



Herbicide Resistance Management Strategies
Developed by the CropLife Australia Herbicide Resistance Management Review Group
 Valid as at 25 June 2015

SPECIFIC GUIDELINES FOR GROUP H HERBICIDES

| GROUP | H | HERBICIDE |
|-------|---|-----------|
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Moderate resistance risk

There are currently no known weeds resistant to Group H herbicides in Australia. Resistance to Group H herbicides is known for a number of populations of *Amaranthus* species in the United States, which demonstrates the potential for weeds to develop resistance to this mode of action. Continuous usage of Group H herbicides in the United States has resulted in resistance in *Amaranthus* species in a relatively short time.

1. Broadacre cropping

Of particular concern in Australia is the potential for development of Group H resistance in wild radish. In some areas, because of a lack of alternate herbicide options growers are heavily reliant on Group H herbicides for control of wild radish populations. It is essential to integrate additional cultural weed control techniques to reduce the seed bank and minimise seed set, thereby decreasing the selection pressure on Group H herbicides.

2. Fallow

In high summer rainfall areas, weed control in fallow is heavily reliant on herbicides. Multiple sprays are often required to maintain a clean fallow between winter crops. Integrated Weed Management principles should be incorporated wherever possible, including cultivation - the double knock technique, grazing and combining more than one mode of action in a single application.

3. Rice

Where benzofenap has been applied to rice, a follow-up application of MCPA is recommended where appropriate to provide a secondary mode of action. To reduce the likelihood of resistant weeds developing it is recommended that products containing benzofenap (eg. Taipan[®], Viper[®]) not be used in consecutive rice crops.

Synergistic interactions have been documented for several Group H and Group C herbicide combinations. Where possible, apply a Group H herbicide in combination with a Group C herbicide to maximise efficacy. Always use the label rate of herbicide whether or not a single active ingredient (eg. isoxaflutole) or combinations of active ingredients are applied (eg. isoxaflutole + simazine, pyrasulfotole/bromoxynil).

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Advice given in this strategy is **valid as at 25 June 2015**. All previous versions of this strategy are now invalid.

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SPECIFIC GUIDELINES FOR GROUP H HERBICIDES (cont.)

The above recommendations should be incorporated into an Integrated Weed Management (IWM) program. In all cases try and ensure surviving weeds from any treatment do not set and shed viable seed. Keep to the integrated strategies mentioned in this brochure including rotation of mode of action groups. Where possible, rotate between products from different mode of action groups.

| CHEMICAL FAMILY | ACTIVE CONSTITUENT (FIRST REGISTERED TRADE NAME) |
|--------------------|--|
| GROUP H | Bleachers: Inhibitors of 4-hydroxyphenyl-pyruvate dioxygenase (HPPDs) |
| <i>Pyrazoles:</i> | benzofenap (Taipan [®]), pyrasulfotole (Precept ^{®*} , Velocity ^{®*}) |
| <i>Isoxazoles:</i> | isoxaflutole (Balance [®]) |

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