



19th April 2018

We submit that:

1) The Food Standards Australia New Zealand Act 1991 was written with intent to ensure all new breeding techniques for food are, and will be, regulated. The Act requires the protection of public health and safety (Section 18 (1) (a), Objectives of the Act) therefore all new breeding techniques must be regulated.

- The definitions for 'food produced using gene technology' and 'gene technology' cover food produced using all forms of New Breeding Techniques.
- In New Zealand, it is accepted that *in-vitro* genome manipulations that were introduced after 1996 should be considered genetic modification techniques (Hazardous Substances and New Organisms Act).
- All new breeding techniques should be acknowledged as GM.
- All new breeding techniques must undergo sufficiently rigorous pre-market assessments and follow up monitoring to ensure they can be, and are being, safely consumed over an entire lifetime.

2) This public consultation has broken the requirement that risk analysis be based on the best available scientific evidence, as required by Section 18 (2) of the FSANZ Act.

- This consultation is based on workshops and an Expert Advisory Panel containing scientists with conflicts of interest
- Austrian government agencies found there is insufficient knowledge of the risks of these techniques and all of them should be regulated. ^[1]
- The Norwegian Environment and Development Agencies concluded further biosafety research needs to be done before these techniques are commercialised. ^[2]
- The European Network of Scientists for Social and Environmental Responsibility state these techniques are recognized as GM in the medical field and should been seen as GM in agriculture and food. They "assert that the application of these techniques allows for outcomes that may be unprecedented in human experience:" ^[3]

- Non-regulation of these techniques would mean numerous Human Rights are being breached the: Right to Food ^[4], Right to a Healthy Environment ^[5], Right to Health ^[6] and Right to Freedom essential for scientific research. ^[7]
- Decisions on the regulation, or deregulation, of new GM breeding techniques pose permanent risks to the public and all life. No one will be able to avoid foods from these new GM techniques yet the consultation paper is impenetrable to most members of the general public. There has been no formal, balanced, general public information campaign on this consultation. There is no ability to discuss the ethical, moral, social, ecological, economic or other implications of de-regulating these techniques.

3) Response to the questions asked in the consultation paper.

- Responses to questions 3.1.1 to 3.3.

Reasoning for this submission:

1) All new breeding techniques must be regulated.

The definitions for 'food produced using gene technology' and 'gene technology' cover food produced using all forms of New Breeding Techniques.

The key definitions in the FSANZ Code are:

food produced using gene technology means a food which has been derived or developed from an organism which has been modified by gene technology.

Gene technology means recombinant DNA techniques that alter the heritable genetic material of living cells or organisms.

This therefore covers all of the techniques discussed as they are *in vitro* techniques that alter the genome namely:

- Outcome one: Genome contains new DNA
- Outcome two: Genome unchanged by gene technology
- Outcome three: Genome changed (genome editing)

FSANZ is required to regulate these techniques to ensure the protection of public health, the confidence of the consumer in our food supply, the provision of adequate information and the prevention of misleading and deceptive conduct, as laid out in the object and objectives of the FSANZ Act 1991. ^[8]

The Act was not written to cover the first generation of GM breeding and deregulate all subsequent ones, it was written to protect public health. All new breeding techniques should be acknowledged as GM. All new breeding techniques must undergo sufficiently rigorous pre-market assessments and follow up monitoring to ensure they can be, and are being, safely consumed over an entire lifetime.

In New Zealand, it is accepted that *in-vitro* genome manipulations that were introduced after 1996 should be considered genetic modification techniques (HNSO Act).

2) This public consultation has not been based on risk analysis using the best available scientific evidence, as required by Section 18 (2) of the FSANZ Act.

This consultation is based on workshops and an Expert Advisory Panel containing scientists with conflicts of interest.

Workshops 2012 and 2013.

FSANZ held two workshops in 2012 and 2013 to discuss the new techniques. (See Appendix 1 for details of membership and Appendices 2 and 3 for Hansard report of Senate Estimate questions on conflicts of interest in these workshops.) The workshops decided that some of these new techniques were not GM techniques. ^[9] If these views are accepted, the new GM techniques will escape regulation. It is not clear they will be regulated anywhere else, despite being entirely new and having no history of safe use.

Professor Peter Langridge was Chair of both the 2012 and 2013 workshops yet he has significant conflicts of interest. At the time of the workshops, he was the Chief Executive Officer of the Australian Centre for Plant Functional Genomics Pty Ltd (ACPFPG). He held this position from 2003 to 2014. ^[10] ACPFPG received funding of \$2.3 million^[11] a year from Du Pont, a multinational company that sells GM seeds and pesticides. The ACPFPG has 73 gene patents, either filed or granted. Several of these have Professor Peter Langridge named as the inventor. ^[12] Since June 2015 Professor Peter Langridge has been on the board of directors of Pastoral Genomics. This is a company using biotechnology aimed at creating grasses for pasture. Their strategy is to “Determine the underlying genetic causes for traits of importance and apply that knowledge using breeding techniques that do not require regulation.” ^[13]

In 2016 Senator Rachel Siewert questioned the scientific conflicts of interest in these workshops in Senate Estimates in 2016 (See Appendix 2). She named Professor Peter Langridge, Professor James Dale and others due to ‘hold(ing) patents or are inventors of specific gene technologies.’ Professor Dale created a GM banana, using genes from an existing high beta-carotene banana. The Gates Foundation has given \$15 million to fund this work. ^[14]

FSANZ, in response to previous questions on notice, said “FSANZ is not aware that any members of the expert panel have potential conflicts of interest such as a commercial interest or patents in any of the listed breeding techniques.” FSANZ’s CEO, Steve McCutcheon, was unable to give Senator Siewert a coherent account of how experts are chosen and how conflicts of interest are dealt with (Appendix 2). Subsequent questioning by Senator Janet Rice showed that FSANZ did know of these conflicts of interest. At least nine people on the panel were listed as inventors in a number of gene patents, thereby having conflicts of interest (See Appendix 3). Freedom of Information requests by Friends of the Earth reveal:

- Professor Peter Langridge alerted FSANZ to his conflicts of interest in an email. ^[15]
- FSANZ adopted the conclusions of the workshops in full and have decided to not regulate these techniques. In a letter to the Minister they state: “We have considered the key findings of the expert panel and concur with their conclusions regarding which foods should be regarded as GM food, and which should not.” “Foods derived using oligo-directed mutagenesis, zinc-finger nuclease technology used to introduce small, site-specific mutations involving one or a few nucleotides, and seed production technology are not captured by the standard and therefore do not require pre-market approval.” ^[16]

This consultation appears to be made to justify a decision taken by FSANZ that is unaccountable, lacking in scientific rigour and which has not been subject to Parliamentary scrutiny.

The Expert Advisory Group on this consultation has members with conflicts of interest.

FSANZ has established an Expert Advisory Group to "provide us with expert advice on issues relevant to the review, such as the current science relating to NBTs and potential food safety issues associated with the use of NBTs."^[17] At least four of the eight members have conflicts of interest:

- Dr. Allan Green – CSIRO Agriculture and Food, Australia. He has used one of the new GM techniques, gene silencing, to engineer a GM safflower crop ^[18]. Will he benefit if gene silencing is regarded as non-GM and therefore will escape any premarket testing, regulation and labelling? He was a member of both the 2012 and 2013 workshops.
- Professor John Knight – Otago University, New Zealand, produced a biased survey of tourists' views around GM. ^[19]
- Dr. Goetz Laible – AgResearch, New Zealand developed GM cows to produce bio-pharmaceuticals in their milk. The 2015 'GE Animals in New Zealand' report used AgResearch annual reports and Official Information Act requests. It found:

"These annual reports catalogue a sad and profoundly disturbing story of illness, reproductive failure and birth deformities that have consistently afflicted the genetic engineering (GE) trials.

Both the surrogate and transgenic cows suffer from chronic illness, reproductive losses, sudden unexplained deaths and severe deformities, relating to the foreign DNA inserted in the embryos used in the artificial insemination programme. Most of the transgenic cows are not able to reproduce past the first generation. The transgenic cows that have produced a second generation have borne sterile offspring.

After fifteen years of experimentation, from the many thousands of transgenic embryos the cows have carried, the average live birth rate has ranged from 0 - 7%.

Clinical trials on transgenic proteins have resulted in allergic reactions in subjects causing the trials to be terminated early. It is noteworthy that, the proteins that these animals have been modified to express are available on the market today, made from simpler non-transgenic processes or produced in genetically engineered bacteria in laboratory containment."^[20]

Dr. Mark Tizard – CSIRO Australian Animal Health Laboratory, Australia. He is a senior genome engineer working on CRISPR and gene drives in animals. He is affiliated with Genetic Biocontrol of Invasive Rodents (GBIRd). This partnership includes CSIRO, University of Adelaide, WA's Conservation Department and US affiliates. It is being funded by Defense Advanced Research Projects Agency (DARPA), a branch of the US military, to create gene drives in mice that will lead to their extinction. ^[21] There is an intention to test these GM gene drive extinction mice on islands off the coast of WA. Critics have said this will lead to an ecological catastrophe.

Scientific bodies and scientists are calling for these new techniques to be regulated as GM.

Austrian government agencies found there is insufficient knowledge of the risks of these techniques and all of them should be regulated. [22]

The Norwegian Environment and Development Agencies concluded further biosafety research needs to be done before these techniques are commercialised. [23]

The European Network of Scientists for Social and Environmental Responsibility (ENSSER) state that these techniques are recognized as GM in the medical field and should be recognized as GM in agriculture and food as well. [24] They "assert that the application of these techniques allows for outcomes that may be unprecedented in human experience: "They note that these techniques allow for sequential or multiple alterations of an organism producing an organism as different from the parental line as any 'produced with "conventional" transgenic modification techniques, or even more so.' "The general claim that genomes changed using NGMT are always identical to those that would arise without human intervention at the molecular level is unproven and undocumented scientifically." "Even if no foreign DNA remains in the end product, the intended genetic or epigenetic change in the organism's own DNA or RNA is detectable."

These techniques are new and not fully understood. "Unexpected patterns of mutation induced by genome editing NGMT's at both on-target and off-target sites have recently been described." "Off-target effects at a DNA, RNA or protein level can lead to unintended alterations in the biochemistry of the organism. This is the case even when no foreign DNA is present at the end of the NGMT manipulation. In the case of plant foods produced with these techniques, off-target effects can lead to unexpected toxins or allergens or altered or compromised nutritional value." Their detailed statement needs to be read in full to show the reason why all these new techniques are GM and why they need regulation.

Non-regulation of these techniques would breach numerous Human Rights.

Non-regulation of these techniques would mean numerous Human Rights are being breached the: Right to Food [4], Right to a Healthy Environment [5], Right to Health [6] and Right to Freedom essential for scientific research. [7]

Decisions on the regulation, or deregulation, of new GM breeding techniques pose permanent risks to the public and all life. No one will be able to avoid foods from these new GM techniques yet the consultation paper is impenetrable to most members of the general public. There has been no formal, balanced, general public information campaign on this consultation. There is no ability to discuss the ethical, moral, social, ecological, economic or other implications of de-regulating these techniques.

Response to questions:

3.1.1 Questions - Genome contains new DNA Do you agree, as a general principle, that food derived from organisms containing new pieces of DNA should be captured for pre-market safety assessment and approval?

Yes. All new genetic modification techniques should be assessed for safety before being allowed in our food. They should also be labelled for consumer choice. This includes gene editing, GM rootstock grafting, cisgenesis, intragenesis RNA interference and null segregants.

Should there be any exceptions to this general principle?

No.

3.1.2 Questions - Genome unchanged by gene technology Should food from null segregant organisms be excluded from pre-assessment and approval?

No.

If yes, should that exclusion be conditional on specific criteria and what should those criteria be? If no, what are your specific safety concerns for food derived from null segregants?

The assumption that there have been no unintended genetic changes needs to be tested before products derived from these techniques are allowed in our food. Hence the need for a full safety assessment.

3.1.3 Questions - Genome changed but no new DNA Are foods from genome edited organisms likely to be the same in terms of risk to foods derived using chemical or radiation mutagenesis? If no, how are they different?

No. While chemical and radiation mutagenesis can increase the rate of random DNA point mutations, gene editing techniques cause DNA double strand breaks and can be used sequentially to make dramatic differences to DNA. They are also prone to additional unexpected mutations. They therefore carry a greater risk and warrant pre-market safety assessment and approval.

3.2 Questions - Other techniques. Are you aware of other techniques not currently addressed by this paper which have the potential to be used in the future for the development of food products?

RNA interference which can result in DNA methylation and gene silencing and has the potential to be used in the future for the development of food products. It poses unique risks such as gene silencing in non-target species that need to be assessed before it is allowed in food. Products produced using RNA interference should also be labelled as genetically modified for consumer choice.

Should food derived from other techniques, such as DNA methylation, be subject to pre-market safety assessment and approval?

Yes. DNA methylation is quite clearly a genetic modification technique and can result in heritable genetic changes. It therefore needs to be assessed for safety before being used in our food.

3.3 Questions - Regulatory Trigger Do you think a process-based definition is appropriate as a trigger for pre-market approval in the case of NBTs?

Yes. Genetically modified organisms pose unique risks and a process based trigger is appropriate for assessing these risks.

If yes, how could a process-based approach be applied to NBTs?

All genetic modification techniques should be assessed for safety and these new GM techniques are quite clearly genetic modification techniques under the Gene Technology Act - which until recently Standard 1.5.2 referred to. The Gene Technology Act 2000 defines gene technology as "any technique for the modification of genes or other genetic material". This clearly includes all new GM techniques including RNA interference.

Are there any aspects of the current definitions that should be retained or remain applicable?

Standard 1.5.2 defines "food produced using gene technology" as "a food which has been derived or developed from an organism which has been modified by gene technology." It states that "gene technology means recombinant DNA techniques that alter the heritable genetic material of living cells or organisms." This definition clearly includes gene editing techniques. The intent of the Gene Technology Act and Standard 1.5.2 was to capture all new GM techniques. Since RNA interference can also "alter the heritable genetic material of living cells or organisms" through DNA methylation the definition of gene technology in Standard 1.5.2 would be better changed to "gene technology means in vitro techniques that alter the heritable genetic material of living cells or organisms" for clarity.

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References

- ^[1] Eckerstorfer, M., Miklau, M. & Gaugitsch, H. (2014) New plant breeding techniques: risks associated with their application, Austrian Environment Agency, http://www.ekah.admin.ch/fileadmin/ekah-dateien/New_Plant_Breeding_Techniques_UBA_Vienna_2014_2.pdf
- ^[2] Friends of the Earth, GM 2.0 Fact Sheet, 2nd May 2016. <http://emergingtech.foe.org.au/wp-content/uploads/2016/05/GM-2.0-Fact-Sheet.pdf>
- ^[3] ENSSER Statement on New Genetic Modification Techniques 27th September 2017 <https://ensser.org/publications/ngmt-statement/>
- ^[4] Article 11 of the International Covenant on Economic, Social and Cultural Rights, in Articles 24.2(c) and (e) and 27.3 of the Convention on the Rights of the Child, and in Articles 25(f) and 28.1 of the Convention on the Elimination of All Forms of Discrimination against Women
- ^[5] (Resolution 25/21 of the Human Rights Council, of 15 April 2014), taking into account the responsibilities imposed on corporations by the Guiding Principles on Business and Human Rights, as endorsed by the Human Rights Council in Resolution 17/4 of 16 June 2011
- ^[6] Article 12 of the International Covenant on Economic, Social and Cultural Rights, or the right of child to the enjoyment of the highest attainable standard of health, as recognized by Article 24 of the Convention on the Rights of the Child.
- ^[7] Article 15(3) of the International Covenant on Economic, Social and Cultural Rights, as well as the freedoms of thought and expression guaranteed in Article 19 of the International Covenant on Civil and Political Rights.
- ^[8] <https://www.legislation.gov.au/Details/C2016C01118>
- FSANZ Act 1991

Section 3 Object of Act

The object of this Act is to ensure a high standard of public health protection throughout Australia and New Zealand by means of the establishment and operation of a joint body to be known as Food Standards Australia New Zealand to achieve the following goals:

- (a) a high degree of consumer confidence in the quality and safety of food produced, processed, sold or exported from Australia and New Zealand

Section 18 Objectives of the Authority in developing or reviewing food regulatory measures and variations of food regulatory measures

(1) The objectives (in descending priority order) of the Authority in developing or reviewing food regulatory measures and variations of food regulatory measures are:

- (a) the protection of public health and safety; and
 - (b) the provision of adequate information relating to food to enable consumers to make informed choices; and
 - (c) the prevention of misleading or deceptive conduct.
- ^[9] FSANZ, New Plant Breeding Techniques, Report of a workshop hosted by Food Standards Australia New Zealand, August 2013
<http://www.foodstandards.gov.au/consumer/gmfood/Pages/New-plant-breeding-techniques-in-the-spotlight.aspx>
 - ^[10] Australian Centre for Plant Functional Genomics, Media Release Adelaide “ACPFPG announces acting CEOs to replace outgoing Professor” 26th May 2014.
<http://acpfg.com.au/uploads/documents/news/Media%20Release%20Appointment%20Acting%20CEOs%20final.pdf>
 - ^[11] Ground Cover issue 59 “\$2.3 m research deal”. <https://grdc.com.au/resources-and-publications/groundcover/ground-cover-issue-59/23m-research-deal>
 - ^[12] Commonwealth of Australia, Official Committee Hansard, Senate, Community Affairs Legislation Committee, Estimates, Wednesday 16th March 2016, Canberra. See Appendix 2 for transcript.
 - ^[13] Pastoral Genomics, Outcomes. <http://www.pastoralgenomics.com/outcomes/>
 - ^[14] The Ecologist, Adam Breasley and Oliver Tickell, 24th November 2014. “Why is Bill Gates backing GMO red banana biopiracy?” <https://theecologist.org/2014/nov/24/why-bill-gates-backing-gmo-red-banana-biopiracy>
 - ^[15] FOI document available at: <http://emergingtech.foe.org.au/wp-content/uploads/2016/10/REDACTED-Documents-65.pdf>
 - ^[16] FOI available at: http://emergingtech.foe.org.au/wp-content/uploads/2016/02/Document-18-Min-Sub-N13000738-New-Plant-Breeding-Techniques-Workshop-Report-SIGNED_Redacted.pdf
 - ^[17] FSANZ. Food derived using new breeding techniques - review February 2018.
<http://www.foodstandards.gov.au/consumer/gmfood/Pages/Review-of-new-breeding-technologies.aspx>
 - ^[18] Australian Unlimited. A minor crop with huge potential, Georgie Mills, 6th June 2012.
<https://www.australiaunlimited.com/science/a-minor-crop-with-huge-potential>
 - ^[19] GE-Free New Zealand, ‘Otago University Genetic Lecture ‘Outdated’ and Likely to Mislead.’ 26th August 2012. <http://press.gefree.org.nz/press/20120826.htm>
 - ^[20] GE Animals in New Zealand: Genetically Engineered Animals, the first fifteen years. Claire Bleakley 2015 <http://www.gefree.org.nz/assets/pdf/GE-Animals-in-New-Zealand.pdf>
 - ^[21] Could WA be the genetic testing ground for synthetic mice to end all mice? Kath Wilson, Sydney Morning Herald, Updated 24th Feb

2018 <https://www.smh.com.au/environment/conservation/could-wa-be-the-genetic-testing-ground-for-synthetic-mice-to-end-mice-20180221-h0wev9.htm>

- ^[22] Eckerstorfer, M., Miklau, M. & Gaugitsch, H. (2014) New plant breeding techniques: risks associated with their application, Austrian Environment Agency, http://www.ekah.admin.ch/fileadmin/ekah-dateien/New_Plant_Breeding_Techniques_UBA_Vienna_2014_2.pdf
- ^[23] Friends of the Earth, GM 2.0 Fact Sheet, 2nd May 2016.
<http://emergingtech.foe.org.au/wp-content/uploads/2016/05/GM-2.0-Fact-Sheet.pdf>
- ^[24] ENSSER Statement on New Genetic Modification Techniques 27th September 2017
<https://ensser.org/publications/ngmt-statement/>

Appendix 1

Below is a list of the Membership of the Workshops in 2012 and 2013.

Appendix 1

Membership of the Workshops in 2012 and 2013

"New Plant Breeding Techniques, Report of a Workshop hosted by Food Standards Australia New Zealand, August 2013." [1]

Name and Position

- Professor Bernard Carroll - School of Chemistry & Molecular Biosciences, University of Queensland
- Dr Rob Defeyter - Intellectual Property Manager, CSIRO Plant Industry
- Dr Allan Green - Deputy Chief, CSIRO Plant Industry
- Dr Roger Hellens^[1] - Science Group Leader, Genomics, Plant and Food Research NZ
- Professor Peter Langridge - Director and CEO, Australian Centre for Plant Functional Genomics, University of Adelaide
- Dr Bill Taylor^[2] - Business Development Manager, CSIRO Plant Industry
- Professor Peter Waterhouse - School of Molecular Bioscience, University of Sydney

Other workshop participants were staff from FSANZ, the Office of the Gene Technology Regulator, the Australian Government Department of Agriculture, and the New Zealand Ministry for Primary Industries. The workshop was chaired by Professor Peter Langridge, a FSANZ Scientific Fellow.

New Plant Breeding Techniques Report of a Workshop hosted by Food Standards Australia New Zealand, 2012.^[2]

APPENDIX 1: EXPERT PANEL

Chair: Professor Peter Langridge (Director and CEO, Australian Centre for Plant Functional Genomics, University of Adelaide)

Panel Members:

- Dr Paul Brent (Chief Scientist, Food Standards Australia New Zealand)
- Distinguished Professor James Dale (Director, Centre for Tropical Crops and Biocommodities, Queensland University of Technology)
- Dr Andrew Granger (General Manager, Science, Plant and Food Research NZ)

- Dr Allan Green (Deputy Chief, CSIRO Plant Industry)
- Dr Roger Hellens (Science Group Leader, Genomics, Plant and Food Research NZ)
- Dr Lisa Kelly (Principal Scientist, Food Standards Australia New Zealand)

Present also were:

Dr Andrew Bartholomaeus,

Dr Mark FitzRoy, Ms Lynda Graf, Dr Janet Gorst, Dr Utz Mueller and Dr Chris Schyvens from Food Standards Australia New Zealand, Dr Michael Dornbusch, Dr Heidi Mitchell, Dr Fiona Murray, Dr Will Tucker and Dr Brian Weir from the Office of the Gene Technology Regulator and Dr Kirsty Allen from the New Zealand Environmental Protection Authority.

References

- ^[1] FSANZ, New Plant Breeding Techniques, Report of a workshop hosted by Food Standards Australia New Zealand, August 2013
<http://www.foodstandards.gov.au/consumer/gmfood/Pages/New-plant-breeding-techniques-in-the-spotlight.aspx>
- ^[2] FSANZ, New Plant Breeding Techniques, Report of a Workshop Hosted by Food Standards Australia New Zealand, August 2013
<http://www.foodstandards.gov.au/publications/Documents/New%20Plant%20Breeding%20Techniques%20Workshop%20Report.pdf>

Appendix 2

Hansard, Senate Estimates, 16th March 2016 and 1st March 2017.

Commonwealth of Australia, Official Committee Hansard, Senate, Community Affairs Legislation Committee, Estimates, Wednesday 16th March 2016, Canberra.

Senator SIEWERT: I have a series of questions into key areas. Some go to questions that FSANZ answered in response to questions on notice in July last year. I am specifically referring to this comment that was made: FSANZ is not aware that any members of the expert panel have potential conflicts of interest such as a commercial interest or patents in any of the listed breeding techniques. This is about the expert panel that was convened to look at whether new GM techniques should be considered and regulated as genetic engineering.....

Senator SIEWERT: Thank you. The chair of the panel was Professor Peter Langridge, who was then a director and the CEO of the Australian Centre for Plant Functional Genomics and is a Fellow advising FSANZ on scientific matters. Am I correct in my understanding?

Mr McCutcheon: That is correct.

Senator SIEWERT: I understand that the Australian Centre for Plant Functional Genomics has 73 gene technology related patents either filed or granted.

Mr McCutcheon: I cannot confirm or deny that. It is a matter for the centre.

Senator SIEWERT: Sorry?

Mr McCutcheon: I cannot confirm or deny that information you provided. That is really a matter for the centre that Professor Langridge is part of.

Senator SIEWERT: With all due respect, given that he was the chair of this panel, I would have thought it was an issue for FSANZ to know.

.....

Senator SIEWERT: I also understand Professor James Dale was a member of the panel. Professor Dale is the director of the Centre for Tropical Crops and Biocommodities.

Mr McCutcheon: I would have to check that. I do not have a list of the members of the committee nor a memory of them.

Senator SIEWERT: Okay—if you could check whether I am correct. The Queensland University of Technology specialises in genetic modification of a number of tropical crops, such as sugarcane, bananas and tobacco, and Professor Dale is listed as an inventor with nine granted patents or patent applications. Were you aware of that information?

Mr McCutcheon: Again, I will have to take that on notice. But, again, he sounds like an expert in his field and that would be the reason why we asked him to join our committee to provide the organisation with advice.

Senator SIEWERT: There are a number of other people that are on the panel who also hold patents or are inventors of specific gene technology. I am presuming that you will tell me the same thing, which is that you do not know about these. So instead of taking up the

committee's time, because I know we are going to run out of time, I will put each of those on notice and ask, for each of them: did you know or do you know that they hold patents in each of these areas?

Mr McCutcheon: Yes, we are happy to take those on notice.

Appendix 3

**Proof Committee Hansard, Senate Community Affairs Legislation Committee,
Estimates, Wednesday 1st March 2017, p123-124.**

Senator RICE: But you are basically saying they did potentially have conflicts of interest, however, because they were involved as scientists in the field.

Mr May: If being active in the scientific work in that area is a conflict, that is possibly the case. If you are talking about commercial conflicts or what we would call material conflicts of interest, we are satisfied that they were weeded out through the process of declaration of conflicts of interest.

Senator RICE: That does not seem to be consistent with the statement that you made to estimates in May last year that FSANZ is not aware that any members of the expert panel have potential conflicts of interest, such as a commercial interest or patents in any of the listed breeding techniques. We recently had a document released under FOI where the chair of the panel said, 'I'm happy to chair the meeting, if you don't feel my potential conflict of interest is a problem.' I have a list of nine people who were on the panel, all of whom were listed as inventors in a number of gene technology patents, so clearly they had potential conflicts of interest.

Mr May: It is acknowledged that they all had potential conflicts of interest,"