Ministry for Primary Industries
Manatū Ahu Matua

2 March 2015

Project Officer – FSANZ Review of Microbiological Criteria
Food Standards Australia New Zealand
PO Box 10559
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Dear Sir/Madam

FSANZ Consultation Paper on Completing the Review of Microbiological Criteria

Thank you for the opportunity to comment on this Consultation Paper. The Ministry for Primary Industries (MPI) has the following comments to make.

MPI fully supports the FSANZ proposal to continue to review the Microbiological Limits for Food in the Food Standards Code Standard 1.6.1 and agrees that the approach should be based on the principles established by Codex Alimentarius in *General principles and guidance for the establishment and application of microbiological criteria related to foods* (CAC/GL 21-1997). MPI also agrees with the approach to clarify the purpose of each microbiological criterion, when it should be applied and corrective actions when the limits are not met. MPI considers that microbiological limits detailed in the Food Standards Code (FSC) Standard 1.6.1 should be solely food safety criteria to determine the safety of a lot. Process hygiene criteria should be separately detailed in the respective New Zealand or Australian production and processing legislation and standards.

MPI is of the view that there is an urgent need to revise and update the FSANZ User Guide to Standard 1.6.1, the FSANZ *Guidelines for the microbiological examination of ready-to-eat foods* and the New Zealand Microbiological Reference Criteria for Food so that they reflect the revised FSC Std. 1.6.1 and provide guidance for foods for which there are no production and processing standards. One approach may be to consolidate and review these documents on a bilateral basis.

MPI agrees that where appropriate, internationally recognised criteria developed under the Codex Committee for Food Hygiene (CCFH) will provide the preferred approach for the review.

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FSANZ invited submissions to help elaborate:

What microbiological testing is currently undertaken by industry and government and why?

In New Zealand microbiological testing is used by both industry and government as shown in the table below

Microbiological testing undertaken	Industry or Government	Why?
Product testing	Industry	• Determine compliance against FSC Std 1.6.1, or other tertiary legislation • Verification of operator controls for food safety or process hygiene • Customer requirements (including export country requirements and quality assurance schemes)
Imported foods	Government	• Determine compliance against FSC Std 1.6.1, or other tertiary legislation
Monitoring of the process environment	Industry	• Verification of control measures
Product testing	Government	• Research, monitoring and surveys • Compliance action prosecution

How existing microbiological limits are used and any difficulties in their application?

Since the microbiological limits were originally established in FSC Std. 1.6.1 there has been a change to the types of foods that our nations are consuming, an increase in the knowledge of existing and emerging hazards and the processing techniques, which is not reflected in the current standard.

Microbiological criteria e.g. standard plate counts (SPC) and coliform limits for process hygiene and quality reasons were historically included for some foods in FSC Std. 1.6.1 where other controls e.g. Good Manufacturing Practice and Good Hygienic Practice, were not considered to be adequate. However with the development of production and processing standards and requirements in both countries, inclusion of these criteria in FSC Std. 1.6.1 is no longer appropriate.

FSC Std 1.6.1 is inconsistent in the naming of foods in that some names are very specific, e.g. cooked/cured meat, whereas others are more generic e.g. ready-to-eat processed finfish. The specific naming of certain foods has led inadvertently to similar foods, e.g. cooked/cured poultry and other ready-to-eat meats being excluded when there may be a good case for application of the microbiological criterion to them. Identifying food groups according to common characteristics, as was done in the review of the application of criteria for *Listeria monocytogenes* is preferable as it would allow criteria to be applied generically to a category of foods with similar characteristics and would allow the inclusion of new food products as they are developed.

There are currently a number of microbiological limits identified in the FSANZ User Guide to Standard 1.6.1 and the New Zealand Microbiological Reference Criteria for Food which are not included in this review. They are used by both regulators and industry but are not being subjected to the same scrutiny as FSC Std. 1.6.1. This could lead to inconsistencies and conflicting information in the application of microbiological criteria to similar foods.

The proposed approach to include food safety criteria and process hygiene criteria in the Code noting that each will have different corrective actions (i.e. response to not conforming to the criteria)

MPI agrees with the approach to include food safety criteria and process hygiene criteria in the appropriate sections of the Food Standards Code together with their respective corrective actions. MPI considers that inclusion of process hygiene criteria in New Zealand or Australia standards is consistent with the scope of the Joint Food Standards Treaty, Article 3(b).

New Zealand has established a number of microbiological criteria in tertiary legislation that apply during the processing of food that those food operators are required to meet. They have been developed to contribute to specific strategies for pathogen control and processing requirements. They may differ from those applicable in Australia to reflect differences in the environment between the two countries for example *Salmonella* incidence in broiler chickens and eggs.

In New Zealand, there are microbiological limits established in tertiary legislation for uncooked comminuted fermented meat (UCFM), seafood, meat, dairy and poultry. These are detailed in an appendix to this submission.

FSANZ seeks input for prioritising the work. Information that may assist includes:
Whether the proposed order is appropriate

In a previous submission MPI requested that there should be an overarching set of principles and objectives agreed for the review to ensure that there is a consistent approach taken across all of the food commodity groups. This has not been provided in this consultation paper. In addition to the review focussing on the food commodities specified, a review of the application of microbiological criteria for each microorganism should be considered to ensure that a similar approach is taken, e.g. for *Salmonella*. Considering the microbiological limits from the perspective of the microorganism may identify whether there are any food groups that have not been identified. This approach is in accord with the principles applied to the establishment of criteria for *Listeria monocytogenes.*

There are some commodity groups that have not been included within this review, for example horticultural products. These products are increasingly featuring in foodborne illness reports. While it may not be necessary to specifically identify all commodity groups in the Standard, the review process should ensure that new and emerging hazard/product combinations are taken in to consideration.

MPI agrees that infant formula products should be at the top of the list for the review but would prefer dairy to be reviewed before seafood.

It is assumed that all categories not listed in the consultation paper for which there are existing criteria e.g. processed egg products, will be included in the 'other' section of the work plan.

Issues related to specific commodities/commodity groups that should be considered under the review and the rationale

As noted previously in this submission some of the food product categories are very specific and the scope should be expanded to capture all of the intended food products, using descriptions of products rather than specific names. This has been a particular issue with the microbiological limits for meat and meat products.

As the review is focussed on commodity groups, composite food products are not included. However composite food products, including food service form an increasing part of many consumer's diet. There should be discussions as to whether this category of food should be included in FSC Std 1.6.1 or in guidelines, specifically by the review and updating of the FSANZ *Guidelines for the Microbiological examination of ready-to-eat foods.*

MPI asks that FSANZ provides clear guidance and expectations for the application of the food safety criteria where the presence of the hazard is prescient on the failure of process control or there is no knowledge of the conditions under which the food has been produced e.g. for staphylococcal enterotoxin.

For seafood MPI asks that the microbiological limits provided for this category in the FSC Std.1.6.1 are reviewed in light of current knowledge, emerging microorganisms, a focus on food safety criteria and take into account the Codex texts including those produced by the Codex Committee on Fish and Fishery Products (CCFFP). For example, there has been a discussion in CCFFP with respect to the relevance of a microbiological limit for S*almonella* in raw fish and bivalve molluscan shellfish when there is evidence that *E. coli* may be a useful surrogate. *Vibrio spp*. are an emerging microbiological hazard in seafood sourced from areas that traditionally were not considered to be an issue, due to changes in water temperature and salinity.

Resources available to assist in the application of microbiological criteria
The following publications will assist with the application of microbiological criteria:

- Codex Code of Practice for Fish and Fishery Products
- Codex Code of Hygienic Practice for Powdered Formulae for Infants and Young Children
- Codex Code of Hygienic Practice for Low Moisture Foods (in development)
- Publications from the International Commission on the Microbiological Specifications for Food (ICMSF). Microorganisms in Foods 6 and Microorganisms in Foods 8

In conclusion, MPI considers that this review is a significant undertaking inextricably linked into the ongoing development in both countries of processing and production requirements for industry. The setting of a microbiological standard must take into account these requirements. This is a complex area and it is important that there is a cooperative approach. The recent development of microbiological criteria for raw milk products highlighted some of the complications of developing criteria to align with the differing processing requirements in the two countries. MPI is committed to actively participating in and contributing to the process to ensure that the outcome is supportive of development of the New Zealand food safety systems.

Yours sincerely

[redacted]
Manager Food Science and Risk Assessment

Table I: Microbiological limits specified in legislation that apply to food in New Zealand

Sector	Document	Products	Microorganisms	Role/purpose	Application point
All foods as listed	Food Standards Code Standard 1.6.1	As defined in the Standard	Various	Foods that fail to meet these limits may pose a risk to human health and must not be offered for sale.	Shelf life of product
Dairy	DPC1 Animal Products(Dairy): Approved Criteria for General Dairy Processing	Dairy products for general population	*Salmonella*, *Listeria monocytogenes, Staphylococcus aureus* and *E. coli*	Product safety limits	Not more than 7 days after manufacture
		Dairy products for infants	*B. cereus* and *Cronobacter spp.*		
	Animal Products (Raw Milk Products Specifications) Notice 2009	Raw milk	*Aerobic plate count*	Corrective action requirement	Immediately prior to the commencement of manufacture
		Raw milk products	*L. monocytogenes,* Staphylococcal enterotoxin, *Salmonella*	Acceptable limits	End of manufacture
	Animal Products (National Microbiological Database) specification 2012	Bovine, caprine, cervine, bobby calf, ostrich, emu, poultry – carcasses, some primal cuts and	Salmonella, APC and *E. coli*	Mandatory monitoring -performance standard for	During processing as specified

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Meat and poultry		bulk meats		pathogens and moving window target for indicators	
		Poultry carcasses	*Campylobacter*	Mandatory - Performance target	Defined point during processing
		Ovine carcasses	APC	Mandatory monitoring - Moving window targets	During processing
Seafood	Animal Products (Specifications for products for human consumption) clauses 119-139	Seafood including bivalve molluscan shellfish	*E.coli* and Salmonella	Product safety limits	At end of processing
	Animal Products (Specifications for products for human consumption) Part 14	Ready-to-eat fish and seafood products, excluding canned, dried, etc (i.e. products where *Listeria* will not be present or cannot grow)	*Listeria monocytogenes*	Monitoring	At end of processing
	Animal Products (Specifications for bivalve molluscan shellfish) Notice 2006	Growing water and shellfish	Faecal coliforms and *E. coli*	Bacteriological standard for a growing area. Not to be exceeded	Samples from growing area