

Manitoba Crop Pest Update

Issue 5: June 22, 2022



Summary

Insects: Some foliar insecticide applications for flea beetles continue in all regions. Up to four foliar applications have been made in some canola fields, and some reseeded of canola has occurred because of flea beetle injury. Some are reporting that the earlier seeded canola seems to be impacted more by flea beetles. Cutworms are still being found, but there have been few reports of economic levels this year, compared to the past few years. Some sunflower fields were sprayed for cutworms. High populations of juvenile grasshoppers are being noticed in some areas. Lygus bugs are being noticed on alfalfa for seed and forage, but economic populations have not been reported. High levels of pea leaf weevils have been noticed on faba beans in the Northwest.

Diseases: It could be shaping up to be a year with significant disease pressure – thus far it's been substantially wetter and cooler than at the same time last year. One agronomist working in south central Manitoba reports seeing “lots of tan spot and Septoria in winter wheat, moving up to flag leaves.” It is already time to begin considering the risks of foliar diseases and even Fusarium Head Blight. Read more detail on this in the Plant Pathology section.

Weeds: Seeding is wrapping up as Crop Insurance deadlines have passed, there is extreme variability across the province in terms of crop and weed staging. Earliest seeded cereals have received their herbicide application, as have some early canola fields. Corn and soybean are growing well and loving these hot days, first herbicide applications are being done. Weeds to watch are kochia, lambs quarters, round leaf mallow, buckwheat and red root pigweed. Barnyard grass and foxtails are really taking off with the recent heat. Weeds that we don't normally see, like Canada fleabane, biennial wormwood, prostrate knotweed marsh yellow cress and purslane speedwell are showing up in fields across the province. Perennial weeds like Canada thistle, dandelion and quackgrass took advantage of ample moisture last fall and this spring and have grown extremely well.

Reminder of information to include when sending photos for identification: A reminder that when sending photos of crop pests for identification, whether through Email or text, please submit information to assist us with the identification, and for documentation of the identification.

At a very minimum we require the following four pieces of information:

- the crop it is in,
- general location in the province (nearest town will do),

- the date the photo was taken (particularly if they are older photos),
- and your name.

Any other information that can help with the identification is also much appreciated. Please do not submit the images with a request that only states “what is this”, or we may reply requesting more information (which we need to document what we identify). Images sent through Email are easier to work with and reply to than from texts, but either are acceptable. Showing a couple different angles of some crop pests can also help with identifications. Thanks for your cooperation and help in making identifications easier.

Entomology

Monitoring grasshopper stages: Grasshoppers generally have five nymphal instars before becoming adults, and it generally takes 33 to 55 days to go through the nymph stages, depending on species and temperature. In the third instar, the wingbuds are starting to become more noticeable. Once they reach the fourth instar, they have small triangular wingbuds that extends over the first segment of the abdomen. In fifth instars, the wingbud is longer and beginning to look like a wing.

As a general guideline, when many of the grasshoppers are third instars the hatch is over the peak, or almost completed. If there are levels of grasshoppers that appear to be economical and control is desired, timing it when most of the grasshoppers have reached the third instar is ideal. If you were to control them earlier than this, be aware that more hatch is likely and consider a product with good residual.



Plant Pathology

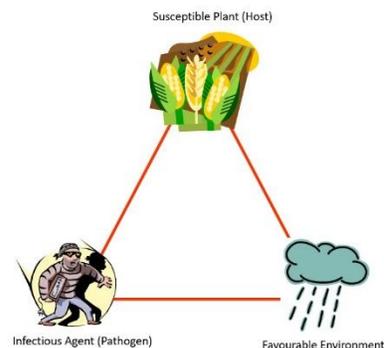
Are Winter Wheat Crops Vulnerable to Fusarium Head Blight (FHB) Right Now?

In short, most likely NO. But here are some reasons to be ready for a preventative fungicide application in the not-too-distant future:

1. Much of the winter wheat is at or nearing the *vulnerable stage* – heads fully emerged to end of flowering.
2. Some locations are experiencing periods of prolonged humidity within the crop canopy, despite warmer temperatures. When Fusarium spores are airborne, >85% RH and 15 – 30C are *ideal conditions* for infection.

- As a class, Winter Wheat now has genetic resistance comparable to CWRS, however, except for Emerson (R), most of the winter wheat are Intermediate (I) to Moderately Resistant (MR). Bottom line – consider the crop to be a susceptible host.

These are the three elements of the classic “Disease Triangle,” needed for infection to occur.

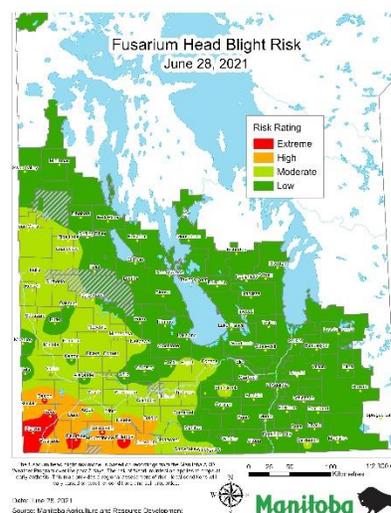


The first FHB Risk Forecast Maps will be posted [here](#) next Monday – June 27th – along with an animated map that shows conditions over the previous seven days. Here is an example of what the risk would have appeared for Wednesday, June 22nd.

You can see that, if winter wheat in the Southwest corner of the province was flowering now, risk of infection would be in the High to Extreme range.



In the 24-hour time period at Oakburn (above), the RH was above 85% and the temperature was above 15C for ~ 17 hours! On top of that, the weather station recorded an inch of precipitation between midnight and 3PM.



Diagnostic quiz

Very few readers took a stab at our disease diagnostic quiz from last week. We will have to come up with a way of making it easier to respond. Summer Field Crop Pathology Assistant, Brynne, is working on a solution.

Here are the best “answers” to last week’s questions, to satisfy the curious.

- Leaf symptom on canola – “None of the above.” A tissue test that we saw later in the week, suggested that boron (B) deficiency may have been the cause. Symptoms can be a bit like sulphur (S) deficiency. Both B & S deficiencies can be very patchy within a field. Since ammonium sulfate (21-0-0-24) was applied in the spring, we quickly ruled out lack of sulphur as the cause.
- Leaf symptom on fall rye – A bacterial blight. Exactly which of bacterial pathogen would need to be determined in a diagnostic lab. However, it is not surprising that a fungicide would be an *ineffective* treatment.

Weeds

Extremely wet conditions have shifted the weed community to those species that survive well under saturated conditions. We rarely see these weeds in crop, like prostrate knotweed and purslane speedwell. Prostrate knotweed (*Polygonum aviculare*) is a member of the buckwheat family and we normally find it in compacted areas (like where vehicles are parked). Its been showing up in cropped fields this year, which is unusual. It tends to grow low to the ground but stems can be slightly erect. Its hairless, with alternate leaves that have a membranous sheath (ocrea) at the nodes. Flowers are small, reddish to white colored, in groups of 2 to 4 in the leaf axils.



Purslane speedwell (*Veronica peregrina*) is a member of the Figwort family, an annual that tends to be quite short (under 12 inches tall). This plant can be very branched, erect or somewhat spreading, stems tend to have fine hairs on them. Leaves are opposite at the base of the plant and alternate at the top. Its been flowering for a while and has distinctive heart-shaped pods in the leaf axils.



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 arrive. So far, diamondback moth has been found in 33 traps. Levels are generally very low, with the exception that some moderate to high counts have occurred in the Eastern and Central region, particularly over the past few weeks. The highest cumulative trap count so far is 197 from a trap near Hadashville in the Eastern region. There are some areas in the Eastern and Central region where looking for larvae while crop scouting would be good to prioritize.

Table 1. Highest cumulative counts of diamondback moth (*Plutella xylostella*) in pheromone-baited traps for five agricultural regions in Manitoba as of June 22, 2022.

Region	Nearest Town	Trap Count
Northwest	Makaroff, Russell, Grandview	4
	Inglis, Grandview, Durban	2
Southwest	Rosburn	7
	Brandon	6
	Rivers	5
Central	Gnadenfeld	111
	Altona	62
	Halbstadt	50
	Belmont	14
Eastern	Hadashville	197
	Beausejour	189
	Whitemouth	174
	Stead	165
	Tournond	19
Interlake	Arborg	2

← 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/diamondback-moth-forecast.html>

Armyworms (*Mythimna unipuncta*). A network of pheromone-baited traps are being monitored from early-May until mid-July to determine how early and in what levels populations of armyworms have arrive. Some moderate counts have occurred from traps in Eastern and Central Manitoba. The highest cumulative count is 49, from a trap near Beausejour in the Eastern region. So far there have been no reports of larvae of armyworms being found in Manitoba.

Table 2. Highest cumulative counts of armyworms in pheromone-baited traps for agricultural regions in Manitoba as of June 21, 2022.

Region	Nearest Town	Trap Count
Northwest	All traps with 0	
Southwest	Brookdale	3
	Brandon	2
Central	Rosenfeld	48
	Halbstadt	35
	Rosebank	18
Eastern	Beausejour	49
	Lac du Bonnet	42
	Dominion City	37



← 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-june21-2022.pdf>

A map showing armyworm counts from Manitoba, Eastern Canada, and several Northeast U.S. states is available at: <https://arcg.is/0Lry5a>. Go to the link “TAW”.

Identification Quiz:

Question: Some have been noticing very minute white things moving around in some of our moist soils, such as in this photo (note that this was magnified for the photo). Occasionally you may see them on a seedling, but they can be abundant regardless if there is a crop in the field. What are they?



Hints: Technically they are not classified as insects.

Also, some members of this class of animals have a fork-like appendage on their abdomen that they can spring themselves with.

Answer: These are called springtails. The springtails in the photo belong to a group called elongate-bodied springtails. Springtails are close relatives to insects, but technically have their own class (Collembola). There are lots of different species of springtails in Canada (474 species), and 217 in the order that makes up the elongate-

bodied springtails (Entomobryomorpha). You may also sometimes see another order of springtails called globular springtails.

Many species of springtails are semiaquatic; they are adapted to and reproduce more rapidly if soil moisture levels are at or near saturation. This may explain why they are being noticed at high levels in some areas this year.

Springtails have a valuable role as decomposers, feeding on dead plant material and are not usually a pest. Occasionally some feeding may occur to seedlings, usually not at economic levels. This year some feeding on soybean seedlings was occurring. In another instance someone noticed high numbers of springtails along an irrigation line.

Compiled by:

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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.