Flea Beetle Identification, Assessment, and Management in Canola

Flea Beetle Identification

- There are two dominant flea beetle species in Western Canada.

1) Striped flea beetle:
   - Black with two distinct yellow stripes on either side of their black back.
   - Typically emerges earlier in the spring than the crucifer flea beetle.

2) Crucifer flea beetle:
   - Completely black with a metallic sheen.
   - Typically emerges later in the spring than the striped flea beetle.

Assessment of Flea Beetle Damage

- Scout fields from cotyledon to a minimum of the 4-leaf stage.
- Adult flea beetles feed on the surface of leaves, stems, and pods and produce small pits. Feeding can also occur on the underside of leaves and on stems.

Flea Beetle Distribution and Life Cycle

- Both the striped and crucifer flea beetles are found wherever canola is grown.
- The striped flea beetle tends to emerge and become active 1 to 4 weeks prior to the crucifer flea beetle.
- The crucifer flea beetle tends to peak in emergence when the ground temperature is above 15°C.
- Sunny, warm and dry weather increases flea beetle feeding.
- Cool, damp weather can slow feeding and can drive flea beetles down the plant where they feed on the stem and underside of the leaves.

Flea Beetle Management

- Action threshold established for flea beetle feeding on canola is when there is 25% defoliation of the plant, and the flea beetles are actively feeding.
- At this time an application of a foliar insecticide should be considered.
- High flea beetle populations combined with low plant populations and slow crop growth due to cool and/or dry conditions can allow flea beetle feeding damage to increase rapidly. Lowering the action threshold to 15-20% defoliation may be beneficial.
- There is no threshold established for stem feeding, however given the importance of the stem and its delicate nature, stem feeding can often result in plant mortality and warrant foliar control measures.

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**Figure 4.** Assessing flea beetle damage on canola. Courtesy of the Canola Council of Canada (www.canolacouncil.org)

**Figure 5.** Standard canola seed treatment compared to standard seed treatment plus Lumiderm™ insecticide seed treatment 42 days after seeding. Seven Persons, AB. *Standard canola seed treatment is a neonicotinoid insecticide in combination with a fungicide package.*