



AUSTRALIAN
**FOOD &
GROCERY**
COUNCIL

AFGC SUBMISSION

FOOD STANDARDS AUSTRALIA NEW ZEALAND

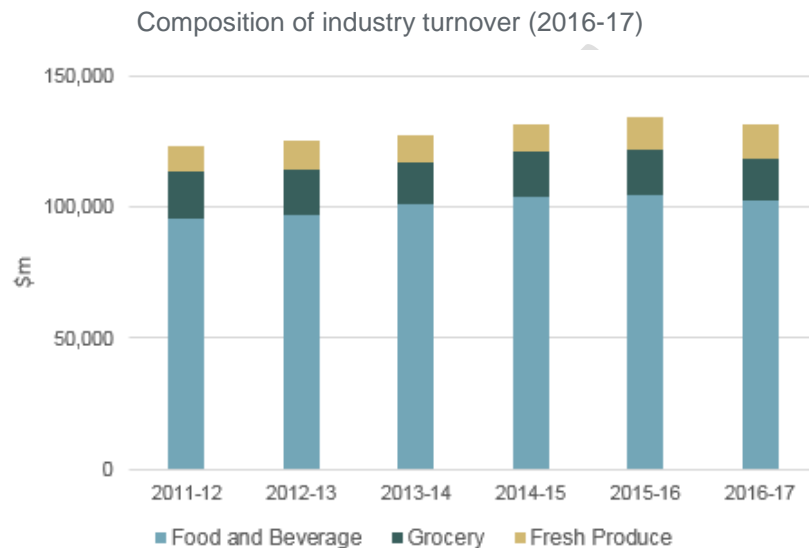
A1186 - Soy leghemoglobin in meat analogue products

Sustaining Australia

PREFACE

The Australian Food and Grocery Council (AFGC) is the leading national organisation representing Australia's food, drink and grocery manufacturing industry.

There are over 180 member companies, subsidiaries and associates who together comprise 80 per cent of the gross dollar value of the processed food, beverage and grocery products sectors.



With an annual turnover in the 2016-17 financial year of \$131.3 billion, Australia's food and grocery manufacturing industry makes a substantial contribution to the Australian economy and is vital to the nation's future prosperity.

The diverse and sustainable industry is made up of over 36,000 businesses and accounts for over \$72.5 billion of the nation's international trade. These businesses range from some of the largest globally significant multinational companies to small and medium enterprises. Industry made \$2.9 billion in capital investment in 2016-17 on research and development.

Food, beverage and grocery manufacturing together forms Australia's largest manufacturing sector, representing 36 per cent of total manufacturing turnover in Australia.

The food and grocery manufacturing sector employs more than 324,450 Australians, representing almost 40 per cent of total manufacturing employment in Australia.

Many food manufacturing plants are located outside the metropolitan regions. The industry makes a large contribution to rural and regional Australia economies, with almost 42 per cent of the total persons employed being in rural and regional Australia.

It is essential to the economic and social development of Australia, and particularly rural and regional Australia, that the magnitude, significance and contribution of this industry is recognised and factored into the Government's economic, industrial and trade policies.

OVERVIEW

The Australian Food and Grocery Council (AFGC) welcomes this opportunity to comment on Food Standards Australia New Zealand's (FSANZ) call for submissions on *Application A1186 Soy leghemoglobin in meat analogue products*.

The AFGC has reviewed both the Application and FSANZ's risk assessment. Both documents provide comprehensive, detailed and convincing scientific evidence that the application to amend the Australia New Zealand Food Standards Code (the Code) to permit the use of soy leghemoglobin in the form of LegH Prep in meat analogue products (including the Impossible™ Burger, meatballs, sausages, and as fillings in buns and dumplings) presents no consumer foods safety or health implications. Consequently the AFGC supports *Application A1186 Soy leghemoglobin in meat analogue products*.

COMMENTS

SOY LEGHEMOGLOBIN IN MEAT ANALOGUE PRODUCTS MEETING A CONSUMER NEED

Meat analogue products containing soy leghemoglobin derived from *P. pastoris* will provide consumers with access to more choices for nutritious and flavourful plant-based alternative protein products. This application will assist consumers to construct healthy diets aligned to the Australia and New Zealand Dietary Guidelines with a meat substitute that potentially has superior attributes if this product is approved.

The applicant is targeting their products at 'flexitarians', who they claim (on page 62 of the application) are looking for a "more ethical and environmentally friendly alternative meat products without compromising on attributes such as the taste and texture". This is likely to be a premium product so it is unlikely that it will become confused or substituted for meat in the short to medium term.

Additionally, a recent U.S. consumer study¹, of 1, 000 participants, indicated that nearly half (49%) of participants reported having tried newer meatless products with the top reason for doing so being "liking to try new foods" (41%).

Labelling of meat analogue products containing soy leghemoglobin that is sold packaged (e.g. frozen burger patties) would enable consumers to make an informed choice to purchase these products.

¹ International Food Information Council. A consumer survey on plant alternatives to animal meat. 2019. <https://conscienhealth.org/2020/02/do-consumers-care-about-whats-in-fake-meat/>

ALIGNMENT WITH FOFR PRIORITIES

The Ministerial Forum on Food Regulation's (the Forum) *Policy Guideline for the Fortification of food with Vitamins and Minerals* relies on the need for vitamins and minerals to be bioavailable to potentially support the nutritional adequacy of the local diet. Based on the assessment of the iron bioavailability, FSANZ considers that the Policy Guideline has been met.

The nutrition assessment concluded that haem iron from soy leghemoglobin is likely to have similar bioavailability to haem iron from mammalian haem proteins (e.g. myoglobin present in muscle tissue). The approval of this product may assist with increasing iron intakes given that the estimated intakes of iron (with the additional iron contribution from soy leghemoglobin) for all population age/sex groups assessed for both the Australian and New Zealand populations are below the ULs for iron.

Additionally, the Forum has identified as a priority for the food regulation system “Supporting the public health objectives to reduce chronic disease related to overweight and obesity”. Access to nutritious and flavourful plant-based alternative protein products is clearly aligned with that objective. Their value, however, depends heavily on consumer acceptance. As has been reported in the Application, meat analogue products with soy leghemoglobin derived from *P. pastoris* have similar texture, nutrition, flavour and aroma of their traditional animal-derived counterparts. This will result in greater consumer acceptance of the products with more consumers likely to continue using products once they have tried them.

SAFETY OF THE SOY LEGHEMOGLOBIN IN MEAT ANALOGUE PRODUCTS HAS BEEN CONFIRMED

The AFGC agrees with the FSANZ safety assessment which has not identified any health or safety concerns associated with the soy leghemoglobin derived from *P. pastoris* as described in the application.

However, the AFGC seeks clarification and rationale for why a maximum limit for leghemoglobin is imposed based on the FSANZ's assessment that there are no concerns regarding health risk:

- The AFGC notes that despite the total iron content of meat analogues may be higher than red meat, this is not a health risk because the conservative and likely overestimated dietary intake assessment concluded that total iron intakes are below the UL for iron in all age/sex populations.
- Additionally, the level of iron claimed in ‘analogues of meat’ is limited by the Code in *Schedule 17—4 Maximum claim per reference quantity* (maximum percentage RDI claim), which is likely a deterrent for other manufacturers to add high amounts of iron into their meat analogue products.
- The AFGC also notes that although genetic modification techniques were used to derive the soy leghemoglobin from *P. pastoris*, no safety issues associated with these techniques were identified.
- Additionally, the safety assessment of soy leghemoglobin of the residual Pichia proteins identified no allergenicity concerns.

CONCLUSION

The AFGC commends both the Applicant and FSANZ for the thoroughness with which the science, methodology and safety confirmation of the production and potential use in food products has been described and assessed.

The AFGC has not identified any issues with the application which would warrant its progression through the food regulatory system being delayed or denied.

RECOMMENDATION:

The Australian Food and Grocery Council recommends the amendment to the Australia New Zealand Food Standards Code sought in *Application A1186 Soy leghemoglobin in meat analogue products*.

Specifically:

- as a food produced using gene technology derived specifically from the GM production strain *Pichia pastoris*
- with no maximum permitted use level in raw product
- as a permitted form of iron
- with identity and purity specifications for LegH Prep.

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