

# Survey finds glyphosate resistant ryegrass is widespread in cropping paddocks in the South East of South Australia

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## Key points

- Sixteen per cent of annual ryegrass populations in the south east of South Australia are resistant to glyphosate
- Integrated weed management focussing on stopping the seed set of resistant survivors needs to be adopted immediately

Over the past 15 years the University of Adelaide team has been conducting random surveys of major weeds species present in cropped fields in late spring across South Australia and Victoria. Seed samples are collected from fields at random during harvest. The samples are tested for resistance to several herbicide modes-of-action to determine the patterns of resistance in the different areas.

In the 2012 survey of the South Australian Mallee and the South East annual ryegrass was collected from 243 paddocks across the SA Mallee and 122 paddocks in the South-East. Seed was germinated in pots and were treated with 570 g ha<sup>-1</sup> glyphosate at the two to three-leaf stage. Survival was recorded after 28 days and populations with more than 20 per cent of individuals surviving the herbicide application were recorded as resistant to glyphosate.

While none of the annual ryegrass samples collected from the South Australian Mallee survived the application of glyphosate 16 per cent of samples from the South East region were resistant to glyphosate. The majority of the resistant populations were from paddocks in the Naracoorte region; however isolated examples occurred near Coonawarra, Padthaway, Frances and Bordertown.

This work has identified glyphosate resistant annual ryegrass to be widespread in cropped paddocks in the South East region of South Australia and there is a need for growers to monitor their herbicide applications and to introduce integrated weed management tactics if they suspect glyphosate resistant weeds are present.

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