Issue 7 – July 4, 2024

Manitoba Crop Pest Update

Seasonal Reports Weekly Weather Maps Insects

Summary

Insects: There was some spraying for **flea beetles** in late-seeded fields over the past week. **Alfalfa weevil** is at high levels in alfalfa and other forage legumes in some fields; there have been reports of high levels now from the Interlake, Eastern, Northwest and Southwest regions. Counts of **true armyworm** adults have dropped in traps over the past week, indicating that the migratory population of adult moths that seemed to arrive in the Eastern, Interlake and Central regions in early- to mid-June has been reduced, but growers of cereal crops and forage grasses should now be scouting for the larvae.

Disease: Because we are presenting daily at this year's Crop Diagnostic School, there is scarce time for detailed reporting in this update. For that reason, I will cheat a little and pass along some of what Manitoba Agriculture's field staff are seeing in the countryside.

Weeds: Weed control applications continue in later seeded crops and weather conditions remain challenging. Rain, wet fields and high winds have been severely limiting herbicide operations. Weeds may have advanced beyond the recommended stage for weed control as farmers were not able to get on the fields as early as they planned. Moist conditions are contributing to weed growth and we see continued emergence of flushing weeds like foxtails and pigweeds.

Entomology

Alfalfa Weevil

Alfalfa weevil can be an important early-season defoliator of alfalfa, but will also feed on other forage legumes. One of the heavy populations reported this week was from a sweet clover field. Larvae go through four growth stages (or instars). The larvae are not too big and can blend in with the vegetation well, which can make them hard to notice until damage starts getting quite visible. First instars will be just 1 to 2 mm long and light-yellow to tan with a darker head. Fully grown larvae (fourth instars) are about 6 to 8 mm long and bright green with a white stripe down the centre of the back, and a black head capsule. Early harvest of hay fields, by cutting in early bloom, can manage high densities of alfalfa weevil larvae. Larvae are killed by desiccation or starvation.

Figure 1. Alfalfa weevil larvae

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Manitoba

There are several methods that can be used to monitor alfalfa weevil larvae. More information on alfalfa weevil biology, monitoring, thresholds, management and natural controls can be found in the factsheet on "Alfalfa Weevil in Manitoba": Province of Manitoba | agriculture - Alfalfa Weevil (gov.mb.ca)

Emergency Registration of Carbine in Sunflowers

An emergency use registration has been granted for the use of the insecticide Carbine to control lygus bugs on confection sunflowers in Manitoba from July 21, 2024 to July 20, 2025. Carbine will stop lygus bug feeding rapidly, but it may take several days to see a reduction in lygus numbers.

Plant Pathology

General Reports of Disease

Here are some comments from MB Ag's Crop Production Extension Specialists, as appeared in this week's Crop Report:

"The humid conditions and dropping petals are creating ideal conditions for sclerotinia in canola." – Central Region.

"Producers have started to spray for Mycosphaerella blight in peas given the wet weather and disease being found in the lower canopy. Septoria or bacterial leaf spotting has been observed in oats, particularly after recent rains." - Southwest Region.

"… in later seeded canola ... wilting plants and ample evidence of root rot was found in these fields. Dry conditions are needed to prevent root diseases from taking hold in large areas of fields." - Eastern Region.

Figure 2. Fallen petals, sepals and anthers provide the sugars for SSR infection

If soils are wet and canola petals have begun to fall to the lower leaves, it's time to consider fungicide control measures. The 20% bloom stage mentioned on most product labels coincides with early petal drop.

Weeds

Weed Escapes

Continue scouting for waterhemp as we've had more than adequate moisture and are seeing flushing weeds continue to germinate. Waterhemp previously found in MB was resistant to herbicide groups 2,9 and 14, assume any waterhemp present is resistant as well. Other weeds may have been too big at time of spraying due to difficult spraying conditions when the weeds were smaller. Monitor weed escapes and treat as if they were herbicide resistant, do not let them go to seed.

Xtend vs Enlist soybeans

Make certain you know which soybean herbicide system you are spraying as dicamba and 2,4-D choline are NOT interchangeable. Dicamba cannot be sprayed on Enlist soybeans and 2,4-D choline cannot be sprayed on Xtend

soybeans. We've demonstrated this, along with various treatment combinations for each system, at our 2024 Crop Diagnostic School here in Carman. The pictures below show the damage less than 24 hours after spraying, it is catastrophic and irreversible.

Left: Dicamba sprayed on Enlist soybeans

Right: 2,4-D choline sprayed on Xtend soybeans.

Forecasts

Diamondback moth

A network of pheromone-baited traps were monitored across Manitoba in May and June to determine how early and in what levels populations of diamondback moth adults occured. The trapping period is now complete, with traps being removed after they were checked the week of June 23-29. Diamondback moths were found in 75 out of 92 traps that counts were reported from. Trap counts were generally low in the Northwest and Southwest regions, with just a few traps in the Northwest surpassing cumulative counts of 25 moths. Some moderate to high counts 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 then decreased. Trap counts in the Interlake remained at moderate levels for a few weeks.

The highest cumulative trap count was 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 July 4, 2024.

Lower Risk: 0-25 Elevated Risk: 26-200 Higher level of moth catch: 200+

Region	Nearest Town	Trap Count
Northwest	The Pas North	33
	Roblin	28
	The Pas East	27
	Shell Valley	18
	Grandview, Makaroff	17

Southwest	East Brandon	21
	Rivers	14
	Strathclair	13
	Elphinstone, Pierson	11
	Melita	10
Central	First week with weekly trap counts greater than 25: May 26 – June 1	
	Fannystelle	196
	Elm Creek	152
	Rosenort	138
	Rosenfeld	119
	Starbuck	105
Eastern	First week with weekly trap counts greater than 25: May 5-11	
	Stead	222
	Hadashville	128
	Beausejour	62
	Dufresne	14
	Whitemouth	12
Interlake	First week with weekly trap count greater than 25: May 12-18	
	Riverton	233
	Hodgson	175
	Ledwyn	134
	Memville	82
	Arborg	60

← Highest cumulative count

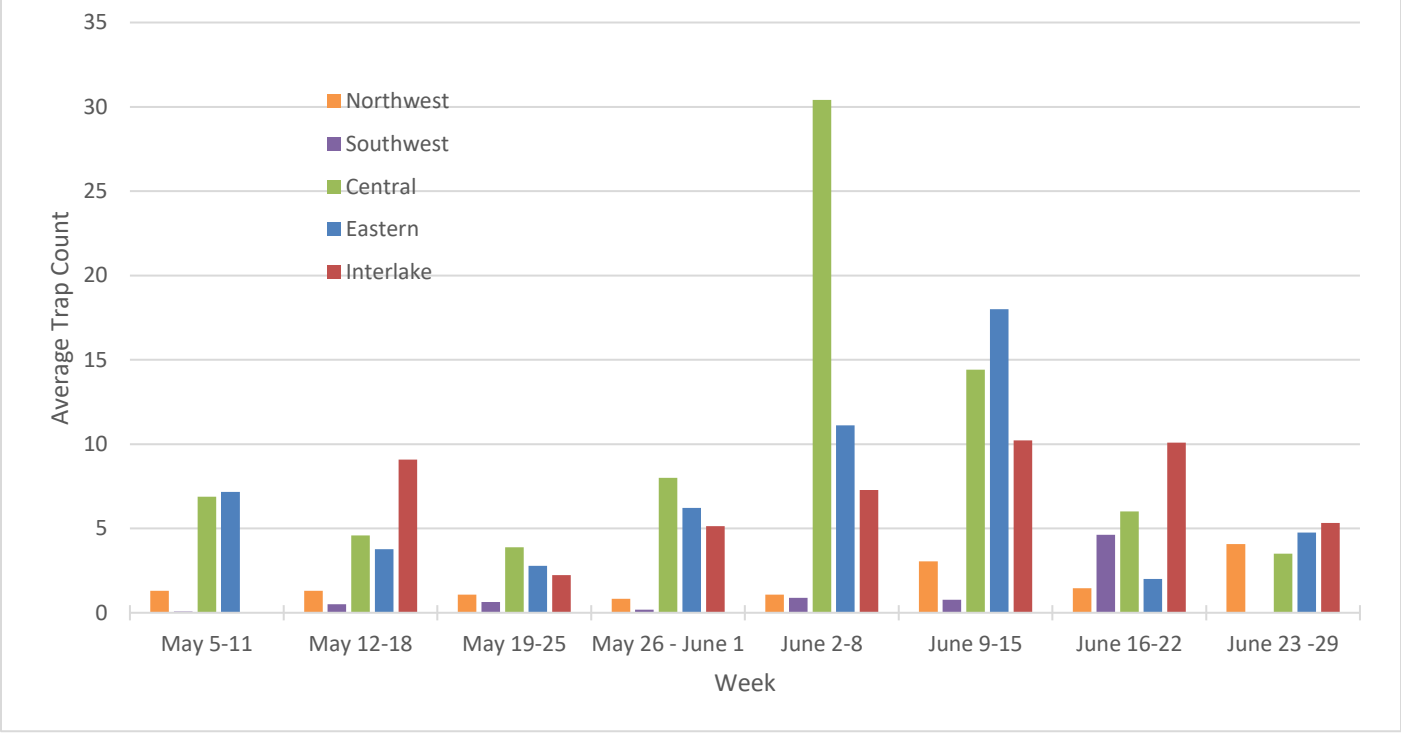


Figure 3. Average weekly trap counts for diamondback moth per agricultural region in Manitoba

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 and Central regions.

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-july-04-2024.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, generally increasing and peaking during a three week period from about June 2 – 22 (see Figure 3). Late-June counts for these regions were lower.

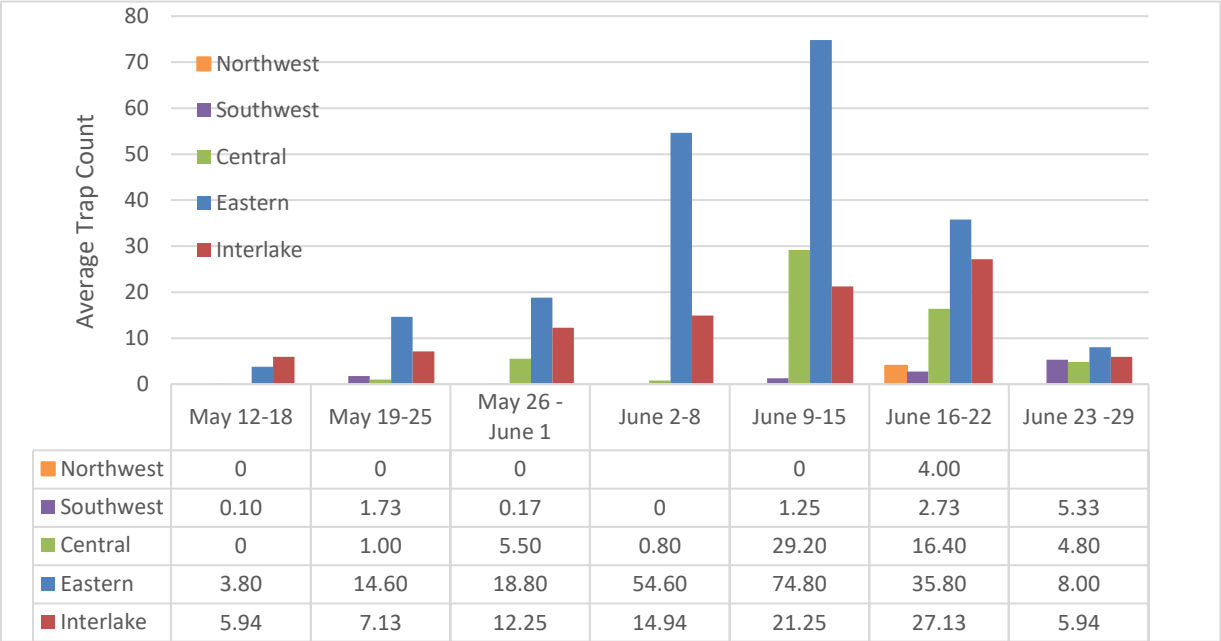
The highest cumulative count is 434, from a trap near Riverton in the Interlake region. There are some areas in the Central, Eastern and Interlake regions where looking for larvae of armyworms while scouting cereals and forage grasses would be good to prioritize. Armyworm larvae have been reported from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

Table 2. Highest cumulative counts of armyworms in pheromone-baited traps for agricultural regions in Manitoba as of July 3, 2024.

Region	Nearest Town	Trap Count
Northwest	Russell	4
	Grandview	0
Southwest	North Pierson, West Pierson	23
	Rivers	22
	Medora	9
	Glenboro	3
	Belmont	2
Central	Horndean	93
	Rosenfeld	79
	Altona	73
	Morris	22
	St. Joseph	17
Eastern	Dencross	426
	New Bothwell	270
	Beausejour	211
	Kleefeld	138
	Lorette	27

Interlake	Riverton	434
	Washow Bay	228
	Teulon	186
	Fisher Branch	136
	Balmoral	113

← Highest cumulative count



	May 12-18	May 19-25	May 26 - June 1	June 2-8	June 9-15	June 16-22	June 23 -29
Northwest	0	0	0		0	4.00	
Southwest	0.10	1.73	0.17	0	1.25	2.73	5.33
Central	0	1.00	5.50	0.80	29.20	16.40	4.80
Eastern	3.80	14.60	18.80	54.60	74.80	35.80	8.00
Interlake	5.94	7.13	12.25	14.94	21.25	27.13	5.94

Figure 4. 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-07-03-2024.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 58 out of 79 traps that counts were reported from so far. Trap counts have been low so far.

The highest cumulative trap count so far is 50 from a trap near Whitehead in the Southwest region.

Table 3. Highest cumulative counts of bertha armyworm (*Mamestra configurata*) in pheromone-baited traps for five agricultural regions as of July 4, 2024.

Region	Nearest Town	Trap Count
Northwest	The Pas North	25
	The Pas East	22
	Grandview	10
	Roblin South	9
	Makaroff South	8
Southwest	Whitehead	50
	Killarney	34
	Ninga	28
	Brandon East	22
	Pierson East	12
Central	Morris	34
	Horndean	21
	St. Joseph	18
	Altona, Emerson	16
	Rosenfeld	14
Eastern	Whitemouth	49
	Stead	31
	Beausejour	4
	Hadashville, Ste. Anne	2
Interlake	Silver Bay	22
	Teulon East	20
	Pleasant Home	19
	Gimli, Teulon	17
	Arborg	16

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

← 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

Manitoba

Identification Quiz

Question: What are these commonly found beetles?

Answer: These are three different species of blister beetles (Family: Meloidae). The common name blister beetle comes from the fact that they contain the toxin cantharidin, which can cause blisters. They release cantharidin when crushed and the toxin remains active even after the beetle is killed. Cantharidin can cause severe distress in sensitive livestock, especially horses, after eating baled alfalfa hay containing blister beetles.

Adult beetles feed on the foliage of various crops and wild plants but they are rarely a problem. Some blister beetles can be beneficial. The larvae of *Epicauta* species, such as the black and grey beetles on the left side of the photo, feed on grasshopper eggs. The shiny beetle on the right side of the photo is species called Nutall blister beetle, *Lytta nutalli.* The larvae of Nutall blister beetle do not feed on grasshopper eggs. The larvae instead feed in nests of ground-dwelling leafcutter and bumble bees.

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

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