



Got Control Issues?

Developing new herbicide and weed management options for pulse growers

In 2011, SPG identified weed control in pulse crops as one of the key issues facing pulse growers in Saskatchewan. As a result, the *Weed Science and Herbicide Technologies for Pulse Crops* project in partnership with the University of Saskatchewan (U of S) was born.

Lead by Dr. Chris Willenborg, Assistant Professor in the Plant Sciences Department at the U of S, with support from Research Assistant Ken Sapsford, the project was set up to develop a pro-active weed control program for SPG.

“Weed control is a major challenge for pulse growers, both with respect to the increasing

incidence of weed resistance and a general lack of herbicide options in pulse crops,” Willenborg says. “Our goal with this research agreement was to widen the portfolio of herbicide options available to pulse growers to give them new herbicide options, as well as improve their ability to manage herbicide resistant weeds.”

Since its inception the project has made significant advancements in weed control in pulse crops, of which Willenborg considers the most significant to be the advancements in product registrations. “While we aren’t able to get into the specifics at this moment, we have determined that a number of products can be used in various crops where no registration exists currently,” he says. “In these cases we are working with the manufacturer towards registration or in some cases, seeking minor use registration for products.”

One of the outcomes Sapsford is currently most proud of relates to work undertaken related to sulfentrazone. “We have done a lot of work with sulfentrazone

(Authority) for use on pulse crops. Even though it was registered on peas and chickpeas prior to the start of this project, we have assisted in reducing the re-cropping time for canola to 12 months after application and lentil to 24 months after application, which greatly helps the growers without restricting their cropping rotation.”

While the program is making significant advancements in weed control, it also plays a key role in supporting work being undertaken by the SPG-funded breeding program at the U of S Crop Development Centre (CDC). “We identified early on that there are significant differences in lentil variety tolerance to group 14 herbicides,” Sapsford says. “From that initial and continued screening, lentil breeder Dr. Bert Vandenberg is making progress in developing a group 14 tolerant lentil. We have also been working with pea breeder Dr. Tom Warkentin to improve the tolerance in peas to Odyssey and look for other modes of action where herbicide tolerance could possibly be developed. In the

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area of chickpea, we have worked closely with chickpea breeder Dr. Bunyamin Tar'an on evaluating the imi-tolerant chickpea."

The project is set to continue until at least 2016, and both Sapsford and Willenborg are excited about the continued potential in the program area and possible outcomes, including different modes of action for weed control in pulse crops and

the potential for new pulse crops in Saskatchewan.

"I believe the key outcomes in the future arising from this project will be a much wider portfolio of herbicide products for pulse growers," Willenborg says. "These options will help widen weed control in smaller acreage pulse crops like faba bean, which has great potential to occupy many acres in Saskatchewan."

Willenborg believes the model by which this project is funded is a really unique opportunity for both the U of S and growers. "Projects like this one, where there is also significant collaboration with industry, leverage grower dollars in an extraordinary way. The results that have come from this work should be of great benefit to growers, industry, agronomists, and academics alike."



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--Chris Willenborg/Lead Researcher, Assistant Professor in the Plant Sciences Department at the U of S