

## LIST OF HERBICIDE RESISTANT WEEDS IN AUSTRALIA

Resistance has been confirmed to at least one herbicide mode of action group in Australia in the following weeds:  
**Some herbicide mode of action groups were changed in February 2008 and they are shown in bold type.**

GRASS WEEDS	GROUPS	SITES
Annual ryegrass ( <i>Lolium rigidum</i> )	A	>20,000
Annual ryegrass ( <i>Lolium rigidum</i> )	B	>10,000
Annual ryegrass ( <i>Lolium rigidum</i> )	C	>50
Annual ryegrass ( <i>Lolium rigidum</i> )	D	>500
Annual ryegrass ( <i>Lolium rigidum</i> )	<b>Q</b>	3
Annual ryegrass ( <i>Lolium rigidum</i> )	M	>100
Wild oat ( <i>Avena</i> spp.)	A	>1000
Wild oat ( <i>Avena</i> spp.)	B	2
Wild oat ( <i>Avena</i> spp.)	<b>Z</b>	>50
Northern barley grass ( <i>Hordeum glaucum</i> )	A	1
Northern barley grass ( <i>Hordeum glaucum</i> )	B	4
Northern barley grass ( <i>Hordeum glaucum</i> )	L	>50
Brome grass ( <i>Bromus rigidus</i> )	A	6
Brome grass ( <i>Bromus rigidus</i> )	B	5
Large crab grass ( <i>Digitaria sanguinalis</i> )	A	2
Large crab grass ( <i>Digitaria sanguinalis</i> )	B	1
Barley grass ( <i>Hordeum leporinum</i> )	A	14
Barley grass ( <i>Hordeum leporinum</i> )	L	>50
Brome grass ( <i>Bromus diandrus</i> )	A	4
Paradoxa grass ( <i>Phalaris paradoxa</i> )	A	3
Awnless Barnyard grass ( <i>Echinochloa colona</i> )	M	5
Barnyard grass ( <i>Echinochloa crus-galli</i> )	C	1
Liverseed grass ( <i>Urochloa panicoides</i> )	C	7
Liverseed grass ( <i>Urochloa panicoides</i> )	M	2
Giant Parramatta grass ( <i>Sporobolus fertilis</i> )	J	6
Serrated tussock ( <i>Nassella trichotoma</i> )	J	2
Silver grass ( <i>Vulpia bromoides</i> )	C	1
Silver grass ( <i>Vulpia bromoides</i> )	L	1

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Advice given in this strategy is valid as at 15 September 2009. All previous versions of this strategy are now invalid.  
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BROADLEAF WEEDS	GROUPS	SITES
Wild radish ( <i>Raphanus raphanistrum</i> )	B	>100
Wild radish ( <i>Raphanus raphanistrum</i> )	C	4
Wild radish ( <i>Raphanus raphanistrum</i> )	F	4
Wild radish ( <i>Raphanus raphanistrum</i> )	I	20
Indian hedge mustard ( <i>Sisymbrium orientale</i> )	B	>200
Indian hedge mustard ( <i>Sisymbrium orientale</i> )	I	12
African turnip weed ( <i>Sisymbrium thellungii</i> )	B	2
Arrowhead ( <i>Sagittaria montevidensis</i> )	B	20
Black bindweed ( <i>Fallopia convolvulus</i> )	B	2
Calomba daisy ( <i>Pentzia suffruticosa</i> )	B	1
Charlock ( <i>Sinapis arvensis</i> )	B	1
Common sowthistle ( <i>Sonchus oleraceus</i> )	B	>200
Dirty dora ( <i>Cyperus difformis</i> )	B	>50
Iceplant ( <i>Mesembryanthemum crystallinum</i> )	B	2
Lincoln weed ( <i>Diplotaxis tenuifolia</i> )	B	20
Paterson's curse ( <i>Echium plantagineum</i> )	B	2
Prickly lettuce ( <i>Lactuca serriola</i> )	B	>200
Starfruit ( <i>Damasonium minus</i> )	B	5
Turnip weed ( <i>Rapistrum rugosum</i> )	B	1
Wild turnip ( <i>Brassica tournefortii</i> )	B	3
Stinging nettle ( <i>Urtica urens</i> )	C	1
Dense-flowered fumitory ( <i>Fumaria densiflora</i> )	D	2
Capeweed ( <i>Arctotheca calendula</i> )	L	1
Square weed ( <i>Mitracarpus hirtus</i> )	L	1

CropLife acknowledges the assistance of Dr Chris Preston (University of Adelaide) in compiling this list.

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## INTEGRATED WEED MANAGEMENT STRATEGIES

Strategies are designed to prevent and/or reduce the occurrence of resistance by adopting Integrated Weed Management (IWM) strategies. Do not rely on a single strategy to keep resistance at bay but integrate them into the crop production program. Some of the key strategies are: -

- Refer to specific CropLife Herbicide Resistance Management Strategy guidelines for each herbicide mode of action group.
- Rotation of herbicide mode of action groups within and across years.
- **Keep accurate records of your herbicide applications on a paddock basis.**
- Read the herbicide product label and literature carefully and follow the instructions.
- Always use robust label rates
- Rotation of crop and variety.
- Identify and monitor your surviving weed populations and check for resistant weeds on your farm. Keep good records of weed populations.
- Additional cultural weed control techniques to reduce seed banks, e.g. burning, cultivation, delayed sowing, competitive crops and varieties, green manuring, grazing and collection of weed seed at harvest.
- Do not introduce or spread weeds by contaminated seed, grain or hay.
- Crop and pasture topping.
- Attend training courses, e.g. GRDC IWM course, *ChemCert* and field days.
- Additional information can be obtained from: CropLife Australia ([www.croplifeaustralia.org.au](http://www.croplifeaustralia.org.au)), Australian Glyphosate Sustainability Working Group ([www.glyphosateresistance.org.au](http://www.glyphosateresistance.org.au)), Grains Research & Development Corporation ([www.grdc.com.au](http://www.grdc.com.au)) and state government departmental publications.

### Weed control options for IWM

	<b>Herbicidal</b>	<b>Non-herbicidal</b>
<b>Crop phase</b>	Crop topping in pulse/legume crops Knockdown herbicides e.g. double knock strategy before sowing Selective herbicides before &/or after sowing – but ensure escapes don't set seed Low and moderate risk herbicides	Rotate crops Rotate varieties Grow a dense and competitive crop Cultivation Green/brown manure crops Delay sowing Cut crops for hay Burn stubbles / windrows Collect weed seeds at harvest
<b>Pasture phase</b>	Spray topping Winter cleaning Selective herbicides – but ensure escapes don't set seed	Good pasture competition Hay making or silage Cultivated fallow Grazing

Keep yourself informed and be pro-active in the fight-back against resistance. For further information on resistance management strategies, consult your reseller agronomist, farm consultant or Departmental Agronomist.

Specific guidelines for resistance management in rice are established by the Rice Weed Management Working Group e.g. Rice Notes. Contact your local Departmental Rice agronomist for details. There are also specific guidelines for Clearfield®, Roundup Ready® and Liberty Link® Crop Management Plans and Integrated Weed Management for Triazine Tolerant Canola (refer to manufacturing companies).

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