

Manitoba Crop Pest Update

Issue 8: July 12, 2023



Summary

Insects:

Armyworms remain a concern in some areas, although the first generation caterpillars are turning to pupae, and some parasitism is being noticed. Some are noticing the pupal cases of *Cotesia* in fields that have armyworms.

Diamondback moth larvae were at higher levels in a few fields in the Central region, with a field near Elm Creek needing control.

Grasshoppers remain a concern in some areas, with some control continuing.

Some high populations of **pea aphids** in peas were found in the Central regions in fields in the Notre Dame de Lourdes area, with a couple of fields having insecticides applied.

In some fields, peas are nearing the end of their more susceptible growth stages.

The first **soybean aphids** of the year were reported by an agronomist in the Central region on July 6, and have also since been found in the Eastern region, but so far they are just at low levels.

Diseases:

It was again another week of conditions that do not favour infection by, nor the advance of, pathogenic diseases. A lot can happen before the crop is in the bin, but it is lack of moisture and associated stresses that have been the story so far. FHB Risk Forecasting will likely be wrapped up this week.

Weeds:

Post-emergent scouting continues and problematic weeds are showing up in crops.

Monitor for kochia and pigweeds as these weeds can be multiple-herbicide resistant.

Where weeds do not appear to have been affected by in-crop herbicides investigate the possible cause(s) and test for herbicide resistance. Do not let these weeds go to seed

Entomology

Armyworms: Some of the armyworms that we have been displaying at our Crop Diagnostic School are now turning to pupae, and other are dying because of parasitoids. We are likely getting to the end of the first generation of larvae in many areas. The second generation is usually not as damaging. See the Identification Quiz for one of the natural enemies of armyworms.

Soybean aphids: Soybean aphids are starting to be seen in some fields in Eastern and Central Manitoba. Quite high levels of soybean aphids are needed before control with insecticides would be economical. The action threshold for soybean aphids (where insecticide application is recommended to prevent economic loss) is:

- 250 aphids per plant on average,
- and the population is increasing,
- and the plants are in the R1 (beginning bloom) to R5 (beginning seed) growth stages.


Many natural enemies will feed on soybean aphids and can potentially help keep their populations from reaching economic levels. These include lady beetles, hover flies, green lacewings and minute pirate bugs. Fungal pathogens can also reduce soybean aphid levels, particularly in warm and humid weather.



For information on the biology, scouting and thresholds for soybean aphids, see: <https://www.gov.mb.ca/agriculture/crops/insects/soybean-aphids.html>

Plant Pathology

The 2023 Crop Diagnostic School is wrapping up and we will be heading to the field soon for the major Crop Disease Surveys. FHB risk forecasting will be wrapped up this week – farmers and agronomists attending the school told us today that most spring-seeded cereal crops have finished flowering and are now beyond the susceptible stage. We started posting about two weeks earlier this year and will be finishing earlier as well. Rapid crop development has been driven by above average Growing Degree Day (GDD) accumulation and, unfortunately, lower than average rainfall in most locations.

Manitoba 

Manitoba Agriculture, Food and Rural Development

MAFRD Home > Manitoba Ag Weather Program

Growing Season Report

Station Name:

Planting Date:
End Date:

Daily Weather Summary for Carman
From: May 01, 2023 To: July 11, 2023

Season Summary

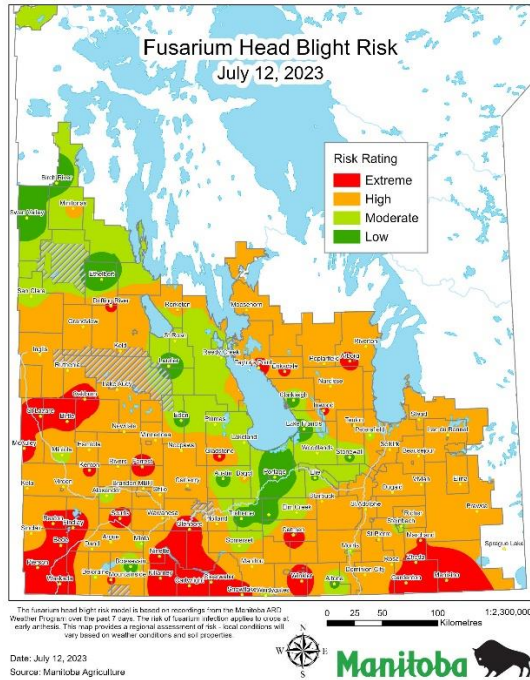
	Actual	Normal	Normal%
Number of Days	77		
Growing Degree Days	949	728	130
Crop Heat Units	1691	1333	127
Total Precipitation	61	174	35

Normals based on 30-year averages

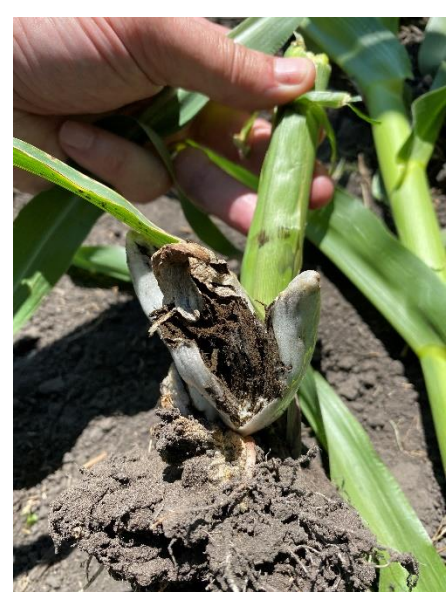
Season Forecast
Fall frost date risk:

	10%	25%	50%
Average Frost Date	Sep 04	Sep 10	Sep 18
Number of Days	55	61	69
Growing Degree Days	1691	1747	1806
Crop Heat Units	2599	2689	2789
Total Precipitation	179	189	201

Forecast is based on normal conditions for the remainder of the season



Actual pathogenic diseases observed at the Crop Diagnostic School this year were **bacterial leaf blight in oats**, **true loose smut in barley** and **common smut in grain corn**, all illustrated below, as well as some Barley Yellow Dwarf (aka. Red leaf) in oats.



Weeds

A new infestation of waterhemp has been found in a soybean field in the RM of Rhineland. The field had been sprayed with glyphosate alone and the waterhemp was noticeably taller than the crop. The weeds were positively identified through DNA analysis to be waterhemp and are being further tested for herbicide resistance. Note the larger plants in the pics below, leaf shape is more oblong than redroot pigweed and leaves are a bit brighter green and shiny. These plants are being rogued from the field as they are Tier 1 weeds under the Noxious Weeds Act and as such must be eradicated. Monitor all fields for this weeds and in particular more vulnerable crops like soybeans, corn, dry beans and sunflowers. Contact us at MB Ag for help in identifying suspicious plants and for developing a plan to deal with weeds like waterhemp and Palmer amaranth if they are found on your fields.



Forecasts

Bertha armyworm: Cumulative counts are still all in the low risk range in the traps for bertha armyworm, except for a trap near Waskada, which has moved into the uncertain risk range. The highest cumulative trap count so far is 353 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 as of July 12, 2023.

Region	Nearest Town	Trap Count
Northwest	Durban	89
	Makaroff	66
	Inglis	64
	The Pas (East)	61
	Minitonas	58
Southwest	Waskada	353
	Miniota	163
	Minto	118
	Pierson	84
	Crandall	71
Central	Low Farm	139
	Emerson	67
	Greysville	27
	Altona, Barnsley	18
	Horndean	15
Eastern	Beausejour	48
	Whitemouth	34
	Stead	31
	Ste. Anne	17
	Tourond	12
Interlake	Teulon	118
	Ashern, Hodgson	52
	Meadows	47
	Stonewall	46
	Poplarfield	45

← Highest cumulative count

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

Identification Quiz:

Question: What is this cluster at the top of the wheat head in this picture?

Answer: These are pupal cases of a parasitoid of caterpillars called *Cotesia* (Braconidae). There are many species of *Cotesia*, which can be hard to tell apart. This is a very interesting genus of parasitic wasps. Often *Cotesia* wasps will lay many eggs (20 to 60) into a caterpillar. This genus of Braconids is known to inject polydnviruses into the host along with the eggs. These suppress the immune system of the host. Infected caterpillars don't form a cocoon, but instead can reach extremely high weights.



About 2 or 3 weeks after eggs were laid into the caterpillar, the wasp larvae emerge from the caterpillar, which dies when the wasp larvae emerge. Emergence of the multiple larvae happens over quite a short period of time. Then they spin their cocoons on or near the caterpillar, forming a cluster of pupal cases, which can be quite visible at the top of plants. People often mistake these for eggs.

Eventually the adult parasitic wasps will emerge from these cocoons and be looking for more caterpillars to lay batches of eggs into.

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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.