Eastern half of Manitoba and Interlake region.

Highest counts in each region 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/diamondback-moth-monitoring-june-27-2024.pdf>

True Armyworms

Larvae of armyworms (*Mythimna unipuncta*), sometimes also called true armyworms, can cause significant feeding injury to cereals and forage grasses when levels are abundant. Adult moths of armyworms migrate to Manitoba in the spring from overwintering sites from the southern US. A network of pheromone-baited traps are being monitored from early-May until late-July to determine how early and in what levels populations of armyworms have arrive.

Counts have been low so far in the western regions of Manitoba, with some moderate counts in the Central region. Some higher counts have occurred in some of the traps in the Eastern and Interlake regions. Counts gradually got higher over a few week period in the Central, Eastern and Interlake regions, peaking during the week of June 9-15 in the Eastern and Central regions.



The highest cumulative count is 434, from a trap near Riverton in the Interlake region. There are some areas in the Central, Eastern and Interlake regions where looking for larvae of armyworms while scouting cereals and forage grasses would be good to prioritize.

Table 2. Highest cumulative counts of armyworms in pheromone-baited traps for agricultural regions in Manitoba as of June 26, 2024.

Region	Nearest Town	Trap Count
Northwest	Russell	4
	Grandview	0
Southwest	North Pierson, West Pierson	23
	Rivers	20
	Medora	9
	Glenboro	3
	Belmont	2
Central	Horndean	89
	Altona, Rosenfeld	66
	Morris	22
	St. Joseph	17
Eastern	Dencross	426
	New Bothwell	250
	Beausejour	211
	Kleefeld	117
	Lorette	25
Interlake	Riverton	434
	Washow Bay	227
	Teulon	171
	Fisher Branch	136
	Moosehorn	112

← Highest cumulative count

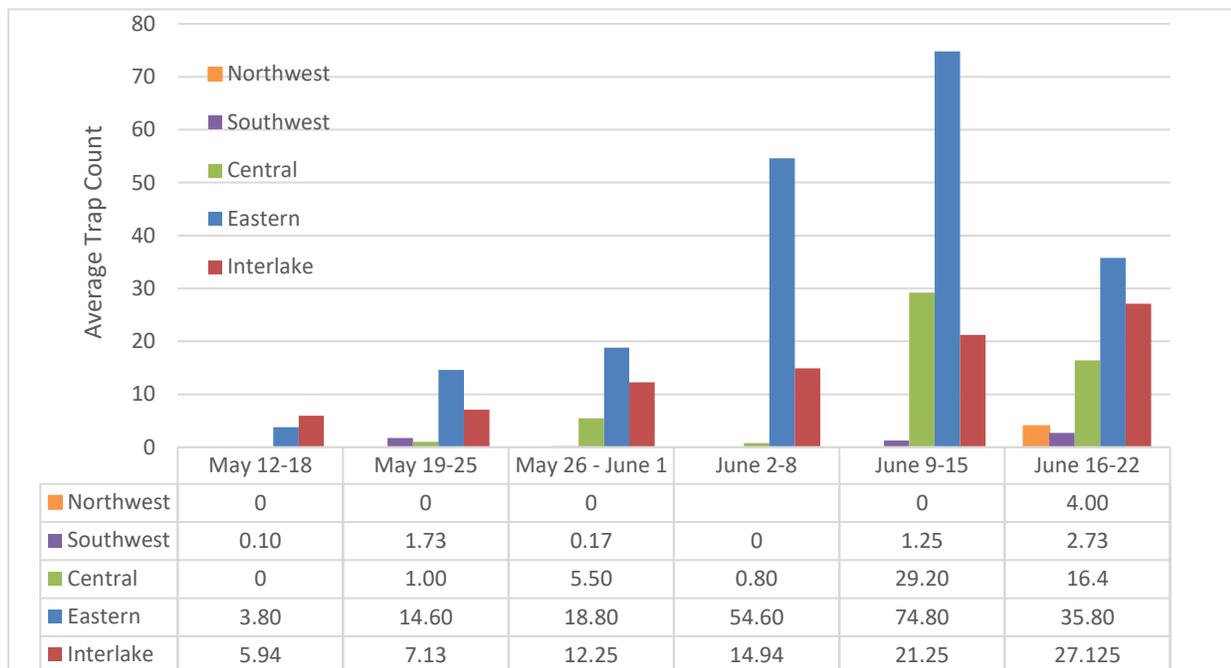


Figure 3. Average weekly trap counts for true armyworm per agricultural region in Manitoba

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-06-26-2024.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 Armyworm

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 37 out of 74 traps that counts were reported from so far. Trap counts have been low so far.

The highest cumulative trap count so far is 49 from a trap near Whitemouth in the Eastern region.

Table 3. Highest cumulative counts of bertha armyworm (*Mamestra configurata*) in pheromone-baited traps for five agricultural regions in Manitoba from June 9 to June 27, 2024.

Region	Nearest Town	Trap Count
Northwest	Grandview	10
	Roblin South	9
	Makaroff South	8
	Makaroff North, Roblin North	1
Southwest	Pierson East	12

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

	Baldur, Brandon East	8
	Whitehead	5
	Ninga, Rivers	3
Central	Morris	22
	St. Joseph	8
	Emerson	6
	Elm Creek, Fannystelle	4
	Starbuck	3
Eastern	Whitemouth	49
	Stead	31
	Beausejour	4
	Hadashville	2
Interlake	Silver Bay	21
	Pleasant Home	14
	Teulon East	13
	Arborg	12
	Teulon	11

← Highest cumulative count

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>

Identification Quiz

Question: What are these things found on plants? Is it fungus related? Is it insect related?



Photo by Abi Benson

Answer: Although they may be confused for something fungus or mold related, these are actually green lacewing eggs. Green lacewing eggs are laid singly on stalks near a food source for the larvae once they hatch, such as where there are aphids. It is theorized that the stalks protect the eggs from being eaten by predators including newly hatched sibling green lacewing larvae.

Up until now we were only finding adult green lacewings in our beneficial insects survey. Eggs were seen this week so larvae should start appearing within the next couple of weeks.

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

