

Manitoba Crop Pest Update

Issue 1: May 12, 2021

Summary

Insects: Flea beetles are emerging. Striped flea beetles, the earlier emerging of the two more common flea beetles in canola, are quite noticeable in some areas. Monitor early emerging canola for feeding from flea beetles and other early-season insects.

Weeds: Due to the dry conditions and cooler temps weed growth has been slow. Keep scouting, however, as there may be more there than you think! Check labels to see when burn-offs can be sprayed relative to crop planting and/or emergence. And when spraying after cool nights or light frosts, weeds need to be actively growing to take up the herbicide. Weeds should be sprayed when temps are 8-10 degrees and rising, for at least a few hours.

Entomology

Is there an ideal time to seed canola to minimize the risk of injury from flea beetles?

This is a complex question as weather and growing conditions right after seeding factor in.

A few things that need to be considered are:

- The insecticide component of the seed treatment generally has about 3 weeks residual from planting date (not emergence); maybe 4 weeks if weather conditions are not conducive for feeding by flea beetles.
- Research has shown that yield of canola was reduced most when plants were damaged during the seedling to second true leaf stage, with less impact when they were damaged after reaching the third to fourth true leaf stage (Bracken and Bucher. 1986. The Canadian Entomologist. 118: 319-324).
- The challenge is to get the canola plants to a stage where they can naturally tolerate flea beetle feeding (3-4 leaf stage) without having occurred significant feeding injury.
- Slow emergence and early season growth makes canola more vulnerable to flea beetles.



Getting the plants to the 3-4 leaf stage within 3 weeks on seeding date will reduce the risk of damage by flea beetles.

If someone had seeded early and happened to get conditions for quick germination and rapid early season growth, they may not have to worry about foliar applications of insecticide. They may also get the canola to a more tolerant stage before peak flea beetle emergence. Seeding too early can increase the risk of flea beetles, however, should conditions not be suitable for quick germination and rapid growth. A grower could then be caught in a situation where the seed treatment no longer is providing protection, the canola is still seedlings, and flea beetles are just starting to peak. Weather and growing conditions factor in heavily.

There have been a few studies that looked at seedling date and the level of flea beetle injury:

- A study in Manitoba found that earlier seeded tests suffered more damage by flea beetles (Lamb. 1984. *The Canadian Entomologist* 269-280).
- A study in North Dakota found that early seeding increased injury by flea beetles (Knodel et al. 2008. *Journal of Economic Entomology*. 810-821).
- A study in Alberta found that early seeding reduced damage by flea beetles in southern Alberta, but increased damage in central and northern Alberta. (Carcamo et al . 2008. *Journal of Applied Entomology*. 623-631).

The complexity to recommending an ideal time period of seeding to minimize risk of flea beetle injury is that weather and growing conditions right after seeding are important. Dry soils, cool temperatures, frosts and other things that can delay germination or keep the canola in the seedling stage for prolonged periods are difficult to predict. My general advice, anticipate high levels of flea beetles in late May and early June and whatever you can do to get quick germination and early growth will reduce the risk of excessive injury by flea beetles. This needs to be factored into all the other considerations regarding optimum seeding date for canola.

Soil Fertility

Surface applied nitrogen is not lost – just stranded!

Like a COVID-era traveller, much of our surface broadcast applied fertilizer is feeling unloved – and stranded. The dry soil and lack of precipitation has meant that surface applied fertilizer, particularly nitrogen is stranded at the surface, and is not being moved into the root zone where it will eventually be needed. Often under such dry conditions we are concerned about volatilization loss of such surface applied urea-form N. But generally it has been so dry that pellets are not absorbing enough moisture to dissolve and react. The critical relative humidity for urea is about 75% at warm temperatures in order to absorb moisture. And the soil surface is a dust mulch, which prevents any soil moisture wicking to the surface from below.

Amir Farooq (western MB agronomist) and I have on-farm projects set up to detect any volatilization loss of ammonia (NH_3) from shallow banded urea. As a check we compare to surface applied urea (Figure 1). Some 10 days after application most urea pellets still are intact with no ammonia loss detected. No losses have been detected from shallow bands either.

Figure 1. Surface applied urea remaining intact some 10 days after application. Dositube indicates no NH_3 lost.



Forecasts

Diamondback moth. A network of pheromone-baited traps are being monitored across the Canadian prairie provinces in May and June to determine how early and in what levels populations of diamondback moth arrive.

So far only 1 diamondback moth in total has been captured in the traps, that being from a trap near Austin. There is no evidence of movement of populations of diamondback moth into Manitoba at this point.

Armyworms. Thirty traps for armyworms (*Mythimna unipuncta*) are set up this year to monitor for migration of armyworm moths into Manitoba. Armyworms can potentially be a concern in cereals and forage grasses when large numbers migrate into Manitoba. So far only 1 armyworm moth has been found in the traps, that being from the Eastern region.

Identification Quiz:

The cutworm in the photo below was recently photographed in a field near Ashville in the Northwest. What species is it?

Hints: - Note the markings on the back that look v-shaped, or like tire tracks.

- Note the size; could be a species that overwinters as partially grown larvae.



Photo courtesy Bre Fulham
– Intermountain Ag Supply

Answer: This is dingy cutworm (*Feltia* sp.). Dingy cutworms are primarily leaf feeders, and rarely cut plants. They overwinter as partially grown larvae.

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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.