

Forget the silver bullet, bring out the arsenal against kochia

Study using multiple methods to control one of the most dangerous weeds on the Prairies

By Alexis Kienlen *Reporter*



Lewis Baarda.
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If it's a one-on-one battle, put your money on kochia.

The pernicious weed is not only a prolific seed producer, thrives in harsh conditions, and spreads its progeny far and wide, it's also a master when it comes to developing resistance to herbicides. So producers are urged to use a variety of 'best management practices' to control kochia before it gets out of control.

But what's the best recipe?

That's a question that Farming Smarter is addressing in a four-year study on controlling the weed — a project that is field scale in scope, site specific, and utilizes a bevy of high-tech tools, including satellite and drone imagery and advanced GIS (geographical information systems).

You need an arsenal of weaponry when going up against kochia, said Farming Smarter researcher Lewis Baarda during a field school earlier this month.

"The characteristics of kochia include its rapid seed production," Baarda said during the digital and in-person event. "It has about 20,000 to 30,000 seeds per plant."

It also emerges early, does well in saline soils, flourishes during droughts, and spreads its seed over large areas after drying off and becoming a tumbleweed.

But it is the weed's ability to develop resistance to herbicides that makes it such a huge threat, he noted.

It developed Group 2 herbicide resistance about 30 years ago and about 10 years ago, batches of kochia able to tolerate glyphosate (Group 9) began to show up in the States. Today, kochia is considered to be fully resistant to Group 2 herbicides, and a 2017 survey in southern Alberta found more than 50 per cent of kochia populations were also resistant to glyphosate (a Group 9 herbicide).



Farming Smarter's field day in early July had an unusual aspect — attendees — who heard from several speakers, including researcher Lewis Baarda. Photo: Supplied