

From: Linda Grammer [mailto:linda.grammer@gmail.com]

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To: NBT Consult Submissions <NBTConsultSubmissions@foodstandards.gov.au>

Cc: standards management <standards.management@foodstandards.gov.au>; FSANZ General email <slo@foodstandards.gov.au>; Marty Robinson <organics@value.net.nz>

Subject: submission by GE Free Northland (in New Zealand) on new Breeding Techniques

Submission to Food Standards Australia NZ (FSANZ)

Submission on New Breeding Techniques

Submission by: GE Free Tai Tokerau (Northland)

Contact details:

Secretary
GE Free Tai Tokerau
PO Box 1439
Whangarei 0148
Te Tai Tokerau
NEW ZEALAND

email: organics@value.net.nz

tel 09 407 8650

Thank you for the opportunity to make a submission.

Who we are:

GE Free Tai Tokerau (in food and environment) with about 400 members including Iwi members, environmental groups and many primary producers. We work constructively with all Northland Territorial Authorities, Iwi authorities and other organisations to maintain Northland's GE free status and protect the right of New Zealanders to eat GE free food. We strongly promote the rights of our members and all NZ consumers to avoid purchasing or consuming GE food. In NZ, we have a partial GE labelling regime (unacceptable exemptions to GE labelling include imported GE oils, sweeteners, food additives and some imported animal feed). We support consumer "right to know" (all GE food ingredients and food derived from new breeding techniques including but not limited to CRISPR must be regulated, assessed by independent scientists (not those indentured to the industry) and clearly labelled. We note that scientists continue to argue on a very high technical levels as to whether or not GE food is even safe to eat. Therefore, we and our members support consumer "right to know", full strict regulation, and full labelling so people can avoid food derived from GE crops or the new genetic techniques)

We also strongly support the initiatives of District and Regional Councils in NZ (and Australia) to include a precautionary approach and prohibition provisions, policies, and objectives regarding outdoor use of GMOs in their local plans. We work closely with Tai Tokerau tangata whenua, Northland Conservation Board, the Auckland GE Free Coalition, and other organisations/ community groups and also support (with technical information) local ratepayers.

We represent and support public support in Northland, New Zealand for regulation and full and comprehensive labelling of new genetic techniques/ approaches to genetic manipulation in order to allow people in NZ the choice to avoid them and to protect our food sovereignty and the public health in NZ.

We strongly support the submissions lodged by the Auckland GE Free Coalition and GE FREE NZ.

In our view, there is an obligation by FSANZ/ a social contract in place that requires regulation of the three new techniques being considered in this consultation.

The international concerns of civil society and independent scientists around emerging genetic techniques has resulted in the demand for an international system of regulation, testing and labelling.

Although countries like the US have followed industry lobbying and not required labels on novel foods the consumer demand has driven a huge non-GMO sector in the US.

The community-FSANZ- industry nexus is the basis for the industry 'license to operate' – regulation, testing, labelling, monitoring and capacity for traceability/ emergency recall.

Deregulating the three new techniques would fundamentally destroy public confidence and trust.

There is an unacceptable risk in FSANZ's flawed approach because of conflicts of interest and bias within the advisory panel used by FSANZ.

It is concerning that the panel may have been influenced by a view of consumers that is based on potentially misleading market research experiments. This includes creating models of consumer acceptance of novel foods based on misrepresenting benefits to consumers and which can be considered 'confusion marketing' or even unethical.

FSANZ should not assume safety of any products from CRISPR and the other new genetic techniques. There is a significant potential for unintended results and the integrity of the food supply requires regulation, omic profiling, labelling, and oversight.

It is wrong to allow trade relations to influence the fundamental unwinding of food safety system that a failure to regulate the new techniques would be.

The US appears to not be regulating crispr. However this puts at risk food safety and monitoring and should not be followed, but a policy change urged by other governments.

The risk to trade is much greater from a loss of global consumer confidence by FSANZ not regulating. A major food safety event is a high risk to global trade and made more likely if safety of any of the techniques is just assumed but not tested for in each case.

To answer the questions FSANZ:

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 no, what are your specific safety concerns for food derived from null segregants -

Our concern:

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?

NO.

If no, how are they different?

- 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.

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

Yes.

DNA methylation is 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 Hazardous Substances and New Organisms (HSNO) Act 1996 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.

SUMMARY

GE FREE NORTHLAND (NZ) ask for regulation of all the following: gene editing, CRISPR, GM rootstock grafting, cisgenesis, intragenesis RNA interference and null segregants.

This is necessary because the research simply hasn't been done to show there are no unintended consequences and that these foods or techniques are safe for commercial use.

The public expectation underpinning FSANZ's legitimacy is a social contract.

These techniques are required to be regulated under the Gene Technology Act 2000. This defines gene technology as "any technique for the modification of genes or other genetic material".

It clearly includes all new GM techniques including RNA interference.

Please keep us informed.

We would like to be heard at any community consultation or public hearings are held either here in NZ or in Australia (via SKYPE or conference call).