Regulation in Agriculture Submission

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Why regulate?

In the old days we used to burn rubbish in the back yard, until regulations came in to ban backyard rubbish burning. Recent suggestions of putting herpes virus into the public water supply to control carp and the unnecessary liberal spraying of sensitive areas with a high population of amphibians to kill a virus that was caught overseas, are some good examples as to why a well-considered, broad reaching approach to regulation is the best option to protect the water, air and food of the nation.

Ideas like adding herpes in the water are being suggested by politicians with obviously little knowledge of ecosystems. Putting herpes in water may have adverse effect on other species and thus is an untargeted control and an expensive over dose. Thus the whole concept of treating a whole field with a poison, to treat a pest or weed that may or may not occur is ill-targeted farming.

The public have an increasing distrust of GM (genetically modified) crops, as the regulators are not keeping to their purview to protect the public health of the people in Australian and New Zealand, but regulators seem to be onside with the industry that has sold out any interest in the health of the human being.

In the past GM applications have been approved and later found there have been problems with the GM product and have to be recalled. Some GM product problems have led to fatalities and thus is a strong case to closely regulate the Biotech industry to prevent this from happening again and thus maintain public health.

Background for regulation in agriculture of GM food crops

When the Biotech industry commenced GM crops onto the market in the 90's, they made a fatal mistake to the long term viability of the industry- by not being upfront with the public. The lack of transparency with the GM process and absence of safety testing done for GM crops sealed the industries' fate. Therefore, it is no surprise the public were wary of this new technology, 'that was the same as before' and yet is such a 'new creation' that the industry can get a patent for a 'novel and new plant' that is held and prevents anyone testing the safety of the said new materials.

Roundup used in the some GM crops has recently gone onto the list of dangerous chemicals and has been registered by the FDA as potential cancer causing [7]. This ruling is another example of regulation protecting public health. This product however, has unfortunately been sprayed onto a large per cent of GM crops globally and residues consumed in foods with a ticking time bomb of possible health problems in the future. Due to tolerance of weeds and pest resistance, the amount of Roundup sprayed has increased and the levels of pesticide residues allowed in food have increased at the same rate. The amount of accumulated levels of pesticides is not studied as the total amount of exposure would be dependent on the types and amounts of different foods containing pesticide residues from GM crops that are consumed.

GM: based on the false assumption of substantially equivalence'

After all the work the industry put into changing the genes and doing this fantastic new procedure, they told the public that nothing had changed the crops were 'virtually' the same. The industry then went onto sell the technology as 'substantially equivalence', a term coined by the industry to allay fears that may harm the productivity of the technology. Then they went onto argue that these crops are in fact 'new creations' in order to get a patent. Clearly, this is not the case and was never well accepted by many scientists. Opposite positions cannot exist in the same. Marketers with degrees in

unrelated fields such as geology have helped to sell this unscientific concept to alleviate the messy business of testing the new GM crop products.

Problems with GM products in the past

Since the inception of the GM technology the industry and regulators have worked to reduce the amount of regulation of the Biotech industry. This was despite a string of problems with different GM crops as they first emerged and were consequently taken off the market, for example the Flavr Savr tomato, Starlink corn and tryptophan [1].

These are examples as to why FSANZ should not accept marketing of new products over detailed safety testing that may have prevented these insults and deaths. This on its own is perhaps fuel to halt the global, uncontrolled and unethical experiment of GM crops. FSANZ have perhaps moved away from their original purview: "..there is a clear focus on the protection of public health and safety based on best scientific evidence and rigorous scientific risk assessment" [2] Public health has taken a back foot to the needs and requests of the industry- meanwhile none of the public's needs or independent scientist's concerns are being considered.

GM crop bans

Upon the commencement of GM crops, the states in Australia implemented moratoriums against growing GM crops. Over the years bans where brought in in some states and slowly as the Liberals got in power they removed the GM bans. South Australia and Tasmania (excluding GM poppies as is not a food) remains the only protected markets here for GM-free crops to sell to the world. Thus as GM bans were lifted we have lost our geographical advantage, as a Nation we were previously safe from wind transfer of GM seeds from other countries. We must not allow the Liberals to reduce the productivity of farmers and quash the productive Non-GM industry and must not allow the industry to attempt to introduce more questionable GM techniques.

Tasmania had called for an indefinite GM ban which was well received by famers and was to allow long term planning and in a place of genetic isolation from unfettered experiments, this would have been the only such place left in Australia. This did not go through, so the GM crop moratorium in Tasmania only exists until 2019

SA and Tasmania GM bans are targeted by the Biotech industry and this threatens Non-GM Markets. There are really no grounds for the GM ban to be lifted in SA or Tasmania. Australia will lose the last frontier of land free from GM contamination and free from accumulation of the accompanied herbicide and pesticide residues. Lifting the GM ban, will take away the competitive advantage of Non-GM crops with the higher purchase price and a growing high demand.

GM bans across the world

Since the beginning of GM crops there have been many countries banning GM crop technology and GM foods have been rejected around the world with bans on growing and selling GM crops and implementing labelling of GM ingredients [3].

Demand for GM-free food is important for the majority of the Chinese, whom are trying to buy Australian land to grow clean food for their country, free from GM to meet the increasing demand for GM-free food [4].

Crop tolerance leads to more questionable & problematic methods of gene manipulation techniques. The rise of superweeds due to tolerance of herbicides requires more levels of herbicides for the same result. In just 10-15 years this delinquent industry has suggested farmers battle with these stubborn weeds by building the next generation of GM crops resistant to withstand stronger

chemicals like 2,4- D the active ingredient in Dicamba (used as a defoliant in Vietnam and is blamed for birth defects). Now, the third generation of GM crops 'double DNA strand disturbance' is turning reality- into the X-Files meets the mad scientist with bold- untested techniques.

The first generation of GM crops could lead to barren desertification, as the land is raped to death by increasing herbicides. The second generation of GM crops is the industry's idea to solve superweeds (of their own creation- from the 1st generation of GM) by introducing 2,4- D resistant crops and spraying the highly toxic 2,4- D poison and defoliant on our food crops. Over time the same problem of resistant weeds seen in the 1st generation of GM will ensue, until we will be left with unviable land with all the nutrients stripped and with little chance to rehabilitate the land. In Australia 2,4-D should not be used due to the potential damage to the environment and other insects and animals. The 3rd generation of GM is a sweetener in attempt to make some benefits for consumers to accept GM technology.

According to EurActiv, Bové told them New Breeding Techniques NBT is another attempt to sell GM to Europe via the back door. Bové also states his opposition to GM-"We oppose all these biotechnology techniques because making plant varieties resistant to herbicides is dangerous and harmful to health and the environment in the short, medium and long term" [5].

Justification for (NBT) uses a similar flawed theory as was used for the first GM crops- saying these extensive adjustments of DNA with desired traits are somewhat similar to classical mutagenesis and it is hoped NBT can similarly avoid regulation. However, the industry should not ignore the fact that with NBT they are just as unsure if they will create problems; by genes being permanently turned on or off, or the DNA does not join properly after it has been cut, or there is a chance of other mutations that occur due to unknown processes of the DNA.

Regardless of what the industry suggests, mutations on the DNA is not a desired state and can lead to cancer or defects in the product. These products offer increased risk without any confidence of safety and little or no benefits for consumers. Therefore, these new processes definitely need close consideration and safety testing, and heavy regulation before the latest generation of GM crops is unfurled.

Thus the Biotechnology Industry needs to be paused and thoroughly examined and highly regulated at least for self-protection for the industry from massive law suits for serious damages to public health, as a result of hubris in their approach to artificial molecular biology.

Revelations of GM via NBT marketing

With the latest generation of GM crops, the Biotech industry is if fact admitting now, that the GM processes in the past were in fact random and not as precise as the industry previously suggested. Past modifications were also 'radical' using foreign DNA, but new techniques apparently don't use foreign DNA. However, this does not necessarily make NBT less radical, the techniques are far more complicated and thus the chances of problems with a GM product are greater.

Also, the dream goal for the industry to sooth the naysayers is the plan to tackle drought tolerance and frost. Conditions like drought are controlled by multiple genes on the DNA responding to changes in environmental conditions, GM for these conditions are too complicated and not viable in the 'live' setting- which changes day to day and season to season [6]. An industry spokesperson even admitted drought is too difficult on Radio National interviews last year.

It is not science to use a later GM technique to justify a previous one - we must take each technique on its own merit and the regulator should provide clear rules to the Biotech industry and require

they follow them to protect human safety. It is unacceptable to not check the product for safety and must be called into line by our regulators for the industries own benefit in the long term.

Public concern

The concerns of the public are growing fast and widening especially in light of the industry push to fast track new GM creations and avoid any regulation. While the industry is advertising the new style of DNA manipulation using nucleases as a 'game changer' technology -it actually has the potential to cause chaos in the DNA and thus result in unviable plants, animals or humans. Yet another generation of untested products are attempted to be used as a lure to veil the lack of benefits for consumers and tries to justify the 1st generation of GM crop resistant to Roundup a chemical which has since been put onto list of dangerous chemicals [7]. This has caused the industry to have a rethink and commence a re-inventing spree of NBT.

Gut health

Previously I have addressed the health issue from consuming GM foods with the government in a submission for the National Food Plan. GM crops are creating an insult to our guts. The most fundamental organisms effected by GM food crops are microbes. Good bacteria are killed in the gut after consuming food with pesticide residues-allowing pathogens to rise and share advantageous traits- without the usual beneficial bacteria and fungus to keep things in check [8]. This dysbiosis leads to dysfunction in the gut and body, reduction in absorption and reduced nutritional status. Consuming pesticide residues in foods has the potential to cause cancer, also the changes in the DNA have not been examined or cleared from causing cancer.

Microbes that facilitate plant growth are also killed in the soil with GM crops resulting in the same rise of pathogens now seen to be plaguing farmers. Microbes are the tiny reason with massive consequences to research GM crops properly and regulate them carefully.

Food safety

The states are responsible for the food safety of Australian's and should be able to protect a clean space for this GM-free market. The states are free to choose a position to not grow these products that have not been safety tested- as it is not a long term viable product. Either problems with health concerns emerge about a GM food crop, or superweeds and supergerms emerge, and lastly, barren soil ruins the property. The soil is left non-productive after a few years of hard spraying and the land is unsellable on the long term.

Roundup is being considered more noxious than was first thought by the industry and thus the 1st generation of GM crops with Rup resistance will be a tough sell to convince the market to eat foods with pesticide residues that could lead to cancer.

There should have be food safety testing done on GM crops before it was given to the public so as to ensure is was safe and no problems with the quality of food for the public and animals. The responsibility of checking safety of the GM creations lies with the Biotech companies.

<u>Productivity of Non-GM crops is threatened by GM crops</u>

More importantly, from a productivity perspective Non-GM crops obtain a higher return than GM canola [9]. Non-GM crops are less prone to losses and eventual exhaustion of the land, if the farmer manages the crops properly, and GM crops have much longer term viability. By the industry trying to force many Non-GM farmers out of the market that have been on the land for centuries and- thus they lose their market advantage- is a very bullyboy approach and the industry should be more sympathetic to other ways of farming- seeing as GM crops are the untested newcomer.

Transport logistics

As GM canola is small it has been free to drop everywhere. There should have been separate harvesters for GM crops paid for by the industry, but they refuse and avoid this obvious liable cost, for the new industry to run along-side each other and not interfere with the productivity of other Non-GM growers and organic farmers. If GM seeds are such a sacred commodity then why let farmers dose the agricultural environment with your product (due to lack of containment) and then blame other people for it growing. These regulations need to tightening up to prevent vagrant GM seeds blowing onto other farms and regulations to prevent the costs of containment and law suits falling on the Non-GM grower.

<u>Totally unsatisfactory regulation of GM crops for an organic farmer: The Marsh vs. Baxter case</u>
The invasion in Australia of the 'new kid on the block' GM technology has allowed environmental losses from trucks and harvesters, and wind dispersal of the GM seeds. The principle problem being lack of regulation of GM crops has cost this farmer his organic farm status and higher return on the crop for farming without toxic chemicals and untested technologies.

The case of Marsh vs. Baxter has demonstrated that the onus is on all the old school farms of conventional and organic crops- to prove to the 'new kid on the block' that they did not steal this 'commodity'- they did not want. Cross contamination by GM crops will put their product is the same shady vein as the untested GM crops intended to be grown on full scale. This case was well supported by the industry whereas the other side was one individual standing up for the rights of all farmers now and into the future.

This was a very lop sided case with one of the most powerful multinationals- at the time- against one man who was unlucky to have a neighbour who went against his expressed wishes for the GM crops to be located far from his property- crop buffering. This crop buffering should be on the GM crop side- but it is the opposite- the 'new kids' go right to the boundary of the block with a tiny buffer a lice could jump across. Thus the onus is on the Non-GM farmer to reserve a large boundary to protect the integrity of their crop from contamination and limit the chance of a legal battle for 'stealing' the rogue weeds.

To grow the GM crop it was an the industry directive to not cut the crop and leave it to blow in the wind, Baxter admitted to going against Marsh's request to plant away from his farm and knowing left the crop unattended for some time- regardless of this, he and the biotech industry were awarded the case. This massive financial loss for Marsh was a direct result of a lack of foresight and fortitude of the regulator to protect Australian farmers.

This demonstrates that even with some rules there may still be compliance issues and problems with contamination between farms and thus an increase in regulation is required to prevent these civil cases arising again- it would be the most prudent thing to do to protect all farmers.

Labelling GM ingredients

The majority of Australians don't want to eat GM foods but at the least want GM food labelled to make an educated choice [10]. Can you think of a product that is consumed and that is not required by law to acknowledge what it is? If the Biotech industry don't want to disclose the GM techniques used in their crop- it makes people wary and thus people won't buy the products that are not true about the source of ingredients.

Many people and giving feedback to companies around GM crops and they are trying to source GM-free products to keep up with this demand. As GM concerns increase, it will become unviable to grow GE crops given the small profit margin or 'apparent' yield increase, larger running costs for

pesticides and new seeds each year, possible crop losses and a public dubious to consume GM foods.

'Artificial gene construction' label

How do GM crops benefit the consumer- if they don't even know they are consuming a GM product? The industry needs to think of it as free advertising. Artificial colours, artificial flavourings have been in the food supply and on labels for a long time; therefore 'artificial gene construction' for example would be an accepted term over time- if the industry wants to keep selling their product it would be better to get GM on the label.

At least GM labelling should be allowed for the ill, elderly, children, mothers and breast feeding women and for those that wish to exit the gene tampered poison experiment. Details about GM ingredients should not be confined to a 'smart' phone but with details on the label so information is available to all.

No GM labelling should be on computers as they have nothing to do with food- this approach discriminates against the poor, the elderly and those without a 'smart' phone. The GM label must be independent of computers and should be at the point of sale- on the product in black and white, this reduces double handling and avoids people spending 5 minutes or so per product, to find GM ingredients.

Labels that include GM ingredients will make it much easier for health professionals to give recommendations for those patients that may need to avoid GM ingredients. These labels must be provided, otherwise the level of morbidity will rise in the community and with it a high level of cost to the community and government. They have labelled GE crops in Britain without massive problems- Australia should look to them for costs for labelling GM crops.

<u>Increasing herbicides on GM crops contributes to climate change issues</u>

GM farming problems include; top soil clumping, reduced nutrient absorption, increased runoff, weed tolerance, beneficial insects and microbes are killed giving rise to pathogens, questionable yields, crop losses and lack of tolerance of other farm methods.

The most insidious and hidden problem with GM crops is the clumping of top soil due to increasing levels of herbicide. This clumping prevents nutrients getting to the plant, so nutrients runoff to the ocean along with the fertilizers, herbicides and pesticides used on the farm. The run off from GM crops increases the acid of the water allowing more carbon to be released to the environment (T. Hughes, Climate research centre, [11]). There have been attempts to reduce this runoff effecting the coral reef in Queensland, however more needs to be done to protect ecosystems from insidious poisons.

Thus, the GM industry must be closely watched, especially as the impact of growing these GM crops can be so globally widespread, and as the runoff contributes to acidification of the ocean thus contributing to the largest logistical nightmare of human history. Therefore, it would be prudent to see that the GM crops are strongly regulated and kept away from rivers and the ocean to help protect marine life and the future of the humans on the planet.

Biodiversity supports higher yield crops

GM monocultures sprayed in with poison encourage pathogens and wipe out beneficial insects like bees, ladybirds, and monarch butterflies. GM crop plants are stressed plants- due to the lack of nutrients, lack of biodiversity and wiped out beneficial insects and microbes. Therefore, the most productive way to grow a farm is a diverse garden without poisons, like the organic model.

Planting organic crops pays a higher return due to the impute costs being higher by the farmer. Recently studies have showed a massive increase in yield for conventional Non-GM crops that had inter-planting between crop rows. Inter-planting of crops can increase in yield by 300% vs. the 5-7% touted by the GM industry (L Bignell, SA Agriculture Minister [12]). Thus in the long term it is more cost effective to protect biodiversity and limit the exposure of the environment of harsh chemicals, and have a much higher crop yield.

Testing GM crop safety

<u>The 1st generation of GM only led to superweeds and an increase in health problems</u> Research ethics

It is questionable the amount of biology being understood by the biotech industry, and for anyone to assume that changing the DNA in random and radical ways- would have no effect on the DNA or on the ecosystem- on microbes, Insects, plants, other animals or on the human animal. It is very unscientific to do a blind uncontrolled experiment with new creations that may cause harm- this demonstrates extremely unethical behaviour of the GM industry to not gain the participants permission.

Just like we used to have to ask someone if they are ok for you to film them, it should have always been the case to not experiment on people without their permission- this follows science protocols. It is unethical to test something on someone that may cause harm, and it would not pass an ethics committee. As the outcome from these 'Novel' creations is not clear anything new into the environment or into our bodies should been safety tested in the interest of our safety and all in the circle of life.

Based on the data from current independent studies there are alarming possible effects on the liver, kidney, gut, stomach and testes on humans eating GM crops [13]. Despite industry protests about the methods of these studies, these scant complaints are undermined by the industries own flawed 'studies'-which are short term and have small sample sizes. These industry studies were done only after requested by the European Union regulators.

The industry uses their 'studies' to sell their products- only measuring farm concerns, such as GM crop yield and not feeding study parameters, checking for safety. Therefore, scientists are able to clearly see bias by the industry to try to suppress negative press for GM crops, from these possible alarming effects on animals and humans. Thus, the global uncontrolled, unethical experiment should cease as a precaution, until safety testing is done for the 'novel' creations by the biotech industry.

The case for less GM regulation does not stack up, as there is no safety testing done by the genetic engineers or the regulators. The biggest mistake of the Biotech industry was not giving the 'invention' to the pure scientists to test for safety before presenting it to regulators or putting it to market. I query the amount of rigorous scientific risk assessment the industry actually does- there appears to be no burden apart from 'apparent' delay of the applications through the regulators.

As there are no safety experiments on GM crops- unknown consequences will unfold in a slap dash manner and injuries will occur and some GM food products will be linked back to the crops. Therefore, is it not viable or productive for any company to put untested products into the marketplace- it does not make financial sense. If long term randomised animal studies on toxicology and gross pathology were allowed by an independent authority, it may reduce the regulatory burden, - thus reduce the possibility of products coming to market with problems and this in turn will lift the standing of the industry in the community. These fundamental safety studies are an investment to ensure the longevity of the Biotech industry.

The Biotech industry will use any vessel to implement their core business of pest killing with liberal pesticides or killing weeds with herbicides. This approach does not fit into the model of nature's systems or natural selection, therefore, there is no other more valid reason, that full research on GM crops should not be done- other than industry coercion of the regulators to fast track their product to market.

This arrogant attitude of the biotech industry to ecosystems collapses in the long run, as consumer concerns grow for GM technology. In fact the bans for GM crops are increasing worldwide along with the dis-ease about the new generation of GM. The NBT have much greater manipulation with both strands being cut and re-joined, thus there is higher chance of mutation and recombining of DNA incorrectly, NOT LESS as the industry try to suggest.

Many of the crop adjustments are very different to anything that has ever been grown on the planet before- like resistance to Roundup or putting pharmaceuticals into a plant. Obviously, not all members of the community may want to consume a particular herbicide or pharmaceutical drug. Therefore, there must be regulations and labelling to protect our health and no mixing of 'treatment' with pharmaceuticals and food crops.

These Biotech creationists need to understand that DNA is dynamic and reacts to the environment and it is unknown if any important functions are knocked out with gene manipulation. Thus, research on new creations in the environment and especially in the food supply including animal feed is urgently required, and should have been enforced BEFORE people put their lives on the line.

Treating increasing health problems – lack of GM labelling reduces practitioner's **productivity**There has currently been a massive rise in health problems and some new diseases since GM crops were introduced in the late 90's. Practitioners who are trying to manage the consequences of this unbridled GM industry, due to lack of GM labelling laws- are limited for treating conditions associated with consuming untested GM foods with genes changes. Health workers are often at a loss when suggesting the client cut out or avoid GM crops due to liver, kidney or gut problems-advising to remove toxins from the diet requires cutting out GM foods. However, due to the lack of GM labelling for these patients and others in the public, it is extremely difficult to avoid GM crops in foods unless you eat organic.

GM crops health concern and practitioners

The government are obviously not trained scientists and may not fully understand GM techniques and the problems with the industry, and should be under advisement of those that work to protect the health of the nation and have expressed many concerns about the technology. Government should beware of promoting the biotech industry before public health, as this may leave a stain on their record if things go wrong with the food supply.

In the likelihood of a GM crop problem, a separate farming system and labelling would help in a case for recall of a GM product. Health concerns from consuming GM foods is unfortunately likely, according to independent testing and basic understanding of biology and how DNA works (DNA is interactive- and putting things into it will have consequences). DNA is not a computer with set limiting functions, but is dynamic and able to adjust requirements for the organism, depending on the environmental situations. Therefore, it is paramount the **Precautionary Principle** be the approach applied to all current GM crops and any applications in the future- for the protection of human health.

Recommendations to protect all markets for a **productive** future for the entire nation, and agriculture and farming industries in Australia

- The regulators need to <u>prioritise the health</u> of the nation over the profits of a well-funded industry and consider health effects of new products.
- In turn the products produced by GM techniques should be disclosed for all customers to see with clear GM labelling on the product.
- I encourage the <u>producers of food</u> to find out each GM product and <u>label it</u>, thus they know what they are buying and putting into their product and selling to customers.
- <u>FSANZ should stand up against the Biotech industry</u> wanting all the existing rules and business to be imposed upon by their new technology and enforce stronger regulation of GM crops.
- Call for the <u>productivity commission to not be lured by massive profits</u> of offshore GM businesses <u>but the productivity of a healthy nation</u> as a whole- including Non-GM businesses
- <u>Protect GM bans</u>- due to rejection or GM crops worldwide it is imperative to retain the last place in Australia and one of the last few remaining places in the world free from the GM experiment and thus a boon for market exploitation for the growing and bulging demands of the <u>counties demanding Non-GMO products</u>- including China one of Australia's partner.
- Consider the world rejection of GM crops and keep Australia open to the profitable Non-GM and organic markets that warrant protection.
- <u>Implement a separate GM farming system</u>: harvesters, trucks and a larger crop buffering on the side of the GM farmer, so the costs of the Biotech industry do not leak to the Non-GM farmers.
- Due to the random nature of GM techniques a crop can fail and thus large crop losses are borne by the farmer- not the industry that sold the dud crop. Maybe the ACCC can be used here to assist when GM crops fail- to seek compensation for a faulty GM product.
- Commence a <u>call for independent studies of GM crops</u> on toxicology and gross pathology of animal trials. Only after no problems with the GM crop- commence independent double blind randomised control trials (RCT) over a long time (> 3years) checking toxicology and pathology to check for safety of the GM crop (if it is able to pass ethics committee).
- The <u>Precautionary principle</u> should be applied to all current GM crops and any future applications including new breeding techniques in the future.
- <u>Cease future approvals</u> until the industry meets the standards for health and productivity for all Australians as addressed in these recommendations.
- All <u>new technologies must be traceable</u> in case of problems in the market. There should be a direct line from the farm, via transport, to the food producers and to the supermarket, thus labelling of GM crop is important for public safety in product recalls.
- <u>Cease 'browning off'</u> spraying of wheat (or any other crop- for the industry to save time).
 With a rise in carbohydrate intolerance globally- stopping this needless spraying will help to reduce the toxic burden on consumers.
- Respect a plant's or any organism's imperative toward homeostasis after an insult and understand that GM changes effect plants, animals and humans and they deserve protection from these unnecessary industry driven insults.
- <u>Understand</u> that <u>'substantial equivalence'</u> of GM crops is a <u>false concept</u> and cease in perpetuating falsehoods about the biotech industry <u>like safety testing</u> has been done
- Improve productivity of health workers by allowing GM labelling.
- Increase productivity of the nation by reducing exposure to this unfettered GM experiment
- Reduce the amount of sprays and residues -<u>protecting collateral damage</u> from GM crops, <u>butterflies and bees</u> that are very vulnerable to pesticides and herbicides and are vulnerable species which are fundamental in fertilizing food crops.
- Reduce the level of pesticide and herbicide residues allowed in food- to protect consumers

Australia must protect GM-free markets

In context of the world rejection of GM technologies and the chance that there maybe another health issue or problem (like the tryptophan deaths year ago) there are grounds to up-regulate this leaking industry and gain some credibility and some assurances for all consumers and farmers.

All the marketing in the world to sell a product people don't want to swallow- will fall short. All the people are asking for is the truth. The industry can't expect to be taken seriously with their attitude that the customers bear the cost (a few farmers and millions of consumers). Therefore the industry must respond with what the customer requires- which is labelling of GM crops and an increase in regulation, especially in light of the new gene technologies and allow Non-GM markets to thrive independent of GM crop burdens.

Future focus to protect Australia

It is important to regulate to have clean water, clean air and clean food to protect our future. Therefore, the children- who are growing- should be protected from any possible harm from GM crops and should not be bearing any risk in this unfettered 'GM trial'- for the sake of their children. Health, money and agriculture are not separate but interactive and co-dependent. Thus, GM labelling, GM bans, GM separation in farming and independent studies to prove GM safety- would see an increase in sales and thus productivity in all areas in Australian agriculture, not just one industry flourish- at the sake of all others.

Consequences of GM crops include infertile soil, loss of beneficial microbes and insects, an increase in pathogens, loss of biodiversity, increasing levels of pesticides, increasing strength of pesticides, increasingly risky GM techniques and a host of health problems associated with eating unlabelled GM crops coated in poisons. The community has seen problems in the past with GM and is why we need **more regulation in GM crops not less**.

On these grounds I strongly recommend the Government (and the productivity commission) pause to reflect on the position for the future health of the nation, for the potential for morbidity and mortality from GM crops is a cost to high to bear and thus consumers need primary protection from the 'bottom line' battles of industry. I encourage you attend to the above recommendations that reinstate common sense caution for GM crops over the profits of a few.

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