TOPIC: WILD RADISH IN WHEAT

Group: ***Yuna 2010***

ABSTRACT

The aim of this trial is to demonstrate the efficacy and crop safety of Velocity® and Precept® 300EC applied alone or in tank mixtures compared to currently available standards for the control of wild radish in wheat.

The crop was water stressed at the time of application despite approximately 20 mm of rainfall a week before application. A period of cold overnight temperatures may have also contributed to the levels of herbicide injury recorded from this trial.

The wild radish density was a little patchy across the site. Coverage was generally not an issue and weed size was ideal for Velocity @ 670 mL/ha + Hasten 1% v/v with 79% between cotyledon and 3 leaf. The weeds were stressed at application however 5 mm of rainfall 2 days after application followed by warm dry conditions resulted in rapid control recorded from treatments or tank mixtures containing bromoxynil at 14 DAA.

The volunteer lupin density was fairly consistent across the site. Weed size was ideal for Velocity @ 670 mL/ha + Hasten 1% v/v with 90% 4 leaf or smaller.

BACKGROUD SUMMARY

- Velocity will control wild radish resistant to Group B, Group F and Group I herbicides.
- Velocity and Precept® 300EC are registered for control of a wide range of broadleaf weeds and volunteer legumes in wheat, barley, triticale and cereal rye. Precept is also registered in oats.
- Velocity and Precept 300EC incorporating a crop safener provide outstanding crop safety.
- Velocity® and Precept® 300EC provide excellent tank-mixing compatibility with grass herbicides for flexibility and efficiency.
- Velocity® will be registered at use rates up to 1 L/ha in time for the 2011 season.
- Velocity® is registered in tank mixtures with MCPA LVE at 500 mL/ha for the 2011 season.

TRIAL DETAILS

RESULTS

Property	Dartmoor Rd, Yuna
Soil type	Loamy Sand
Crop & Variety	Mace wheat
Paddock rotation	2009 – Lupins, 2008 – Wheat
Pre-em applied	28/5/10 Roundup CT @ 1.5 L/ha + Treflan 480 @ 1.5 L/ha
Seeding rates	70 kg/ha
Plot size	2.5 m x 20 m (3 replicates)
Spray date	1/6/2010 **Water rate** 80 L/ha
Ground Speed	9.2 kph **Nozzle Type/ Pressure** Drift Guard 02/ 2 bar
Weed stage	**Wild radish 224/ m^2 = cot-**19%, 1 lf-22%, 2lf-23%,3lf-15%,4lf-19%,5lf-2% **Vol lupins 19/ m^2 =** 2lf-32%,4lf-58%,6lf-10%

Crop Effect – Mace wheat

All rates of Velocity up to 1 L/ha were safe on the crop at all assessments. All treatments containing the Group F herbicides Jaguar, Tigrex or Paragon including Velocity & Precept tank mixtures recorded early crop discolouration at 14 DAA which had recovered completely by 44DAA.

All treatments applied in this trial were safe to the crop with any early crop effects recovering quickly.

Weed Control

	Weed Target	Wild radish			Volunteer lupins	
	Assessment Date	6/07/10	21/07/10	5/08/10	6/07/10	5/08/10
	Days after application	14 DAA	29 DAA	44 DAA	14 DAA	44 DAA
	Rating Type	Rating	Rating	Rating	Rating	Rating
	Rating Scale	0-100	0-100	0-100	0-100	0-100
Treatment	**Rate/ ha**	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
UNTREATED		0	0	0	0	0
VELOCITY HASTEN	670 mL/ha 1 % v/v	87	94	96	93	98
VELOCITY MCPA LVE HASTEN	670 mL/ha 500 mL/ha 1 % v/v	97	94	**98**	96	100
VELOCITY TIGREX HASTEN	670 mL/ha 500 mL/ha 1 % v/v	91	97	**98**	93	100
VELOCITY HASTEN	800 mL/ha 1 % v/v	96	91	96	96	100
VELOCITY HASTEN	1 L/ha 1 % v/v	95	96	97	97	100
PRECEPT 300 HASTEN	750 mL/ha 1 % v/v	84	85	88	88	97
PRECEPT 300 BROMICIDE 200 HASTEN	750 mL/ha 500 mL/ha 1 % v/v	91	92	94	93	100
PRECEPT 300 JAGUAR HASTEN	750 mL/ha 500 mL/ha 1 % v/v	94	95	**98**	96	100
JAGUAR	1 L/ha	90	90	86	92	97
PARAGON BROMICIDE 200	500 mL/ha 500 mL/ha	88	87	88	90	91
PARAGON	500 mL/ha	78	81	81	71	**77**

Wild Radish Control

At 44DAA all Velocity treatments applied alone or in tank mixtures recorded excellent control (≥94 rating) of wild radish in this trial. All Velocity treatments including tank mixtures provided superior control to Precept 300 at 750 mL/ha (88), Jaguar 1 L/ha (86) and Paragon 500 mL/ha applied with (88) or without (81) Bromicide 200 500 mL/ha.

Despite the suspected Group I tolerance at this site the addition of MCPA LVE to Velocity at 670 mL/ha assisted with final control of wild radish. This tank mixture has been shown to assist with control in situations with larger weeds or where shading is an issue. If Group I tolerance is a concern always use the maximum 1 L/ha rate of Precept 300 (H,I). The addition of a 3rd chemistry group such as bromoxynil (Group C) in Bromicide 200 and Jaguar (C & F) also containing diflufenican (F) may assist control. Precept applied with a 3rd group recorded excellent control in this trial.

Paragon (Group F,I) applied at 500 mL/ha recorded the lowest level of control in this trial (81) with many of the survivors egrowing significantly. The addition of Bromicide 200 increased control but not to the level of Velocity.

Volunteer Lupin Control

All Velocity and Precept 300 treatments achieved commercially acceptable control (≥97 rating) of volunteer lupins in this trial. Paragon applied at 500 mL/ha did not record acceptable control (77) of lupins in this trial.

Technical Support

Rick Horbury – Technical Advisor, Bayer CropScience; Bernie Quade, Landmark Geraldton

In-kind Support

Thanks to Murray for allowing us to conduct the trial and Peter Burchell for mixing the treatments.