

Manitoba Crop Pest Update

Issue 2: May 27, 2020



Summary

Insects: Cutworms are being found in some fields. Photos or samples of redbacked, dingy, and glassy cutworm have been sent in over the past week. There has been some spraying for cutworms in peas in the Northwest, and clover in the Central region. Flea beetles are being noted in canola fields. Most fields will still be protected by seed treatments, and with good soil moisture and temperature may have a good chance for getting to the 3 to 4 leaf stage before the seed treatment wears out. There have been some foliar insecticide applications for flea beetles on canola seeded early into cool soils in the Southern Interlake and south of Carman.

Diseases: As was the case last week, there were no reports from our network of field agronomists about pathogenic diseases in field crops. In the plots for the disease section of this year's Manitoba Crop Diagnostic School, the peas have emerged well and are already at the 4th leaf node stage. Oats and barley have emerged more recently.

Weeds: Now that the heat and moisture has weeds jumping, there are regrets about missing the pre-seed window. Off-label concoctions are dangerous, and can limit yield potential, please be cautious with creativity. Some problems just can't be solved.

Entomology

Re-gift your cutworms: Roughly 300 cutworms are required for a research trial on controlling cutworms. If you come across a field with a lot of cutworms, and don't mind some of them being taken from the field, please contact John Gavloski (see bottom of report for contact information) so a sample can hopefully be collected for the project.

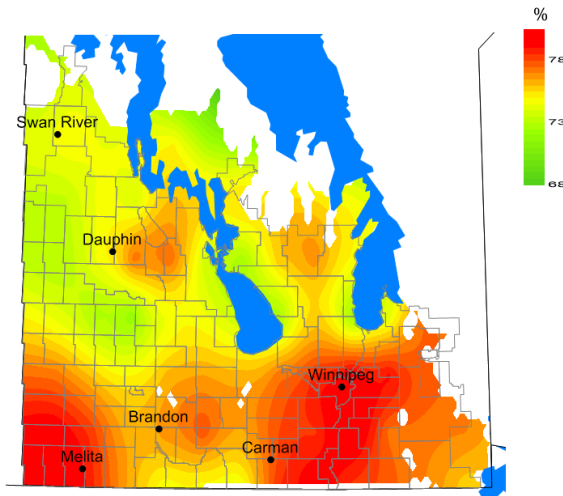
Grasshopper Development:

Our pest species of grasshoppers all overwinter as eggs. Once embryonic development is complete in the eggs they will hatch. The following map shows the average percent embryonic development of grasshopper eggs across Manitoba as of May 25, based on degree day calculations for migratory grasshoppers. Red on the map means on average development of the eggs is further along than areas with yellow or green on the map, and hatch could occur sooner in these red areas. When interpreting the map, note, however, that the range on the map is approximately 10%, thus embryonic development is actually very similar across most of the province. It is possible a very small portion of eggs would be hatching in some of these areas, as shown in the table next to the map.

Next week’s forecast is predicting warmer temperatures. This could result in more extensive hatch by the end of next week. Over the coming weeks, roadsides should be monitored to assess grasshopper populations.

% Embryonic Development of Grasshopper Eggs

% Hatch of Grasshopper Eggs



Location	Hatch(%)
Roblin	4.5
Swan River	5.5
Melita	5.8
Virder	3.4
Dauphin	0.5
Minnedosa	4.5
Brandon	1.7
Cartwright	0.0
Morden	4.7
Carman	0.0
Portage La Prairie	1.1
Winnipeg	4.8
Steinbach	4.5

Plant Pathology

This picture of oats was taken yesterday (May 26th) and you can see that the coleoptilar sheath has lengthened just enough for the first leaf to crack the surface from a depth of about one inch. The crop was seeded into warm moist soil less than a week earlier on May 20th.



Weeds



Waterhemp Update:

Waterhemp is starting to emerge in Manitoba fields. Keep an eye open for this Tier 1 Noxious Weed that is very competitive and can be quite detrimental to crop yields. The photo was taken today, but since waterhemp grows very quickly, early scouting and proactive weed control is essential to keep this weed from becoming more widespread. There is more

information available on our website: <https://www.gov.mb.ca/agriculture/crops/seasonal-reports/pubs/tall-waterhemp-notice.pdf>

Field Horsetail and Scouring Rush – Related but not the same



Field horsetail emerging in the spring.

Field horsetail (*Equisetum arvense*) is a perennial with a spreading rhizome system that produces numerous shoots and tubers. It has two types of stems; the leafless, fertile, cone bearing stems that grow 6 to 12 inches tall, and the sterile, hollow, vegetative stems that grow to 2 feet tall with whorls of branches growing from banded joints. Fertile stems are few in number, tan colored, and die back shortly after the pale green spores are shed. The vegetative stems all die back in the fall.

Scouring rush (*Equisetum hyemale*) is evergreen, with leafless, hollow, segmented stems with ash-colored bands (nature's lego). Stems grow to about 1/2 inch in diameter and reach up to five feet tall. They grow from aggressively spreading rhizomes and each stem is fertile, having small rounded cones containing reproductive spores at the tips. Because the stems are rough and durable (due to their high silica content) they were called "scouring rushes" because early pioneers used them to scrub pots and pans.

Control options: Tillage is not terribly effective because of the deep rooting, MCPA is most effective for when shoots are 20 to 25 cm tall (possibly so that there is enough plant biomass for uptake). Glyphosate has varying efficacy, and post-harvest treatments are not that effective. Glufosinate ammonium plus AMS has done decently for top-growth control in LL canola. Crop competition and an integrated management strategy are really all that will help to set back these dinosaur weeds.

Soils and Fertility

Struggling fall rye.

Firstly some thin stands, where larger plants at the stem elongation stage are falling over and looking weak. Inspection shows very poor nodal root development (above seed near crown). The lower roots appear to be sustaining enough moisture for some growth but nodal roots are failing to provide any support or nutrient uptake. In particular, I've seen this where rye was disk drilled into wet soils last fall and sidewalls of the trench were smeared (even worse in compacted tractor wheel tracks). With the dry spring, these furrows have dried out, opened up and sidewalls set like concrete, thus preventing root penetration. Roots are growing in a plane in the furrow – not 3 dimensional. A typical “sidewall compaction” issue is usually overcome with moist conditions after seeding.



In corn this is known as the “floppy corn syndrome” and is compounded by shallow seeding.

Nitrogen (N) deficiency in rye fields due to the lack of rain since mid April:

In one case, part of the field (right side in photo below) was more aggressively tilled in the fall and rye established better and is now greener and more advanced. Where seeded into heavy residue, I feel the dribbled UAN was hung-up in the residue, where a portion is likely to be

immobilized or volatilized. I expect with recent rains a good portion of this N will be washed into the root zone and some recovery will result. The lack of N was confirmed through tissue testing both parts of field.



The other case is where UAN was dribbled in mid April, but with the lack of rain, only those rows directly receiving a dribbled band of N are greening up and advancing – leaving regular yellow-green strips in the field. The N is likely not lost, just stranded at the soil surface until this recent rainfall.



(photo A. Knaggs)

Check stands for injury from seedplaced fertilizer, sidebanded or preplant banded N

Many cereals and canola are emerging now, so it's timely to check the fertilized stands vs the small "no fertilizer" check area you left at seeding. The picture below is of a shallow urea band on a 20° angle to seeding of oats (right photo below). Plant stand is still optimal (25-30 plants per square foot) but emergence is delayed and seedlings stunted directly over the urea band (left photo). This instance is on clay soils and we would expect it to be even more severe on sandy soils that have dried out.



Forecasts

Diamondback moth. A network of pheromone-baited traps are monitored across the Canadian prairie provinces in May and June to determine how early and in what levels populations of diamondback moth arrive. Highest counts so far have generally been in the South Interlake, although a trap near Gladstone has a count of 51 moths.

Table 1. Highest cumulative counts of diamondback moth (*Plutella xylostella*) in pheromone-baited traps for five agricultural regions in Manitoba as of May 27, 2020.

Region	Nearest Town	Trap Count
Northwest	Benito	3
	Swan Valley	2
	Grandview	2
Southwest	Foxwarren	5
	Justice	1
	All other traps	0
Central	Gladstone	51
	Portage la Prairie	9
	Killarney	6
Eastern	Lac du Bonnet	18
	Tourond	8
	Whitemouth	5
Interlake	Warren	78
	Clandeboye	16
	Gunton	12

No traps in Western Manitoba reporting over 5 yet. Good news for canola growers in this region.

Note the catch of 51 in the trap near Gladstone. This is a bit of an outlier at this point, as all other traps in Central regions are below 10. This can happen, depending on where arriving moths get deposited.

Five of the 7 traps in the Southern Interlake are over 10. Not alarming, but it seems some did get blown in and settled in this region.

Highest counts in each region and a monitoring summary are updated twice weekly (Fridays and Tuesdays) on the Insect Page of the Manitoba Agriculture and Resource Development website at: <https://www.gov.mb.ca/agriculture/crops/insects/diamondback-moth-forecast.html>

Identification Quiz:

Question: These are things can be seen crawling around on the soil this time of year. What mite they be?



Answer: The tiny bright red things you see on the soil this time of year are called red velvet mites. Red velvet mites are a family of mites (Trombididae). They are active predators as adults, but as early instars are often parasites on insects and some arachnids. Later in the season, you may see them on grasshoppers, particularly under the wings, for those of you that like looking under grasshopper wings.

Question: Is this herbicide carryover injury?



Answer: Maybe? There are many reasons to see a variable stand. Herbicide carryover is one option, so is proximity to fertilizer (those hot bands). So this is a great picture to assess that there is swelling with some of the coleoptiles and stumpy roots, there are a few other questions to ask:

- Is there any pattern in the field? even if it is a patch, is the soil in that patch different from the surrounding area in some way that might impact herbicide carryover or fertilizer injury

- Are there areas of potential spray overlap (corners, around potholes or poles) that show this symptomology? If not, maybe herbicide carryover isn't the issue.
- What is the crop rotation – any chance of a pathology problem?

Tune into CropTalk next week to see if John Heard and I can agree on what caused this injury.

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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.