



Sakura[®] Herbicide

PRE-EMERGENT TRIALS UPDATE



With stand-alone prosulfocarb (800 g/L) pre-emergent chemistry entering the broadacre herbicide market for the 2017 season, seven small plot replicated trials were undertaken across Western Australia, Victoria and New South Wales in 2016. The aim was to compare the performance of a range of different pre-emergent grass control herbicides available to growers, including prosulfocarb.

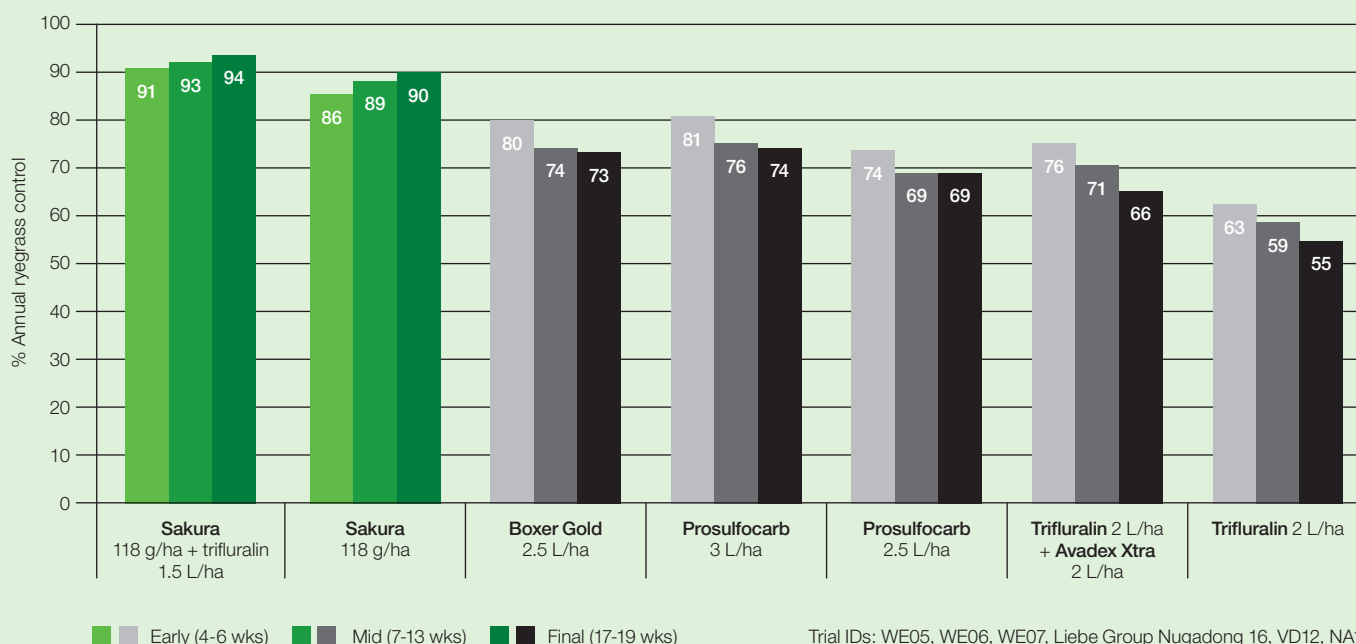
In addition to prosulfocarb, the different grass control options assessed included trifluralin, Boxer Gold[®], Sakura[®] and Avadex[®] Xtra, including some common tank mixes of some of these products applied at label rates.

The trial plots at the different sites were inspected for annual ryegrass control at early (4-6 weeks), mid (7-13 weeks) and late (17-19 weeks) season timings, with early crop safety also assessed following the applications.

Across all trials the conditions presented were largely ideal for pre-emergent herbicide applications at the start of the season. There was good soil moisture at depth and the opportunity for a double knockdown prior to sowing.

Graph 1: Pre-emergent control of annual ryegrass

Early, mid and final panicle ratings across **7 trials** - Coorow, Pithara, Nugadong & Cunderdin WA, Pyramid Hill and Wedderburn Victoria, and The Rock NSW



SAKURA – BEST-IN-CLASS

At the early inspections, most products were controlling the annual ryegrass (ARG) populations quite well, especially after effective knockdown applications. However, by the mid-season assessments, with good soil moisture and subsequent germinations of annual ryegrass, treatments were starting to differ in terms of their control.

Sakura, with its long residual activity, continued to offer excellent control late into the season. At the final panicle assessments, the length of activity from Sakura, as recognised by growers over recent seasons, was the clear stand-out for ryegrass seed-set control, while that offered by other treatments had faded as the season moved on.

By the final assessments (Graph 1), Sakura alone demonstrated around 90% control across the seven trials, recording at least 16% improved ARG control compared with the next best product in the trials. Interestingly, prosulfocarb (3 L/ha) performed very similarly to Boxer Gold with early assessments of around 80% control dropping to low-mid 70s at the mid and late season assessments. Sakura, when mixed with trifluralin (1.5 L/ha), provided a slight increase control (<= 5%) at each of the assessment timings.

Bayer Customer Advisory Representative, Rick Horbury, observed that with good soil moisture at sowing, trifluralin applications and the tank mixture with Avadex Xtra also affected crop emergence, while emergence in the Sakura treatments was comparable with the untreated plots and better than trifluralin.

YIELD AND RETURN ON INVESTMENT

Trials in WA (Coorow, Pithara, Nugadong & Cunderdin) were harvested at the end of the season. Despite some frost damage over the four trials, Sakura treatments yielded an average 2.14 t/ha (up from 1.65 t/ha for untreated) achieving an average \$73.48/ha return on investment after the cost of the treatment was accounted for.

Applications of Boxer Gold at 2.5 L/ha achieved an average yield just under 2 t/ha for a return of \$18.40/ha. However, with 18% lower average weed control, Boxer Gold also allowed more ryegrass seed to enter the seed bank.

Prosulfocarb applied at 3 L/ha achieved a similar yield and return on investment to Boxer Gold at around 2 t/ha, however, assuming a cost over \$30/ha, its return on investment is expected to be similar to Boxer Gold and much less than Sakura.

The Sakura plus trifluralin 1.5 L/ha mixture only added a couple of percent in weed control, but still returned the highest yield and return on investment across the trials at 2.23 t/ha and \$78.50/ha respectively, making it the most profitable treatment.

Applications of trifluralin at 2 L/ha, which didn't achieve acceptable ryegrass control, produced a \$7.20/ha return, while a tank mixture with Avadex Xtra produced a negative return.

TRIAL LOCATION AND WEED DENSITY		Coorow (1831 panicles/m ²)		Pithara (843 panicles/m ²)		Cunderdin (1033 panicles/m ²)		Liebe - Nugadong (493 panicles/m ²)			
Treatment	Cost \$/ha	Final %ARG control	% ARG wt/grain sample	Final %ARG control	% ARG wt/grain sample	Final %ARG control	% ARG wt/grain sample	Final %ARG control	% ARG wt/grain sample	Mean Final %ARG control	Mean % ARG wt/grain sample
Sakura 118 g/ha + trifluralin 1.5 L/ha	\$51.90	97	0.8	96	0.1	90	0.6	98	-	95	0.5
Sakura 118 g/ha	\$40.10	93	1.4	95	0.0	92	0.4	92	-	93	0.6
Boxer Gold 2.5 L/ha	\$38.28	75	6.8	75	0.4	70	0.9	78	-	75	2.7
Prosulfocarb 3 L/ha	\$35.70	76	3.1	83	0.7	72	0.6	67	-	75	1.4
Prosulfocarb 2.5 L/ha	\$29.75	73	3.4	77	0.4	61	0.8	67	-	70	1.5
Trifluralin 2 L/ha + Avadex Xtra 2 L/ha	\$31.63	62	6.7	66	0.8	53	2.3	68	-	62	3.2
Trifluralin 2 L/ha	\$11.80	48	7.7	58	0.1	35	0.5	68	-	52	2.8
Treatment	Cost \$/ha	Yield t/ha	\$ROI	Yield t/ha	\$ROI	Yield t/ha	\$ROI	Yield t/ha	\$ROI	Mean t/ha	Mean \$ROI/ha
Sakura WG 118 g/ha + trifluralin 1.5 L/ha	\$51.90	2.60	\$158.40	2.82	\$57.54	1.81	\$61.50	1.68	\$36.55	2.23	\$78.50
Sakura 118 g/ha	\$40.10	2.31	\$109.30	2.81	\$67.12	1.95	\$106.90	1.50	\$10.59	2.14	\$73.48
Boxer Gold 2.5 L/ha	\$38.28	2.14	\$75.42	2.40	-\$22.08	1.67	-\$8.58	1.57	\$28.84	1.95	\$18.40
Prosulfocarb 3 L/ha	\$35.70	1.91	\$29.70	2.70	\$14.70	1.65	\$39.30	1.40	-\$4.49	1.92	\$19.80
Prosulfocarb 2.5 L/ha	\$29.75	2.31	\$119.65	2.65	\$41.95	1.66	-\$2.15	1.57	\$35.99	2.05	\$48.86
Trifluralin 2 L/ha	\$11.80	1.87	\$45.20	2.35	-\$6.70	1.31	-\$18.40	1.35	\$8.70	1.72	\$7.20
Trifluralin 2 L/ha + Avadex Xtra 2 L/ha	\$31.63	1.75	\$0.17	2.43	-\$37.93	1.50	-\$37.63	1.42	\$2.26	1.77	-\$18.28

%ROI includes \$6.00/ha application cost.

All grain AGP1 apart from some treatments at Pithara & Cunderdin, which were ASW1 and APW1. All grain prices delivered to Kwinana 9/11/16.

Untreated (gross grain return)	\$0.00	1.57	\$329.70	2.30	\$510.60	1.50	\$315.00	1.23	\$257.32	1.65	\$353.16
--------------------------------	--------	------	----------	------	----------	------	----------	------	----------	------	----------

SUMMARY

- Across seven trials in 2016, Sakura demonstrated best-in-class pre-emergent control of ARG at early, mid and late season assessments compared to other pre-emergent herbicide options including Boxer Gold and prosulfocarb.
- With longer residual control, Sakura helps to control ARG for longer, helping to reduce ARG seed-set and keep the weed pressure low for the following crop.
- The prosulfocarb provided similar ARG control to Boxer Gold at a higher rate of 3 L/ha, but provided a lower level of control at 2.5 L/ha.
- Based on four trials in WA taken to yield, Sakura alone, or with trifluralin, offered the best ROI and the lowest number of ARG weed seeds compared to other treatments in frost affected areas.

sakuraherbicide.com.au

Bayer CropScience Pty Ltd ABN 87 000 226 022 Level 1, 8 Redfern Road, Hawthorn East, Vic 3123 Technical Enquiries: 1800 804 479 enquiries.australia@bayer.com
Sakura® is a Registered Trademark of Kumiai Chemical Industry Co. Ltd.

Always read the label for full instructions. The information and recommendations set out in this brochure are based on tests and data believed to be reliable at the time of publication. Results may vary, as the use and application of the products is beyond our control and may be subject to climatic, geographical or biological variables, and/or developed resistance. Any product referred to in this brochure must be used strictly as directed, and in accordance with all instructions appearing on the label for that product and in other applicable reference material. So far as it is lawfully able to do so, Bayer CropScience Pty Ltd accepts no liability or responsibility for loss or damage arising from failure to follow such directions and instructions.

