

# MANAGE RESISTANCE *Now*

Protect your land, one field at a time

## CASE STUDY

### JAKE LEGUEE

Grower, Fillmore, Saskatchewan



## Multiple strategies key to successfully managing pests and insecticide resistance

When you manage 13,800 acres of cropland like Jake Leguee does, it's important to know what you have – and don't have – in all your fields.

It's why Leguee will visit his fields once per week during the growing season and usually every three to five days immediately before seeding and flowering.

His typical mix of canola, peas, lentils, spring wheat – including midge-tolerant varieties – durum, flax and soybeans can come under various insect pressures. Within the last three years, he's had to deal with wheat midge, diamondback moth, flea beetles, cutworms and aphids.

### Cultural practices minimize pests

Despite the pressures, he doesn't waver from his cultural practices, which begins with a strong rotation.

"We try to run a fairly long rotation on our fields, 25 per cent peas, 30 per cent canola and the rest cereals," says Leguee, who is also a certified agronomist. "That's the first step. If you can break things up a little bit more you tend to have less pest problems."

He plants his cereals as early as possible in order to have them growing and competitive before insects begin to mature and attack. So far, it's worked well in cereals, but he still prefers to wait until the first week of May for canola.

### Gather information before making spray decisions

He's a big advocate for provincial guidebooks on economic thresholds and making detailed notes annually of what he dealt with, documenting various pests' pressure levels. In addition, he also consults with his agronomist, retailer, fellow farmers on social media and, most importantly, his neighbours.

"If they are seeing something that you're not even aware of, it's a great way to start and look," he says. "We all have to go out and look."

Leguee will spray, but only as a last resort, like in 2017 when he dealt with diamondback moth in his canola.

**He plants his cereals as early as possible in order to have them growing and competitive before insects begin to mature and attack.**

“I was out checking canola for a month straight on a regular basis to see if there’d be enough moths to spray,” he says. “We had to treat a couple of our own fields, but they never grew to a high enough level to do enough damage to warrant a blanket insecticide application and I do believe it’s because of the beneficial insects.”

Because of the targeted and selective approach of modern insecticides, Leguee uses them sparingly for a few reasons.

“One is the cost, which can be as high as \$12 per acre,” he says. “We also have other things to do and don’t want to spend all those hours in the sprayer. We’re always looking at other things before we get to the point of spraying.”

For his midge-tolerant wheat crops, he doesn’t mind having to invest in new seed every other year in order to protect the Sm1 gene to guarantee midges do not build up resistance.

### **Routine scouting is a key component**

He also closely manages any field where there were peas growing on it the year prior, since the plant matter is harvested down so short, the ground warms up very quickly in the spring, allowing cutworms to deposit eggs in the soil bed. But, just like any other crop, routinely checking it, watching the economic threshold and letting beneficial insects go to work, are all cultural practices Leguee employs before considering an application.

“With a good crop rotation and using the products at appropriate rates and timing, we aren’t dealing with insecticide resistance,” he says. “These very targeted products are also great for environmental stewardship because of their efficacy.”

Overall, he’s grateful for ongoing research related to pests and professional development opportunities such as conferences and grower meetings during the winter months.

“There’s new ideas and thoughts about how to control insects,” he says. “You have to keep your mind open as to how you control insects. They’re honestly the worst thing to scout for: they’re complicated, the thresholds are hard to figure out in a large field and there’s a lot of points you have to check. Insects are really, really tough to scout for, but it’s well worth it.”

**“With a good crop rotation and using the products at appropriate rates and timing, we aren’t dealing with insecticide resistance,” he says.**

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