# Assessing the health risks of GM foods

June 26 2014, by Ashley Ng

Genetically modified (GM) foods require strict assessment before they can be considered safe for human consumption.

In Australia, GM foods are regulated under Standards 1.5.2 – Food produced using Gene Technology, which covers the sale and use of food and the labelling of food produced using gene technology.

Its schedule lists the permitted foods produced using gene technology that can be sold in Australia and New Zealand.

Foods produced using gene technology are prohibited from sale in Australia and New Zealand unless they have undergone strenuous pre-market assessment and been approved by Food Standards Australia New Zealand (FSANZ).

FSANZ identifies new or altered hazards associated with the food as a result of the genetic modification. It assesses whether there is risk associated with any identified hazards under the intended conditions of use, and determine if any new conditions are needed to enable safe use of the food.

## GM food approval in Australia

The only GM foods which have been approved for sale in Australia after a case-by-case analysis are specific GM varieties of canola, corn, cotton, lucerne, potato, rice, soybean and sugarbeet.

It also assesses any altered composition or nutritional value introduced by genetic modification to the organism.

While FSANZ doesn't conduct its own laboratory tests, its assessments are based on safety data provided by the applicant generated according to quality assurance guidelines on internationally accepted protocols consistent with Good Laboratory Practice:

- Case-by-case consideration of GM foods is necessary because the key issues requiring consideration in a safety assessment will often depend on the type of food being evaluated and the nature of the genetic modification
- FSANZ assesses **intended** (related to the particular genetic modification made) and **unintended** effects (such as toxicity to the edible part of the plant, or unexpected allergenicity) of the GM

- Comparisons with conventional foods having an acceptable standard of safety.

FSANZ also uses other sources such as scientific literature, including evaluation of animal feeding studies where available, independent scientists, other regulatory bodies and importantly, the general community who can tender written submissions for currently open assessments.

These case-by-case safety assessments are publicly accessible.

FSANZ is aligned with the principles established by the Food and Agriculture Organisation and the World Health Organisation Food Standards Program (FAOWHOFSP) and the Codex Alimentarius committee.

GM foods undergo more rigorous pre-market assessment than any other food sold in Australia. As new flood and drought-resistant GM crops and organisms become available, it can be expected that the number of approval applications will increase.

From the aspect of food safety assessment, a stringent process is currently in place that includes invitation for public comment.

As this process can reject GM food applications or impose conditions on their use in the interests of public health, the safety, nutritional and societal impacts of any new GM foods will continue to be assessed before these GM products should appear, appropriately labelled, on our shelves.

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