

Weed control in Oats

Avon Richardson Cropping Group

The aim of this trial was to investigate options for broadleaf weed and grass control in oats

Summary

Ryegrass and broadleaf weeds such as toadrush and capeweed are the main weeds to control in oat crops on the rising hill country in the southern Wimmera. In this trial, the most cost effective option to control these weeds was Diuron and Glean applied at the 3 leaf stage of the oats.

Background

Oats are a good crop for the rising hill country in the southern Wimmera. Broadleaf and grass weed control options in oats can be a problem and this trial was aimed at identifying some options

Method

The trial was located at the Marnoo site (Avon-Richardson Cropping Group). Echidna oats (80 kg) were sown on May 8 with MAP at 80 kg/ha. Herbicide treatments were applied when the oats were at the 3 leaf stage (ryegrass was in the early tillering stage). All treatments were replicated and randomised.

Results

The main broadleaf weed present was sub-clover, in a wet year weeds such as toadrush could be a problem. The ryegrass population was quite dense at more than 50 plants per square metre. The Glean treatments had good suppression of the ryegrass. There were no significant differences between the treatments due to quite high variability in yield between the replicates (Table 2.15). The lower oat yield seen in treatments other than Glean was probably due to competition with ryegrass.

Table 2.15 Herbicide status and cost and treatment yields

Treatment	Status	Cost \$/ha	Yield t/ha
Control			4.04
Diuron 1L + Glean 20g	R	14.50	4.27
Glean 15g	R	5.10	4.31
Glean 20g	R	6.80	3.83
Ally 5g	NR	3.25	3.81
Igran 0.65L	R	10.00	4.24
Jaguar 0.5L	NR	12.30	3.55
Tigrex 0.5L	R	9.15	3.50
Barrel 1L	R	14.50	3.47
Buctril MA 1L	R	14.50	3.46
Buctril MA 1.4L	R	20.30	3.87
MCPA amine 1L	R	6.80	3.44
2,4 D Amine 1.2L	R	8.30	3.47
Significant difference:			NS

Interpretation

There was no significant difference in yield between herbicide treatments. Ryegrass levels and hence competition with the crop was high in those treatments which did not include Glean. Jaguar caused some transient yellowing of the crop, the crop recovered 6 weeks after the application of the herbicide.

Commercial Practice

Weed control options for the rising hill country south of Marnoo has to include the control or suppression of ryegrass, toadrush, capeweed, erodium, sorrel and onion grass. In the trial the most cost effective option, which has good control of these weeds, is Diuron with Glean. Small ryegrass (2 to 3 leaf) can be controlled effectively with Glean. Igran has a role where oats have been undersown with clover (Glean cannot be used). Another option which requires further investigation is a mixture between Dual and Diuron, especially where water weeds are common.

The use of Trifluralin in oats

The Avon-Richardson Cropping Group also investigated the safety aspects of using trifluralin in oats. This practice is not registered but is commonly used for effective control of hogweed and ryegrass in oat crops (and oaten hay).

The Group undertook a demonstration of three rates of Trifluralin, incorporated in three different ways (Table 2.16). Note: the treatments were not replicated but were only a demonstration of each treatment.

Table 2.16 Trifluralin use and Oat yield

Incorporation method	Trifluralin ml/ha	Yield t/ha
Control	0	2.96
Applied immediately prior to sowing and harrowed in	800	3.91
	1000	4.29
	1200	3.69
Incorporated by sowing	800	3.42
	1000	3.52
	1200	3.26
Sprayed and harrowed in post sowing and pre-emergent	800	3.60
	1000	3.47
	1200	3.67

At all three rates, independent of the incorporation technique, the use of trifluralin reduced the ryegrass population to the extent that yields were greatly increased compared to the control. If using trifluralin on oats, always try it out first to minimise the risk that your sowing technique and soil type result in crop damage.