

Management of acetyl coA carboxylase inhibitor resistant wild oats in northern New South Wales

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Summary The first cases of resistance in wild oats (*Avena sterilis* ssp. *ludoviciana*) in the northern grain region to acetyl coA carboxylase inhibitor (Group A) herbicides were documented in 1997. This occurred on two properties near Moree, New South Wales.

Since that time, the number of properties with resistant wild oats has been increasing, with little sign of abating.

This is a result of the heavy reliance on Group A herbicides to control wild oats and the trend towards reduced tillage to protect highly erodable soils. Increasing the row spacing width in winter cereals has also been implicated in this problem. The registration of selective spray-topping with flumetralin gave farmers another tool to combat resistance in wild oats.

A field trial on resistant wild oats was conducted to investigate a range of post-emergent options available to growers for controlling Group A-resistant wild oats. Fenoxaprop-p-ethyl, clodinafop-propargyl and tralkoxydim were applied at the highest label rate and twice the label rate with some treatments followed

by selective spray-topping with flumetralin. Flumetralin was also applied at the early post-emergence stage along with iodosulfuron-methyl, diclofop-methyl, butroxydim, clethodim and fluazifop-butyl.

Of the cereal-selective wild oat herbicides tralkoxydim at the top rate gave commercial control, however the addition of selective spray-topping with flumetralin gave excellent control of seed set. Flumetralin at the early post-emergence stage also gave excellent control. Iodosulfuron gave good suppression under very high wild oat populations and the addition selective spray-topping with flumetralin would have given excellent control of seed set. Fluazifop-butyl controlled the wheat, and not the wild oats, while clethodim and butroxydim gave good control of both wheat and oats. However, subsequent wild oat establishment swamped these treatments.

As yet most Group A resistance appears to be confined to the 'fops', however over-reliance on this chemistry is likely to lead to resistance developing in these herbicides.