

14. SPECIFIC GUIDELINES FOR GROUP L HERBICIDES

GROUP	L	HERBICIDE
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Moderate resistance risk

Globally herbicide resistance to the Group L herbicide mode of action has been confirmed and documented in more than 30 weed species across 16 countries

Group L resistance exists in Australia in annual ryegrass, and in 2 species of barley grass across more than 100 populations, blackberry nightshade, crowsfoot grass, capeweed, pennsylvanian cudweed, squirrel-tailed fescue (silver grass) and small square weed. Most instances have occurred in long-term lucerne stands treated regularly with a Group L herbicide but Group L resistant barley grass has also occurred in no-till situations.

The following factors are common to most cases of Group L resistance:

- A Group L herbicide is the major or only herbicide used;
- A Group L herbicide has been used for 12 – 15 years or more; and
- There has been minimal or no soil disturbance following application.

The risk of resistance to Group L herbicides is higher in zero tillage broadacre cropping. Other high resistance risk situations include: irrigated clover pivots, orchards, vineyards or pure lucerne stands where frequent applications of a Group L herbicide are made each season, cultivation is not used and there is reliance on a Group L herbicide alone for weed control.

To assist in delaying the onset of resistance, consider alternating Group L herbicides with herbicides from other modes of action. For example, (Group N) eg glufosinate or (Group Q) eg amitrole or (Group M) eg glyphosate.

Below are strategies that address these high resistance risk situations to reduce the risk of Group L resistance developing.

Zero Tillage

1. Rotate Group L herbicides with other knockdown herbicides with a different mode of action For example (Group M) eg glyphosate. A full label rate for the weed size targeted should be used for resistance management.
2. Consider utilising the double knock technique¹ where glyphosate is sprayed first followed within 1 - 7 days by a paraquat application. A full label rate for the weed size targeted should be used for the paraquat application for resistance management.
3. Consider occasional mechanical cultivation to aid weed control.

¹ The double knock technique is defined as using a full cut cultivation OR the full label rate of a paraquat-based product (Group L) following the glyphosate (Group M) knockdown application

Lucerne

1. If using a Group L herbicide for winter cleaning, where possible include another mode of action eg. Group C.
2. Use alternative modes of action to selectively control grass and broadleaf weeds.
3. Rotate Group L herbicides with other knockdown herbicides with a different mode of action for example (Group M) eg glyphosate prior to sowing lucerne and prior to sowing future crops in that paddock.

Horticulture

1. Rotate Group L herbicides with other knockdown herbicides with a different mode of action. For example (Group N) eg glufosinate or (Group Q) eg amitrole or (Group M) eg glyphosate
2. Where possible use residual herbicides (that are effective on the same weeds as the Group L herbicides) where applicable either alone or in mixture with Group L herbicides.
3. Where possible use alternative modes of action to selectively control grass and broadleaf weeds.
4. Consider using the double knock technique where glyphosate is sprayed followed within 1-7 days by a paraquat application. A full label rate for the weed size targeted should be used for the paraquat application for resistance management.

All the above recommendations should be read in conjunction with the Integrated Weed Management (IWM) strategies

CHEMICAL FAMILY	ACTIVE CONSTITUENT (FIRST REGISTERED TRADE NAME)
GROUP L	Inhibitors of photosynthesis at photosystem I via electron diversion (PSI inhibitors)
<i>Bipyridyls:</i>	diquat (Reglone [®] , Spray Seed ^{®*}), paraquat (Alliance ^{®*} , Gramoxone [®] , Spray Seed ^{®*})

* ***This product contains more than one active constituent***

List of chemical families, approved active constituents and, in parenthesis, the trade name of the first registered product or successor. Refer to the APVMA website (www.apvma.gov.au) to obtain a complete list of registered products from the PUBCRIS database.

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Advice given in this strategy is **valid as at 22 June 2018**. All previous versions of this strategy are now invalid.

Phone: 02 62732733 Email: info@croplife.org.au Website: www.croplife.org.au