

Diamondback moth numbers extreme in some areas

By Barb Glen

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MEDICINE HAT — Diamondback moths didn't look like a problem in the early part of this year's growing season.

Then they became a big problem.

"Diamondback moth really was a massive issue for canola growers in southern Alberta and a little bit of a surprise because we've never, ever seen anything like that in Alberta," said provincial insect management specialist Scott Meers.

"This was unprecedented in southern Alberta this year. We had some cases where the numbers were extreme."

Meers told the Farming Smarter Cypress Conference Oct. 26 that his department doesn't do forecasts on diamondback moths because they do not typically overwinter on the Prairies.

Instead, it monitors the spring flight during the insect's migration on winds from the south.

"The numbers of adult catch in our pheromone traps was quite normal, but they built up through the summer and we started to get calls from guys who were doing their sweeps for cabbage seedpod weevil," he said.

Farmers reported few weevils but many diamondbacks in their sweeps.

"In retrospect, we should have taken it a little bit more seriously," said Meers.

The moths themselves don't do a lot of damage, but the larvae feed on canola pods and cause dry-down and shattering.

The hot, dry summer favoured several generations of the insect, and those conditions also reduced the number of parasitoids that would normally provide control.

"The other thing that we have been ignoring in this whole system is fungal activity," said Meers.

Fungal growth can kill larvae, but heat and drought reduced it this summer.

Farmers with diamondback infestations had many questions about spraying thresholds, and Meers agreed they are likely inadequate. However, a new figure is hard to determine when crops are poor because of drought.

"We had very poor crops, so how do you determine whether or not it's worth spraying a 10 bushel canola crop when you've got way over the numbers of diamondback moth?" he said.

A low bushel crop has fewer pods, and the insect affects the pods, so spray thresholds might be lower in poor crops.

The Canola Council of Canada says the nominal threshold for larvae is 20 to 30 per sq. foot in crops, but acknowledges that plants with lower leaf surface might demand a lower threshold.

As for the economics of spraying a low-yielding crop, the council says that "at \$15 to \$25 per acre to spray — depending on product and application method — a spray that saves two to three bu. per acre should be at or slightly above the economic threshold.... If yield potential for all canola on a farm is well under its crop insurance coverage point, spending more on the crop doesn't make financial sense."

Meers said one lesson learned this year is to pay more attention to diamondbacks while sweeping for cabbage seedpod weevil.

Another lesson is that synthetic pyrethroids, which are the treatment for diamondback moths, do not work when temperatures exceed 25 C.