



# 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.



Figure 1. Striped flea beetle



Figure 2. Crucifer flea beetle

## Flea Beetle Distribution and Life Cycle

- Both the striped and crucifer flea beetle 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.

## 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.

- **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.

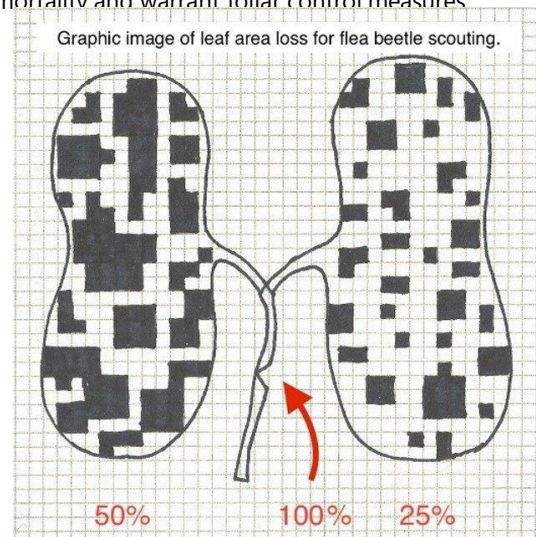


Figure 3. Image representing 25% and 50% leaf area loss due to flea beetle feeding. When stem is clipped, loss is considered to be 100%. Courtesy of the Canola Council of Canada ([www.canolacouncil.org](http://www.canolacouncil.org))

## Flea Beetle Management

- **Seed Treatment:** all canola is treated with a neonicotinoid treatment for flea beetle protection. Additional options are available for enhanced protection.
- Flea beetle feeding still occurs when seed treatments are utilized, as insecticide ingestion is required to achieve flea beetle control.
- Use best agronomic practices to promote a healthy crop. Higher plant populations can limit the amount of damage.
- Strong early vigor can limit the amount of flea beetle damage (% defoliation) per plant and help avoid breaching the damage threshold where a foliar insecticide is required.

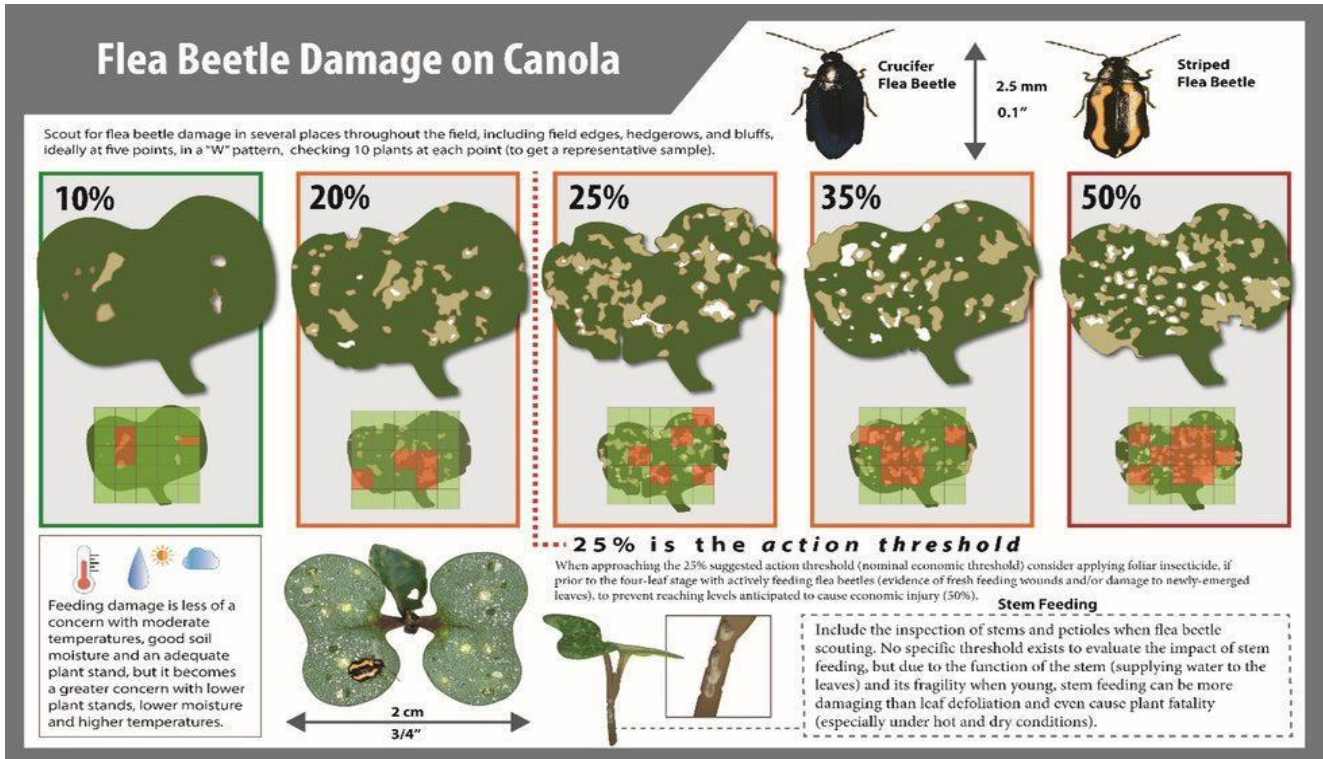


Figure 4. Assessing flea beetle damage on canola. Courtesy of the Canola Council of Canada ([www.canolacouncil.org](http://www.canolacouncil.org))



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.