



CropLinks

THE NEWSLETTER OF CROPLIFE AUSTRALIA

WINTER EDITION 2013

Australian farmers growing GM crops gain \$611 million

The latest independent international report shows that in the sixteenth year of its widespread adoption, crop biotechnology has delivered considerable environmental benefits as well as providing an unparalleled improvement in farmer income.

Farmers who grow biotech crops continue to see significant economic and productivity gains, as well as substantial environmental benefits, the latest annual reports from PG Economics reveals.

Australian biotech cotton and canola farmers have realised farm income benefits of more than \$611 million over the 16 year period from 1996–2011, covered by the report.

Crop biotechnology has also contributed to significantly reducing the release of greenhouse gas emissions from agricultural practices. This results from less fuel use and additional soil carbon storage from reduced tillage with GM crops. In 2011, this was equivalent to removing 23 billion kg of carbon dioxide from the atmosphere, or equal to removing 10.2 million cars — 80 per cent of the cars registered in Australia — from the road for one year.

Since 1996, the global farm income gain from biotech crops has been US\$98.2 billion. This is an impressive increase and demonstrates the value of agricultural biotechnology, not just for farmers, but for the global economy as a whole.

Even more impressive is the contribution of biotech crops to the global food supply. Between 1996 and 2011, crop biotechnology was responsible for an additional 110 million tonnes of soybeans and 195 million tonnes of corn. The technology has also contributed an extra 15.8 million tonnes of cotton lint and 6.6 million tonnes of canola.

The global farming sector will need to produce 70 per cent more food by 2050 in order to meet the needs of our growing population. These figures give real, concrete evidence that agricultural biotechnology is a crucial asset and innovation for achieving that goal.

If crop biotechnology had not been available to the 16.7 million farmers using the technology in 2011, maintaining global production at the 2011 levels would have required additional plantings equivalent to 33 per cent of the arable land in Australia. That's over 15 million hectares of forest and natural habitat saved by the use of crop biotechnology.

These latest figures released by PG Economics once again provide the solid data proving the real and genuine benefits of biotech crops. It is only fair that this technology be available to all farmers across Australia, and the rest of the world.



HIGHER YIELDS

IF HIGHER YIELDING BIOTECH CROPS HAD NOT BEEN AVAILABLE FROM 1996 TO 2010, AN ADDITIONAL 91 MILLION HECTARES OF FARMLAND WOULD HAVE BEEN NEEDED TO MAINTAIN GLOBAL PRODUCTION LEVELS¹

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Agvet chemical reforms

GM moratoria holding Australia back

Chemclear® demonstrates strong commitment to industry stewardship

1. BROOKES AND BARFOOT, 2012



As the Federal Budget is handed down, in this election year, it is a good time to take stock of the issues and priorities facing a crucially important sector for the prosperity of the nation's agricultural industry.

From the Chief Executive Officer

The plant science industry is looking for simple, smart policy this budget season.

The plant science industry is an integral part of the success of Australian farming and agriculture, and Australian agriculture is integral to the federal government's economic policy for the Asian Century. What affects the plant science industry affects farming, and what affects farming, affects our economy as a whole.

When we think about the challenges and opportunities facing the Australian economy in the coming years — the end of the resources boom, accessing new and expanded markets in Asia, increased demand for food — one thing is clear: in order to position our economy for future prosperity, we must increase agricultural productivity.

A 2012 discussion paper recently released by the Office of the Chief Scientist entitled 'Australia's Role in Global Food Security' found that continued investment in R&D is essential for increasing Australia's agricultural production and helping secure food availability, both in the Asian region and further abroad.

A small investment now is likely to proffer enormous rewards in the coming decades. Equally, a long-term vision and holistic and efficient approach to the regulation of agriculture's support industries are absolutely fundamental to the future success of our farming sector.

Public policy must be founded on mainstream, proven science, and

governments should be looking to fund programs that allow key agricultural support industries to provide farmers with the tools they need to produce more with less.

For example, the plant science industry has been calling on the Australian Government for many years to provide funding for a specialty crops and minor use program. An analysis of the US specialty crops program showed that every dollar spent by that government on its program in the US returned more than five hundred dollars to the economy.

Similarly, biotech cotton is earning the farmers who grow it, on average, an extra \$180 per hectare. Farmers using biotech canola are earning on average an extra \$73 per hectare. Policies that restrict the use of this technology in a number of states are depriving farmers of the opportunity for similar increases in profit.

The federal government's failure to fund a minor use program and the persistence of a number of state governments with archaic, non-science based moratoria on GM crops are just two examples of issues and hurdles restricting the path to increased agricultural productivity.

All our industry is looking for in this budget and in the forthcoming election is simple, smart policy: giving farmers access to the approved tools and technologies they need to increase productivity.



Representing Australia's plant science industry

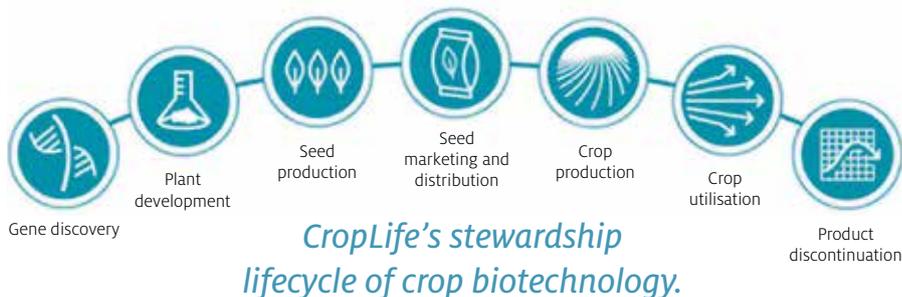
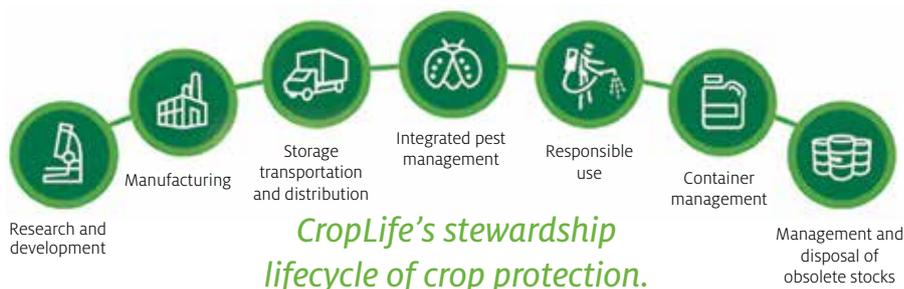




Industry Stewardship

CropLife and its member companies are global leaders in their full lifecycle approach to industry stewardship; ensuring products are developed, sold, used and disposed of appropriately.

CropLife and its members spend more than \$13 million a year on stewardship activities. CropLife members adopt and promote ethical and responsible practices, from discovery and development of crop protection and biotechnology products, through to their uses and final disposal of associated wastes. CropLife's wholly owned subsidiary, Agsafe and its programs are the foundation of the plant science industry commitment to remaining world leaders in industry stewardship.



ChemClear® demonstrates strong commitment to industry stewardship

ChemClear® is an industry stewardship program, managed by CropLife Australia's wholly-owned subsidiary, Agsafe. The program collects and disposes of eligible agvet chemical products from 99 participating manufacturers. ChemClear® provides a safe and easy avenue for farmers to dispose of chemicals in an environmentally friendly way.

As of 1 April 2013, more than 80,000 litres of obsolete agvet chemicals have been registered for collection and disposal. In ChemClear's® 10 year history more than 366 tonnes of obsolete agvet chemical have been collected for safe disposal. This is

about equivalent to the volume of a 25-metre swimming pool. This level of success clearly demonstrates that farmers and industry are committed to working together to practice the responsible use of agvet chemicals.

The success of ChemClear® demonstrates how agvet chemical products can be disposed of in a safe and sustainable manner. This success shows the strong commitment of the farming sector and the plant science industry to sustainable management of products at every stage of their life cycle.

Did you know?

About 98 per cent of the chemicals collected by ChemClear® are used as an alternative fuel source in the manufacturing of cement.



Accreditation & Training



Minor use, major benefit

Specialty crop producers in Australia can struggle to access appropriate pest management tools. As a result, these farmers are at a serious disadvantage to their international competitors.

The plant science industry has been calling on the Australian Government for many years to provide seed funding for a Specialty Crops and Minor Use Program to give farmers access to the products they need to develop and grow specialty and minor crops.

Minor uses and specialty crops are by definition, small markets. High regulatory costs associated with low potential sales results in little incentive for registrants to add new uses to labels. This is particularly a problem for horticultural crops, including fruits, vegetables, nuts and herbs. A lack of registered pest management tools means that 'glass ceilings' are placed on these potentially high-profit crops.

The way to remove this 'glass ceiling' and deliver a bonus to the nation's farming sector is for the Australian Government to establish and fund a Specialty Crops and Minor Use Program.

The federal Coalition promised to fund an 'Australian Specialty Crops Protection Unit' as part of its 2007 election commitment, but to date the current government has not publicly supported or looked to implement this important investment for the Australian economy.

Similar programs in the US and Canada receive millions of dollars in government funding because they deliver significant economic returns. Australian farmers looking to open up new commercial crop opportunities must develop expensive



This is an initiative that should have bipartisan support in Australia.

data packages and complete complex applications to support uses that are often allowed in other markets.

An analysis of the US specialty crops program showed that every dollar spent by government in assisting specialty growers in the US returned more than \$500 to the economy. That benefit includes cheaper fruit and vegetables for the entire community. That is a big economic bang for small bucks.

The Australian Government, states and territories are trying to harmonise their regulations for using crop protection products. Registering more products and more uses for more high-value crops will assist in achieving this goal. It would be a shame if the government's National Food Plan was undermined by an issue that could be solved with a little bit of vision and even less money.

Agvet chemical reforms

Whatever the result of the current agricultural and veterinary chemicals legislative reform process, farmers still need an efficient regulator.

For many years, CropLife has advocated for reform of agricultural chemical regulation and has been actively engaged with government to assist in this process. The Agricultural and Veterinary Chemical Legislation Amendment Bill 2012 is awaiting its third reading in Parliament.

Regardless of the fate of the Bill, it has been clear from the outset that the Australian Pesticides and Veterinary Medicines Authority (APVMA) needs to be more efficient in the way it carries out product registrations and approvals.

One of the major concerns for the plant science industry and the farming sector is the inclusion of a re-registration process in the Bill. This would require all products to go through an additional bureaucratic process to remain on the Australian market.

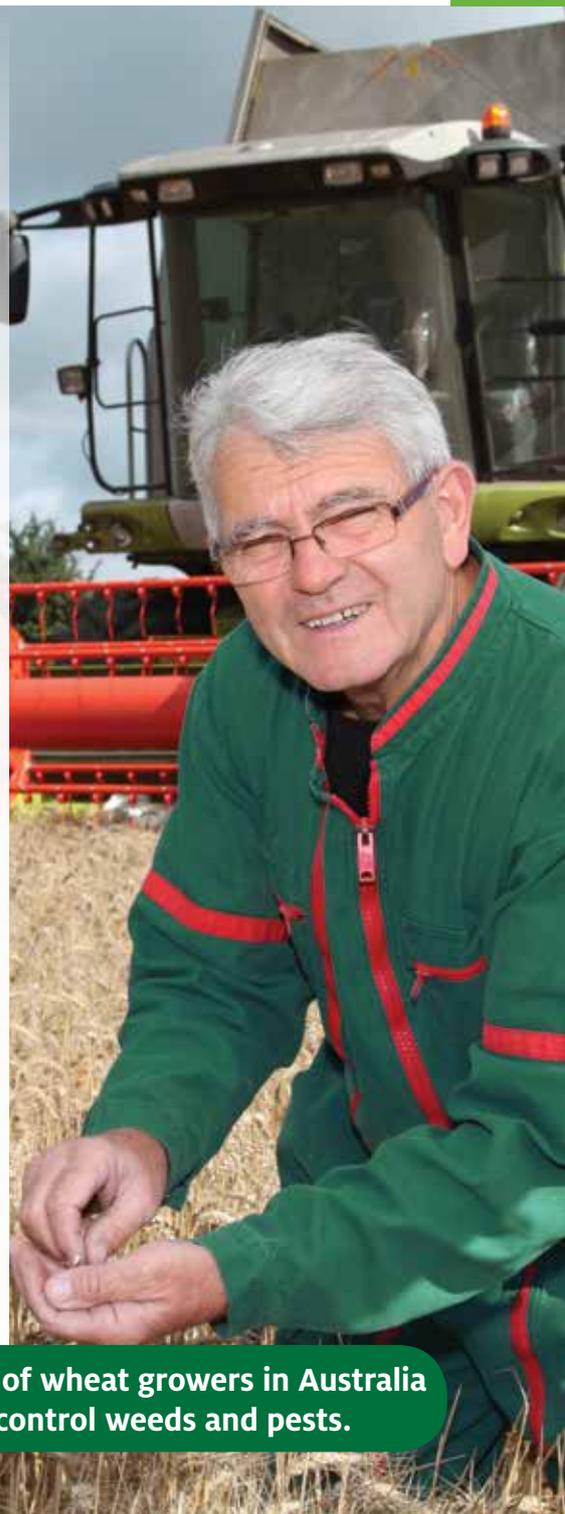
Re-registration creates inefficiencies that could lead to the removal of a suite of safe and necessary protection products that help our farmers control the 2300 weeds that put Australian crops at risk.

Australia prides itself as a world leader in innovation. The Rural Industries Research and Development Corporation estimates that for every dollar spent towards agricultural research and development there is an \$11 return. Governments should be particularly careful to ensure that the overwhelmingly positive results from the scant few dollars spent on agricultural R&D are not wasted by passing laws that discourage innovation.

This said the proposed Bill isn't all bad. CropLife supports improved data protection, as this will provide a greater incentive for businesses to innovate and bring new products to the market. Suggested improvements to the APVMA's compliance powers would help ensure crop protection products and remain safe, effective and reliable.

Reforms that create an efficient regulatory system will encourage greater competition. In turn this will allow registrants to bring new products, register new uses and lower costs for farmers.

The reforms for which CropLife has been fighting over the past three years focus on providing maximum benefit to all farmers, through an effective and efficient registration process that cuts through red tape to provide incentive for innovation and assists in safeguarding the international trade competitiveness of the Australian Farming sector. No matter what happens to the current Bill, there is still a great deal of work to be done.



Did you know? Up to 93 per cent of wheat growers in Australia use pesticides to control weeds and pests.

Mind the gap

A recent report from the Department of Industry, Innovation, Science, Research and Tertiary Education (DIISRTE) has found a strong correlation between a lack of understanding of the science of agricultural biotechnology, and opposition to its use.

The report revealed that over half of the population was in favour of growing GM crops in their state and only a third was opposed. Three fifths of those opposed would change their mind if it could be demonstrated that GM crops provided positive outcomes for the environment and human health, or if they were informed about the strict regulatory regime that is in place for GM crops.



The report shows that there is a continuing gap between the science of the safety and proven benefits of biotech crops, and public awareness.

Agricultural biotechnology is transforming modern day farming, bringing with it an array of positive outcomes for the environment. Biotechnology allows crops to be grown in harsher conditions, using fewer resources, and delivering higher yields. In 2011, biotech crops were directly responsible for saving 23 billion kgs of carbon dioxide emissions — equivalent to removing 10.2 million cars from the road for a year.

Further, biotech crops can deliver crucial nutrients directly into the diets of those that need it most. Golden Rice has been genetically improved to contain higher levels of vitamin A than conventional rice. This biotech rice has the potential to help reduce the burden of vitamin A deficiency in the developing world by up to 59 per cent or save up to 40,000 lives each year. Many more nutritionally enhanced crops are waiting in the pipeline for approval.

Australia has one of the world's most stringent regulatory frameworks for GM cropping.



A rigorous case-by-case assessment of every new biotech trait ensures that all approved biotech products are safe for the environment and for human consumption. Despite this stringent regulation, misinformation and scaremongering continue to influence public opinion of agricultural biotechnology.

The benefits and safety of biotechnology are strongly backed by scientific evidence. Closing the gap in awareness and bringing the public up to speed on the science of biotechnology is vital for the future prosperity of the Australian economy and the sustainability of our farming sector. It is important all opinion leaders follow the science of agricultural biotechnology and not let misinformation and scaremongering get in the way of good policy.



GM moratoria holding Australia back

While global GM crop plantings increase at unprecedented rates, many Australian farmers are still denied access to the technology.

A recent report from the International Services for the Acquisition of Agri-Biotech Applications (ISAAA) demonstrated global adoption of biotech crops increased 6 per cent last year to reach 170.3 million hectares. This equates to a 100 fold increase in the area planted since 1996, marking a significant milestone for modern agriculture. Australia, however, when compared to its biggest international trade competitors, continues to be held back by politically motivated state regulation.

Australia has one of the world's most stringent risk assessment regimes for biotechnology; with up to three federal regulatory agencies that rigorously assess the environmental and health safety of new GM traits. This high standard of assessment guarantees that

all approved GM crops in Australia are safe for the environment and for human consumption. Despite this, moratoria still exist on biotech crops in a number of states, preventing many Australian farmers from receiving the benefits of biotechnology.

Although 2012 was a record year for adoption of GM crops in Australia, with 700,000 hectares planted, this number pales into insignificance on a global level. Australia is ranked as having the 13th largest area of GM crops behind countries like Canada, Brazil, the US, Pakistan, Bolivia and the Philippines.

Australia has eight times more arable land than the Philippines; however the Philippines still grows 100,000 more hectares of biotech crops than Australia.

Australian canola farmers compete on global markets with countries like Canada, where a record of 8.4 million hectares of biotech canola was grown last year. Canadian farmers are reaping the benefits of a technology that is not available to Australian farmers in a number of states because of unnecessary and inhibiting regulation.

Further adoption of biotech crops holds huge potential for Australian farmers, promising higher yields and the ability to grow food and fibre in harsher growing conditions using fewer resources. Biotech crops could help Australia dramatically increase its share of growing Asian markets. However, unscientific regulation continues to distort the market and impede the performance of the Australian agricultural sector.

Did you know?

ABARES estimated the economic benefit to South Australia of adopting GM canola from 2008 for 10 years would be equivalent to over \$115 million. Thus: \$115 million slipped through South Australia's fingers due to state GM moratoria.

A recent Macquarie Franklin report for the Tasmanian Government estimates there has been a farm gate loss of \$90 million

over the last 10 years as a direct result of the state's GMO moratorium.

DOW AGROSCIENCES



Dow builds strategic relationships

Dow AgroSciences LLC recently announced a global strategic relationship with The Royal Barenbrug Group for the development and commercialisation of advanced germplasm in forage seeds. Dow AgroSciences will be a minority shareholder in Barenbrug Holding B.V., part of The Royal Barenbrug Group and will provide Barenbrug access to select hybrid *Brachiaria* germplasm. This relationship will allow the two companies to maximise strengths to realize a shared vision of growth in forage grasses. Barenbrug are the owners of Agriseeds in New Zealand and Heritage Seeds in Australia.

MONSANTO



WeedSmart

Monsanto has joined forces with industry to launch the WeedSmart initiative to confront herbicide resistance. WeedSmart is the first education and extension program of its kind and will arm farmers with the latest tools and resources to combat resistance and ensure the future value of herbicides.

NUFARM



New master to tackle weeds

Nufarm Australia Limited will be launching a new range of glyphosate products later this year, following the recent announcement of the end of the distribution agreement between Nufarm Limited and Monsanto for Roundup products in Australia and New Zealand.

Branded as the Nufarm Weedmaster glyphosate range, several of the products are based on Nufarm's patented dual salt technology. These products complement the other high quality glyphosate products that Nufarm currently manufacture and distribute, such as Credit & Bonus.

AGNOVA TECHNOLOGY



Registers Flute to combat Powdery Mildew

Working closely with agricultural producers and their supporting rural reseller, AgNova has just registered Flute, a new mode of action Powdery Mildew fungicide for use in grapes and cucurbits. Focus on commercialisation of new products and opportunities are AgNova's core business.

AgNova Technologies is an Australian company that sources, develops and distributes specialty crop protection and production solutions for agricultural and horticultural producers. AgNova markets a wide range of specialist herbicides, insecticides, fungicides, fertilisers and non-chemical technologies within Australia.

BAYER CROPSCIENCE



Competition winners to represent Australia at Global Youth Ag Summit

Corbin Schuster and Rachael Rodney were announced winners of the Global Youth Ag Summit essay competition at the Future Farmers Network's (FFN) Youth Agricultural Central event in Canberra recently. From an entry pool of 34 applications, Corbin and Rachael have won an expenses paid trip to the summit which will address issues affecting the agriculture industry today with a key focus on global food security. Bayer CropScience and FFN have partnered to provide the winners the opportunity to participate in the Global Youth Ag Summit to be held in Canada in August.

SYNGENTA



Australian research tour to kick-start peach production in Pakistan

When agricultural researchers from a formerly Taliban occupied province in northern Pakistan visited Australia recently they found the two countries faced plenty of common challenges. Two researchers from Pakistan were hosted by Australian Khyber Pakhtunkhwa Agricultural Development Organisation (AKPADO) through the support of Syngenta and the Crawford Fund. This was a fantastic opportunity to build relationships and look at some of the agronomic solutions available in the Australian market. The three researchers return to Pakistan armed with some new techniques to share with growers and have also made some great connections, which will help kick-start the re-establishment of peach farming in the Swat Valley.

CropLife Australia is part of a global network representing the plant science industry across 91 countries. CropLife Australia works together with its global network to ensure the safe, sustainable and beneficial use of agricultural biotechnology across the globe.

Developing countries embrace benefits of plant biotechnology

For the first time since the introduction of GM crops, developing countries have grown more hectares of biotech crops than industrial countries.

It was once thought that biotech crops would never be grown in developing countries, but of 28 countries that grew biotech crops last year, an astounding 20 were developing countries, including Bolivia, Sudan, Egypt and Costa Rica. In 2012, a majority of farm income gains — 51 per cent — went to farmers in developing countries, 90 per cent of which are small, resource poor farms.

For millions of families in the developing world, farming is more than just an occupation; it is a sole means of survival. Biotechnology has enabled more productive farming, increased profits and resulted in improvement in overall quality of life. In India, biotech cotton has

boosted yields; leading to a US \$12.5 billion dollar increase in farm income (from 1996–2011). The flow-on effects within the community have resulted in improved access to telephone systems, drinking water economic infrastructure and health care.

Biotechnology offers more than just improvements to farming in the developing world. The ingenuity of modern day technology has helped in alleviating poverty by helping 17 million small farmers feed themselves and their families. CropLife Australia is working with CropLife International to support the adoption and sustainable use of agricultural biotechnology across the globe.

Global adoption of biotech crops in developing and industrial countries



**HIGHER YIELDS
IMPROVED LIVELIHOODS**
In India, Bt cotton is boosting yields, leading to higher farm incomes and quality of life improvements.

**\$12.5 BILLION
IN FARM INCOME
GAINS FROM 1996–2011**

**IMPROVED ACCESS TO
TELEPHONE SYSTEMS,
DRINKING WATER AND
ECONOMIC INFRASTRUCTURE**

**MORE MATERNAL HEALTH CARE,
HIGHER SCHOOL ENROLMENT
AND VACCINATION RATES**

Tackling the issue of herbicide resistance

What would you do if faced with a \$200 million productivity problem? Would you tackle it alone? Or would you work with other organisations with a similar problem to really impact the issue?

WeedSmart mobilises an entire industry to tackle the issue of herbicide resistance. Fourteen industry partners are involved, from government agencies, to the biggest players in commercial biotechnology, agri-business, education and research.

CropLife Australia is pleased to support this important initiative and very proud at the leadership shown by our member companies in initiating the program.

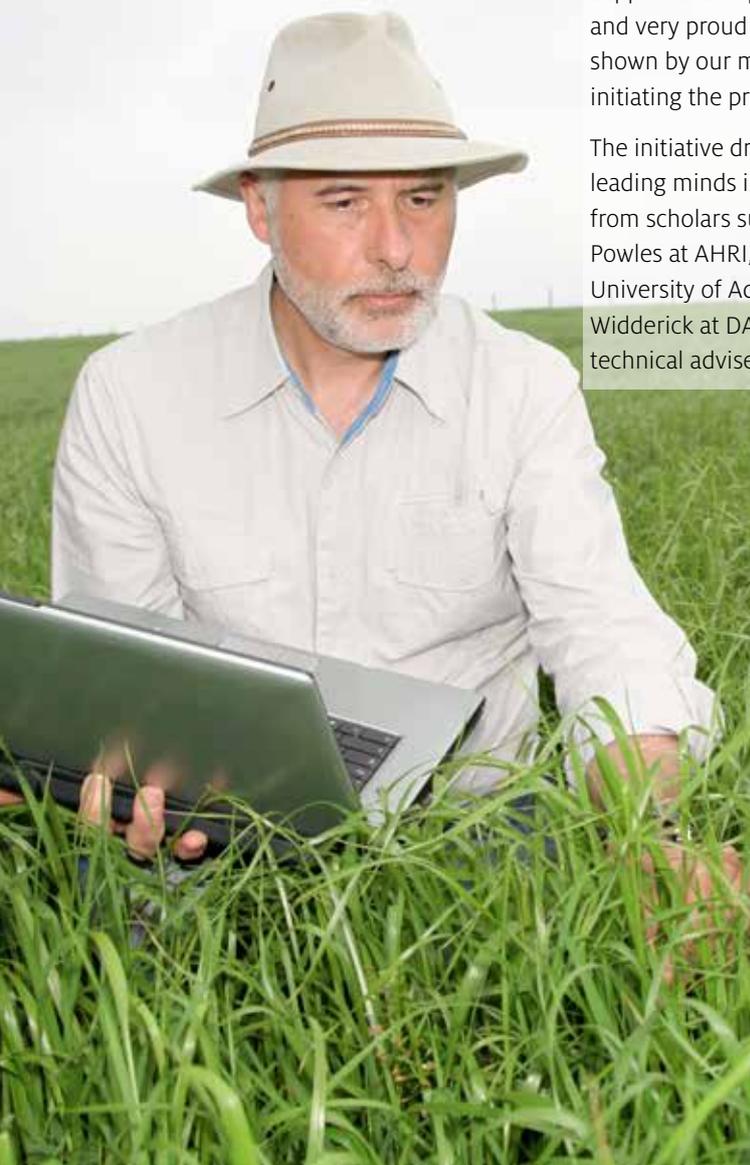
The initiative draws on Australia's leading minds in herbicide resistance from scholars such as W/Prof Stephen Powles at AHRI, Dr Chris Preston at University of Adelaide and Dr Michael Widderick at DAFF Queensland to technical advisers such as Tim Condon

from Delta Agribusiness each advising on best practices.

WeedSmart was launched at the Global Herbicide Resistance Challenge in February 2013. The initiative aims to educate farmers about the sustainable use of herbicides and how to manage the weed seed bank.

The goal is that WeedSmart will be a catalyst to a cultural shift in the way farmers approach a serious problem that threatens a major segment of Australia's economy; preserving herbicides, agricultural productivity and profitability for the next generation.

A range of useful resources are available at www.weedsmart.com.au to growers, advisers, educators and corporate partners.



WEED
smart
every weed every seed
every farm every year



Welcome to WeedSmart

Herbicide resistance costs the grain industry hundreds of millions of dollars annually. This number will rise if left unchecked.

It's time to act.

Visit weedsmart.org.au to tackle herbicide resistance on your farm

[WeedSmart App](#) |
 [Grower ToolKits](#) |
 [Advisor Portal](#) |
 [10 Point Plan](#) |
 [eNewsletter](#)



Available on the App Store

WEED smart
every weed every seed
every farm every year



GRDC
Grains Research & Development Corporation

"GRDC is a foundation partner of WeedSmart, an industry-wide initiative to tackle herbicide resistance. This critical issue is threatening the productivity of the Australian grains industry and large growers and advisors to take advantage of the tools on offer. Visit weedsmart.org.au."

- John Harvey, Managing Director, GRDC

Your tool kit to combat weeds

Herbicide resistance costs the grains industry hundreds of millions of dollars annually. This number will rise if left unchecked.

Visit weedsmart.org.au to join the fight against herbicide resistance.

The WeedSmart app

The WeedSmart app for iPhone and iPad is now available on iTunes. Simply answer five questions on a specific paddock's farming system and the tool will gauge your herbicide resistance and weed seed bank management. [To learn more](#)

Subscribe to WeedSmart

Subscribe to WeedSmart to keep up to date with the latest research and developments. [Subscribe now](#)

WeedSmart launch

Want to learn about WeedSmart? View the launch video here. [View the launch video here](#)

Tackle herbicide resistance in your region:

Northern Region

Southern Region

Western Region

Enter the WeedSmart COMPETITION

[Enter Now](#)

CropLife Australia

CropLife Australia (CropLife) is the peak industry organisation representing the agricultural chemical and biotechnology (plant science) sector in Australia. CropLife represents the innovators, developers, manufacturers, formulators and registrants of crop protection and ag-biotechnology products.

The plant science industry provides products to protect crops against pests, weeds and diseases, as well as developing crop biotechnologies that are key to the nation's agricultural productivity, sustainability and food security.

CropLife is focused on three key areas of modern farming: crop protection (pesticides), crop biotechnology (GM crops) and industry stewardship.

CropLife's members represent 85 per cent of crop protection and 100 per cent of the crop biotechnology products used by Australia's farmers.

CropLife ensures the responsible use of the industry's products through its code of conduct and has set a benchmark for industry stewardship through programs such as **drumMUSTER**, ChemClear® and Agsafe Accreditation and Training.

CropLife Australia is part of the CropLife International Federation, representing the industry in 91 countries around the world.

Facts about Australia's plant science industry

- The plant science industry is worth more than \$1.5 billion a year to the Australian economy and directly employs thousands of people across the country.
- CropLife member companies spend more than \$13 million a year on stewardship activities, which ensure their products, are sustainably managed for the benefit of users, consumers and the environment.
- It costs up to US \$136 million and 13 years to research, develop and register a new GM crop product.
- It costs up to US \$256 million to research, develop, and register a new crop protection product: only 1 in 139,000 chemical products make it out of the laboratory.
- Pesticides are a key tool for farmers; increasing crop production by up to 50 per cent by ensuring crops are pest and disease free.
- In 2011 the total farm income benefit from using GM technology was US \$19.8 billion an average increase in income of US \$133 per hectare.
- The amount of carbon dioxide emissions saved by biotech crops in 2011 was equal to removing 10.2 million cars from the road for one year.



Crop Protection



Crop Biotechnology



Industry Stewardship

CROPLIFE AUSTRALIA MEMBER COMPANIES



CROPLIFE AUSTRALIA LIMITED