

GREENPEACE

AUSTRALIA'S WHEAT SCANDAL

THE BIOTECH TAKEOVER OF OUR DAILY BREAD

Executive Summary

Fundamental changes are taking place in Australia's wheat industry and corporations with monopoly control and strong conflicts of interest are calling the shots. While the 'oil for food' scandal made headlines in 2005, the carve-up of Australia's wheat infrastructure by global biotech corporations has received little airtime. There are obvious questions about the impact of corporate monopoly on prices and market access for Australian wheat. Less obvious has been the increasing stranglehold of global biotech corporations on Australia's wheat industry.

In October 2010, Greenpeace Australia Pacific released a report showing that the companies now in control of Australia's wheat export market have strong ties to the global biotech industry. These biotech companies

are pushing for Australia to become the first country in the world to commercialise genetically modified (GM) wheat. Greenpeace can now reveal that the same global biotech companies are behind the nine GM wheat field trials planted across five Australian states this year.

Why is this a problem for our wheat industry? The research and development of GM wheat in Australia is occurring at the behest of the corporations that stand to benefit. While it is now the norm for scientific research to be run in partnership with corporations, it is a problem when the vested interests of corporations are at odds with the interests of Australian farmers and citizens. Unless the government steps in to weed-out the vested interests in Australia's GM wheat trials, Australian wheat farmers

stand to be swindled out of billions of dollars and Australian consumers will be eating GM bread that has never been proven safe.

This report details why the Australian Government must intervene to stop the corporate attempt to commercialise GM wheat in Australia by 2015, beginning with a ban on all trials of GM wheat in the field.

The research and development of GM wheat in Australia is occurring at the behest of the corporations that stand to benefit.

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GM Wheat: Rejected by the Rest of the World

Australia is among the world's top five wheat exporters. GM wheat has been rejected by all of the other major wheat growing nations. In 2004, North American farmers blocked GM wheat commercialisation. According to the Canadian Wheat Board, the biotech industry could not ensure that

GM wheat would not contaminate Canada's conventional wheat supply and GM contamination would "virtually destroy the \$3.5 billion industry in Western Canada."¹ The European Union and Russia have a near-ban on GM crop cultivation.

None of the top five global wheat exporters, except Australia, is willing to be a testing ground for GM wheat. Australia stands to lose key wheat export markets if it loses its GM-free wheat status.

"GM wheat has the potential to virtually destroy the \$3.5 billion industry in Western Canada."

Ian McCreary, a farmer and a director with the Canadian Wheat Board²

Who is Protecting Australia's Wheat Industry?

During its existence, the Australian Wheat Board had a clear policy rejecting GM wheat commercialisation. Like Canada's Wheat Board, the Australian Wheat Board rejected GM wheat because of the biotech industry's inability to guarantee segregation of GM wheat in the field and "clear market signals from international and domestic customers that strong reservations exist concerning GM wheat."³

The Australian Wheat Board has since been privatised and no analysis of the potential for GM contamination of our wheat supply chain, or the potential impact of this on Australia's wheat export markets, has been published since the Australian Wheat Board surveyed Australia's export markets in 2003.

While all of Australia's major export competitors have rejected GM wheat commercialisation to protect their

financial interests, Australia is set to commercialise GM wheat by 2015.⁴

To date, no Australian Government body or Australian wheat industry body has considered the impacts GM wheat will have on Australia's \$4.7 billion wheat export industry.

This is despite all existing evidence indicating that if GM wheat is commercialised it will not be successfully segregated in the field.



GM Contamination of Australian Wheat

GM crops in the field cannot be contained. It is inevitable that Australia's conventional wheat will be contaminated by GM wheat.

There is a long history of the evidence of GM contamination in Australia. Details of 29 reported incidents of contamination and 169 breaches of security licenses issued by the Office of the Gene Technology Regulator (OGTR) are recorded.⁵

The OGTR argues that GM wheat carries less risk of contamination than GM canola because wheat is self-pollinating. This argument is flawed – sixty per cent of GM contamination and license breaches in Australia resulted from human error, not from gene flow in the field.⁶

Greenpeace strongly opposes field trials of GM wheat as the risks of such open experiments cannot be contained. One of the largest and most costly GM contamination cases in history started from a small-scale field trial of Bayer's Liberty Link rice. In 2006, the GM rice was found to be widespread in US long grain rice, costing the global rice industry \$1.2 billion.⁷ When asked in court to explain how the contamination resulted from a 'low-risk', small-scale GM field trial, Bayer claimed the contamination event was "an act of God."⁸

The Australian Government has documented clear evidence of GM contamination. Yet, with willful ignorance of the risk of GM contamination, GM wheat trials have proceeded. Why is the OGTR trialling GM wheat in the field, when they have clear evidence that GM wheat will contaminate?

169

breaches of gene security licenses by companies testing GM

60%

of which were due to human error

29

reported incidents of GM contamination

1/2

half of which were during 'contained' GM trials

9

GM-wheat trials approved in 5 states across Australia

1st



Australia is set to become the first country in the world to eat GM wheat which has never been proven safe



Export canola bound for Japan found to contain GM



LEGEND

-  GM wheat trial site
-  GM contamination incident originating from trial site
-  GM contamination incident originating from commercially grown crop
-  Export shipment contaminated by GM

The Evidence of GM Contamination in Australia

Export canola bound for Japan contaminated with GM

Export shipment of wheat contaminated with GM

Corporate Control, Vested Interests

Only a closer look at the billion-dollar corporate interests pulling the strings in Australian wheat research shows why the Australian Government is willing to risk our major export crop.

This year's GM wheat trials were proposed and approved while two directors of Nufarm were serving on the board of the CSIRO. Nufarm is the exclusive distributor of Monsanto's Roundup Ready products in Australia. Doug Rathbone has been Nufarm's Chief Executive and Managing Director since 1982. During this time, he served on the board of CSIRO from 2007 until 2010.⁹ John Stocker joined Nufarm's board in 1998. He served simultaneous appointments as CSIRO Chief Scientist from 1996 to 1999 and returned to CSIRO as Chairman from 2007 until 2010.¹⁰

The CSIRO's current GM wheat project was locked in during this time

– a clear conflict of interest. CSIRO policy requires that no board member of CSIRO should become entitled to receive a benefit by reason of a contract made by CSIRO with a firm the board member represents.¹¹

CSIRO also works with the Australian Centre for Plant Functional Genomics (ACPFPG) at the University of Adelaide. ACPFG is a key partner with Arcadia Biosciences – the company that licensed its last plant breeding trait to Monsanto – to commercialise GM wheat.¹² ACPFG works with Australian Grain Technologies and Intergrain. The board of ACPFG is peppered with biotech industry leaders, including Mark Tester, who worked sabbatical year at Monsanto, and Joshua Hoffheimer, a lawyer for Monsanto and former CEO of the biotech company, Hexima.¹³

Until recently, Monsanto has developed its stake in the Australian wheat sector through its corporate

partners. But in 2010, the Western Australian Government sold 20% of its public grains research body, Intergrain, directly to Monsanto. Dale Baker is chairman of both Intergrain and ACPFG, two organisations that have worked together on GM wheat research since 2010.¹⁴

The strong vested interests in GM wheat development in Australia call into question the Australian farming and scientific community's ability to trust the results of this year's GM wheat trials. In 2009, *Scientific American* and *Nature Biotechnology* reported that GM company contracts prohibit independent researchers from accessing the seed needed for environmental and health research.¹⁵ The independent research on GM that does exist consistently reports different results to GM company research on both the health risks and agronomic performance of GM crops.

Shoddy Science

The dominance of corporate interests pushing for release of GM onto Australian soils is displayed most clearly through an analysis of the Australian Government's risk analysis for this year's GM wheat trials. The gaps and flaws in the regulators risk analysis are overwhelming. These include:

1. Failure to require corporate applicants to conduct molecular analysis to map gene insertion sites and copy number. This means that scientists and their corporate partners do not know what and where they have inserted novel genes into GM wheat before releasing it into the environment. This information is crucial to any serious risk assessment, as the risks of genetic instability and untargeted gene-silencing increase with the number of copies of the gene inserted.
2. Failure to require corporate applicants to disclose evidence of short-term genetic stability, claiming that novel genes have been inherited

"over an unspecified number of generations".¹⁶

3. Failure to require corporate applicants to disclose details on genes inserted, declaring this information 'commercial in confidence'.
4. Failure to require corporate applicants to provide evidence that GM will not cause toxic or allergic effects in animals and humans. No amount of testing on animals or humans can prove that GM is safe. That is because the method used to genetically modify an organism, creates the risk of genetic instability. GMOs are living things that interact and change in the environment and no preliminary safety testing can guarantee the ongoing safety of the GMO.

The Australian Government has failed to consider potential short-term toxic and allergic effects of GM wheat before approving its release into the environment, let alone these long-term risks.¹⁷

5. Failure to consider the effects of extreme weather events on the spread of GM wheat in the field. The OGTR dismisses the risk of extreme weather events, even though a number of the current GM wheat field trial sites were compromised in Australia's recent floods.

The OGTR acknowledges the risks that stem from these gaps in the science, as revealed in published documents relating to the GM wheat trials:

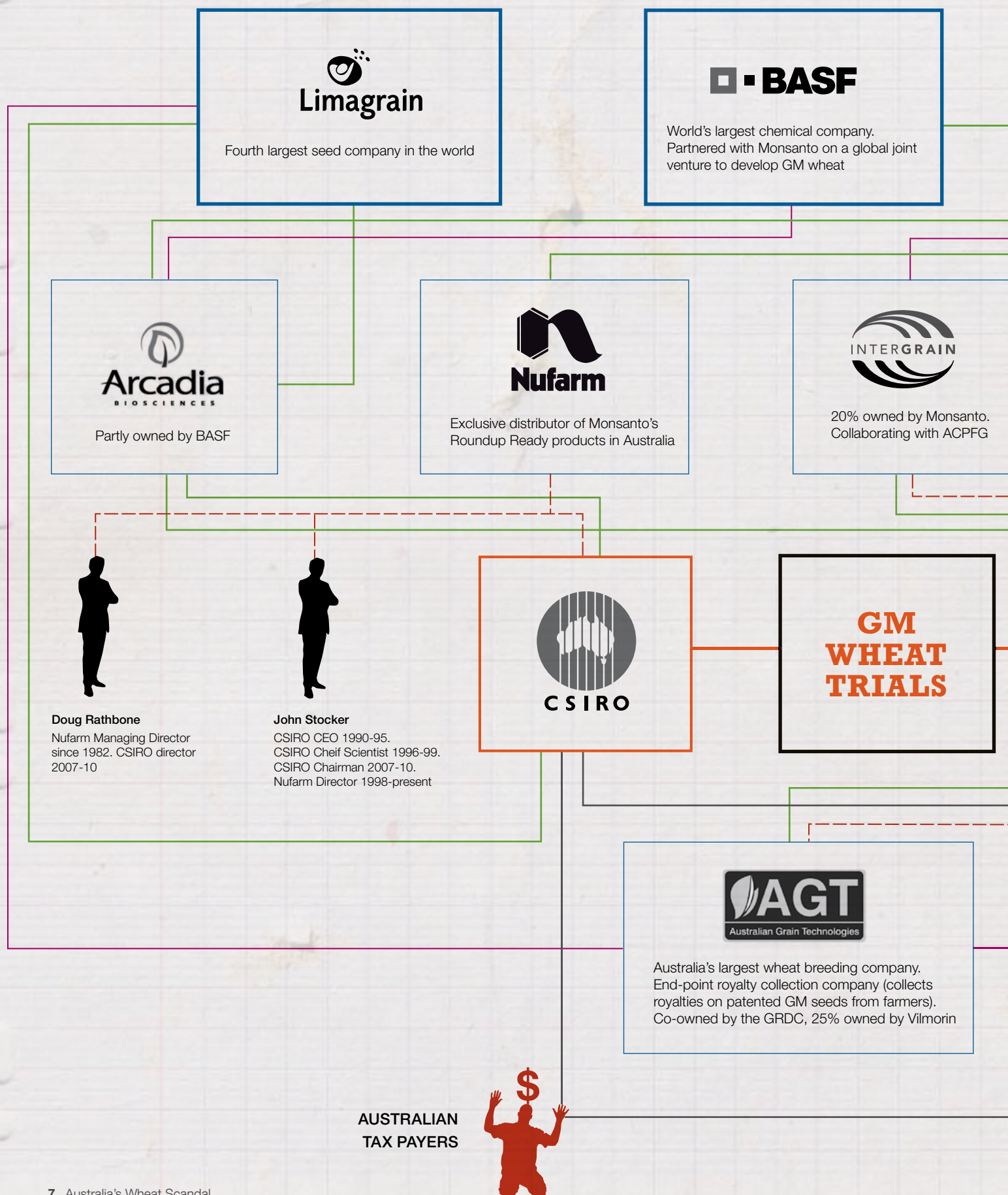
"Gene technology has the potential to cause unintended effects due to the process used to insert new genetic material or by producing a gene product that affects multiple traits."¹⁸

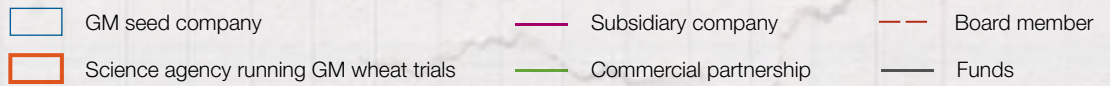
"However, there may be unintended effects due to random insertion of the introduced genetic material..."¹⁹

Clearly, the Australian Government is well aware of the risks of releasing GM wheat into the environment.

The Australia Government is well aware of the risks of releasing GM wheat into the environment.

Who is Really Running Australia's GM Wheat Trials?





MONSANTO



World's largest seed company

Cargill

Controls 40% of Australia's grain trade.
Joint venture with Monsanto to develop GM

HEXIMA




Australia's first GM seed company. In a 'strategic cereal alliance' with ACPFG. Has commercial licensing agreements with Du Pont & Monsanto

DU PONT

Third largest chemical company in the world.
Second largest seed company. "Collaboration commitment" to develop GM wheat with ACPFG

ACPFG



AUSTRALIAN
CENTRE FOR PLANT
FUNCTIONAL GENOMICS
PTY LTD



Dale Barker
Chairman of Intergrain
and ACPFG



Josua Hoffheimer
ACPFG Board Member.
Lawyer for Monsanto.
Brokered first ever deal
between Monsanto & BASF.
Former CEO of Hexima



Mark Tester
Publicly paid Professor
of University of Adelaide.
Chief scientist ACPFG.
Running GM trials in WA.
Worked sabbatical year at
Monsanto. On board of AGT.
Chairman of Adelaide University
free-for-service laboratory &
business unit

GRDC

Grains & Research Development Corporation.
50% funded by farmers & royalties,
& 50% by taxpayer



**AUSTRALIAN
FARMERS**

Testing on Humans Before Proven Safe

The CSIRO announced that GM wheat from this year's field trials in the ACT will be used for human feeding trials.²⁰ This will be the first time in the world that GM wheat will be tested on humans. Human feeding trials have on the whole been avoided by the GM industry. CSIRO and its global biotech partner, Limagrain, intend to test GM wheat on rats and pigs before testing it on Australians. However, there is currently no publicly available information on the parameters of these animal-feeding studies and the OGTR does not require testing for potential toxic or allergic effects.

Greenpeace has submitted a Freedom of Information request to the CSIRO for both the health and safety parameters and the ethics clearance papers relating to the testing of GM wheat on humans. CSIRO has denied this request, declaring this information commercial in confidence. This removes the capacity for any external review of the testing of potentially unstable, experimental GM products on Australians.

The limited public information that is available indicates that CSIRO's tests on rats and pigs will run for just 28 days before GM wheat is tested on humans.²¹ The first two phases of human tests will go for just one day.²²

This is the first generation of Australians facing a lifetime exposure to GMOs in food, and yet the health impacts remain unknown.

Who is Protecting Australian's Health?

GM food has never been proven safe to eat. Against the advice of the Australian Public Health Association, the Australian Government does not require long-term animal feeding studies before approving GM as safe for humans. To determine if GM crops are safe to eat, Australia's food regulator relies on the data provided by corporations invested in GM development. The lack of independent testing is cause for concern, and those independent studies that do exist have produced alarming results.

Independent analysis of biotech rat-feeding data, retrieved through a court order, found signs of toxicity in the GM-fed rat groups were significantly higher than non-GM fed groups, with greatest impact on the kidney and liver.²³ In Australia, a CSIRO-sponsored study conducted by John Hopkins Medical School found that mice had an allergic reaction and failed to gain weight when fed GM.²⁴

This is the first generation of Australians facing a lifetime exposure to GMOs in food, and yet the health impacts remain unknown. By 2015, Australians will be eating even greater amounts of genetically modified food if GM wheat is commercialised.

Healthwash

While the majority of GM wheat trials planted this year are testing for agronomic effects, those flagged with the earliest potential commercialisation dates are trialling so-called 'functional foods' or 'nutricrops'. In the ACT, NSW and WA, CSIRO is in partnership with the biotech firm Limagrain, to develop white bread with more resistant starch in it. They claim that GM white bread is the answer to reducing bowel cancer rates in Australia.

GM 'functional foods' fail to adhere to the Public Health Association of Australia's principles on industry health claims on food; particularly the first of PHAA's 'Fundamental public health nutritional principles', that "the reduction in risk for disease is affected

by the total diet and lifestyle pattern, not by use of an individual food."²⁵

False promises of the benefits of GM crops are nothing new for the biotech industry and 'functional' GM crops are the latest misleading PR exercise. 'Golden Rice' is still being pushed as the answer to malnutrition in Asia, despite its failure to offer real solutions to Vitamin A deficiency.²⁶

CSIRO's genuine commitment to improving human health came into question when Limagrain's managing director, Alain Perrin, stated in CSIRO's own promotional material that their efforts were designed to "contribute to the acceptance of GM food crops in Europe."²⁷ Indeed the CSIRO's

Dr Matthew Morell, admits that a conventional equivalent of the high RS wheat has been developed using marker assisted selection (MAS) alongside the GM variety, but the preference is to commercialize the latter if possible.²⁸ CSIRO themselves have pointed out that eating more wholegrains is the real answer to the health problems that come from an unhealthy diet of too much meat and processed foods.²⁹

By encouraging Australians to eat more processed white bread, CSIRO is contributing to the problem it claims to be remedying, with much applause and financial support from the GM industry that stands to benefit.

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False promises of the benefits of GM crops are nothing new for the biotech industry and 'functional' GM crops are the latest misleading PR exercise.

GM Crops: An Economic Failure

Analysis of the GM industry from a purely economic perspective also demonstrates that GM is not a reliable investment. While biotech companies' advocate that GM crops will increase yield, independent research proves otherwise.³⁰ Monsanto's latest offering, 'Smartstax' corn, has performed so badly in the field that Monsanto is now giving the seed away to American farmers.³¹

GM crops may have also contributed to the proliferation of 'superweeds'. Over 70% of all GM crops available to farmers today are 'Round-up Ready', or resistant to the toxic herbicide,

glyphosate. The use of these Roundup Ready crops has driven consumption of glyphosate. Widespread use of this toxic chemical has resulted in the emergence of herbicide resistant superweeds.³² In the US, farmers have been forced to return to hand-weeding to deal with superweeds, with additional costs to Georgia farmers of \$240 per hectare.³³

In Australia, biotech companies have made a number of false promises to Australian farmers, including the claim that GM crops will increase yields and provide a silver-bullet solution to drought.³⁴

Given the biotech companies track record, why should Australian farmers believe biotech companies' PR promises?

In Australia, biotech companies have made a number of false promises to Australian farmers.



Environmental Risks of Field Trials

GM organisms are living organisms that can multiply and cross-breed. They pose a threat of irreversible damage to biodiversity and ecosystems. 'Genetic pollution' is a major threat because GM organisms are extremely difficult to recall once released into the environment.

Greenpeace opposes field trials of GM wheat as the risks from such open experiments can't be contained. Further field trials can't be justified on the basis that they support impact assessment. The impacts are then already real, potentially widespread and may be difficult, if not impossible, to reverse.

In addition to the unknown risks associated with the inevitable spread of GM in the field, local and international evidence also shows that GM crops increase the use of toxic chemicals in farming and harm soil biota and non-target wildlife.³⁵

'Genetic pollution' is a major threat because GM organisms are extremely difficult to recall once released into the environment.

Rescuing Australian Food

In an era of increasing global food insecurity, the Australian Government's decision to hand the patent for our daily bread to an alliance of global biotech companies amounts at best to gross incompetence.

At the current rate, the ink will be dry on the patent contracts before the majority of Australians even hear about GM wheat.

Greenpeace Australia Pacific is committed to taking action as part of

an alliance of farmers, consumers, food companies, and farming experts to stop GM wheat in Australia.



The Real Solutions

Despite decades of scientific research and development, commercialised GM crops do not yield more than other crops, do not enhance nutritional qualities of food, do not improve degraded farming land, or address changing climatic conditions. Only farming practices that work with, rather than against, our natural resources will provide real solutions to the challenges of climate change and food security.

Around the world, scientists, farmers, bureaucrats and agronomists are increasingly turning to agroecology – sustainable farming – to address farmland degradation and food security issues. The Australian Government must replace its investment in GM technologies and support for the biotech industry with support for Australian farmers and consumers.

It's time we invested in Australia's future with farming that is good for people and good for the planet.

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Time for Action

Greenpeace Australia Pacific is calling on the Australian Government to secure the future of Australian wheat.

Starting today, the Government can take action to rescue Australia's most important staple food. The Government needs to:

1. Stop GM wheat field trials.

The contamination risks from such open-air GM experiments simply can't be contained. Further field trials can't be justified on the basis that they support impact assessment. The impacts are then already real, potentially widespread and may be difficult, if not impossible, to reverse.

2. Establish an independent wheat industry regulator to guide wheat sector development. The regulator would have oversight of marketing

and research and development investment. The regulator should be impartial to the vested interests of corporations.

3. Stop the release of GM wheat which cannot be proven safe for humans, animals or the environment because it cannot be safely and conclusively tested in the field.

4. Stop any testing of experimental, potentially unstable and poorly understood GM products on Australians.

5. Increase transparency about how public money is spent on agricultural research and development. This includes details of commercial and public-private partnerships.

6. Stop investment in GM 'functional foods' that fail to adhere to the Public Health Association of Australia principles on industry health claims on food.

7. Increased government support for Australia's world-leading sustainable farming industry. This should include funding for an evidence-based structural adjustment program for farmers struggling to respond to decreasing soil fertility, water shortages and increasing dryland salinity.

References

- 1 Ian McCreary, a farmer and a director with the Canadian Wheat Board; "Wheat board and Monsanto duel over GM wheat" CBC Digital Archives, Broadcast Date: Oct. 13, 2003 <http://archives.cbc.ca/lifestyle/food/clips/10957/> (accessed 7 June 2011)
- 2 Ibid
- 3 Hansard, WA Legislative Council, page 2453, Wednesday, 10 May 2006
- 4 CSIRO "GM wheat trial, OGTR application DIR092" Food Futures Flagship <http://www.csiro.au/files/files/pr3v.pdf> (accessed 4 July 2011)
- 5 See OGTR Annual and Quarterly Reports under the Gene Technology Act 2000, published at <http://www.ogtr.gov.au/internet/ogtr/publishing.nsf/Content/reports-1>
- 6 Ibid
- 7 Blue (2007) Risky Business. Economic and regulatory impacts from the unintended release of genetically engineered rice varieties into the rice merchandising system of the US. Report prepared for Greenpeace International, online available at <http://www.greenpeace.org/raw/content/international/press/reports/risky-business.pdf> (accessed 7 June 2011)
- 8 Weiss, R. "Firm Blames Farmers, 'Act of God' for Rice Contamination" Washington Post, 22 November 2006 <http://www.washingtonpost.com/wp-dyn/content/article/2006/11/21/AR2006112101265.html> (accessed 7 June 2011)
- 9 www.nufarm.com/Directors. www.csiro.au/files/files/p6ul.pdf
- 10 www.nufarm.com/Directors. AAP 'John Stocker is appointed CSIRO Chairman.' Jul7 2007. <http://www.smh.com.au/news/National/John-Stocker-is-appointed-CSIRO-chairman/2007/07/02/1183229018443.html>
- 11 CSIRO 2008-09 Annual Report p129
- 12 Australian Centre for Plant Functional Genomics, Annual Reports, 2009 and 2010
- 13 Australian Centre for Plant Functional Genomics website <http://www.acpfg.com.au/index.php?id=21&linkid=38> (accessed 3 June 2011)
- 14 Australian Centre for Plant Functional Genomics, Annual Report 2010
- 15 Waltz E. (2009) Under Wraps. *Nature Biotechnology* 27, 880 – 882. doi:10.1038/nbt1009-880. Scientific American (editorial). 2009. Do Seed Companies Control GM Crop Research? August 13, 2009. <http://www.scientificamerican.com/article.cfm?id=do-seed-companies-control-gm-crop-research&print=true> (accessed 3 June 2011)
- 16 OGTR (2009) DIR 099 Risk Assessment and Risk Management Plan, p17; OGTR (2009) DIR 100 Risk Assessment and Risk Management Plan, p21. <http://www.ogtr.gov.au/internet/ogtr/publishing.nsf/Content/ir-1> (accessed on 4 July 2011)
- 17 OGTR (2009) DIR 094 Risk Assessment and Risk Management Plan p14; OGTR (2010) DIR 102 Risk Assessment and Risk Management Plan, p.21; OGTR (2010) DIR 102 Risk Assessment and Risk Management Plan, p19 <http://www.ogtr.gov.au/internet/ogtr/publishing.nsf/Content/ir-1> (accessed on 4 July 2011)
- 18 Ibid, p37
- 19 Ibid, p19
- 20 OGTR (2009) DIR 093 Risk Assessment and Risk Management Plan, <http://www.ogtr.gov.au/internet/ogtr/publishing.nsf/Content/dir093> (accessed 7 June 2011)
- 21 Ibid, at p9
- 22 Ibid, at p9
- 23 de Vendômois JS, Roullier F, Cellier D, Séralini (2009) "GE. A Comparison of the Effects of Three GM Corn Varieties on Mammalian Health" *Int J Biol Sci*; 5:706-726. <http://www.biolsci.org/v05p0706.htm> (accessed 7 June 2011)
- 24 Prescott VE, Campbell PM, Moore A and others (2005). "Transgenic expression of bean alpha-amylase inhibitor in peas results in altered structure and immunogenicity" *Journal of Agricultural and Food Chemistry* 53(23):9023-9030
- 25 Public Health Association of Australia, (2007) "Health claims on food." <http://www.phaa.net.au/documents/PHAAPolicyHealthClaimsonFood.pdf>, p1 (accessed 30 June 2011)
- 26 Enserink, M. (2008) "Tough Lessons from Golden Rice" *Science*, 320, pp468-471
- 27 Thyer, R. (2007) "Food Futures: Wheat gets a health kick" Solve, CSIRO <http://www.solve.csiro.au/0207/article5.htm> (accessed 4 May 2011)
- 28 Ibid
- 29 CSIRO (2009) "The BARLEYmax Better Nutrition Report", BARLEYmax joint venture between CSIRO and Australian Capital Ventures Ltd., Canberra
- 30 Fernandez-Cornejo J and Caswell M. (2006). The First Decade of Genetically Engineered Crops in the United States. U.S. Department of Agriculture Economic Research Service, Economic Information Bulletin No. (EIB-11) 36pp. Available online at: <http://www.ers.usda.gov/Publications/EIB11/> (accessed 27 May 2011); National Variety Trials (2009) NVT GM Canola Variety Trial Report, http://nvtonline.com.au/_literature_61292/2009_NVT_GM_Canola_Report (accessed 3 October 2010)
- 31 Pollack, A. "After Growth, Fortunes Turn for Monsanto" New York Times, 4 October 2010, http://www.stopdown.net/Monsanto-stock_falling.html (accessed 6 June 2011)
- 32 Greenpeace International (2011) Rounding Up Glyphosate. <http://www.greenpeace.org/international/en/publications/reports/Herbicide-tolerance-and-GM-crops/>.
- 33 Charlier T (2009). 'The perfect weed': An old botanical nemesis refuses to be rounded up. Memphis Commercial Appeal, 9 August 2009. Hollis P (2009) Resistant Pigweed: Reduce Seed Bank. Southeast Farm Press, 18 September 2009
- 34 Agrifood Awareness Australia (2010) "GM wheat: fact not fiction" http://www.afa.com.au/GM_wheat_2010/AFAA_GMWheatBrochure_WEB.pdf (accessed 6 July 2011)
- 35 Talas-Ogras, T. (2011) "Risk assessment strategies for transgenic plants" *Acta Physiol Plant Vol.* 33 pp.647–657; Myhr, A.I. (2010) "A Precautionary Approach to Genetically Modified Organisms: Challenges and Implications for Policy and Science" *J Agric Environ Ethics*, Vol 23, pp.501–525; Wickson, Fern (2004) "Australia's Regulation of Genetically Modified Crops: Are We Risking Sustainability?" *Australian Journal of Emerging Technologies and Society Issue 2*, Autumn. Online at http://www.swin.edu.au/sbs/ajets/journal/issue2/abstract_gmcrops.htm (accessed 18 May 2011); Kvakkestad, V. and Vatn, A. "Governing uncertain and unknown effects of genetically modified crops" *Ecological Economics* 70 (2011) 524–532

**We all deserve safe and healthy food.
Tell the Australian Government you won't swallow
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