

# Weed control opportunities with GM canola

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## KEY MESSAGES

Australia's agricultural profitability and sustainability is being threatened by weeds proliferating and becoming resistant to many different herbicide groups. Annual ryegrass (*Lolium rigidum*) is a particularly severe problem in Western Australia. Farmers are increasingly growing wheat on wheat as part of their rotation and are consequently increasing the amount of stubble burning for slight improvements in trifluralin efficacy on ryegrass. GM canola would greatly improve our ability to control weeds, maintain stubble as a carbon sink and protect our soil from wind and water erosion.

With less pastures in their rotations, inconsistent returns from pulse crops, high levels of resistance to grass selective herbicides, and with canola being a risky and expensive crop to grow, farmers are increasingly vulnerable to weeds. This puts our farmers in a similar position to Canadian farmers 10 years ago with wild oat, kochia and green foxtail resistance, before the advent of GM technology.

GM canola has largely been responsible for sustained clean crop rotations in Canada. Canada now boasts 77% of their canola crop being GM. This does not include another 18% of IMI canola which is produced by mutagenesis (arguably GM) and they have no TT canola. This leaves only about 5% of their canola being not herbicide tolerant. Western Australian farmers have to mostly (90%) rely on the ground water-polluting herbicide Atrazine which is somehow supposed to maintain our 'clean and green' image. Anti-GM activists have the ear of politicians with shallow logic and this is hurting us.

## AIMS

To discuss how Canadian farmers have successfully embraced GM canola with profound weed control benefits and to show how Western Australian farmers are being denied this powerful new tool to fight herbicide resistant weeds which is affecting our agricultural competitive ability.

## METHOD

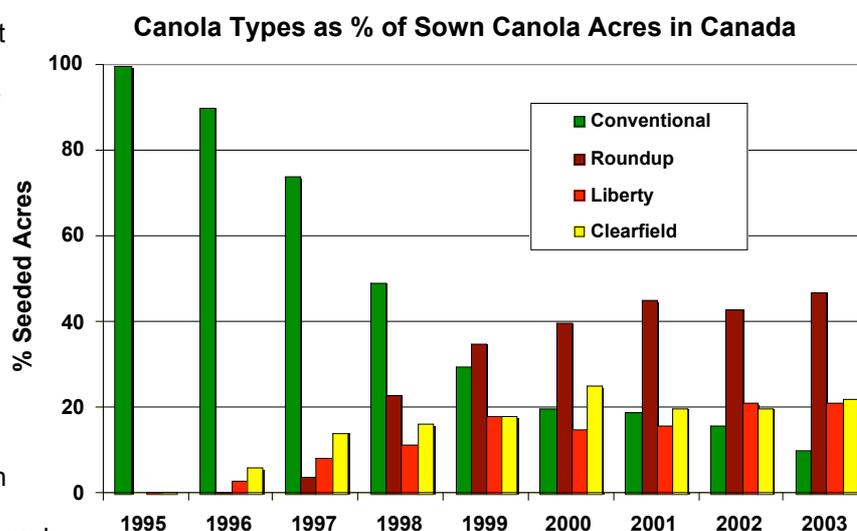
To share some experiences of weed control in Canada with GM canola, discuss some principles of herbicide resistance that are relevant to our Western Australian experience and discuss the political impact we currently have with GM canola in Western Australia.

## RESULTS

### *The Canadian weed experience with GM canola*

Canadian farmers have almost universally embraced GM canola. It has been one of the most rapidly adopted technologies ever by farmers. This is confirmed to me by my almost weekly emails with Canadian scientists or farmers and from my visit to Canada in August 2004 with 44 Australian farmers and scientists.

Canadians are enjoying good weed control, good herbicide resistance management, much less herbicide use, less costs, better crop yields, more return and more profit from the adoption of GM canola. This is shown in a report to the Canadian Canola Council in 2000, and is found on GRDC's website ([www.grdc.com.au/growers/gc/gc41/canada.htm](http://www.grdc.com.au/growers/gc/gc41/canada.htm)).



## *Australian weed issues and GM canola*

Some people believe that if we introduce RR canola then this will bring on glyphosate resistance more rapidly. While this is a valid argument, other truths also exist with this issue and they need to be discussed in full when considering GM canola and weed management. These issues include:

- Liberty (glufosinate ammonia) is effectively a new knockdown herbicide and mode of action
- SpraySeed before sowing GM canola, when possible, would become a compelling argument
- Applying glyphosate in-crop is a useful resistance diversity tool, as Canadians have observed
- The option exists to use SpraySeed between wide rows and Roundup or Liberty for furrow weeds
- Resistance is a numbers game and we need to use all knockdown herbicides and rotate them
- Good weed control is more likely with knockdowns in drought years – less reliant on soil moisture
- More weed competitive crops, earlier time of sowing and having hybrids with higher yields
- The option to rest 'fop' and 'dim' herbicides would be an option, yet they still could be used
- The ability to sow on the first rain and not have to wait for a weed germination is advantageous
- More flexibility with dry starts to the season – farmers would not be committed to a triazine crop
- Resistance to triazines is likely – being used in canola, lupins, beans, barley and Eagle Rock wheat
- The resistance load that trifluralin is carrying for ryegrass control is huge and not sustainable
- Good grass weed control requires at least two broadleaf crops to be grown in succession.
- The ability to grow two consecutive broadleaf crops – currently triazine restrictions limit this

These issues with GM canola and higher yields would make growing canola in dry regions, or in drought years, a sensible risk for farmers to take. Independent WA canola trial data, as reported in the 2004 Crop Updates, show a 15-20% yield increase for GM canola. GM canola would enable farmers to make more profit and better managing herbicide resistant ryegrass with a new knockdown.

Monsanto currently plans to use an 'end point royalty' scheme to re-coup their investment and plan not to collect fees if the crop fails. Note also that the ACCC does not allow Monsanto to link Roundup sales to their Roundup Ready (RR) crop (nor in Canadian). By rejecting GM canola in 2004 it is estimated that WA lost \$170 million, [www.no-till.com.au/publications/pressrelease.html](http://www.no-till.com.au/publications/pressrelease.html).

### *The Problem is Political*

There appears to be no desire for politicians, senior public servants and agro-politicians to honestly talk of the real benefits and small risks of the GM canola technology. These people have been hiding behind the fears of activists who say that markets are rejecting GM canola – this is not true! Data from ABARE show that Australian non-GM canola receives the same price as Canadian GM canola.

It is clear that canola profitability in Australia is lagging behind our, only serious, canola export competitor (Canada) both in terms of production and efficiency. The state governments are listening to and effectively perpetuating erroneous market comments. This is perplexing given the profoundly rapid adoption of Canadian GM canola and the ease with which they market their canola into mostly the same markets as us. Politicians need to support their farmers in their pursuit of sustainability.

## **CONCLUSION**

There is a \$170 million opportunity for WA farmers to embrace GM canola as a profound weed management and profit making tool. There needs to be a general farmer uprising of discontent to change the political will and resist the fear campaign waged by the anti-GM activists.

## **KEY WORDS**

GM crops, canola, weed control, grain yields, politics, resistance, Concerned Farmers, Green Peace.

## **ACKNOWLEDGMENTS**

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**Paper reviewed by:** Todd Andrews, NSW DPI, former Weeds Specialist, Manitoba Agric, Canada.