



**PRECEPT®**

# Resistant Wild Radish Common in Southern NSW

**Herbicide resistance in wild radish and other broadleaf weed populations is often considered a Western Australian issue, globally regarded as the home of resistant weeds.**

While in Eastern States the focus of herbicide resistance has been on grasses such as annual ryegrass, there are trends that mirror the development of broadleaf weed resistance to herbicides in WA.

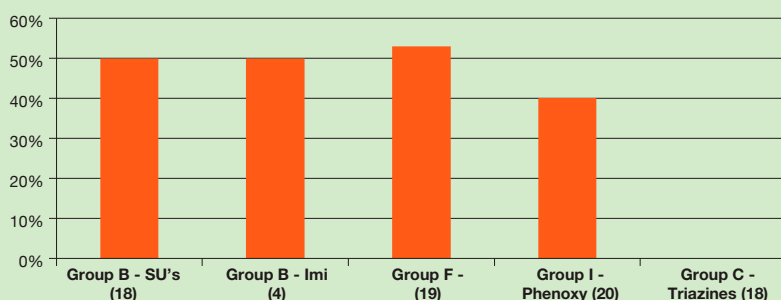
In 2017, the Crop Science division of Bayer sponsored random resistance testing of wild radish populations across Southern NSW.

In total, 20 wild radish samples were collected. Peter Boutsalis from Plant Science Consulting in Adelaide tested these for herbicide resistance. The samples were taken from locations within a 200-kilometre radius around Wagga Wagga and included locations near Young, Barellan, Lockhart, Culcairn and Junee. Growers who participated in the testing could test against up to 4 different herbicide modes of action - listed in Table 1 below.

**Table 1. Herbicide Groups and Common Brands**

Herbicide group / class	Common brands
Group B – sulfonylureas	Ally®, Logran®, Glean®, Hussar®, Monza®
Group B - imidazolinones	Intervix®, OnDuty®, Spinnaker®, Flame®
Group C – triazines	Gesaprim®, Nutrazine®, Gesatop®, Simazine®, Terbyne® Xtreme
Group F – pyridine carboxamide	Brodal® Options, Sniper®
Group I – phenoxy	LVE MCPA 570, Agritone®, LVE Ester 680, Estercide® Xtra, Amicide® 700

**Chart 1: Percentage of wild radish populations testing positive for resistance**



Not surprisingly, 80% of the 20 samples tested showed some level of resistance to at least one herbicide mode of action. However, what is concerning is the spread of resistance across different herbicide groups.



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GROUP **HI** HERBICIDE

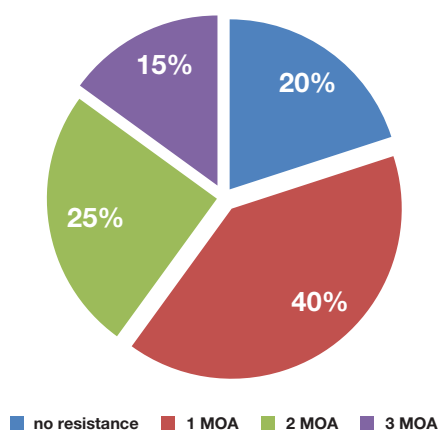
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## Multiple resistance picked up across herbicide groups

- **Multiple** resistance to two or more herbicide modes of action was detected in 40% of samples.
- Group **F** and **I** resistance was 53% and 40% respectively.
- Three wild radish populations across southern NSW **tested positive** for resistance to three different mode of actions; **Group B (SU) + Group F and Group I**.
- **No resistance** was detected to atrazine. Many suspected some resistance because of reduced control in 2016. This result can be put down to poor herbicide performance due to excessively wet conditions.

**Chart 2:**  
Wild radish populations with multiple  
Mode of Action (MOA) resistance.



## Take home messages:

- **Know your weed resistance status:** utilise resistance tests to check the effectiveness of herbicide modes of action on your farm.
- Broadleaf weed resistance (especially wild radish) **is not just an issue in Western Australia**. It is now quite common in SA, VIC and NSW.
- **Cross-resistance** (resistance to multiple herbicide groups) showed up in 40% of samples.
- **Utilise Group H** (pyrasulfotole) based herbicides such as **Velocity®** and **Precept®** in your herbicide rotations.
- No resistance was detected to group C herbicides (atrazine) in these tests, so TT canola remains in the toolkit for growers.
- Trials have consistently shown that **spraying wild radish early at the 2-6 leaf stage** provides the best return on investment.

**Group H Herbicides** such as **Velocity** and **Precept** alone or in combination with other herbicides effectively control a very wide range of resistant and susceptible broadleaf weeds. These include hard to kill weeds such as **wild radish, fumitory, sowthistle, wireweed, prickly lettuce, volunteer canola (including Clearfield® and Roundup Ready® varieties) and Indian hedge mustard**.

Check out our herbicide resistance mapping tool at [www.diversitycantwait.com.au](http://www.diversitycantwait.com.au) to learn more about herbicide resistance in your region.



**Science For A Better Life**

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Bayer recommends the adoption of Integrated Weed Management for control of weeds including chemical and non-chemical, diverse control methods. More information; [www.diversitycantwait.com.au](http://www.diversitycantwait.com.au)

Always refer to product label for the full list of weeds controlled and the appropriate product use rates and weed size details; Always read the label for full instructions. The information and recommendations set out in this brochure are based on tests and data believed to be reliable at the time of publication. Results may vary, as the use and application of the products is beyond our control and may be subject to climatic, geographical or biological variables, and/or developed resistance. Any product referred to in this brochure must be used strictly as directed, and other applicable reference material. So far as it is lawfully able to do so, Bayer CropScience Pty Ltd accepts no liability or responsibility for loss or damage arising from failure to follow such directions and instructions. Precept® and Velocity® are Registered Trademarks of the Bayer Group.