



OPTIMISING SPRING CROPPING

The adoption of spring cropping has been critical in keeping black-grass at manageable populations for many growers. However, there are still opportunities to optimise the control of the weed whether by drilling date, crop species or herbicide use.

Spring oats and spring barley were drilled at three timings – February, March and April – with a range of herbicide options at each drill timing (Figure 1).

Figure 1. Herbicide treatment list used for each drilling date

Crop	Herbicide	Rate (l/ha)
Spring oats	Untreated	
	Hurricane (a.i. diflufenican 125g ai/ha)	0.25
Spring barley	Untreated	
	Hurricane (a.i. diflufenican 125g ai/ha)	0.25
	Liberator (flufenacet 120g ai/ha + diflufenican 30g ai/ha)	0.30
	Liberator (flufenacet 120g ai/ha + diflufenican 30g ai/ha) + Crystal (flufenacet 120g ai/ha + pendimethalin 600g ai/ha)	0.30 + 0.20
	Liberator (flufenacet 120g ai/ha + diflufenican 30g ai/ha) f/b Crystal (flufenacet 120g ai/ha + pendimethalin 600g ai/ha)	0.30 + 0.20

- There is a trade-off between black-grass density and yield (Figure 2). To optimise the spring cropping package, drilling should be delayed until March.
- Spring oats are more competitive but are more susceptible to losing yield in later drilling slots (Figure 3).
- It is easy to use too much herbicide in spring crops causing damage to the crop's competitive ability. If drilling is delayed then a grassweed herbicide may not be required, but when deemed necessary low inputs are more appropriate.
 - Consider the cross-benefits that some products will have on broad-leaved species as this may save later applications.

Figure 2. Density of black-grass heads across the trial

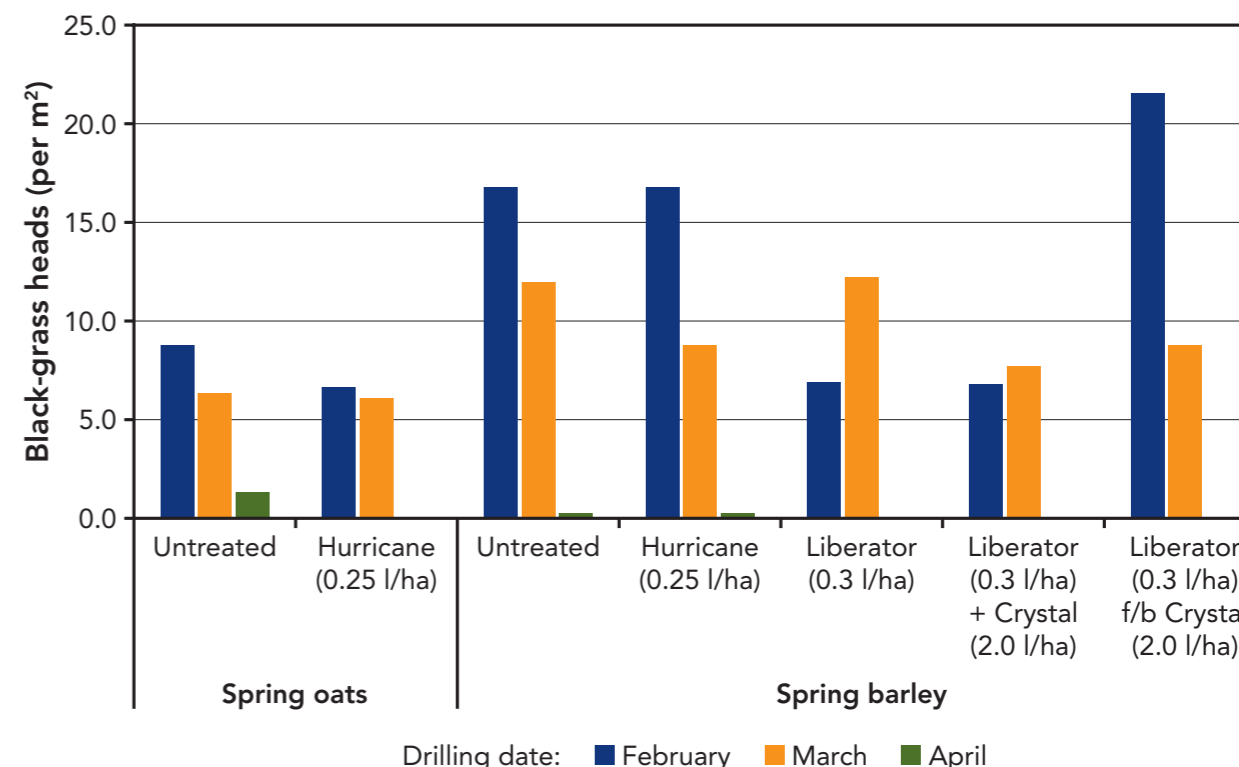


Figure 3. Crop yield as a response to drilling date (values are averages across all treatments in each drilling date)

