GENETICALLY MODIFIED CROPS FREE AREAS EXEMPTION ORDER 2009 — DISALLOWANCE

Motion

HON PAUL LLEWELLYN (South West) [11.37 am]: I move —

> That the Genetically Modified Crops Free Areas Exemption Order 2009, published in the *Government Gazette* on 17 February 2009 and tabled in the Legislative Council on 18 March 2009 under the Genetically Modified Crops Free Areas Act 2003, be and is hereby disallowed.

At the outset, I thank all those members of the house who supported our bringing this important disallowance motion before the house on this last day before the three-week break. The issue of genetically modified organisms is a very important issue for Western Australia. The fact of the matter is that once these organisms are released, they are irretrievable. They are free to spread across the landscape and inflict economic damage on non-GM crop farmers, and to inflict damage to the environment. I do not believe that it is responsible for Western Australia to pursue GM crop trials of this scale. Indeed, I do not believe it is responsible for Western Australia to pursue a pathway of releasing GM crops into the environment. The minister has made it very clear that his intention is to run a segregation trial. To give members a sense of it, I understand that the trial is to grow, on a commercial scale, more than 1 000 hectares of genetically modified canola and then to measure the path all the way to the point of sale to determine whether those organisms can be separated from non-GM crops. I will use a number of analogies as examples of this. This is simply not the safest way to test segregation. If the objective of the trial is to determine whether it is possible to segregate GM canola, we could use any number of tags on non-GM canola seeds and trace them all the way to market. Simplistically, we could dye some GM seeds and then assess whether there was some contamination. We could use other genetic markers, which are not necessarily GM canola or Roundup Ready. We could use radioisotope markers to achieve exactly the same objectives. As I understand it, trials of that nature have already been conducted. Evidence from around the world indicates that segregation is, in fact, impossible. These trials could be run in a country that has already introduced GM canola to measure empirically what has happened. Once these genes are released into the environment, they could do the damage that we believe it is possible they could do. This is no different from playing war games with live ammunition and using farmers in Western Australia as guinea pigs in those games. To use another analogy, this is like using farmers in the fields of Western Australia as live crash-test dummies in car safety trials. I do not believe that the government has a mandate to conduct these trials. I do not believe that Western Australians, both consumers and farmers, want GM canola to be released into the environment. We certainly do not want our farmers to be used as crash-test dummies in a fruitless exercise that will allow a multinational company—Monsanto generally—to benefit financially from a massive-scale trial, which is, in effect, commercialisation by stealth.

Even if one were persuaded that there were some empirical, tangible, practical benefit, such as a financial or environmental result, of using, in this instance, GM canola, one would still be very concerned about the way in which these trials have been set up. I asked, by way of a question in the house, the Minister for Agriculture and Food to table the contract that farmers are entering into under these so-called trials. The contract states —

> Application is made for approval of a trial cultivation the details which are set out below.

It then asks for the name, postal address and so on of the farmer. Before farmers can enter into this contract, they must have gained accreditation as a Co-operative Bulk Handling Ltd Better Farm IQ handler, accreditation under the Monsanto Roundup Ready canola stewardship program and so on. The contract also lays out a series of understandings about the nature of the trial, but, most importantly, it lays out a number of conditions that farmers must agree to meet. They must agree to implement all aspects of the crop management plan, which one would expect; deliver Roundup Ready canola to CBH and declare the grain as Roundup Ready canola; provide access to Department of Agriculture and Food officers to inspect the trial and so on; and be responsible during and after the trial for monitoring the trial site areas. The condition that I hope that members of the government who support this trial will listen to very carefully is that farmers will be responsible for any costs incurred or income forgone by them as a consequence of the trial. If things do not work out for farmers, they will have to bear the entire cost. The last condition for farmers is that they must recognise that failure to conduct the trial as specified in the contract and in related agreements, accreditations and plans may mean that the trial is not covered by the exemption order and, as such, would represent a breach of the Genetically Modified Crops Free Areas Act. Farmers will be fully liable for anything that goes wrong, and the Department of Agriculture and Food and Monsanto will get off scot-free. It is the prerogative of any farming enterprise to make a decision about how it will take on board these risks, but the Greens (WA) have grave concerns that we should not go down the fruitless path of running a high-risk exercise in which organisms are released into the environment when the facts can be established in a completely benign way, both environmentally and economically.

The Greens outlined a few weeks ago in an urgency motion the idea that, far from creating choice in the marketplace, these genetically modified organism trials will shut down the choice of farmers. These trials will shut down the choice of farmers to grow whatever seeds they like and to save seeds and replant. We know from the experience of Canadian farmers that the contractual arrangements that farmers have to enter into, primarily with Monsanto, are ruthless and that Monsanto uses any mechanism it has at hand to ensure that it intimidates farmers, including suing farmers for the illegal use of its GM property. We know that we have an end-point royalty arrangement in Western Australia whereby CBH measures the GM canola when it comes into the silos. If there is any contamination, Monsanto will be able to recover costs from farmers who did not choose to grow GM crops but whose crops were in fact contaminated. Monsanto will be able to recover a royalty from farmers whose crops, through no fault of their own, were contaminated.

We know from discussions with farmers internationally that Western Australia is a prime location for non-GM canola, and that gives Western Australian farmers a premium market. Even if one could argue that there is not a premium price, we have access to premium markets because of our clean, green agriculture. A separation across the Nullarbor will ensure that Western Australia will maintain that access to premium markets for communities who do not wish to consume genetically modified products. We know also that Monsanto's business plan is effectively to control agricultural production all the way from the paddock to the plate, and to control all of the seed banks and so on. Monsanto lays out that plan ruthlessly on its websites.

The Greens (WA) moved in this house to introduce a regime of strict liability in the use of GM technologies in Western Australia so that farmers who are contaminated would have automatic protection and could claim damages for losses against companies that allow their GM material to stray onto non-GM farmers' properties. We believe that would give some comfort to non-GM farmers. However, we also know, from empirical evidence around the world, that it is almost impossible to guarantee segregation from GM canola or that there will be no cross-contamination. In fact, even in the report of the Standing Committee on Environment and Public Affairs the notion that segregation could not be guaranteed was clearly made.

I gave an undertaking that I would not spend too much time on this motion. The Greens believe that it is extremely timely that we have this debate right now and that we can put this whole matter to bed. Support for this disallowance motion will give any farmer who has entered into these contracts some breathing space and a cooling-down period, and it will give the Minister for Agriculture and Food, and indeed the National and Liberal Parties, some time to consider the strategies they have been pursuing for the release of GM canola in this state. The Greens cannot with a clear conscience allow this exemption order to stand.

HON KIM CHANCE (Agricultural) [11.52 am]: The opposition will support the motion to disallow the exemption order made under the Genetically Modified Crops Free Areas Act 2003, as specified in order of the day 49. In doing so, I am, and the opposition is, mindful that the government was elected on a platform that there would be trials of GM canola in Western Australia if it was elected, and that those trials were to set out to prove or to disprove the commercial potential of this form of canola species. Ordinarily the opposition would not oppose the government's elected mandate. However, for a number of reasons, we believe that the specific order in question exceeds that mandate and, indeed, further to that, may even exceed the authority of the act under which it is purported to be made; that is, it is ultra vires the provisions of the Genetically Modified Crops Free Areas Act 2003. I intend to work through the issues quite quickly, as we have other important work to do today.

In summary, the specific matters I will raise today will deal with just four essential points among what is obviously a much greater number of points. These four points in summary are, first, the scale of the trials does not meet the specification of the term "small scale" that is provided in the act, and as such the order is ultra vires the act; secondly, in the construction of the legal responsibility for the trials, the government has unreasonably shifted the legal responsibility onto the farmers who are conducting the trials and has offered no legal support to those farmers whatsoever; thirdly, the government has failed to support the introduction of this technology with an adequate statutory framework and has probably also failed to come to terms with what those legal issues might be, in that it does not understand yet which questions need to be answered; and, finally, the trials are commercial within the meaning of the act, and as such are specifically excluded by the provisions of section 5(2)(a) of the act when that section is read with section 3 of the act. The order as it stands is clearly beyond the authority of the act and should be disallowed on those grounds alone.

Firstly I will address the question of the nature of the trials. Most people, I think, were reasonably relaxed with the National Party's pre-election position on the trials; indeed, many people regarded that position as being virtually identical to that of the former Labor government. Those views were that trials were desirable to bring to our knowledge in the debate factual matter to allow a determination on whether the technology should or should not be adopted. Essentially the difference between the National Party and the Labor Party in that position was very hard to separate; the Liberal Party had a clearer picture which was somewhat different. The former Labor

government had in fact already approved a trial in the Esperance area for exactly that purpose. Ultimately that trial did not proceed, but the only reason the trial did not proceed was that the owners of the technology point-blank refused to provide seed for that trial.

It was not until quite recently, though, that we learnt the real nature of what will be called a trial in the context of this order. It is not a hectare or two in a trial that is intended to be conducted under the protocols of the Office of the Gene Technology Regulator, such that any volunteer plants would be identified and destroyed over a period of years with the seed from the trial to be crushed and destroyed on site. It is actually 20 different trials spread right across the southern half of the Western Australian wheatbelt, each up to a maximum of 70 hectares; in combination, a total of up to 1 000 hectares. Some members might have trouble visualising 70 hectares. It is a significant area; it is 700 000 square metres, or an area 700 metres wide by one kilometre long. That is the area for just one of these possible trials; it is a very significant area. It is an impossibility to think that every single surviving volunteer plant for the years that follow that trial could be removed. It is my contention that these trials do not meet the specification that is provided in the act for a trial to be small scale. In section 3 of the act, "Interpretation", a field trial is designated to be a small scale activity for a defined set of circumstances. The act does not go on to describe the area that qualifies as meeting the definition of "small scale". It does not say, for example, "one half of a hectare". However, clearly an area of 1 000 hectares—or, if members prefer, 10 million square metres—is not small scale, and the order should be disallowed on that aspect alone. It is my view that the objects of the Office of the Gene Technology Regulator protocols simply cannot be achieved in a scattered planting of that size. If the objects of the OGTR protocol cannot be achieved—that is, if the trial sites and their vicinity cannot be guaranteed to be left clean of unintended GM plants—then this is a deliberate attempt to contaminate 20 sites in the southern Western Australian wheatbelt. I might be wrong, of course, but if I am wrong and it is possible to guarantee that these 20 sites can be clean in successive years, why are we not using the protocols of the Office of the Gene Technology Regulator? The government can have it one way or the other; it cannot have it both ways. If these trials are not going to contaminate this area, it should use the protocols. If they are going to contaminate the area, why is the government doing it? Regrettably, the answer is that the Liberal-National government has chosen this methodology for no other reason than to do precisely what Hon Paul Llewellyn has just said; that is, to transfer liability to those farmers who are hosting the trials.

The second-last dot point on the application form for approval for a trial cultivation of Roundup Ready canola is crystal clear in that aspect. It states inter alia, "I agree that I will be responsible for any costs incurred or income forgone by me as a result of the trial." Anything that happens, anything that goes wrong, any legal action that may commence will be entirely the farmer's problem as a result of that signature on that application. Therefore, the department, the government, the minister and the company will carry no liability because the farmer has taken it on his own shoulders. They will carry no liability whatever once that farmer has signed that application. If anything does go wrong, the first thing that farmer will see is everyone else's dust as they disappear over the horizon, wishing him, no doubt, good luck! Again, for this reason alone, the order should be disallowed. In abandoning farmers to fend for themselves if anything goes wrong, and in abrogating all responsibility, the government has shown an absence of responsibility.

There has also been no effort by the government to support this technology by introducing a legal or statutory framework to allow the rational management of issues that are almost certain to arise once GM canola is introduced into the wheatbelt. The Minister for Agriculture and Food has said that farmers who are aggrieved by the actions of another farmer can take action, and that is correct. That implies common law action involving that process of proof of damage and then the process of proof of negligence—the law of tort. The cost of common law actions can be enormous. They are generally won by the one party in the dispute that has the most resources and has the least to lose. Common law is a process of attrition. It ends in the High Court of Australia. It is unbelievably expensive. That is why we have statutory law to manage complex things like the use of chemicals in agriculture. We have a stack of statutory law inches high for that. Why in a much more complex issue like genetic engineering can we imagine we can control this through the use of common law?

As I said, the cost of those actions is enormous. They are generally won by the most financially fit, yet apparently the minister is quite happy to see farmers caught in that kind of legal minefield. I do not believe that the government would do that, and I find it very hard to believe that is true. I think the issue we have here is that the government simply has not understood the extent of the legal issues that can arise, which are profound. This absence of a legal framework extends far beyond the simple issues of one farmer litigating against his neighbour. It also goes to the issue of how end-point royalties, and the process involved, which we have established in law in Australia, will be used against non-GM growers whose farms become contaminated with GM canola because of the actions of their neighbour. We already have an end-point royalty process: once Monsanto or any other owner of the technology can establish that a farmer has delivered canola that has traces of this patent in it, the farmer has to pay the end-point royalty. It is not an option; the farmer has to do it. It goes to the question of proof

of source of contamination. If a farmer's neighbour does grow GM canola and his crops become contaminated, what is the process for proving that his neighbour caused it?

Members should bear in mind that in the law of tort one has to prove not only damages but also negligence. How is a farmer going to prove that his neighbour was negligent and it was not the fault of somebody three kilometres away, because we know that that is how far the pollen can travel? It goes to the absence of a legal structure that would allow a GM farmer to prove that he or she employed practices consistent with a specified code of practice, and to use that consistency with the code as a defence in a legal action against the farmer. This is not just a question about defending non-GM farmers; GM farmers also have rights. Will we leave them exposed to this legal minefield or will we work through what is needed for an adequate statutory framework? The order should be disallowed because there is no adequate statutory framework available to regulate the use of this technology at this time.

Finally, I believe that the order is ultra vires the act and should be disallowed for that reason. I have already covered one area in which I think the order is beyond the legitimate power of the act; namely, in the specification of the term "small scale" in relation to trials. This matter is similar in that it relates to the meaning of the words "commercial purposes" in the act.

Section 3 of the act provides a specification for what constitutes a field trial. The explanatory memorandum provided when this act was a bill made it clear in the first and second paragraphs at page 3 that the term "field trial" was employed to differentiate trials conducted in the environment from those conducted in the laboratory in closed environments. The EM is also unequivocal that the section 3 reference to commercial purposes has no other meaning than the common use of the term; that is, "commercial" means just that—commercial. "Commercial", of course, is a word that has a clear meaning in its normal use; it means carrying on or pertaining to commerce. Commerce, in turn, is the process of exchange or buying and selling of commodities.

Although section 6 of the act at first sight enables the minister to provide an order that exempts a person or a specified class of persons from the provisions of section 5(1), it seems to me that the very specific provision for trials in relation to "scale" and "commercial purpose" that are laid down in section 5 would clearly take precedence over the general provisions provided in section 6 under that common concept of law that the specific overrides the general. Section 6, of course, is a general term and it may or may not relate to the issue of trials, whereas section 5(2) dealt specifically with trials.

The exemption order itself refers to the order applying to a trial in no less than four places. So I do not think there can be any doubt at all that the order is intended to facilitate a trial or a series of trials. It would be a legal nonsense to suggest that the carefully crafted definition of how a field trial is to be conducted was meant to be set aside by a catch-all provision appearing in a later section of the act. In any event, the order in question fails to meet the act's requirement for orders made under section 6(1) in that it does not name the exempted person, nor does it specify a class of persons who are exempted from the application of section 5(1). The order purports to exempt a person who cultivates GM canola of a specified type, but it does not define who that person actually is or to what specified class of person he or she belongs. Clearly, persons who cultivate GM canola cannot be defined as "a specified class of persons" by that classification alone. It would have to be a much more profound specification. As a result, the clear intention of the act—that is, that anyone reading the order would know who the exempted person is—has been defeated by the construction of the order. It is ultra vires.

This is clearly a commercial undertaking. One thousand hectares of canola at an average yield of 1.2 tonnes per hectare at $500 per tonne is worth, by my reckoning, $600 000. The minister made it clear yesterday, in his answer to a question, that the seed resulting from the planting of that 1 000 hectares of GM canola will be sold. There is no other construction that can be made of the proposition that this is a commercial purpose that is being served here. It might not be the primary commercial purpose; it is nonetheless a commercial purpose. It is of no relevance whatever, in law, that the primary purpose of the trial might not be the production of 1 200 tonnes of seed for sale—the fact remains, and it stands alone, that 1 200 tonnes of seed may be produced and that those 1 200 tonnes of seed may be sold. By that definition, that is a commercial purpose. There is no way around that, in law. It is a commercial purpose. As such, the order that purports to allow such commercial dealing in GM canola under the guise of a trial is clearly beyond the authority of the act and must therefore be disallowed on those grounds alone.

HON WENDY DUNCAN (Agricultural — Parliamentary Secretary) [12.11 pm]: I rise to speak against this motion. Although many people in the community are understandably concerned about GM crops, there are many others who are eager to embrace this technology to improve their productivity and their ability to feed the world.

Consultation has taken place with many stakeholders and it has taken many months to put this program together to ensure that the trial is responsible and done in a cautious manner. It gives us the opportunity to do our research

into GM canola, how it performs in Western Australia and how the industry can manage its transport and storage. As I said, the government is taking a very cautious and responsible approach to GM technology. Previous governments have buried their heads in the sand and thought that the technology would go away, but in fact it is being used in other parts of the world quite successfully. Although GM crops might not be the silver bullet that solves the challenges of the modern world, it certainly has great potential to assist our farmers adapting to climate change and to food shortage issues in the world. Also, I believe that this technology has great potential in reducing the amount of chemical use in farming and fewer requirements to work the land, perhaps reducing the amount of greenhouse gases that are emitted in the process of creating crops.

Hon Paul Llewellyn: How does it do that?

Hon WENDY DUNCAN: Fewer turns around the paddock with the tractor. The decision to go into these GM trials was based on science and to allow farmers to assess the suitability of such technology for their particular environments and whether it suits their enterprises.

The other aspect of these trials, of course, is to focus on the ability to transport, export and segregate this technology. We cannot do that by having just small trials in laboratories or even small field trials. We need a reasonable quantity of grain to be able to properly assess the ability of Co-operative Bulk Handling Ltd to segregate the crop.

As far as health and safety is concerned, the World Health Organization currently says that GM foods are not likely to pose a risk to human health and Roundup Ready canola has already been approved by Food Standards Australia New Zealand.

Hon Paul Llewellyn commented on the fact that producing non-GM canola allows us to have access to premium markets, but, in the same sentence, he said there is not a premium price available for those premium markets. One is wondering why one would target them in the first place. The need in the world at the moment is for large quantities of food and for it to be produced at the lowest cost. At the moment Japan imports only 1.5 million tonnes of non-GM canola and pays no premium for it.

The Genetically Modified Crops Free Areas Act 2003 exemption order permits an area of up to 1 000 hectares of GM canola to be grown for the purpose of demonstrating not only the agronomic viability of the product, but also supply chain management issues. As Hon Kim Chance mentioned, each trial site is less than 70 hectares; the total is 1 000 hectares, because Western Australia is a large state and has quite varied climatic conditions and it is necessary to test the canola under those various conditions. There is no guarantee in fact that there is not already GM canola in the system in Western Australia. From 1996 to 2003, 11 small-scale trials were undertaken in Western Australia by Monsanto and Bayer. The purpose of those trials was to carry out an agronomic assessment of the performance.

Hon Paul Llewellyn: Do you think it might have escaped from the trials?

Hon WENDY DUNCAN: The thing is that any hope that we can achieve a GM-free environment at this stage is probably not a viable one. What the government is talking about is achieving a non-GM status, which is 0.9 per cent of GM canola in non-GM canola. That is what we want to test for, to see whether we can achieve those limits. GM canola has already been grown in New South Wales and Victoria. There was approximately 10 000 hectares grown by 108 growers and the results have been quite promising, with 100 000 hectares planned next year.

As I mentioned earlier, one of the potentials for GM canola is that it will actually enable a better and simpler system of farming, with weed control by safer herbicides than are currently used. I think it is very important that farmers in Western Australia have the choice and the opportunity to see whether this technology is going to improve their enterprises and enable them to provide the food that the world so greatly needs.

There will be strict protocols to address the management of the trials. Of course, there will be specific CBH receival sites that will deal with this. They will segregate the harvested crop from non-GM canola. CBH is very experienced in segregating crops. It has been doing it for decades and there is really no reason to believe that it will not be able to manage this. But of course we are testing it rather than just going straight to production.

The other point to be made about this disallowance motion is that it really does smell as though a political game is being played here. Two members of Parliament whose life in this house is drawing to an end are pushing for this motion.

Hon Bruce Donaldson: Three of them—three troublemakers.

Hon WENDY DUNCAN: I am sorry to leave Hon Kim Chance out. Three members of Parliament whose time in this place is coming to an end are pushing for this motion. It reminds me of another piece of legislation that passed through this house when there was an early election and this place was not truly represented by new government members until some time after the new government was formed. Certain members of Parliament decided to leave their mark on the place by undertaking acts that were undemocratic and bordering on irresponsible. The change to the electoral boundary distribution was another example of how these acts take place because of our two houses not changing membership at the same time.

The trials of GM canola are the result of an election commitment. Hon Kim Chance referred to the fact that we have a mandate to carry out these trials. The agreement to conduct these trials formed part of the negotiations for the formation of this government. Therefore, they have the impetus to go forward. It is government policy and we have a mandate for it.

Hon Jon Ford: How do you think you've got a mandate? How many members do you have?

Hon WENDY DUNCAN: As Hon Kim Chance mentioned in his speech, our colleagues in the Liberal Party probably supported GM canola trials more than the National Party, but we are both in favour of moving forward with trialling GM crops as they have the potential for not only giving farmers the opportunity to make their businesses more efficient and more profitable, but also giving us the opportunity to feed the world.

Hon Paul Llewellyn: What's your view on Kojonup and the shires that are opposing GM trials?

Hon WENDY DUNCAN: We live in a democracy, and those shires are entitled to make their views known. Plenty of shires do not oppose the introduction of GM trials. I suppose that the attitudes of local governments in Western Australia are a reflection of the views of our community. The fact is that this is government policy and passing this disallowance motion would go against the policy which resulted from the change of government and for which we have a mandate.

HON ANTHONY FELS (Agricultural) [12.24 pm]: I wish to speak in support of the disallowance motion. I am very proud and pleased to give the reasons why I support the disallowance motion. I will take up the last issue that Hon Wendy Duncan raised about the fact that we have a new government and its policy is to implement genetically modified organisms. If that is the government's policy and if it was elected on that policy, I would not want to prevent it from doing that. The problem that we have in Western Australia is that we had eight years of Labor government, but in the past five years we have seen no development of genetically modified crops in Western Australia. I was openly critical of the former Minister for Agriculture and Food and the government on that issue. There was basically a head-in-the-sand approach to genetically modified crops in Western Australia when they were developing quite rapidly throughout the world. As a minimum, the Department of Agriculture and Food should at least trial genetically modified organisms and anything else related to agriculture that has proved to be safe on a scale that is controllable to see whether they are properly applicable to the situation in Western Australia. That did not happen for all sorts of reasons, and they were largely political.

Hon Kim Chance: Not in canola. We did a lot of work in GM cotton.

Hon ANTHONY FELS: There has been some work done in cotton. I know there is another disallowance motion dealing with GM cotton. I will not support that disallowance motion when we get to that on another day as I do not have a problem with that issue. Canola is a different species of crop and it has a particular trait. At flowering time it is capable of cross-pollinating with other canolas. That may not be a problem. We may find out more about that through further research and trialling. It is certainly a problem that has been raised by the anti-GMO group and a number of farmers. Farmers have a range of views and opinions. Organic farmers are opposed to GM canola. In the past month I have been approached by a number of farmers whom I highly respect as individuals. They are progressive farmers who understand their industry very well. They are some of the leaders in agriculture in Western Australia. Some are very large operators, to the point at which they are marketing product direct to Japan, Europe and other places. They operate on a big scale. Following all the deregulation that we have in wheat and other grain marketing, farmers are able to do that themselves and they are getting big enough to charter a ship and export a shipload of bulk grain overseas.

I listen to the farmers when they tell me how GM crops might affect them in the future. In some cases I have phoned farmers whom I have known for many years. In the late 1980s and early 1990s I spent five years with the Primary Industry Bank of Australia lending money. It was a new organisation then. In a lot of cases we were lending to some of the more progressive farmers around the state. In the 20 years since then, some of those farmers have become bigger and bigger and are well known in the farming industry. I quite often ring some of those farmers to hear their views on various issues. When I went to university, I had mates who are now agricultural scientists, agronomists and farmers.

Hon Bruce Donaldson: What about Bill Crabtree? Where does he stand?

Hon ANTHONY FELS: Bill Crabtree has been bashing my ear about how great GM crops are for as long as they have been an issue.

Hon Bruce Donaldson: You should be listening to him.

Hon ANTHONY FELS: I listen to Bill Crabtree. I have probably spoken to him two or three times a day for the past week.

Hon Bruce Donaldson: You should start listening to him. He has good advice.

Hon ANTHONY FELS: I do listen to Bill. I have given Bill a lot of advice in the past week about how politics works. I have tried to pass on to Bill and other agronomists who have a similar view to Bill Crabtree that I have counted the numbers in this place and I worked out some time ago that it was quite likely that the disallowance motion proposed by Hon Paul Llewellyn could succeed. We would then have a very serious situation in WA for those farmers who want to get on with growing GM crops, GM canola in particular. Everything that was promised to them this year would all of a sudden be pulled out from underneath them just as they were about to plant their crops.

The reason I wanted to deal with this disallowance motion now is that this house will, after today's sitting, have a three-week break. It is during those three weeks that most of the GM canola will be seeded in Western Australia. If that was to happen and then the disallowance motion was passed, what would happen to the farmers who participated in those trials would be unfathomable. They would have gone to great personal effort to participate in the trials because they are genuinely interested in and supportive of advancing this technology. Should the motion be passed after they had begun the trials, they would be faced with having to destroy those crops.

Hon Bruce Donaldson: They will not have to.

Hon ANTHONY FELS: They might not have to, but they certainly will not have to if the disallowance motion is passed today and not three weeks down the track. As far as I am aware, a statement is still to be made on where the trials will be held. As far as I know, the seeding of GM canola has not commenced this year.

I wrote to Hon Terry Redman, Minister for Agriculture and Food, last week. I have had a number of discussions with him and his advisers. I appreciate the information that they provided me. I also appreciate the information that has been given to me by the many people to whom I have spoken about this issue. I set out my concerns about what will happen if the disallowance motion goes ahead after seeding has taken place. I pointed out that it is not too late for the minister to change his decision or accept the disallowance motion. If that happens before the trials proceed, there is still time for him to give an exemption by, as a minimum, allowing the Department of Agriculture and Food to conduct trials on the sites that have already been chosen—Esperance research station, Geraldton research station and, I understand, Wongan Hills research station. I do not have a problem with the department conducting trials on a small-scale basis. The trial should not be conducted over 50 hectares. We do not need such a large area on which to trial GM crops to ascertain how good they are. It has always been the case when the department has tested new varieties of traditional non-GM cereals, lupins, clover and whatever that the trials are undertaken on small-scale, scientific and independent bases. Trials can be conducted on GM crops, the seeds for which are provided by the companies that hold the rights to these varieties, to compare them with what is grown in Western Australia now.

We cannot rely on what has happened in Canada to determine what yield we will get here. I grew up hearing about the ridiculously high yields in America, the United Kingdom, France and other countries, and now Western Australia is beginning to achieve the same yields. Agriculture has certainly advanced rapidly in Western Australia. I have seen that with the conventional varieties of canola and the hybrids that have been developed. Trials have also been conducted on triazine-tolerant varieties.

I have been told by Bill Crabtree and others who strongly support GM crops that there is a 30 per cent yield benefit from growing GM crops. That information aroused my interest, and that is one reason that I was disappointed that previous governments were not conducting small-scale trials in Western Australia. In recent times I have asked Bill Crabtree and others for the figures. I have not been given any yield data that satisfies me that growing GM canola will be economically advantageous to Western Australian farmers. I can say that with my hand on my heart.

I grow canola and I have done the sums. I used to believe that it was a difficult crop to grow. However, I now consider it to be one of the easier crops to grow under the TT canola regime because not as much paddock preparation is required. A chemical called triazine is allowed to be used and a resistant gene has been bred into canola so that it is tolerant to triazine. That chemical can be used before and after seeding to control the weeds.

Hon Bruce Donaldson: There is still residual left in the soil. Roundup does not do that.

Hon ANTHONY FELS: Absolutely—and it is banned in most countries around the world.

Hon Bruce Donaldson: I know it is, but here you are supporting it.

Hon ANTHONY FELS: It is a fantastic chemical to use in Western Australia, while we are allowed to use it.

Hon Bruce Donaldson: The state will be a dust bowl eventually, just like some of the states in the US.

Hon ANTHONY FELS: A concern that has been put to me by some farmers in this state who like growing TT canola is that when GM canola is permissible, triazine will be banned in Western Australia. It has been a very useful tool in the weed control program in Western Australia.

Hon Bruce Donaldson: It still leaves residual in the soil.

Hon ANTHONY FELS: It does, and most chemicals do for some time. Even Roundup leaves residual in the soil.

Hon Bruce Donaldson: It is not in the soil for as long as atrazine.

Hon ANTHONY FELS: Some chemicals remain in the soil longer. There are issues with atrazine, and I know it has been banned in Europe and other places because it gets into the waterways.

Hon Kim Chance: It is banned only for use in waterways. It is not banned in agriculture.

Hon ANTHONY FELS: It is also banned in agriculture.

Hon Kim Chance: You cannot kill water weeds other than for irrigation purposes.

Hon ANTHONY FELS: I know that there is a concern that it will be banned by the Australian Pesticide and Veterinary Medicines Authority for use in agriculture in Australia at some point.

Hon Kim Chance: I am advised that there is no risk of that.

Hon ANTHONY FELS: I am pleased to hear that. I would be happy if we can continue to use triazine.

Hon Norman Moore: I am not sure whether members near you would agree with you.

Hon ANTHONY FELS: I do not think that my colleagues who will support the disallowance motion would support that.

I refer again to the TT canola varieties. The only trials that I know about were held last year in Forbes in New South Wales and Horsham in Victoria. The results have been provided but they do not tell much of a story. Last year those states had very dry conditions; therefore, we cannot rely on the results of those trials. We cannot rely on trials in any one year anyway. Those trials did not show GM crops to be any better than the TT canola or other varieties they were tested against. In fact, they were a bit down the scale in the results that I saw. That could be explained by last year's climatic conditions. It demonstrates the reason for the need to trial GM crops against the varieties we are already trialling. If I were shown figures that reveal that GM crops are providing a 30 per cent, 20 per cent, 15 per cent or even one per cent advantage over the conventional varieties, I would need to consider other aspects. I would take into account the cost of buying the seed and the import royalty that is paid to the owner of the seed. If the cost of growing the GM crop were calculated to be cheaper than growing the conventional varieties and if there were a dollar in it for the farmer, I would be happy to progress it further. That is the point at which we should go to commercial trials. We had five years with no trials in WA, and then a change of government occurred. Some might say that the new government has a mandate to allow GM crops. If it has, it should repeal the legislation that refers to the moratorium.

Hon Wendy Duncan: Isn't that what you are doing?

Hon ANTHONY FELS: If anyone wanted to move that I introduce such a bill, I would be happy to do it. It could then be debated, and if in the meantime I had left this place, it could be dealt with after 22 May. It would not take long to get it through this place then. If the house agreed to GM crops, the government would not have to worry about exemptions and disallowances because they could just be done.

I stood for the Family First Party at the last election and was not successful. However, I am a member of that party, and one of its platforms is that it opposes GM crops. I have debated with members of the party why I am not opposed to GM crops. I am not opposed to GM crops; I am opposed to the process of having commercial trials this year.

Hon Wendy Duncan: You're opposed to being denied being in the limelight.

Hon ANTHONY FELS: The proposed trials will not advance any information that is not already known about the benefits of GM crops versus whatever else is around. The way to do that is to have yield trials. Those trials can be done on a very small basis. They do not need to be done on 50-hectare plots throughout the state. I am told that yield is not the issue. It has been conceded to me in the briefings I have had that GM crops do not have a significant yield benefit; the issue that needs to be tested now is segregation, and that is why these large commercial-size trials need to be done. That sounds a bit strange to me, because if there does prove to be a problem with segregation, and if these trials are done on a large-scale basis and they fail, that problem will be compounded. I do not think these trials will fail. I have spoken to some of the directors of Co-operative Bulk Handling Ltd and I have been assured that these sorts of trials have been done in the past and that CBH can segregate the GM crops from the non-GM crops. I know that CBH messes things up from time to time. It has put wheat into barley stacks, and it has put feed barley into malt barley stacks. A ship in Esperance had 6 000 tonnes of wheat loaded into its barley bin in the hold. These mess-ups happen; it is human error. The real issue with segregation is crosspollination. That seems to be the issue that the anti-GM farmers are most concerned about. If that does prove to be an issue after we have done these commercial-size trials for a year, the problem will be out there and we will not be able to get rid of it. If crosspollination is the problem that some people say it is, and we do these trials up-front now, that problem will be here forever.

Hon Bruce Donaldson: Segregation is not a problem in Canada. They are growing a lot of GM canola in Canada, and it is not a problem at all.

Hon ANTHONY FELS: I keep being told that segregation is not a problem. However, I also keep being told that the purpose of this trial is not to determine the yield benefits, but to see whether the problem of segregation can be dealt with. If segregation does prove to be a problem during this trial, we will have GM contamination in this state this year. This state has had a GMO-free status until now. Western Australia is now one of the only places in the world that is not growing GM canola. I understand that Europe has recently allowed the growing of GM canola. I asked a number of questions of the previous Minister for Agriculture and Food about the premium that we are getting in Western Australia for having non-GM crops. I was told in answer to those questions that the premium was about $95 a tonne. I do not know whether that is the case. I have never been satisfied that we were getting a premium. However, I do know that at the end of the season, if farmers wanted to sell whatever grain they had left, and there was not enough demand for all of it at the price the farmers wanted to get, the farmers would always be able to sell their non-GM canola before they would be able to sell their GM canola. That is because non-GM canola can be used in place of GM canola, but GM canola cannot be used in place of non-GM canola. That is another important factor in this debate.

The biggest issue for me is the price that farmers will need to pay for the GM seeds that are tied up under the patents that are associated with this technology. That is the number one issue for me. The cost of GM seed is around $25 000 a tonne. It is not like triazine-tolerant canola seed or other conventional varieties of seed, for which farmers have been paying about $6 or $8 a kilogram in recent years, because farmers can grow that crop, and they can then keep their seed and will not need to pay anything for it the next year. I do not think that will be the case for GM seed. Farmers will also lose control over their crops and their industry if GM crops are allowed to be grown before the proper research has been done. I am told that one of the biggest advantages of GM canola is that farmers in the marginal wheatbelt areas will be able to plant their canola crop before it rains, and as soon as it rains, the crop will germinate, and so too will the weeds, but the farmers will be able to knock out all the weeds using Roundup, and they will get a good crop of canola. That sounds magical and fantastic. However, if farmers have to pay $25 a kilo for their seed, and if they are seeding five kilos a hectare—or only three kilos a hectare in the marginal areas—it will cost them $75 a hectare just to plant their crop. In many of these areas, such as Salmon Gums, Mukinbudin, Mullewa and Morawa —

Hon Wendy Duncan: That is their choice if they want to do that.

Hon ANTHONY FELS: It is their choice, but it is a difficult choice for those farmers,

Hon Wendy Duncan: Do you want to deny them choice?

Hon ANTHONY FELS: I do not want to deny them choice. I am always a big fan of freedom of choice. Those farmers will have to fork out a minimum of $75 a hectare just to plant their crop. In many of these areas, as I have said, probably every second year they do not even harvest their crop. They often grow their canola crop just to keep the weeds at bay. Some of my mates grow canola, and if it turns out not to be a good year, in August they spray the whole crop out. It is just a weed-control mechanism. However, it is a very expensive way of controlling weeds if they have to pay for GM seed so that they can have canola in their cropping program. It is not such an issue for those farmers in the higher rainfall areas, where the yield is consistently 1.5 or two tonnes a hectare, and they are planting at roughly the same seeding rate. The advantage available to farmers in marginal areas to grow Roundup Ready canola is not as attractive as it is to farmers in the higher rainfall areas, because

the capital cost is too high. It is an extremely high input cost—even higher than the cost of fertiliser—to buy the seed to plant a crop that might not even succeed.

Hon Bruce Donaldson: I am surprised your farm consultant has not convinced you to grow GM canola this year on your own property as one of the trial plots!

Hon ANTHONY FELS: Well, we have talked about that. I do not know where that trial canola will be grown. I am receptive enough to look at growing GM canola. I would be happy to have a quarter-acre plot and contain it and compare it, on my property or anywhere else. I do not have an issue with that. I am not going to get into the argument about food safety and whatever else with GM crops generally. That is a totally different argument. The issue before us is canola. Canola is different from other crops when it comes to the crosspollination issue. That is certainly an issue that we need to consider given the GM-free status of Western Australia. We need to preserve that GM status. We should not surrender this advantage now for some short-term gain, when in five or 10 years it may come back to bite us on the backside when everyone else is doing the same thing and growing GM crops and our farmers are still struggling to compete on the world market because they are beholden to the companies that own this technology

HON BRIAN ELLIS (Agricultural) [12.48 pm]: We discussed the issue of genetically modified organisms and genetically modified crops in an urgency motion just recently. Many of the same arguments are being put up now by those who oppose GM crop trials. I respect the views of people who have concerns about GM canola. I respect their right to have a difference of opinion. However, I think there is too much emotion about this matter, and people are overlooking the facts about the research on the worldwide use of not just GM canola, but all GM crops. I am pleased to hear that Hon Kim Chance and the opposition accept that this government has a mandate to trial genetically modified canola, as was pointed out throughout the election campaign. There was no secret about what this government was going to do.

I will endeavour to point out the facts of the argument and why we need to carry on with the trials. Members may be surprised by some of the information that I have gathered. They may be surprised to learn that Japan, which is often the focus of the GM canola debate, has developed a GM pig. It contains a spinach gene that makes the animal's fat healthier by changing it into an unsaturated fatty acid that is 20 per cent higher than that in non-GM pigs. Canadian researchers have developed an enviro-pig that excretes dramatically less phosphate, a major pollutant associated with high-intensity pig farming. Genetically modified livestock vaccines have been commercialised worldwide. It is anticipated that within the next four years genetically modified wheat that reduces the risk of colorectal cancer and helps fight diabetes and obesity will be on the market. The high-amylose wheat is broken down slowly in the lower bowel, instead of being digested in the small intestine, and creates a feeling of fullness. Trials are underway in the eastern states in a joint venture between the Grains Research and Development Corporation, the Commonwealth Scientific and Industrial Research Organisation's Food Futures Flagship and French grower-owned company Limagrain Céréales Ingrédients.

In some developing countries, a GM rice variety with enriched vitamin A will make the difference between life and death and between sight and blindness for millions of children. Vitamin A deficiency is the leading cause of childhood blindness in these countries and is associated with more than one million childhood deaths each year. Golden Rice will be made freely available to subsistence farmers in developing countries. Gene technology also has the potential to remove allergens from foods and could, for example, play a lifesaving role in removing allergy-causing proteins from peanuts. In the meantime, GM pineapples are undergoing field trials in Queensland. This involves switching off a gene to prevent internal discolouration caused by cold storage. In Australia, insect-resistant GM cotton led to a 75 per cent reduction in insecticide use during the 2004-05 season. In China, insect-resistant GM cotton has led to a reduction in the number of farmer illnesses attributed to chemical misuse. In Canada, GM canola produced improved yields, decreased herbicide use and enhanced weed management options. Importantly, it also made it easier to minimise ploughing. This has many environmental benefits, such as reducing soil erosion, improving soil moisture content, creating healthier soils, decreasing fuel consumption for equipment, less sediment and chemical run-off in waterways, and less dust and smoke in the air.

According to my research, in 2006 more than 100 million hectares of GM crops were grown by more than 10 million farmers across 22 countries. At the time, this represented a 60-fold increase in GM crop area. We can expect increased plantings as technology and research widen the scope of GM benefits. According to my research, 63 countries were involved in the use of GM technology in 2006, when research and field trials are included. As at June 2005, nearly five years ago, 25 GM foods had been approved for use in Australia and New Zealand. Most of these foods came from plants that had been genetically modified to improve the growing characteristics, including pest resistance. I therefore suggest that trying to stop the progress of GM technology is like King Canute standing in front of an ocean and trying to stop the tide. In my view, we would be better to look at ways to catch the wave and ride it safely. Why would we want to dip our toes in the ocean of whipped-up waves?

As I said in an earlier speech in this place, biotechnology already includes the use of micro-organisms for bread-making, beer fermentation and cheese production. Biotechnology has been around since 1800 BC, but more recent applications include food flavouring, sewage treatment, antibiotics and cancer treatment. Gene technology is a tool of modern biotechnology. It was used in 1982 to develop human insulin for diabetics.

In very simple terms, what does GM technology involve? Plants have 22 000 genes. Animals have 30 000 to 40 000 genes. Gene technology alters, deletes or moves one or two of these genes. Often the modified characteristics apply to the plant itself and have little, if any, effect on the finished product. In my view, the modification of one or two genes of a canola plant has particular benefits for future crop production in Western Australia. For a start, Australian farmers collectively pay about $72 million each year to buy and apply herbicides to control weeds in canola crops. Contrary to what Hon Anthony Fels says about the use of atrazine, it is one chemical that I would rather not use because it sterilises the soil and affects crops in following years. If we could move away from the use of that chemical, I truly believe that it would be better for the environment. The use of GM herbicide-tolerant canola will give farmers the option to spray later in the season if weeds become a problem, rather than spraying it up-front. Farmers spray atrazine on the bare ground before the crop comes up, regardless of whether protection is needed. Dealing with the weeds when they appear is a far more productive way of using the chemical than is spraying it for the sake of spraying it. As a canola farmer and a family man, it seems to me that GM technology provides good economic protection, good health protection and good environmental protection. However, it will take sensible planning. Insects and pests can become resistant to insect-resistant crops, just as they become resistant to insecticides. That is why there are strict management practices in place, such as establishing non-GM refuge areas within crops. This encourages insects from GM areas to interbreed with insects from non-GM areas and slows the development of the resistance. GM crops will also benefit subsistence farmers in other countries by allowing them to plant crops that need less water and less pest and disease control and by increasing the nutritional value of their grains. About 82 nations are unable to feed their people at the moment.

Sitting suspended from 1.00 to 2.00 pm

Hon BRIAN ELLIS: Before the lunch break, in the interests of a fair debate, I was about to address some of the concerns around genetically modified crops. I wanted to start with the opponents' worry that the introduction of GM canola in Australia will lead to the loss of international markets and a reduction in premium prices. However, according to the federal Department of Agriculture, Fisheries and Forestry's brochure titled "Market acceptance of GM canola" —

> … virtually all Canada's export canola can be considered GM, but this has not stopped its exports reaching record levels in 2006.

At the time, Canada had a market share of 71 per cent over the preceding three years, excluding European Union trade. According to that brochure, countries that produce GM products dominate world trade in grains and oil seeds. Opponents to GM crops worry about feeding animals with GM products. In the same brochure, the federal Department of Agriculture, Fisheries and Forestry says —

> … the preference for products from livestock not fed on GM materials appears to be very much a niche market and is largely confined to dairy products.

It states elsewhere that Australian animals already use GM feed stuffs widely, particularly locally produced cottonseed and imported soybean meal. Opponents argue that antibiotic resistance GM market genes might cause antibiotic resistance in humans. However, according to Agrifood Awareness Australia that possibility is extremely small. Such a transfer would involve a complex number of steps, and it has only ever occurred in a laboratory under ideal conditions, never in a real-life situation. Opponents worry that it will not be possible to separate GM grain from non-GM grain. However, the federal agriculture department states in its brochure titled "GM grains in Australia: Identity preservation" —

> Australia has successfully implemented identity preservation with conventional grains such as durum wheat and malting barley.

Hon Kim Chance: You know that's nonsense, don't you?

Hon BRIAN ELLIS: I am stating from the federal agriculture department.

Hon Kim Chance: Have you ever seen the barley seeds?

The DEPUTY PRESIDENT: Order!

Hon BRIAN ELLIS: The brochure states —

> … although identity preservation with GM grains will involve some new challenges, this appears to be an issue that the Australian grain industry can take in its stride.

That is from the federal agriculture department. The department is reassuring about any additional costs. It goes on to state —

> … it does not appear at this stage that there is a price premium in domestic and world markets for certified non-GM canola that would be sufficient to offset the additional costs of segregation.

The opponents worry that GM crops will undermine Australia's organic farming sector. Let us hear what the federal agriculture department says about this in its brochure "GM canola — Potential impacts on organic farming in Australia". The department states —

> Commercial production of GM canola is unlikely to have any substantial impact on the organic sector.

According to the department, Australia has more than 1 500 organic farms, or about 1.2 per cent of the total of all farms. In 2003 around 72 per cent of these farms were involved in vegetable, fruit and nut production, around 22 per cent in beef production and around 15 per cent in the production of grains. Producers of organic canola would already be required to establish measures to avoid contact with non-organic canola crops whether or not these were GM canola.

Conversely, it was fascinating to read in the Agrifood publication that GM crops can be used as a buffer to isolate conventional crops from disease. This is the case with GM papaya, which has been used as a barrier crop to minimise non-GM crop infection by the papaya ringspot virus, a virus that had halved conventional crops. Evidence has also suggested that GM corn has been successfully grown alongside conventional and organic varieties. However, returning to the brochure on the effect on organic farming, the department also states —

> In recent years Australia has produced negligible amounts of organic canola oil and meal. This indicates that organic livestock industries use feed other than organic canola meal. The introduction of GM canola would therefore have minimal impact on the organic livestock industry.

What about the old honey of a story about the impact of GM crops on bees! According to the same agriculture department brochure —

> Conventionally produced crops are not suitable forage for bees for the production of organic honey. Consequently, growing GM canola as a substitute for conventional canola would have no additional effect on organic honey production.

Opponents worry that people who consume GM-fed animal products might be adversely affected. According to the Agrifood Awareness booklet, "Gene technology in Australia: Fact not Fiction", studies have shown that animal growth, milk composition and health are equal, whether an animal is fed approved-GM or non-GM feed. Proteins in animal feed are broken down during digestion, and research has specifically shown that GM proteins are broken down the same way. As a result, they are not detected in animal products such as meat, milk or eggs. This means that these products are identical to those from animals fed non-GM feed and, as such, they are not required to be labelled as GM anywhere in the world.

It takes at least eight years of research trials and tests for a GM food item to go from the laboratory to the supermarket. Some of the big names in international food regulation are involved in the safety assessment of GM food. Our national assessment process is conducted by Australia's food regulatory agency, Food Standards Australia New Zealand. It is based on concepts and principles developed by international organisations such as the World Health Organization, the Food and Agriculture Organization of the United Nations and the Organisation for Economic Cooperation and Development. Some of the safety considerations required to satisfy Food Standards Australia New Zealand are that all new genetic material and proteins must have been examined in detail. The new genetic material must stay the same and be passed on predictably from generation to generation. The new proteins must be unlikely to be toxic or allergenic, and the new genetic material must be digested in the human gut without significant impact on human health. When new or modified chemistry is used for insect-resistant and herbicide-tolerant GM crops, the Australian Pesticides and Veterinary Medicines Authority grants regulatory approval and decides the need for registration conditions. Before new GM crops are approved, they undergo a rigorous scientific assessment by the Office of the Gene Technology Regulator. This includes examination of the potential spread and persistence of the crop in the environment and the potential to become a weed. Because canola pollen is quite heavy and sticky, it remains airborne for only a few metres. Canola pollen also dries out quickly, so even if it managed to travel a long distance, it may not be viable.

Hon Paul Llewellyn: What is that reference?

Hon BRIAN ELLIS: I will have to find it.

Canola is 70 per cent self-pollinating, so bees would need to land on flowers that were not already fertilised. In field trials, bees would need to fly beyond the 400-metre isolation zone.

In June 2002, the prestigious *Science* journal published research results on pollen movement from fields of conventional herbicide-resistant canola to nearby canola crops across southern Australia. The researchers concluded that pollen carried to other fields was in amounts well below the internationally recognised levels.

Hon Ed Dermer: Which journal was that?

Hon BRIAN ELLIS: That is from the *Science* journal published in June 2002.

The researchers concluded that the pollen carried had less than one per cent unwanted genetic transfer. Only this morning on the radio—I was trying to find the piece of paper—I heard a professor from the University of Melbourne talking about cross-contamination of canola crops. He said that after studying research from around the world, he found there was only one-100th of one per cent contamination in any trials that he had seen. The professor also discussed the risk of litigation because of this cross-contamination and he pointed out that there has been no litigation around the world due to cross-contamination.

The study published in *Science* also found that non-GM canola is not in any danger of being excluded from markets on the basis of containing GM content because, even without segregation, the crosspollination levels were so low—less than 0.07 per cent—that any practical tests would not be able to detect pollination from GM canola in non-GM crops.

Another GM myth was busted when a 10-year United States-based study published in *Nature* magazine found that GM canola plants did not become weedy, invasive or self-sustaining. Within four years, the GM and non-GM canola plants in the trial had died.

Where GM crops have an environmental or human health consideration differing from their non-GM counterparts, the Gene Technology Regulator can impose licence conditions. The process is transparent; all licence approvals are available on the regulator's website. People can sign up for advice on any applications coming before the regulator. In case members are worried something sneaky might be going on, the regulator has the power to access all gene technology research sites for auditing and monitoring purposes. Several expert committees advise the Gene Technology Regulator and the relevant ministerial council. These committees include experts from a diverse range of disciplines, such as agriculture, herbicide resistance, biological areas, medicine, immunology, ethics, religion, philosophy, and public health. The committees also include community representatives. Before they satisfy this assessment process, GM crops may be tested for risk to native plants, any potential for pollen contamination, their potential to persist in the environment and any risks to animals and insects. It can take years to progress through the laboratory and greenhouse stages to small field trials of crop performance. It is not likely that a gene will be whipped out overnight and a commercial crop planted the next day; there are lengthy safeguards in place.

Let us look at some of the advantages of and potential for GM crops, if we decide to take that plunge. According to the federal Department of Agriculture, Fisheries and Forestry's brochure on biotechnology entitled "GM oilseed crops and the Australian oilseed industry", the potential for GM research includes improved fatty acid profiles of oilseed crops; increased essential amino acid content; precursors of essential vitamins, such as vitamins A and E; reduction of compounds, such as phytic acid, to increase the nutritional value of stockfeed; development of pharmaceutical and industrial products, such as plant-made vaccines or bioplastics; and a reduction in the levels of compounds that cause allergic reactions. New varieties might provide increased yields; improved tolerance of environmental stress; improved disease resistance; more efficient nitrogen use; increased seed size, yield and oil content; and reduced pod shatter. New opportunities include increased use of oilseed crops in rotational cycles; the supply of more local oilseed meal to the stockfeed industry; the development of stable oils for frying to compete with palm and soybean imports; the development of value-added oils, such as omega-3 fatty acids, and the creation of a niche market for them; and production of high volumes of oils for biodiesel production.

In conclusion, I might appear to be and I might be keen to ride the GM wave, but I am not suggesting that we dive in headfirst. I acknowledge that we need to check the dangers in the newly charted waters; therefore, I welcome informed debate. However, I remind members that the early explorers were prepared to sail to the edge of the known world, despite the fears of the people who thought the world was flat. I for one am ready to crew the good ship "GM Canola" and sail her, complete with life rafts, on this exciting journey into the future.

HON ROBYN McSWEENEY (South West — Minister for Child Protection) [2.19 pm]: The government does not support the motion to disallow the Genetically Modified Crops Free Areas Exemption Order 2009. It

was an election commitment of the government to have trials of GM canola. It is not open slather; it is a trial. It will not be on 10 000 hectares, as is the case in Victoria and New South Wales, and it is certainly not intended to grow crops on 100 000 hectares. These trials are still a cautious approach. Although I agree that we are debating an important issue, I believe that we are game playing when we should be debating the Treasurer's Advance Authorisation Bill. All that the Minister for Agriculture and Food has to do is re-gazette this order.

Hon Paul Llewellyn said that we are playing war games with live ammunition, using farmers as guinea pigs. I think that is a little far fetched. That assumes that these farmers are not well informed. The farmers are well informed. Each farmer wants a trial on his or her property. Therefore, I say that they are informed. Whether we like it, they want to participate in these trials.

Hon Kim Chance: So why is the government asking farmers to take all the legal responsibility? Why is the government not putting its weight behind this?

Hon ROBYN McSWEENEY: I can provide a bit of an answer. I know that Hon Kim Chance does not think it is a trial because the scales are too large.

Hon Kim Chance: It is clearly not a trial.

Hon ROBYN McSWEENEY: Hon Kim Chance says that the legal responsibility has shifted to the farmers, and he says that there is not an adequate statutory framework —

Hon Kim Chance: It is not what I say; it is what the application form says.

Hon ROBYN McSWEENEY: — and that the trials are commercial. However, I will go back to farmer liability and GM crops, which I am sure Hon Kim Chance knows about very well, being the former Minister for Agriculture and Food. Legal liability is a GM crop-related issue that was considered in 2005-06 during the review of the commonwealth Gene Technology Act 2000. The analysis of GM crop-related legal liability in Australia and other countries found that common law allows for effective remedies for persons alleging damage from GM crops.

Hon Kim Chance: So why did the state of California have to modify its law?

Hon ROBYN McSWEENEY: I believe that Hon Kim Chance has raised an important issue, but I do not believe it is insurmountable. When we toured Canada in 2002 or 2003—is that when it was, Hon Bruce Donaldson —

Hon Kim Chance: It is a 2003 act, so you would have been there in 2002.

Hon ROBYN McSWEENEY: Yes. Things have moved on a little, and we can see, as Hon Brian Ellis said, that 71 per cent of Canada's grains are sold, and that there is a 0.9 per cent tolerance. The tolerance level is accepted with segregation. It is GM and non-GM. There is that tolerance level.

Hon Kim Chance: It is 0.9 per cent in Australia. In Canada, there is no differentiation. Canola is canola. It does not matter whether it is GM or non-GM.

Hon ROBYN McSWEENEY: Yes. I think when we were there, there was talk of 0.5 per cent.

Hon Bruce Donaldson: GM was in one little area.

Hon Kim Chance: It is all undifferentiated there.

Hon ROBYN McSWEENEY: I understand the negligence issue that Hon Kim Chance is talking about, and I certainly do not dismiss that out of hand. However, the government wants to have individual trial sites that will be no larger than 70 hectares, and could be much smaller. There will be approximately 20 different sites, two of which will be on Department of Agriculture and Food research stations. Eighteen sites will be on private farms, and the other two will be on departmental research stations. The fact sheet that I have states —

> Although two types of GM canola are approved for commercial release in Australia only Roundup Ready canola will be planted. This is because … InVigor canola, has not yet produced sufficient quantities of seed.

When Hon Kim Chance was the minister, what would he have done? Was he going to continue to allow trials on sites that were a lot smaller than 70 hectares, or was he going to allow the trials to develop further?

Hon Kim Chance: No, I approved a trial on 1.3 hectares or something like that. However, that trial did not proceed, because the owners of the technology refused to supply seed as it was an independent trial. They wanted to control the technology.

Hon ROBYN McSWEENEY: Yes. I think that is what we found with Monsanto at times back in the early days. The situation is probably much the same now. The fact sheet states —

> CBH will segregate the harvested crop from non-GM canola, as it has done for malting barley and varieties such as high oleic canola.

As Hon Kim Chance and I know, once the canola has been through the system, nobody can tell whether the oil is from GM canola. There are no remains of the DNA. However, I understand Hon Kim Chance's concerns. I do not think the Minister for Agriculture and Food is rushing into having commercial plantings all over the state. That can hardly be said when there are 20 sites of 70 hectares or less. I do not think he is running headlong into an open-slather situation.

Hon Kim Chance said that the act does not say what the scale should be; that it calls for small-scale activity. As Hon Kim Chance is the former minister, he can probably tell me. In New South Wales and Victoria, 10 000 hectares have been planted, and the area is now going up to 100 000 hectares. As Western Australia comes under the same commonwealth Office of the Gene Technology Regulator, why can they do it?

Hon Kim Chance: Because each state had its own act, and New South Wales and Victoria allowed their acts to expire.

Hon ROBYN McSWEENEY: Okay. That was the difference. I thank Hon Kim Chance for pointing that out to me.

I will go back to the legal action. I do not think the situation is any different for blue gum farmers or anyone else who uses sprays. The same act is used, is it not, for the farmer liability, as I just pointed out? I think everyone uses it.

Hon Kim Chance: Common law applies to everyone.

Hon ROBYN McSWEENEY: Common law, yes.

Hon Kim Chance: But my point is that we have statutory law to regulate the use of agricultural chemicals. With something so much more complex than chemicals, why are we going to rely on the commonwealth? It does not make sense to me. It is like saying, "You can have a motor vehicle industry but don't need to have road traffic laws."

Hon ROBYN McSWEENEY: I take Hon Kim Chance's point that that is used already, so I guess everyone is continuing to use that instead of anything else. I think it was a problem in Canada in the early days. With so much GM canola coming out of Canada now, I do not know what the legal aspect is, but there was certainly one big trial that I remember in the early days.

Hon Kim Chance: The Schmeiser trial.

Hon ROBYN McSWEENEY: Yes, that one. That continued for a few years. I cannot remember the outcome of that now, but I do not think the person —

Hon Kim Chance: Monsanto won.

Hon ROBYN McSWEENEY: Monsanto won. I did not think the person won, no.

Hon Kim Chance: And it will always be the case. An individual cannot beat Monsanto; that is my point.

Hon ROBYN McSWEENEY: No. It is something of which we must be mindful. I think the Minister for Agriculture and Food is very mindful of that, as are the farmers who are taking part in the trial. The fact sheet says that in Western Australia we have the most rigorous regulatory systems in the world for genetically modified organisms. I certainly hope that that is the case, and it seems to be. As I said, all that this disallowance motion will do is make the minister go back and re-gazette on Monday. I wonder why we are debating this disallowance motion after we already debated a similar motion not so long ago, although it is an important debate to have. Genetically modified canola has been previously trialled in Western Australia. Between 1996 and 2003 there were 11 small-scale trials, as Hon Wendy Duncan has pointed out. Genetically modified canola has the potential to provide benefits such as better and simpler weed control systems, environmental benefits through the use of safer herbicides, less fuel usage and potentially higher yields and gross margins. The government is taking a cautious approach in assessing this technology, including the potential benefits, by undertaking a trial.

It is all very well to keep saying that we should have small-scale trials, but these do not go anywhere. We could keep having small trials for the next 20 years, but if there is a potential benefit for farmers who want to grow GM canola, and it can be done safely in a controlled environment, surely we owe it to farmers to test it on larger acreages, to use the old term.

Hon Anthony Fels: These trials have been done by companies, not by the Department of Agriculture and Food, so we do not actually have an independent comparison.

Hon ROBYN McSWEENEY: Two of the trials will be on Department of Agriculture and Food land.

Hon Anthony Fels: The figures for the trials that have been done by companies are not available for us to compare yields.

Hon ROBYN McSWEENEY: Is it not time we had these trials so that we can make the comparison?

Hon Anthony Fels: Yes, it is.

Hon ROBYN McSWEENEY: The member is agreeing with me, yet he supports the disallowance.

Hon Kim Chance: What needs to be remembered in this part of the debate is that the seed companies would not provide seed to allow those trials to proceed, unless they controlled the trial and thereby controlled the information that went out from the trial. If the company does not like the trial results it gets, it just withholds the data; it does not release it. That has been the case in New South Wales for years, but if an independent body wants to carry out trials —

Hon ROBYN McSWEENEY: I will let the member have that argument. I understand about Monsanto's former tactics in Canada, but I have not heard about it being the case here.

Hon Anthony Fels: It's the same everywhere.

Hon Paul Llewellyn: Why wouldn't it happen here?

Hon ROBYN McSWEENEY: It is important for Western Australian growers to be given choice—we are talking about choice—on their own land. If I wanted to take that risk on my own land, with the legal liabilities that are around now, it would be up to me; it is not up to anybody else to tell me I cannot do that. It is important for farmers to have the choice of access to the latest technologies to maintain their competitiveness in the global marketplace. The government's role is to ensure that farmers have the tools available to expand their businesses and grow their profitability. We are talking about GM canola trials; we are not talking about GM wheat, or extending GM food production all over the state. We are talking about 70 hectares and 20 trials, two of which will be on Department of Agriculture and Food land. I believe we need to allow these trials to go ahead so that we can be competitive on the world market.

HON NIGEL HALLETT (South West) [2.33 pm]: I certainly will not support this disallowance motion. We should not even be wasting the Parliament's time with it today.

Hon Paul Llewellyn interjected.

Hon NIGEL HALLETT: Seeing as the member introduced it, I will take the opportunity to comment on it.

Hon Ken Travers interjected.

Hon NIGEL HALLETT: No-one asked the member to comment or interrupt me. If he would like to sit there, he might learn a little more, as he did when I held the regional development portfolio; I noticed that he used to come in at the end of my speeches to listen, and I certainly appreciated that.

I will cover only a few points because time is getting on. The grain industry is a very mature industry. It sees GM production as the next tool to use to move ahead. Hon Kim Chance commented on the 70 hectare trial plots; let us put it into perspective. It takes about two hours for today's seeding equipment to sow a plot of that size. To get a machine in to do anything less than that will not be achievable. I can understand why a company would not have gone ahead with small hectare trial plots—it is just not economically viable to do that.

Hon Kim Chance interjected.

Hon NIGEL HALLETT: No, but to do it in a trial —

Hon Kim Chance: The answer is that it's not to be commercial.

Hon NIGEL HALLETT: No, and 70 hectares is not commercial, as Hon Kim Chance well knows. It would not keep anyone going.

Hon Kim Chance: Have a look at the legal definition of "commercial".

Hon NIGEL HALLETT: We should be talking about the grain industry. It recognises the benefits of GM technology, and it endorses the move to commercial production of GM canola within a framework that can provide market choice. Tony Critch is a very well respected man in the grain industry and is chair of the Grain Industry Association of WA Inc. In a Grain Industry Association media release, he stated —

> …"Industry and consumers should be given the right to choose whether they use GM canola, through a framework of production that provides market choice."

I will read from the GM canola policy statement released by the Grain Industry Association of WA Inc. It provides some food for thought. It states —

> ***"The Grain Industry Association of Western Australia (GIWA) recognises the benefits of GM technology and endorse the move to commercial production of OGTR approved GM canola within a framework that provides market choice."***
>
> …
>
> The West Australian Grains Industry has the capacity to deliver and manage the commercial introduction of Genetically Modified (GM) canola.
>
> …
>
> The Australian grains industry has reviewed the market requirements for GM. The industry considers that the commercialisation of approved GM canola should proceed without further delay. Major Australian grains industry stakeholders have agreed that Australia is now ready to adopt GM canola, and are committed as demonstrated by their endorsement of this document to deliver market choice.
>
> GIWA believes that the process from here is **not** to continue to debate the pros/cons of GM but to decide the process and actions to introduce GM to meet desired outcomes.
>
> …
>
> GIWA urges the WA Government to recognise the grain industry's commitment to market choice of GM and support the commercialization of approved GM canola in Western Australia with appropriate legislation, guidance and funding.

Hon Wendy Duncan hit the nail on the head: this will be the reality; if it is knocked back today, it will come in further down the track, so it is better to give industry control and let the industry move on.

Australia is the largest world exporter of canola after Canada. It is a high value crop that provides a beneficial break between cereal crops. Hon Brian Ellis spoke well on the weed problems, and I will not go over that again. In 2006, 10.3 million farmers in 22 countries grew GM crops; by 2015, that figure is expected to increase to 20 million farmers in 40 countries. That is certainly a statistic that cannot be denied. I will touch on a few other statistics. In Canada, 80 per cent of the canola grown is GM canola. Yields have increased to 1.4 tonnes per hectare. In Australia, canola production yields have decreased to 1.19 tonnes per hectare. A report by the Australian Bureau of Agricultural and Resource Economics released in May 2007 concluded that the introduction of GM canola would have a negligible impact on organic farming, including honey production, due to the absence of canola from Australian organic agriculture, and that it is possible to grow specialty canola without cross-contamination. The International Service for the Acquisition of Agri-biotech Applications estimated that in 2007, GM crops reduced carbon dioxide emissions by 14.8 kilograms, which is the equivalent of removing 6.5 million cars from the road. It said also that 1.2 billion kilograms of CO_2 was saved through the reduced use of fossil fuels, herbicides and pesticides. In addition, 13.6 billion kilograms was sequestered in the soil rather than released as a gas after ploughing because a growing number of grain growers are practising the no-till method of farming, which has reduced the need for continual ploughing. The reduction in pesticide use is a good environmental outcome. The use of pesticides for growing cotton has been reduced by between 70 and 90 per cent. Rick Roush, the Dean of the Melbourne School of Land and Environment at the University of Melbourne, said there is a strong environmental argument in favour of GM crops.

Genetically modified canola was imported from Canada into Australia in December 2006 to help Australian processors overcome the domestic shortage during that year. The importation of GM canola was handled through the existing grain industry and infrastructure chain that is in place today. The requirements of all market participants for both canola oil and canola meal were met, and the effectiveness of the supply chain was clearly demonstrated.

Being aware of the time, I will conclude by saying that the Australian grain industry is ready to move ahead with the commercialisation of the two types of approved genetically modified canola. It does not want further delay. Once again, it is urging government to recognise the grain industry's ability and commitment to support the commercialisation and approval of genetically modified canola in Australia, particularly the trials that are to be conducted in Western Australia.

HON PAUL LLEWELLYN (South West) [2.41 pm] — in reply: I thank members for their contributions. I will briefly go through the lines of argument that were raised. Hon Kim Chance questioned the legality of the

trials and of the exemption order. He made it clear that in his view it was ultra vires and that this exemption ought to be disallowed purely on the basis that it is outside the law. I have looked at that line of argument and I have a strong view that there is a good case for that argument. Hon Anthony Fels outlined the interests of farmers. I was interested to note that he is not a fan of Atrazine.

Hon Anthony Fels interjected.

Hon PAUL LLEWELLYN: Maybe he is the biggest fan of Atrazine! Hon Anthony Fels argued that, as a general rule, we should proceed with caution when conducting these trials. I appreciate the insight that he gave. Hon Wendy Duncan is a member of the National Party, which effectively made this order. She argued that the trials would be safe. My sense about the arguments is that the government has decided it, announced it and now it will defend it, regardless. It will use any line of argument to defend something that is, in effect, indefensible. In his contribution, Hon Brian Ellis quoted from industry literature about the benefits of genetically modified technologies. He gave us a good run-down of what Monsanto and industry groups have put on the record about what they think of genetically modified organisms. It is useful to do that. The brave new world analogy is a powerful one. We are heading into uncharted waters, not of genetically modified technology necessarily, but of a loose legal framework to deal with these technologies. I will err on the side of caution before going ahead with any of these technologies so that we have in place a robust legal framework to deal with the issues that might arise.

There was some confusion in the debate about the use of gene technology and biotechnology. I put on the record that a range of biotechnologies provide enormous advantages and practical benefits for agronomy, farming and industrial processes. However, gene technology is fundamentally different from biotechnology. It is a small part of the whole realm of biotechnology. Gene technology involves taking genes from one species and forcing them into the genes of another species. We run certain risks by doing that. It is neither breeding nor fast breeding; it is forcing genes across barriers in a way that would not normally happen. That puts us into a completely new domain. It allows us to patent life and to commercialise and trade in genes and life forms. A major failing of the United States was that it allowed genes to be patented and commercialised. That is the brave new world that we have entered. It is not just a brave new world that has provided us with new technological advances. Technological development and new ideas and innovations will happen, but there are some things that we do not have to pursue. For example, we do not let a three-year-old play with matches and there are very strict guidelines on the use of certain chemicals. We need very strict guidelines on how to deal with gene technology.

Hon Nigel Hallett and Hon Robyn McSweeney talked about some of the environmental benefits that might be achieved by the use of gene technology. There is no doubt that there will be certain benefits of using a range of new innovations and technologies. However, if we stop using one type of chemical, we might end up using another pesticide. There is an argument that we will end up on the pesticide treadmill, particularly regarding genetically modified organisms, but also for several other technologies. GM crops fail, and they fail spectacularly.

Hon Kim Chance: Have you read today's paper?

Hon PAUL LLEWELLYN: I have not read today's paper, although I did see the article on the 85 000 hectares of maize in South Africa that failed. Gene technologies have failed farming communities in India. We can read the websites of Monsanto and the GM zealots, but equally we must look at the websites of and information from communities that have been badly impacted by GM technologies. In South Africa, 85 000 hectares of maize or corn failed. Monsanto is now paying out a massive amount of compensation to those farmers. The consequences of that are devastating. Genetically modified crops are not a silver bullet, and we should not jump on the GM bandwagon and simply support them because we think they will solve all these problems.

As a young person growing up in Africa, there were always discussions about how the biochemicals and seeds available in the 1960s and 1970s would deliver a green revolution and save the starving millions; it never happened. GM technologies have not delivered on a range of claims, including drought tolerance and salt tolerance. These claims are often discussed but the solutions seem to slip further and further into the distance. In the meantime, the companies get traction in the markets—this is big, big, big business. I am not saying that we should not involve ourselves in enterprise and commerciality, but we should be very careful about signing over the entire agricultural value stream to a small number of companies. That proposition is profoundly concerning. When I read the structure of the contracts, it looks like we are heading down the Monsanto path, and what happened with Monsanto in Canada could happen in Western Australia.

The Greens (WA) are very deeply concerned, and the reason we moved a motion disallowing this exemption order is that there is no adequate protective legal structure for farmers getting involved in GM technologies. It is absolutely true that the Greens are pro-choice on the way farmers manage their land, as long as it is in a responsible way, but the evidence is not there to support GM technologies. We know that once GM canola

becomes part of the whole agricultural industry, choices will evaporate and we will become beholden to a very narrow range of seed merchants and chemical merchants. We are not creating choice, we are shutting down choice.

The exemption order must be judged on three criteria: firstly, is it necessary? Is it possible to achieve the same ends without using GM technologies? The segregation trials could definitely be done without using GM technologies as the marker; there are other things we could use.

Secondly, is it safe? That is a very open question, and I do not think we are adopting the precautionary principle. Testing on 1 000 hectares spread right across the landscape is not a small-scale, well-controlled experiment; it is large-scale commercialisation by stealth.

Thirdly, is it fair? Is it necessary, safe and fair? The contracts tabled in this house by Hon Robyn McSweeney on behalf of the Minister for Agriculture and Food demonstrate that we are sentencing Western Australian farmers to predatory and ruthless contracting. That should not be allowed to happen. For those reasons, the Greens move to disallow this exemption order. With those remarks, I close the debate.

Question put and a division taken with the following result —

Ayes (14)

Hon Matt Benson-Lidholm	Hon Sue Ellery	Hon Paul Llewellyn	Hon Giz Watson
Hon Kim Chance	Hon Adele Farina	Hon Sheila Mills	Hon Ed Dermer *(Teller)*
Hon Kate Doust	Hon Anthony Fels	Hon Batong Pham	
Hon Shelley Eaton	Hon Jon Ford	Hon Sally Talbot	

Noes (13)

Hon Shelley Archer	Hon Wendy Duncan	Hon Barry House	Hon Bruce Donaldson *(Teller)*
Hon Ken Baston	Hon Brian Ellis	Hon Norman Moore	
Hon George Cash	Hon Donna Faragher	Hon Helen Morton	
Hon Peter Collier	Hon Nigel Hallett	Hon Simon O'Brien	

Pairs

Hon Ljiljanna Ravlich	Hon Robyn McSweeney
Hon Carolyn Burton	Hon Barbara Scott
Hon Ken Travers	Hon Ray Halligan

Question thus passed.