

Foliar spray control of flea beetles gets a look by federal researchers

By Barb Glen



Agriculture Canada researcher Hector Carcamo discusses flea beetle control research during a Farming Smarter field day June 6 in Lethbridge. | Barb Glen photo

Uncertainty over the future availability of neonicotinoids as seed treatments to control flea beetles in canola continues to encourage more research into foliar insecticide applications and other methods to limit insect damage.

Agriculture Canada research scientist Hector Carcamo discussed some of that research June 6 during a field day organized by the Farming Smarter applied research group in Lethbridge.

Carcamo said control is complicated by the expanding range of striped flea beetles, which are not as susceptible to neonics as their crucifer flea beetle cousins.

He is conducting field trials to study the effectiveness of foliar insecticides in protecting yield, as well as the effect of seeding density on yield when the crop has had seed treatment or foliar spray or no insecticide in any form.

There have been numerous reports of flea beetle damage across the Prairies this spring, but spraying is recommended only if there is more than 25 percent defoliation of young plants and the beetles are continuing to feed. That level has been reached in some areas.

Carcamo wants to verify that the 25 percent threshold is the best measure.

"If we don't have neonic seed treatments, then we may have to use more foliar, and the other reason is that the neonics don't work on the striped flea beetles so we still have to use foliar," he said.

"So if we're going to use foliar, we need to know the thresholds at which to treat."

He is also studying the effect of different seeding densities on yields in crops faced with flea beetle pressure. Three, six and 12 plants per sq. metre are being measured in combination with neonic seed treatments, foliar spray or no treatment.

Last year, the first in a four-year study, the lowest plant density also had the lowest yield, especially with no seed treatment, but one year of data is not enough to draw conclusions, said Carcamo.

Seeding canola as early as possible used to provide yield protection against flea beetles, at least in the south, because the plants had sufficiently matured to withstand damage by the time crucifer flea beetles emerged in spring.

That has changed with the expanded range of striped flea beetles. They emerge earlier in spring and start feeding sooner.

Once canola crops have matured beyond the cotyledon stage and have developed true leaves, they can generally withstand flea beetle pressure unless infestation is really severe.

Crop scouting is essential to determine damage, though Carcamo notes that it's not always easy to determine the best course of action.

"It's hard to be objective if you're a farmer on the field because it will always look worse than it is."

The Canola Council of Canada provides this advice on scouting: "Assess damage to cotyledons and the first true leaves of seedlings daily, as well as the stems for stem feeding/damage and the undersides of leaves where flea beetles tend to move to in unfavourable weather conditions.

"If leaf area loss is below thresholds, but flea beetles are present in high numbers and the crop is not advancing, stem feeding may be the reason. Continue to scout until the seedlings are past susceptibility, especially when temperatures exceed 14 C and feeding advances rapidly."