

Manitoba Crop Pest Update

Issue 10: July 27, 2022

Summary

Insects: There was still some pea aphid control in field peas over the past week, although some fields are advancing past the more susceptible stages of early pod growth. Aphids have also been noticed in some small grain fields, with oat-birdcherry aphid being the dominant species in some fields, as well as some English grain aphid being noticed. An oats field in the Eastern region had insecticide applied for aphid control. Insecticide applications for grasshoppers continue in some crops. Some high levels of armyworm larvae have been reported in some cereals and forage grasses in the Eastern region, where some fields have had insecticide applied.

Diseases: Compared to last year at this time, I have had many questions (mostly about fungicide timing) and queries – usually accompanied by photos – about diseases not seen for a few years. Of course, many of the pictures that my colleagues and I receive show symptoms un-related to pathogenic disease, insect feeding, or even nutritional deficiencies. In the Plant Pathology section, I will elaborate on some of the “new” issues this year.

Entomology

Armyworm scouting tips:

- Check several areas of the field, and determine the number of larvae per square foot.
- Larvae hide during the day, which makes assessing levels more difficult. During the day, at each stop shake the plants and look on the soil for armyworm larvae. Look under plant debris, lumps of soil, and in soil cracks.
- When armyworms are found have a quick look at the back for eggs of parasites.
- Fields across the road from each other can have very different levels of armyworms, so scout individual fields, and don't make assumptions based on what is happening in other fields in the area.
- Even within a field armyworm levels can vary greatly. If there are lodged areas on a field you may find more armyworms than in non-lodged



areas. The earlier seeded cereals seem to have higher armyworm levels in some areas in the Eastern region. These fields would have been the most attractive to the adults for egg laying when they migrated in.

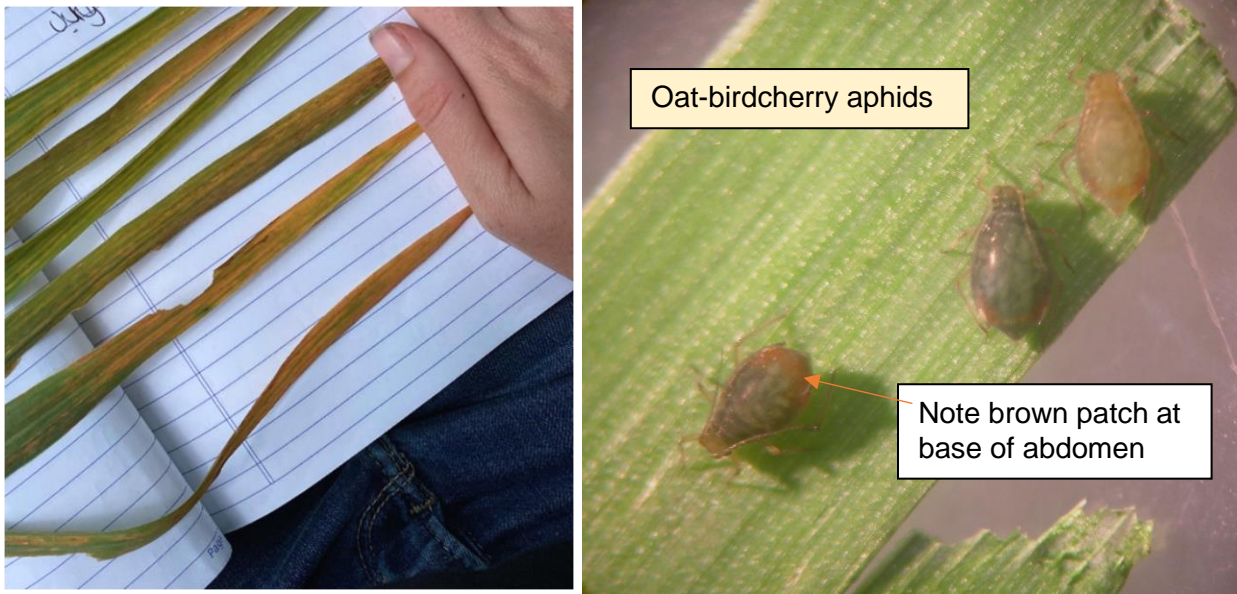
- Some birds commonly search for armyworms in small grain. Any field or areas of fields that have significant bird activity should be scouted to see why they may be there.

More information on the biology, scouting and management of armyworms can be found at: <https://www.gov.mb.ca/agriculture/crops/insects/true-armyworm.html>

Plant Pathology

Barley Yellow Dwarf virus can infect any of the small grain cereals. Thus far, it has affected in an oat field in the Eastern region. The distinctive symptoms are some stunting and reddish-purple leaves. In fact, in Oats we refer to the disease as Red Leaf (caused by BYDV). This viral disease requires an insect vector, the oat-birdcherry aphid. The disease was evident in patches and was more prevalent where aphids were abundant.

Be careful in your diagnosis though – without the vector present, reddened or purpled leaves are likely the result of environmental stresses. In addition, we received numerous pictures that fit that description but without clear cause(s).



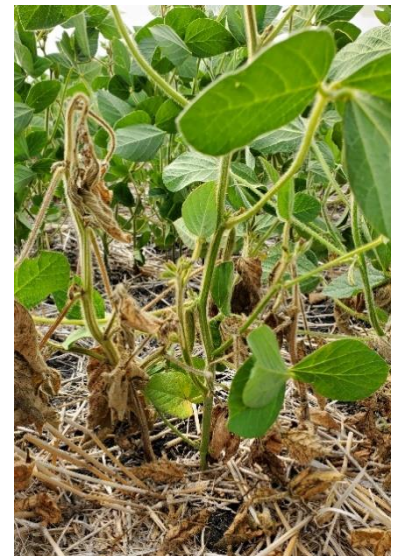
Red leaf on oats (BYDV) courtesy Brina Rathwell.

A few years back, we saw Bacterial Leaf Streak, especially on the Wheat variety AAC Viewfield. Another batch of photos from the same region were most likely BLS. It was on this same variety from bin-run seed. A deliberate higher seeding rate made for a denser canopy in which powdery mildew was becoming evident on the lower leaves.



Bacterial leaf streak on wheat – courtesy Karlee Nardai

Finally, in my first visits to fields, as part of our annual **Soybean** disease survey, I came across some **Phytophthora root rot**. A number of the plants were completely wilted, while others that were yellowed and partly wilted showed the distinctive browning symptoms at the base of plants and creeping up the stems. The distribution in this field, in the Central region, was small patches and only at trace levels. However, given the abundance of moisture this spring and early summer it is not surprising to see this fungus from a group often referred to as the “water moulds.”



One of our Ag Adaptation Specialists, Terry Buss, reports that saturated soils in the Eastern region have been hard on soybeans with general yellowing evident. While the *Mycosphaerella/Ascochyta* complex is at low levels in the area’s field peas, root rots are hitting hard in fields that had excess moisture. Terry also mentioned that fungicide timing is very difficult this year. This is no doubt because of “stagey” crops and ideal timing of fungicides has been a struggle throughout Manitoba.

Forecasts

Armyworms (*Mythimna unipuncta*). Larvae of 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 11 locations 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, with a trap in the Beausejour area having a higher cumulative count. The highest cumulative count is 152, from a trap near Beausejour in the Eastern region. Some high levels of armyworm larvae have been reported from the Eastern region in late-July.

Table 2. Highest cumulative counts of armyworms in pheromone-baited traps for agricultural regions in Manitoba as of July 26, 2022.

| Region | Nearest Town | Trap Count |
|-----------|---------------|------------|
| Northwest | Grandview | 3 |
| | Silver Beach | 0 |
| Southwest | Brandon | 24 |
| | Brookdale | 13 |
| Central | Rosenfeld | 64 |
| | Halbstadt | 36 |
| | Rosebank | 18 |
| Eastern | Beausejour | 152 |
| | Dominion City | 66 |
| | Lac du Bonnet | 79 |
| | Randolph | 1 |



← 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-july12-2022.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".

Bertha Armyworm (*Mamestra configurata*). A network of pheromone-baited traps are monitored across the Canadian prairie provinces in June and July to determine levels of bertha armyworm adult moths, and forecast risk of their potentially being economic levels of larvae somewhere in the region. Traps are set up at 51 locations in Manitoba this year. The traps do not determine risk for the field specifically that the trap is in, but can estimate regional risks, which can help prioritize scouting for larvae. All the

cumulative counts in Manitoba are currently in the low risk category. The highest cumulative trap count so far is 152 near Durban in Northwest Manitoba.

Table 1. Highest cumulative counts of bertha armyworm (*Mamestra configurata*) in pheromone-baited traps for five agricultural regions in Manitoba as of July 27, 2022.

| Region | Nearest Town | Trap Count |
|-----------|-------------------|------------|
| Northwest | Durban | 152 |
| | Bowsman | 80 |
| | Bowsman | 71 |
| | Dropmore | 60 |
| Southwest | Glenboro | 105 |
| | Oakburn | 101 |
| | Decker | 87 |
| | Killarney | 81 |
| Central | Belmont | 32 |
| | Emerson | 30 |
| | Rosenort, Baldur | 19 |
| | Horndean | 18 |
| Eastern | Beausejour, Stead | 11 |
| | Whitemouth | 7 |
| | Ste. Anne | 5 |
| Interlake | Arborg | 2 |
| | | |

← Highest cumulative count

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

Highest counts from bertha armyworm traps 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/bertha-armyworm-forecast.html>

Identification Quiz:

Question: The two insects in the photo to the left were both found on a pea pod. What are they?



Photo by Carisa Penner-Cargill, Nesbitt

Answer: The top insect is a lady beetle pupa, the bottom insect is a lady beetle larva. Pupae will be attached to the plant, and are a non-feeding stage. The larvae will be quite active, and seeking out aphids and other prey to feed on.

Several agronomists have commented on finding larvae and pupae in pea fields this year. They would have been drawn in by the abundance of pea aphids in many pea fields this year.

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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.