

Bayer191 demonstration



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Aim

To demonstrate the performance and effectiveness of new pre-emergent chemistry, Bayer191™, in reducing resistant ryegrass populations in winter cereals.

Take home messages

- *The new winter cereals pre-emergent herbicide, Bayer191, is targeted for release in 2011*
- *New chemistry with varying degrees of broadleaf and grass weed control*
- *High level control of annual ryegrass, including Group A-, B- and D-resistant ryegrass.*

Method

A demonstration looking at a new pre-emergent herbicide, Bayer191, for winter cereals was undertaken at the BCG herbicide resistance site at Jil Jil.

Location: Jil Jil
Replicates: Demonstration
Sowing date: 20 May
Sowing rate: 70kg/ha
Crop type: Barley cv. Vic Sloop
Seeding equipment: Avon Richardson seeder (no-till knife points, press wheels, 300mm row spacing)

Bayer191 was applied using two methods, either incorporation by sowing (IBS) or post-sowing pre-emergence (PSPE) (Table 1).

Table 1. Treatments in the demonstration at Jil Jil.

Treatment No.	Treatment	Method
1	Control	
2	Bayer191 85WG*	IBS
3	Bayer191 85WG*	PSPE

* The Bayer BAY191 rate used in this demonstration was higher than the registered rate.

When using any herbicide always follow the instructions on the registered label.

Plant establishment and ryegrass counts were performed on 20 June to get a measure of the level of crop safety with both treatments and its performance in reducing ryegrass numbers.

The trial was harvested on 12 November and yield and grain quality (screenings and protein percentages) assessed.

Results

Despite the fact that this was a demonstration, there were some visual differences where the new pre-emergent herbicide was used on barley. The IBS and PSPE treatments both showed a reduction in the number of ryegrass plants (Figure 1) compared to the untreated plot. When Bayer191 was incorporated by sowing, 100 percent reduction in ryegrass was achieved. A similar result was achieved when it was applied post-sowing, pre-emergence (98 percent reduction).

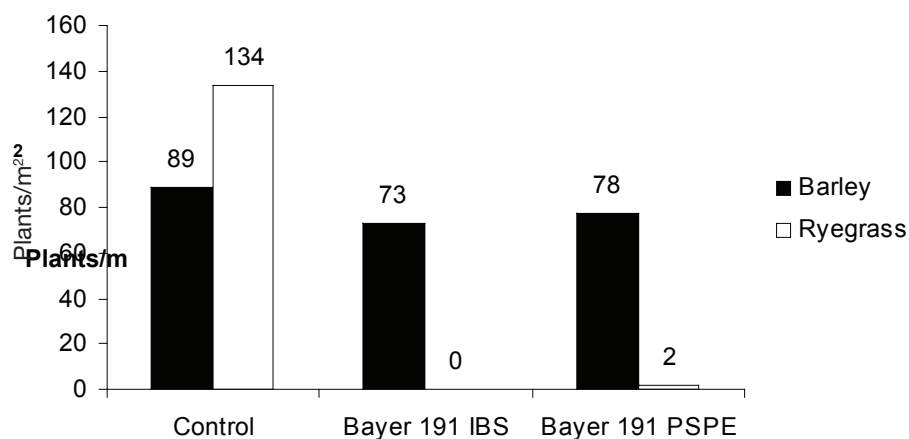


Figure 1. Barley emergence and ryegrass numbers.

In terms of crop safety, emergence was slightly affected as a result of the herbicide treatment (Figure 1), but as this was not a replicated trial, the significance of this difference can not be determined.

The IBS treatment yielded 1.5t/ha which was less than both the control and PSPE treatments which both yielded 1.7t/ha. However, it is difficult to conclude whether the yield difference was due to the herbicide treatment or because of chance caused by paddock variability.

Interpretation

Bayer191 was highly effective in ryegrass control achieving nearly 100 percent reduction in ryegrass numbers in June. In this demonstration, there was a slight reduction in barley emergence when Bayer191 was applied. Previous BCG trials have not shown any effect on crop safety and further replicated research needs to be conducted to confirm any issues.

Application

The new Bayer191 pre-emergent herbicide is likely to be released in 2011, and will provide growers with a new chemistry for ryegrass control in winter cereals. Despite the fact that the mode of action is yet to be determined, Bayer191 will offer an extra tool for growers who are battling with the on-set of Group D resistance through its control on Group A-, B- and D-resistant ryegrass. Bayer191 may be an ideal alternative pre-emergent for growers with its suitability for use in direct-drill (no-till) and discs seeding sowing systems, taking the reliance off high rates of trifluralin.