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Food Standards Australia New Zealand
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Via email: NBTConsultSubmissions@foodstandards.gov.au

Submission to the Consultation Paper: Food derived using New Breeding Techniques

Grain Growers Limited (GrainGrowers) welcomes the opportunity to provide comment on the Food Standards Australia New Zealand (FSANZ) Consultation paper on food derived using New Breeding Techniques (NBTs) relative to definitions in the Australia New Zealand Food Standards Code for 'food produced using gene technology' and 'gene technology'.

GrainGrowers is an independent and technically resourced, grain farmer representative organisation with more than 17,000 members across Australia. GrainGrowers' goal is a more efficient, sustainable and profitable grain production sector that benefits all Australia grain farmers and the wider grains industry. The ability to access gene technology is essential for continued development and growth of the Australian grains industry. Access to gene technology is necessary for research, development and production purposes and it is this technology that enables the grains industry to remain internationally competitive.

In our submissions to the 2016 Technical Review of the Gene Technology Regulations (Office of the Gene Technology Regulator), the 2017 Review of the National Gene Technology Regulatory Scheme (Department of Health) and the associated proposed amendments to the Regulations, GrainGrowers has advocated that organisms produced by NBTs should be excluded from being regulated as GMOs if the genetic changes they carry are similar to, or indistinguishable from the products of conventional breeding.

Therefore, GrainGrowers disagrees that food derived from organisms containing new pieces of DNA should be captured for pre-market safety assessment and approval. The reasons behind our position are:

- Varieties bred using NBTs could have been developed through conventional breeding methods and therefore do not pose different risks to the environment or human health when the resultant product is similar to, or indistinguishable from, those that could have been developed using conventional breeding methods.
- Techniques such as mutagenesis that are based on cellular DNA repair (for example site directed nucleases and oligo-directed mutagenesis) are unlikely to pose risks that are different to naturally mutated organisms. These techniques have been used in plants for targeted mutagenesis of endogenous genes, leading to agronomically useful traits such as herbicide tolerance, enhanced nutrition, and resistance to biotic and abiotic stresses.
- Fewer off-target results are likely to occur through NBTs than may result from chemical and radiation mutagenesis (which can result in random deletions and rearrangement of large DNA sequences) therefore varieties developed through different breeding techniques should not be regulated differently if the resultant product is similar to, or indistinguishable from, varieties that could have been produced using plants developed through earlier breeding methods.

Food derived from null segregants should also be excluded from pre-assessment and approval as it would not have inherited traits from the use of gene technology, and are therefore not GMOs. Such organisms have lost the transgenic event due to normal segregation following conventional breeding with an organism that did not contain the transgenic event. Therefore, food derived from these organisms does not contain any inherited traits from the use of gene technology and should not be subjected to pre-market safety assessment and approval as a GM food.

Food derived from other techniques, such as DNA methylation and other epigenetics, should not be subject to pre-market safety assessment and approval. This is because the techniques can change the expression of the genome, but do not change the gene sequence itself.

GrainGrowers believes that any associated legislative amendments to the Code must not impose regulatory hurdles or place unwarranted barriers to gene technology research, development and adoption into farm production systems. A national framework is essential to ensure a level playing field across Australia that supports the use of technology within a risk-based framework. It is therefore important that clarity is provided around whether organisms developed using a range of new technologies are regulated in a manner commensurate with the risks they pose rather than the technique used to produce them.

To summarise:

- NBTs should be excluded from regulation if the outcomes they produce are similar to, or indistinguishable from the products of conventional breeding;
- Food derived from null segregates should be excluded from pre-market safety assessment and approval;
- Chemical or radiation mutagenesis can result in more off-target results than what may occur from the use of NBTs, however varieties produced using different breeding techniques should not be regulated differently if the resultant product is similar to, or indistinguishable from, food that could have been produced using plants developed through earlier breeding methods;
- Food derived from other techniques, such as DNA methylation and other epigenetics, should not be subject to pre-market safety assessment and approval;
- Gene technology research, development and adoption should not be inhibited by regulatory hurdles or legislative barriers, and
- An appropriate risk-based framework should support the use of NBTs.

GrainGrowers appreciates the opportunity to provide this submission and is willing to participate in future consultation. Should we be able to provide further assistance or there are enquiries relating to our submission, please contact me on 02 9286 2000 or by email (fiona.mccredie@graingrowers.com.au).

Yours Sincerely



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