Sustainable glyphosate use in northern Australian grain and cotton

An increasing number of glyphosate resistant weed species are present in northern Australian grain and cotton systems.

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

Factors that decrease risk:
✓ Monitoring and preventing weed control escapes from setting seed
✓ Planning and implementing an IWM strategy to reduce the weed seed-bank
✓ Strategic use of alternative knockdown herbicides and tillage in fallows and prior to sowing
✓ Use of alternate herbicide modes of action including residual herbicides in crops and fallows
✓ Use of a double knock* – glyphosate followed by tillage or paraquat (Group L) based products at effective rates
✓ Applying stewardship plans when growing glyphosate tolerant crops
✓ Farm hygiene to prevent importing and moving resistant seeds

Factors that increase risk:
✗ Frequent glyphosate-based chemical fallows
✗ Continuous reliance on glyphosate as a knockdown prior to sowing
✗ Inter-row use of glyphosate in grain crops (unregistered)
✗ Lack of tillage
✗ Lack of use of alternative herbicide modes of action in fallows and crops
✗ Allowing survivors of glyphosate applications to set seed
✗ High weed numbers
✗ Lack of crop competition on weeds
✗ Over-reliance on glyphosate tolerant crops

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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