

# Sustainable glyphosate use in winter grain cropping systems in southern Australia



The number of glyphosate resistant weed species present in winter grain crops, along fencelines and in irrigation channels in Australia.

You can reduce the risk of glyphosate resistance in weeds

## Best practice

- Use the **double knock** technique\*
- Use **alternative knockdown** herbicide groups
- Full disturbance **cultivation** at sowing
- Effective **in-crop weed control**
- Use alternative herbicide groups or tillage for **inter-row and fallow** weed control
- **Non-herbicide practices** to prevent formation of viable weed seed
- Use crops with high levels of **weed competition**
- Use **late season weed control** and in-crop spray-topping with alternative herbicide groups
- **Prevent movement** of resistant seed
- **Apply stewardship plans when growing glyphosate tolerant crops**



## High risk practices

- Continual reliance on glyphosate before seeding
- Lack of tillage
- Lack of effective in-crop weed control
- Frequent glyphosate-based chemical fallow
- Inter-row glyphosate use (unregistered)
- Frequent late season weed control and in-crop spray-topping with glyphosate
- Over-reliance on glyphosate tolerant crops
- High weed numbers



**All Group M herbicides are glyphosate herbicides.**

If you suspect you have a resistance problem – get plants or seed tested to see which herbicides still work. The best strategy is to ensure that no further seed set is allowed to occur, and to drive down the weed seed-bank using a number of diverse weed management tactics.

Optimal management techniques for different weed species will vary.

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