Sustainable glyphosate use in Australian vegetable production

Glyphosate-resistant weeds are a threat to vegetable production across Australia.

Tip the scales in your favour to minimise the risk of glyphosate resistance in weeds

Factors that decrease risk:
✓ Preventing weeds from flowerling and setting seed, especially after harvest
✓ Strategic use of alternate herbicide modes of action
✓ Use of a double knock* – full glyphosate rate followed by tillage or a full label rate of paraquat (Group L)
✓ Use of non-herbicide practices for weed control eg. mowing, mulching, tillage or strategic grazing
✓ Ensuring that machinery coming onto the farm are free from soil and weeds
✓ Control all weeds and volunteer plants in planting gaps, around buildings and after harvest
✓ Use clean quality-assured seed for planting

Factors that increase risk:
✗ Allowing weeds to flower and set seed especially after harvest
✗ Continual reliance on glyphosate for weed control around buildings, roads, channels and drains
✗ Few alternative herbicide modes of action used
✗ Lack of non-herbicide weed control methods eg. mowing, mulching, tillage or grazing
✗ Poor field hygiene (contaminated machinery, vehicles and stock coming onto farm) leading to movement of herbicide resistant weed seed
✗ Poor application technique leading to sub-lethal rates of herbicide at the ends of rows (poor control = more weeds)

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 drive down the weed seed bank using a number of diverse weed management tactics.

Optimal management techniques for different weed species will vary.

This guide has been produced by the Australian Glyphosate Sustainability Working Group (AGSWG), a collaborative initiative aimed at promoting the sustainable use of glyphosate in Australian agriculture.

Organisations involved in the AGSWG include: Australian Herbicide Resistance Initiative, University of Adelaide, Queensland Department of Agriculture and Fisheries, Department of Primary Industries and Regional Development, NSW Department of Primary Industries, The Crop Life Australia Herbicide Resistance Management Committee, Horticulture Innovation Australia Ltd, Cotton Research & Development Corporation, Independent Consultants Australia Network, Grains Research and Development Corporation, Conservation Agricultural Australia, Bayer Crop Science, Dow AgroSciences Australia, DuPont-Pioneer, Monsanto Australia, Nufarm Australia and Syngenta Crop Protection Australia.

For more information visit the website: www.glyphosateresistance.org.au

*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.

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