

Metazachlor (Butisan™ Herbicide): new herbicide for the control of annual ryegrass (*Lolium rigidum* Gaud.) and other weeds in canola (*Brassica napus* L.) in Australia

Ian Francis and Marco Montagna

BASF Australia Ltd, Level 12, 28 Freshwater Place, Southbank, Victoria 3006, Australia
(marco.montagna@basf.com)

Summary Metazachlor (Butisan™ Herbicide) belongs to the chemical class of chloroacetamides which inhibit the synthesis of very long chain fatty acids (VLCFAI). Metazachlor is a pre- and post-emergence herbicide that enters target primarily through monocot roots/hypocotyls and dicot cotyledons during germination and early emergence. It has, therefore, its best herbicidal effectiveness during early development stages of the weeds. The efficacy and crop safety of metazachlor was evaluated in twenty-five trials conducted during the 2014 and 2015 growing seasons across the Southern canola growing regions of Australia at 750 to 1876 g a.i. ha⁻¹ rates applied at the incorporate by sowing (IBS) or post-sowing pre-emergence (PSPE) timings. Efficacy data showed greater annual ryegrass (*Lolium rigidum* Gaud.) control than trifluralin and propyzamide as IBS application. PSPE

applications, however, showed lower efficacy when compared to the IBS applications. Metazachlor at 938 g a.i. ha⁻¹ also showed good activity on wild oat (*Avena fatua* L.) and wireweed (*Polygonum aviculare* L.). Methazachlor was demonstrated to be safe when applied to canola as an IBS treatment. PSPE applications however exhibited lower levels of safety with some reduction in establishment and early biomass. No significant crop phytotoxicity effects were recorded of across all treatments. Six re-crop trials were undertaken and included major cereal and pulse crops. These trials demonstrated that a twelve month re-crop interval may be established for metazachlor applied at 750 to 1876 g a.i. ha⁻¹ rates.

Keywords Metazachlor, canola, annual ryegrass.