

Insects in Field Crops in Manitoba in 2011, and forecast for 2012.

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The biggest insect concerns in cereal crops in 2011 were aphids, armyworms (*Mythimna unipuncta*), and thrips. Diamondback moth (*Plutella xylostella*) and Lygus bugs were widespread concerns in canola, and there were localized problems with bertha armyworm, *Mamestra configurata*. High levels of striped flea beetle, *Phyllotreta striolata*, in some canola fields in eastern Manitoba in mid- and late-July was an unusual occurrence. Soybean aphid, *Aphis glycines*, populations were at economic levels in many soybean fields from late-July to late-August. Levels of zebra caterpillar, *Melanchnra picta*, were high and a concern to some canola and flax growers in late-August and early-September.



A much more detailed summary of insects in field crops in Manitoba in 2011, as well as annual summaries from previous years are posted at: <http://www.gov.mb.ca/agriculture/crops/insects/index.html>

Figure 1. Lygus bug on canola

In addition to the summary and forecast for insects in crops, and in keeping with the theme of the conference on “Sorting Agronomic Fact from Fiction”, 5 “Insect Fact or Fiction” questions were presented.

Insect Fact or Fiction

- Question 1) Given that **aphids** have a high rate of reproduction and multiple generations per year, aphid populations will continue to increase over the course of a growing season? True or false?
Answer: This is false. There are many factors that can regulate aphid populations, including predators, parasitoids, diseases, and weather conditions. Although it is possible for aphid populations to continually increase throughout a growing season, populations can stabilize and even start decreasing. We saw an example of this in 2011, when some soybean aphid populations in Manitoba decreased very noticeable in mid-August.
- Question 2) If I see **thrips** on a plant, the plant they are on will be their main source of food? True or false?
Answer: Although in many cases this will be true, there are many species of thrips and they can be plant feeders, pollen feeders, fungus feeders, predaceous, or feed on a combination of these types of food. As an example, *Aeolothrips fasciatus* is a species of thrips that is predaceous, and also feeds on pollen. There are slightly over 100 species of thrips in Canada (Danks, 1979), of which 11 species have been considered potential pest species.
- Question 3) **Bertha armyworm** larvae go through 6 stages of growth (called instars). About 80 % of the food larvae eat occurs in the final instar. True or false?

Answer: This is true. This was demonstrated by Bailey (1976) in experiments at Agriculture Canada in Winnipeg.

- Question 4) **Flea beetles** can be considered beneficial insects? True or false?
Answer: This is true, but whether they are potential pests or beneficial depends on the species. While most agronomists and farmers will be quite familiar with the crucifer flea beetle, *Phyllotreta cruciferae*, and the striped flea beetle, *Phyllotreta striolata*, which feed on canola and other cruciferous crops, there are 72 species of flea beetles known from Manitoba (Cho et al., 1994). Some of the species of flea beetles in Manitoba feed only on weeds. For example, five species of flea beetles in the genus *Aphthona* have been released in Manitoba to help manage leafy spurge.
- Question 5) For the species of **lady beetle** in this photo (*Coccinella septempunctata* – seven-spotted lady beetle), adult males can eat at least 75 soybean aphids in a day, and adult females can eat at least 115 soybean aphids in a day. True or false?
Answer: This is true. This is based on research done in Ontario by Xue et al. (2009). In addition they reported that third instar larvae of the seven-spotted lady beetle can each eat at least 105 soybean aphids per day.



Figure 2. Seven-spotted lady beetle

Literature Cited

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