

Rural Press Club of Victoria

Panel Debate on Transgenic Agriculture

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The quandary of transgenic agriculture

Graham Mitchell AO, Chief Scientist, Principal – Foursight Associates

Jim Peacock at the National Press Club said that there has probably been 30 billion meals consumed in which GM products have been taken in. There hasn't been one example of any downside of that particular event. So that is a fairly mind focussing starting point from me.

I've come from a medical research background not an agricultural research background.

Medicine is laden with GMOs. That same technology is not acceptable in another circumstance where people are demanding safe food. So the technology which has transformed medicine is having this awful dilemma when it comes to agricultural bio-tech, agri-food sector in general.

There are many reasons of course.

I will highlight three. Understanding of the actual system involved in food production most people know about. They couldn't care less what it takes to make a pharmaceutical, a new drug. They are very assured there is a very transparent regulatory framework in place. There are no cowboys in this sector. No-one will get a product on the market unless they follow those rules which are understood by all.

Of course the major thing is broadscale versus contaminant. If I'm being injected with hepatitis B vaccine to protect me against hepatitis, which comes from GMO that is contained whereas the broadscale aspect is the difference. Once the genie is out of the bottle it's out. And it requires a huge amount of long term ecological research to actually demonstrate that there is no downside.

The anti GM (lobby) is very clever, very organised. They know what sells newspapers. Where scientists have gone to ground. They have had far too many negative experiences in this sort of forum and they just go back to the lab and get on with it. It's not worth the angst of the confrontational society in which we live.

GM does not equal bio-tech. Bio-tech is a vast expanse of this. GM is a subset.

Why Australia is not yet ready for transgenic agriculture

Julie Newman, Network of Concerned Farmers

Worldwide millions of consumers are objecting to cross kingdom breeding and rejecting GM food causing market restrictions and yet it is too difficult and expensive to segregate unwanted GM with our consumer preferred non GM product.

Without our existing non GM guarantee attached to quarantine statements farmers will need to prove our non-GM status.

The increased cost is estimated at between 10-20 per cent of our gross product income. The traceability system is needed to assign liability for uncontrollable contamination and this will be traced to non-GM farmers who have signed guarantees and supply chain indemnities to declare there was no GM contamination.

Non GM is a preferred market but due to the unacceptable costs and liabilities non GM farmers will be effectively forced to market as GM. The GM industry must not be allowed to deprive non GM farmers of their chosen market in a bid to remove market competition.

The best of bio-technology is non GM. If the GM product was denied the unique major patent rights we would not have the drive to force GM on a reluctant population.

GM canola encourages the increase in profits from chemical seed sales and corporate control. GM is nothing to do with feeding the poor and everything to do with feeding the demands of corporate business. American subsidies have risen in direct proportion to GM crops grown and they are clearly having difficulties marketing or even giving away GM product.

Pressure has been applied to countries such as Australia to lose our competitive non GM marketing edge to in order to level the playing field and remove consumer choice.

Australia's non GM status is very valuable and yet our agricultural industry is expected to give this away without question or compensation. Where is government protection? Our Federal Government has appointed the Office of the Gene Technology Regulator to assess health and the environment and any risks associated with this product. The OGTR bizarre interpretation of the Act has led to her ignoring economic or agricultural related issues.

She does not consider farms as environment nor farmers as people at risk. It has been decided federally that industry must decide how to manage these crops and government is accepting the role of the Gene Technology Grains Committee.

This committee has been selected by and are approving plans prepared by the GM industry. The GTCC is unrepresentative and ignoring non GM grower concerns. We are faced with a situation where the GM industry is not prepared to bear the costs, liabilities and control of their unwanted product and are preparing management plans to redirect those responsibilities on to those of us not wanting to use this product.

Non GM growers and consumers cannot afford and are not prepared to subsidise companies such as Bayer CropScience and Monsanto. There is high market sensitivity to very low levels of GM contamination in any of our produce. Any detectable contamination and we would not be able to sell our product as labelled non GM.

Was the touted one per cent limit an attempt by the GM industry to mislead farmers, government and the public into believing co-existence is possible.

Why are our industry leaders approving these plans? The bio-technology dream has been misleadingly promoted without clarifying that the best of bio-technology promoted is non GM genomics.

Farm lobby groups have relied heavily on information provided by Agri Food Awareness, incorrectly promoted as unbiased and funded by an association representing Bayer CropScience and Monsanto. And economic reports overestimate unsubstantiated benefits and underestimate or ignore the costs and risks.

We must not allow resolutions to resort to farmer versus farmer. We can only co-exist if we maintain our national non-GM status and ensure the GM industry is 100pc responsible for total containment of their product and all associated costs and liabilities.

The commercial release of GM crops is the biggest threat to our industry we've ever faced. We must fully assess economics. We must ensure no sector of industry is faced with unmanageable problems and we must protect our existing agricultural industry.

GM benefits are doubtful but risks are very real.

Commercialisation of InVigor hybrid canola

Susie O'Neil, Bayer CropScience Pty Ltd

GM canola will be the next GM product commercialised in Australia. InVigor hybrid canola the Bayer CropScience brand of canola coming on to the market is a high performing hybrid plant developed by gene technology. It also allows farmers a new option to use Liberty herbicide for weed control. It has been trialled in Australia since 1997 and has been researched by our company worldwide since the '80s. Over 300 trials have been completed in Australia and we have invested over \$10 million to date in this project in Australia. InVigor hybrid canola has been commercialised in Canada since 1997 and we are committed to the success of this product globally and in the long term.

Australia is fortunate to have one of the most stringent regulatory systems in the world. Each and every GM product, crop or trait is thoroughly evaluated for environmental safety and human health safety by the Office of Gene Technology Regulator, for food safety by Food Standards Australia and New Zealand and for clearance of pesticide uses by the Australian Pesticides and Veterinary Medicines Authority. Foods containing GM ingredients or derived from GM crops are the most tested of foods available today. GM foods are safe, safer than conventional or organic produce. And this is proven through an impeccable and extensive track record of actual use to date, robust regulation and is the conclusion of leading world health authorities and the scientific community. The oil from InVigor hybrid canola is already approved as a food product in Australia and in many countries around the world including the EU, Japan, Mexico, the US and Canada.

Regulatory approval for InVigor hybrid canola from the OGTR and APVMA is expected in the next few weeks or days.

This will be a final endorsement on the safety of InVigor hybrid canola following the OGTR conclusion in April this year that it poses no higher risk to the environment or to human health and safety than conventional canola.

The regulatory approvals for GM crops gained by Bayer CropScience and companies and researchers are the culmination of millions of dollars of research completed in the past decades. That research is subjected to transparency and reviewed from the world's experts and is proven to support conclusions that GM crops are safe to be grown, traded and eaten all round the world.

In the face of this fear and misinformation spread by groups wanting to stop GM crops continues to grab media attention and influence the political landscape surrounding the introduction of GM crops and GM crops in Australia and around the world.

Regulatory approval is however only the next step in the commercialisation of GM canola in Australia. The wider canola industry has taken the responsibility of GM canola introduction very seriously. The Gene Technology Grains Committee consists of the technology providers and their administrative body Avcare, grain marketers, bulk handlers, scientists, food processors, industry associations and government observers.

The GTGC believes in co-existence and has designed systems to ensure that non-GM and GM agriculture can be options for Australian farmers.

Most of the GTGC committee members could be described as pro-choice and in fact not pro-GM.

The GTGC principles document provides a framework for ensuring that co-existence is possible with traceability. The current focus is on GM canola but co-existence is equally applicable for any crop GM or non GM. The science supports co-existence of GM and non GM canola and grower education and industry best management covering pre, on and post farm activities will ensure it is successful.

The market issues raised by key grain marketers such as the AWB are being addressed, through GTGC and working groups to ensure Australia's valuable commodity export market is not compromised. Indeed it can be enhanced by GM crops over the long term.

The anti GM groups trying to stop GM groups are distorting the debate with misleading and confusing information and are not representative of the majority farmers. For example their

interpretation of the issues of costs and liabilities are designed to create confusion are based on hypotheticals and are unproven.

Bayer CropScience is committed to delivering a quality product to its customers and stands behind the research, science and industry recommendations for its management.

Growers of GM crops worldwide are not being impeded by liabilities and damages that are any different to the current risk management decisions they make on their farms every day. As such they are protected by the systems they employ such as quality assurance and their adherence to science based recommendations.

Canada is the world's largest exporter of canola and its major markets are the same as Australia's being China and Japan. Canada has maintained its number one exporting position and their production has been enhanced since growing GM canola.

North American farmers have widely adopted GM crops and the latest USDA report released in July this year shows that 40pc of the corn, 81pc of the soybean and 73pc of the cotton crop in the US is now GM. Interestingly, Canada and the US have maintained their wheat and barley export markets since growing GM crops. Canadian farmers have had the benefit of using GM canola and remain leaders in the global market. InVigor hybrid canola from Bayer CropScience offers agronomic, economic and environmental benefits to canola growers in Australia. The genetic modification has allowed the production of a high yielding, hybrid canola that yields 10-15pc more than conventional canola, 20-30pc more than Triazine? Canola and has oil yields from 45-47pc. It is also tolerant to Liberty herbicide which offers new options for weed control in Australia.

Higher productivity and the use of a more environmentally benign herbicide are good for the environment. Once the regulatory approvals are finalised Bayer CropScience will concentrate on demonstrating InVigor to Australian canola growers under a wide range of conditions. The commercialisation will be cautious and responsible and with due regard to state government and industry requirements.

Bayer CropScience is committed to working with state governments to address the outstanding issues surrounding GM canola. Canola growers do not have the choice to grow GM canola today.

In Canada, GM canola has been available since 1995 and 70pc of the area is sown to GM canola today. Canadians have chose to grow GM because it offers more effective or easier weed control and or improved profitability. Australian canola growers will make the ultimate decision about whether they see benefits in growing GM canola and it is our job to deliver a high performing product to the market and to join with the whole supply chain to ensure the option of using this technology is available and delivers the same success to Australian agricultural production as does agronomic, environmental and economic benefits evident overseas.

Preparing for transgenic agriculture

Marcus Kennedy, AWB Ltd

AWB's position is that we are not anti GM. We support the technology and the research and development. Our position is more around the infrastructure readiness, the preparedness of the supply chain and the economic situation around that in its return to consumers and growers alike.

There are few things in science that invoke stronger feelings than the release of GMO crops and foods.

In Australia we produce on average in a normal year about 35 million tonnes of grains and oilseeds and about 22 million tonnes of that is wheat. This represents about 4pc of world production and because of our relatively small population and domestic demand that makes us a significant player in the international export market with about 16pc of world trade in the wheat market. So therefore Australian grain growers and wheat growers in particular are highly dependent on market access. Access to those international consumers of our product. And the marketability of their product on the export market provides the majority of their income. AWB, on behalf of Australian growers, exports and markets to between 40-50 countries and over 100 customers in those countries.

So therefore you can see the international customer for our products is king in this market. We do not as suppliers provide a commodity product on the world market anymore. In the wheat market we are sellers on behalf of Australian growers of a very high quality reliable supply of a premium price achieving product. We supply the raw material into a highly sophisticated consumer driven process food industry.

What is driving this? Consumer preferences. The marketing edge is now in providing exactly what the customer wants, when the customer wants in, exactly how they like it and most importantly anticipating their changing tastes - not just now but in the years to come.

However there is no clearer example of the need to work more closely with the customer and in our case the international customers of grain, Australian wheat in particular than the current debate surrounding the introduction of GM grains into mainstream food processing. The fate of GM products is not going to be entirely driven by the producers of the technologies. That's part of the debate although they do have a legitimate place in educating and informing all of us across this debate. But the debate and the take up will be driven more by the acceptance or otherwise of the end food products. In Australia we are somewhat lucky in that we do have some breathing space. There are many countries, Canada included that are very envious of our position at the moment given our breathing space. The release of GM canola is underway and consideration of wheat remains clearly on the agenda. This gives us an opportunity to assess both the economics to the grower and to the end consumer and the economy at large and importantly to gauge customers changing opinions and perspectives.

AWB is not anti GM. We have a responsibility to Australian growers for a \$4-\$5 billion industry that exports wheat in this country. We support the ongoing research and development and technology but we take our obligations very seriously on behalf of growers. We have an obligation to protect that income, that export market for Australia. Our concerns are primarily in three areas. One is the market access. At the moment a third and an increasing number of our customers don't want GM. They want GM free certification - zero tolerance. And we've just seen last week, the EU introduce more stringent legislation in terms of a formal traceability system. Which brings me to my second concern and I think Susie mentioned this. It's around co-existence and the infrastructure in the supply chain to support GM. At the moment our systems do not support it. They are nowhere near it. I've sat in front of many state government Senate inquiries and our supply chain partners in this business at the moment cannot guarantee anything under 5pc tolerance. And there's a huge cost associated with putting in that infrastructure.

We don't have the economics to assess that at the moment. And who's going to pay for that cost? Is it the GM farmers or the non GM farmers? Is the industry? Is it the wheat farmers, the barley farmers?

The third concern is around accountability and liability. At the moment we are working towards protocols with the GTGC but at the moment there is no accountability being accepted by any partner in the supply chain. So if contamination occurs, who bears the cost? Certainly at this stage no-one is putting up their hand to accept accountability if someone sues. They're all very important questions. But we do need a bit of breathing space and that's our duty to put those on the table and put them through the GTGC and through other bodies.

A farmer's point of view

Greg Petrass, Graingrower

We farm a property north of Horsham and grow a range of crops. I'm also chairman of a company which processes and exports a lot of the products we and other farmers in our local area grow. Over the last 12 months we've certainly exported some crop to Europe at a premium but this has been mainly due to the difference in price between the DCP price and the local buyer price. The premium is supposed to be out there would have been paid to us over the last few years growing non GM products. We have not got the premium anymore than the Canadian growers have. I've been involved with Bayer and their predecessors since '99 trialling GM canola on our property. We leased 8ha of property to these companies and originally I was the person that sat on the fence. I had no opinion as far as GM went. And that was one of the reasons that we wanted to be involved with a company to find out more if we could. Certainly as Susie said there seems to be yield benefits and oil benefits. So to a farmer that bottom line is what drives us a lot of the time. We are concerned about the environment but we have to make a business decision.

I believe the nutritional, financial and agronomic benefits to us as farmers are a benefit with the advent of GM canola. This product has the ability to give us some options that perhaps we haven't got now. We spend a lot of our time chasing weeds whereas some of these crops might give us the ability to do it on the cheap.

As all of you might have seen in the past you'll come across a plant growing in a very adverse environment and you wonder why it's doing that and as a farmer I sometimes think well wouldn't it be great if some of these abilities could be put into some of the crops we have now. That situation would be of great benefit to me.

GM crops may also allow greater production in the areas that we already use in Australia. Basically when it's boiled down we have to be productive to function in this environment we are in now. The only negative I have is if not used wisely this technology could lead to some more resistance problems. With the science of GM it's been proven with the cotton growers that we have the ability to use less chemicals and less insecticide, which I feel should make our foods better and as a grower it helps my lifestyle. If we can keep down the quantities of chemicals we use so much the better.

GM canola has probably been under more scrutiny than any other crop introduced into this country. Because of that we are coming to better conclusions than we ever have in the past.

The states have been a moratorium on because of marketing issues. I don't really believe that should be the state's position. We have customers now that have to decide whether they eat peanuts or eggs for allergic reaction. If the commodity is properly labelled I think those issues can be solved by the customer.

If our forefathers had used the same logic that we are going through at the moment I'm sure we wouldn't have the medicines, fruits, crops, grapes, animals and lifestyles we are now accustomed to.

Answers to Questions

Marcus Kennedy

Just got back from northern Germany with canola breeders and they had an occurrence where there was crop cross pollination from a distance of 8km away.

Susie O'Neil

Canada is the largest exporter of canola in the world and one of the largest producers. They've been producing GM canola since '95 and they've had no trouble selling it. While consumers may say they want non GM canola they are not prepared to pay a market premium for it. Consumers seem to be comfortable eating and consuming foods containing GM canola.

The issue of costs and liabilities, liabilities have not been a problem in Canada where people have faith in the product. In Australia through the GTGC growers will be trained how to grow it and the science supports the buffer zones that have been put into place by Bayer CropScience where this product is introduced. We believe markets will not be contaminated and consumers around the world will keep eating GM canola they purchased from Canada.

Marcus Kennedy

I would probably take umbrage with a couple of the comments Susie just made in relation to consumers wanting GM canola. Canada has actually lost a million tonne market in China over the last two or three years because the Chinese government have introduced a requirement that they must sign certifications that it is okay. And they have not been able to do that and hence they have lost a million tonne market.

Another example is in Europe. They will only accept canola imports if it is non GM.

The question at issue at the moment for industry is about supply chain infrastructure readiness and we're nowhere near that although we are working very hard. There is a lot of work to be done.

Susie O'Neil

With GM canola we are saying different markets around the world have set different market specifications. For example in Japan the product can have 5% GM and still be called non GM. In Australia the level has been set at 1%. It is widely accepted today that the zero level is something that can be aimed for.

An example of this is where wheat seed is acceptable in seed you buy to plant on your farm. So there is a level set for the variety of seed you grow and that it can contain tolerances in weed seeds. The idea of tolerances is well accepted in many markets today. All the major markets of Australia in fact accept GM canola today. China does accept GM canola under import permit, which is a product coming from Bayer CropScience.

Co-existence is operating between traditional and organic agriculture and also between wheat and barley and lots of different seed crops that need to be kept pure. So neither of those concepts are new or specific to GM canola.

Marcus Kennedy

I don't think anyone is thinking that we can get zero tolerance if we introduce GM crops. It's a matter of whether it's 1% or 5%. I think the real question for Australian growers is at what tolerance level do we lose the price premiums we get for non GM and that's the trade off. That's the economic assessment that has to be done not just for canola but any other crop for example for non GM wheat.

The second point is to have that tolerance level and co-existence in place you need a traceability system right through the value chain from on-farm to manufacturing. That means storage and handling systems, freight and transport all have to enable that traceability. Our systems in Australia are nowhere near that. We're nowhere near coping with one pc and probably nowhere near coping with two, three or four pc tolerance. And that's going to cost growers big time.

That's the economic impact that has to be put into the overall situation not just the agronomic and yield benefits. I'm sure Bayer and Monsanto are going to pay for the infrastructure development that has to be done.

It can't be open ended to be fair to our commercial colleagues and to scientists. If we have a one year moratorium then there is an obligation on us all to do to see what we can do in that time frame and then reassess it. Has consumer attitudes changed? Have our markets changed? Are we better prepared? Have we invested the money into infrastructure and storage and handling? We do need to be flexible but we do need to take a considered approach. So a moratorium is a good thing but it needs to be flexible.

I don't think we are going to lose competitiveness by having a moratorium. The real issue here is to have some guidelines for what we are aiming to achieve in that time frame.

There are potential benefits but most of them are unproven. I think we need to take a cautious and considered approach, hence a one to three year moratorium is appropriate and the issues need to be answered. And the issues are really one the cost benefit to the grower and the consumer and the economy and that involves market access and whether consumers want it. Secondly in terms of storage and handling and our ability in Australia to handle GM product and contamination issues, buffer zones. All those things open up a Pandora box of questions. And thirdly the issues around when and if there will be contamination. Who's going to be accountable and who's going to be liable and how we know, whose going to pay.

Susie O'Neil

GM canola won't be grown commercially this year. When it is released it will be a slow and staged and cautious approach. A 5000ha trial which has been mooted in one state with government supervision is actually an opportunity to test the identity preservation systems to find out where they need work and the bulk handling systems to look at where they need work and look at improving them. So we were actually using it to test the systems that have been put in place and give consumers, growers and industry confidence to go ahead.

Japan accepts GM canola. Canada is the largest supplier. In the last five years they have supplied between 70-85pc of the Japanese requirement. They actually allow 5% GM in the non GM grain they produce and you can still call it non GM.

Farmers will make the ultimate choice about which crops they wish to grow and which they don't based on the individual benefits to them. GM canola is the first of many future GM products that are coming along.

Greg Petrass

In the past we've exported to quite a number of countries around the world and don't seem to be having the issues in the small quantities we export. Little disappointed in the segregation issues. Believe there are a certain amount of farmers that are very professional in their job and we certainly have the ability to grow seed crops and keep them differentiated and the ability to transport them. I think there are still huge benefits for our business.

Julie Newman

It will become our (growers) responsibility to make sure we are selling a product that is non GM. So it is up to us to control the contamination. It is not governments that dictate tolerance levels it is consumers. Jusco the third largest supermarket chain (in Japan) is getting a 34% premium for a 'non GM' labelled canola oil. That is a lot of incentive to buy non GM. Markets don't want GM at any price. The majority of farmers in Australia are non GM farmers. We don't mind somebody choosing

to go their own path but when it influences our own markets and our business and livelihood, that is where there is a problem. The only way we can address this is by making GM totally contained. Not by taking over our existing systems. We need to look at the future which is a zero tolerance preference and we must get protection for our industry in place.

Graham Mitchell

Gently, gently genetics. Continue the debate that deals with specifics, which is very healthy. Also, that we present to our political masters the facts as we know them and provide them with as much information as they need to make decisions in the interests of all of us.