



8 July 2022

Project Manager
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NEW ZEALAND

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Dear Sir/Madam

Attached are the comments that the New Zealand Food & Grocery Council wishes to present on the *Call for submissions – Application A1239 Food derived from EPA and DHA producing and herbicide-tolerant canola line LBFLFK*.

Yours sincerely

Katherine Rich
Chief Executive



**Call for submissions – Application A1239
Food derived from EPA and DHA
producing and herbicide-tolerant canola
line LBFLFK**

**Submission by the New Zealand Food & Grocery
Council**

8 July 2022

NEW ZEALAND FOOD & GROCERY COUNCIL

1. The New Zealand Food & Grocery Council (“**NZFGC**”) welcomes the opportunity to comment on the *Call for submissions – Application A1239 Food derived from EPA and DHA producing and herbicide-tolerant canola line LBFLFK*.
2. NZFGC represents the major manufacturers and suppliers of food, beverage and grocery products in New Zealand. This sector generates over \$40 billion in the New Zealand domestic retail food, beverage and grocery products market, and over \$34 billion in export revenue from exports to 195 countries – representing 65% of total good and services exports. Food and beverage manufacturing is the largest manufacturing sector in New Zealand, representing 45% of total manufacturing income. Our members directly or indirectly employ more than 493,000 people – one in five of the workforce.

APPLICATION

3. BASF Australia Ltd has applied to amend the Australia New Zealand Food Standards Code (the “**Food Standards Code**”) to permit the sale and use of food derived from a new food produced using gene technology: canola line LBFLFK. This canola line has been genetically modified to produce increased levels of the omega-3 (or n-3) long-chain polyunsaturated fatty acids (“**LC-PUFAs**”) (eicosapentaenoic acid (“**EPA**”) and docosahexaenoic acid (“**DHA**”) in the seed, and for tolerance to imidazolinone herbicides. The canola line also includes docosapentaenoic acid (DPA), the metabolic intermediate between EPA and DHA. Notably, BASF is not intending the oil from canola line LBFLFK be used in infant formula products.
4. The prospect is that food derived from canola line LBFLFK may be imported in food products by Australia or New Zealand through the inclusion in such products of canola oil, meal and protein isolate or cooked whole seeds in bread products.

COMMENTS

5. The safety assessment of canola line LBFLFK conducted by Food Standards Australia New Zealand (“**FSANZ**”) covered a characterisation of the transferred gene material, its origin, function and stability in the canola genome, characterisation of novel nucleic acids and protein in the whole food, detailed compositional analyses, evaluation of intended and unintended changes and assessment of the potential for any newly expressed protein to be either allergenic or toxic in humans.
6. Tolerance to imidazolinone herbicides is achieved through expression of a modified form of the enzyme acetohydroxy acid synthase (AHAS), encoded by a modified *csr1-2* gene from the plant *Arabidopsis thaliana*. The AHAS protein has previously been assessed by
7. No potential public health and safety concerns were identified by the FSANZ safety assessment of canola line LBFLFK.
8. The nutrition risk assessment conducted by FSANZ included a hazard assessment and a dietary intake assessment. This covered relevant upper limits of consumption, including the potential intake of the relevant nutrients including EHA and DHA.
9. The n-3 LC-PUFAs have been associated with beneficial effects, particularly on cardiovascular health, however adverse effects have been reported in some studies. The upper limits for consumption from all sources of LC-PUFAs has been regularly researched and tested and FSANZ reports that high intakes of them over long durations (over 7 years)

have not been associated with clear adverse effects. FSANZ concluded that no nutritional concerns had been identified.

10. In summary, no potential public health and safety or nutritional concerns were identified. Based on the data provided and other information, food derived from canola line LBFLFK is considered to be as safe for human consumption as food derived from conventional non-GM canola cultivars.
11. In terms of risk management, the labelling for food derived from canola line LBFLFK as genetically modified would need to comply with Standard 1.5.2—4 of the Food Standards Code noting the exceptions to labelling include for oil which has been highly refined and, through this process, has had the novel DNA or novel protein removed.
12. NZFGC notes that canola line LBFLFK has been approved for use by Health Canada (April 2021) and the US FDA (April 2022) and submitted for approval to China, the EU, Indonesia, Japan, Mexico, the Republic of Korea and possibly Argentina. It had been reviewed in 2018 in the *Plant Biotechnology Journal*¹ where the authors concluded that

“Two new plant-based sources of omega-3 LC-PUFA are expected to soon have full regulatory approval in the US, presenting a sustainable, terrestrial source of omega-3 fish oils. Given the importance of omega-3 LC-PUFA in maintaining optimal health in livestock, farmed fish and in human consumers, de novo sources of these fatty acids represent both a wide-reaching advance and a validation of the ability of plant biotechnology to deliver benefit to the consumer.”
13. NZFGC is unsure if FSANZ liaised with Health Canada on this application especially on their respective risk assessments but it would seem to have been an area appropriate for collaboration.
14. In terms of benefits manufacturers would have increased choice in raw materials and consumers could also benefit from a greater choice of sources of omega-3 fatty acids.
15. On the basis of the FSANZ assessment and NZFGC’s review of the drafting for the amendment to the Food Standards Code, we support the proposed amendments proceeding.

¹ Napier JA, Olsen RE, Tocher DR. “Update on GM canola crops as novel sources of omega-3 fish oils”. Letter in *Plant Biotechnology Journal* (2019) 17, pp. 703–705 doi: 10.1111/pbi.13045. <https://core.ac.uk/download/pdf/199407572.pdf>