Real Agriculture

Canola School: Mapping a control strategy for kochia

YouTube Video

Kochia is a big concern for farmers across the Prairies, primarily because it's a tough weed to kill, and the population is rife with herbicide resistance. Most farmers are aware of Group 2 resistance — which is old news — but newer Group 9 resistance is cropping up, which further complicates control of this prolific weed.

Lewis Baarda, from Farming Smarter joins us for this episode of Canola School to talk about kochia control, why it's so hard to kill, and why it's important to avoid letting it set seed.

One kochia plant can produce 20,000 to 30,000 seeds and as it tumbles across a field, those seeds can spread really far. "If you've been to any presentation on kochia in the last 20 years, you've seen those lines of kochia in the field," says Baarda.

Kochia is also quite genetically diverse, so those 30,000 seeds may have several different characteristics, like early emergence or late emergence or resistance to different herbicides. Furthermore, it can thrive in a variety of conditions — low plant competition, saline conditions, or drought conditions. That early emergence doesn't often work in farmers' favour, because it can get large and become hard to control, and fast.

Diversifying your crop rotation will help with mixing those modes of actions and herbicide groups, says Baarda, as will choosing crops that can compete with kochia. Multiple herbicide applications throughout the year might be an option — say a pre-seed product, an in-crop application, and a pre-harvest application, following maximum residue limit guidelines of course.

An on-farm project from Farming Smarter tried out different forms of mapping, including some basic drone imagery when the kochia was still green, to see where patches were, which allowed them to efficiently spot spray with an effective herbicide. Identifying those patches also allowed them to try out mechanical controls like tilling and mowing.

When kochia seed is at 30 per cent moisture, and that seed is viable, so mechanical controls won't work. But if you can catch it at this stage with a pre-harvest application, or at post-harvest with a Group 14, which should provide some residual into the fall and spring, depending on moisture. A Harrington Seed Destructor might also be a really good fit since any seed that goes through it, including kochia, is no longer viable.

A multi-pronged approach is the best approach to controlling kochia, says Baarda, otherwise we may have to rely on more extreme measures.