

INTEGRATED CONTROL OF HOARY CRESS

A.R.Harradine
 Department of Primary Industry, St Johns Ave.
 New Town Tas. 7008

Abstract. Hoary cress, *Cardaria draba*, has been recognised as a significant weed in cropping areas of Southern Tasmania for over 100 years (1). Sheep grazing and post-emergence herbicides provide satisfactory short-term control in pastures and cereal crops respectively. However, the recent trend in these areas to irrigated cropping has introduced new crops for which selective herbicides for hoary cress control are not available. The research project described aims to develop control programs for the long-term suppression or eradication of hoary cress prior to the establishment of these crops.

A two year old pasture densely infested with hoary cress (mean density of 49.9 shoots/sq.m) was excluded from grazing for two months before the hoary cress at the full-flowering stage was treated with herbicides (Table 1) in plots 48x25 m on 6 November 1988. The trial was a randomized complete block design with 3 blocks based on the initial hoary cress density. Counts in March 1989 showed that all herbicides significantly reduced hoary cress shoot density (Table 1). Plots were then subdivided with half of each being cultivated in autumn and sown with Triumph barley on 5 June 1989. The other half was cultivated in late winter and similarly sown on 28 August 1989. Three weeks before the winter cultivation, plots 6x25 m were treated with glyphosate (0.72kg/ha). Post-emergence herbicides (fluroxypyr and metsulfuron-methyl) were applied to the barley when the hoary cress was at the late rosette to flower-bud stages, giving 42 treatment combinations of pre-sowing treatment, sowing time and in-crop treatment. Data from autumn 1990 hoary cress plant counts will be presented at the Conference. Further cropping/herbicide treatments will be applied to the plots during the 1990 and, if necessary, 1991 cropping seasons.

Table 1. Hoary cress plant numbers on 21.3.89 as a percentage of the numbers present prior to herbicide application for each of the six herbicide treatments.

Herbicide Treatment

Untreated	71.6a*
2,4-D dimethylamine 2.1kg a.i. + dicamba 0.3kg/ha	24.5b
glyphosate 0.72kg + dicamba 0.2kg/ha	15.7b
chlorsulfuron 15g/ha	7.1b
metsulfuron-methyl 9g/ha	7.8b
metsulfuron-methyl 9g + dicamba 0.2kg/ha	4.8b

*Means followed by the same letter are not significantly different ($P=0.05$) based on arcsin transformed data.

REFERENCES

1. Morris, N.A. 1954. Tas. J. Agric. 54, 253-5.