

Issue 1 – May 23, 2024

Manitoba Crop Pest Update



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Summary

Insects: Our potential pest species of grasshoppers are just starting to hatch in some regions. A low percentage of the hatch would be complete by this time, however. Striped flea beetles have been active for a few weeks, and crucifer flea beetles have recently started emerging. In parts of the central region flixweed is abundant this year, and flea beetles are feeding on that and volunteer canola as part of their early-season hosts.

Disease: A new Fusarium risk mapping tool has recently been made available online and is now “live” at prairiefhb.ca. You can get familiar with its operation and its advantages as your winter cereals approach heading. More details on the new tool compared with the forecast maps it replaces are available in the Disease Section.

Weeds: Weeds are really starting to grow now and spraying continues as crops are being seeded. Annual weeds like wild buckwheat, wild oats, lambs quarters, roundleaved mallow, smartweed, red root pigweed and green foxtail are emerging. Winter annuals like night flowering catchfly and flixweed are getting large, and need to be dealt with quickly before they are beyond staging for weed control.

Entomology

Grasshoppers that are larger early in the year

There are several non-pest species of grasshoppers that overwinter as partially grown nymphs, and thus will be larger grasshoppers in early-spring. Among these are the the **brown-spotted grasshopper** (*Psoloessa delicatula*), which overwinters as 4th or 5th instar nymphs. It is an important food item for the survival of the nestlings of grassland songbirds, and would be more common in western than eastern Manitoba.

The **specklewinged grasshopper** (*Arphia conspersa*) overwinters as 5th instar nymphs, and the **greenstriped grasshopper** (*Chortophaga viridifasciata*) overwinters as late-instar nymphs.



Greenstriped grasshopper - nymph



Greenstriped grasshopper - adult

In addition, there are a couple of non-pest species of grasshoppers whose eggs hatch in early-spring. These include the **club-horned grasshopper** (*Aeropedellus clavatus*), which hatches more than a month earlier than

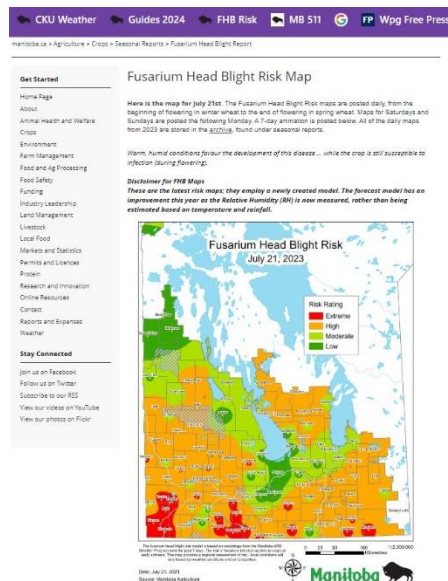
pest species, and the **pasture grasshopper** (*Melanoplus confusus*) which also hatches very early. None of these species will be at levels that could be damaging to crops.

Next week we will look at identification tips for newly hatched grasshoppers from our potential pest species in Manitoba.

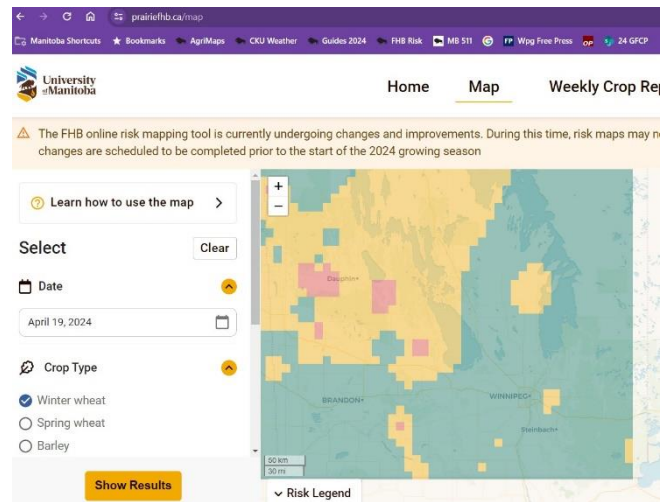
Plant Pathology

New FHB Risk Mapping Tool

For nearly 20 years, Manitoba Agriculture has been posting a daily map to show the risk of Fusarium Head Blight (FHB) infection to wheat. These maps, available through the reproductive season (mid-June to late July), were based on a model that used measured temperature and rainfall, and estimated humidity. The key determinants of FHB infection are the coincidence of high humidity (>85%) and warm temperatures (15 to 30C), at the time of the crop's heading/flowering. In more recent years, the postings included an animation that showed the changes in FHB risk over the previous 7-days. The animation illustrated whether risk was increasing or decreasing.



New research by researchers with the University of Manitoba (Dr. Paul Bullock *et al.*) and Manitoba Agriculture (Dr. Timi Ojo *et al.*), over the past three years, has developed a new model that expands the range of cereal crops – to barley and durum wheat – and the geography covered by the map. It covers the whole prairie region. Furthermore, growers and agronomist can now access risk maps through a web-based tool in real time and “tunnel down” to their own area of operation.



In Manitoba, we have more than 120 weather stations that provide the data that generates the maps. You can view their locations (and proximity to your own) [here](#).

The FHB risk mapping tool can be accessed directly through this link – prairiefhb.ca

Its use is intuitive and follows these main steps:

1. Select the date (usually today's date unless you are looking back in time).
2. Select the crop (winter wheat, spring wheat, barley or durum).
3. Select the variety.
4. Choose which risk type (some are not yet available for some crops).
5. To zoom in, select Manitoba under Province. For the whole prairies, choose View All.
6. Hit Show Results.

There is also a built-in tutorial. If you have already bookmarked the landing page for the FHB Risk Forecast from Manitoba Agriculture, you may view a “snapshot” of the map that will be updated once a week. The link to the new mapping tool is also at the top of that page.

Weeds

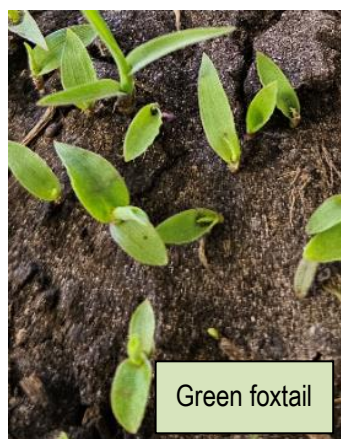
Scouting

Early season weed control is crucial when crops are small and not competitive. Yield losses are significantly higher when weeds emerge before or at the same time of the crop compared to those that emerge later on. For example wild oats with a density of 10/m² (about 1 per square foot) can cause 10% yield loss when they are 1 leaf stage ahead of wheat, 6% yield loss if they are the same leaf stage as wheat, but only 3% yield loss if they are 1 leaf stage behind wheat (O'Donovan, Alberta Environmental Centre).

Continue with burnoff applications prior to seeding or before crop emergence. Annual weeds are very small so coverage is critical, especially when using contact products. Thorough coverage depends on droplet size and droplet numbers, so make sure you use the appropriate nozzles and the highest water volume that's recommended. Consult each herbicide label or the product pages in the 2024 Guide to Field Crop Protection for recommended nozzle size and water volume.

Pre-emergent applications have had adequate rain to activate them and will be working well. These provide residual weed throughout the season, ranging from 3-8 weeks depending on the product. For a list of residual products that can be applied pre-emergent consult crop tables of the 2024 Guide to Field Crop Protection. These products are now listed at the top of each crop table. Some herbicides can be used pre- or post-emergent depending on the product and the crop.





Forecasts

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 moth have been found in 55 out of 68 traps that counts were reported from. Trap counts have generally been low so far, however, some moderate counts have occurred in the Eastern, Interlake and Central regions.

The highest cumulative trap count so far is 69 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 May 23, 2024.

Lower Risk: 0-25 Elevated Risk: 26-200 Higher level of moth catch: 200+		
Region	Nearest Town	Trap Count
Northwest	Makaroff	12
	Roblin	5
	Shell Valley	4
	Dropmore, Bield	2
	Deepdale, Russell	1
Southwest	Belmont	6
	Baldur, Brandon East	2
	Ninga	1
	All other counts	0
Central	First week with weekly trap count greater than 25: May 12-18	
	Altona	41
	Fannystelle	27
	Rosenfeld	26
	Winkler	24
	Horndean, Rosetown	19
Eastern	First week with weekly trap counts greater than 25: May 5-11	

	Hadashville	47
	Beausejour	21
	Stead	12
	Whitemouth	3
	Tache, Tourond	2
Interlake	First week with weekly trap count greater than 25: May 12-18	
	Riverton	69
	Arborg	28
	Hodgson	21
	Memville	17
	Ledwyn	15

← Highest cumulative count

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-may-23-2024.pdf>

True armyworm

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 at 34 locations from early-May until late-July to determine how early and in what levels populations of armyworms have arrive.

Some moderate counts have occurred from traps in the Eastern and Interlake regions of Manitoba. The highest cumulative count is 76, from a trap near Riverton in the Interlake region.

Table 2. Highest cumulative counts of armyworms in pheromone-baited traps for agricultural regions in Manitoba as of May 23, 2024.

Region	Nearest Town	Trap Count
Northwest	Russell	0
Southwest	Belmont	1
	All other counts	0
Central	St. Joseph	8
	Morris	7
	All other counts	0
Eastern	Dencross	64
	Beausejour	19
	New Bothwell	5
	Kleefeld, Lorette	1
Interlake	Riverton	76
	Fisher Branch	27
	Washow Bay	20
	Gunton	11
	Teulon	10



← Highest cumulative count

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-may23-2024.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.

Beneficial Insect Monitoring

This year my summer student and I are doing weekly monitoring of the levels and stages of five groups of predaceous insects; lady beetles, green lacewings, hover flies, minute pirate bugs and damsel bugs. We are currently doing three sets of ten sweeps in alfalfa, and once the canola is tall enough will do the same in canola. So far our counts have been low. We are seeing some sevenspotted lady beetle adult, and outside our plot, and thus not officially part of our survey, have been noticing thirteenspotted lady beetles. Although not part of our survey, we have been catching a few rove beetles in our sweeps in the alfalfa as well, another beneficial insect. Over the growing season our goal is to track the presence and stages of these insects. For the lady beetles we are also keeping track of the species we are finding, so we will have data on the dominant species at different times of the growing season in these crops.

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