Manitoba Crop Pest Update
Issue 2: May 29, 2019

Manitoba Agriculture

Summary

Insects: Flea beetles are a concern, with foliar insecticide applications occurring in many fields and some reseeding. Cutworms have also been a concern in a few fields.

Diseases: With growing degree days and accumulated moisture lagging well behind seasonal norms throughout the province, there is very little in the way of disease-conducive conditions, nor incidence of disease, to report this time around.

Weeds: Frost in many areas did not likely kill many/any weeds, but frost does slow plant growth which reduces herbicide uptake and efficacy. Those that did receive rainfall will be seeing a flush of weeds in the next few days. Winter annuals like stinkweed and shepherd's purse and perennials such as dandelion are blooming and setting seed, well past the optimum time for control.

Entomology

Flea Beetles: There has been foliar insecticide applications for flea beetles in quite a few fields this past week. In some instances there has been spraying of borders, in other cases whole fields. There are also some fields where canola is being reseeded either because of flea beetle feeding or a combination of flea beetles and frost. Striped flea beetle is still the most abundant species, however we are seeing more crucifer flea beetles. This is normal, because striped flea beetle is the earlier-emerging of the two species.

Flea beetles will feed more aggressively on hot, dry, calm days. So our current weather is good for flea beetle feeding. Some have been asking how long the flea beetle pressure will last. The spring populations of our crucifer-feeding flea beetles normally start dying and getting noticeably lower at some point in June. But given the cool start to the spring, I would expect it will be mid- to late-June before you notice a significant decrease. By then most of the canola should be into the more resistant 3 to 4 leaf stages of beyond. So for the next couple of weeks keep and eye on crops in the seedling stages.

Cutworms: There are reports of insecticide applications for cutworms in a few oats fields in the Central and Southwest regions, and some significant damage in a sunflower field east of Winnipeg. Cutworm damage to canola and peas, with some possible reseeding, has been reported from the Northwest region. If you are seeing

feeding damage to seedlings that is hard to explain, check the soil in the areas of the damage to see if cutworms are the culprit. So far it has been both dingy and redbacked cutworms that most have been finding.

Precautionary sprays for cutworms? Some have been asking about the pros/cons of tank-mixing an insecticide, such as a pyrethroid, with a herbicide application as a precautionary measure against cutworms. The rationale is an application is already occurring and the insecticide is cheap insurance. This is generally discouraged, unless you know you have an issue with cutworms. One reason, other than economics, is that any broad-spectrum insecticide application has the added risk that it decreases natural enemies that are keeping other potential pests in check. This week in fields near Carman, we could see a lot of very tiny beetles running over the surface of the soil. In catching and examining them, they were a small species of ground beetle called *Bembidion quadrimaculatum*. Although a small beetle (3 to 4 mm with 4 yellow patches at the sides of the elytra), they are searching for insect eggs and small insects to feed on. If a broad-spectrum insecticide application is applied to a field with low cutworm levels, not much is achieved for cutworm control, and you could set the stage for more root maggots, grasshoppers, etc. So the short answer – use economic thresholds, precautionary sprays are a risk financially, and have the added risk that they could inadvertently spur other insect problems.

Bembidion quadrimaculatum
(these can be hard to see on the soil)

Cutworm Quiz: Below are a couple of the cutworm photos that were sent in over the past week. See if you can determine the species.

a)

b)

Photo a) is a dingy cutworm. Notice the tire-track like markings down the back. Photo b) is a redbacked cutworm.
Photos courtesy of Julie Gullett, Manitoba Pulse and Soybean Growers (a), and Marc Davy, Ag Advantage (b).

Weeds

Grass Weed Identification

Grass identification is challenging for many (especially me), but there are some key areas to focus on: auricles, ligules, leaf sheath, hairs and roots can get you a long way in identification.

This chart has been popular as a summary for grass weed identification this spring. Effective control of grasses will vary with the weed, for instance foxtail barley can be controlled with tillage but quackgrass is usually spread with tillage.

Grassy weeds

Weed	Sheath	Ligule	Auricles	Life cycle
Wheat	split	membranous	small, hairs	annual
Barley	split	membranous	large, clasping	annual
Oat	split	membranous	none	annual
Wild oat	split	membranous	none	annual
Green foxtail	split	fringe of hairs	none	annual
Yellow foxtail	split	fringe of hairs	none	annual
Barnyard grass	split	none	none	annual
Brome, downy Japanese	'v-neck'	membranous	none	winter-annual
Foxtail barley	overlapping	membranous	none	perennial
Quackgrass	overlapping	membranous	small, clasping	perennial (rhizomes)

These pictures were submitted by Amber Knaggs at Shur-Gro.

Clues for grass weed ID from this picture: likely a perennial or winter annual because its already heading. Purple coloring suggests its not foxtail barley or quackgrass.

This picture is perfect!!!
***Ligule** – present, membranous, long*
***Auricles** – absent*
***Sheath** – v-neck*

Panicle provides the differentiation between downy brome and Japanese brome – this is downy (both are Tier 2 Noxious weeds).

Forecasts

Entomology:

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. Diamondback moth levels are generally still low.

Table 1. Highest cumulative counts of diamondback moth (*Plutella xylostella*) in pheromone-baited traps for five agricultural regions in Manitoba as of May 29, 2019.

Region	Nearest Town	Trap Count
Northwest	Dauphin	26
	Durban	12
Southwest	Brookdale	6
	Justice	5
Central	Roland	23
	Elm Creek	21
Eastern	Steinbach	31
	Tourond	15
Interlake	Teulon	11
	Fisher Branch	6

Delta Trap baited for diamondback moth

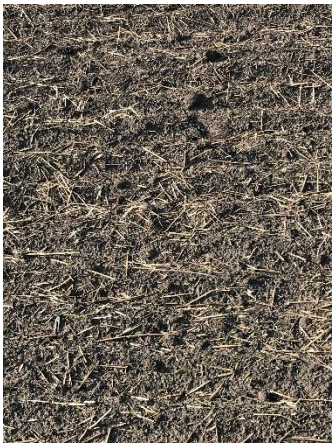
Plant Pathology:

Is it too early to be thinking about Fusarium head blight risk? In a word, yes. The first crop to be vulnerable to infection is winter wheat and the cool start to the season – most weather stations reporting growing degree day (GDD) accumulations of <70% of normal – means the crop is behind in development. Here's an example of crop stage from a winter wheat crop in the Red River valley. It's at the 6th-leaf, 2 tiller stage so there's still a ways to go before the head is in the shot-blade, about to emerge.

We have been speaking to those who, when it's warranted, put up the FHB forecast. With daytime highs now nudging 30C, it might be *less than 2 weeks* before we post the first FHB risk forecasts.

Weeds:

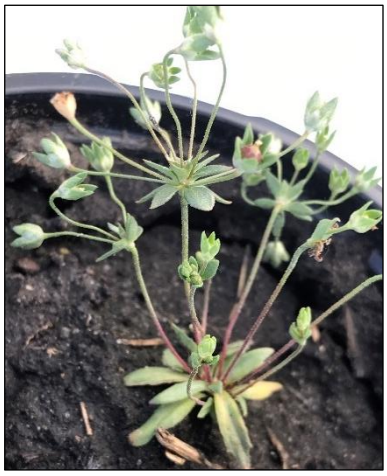
Bare ground? Take a closer look! In the next week expect significant annual weed emergence for areas with recent rain and upcoming warm temperatures. At this density, and especially since it is emerging before the crop, green foxtail will cause yield losses and reach economic thresholds quickly. (Page 43 of the 2019 Guide to Crop Protection provides more detail on yield losses from green foxtail).



Pest Identification Quiz:

Question: What weed is this?

Answer: *Androsace septentrionalis* (Pygmyflower) – one of many winter annuals that are submitted for identification early on. These small plants that are often found at field edges, but are rarely significant as a weed.



Question: What are these orange pustules on a riverside shrub and why should we be concerned about them?

Answer: This is common or **European buckthorn** which is the alternate host for **crown rust on oats**. Its leaves are glossy, serrated and have almost parallel venation. The pustules are the earliest signs of the **aecial spore stage** which can move to and infect oats within a kilometer or two of the river or stream.
Other cereal rust blow into our region from the south, but crown rust is one exception and local sources can cause early infections.

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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.