



CropLinks

THE NEWSLETTER OF CROPLIFE AUSTRALIA

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New regulatory reform initiative — good for farmers, good for agriculture and good for the nation

The Australian Government has introduced a Bill that will improve the efficiency of agricultural chemical registration and ensure the protection of human health and the environment remains the focus of the regulator.

Our farmers use crop protection products responsibly to grow food and fibre that sustain the nation, as well as provide significant product for export. It is crucial that Australia has an efficient, world-class regulator that ensures the protection of human health and the environment while also facilitating farmers' access to these essential tools and products. The positive steps being taken by Minister for Agriculture, The Hon. Barnaby Joyce, in reducing unnecessary regulatory

burden on agricultural and veterinary chemicals (agvetchem) will deliver significant benefits for farming and the Australian community more broadly.

Australia needs a regulatory system that supports the responsible and safe use of chemicals. An efficient and effective Australian Pesticides and Veterinary Medicines Authority (APVMA) is crucial for the Australian community so that the nation's farmers have access to the latest, safest and most efficient technologies. The steps being taken by government will go a long way to improving the system by reducing unnecessary and costly red tape that only detracts from the APVMA being able to be a world-class regulator.

'Minor use' a major win for Australia's farmers

The Australian Government has pledged \$8 million to a program supporting minor and speciality use crop protection product registration.

As a result of increasing costs associated with data development and registration, Australian farmers are being left without the full suite of tools to control pests, weeds and diseases.

An appropriately targeted minor and speciality use program in Australia can safeguard Australian agriculture by increasing its productivity and diversity. Economic analysis of the United States'

minor use program has estimated that for every dollar invested, the program facilitates a return to the US economy of US\$500.

Implementation of a successful program in Australia will lead to similar productivity and economic gains for the farming sector.

ALSO INSIDE

Ag Biotech — important tool for global food security

Healthy bees, healthy farms

ABCA launches coexistence campaign

Did you know?
it takes

\$250 million over 10 years

testing more than **140,000** chemical compounds
to find **one new** crop protection product.



The plant science industry has been responsible for significant improvements in the production of food, feed and fibre, but innovation does not come easily and it is crucial that appropriate strategic public policy settings are in place to meet future food security challenges.

From the Chief Executive Officer

Efficient regulation required to foster agricultural innovation

The issues of agricultural production and global food security have come to the fore over recent years. The facts and statistics relating to the issues can often be overwhelming: to meet the food requirements of the predicted global population of 10 billion people by 2050, agricultural production will need to increase by more than 50 per cent; to feed the global population over the next 20 to 30 years the world will need to produce as much food as we have over the last 16,000 years of human existence; and while the total number of people suffering starvation has significantly dropped over the past two decades, there are still 842 million people who on a daily basis struggle with hunger and nutrition.

History has shown us that with innovation, what once we may have thought to be impossible is indeed achievable. The technological development of modern agricultural chemistry by the plant science industry and the adoption of that innovation into farming was a core component of the Green Revolution through the middle of last century. The adoption of that technology saw a doubling of agricultural production. It is technological development and the innovation that comes from it that will also play a crucial

role in meeting the current and future challenge of global food security.

That innovation does not come easily and it's crucial that governments ensure the appropriate strategic public policy settings that stimulate such innovation are in place, as well as ensure removal of unnecessary regulation that serves as an inhibitor to innovation. As an example of the real impact that regulation can have on innovation, a recent global study found that it now takes 10 years and more than US\$250 million to bring a new chemical crop protection product to market, with more than one third of that cost directly related to meeting regulatory obligations.

The plant science industry itself is one of the strongest advocates for a robust world class regulatory system for agricultural chemicals that ensures the highest level of protection for human health and the environment. For such a regulatory system to remain viable, however, it is equally important that duplicative, unnecessary and costly regulation that does not deliver any genuine public policy or community benefit is removed from the system — Australia's farming future and indeed our food supply depends on it.



Representing Australia's plant science industry



Farmers need agricultural technologies to feed the world

Global population and income growth, and the impacts of a changing climate, will further escalate the pressure for increased and more sustainable agricultural production to feed a hungry planet.

A new study by the International Food Policy Research Institute (IFPRI) has measured the impacts of agricultural innovation on farm productivity, prices, hunger and trade flows to 2050 and identified practices that could significantly benefit developing nations.

Food Security in a World of Growing Natural Resource Scarcity: The Role of Agricultural Technologies, examined 11 agricultural practices and technologies and how they could help farmers around the world improve the sustainability of growing three of the world's main staple crops — maize, rice and wheat.

The study highlighted that the combination of agricultural technologies and practices such as heat-tolerant crops and no-till farming, could reduce food prices by up to 49 per cent for maize, up to 43 per cent for rice and 45 per cent for wheat due to increased crop productivity

The full report is available at www.ifpri.org

Agricultural technologies could increase global crop yields as much as 67 per cent and cut food prices nearly in half by 2050

More food. Less impact.

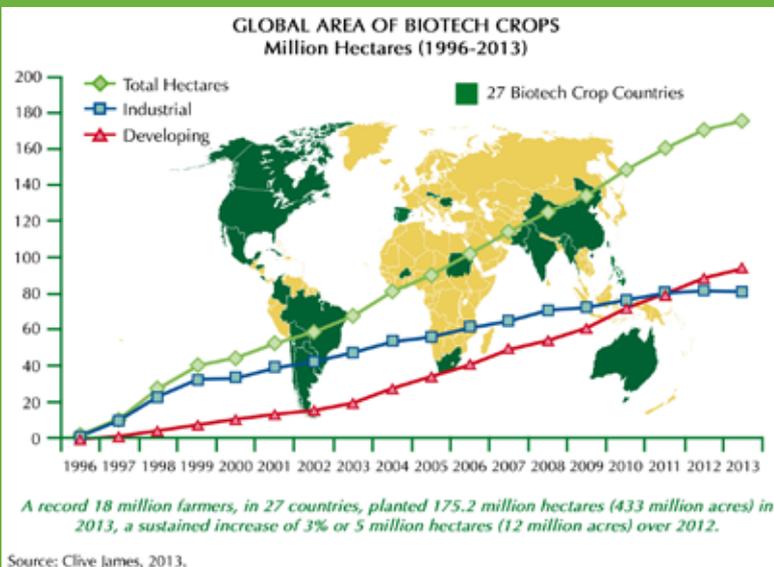
Global adoption of biotech crops increases by 3 per cent

The International Service for the Acquisition of Agri-Biotech Applications (ISAAA) recently released its annual report which revealed that more than 18 million farmers in 27 countries planted biotech crops in 2013, reflecting a 12.4 million, or three percent, increase in global biotech crop acreage.

Global biotech crop acreage has increased from 4.2 million acres in 1996 to over 432 million acres in 2013. During this 18 year period, more than a 100-fold increase of commercial biotech crop acreage has been reported.

The ISAAA report highlights that biotech crops have eliminated the need for 497 million kg of pesticides, reduced CO₂ emissions by 27 billion kg in 2012 alone (equivalent to removing 12 million cars from the road for one year), has conserved biodiversity by saving 123 million hectares of land from being placed in agricultural production, and alleviated poverty for 16.5 million small farmers and farm families, totalling more than 65 million people.

The full report is available at www.isaaa.org





Six dollars gained for every dollar spent by Australian grains industry



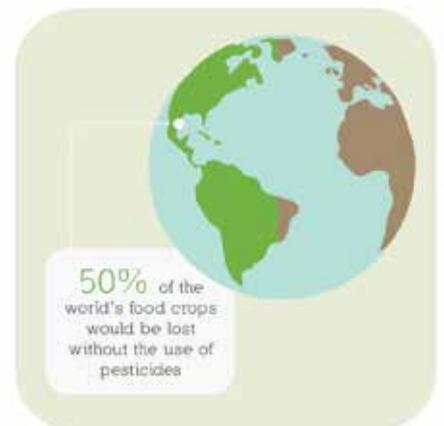
With exports in excess of \$6 billion each year and over 15 million ha planted annually, the grains industry is one of the largest primary industries in Australia. Controlling invertebrate pests such as insects and mites is a priority for Australian grain growers since these pests cause both direct and indirect damage to crop yields — direct through their feeding and indirect through transmission of diseases

A recent report published by the Grains Research and Development Corporation quantified present and potential costs of invertebrate pests to assist in the allocation of resources for pest management. It found that across Australia's six most important grain crops (wheat, barley, oats, canola, lupins and grain sorghum), with a gross production value of \$8 billion, the potential crops losses without any controls were estimated at \$1.7 billion, or 21 per cent of total current production.

The study investigated the benefits of both chemical controls and cultural controls, which include conservation of natural enemies, time of sowing, crop destruction, crop rotation, weed management and cultivation. Combined, present cultural and pesticide controls

of invertebrate pests effectively reduce losses down to an estimated present annual loss totalling \$360 million (4 per cent of total production).

Aggregated across all pests in the six crops, cultural control methods deliver benefits totalling \$254 million. Despite the contribution of cultural controls, many of the invertebrate pests regularly require intervention for their management, and this intervention is invariably pesticide-based. Pesticide treatment costs across the six crops totalled \$159 million, preventing \$1 billion in crop losses. Thus, Australian grain crop growers gain \$6.3 for every dollar spent on pesticides to control invertebrate pests.



Healthy bees, healthy farms

Bees are very important to Australian agriculture. Of all the horticultural and agricultural crops introduced into Australia since European settlement, 65 per cent require honey bees for pollination. In addition to the value of bees as pollinators, the Australian honey and other bee products industry is valued at approximately \$90 million per year.

Australia has one of the healthiest bee colonies in the world. Alongside the responsible management of hives, Australia is free of the parasitic mite *Varroa destructor* and Colony Collapse Disorder, which have devastated some bee colonies overseas. Australia was also the last continent free of small hive beetle, a major pest of honey bees that arrived around the year 2000, and has since become endemic. The National Bee Pest Surveillance Program, which assists in Australia maintaining its status as *Varroa* mite free, is paramount to ensuring the health of our bee colonies.

The introduction of modern insecticide formulations has significantly reduced the risk to bees and other pollinators. One family of insecticides introduced in the late 1990s, the neonicotinoids, were specifically designed to be softer on bees and other beneficial insects. Neonicotinoids are now widely used in Australia and internationally as a seed treatment.

The Australian farming sector has successfully used neonicotinoid insecticides for decades and has one of the healthiest bee colonies in the world.

The plant science industry has a vested interest in bee health, in addition to the \$13 million that CropLife's member companies contribute annually to stewardship activities to ensure the safe and effective use of their products, CropLife has been working with member companies to continue to ensure the Australian plant science industry maintains world's best stewardship practices in protecting pollinators.





No need for farmer conflict

Impractical Australian organic standards that are inconsistent with the rest of the world are to blame for the recent dispute between two farmers before the Supreme Court of Western Australia.

History has shown that Australian farmers can produce a variety of feed and fibre crops side-by-side and keep them separate throughout sowing, harvest, storage and delivery. With the provision of adequate standards, there is no reason that modern and organic farms cannot exist in harmony as other farming systems have for decades.

Canola farming is an example of successful coexistence under appropriate standards. Many farmers grow GM and non-GM canola side-by-side, and after

five years of growing GM canola there has not been one incident across over 3 million tonnes of canola delivered domestically, or over 10 million tonnes delivered internationally, where an end user has not received what they had ordered in terms of the GM status.

Australia's zero-tolerance organic standards are out of step with other industries and the rest of the world. Australia's major trading partners, including Europe, the US and Canada, all have standards for organic production that do not place impossible requirements on organic farmers or their farming neighbours. This type of bad regulation leads to unnecessary conflict which will only hurt all farmers and Australian agriculture as a whole in the long term if not rectified. Standards and

regulations in agriculture must recognise that nature does not operate in absolutes and biological systems do not operate in isolation.

The Western Australian court case will result in no winners. Interested parties who have fuelled this conflict could spend their time and resources much more effectively by contributing to better public policy for Australia's farming sector, rather than spreading misinformation for their own narrow political agendas.

Australian farmers must have access to the same safe, effective tools and technologies as their international competitors. They must have access to a variety of markets for high quality produce, without being subjected to uniquely irrational and unreasonable standards.

Australian farming has a tradition of sustainability, diversity and harmony.

Coexistence is the foundation of farming. It is not a new concept.

Make an informed decision, visit:
www.abca.com.au/coexistence

The Agricultural Biotechnology Council of Australia (ABCA) seeks to provide balanced, science-based information on biotechnology.

Agricultural Biotechnology Council of Australia

ABCA launches new public information resource on coexistence

The Agricultural Biotechnology Council of Australia (ABCA), of which CropLife Australia is a founding member, recently launched a public campaign to provide credible, balanced information on the coexistence of farming systems.

Agricultural biotechnology, along with many other innovations, is delivering crucial benefits to Australian farmers, ensuring environmental sustainability, food security and a productive agricultural sector.

www.abca.com.au/coexistence





RETRACTED: Seralini's 2012 anti-GM study rejected by the scientific community

The *Food and Chemical Toxicology Journal* has retracted the article 'Long-term toxicity of a Roundup herbicide and a Roundup-tolerant genetically modified maize', published in November 2012.

Met with near-universal condemnation by the global scientific community and the plant science industry, the study claimed that rats fed for two years with glyphosate-resistant NK603 corn died earlier and suffered more tumours than control rats. It was also claimed that rats developed more tumours when glyphosate was added to their drinking water.

Shortly after the article in question was published, the journal received many letters to the editor expressing concerns about the validity of the findings, the proper use of animals and

even allegations of fraud. Food Standards Australia New Zealand (FSANZ), in agreement with food safety regulators globally, rejected the conclusions of the study, finding "on the basis of the many scientific deficiencies identified in the study, FSANZ does not accept the conclusions made by the authors and has therefore found no justification to reconsider the safety of NK603 corn."

CropLife Australia and the agricultural biotechnology industry applauded the editors of *Food and Chemical Toxicology Journal* for their careful review of and decision to retract the Seralini study. The industry was joined by countless members of the global scientific community in agreeing that the study was not based on sound science and the conclusions were unreliable.



Tasmania's GM moratorium extension a loss for sustainable agriculture



The extension of Tasmania's moratorium on GM crops bodes poorly for both the profitability and sustainability of Tasmanian agriculture. The Tasmanian Government's decision went against the weight of scientific and economic evidence, and was heavily influenced by misinformed speculation.

Tasmanian farmers will miss out on the environmental and economic benefits GM crops are already bringing to mainland states and farmers across the globe. In 2012 alone, the use of GM crops globally was responsible for savings in CO₂ emissions of 27 billion kg — the

equivalent of removing 90 per cent of the cars registered in Australia from the road for one year. The use of GM crops has also reduced water use in cropping by up to 32 per cent. Pesticide use has been reduced by up to 86 per cent in some crops.

The argument that Tasmania's GM-free status generates a price premium for exports was rejected by both of the reports commissioned by the Tasmanian Government, clearly indicating that the decision was political. The reports also stated that Tasmania's agricultural sector has suffered a \$40 million net farm-gate loss due to this moratorium.

Industry Stewardship

CropLife members are global leaders with their full-lifecycle approach to industry stewardship.

They adopt and promote ethical and responsible practices from discovery and development of crop protection and crop biotechnology products through to their use, and the final disposal of associated wastes.

CropLife members spend more than \$13 million each year on stewardship activities to ensure the safe and sustainable use of their products.

drumMUSTER and ChemClear

drumMUSTER and ChemClear are industry stewardship programs run by CropLife Australia's wholly owned subsidiary AgSafe. The programs are run as part of the Industry Waste Reduction Scheme (IWRS). Participating members in the IWRS are CropLife Australia, Animal Medicines Australia, Veterinary Manufacturers and Distributors Association, the National Farmers' Federation and the Australian Local Government Association.

drumMUSTER has collected more than 23 million drums nation-wide since 1999. That represents more than 28,000 tonnes of waste avoiding landfill.

Once collected, the waste is recycled into new and useful things again, like plastic cable covers, wheelie bins and pipes.

stewardshipfirst™
CROPLIFE AUSTRALIA



drumMUSTER: Lockyer nabs Queensland's 4 millionth drum

A regional Council in south east Queensland has nabbed the state's 4 millionth Agvet chemical container through the national recycling program, drumMUSTER.

The coveted drum was picked up at Lockyer Valley Regional Council's Anuha Recycling Shed in Gatton.

The Lockyer Valley runs six drumMUSTER sites in the council region which are operated out of transfer stations and landfills.

The council is responsible for collecting and recycling nearly 65 tonnes (or roughly 72,000 drums) of agvet container waste from farmers

and agvet chemical users in the 13 years it has been running the recycling program.

The drum represented more than 5000 tonnes of waste material avoiding landfill and being recycled.

Where would the world be without chocolate?

If it weren't for crop protection products, many pests and diseases would severely impact cocoa production in West Africa, which produces about 70 per cent of the world's cocoa.



Crop protection increases cocoa production by 75 per cent.

Farmers in the Ivory Coast, which is the world's leading producer and exporter of the cocoa beans used in chocolate manufacturing, are only able to control some pests and diseases with crop protection products.

In Ghana, the second largest cocoa exporter in the world, crop yields have dramatically improved since the national government introduced a cocoa disease and pest control program in 2001, which calls for the use of crop protection products. Since then, annual yields have increased from roughly 400,000 to 700,000 tonnes.

News and Events



Dinner Under the Stars at Gulargambone

MONSANTO

MONSANTO



Monsanto recently announced that they will invest in a new purpose-built research facility in Toowoomba. The increased investment in the company's research capability will ensure cotton growers continue to benefit from its highly successful insect-tolerant and herbicide-resistant cotton for years to come. Queensland Agricultural Minister John McVeigh congratulated Monsanto Australia on plans to open a new research facility in Toowoomba.

EUROFINS AGRISearch

euofins

Eurofins Scientific acquired a majority shareholding in Agrisearch Services and its wholly owned subsidiaries Agrisearch Analytical and Agrivet Services.

The companies are now respectively known as Eurofins Agrisearch, Eurofins and Eurofins Agroscience Services. Eurofins Agrisearch specialises in early development glasshouse and field trials, through to regulatory support and eventual commercialisation.

BAYER



Bayer CropScience

Bayer CropScience recently opened its Wheat & Oilseeds Breeding Centre in Horsham. The state-of-the-art breeding centre is the first of its kind in Australia and will focus on developing wheat and oilseeds varieties with higher yields and productivity improvements specifically for Australian agriculture. Bayer has invested \$14 million in the centre which will employ 20 staff and work closely with Longerenong College's agricultural training programs.

NUFARM



Nufarm Australia Limited (Nufarm) and Sumitomo Chemical Australia Pty Ltd. (Sumitomo Chemical) have announced that they will be working together to further develop the Group G herbicide, flumioxazin, in Australia.

The cooperation in Australia follows other strategic alliances between Nufarm and Sumitomo Chemical group around the globe.

FARMOZ



Farmoz was the major sponsor at this year's annual Dinner Under the Stars. Dinner Under the Stars is a community initiative that began in 2002 to help raise funds for the *two eight two eight* project in Gulargambone.

BASF



Chemical company BASF have built a sales team with broad based industry experience as part of their push into the Australian agricultural market place. The sales team is led by National Manager Trevor Gillespie and has a structure encompassing both Northern and Southern regions. The Northern team is headed by Lindsay McRae with Regional Sales Manager Andy Byard, Area Manager, Joel Murphy and Technical Manager Richard Holzknicht will providing support. In the South, Chris Ryan is the Regional Sales Manager with Area Managers Lachlan Broad and David Clegg and Technical Manager Sigurd Howard. The team will continue to grow in coming months.

DUPONT



Rik Miller, DuPont Crop Protection Global President, and the Economist Intelligence Unit recently launched important new research, generating critical discussion on Australia's contribution to food security within Asia Pacific. In an event at the National Press Club, moderated by Sky News' David Speers, a panel of local and international experts provided unique



insights from a number of perspectives including industry, government and our regional neighbours into how Australia can better capitalise on the country's innovation, assets and close proximity to Asia Pacific.

Gary Dawson, Chief Executive of the Australian Food and Grocery Council, the Hon. Tim Fischer, former Deputy Prime Minister and board member of The Global Diversity Trust, and Matthew Cossey, Chief Executive of CroLife Australia on the panel at the National Press Club event.



Senator the Hon. Fiona Nash,
Assistant Minister for Health



Laurie Wilson, President of the Press Club of Australia and Kareena Arthy,
CEO of the Australian Pesticides and Veterinary Medicines Authority



CROPLIFE ANNUAL NATIONAL FORUM



The CropLife National Members' Forum was held recently at the National Press Club and was addressed by Senator the Hon. Fiona Nash, Assistant Minister for Health, the Hon. Joel Fitzgibbon MP, Shadow Minister for Agriculture, Ms Kareena Arthy, CEO of the Australian Pesticides and Veterinary Medicines Authority and Dr Joe Smith, Gene Technology Regulator along with several other government and industry leaders. The forum was followed by CropLife's Annual Agriculture Industry Function. The function brought together key policy makers, politicians, journalists and industry stakeholders to discuss the year ahead in agriculture and acknowledge the successes of 2013.



Michael Whitehead, Director of Industry Insights, Agribusiness at ANZ



Leigh Radford, National Editor at ABC Rural



Lachlan McKinnon, Nufarm Australia Limited, President of CropLife Australia



Duncan Fraser, former President of the National Farmers Federation



Daniel Kruihoff, Monsanto Australia Limited, Vice President (Crop Biotechnology) of CropLife Australia, presenting Ben Stapley with the CropLife Australia's President's Award for contribution to the plant science industry, as the former CropLife Policy Manager for Crop Protection and Stewardship



Dr Yolanda Gasper from the La Trobe Institute for Molecular Science being presented CropLife Australia's President's Award for contribution to the plant science industry by Daniel Kruihoff



Shadow Minister for Agriculture, the Hon. Joel Fitzgibbon MP

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 \$17.6 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