Import Risk Analysis: Fishfood

Review of Submissions

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Biosecurity New Zealand
Ministry of Agriculture and Forestry
Wellington
New Zealand

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Biosecurity New Zealand

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Approved for general release

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Contents

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1 Executive Summary

Manufacturers import a number of products for use as fish food under an existing import health standard for this purpose. Commodities covered by this include rendered poultry products (poultry meal, poultry feather meal, poultry oil, and poultry blood meal), rendered fishmeal, zooplankton (including *Artemia salina* and *Artemia franciscana, Daphnia* spp., Krill, and Mysida shrimps), and blood worms (Chironomid midge larvae).

In addition, a manufacturer has expressed an interest in importing rendered ruminant meals (ovine blood meal, meat meal, bone meal, and casing meal, and bovine blood meal, meat meal, and bone meal) for use in fish food. Fish oil is also likely to be included in fish food.

The biosecurity risks associated with the importation of all of these ingredients from all countries into New Zealand for use in the manufacture of fish food for both commercial aquaculture and domestic purposes (i.e. aquaria and fish ponds) were considered in a draft import risk analysis released for public consultation on November 16th 2007.

The key findings of the risk analysis and options discussed for the effective management of identified risks included:

- No hazards were identified associated with rendered products derived from poultry which have not been slaughtered for disease control purposes.

- No hazards were identified in rendered fishmeal and fish oil which are derived from fish which have not been slaughtered for disease control purposes.

- No hazards were identified associated with dried viable *Artemia salina* and *Artemia fransicana* eggs, and consignments containing only these species could be permitted without the need for risk management measures.

- Imported non-viable zooplankton species may be associated with hazards including potentially zoonotic bacteria, a number of viruses, and marine parasites, although a clear definition of these hazards was not possible due to a lack of data. Irradiation doses of at least 2.5 Mrads (25 kGy) or 4.5 Mrads (25 kGy) may be appropriate to effectively manage the risk.

- Similarly, limited data was available to clearly define hazards associated with freeze-dried non-viable Chironomid larvae although potentially zoonotic bacteria have been associated with these organisms. Irradiation doses of at least 2.5 Mrads (25 kGy) or 4.5 Mrads (25 kGy) may be appropriate to effectively manage the risk.

- Imported ruminant meals derived from animals which have not been slaughtered for disease control purposes may contain infectivity for both Bovine Spongiform Encephalopathy (BSE) and Scrapie. It may be appropriate to limit the importation of ruminant meals to countries recognised as being free of scrapie and having a negligible BSE risk.

Four submissions were received, from the University of Auckland, the Poultry Industry Association of New Zealand (PIANZ), the Meat Industry Association of New Zealand (Inc), and Federated Farmers of New Zealand.

A number of questions raised by these submissions related to the measures required to ensure the appropriate level of protection against identified hazards and these will be considered by MAF Biosecurity New Zealand before a draft Import Health Standard is issued for public consultation.

PIANZ requested an amendment to the commodity definition for rendered poultry material, which has been accepted and the final import risk analysis will be amended to reflect this. PIANZ also highlighted the omission of avian intestinal spirochaetes from the preliminary hazard list and a failure to consider exotic strains of infectious laryngotracheitis (ILT) virus. These matters have been examined in Sections 3.2.7 and 3.2.5 of this document and it has been concluded that these organisms should not be considered hazards in rendered poultry material.

Federated Farmers of New Zealand sought clarification regarding the effect of rendering on *Bonamia* spp., *Styela clava*, and *Pyrodinium bahamense* (and other marine biotoxin producers). This has been discussed in Section 3.4.1 of this document and it is concluded that none of these organisms should be considered hazards in rendered fishmeal.

It is considered that no technical issues have been omitted that affect the conclusions of the draft import risk analysis on the fish food. Therefore the conclusions of the draft import risk analysis are considered to be valid for the development of import health standards for these commodities.

Summary of proposed changes to be made to the draft import risk analysis

- Section 3.1 should be amended from “rendered animal by-products including poultry meal, ...” to “rendered poultry byproducts including poultry meal, ...”.
- Avian intestinal spirochaetes should be added to the preliminary hazard list for rendered poultry material.
- The need to consider exotic strains of ILT virus should be added to Section 3.2.1.1.

2 Introduction

Risk analyses are carried out by MAF Biosecurity New Zealand under section 22 of the Biosecurity Act 1993, which lays out the requirements in regard to issuing Import Health Standards (IHSs) to effectively manage the risks associated with the importation of risk goods.

Draft risk analyses are written by the Risk Analysis Group and submitted to internal, interdepartmental, and external technical review before the draft risk analysis document is released for public consultation. The Risk Analysis Group of MAF Biosecurity New Zealand then reviews the submissions made by interested parties and produces a review of submissions document. The review of submissions identifies any matters in the draft risk analysis that need amending in the final risk analysis although the decision to implement these changes lies with an internal committee of MAF Biosecurity New Zealand. The final risk analysis and the review of submissions together inform the development of any resulting IHS by the Border Standards Group of MAF Biosecurity New Zealand for issuing under section 22 of the Biosecurity Act by the Director General of MAF on the recommendation of the relevant Chief Technical Officer (CTO).

Section 22(5) of the Biosecurity Act 1993 requires CTOs to have regard to the likelihood that organisms might be in the goods and the effects that these organisms are likely to have in New Zealand. Another requirement under section 22 is New Zealand's international obligations and of particular significance in this regard is the *Agreement on Sanitary & Phytosanitary Measures* (the "SPS Agreement") of the World Trade Organisation.

A key obligation under the SPS agreement is that sanitary and phytosanitary measures must be based on scientific principles and maintained only while there is sufficient scientific evidence for their application. In practice, this means that unless MAF is using internationally agreed standards, all sanitary measures must be justified by a scientific analysis of the risks posed by the imported commodity. Therefore, risk analyses are by nature scientific documents, and they conform to an internationally recognised process that has been developed to ensure scientific objectivity and consistency.

MAF Biosecurity New Zealand released the document *Import Risk Analysis: Fish food* for public consultation on 16 November 2007. Every step was taken to ensure that the risk analysis provided a reasoned and logical discussion, supported by references to scientific literature. The draft risk analysis was peer reviewed internally and externally and then sent for interdepartmental consultation to the Ministry of Health, the Department of Conservation and the New Zealand Food Safety Authority. Relevant comments were incorporated at each stage of this review process. The closing date for public submissions on the risk analysis was 15 February 2008.

Four submissions were received. Table 1 lists the submitters and the organisations they represent.

This document is MAF Biosecurity New Zealand’s review of the submissions that were made by interested parties following the release of the draft risk analysis for public consultation. Public consultation on risk analyses is primarily on matters of scientific fact that affect the assessment of risk or the likely efficacy of any risk management options presented. For this

reason, the review of submissions will answer issues of science surrounding likelihood[1], not possibility[2], of events occurring. Speculative comments and economic factors other than the effects directly related to a potential hazard are beyond the scope of the risk analysis and these will not be addressed in this review of submissions.

Table 1. Submitters and Organisations Represented

Submitter	Organisation Represented/Location
David Jenkins	University of Auckland
Michael Brooks	Poultry Industry Association of New Zealand (PIANZ)
Tracy Galland	Meat Industry Association of New Zealand (Inc) (MIA)
Ann Thompson	Federated Farmers of New Zealand

[1] Likelihood**:** The quality or fact of being likely or probable; probability; an instance of this.
[2] Possible: Logically conceivable; that which, whether or not it actually exists, is not excluded from existence by being logically contradictory or against reason.

3 Review of Submissions: Fish Food

3.1 UNIVERSITY OF AUCKLAND

The University of Auckland submission is included in Appendix 1.

This submission raises no technical challenges to the published draft risk analysis. However, comments regarding alternative risk management measures will be considered by our border standards team before drafting any IHS based on this risk analysis.

3.2 POULTRY INDUSTRY ASSOCIATION OF NEW ZEALAND

The PIANZ submission is included in Appendix 1. The discussion below summarises the points of concern and gives MAF's responses to them.

3.2.1 PIANZ suggest that the commodity definition (Section 3.1) should be amended from "rendered animal by-products including poultry meal, ..." to "rendered poultry byproducts including poultry meal, ...".

MAF response: This suggestion is accepted and the import risk analysis will be amended to reflect this.

3.2.2 It is noted that for the purposes of the OIE Terrestrial Animal Health Code (2007) , poultry is defined as "all domesticated birds, including backyard poultry, used for the production of meat or eggs for consumption, for the production of other commercial products, for restocking supplies of game, or for breeding these categories of birds, as well as fighting cocks used for any purpose". Birds that are kept in captivity for any reason other than those reasons referred to in the definition are not considered to be poultry. The industry therefore requests, for purposes of clarity, that a definition of poultry be included in the IRA.

MAF response: Poultry meal, poultry feather meal, poultry oil, and poultry blood meal are standard commodities with defined production processes described in the import risk analysis. We therefore do not agree with this suggestion.

3.2.3 Industry is concerned that despite the fact that there is currently no legislation in place which forbids the feeding of poultry to poultry, the potential for accidental feeding of contaminated poultry meal to poultry has not been given the same level of consideration given to the accidental feeding of ruminant meals to ruminants.

Whilst acknowledging that the economic consequences of an outbreak of BSE within New Zealand will have a "marked negative effect on the national economy", Industry notes that an outbreak of IBD in New Zealand would have a significant negative impact

on the poultry industry. Industry therefore requests that no amendments are made to the current time temperature combinations stated in the current Import health Standard for the Importation into New Zealand of Fish Food, Fish Bait, *Artemia Salina* and *Artemia Fransiscana* from All Countries.

MAF response: The current time/temperature requirements for poultry meal and/or poultry feather meal and/or poultry oil are treatment at a minimum core temperature of 110^{o}C for at least 1 hour; and for poultry blood meal the requirement is for heat treated at a minimum core temperature of 90^{o}C for 30 minutes. MAF's CS88 predictive model suggests that this would achieve <3D reduction in IBDV in blood meal and a 6D reduction in IBDV in other poultry meals.

The import risk analysis demonstrates that standard industry rendering practices will be associated with a >4D to >12D reduction in any IBDV present. Whilst there is, of course, always the possibility of accidental exposure of poultry to imported fish food, the level of reduction of IBDV associated with rendering (between 99.99% and 99.9999999999%) is considered to be sufficient to regard the residual risk associated with IBDV as negligible.

3.2.4 Industry requests that any poultry meal which is imported for use in fish food must be labelled as such and must not be fed to poultry.

MAF response: Given that the hazard identification has not described any potential hazards in rendered products, this is considered unnecessary.

3.2.5 Industry acknowledges the presence of mild infectious laryngotracheitis virus (ILT) strains in New Zealand but notes that strains present in other countries (such as Australia) are far more virulent than those reported in New Zealand. Therefore, the statement that ILT is present in New Zealand and as such the agent requires no further consideration is unacceptable. Industry therefore requests that due and appropriate consideration is given to ILT in the import risk analysis and that it is included in the summary of disease agents (Section 3.2.1.4) requiring further consideration.

MAF response: ILT is a member of the Herpesviridae and Section 3.2.1.4 states that Herpesviridae should be further considered. Section 3.2.2.1 indicates that Herpesviridae are sensitive to heat inactivation and should therefore not be considered potential hazards in this risk analysis. The specific inclusion of exotic strains of ILT would therefore not impact upon the conclusions of the risk analysis.

3.2.6 Industry supports the inclusion of the requirement that rendered poultry (and other animal products) are not derived from poultry (or animals) which have been slaughtered for disease control purposes. However, industry notes that the same measures are not always taken in all countries and the response to the presence of the disease is determined by historic and prevailing conditions within the country concerned. In addition, the potential impact of the disease outbreak on the human population and the potential for the spread of the disease will have a significant bearing on whether birds (or animals) are slaughtered for disease control purposes.

Additional clarification around the statement "which have not been slaughtered for disease control purposes" is therefore requested.

The industry also notes that the definition of rendered meals does not specifically exclude animals which have died as a result of a disease outbreak. The Poultry and Feed Industries believe that the definitions for various rendered meals which are currently included in the IRA do not address many of the risks associated with "Category 1" and "Category 2" material detailed in the EC Regulation 1774/2002. Industry strongly believes that Biosecurity New Zealand must review the definitions included for rendered animal products to more accurately reflect the intention.

MAF response: These above points relate to the certification of any commodity imported under an IHS derived from the risk analysis. Such issues will be addressed by the MAF border standards team at the time of drafting an IHS.

3.2.7 The industry notes that intestinal spirochetes should be included in the list of preliminary hazards.

MAF response: MAF acknowledges that avian intestinal spirochaetosis, associated with *Brachyspira* spp., was overlooked in the preliminary hazard list for rendered poultry products. The Order: Spirochaetales is divided into three families, Brachyspiraceae, Leptospiraceae, and Spirochaetaceae. *Leptospira* spp. have been shown to survive for less than 1 minute at 60°C and *Treponema pallidum* (the spirochaete cause of syphilis) has been shown to survive for less than 1 hour at a temperature of 41.5°C and for 30 minutes during desiccation[3]. MAF therefore considers that *Brachyspira* spp. would not survive the rendering conditions described and the inclusion of avian intestinal spirochaetosis would not alter the conclusions of the risk analysis.

3.2.8 The Industry would like to highlight concerns around the risks associated with rendered products. In particular, Industry notes that:

1. The use of rendered ruminant protein in poultry feeds is allowed in certain countries around the world.

2. Depending on the country under consideration, there may be limited controls around the processing of ruminant and poultry by-products in the same rendering facility and potential for cross-contamination does exist.

As such, Industry strongly recommends that any IHS which is developed subsequent to the completion of the consultation process pays close attention to the potential for contamination of poultry by-product meal with ruminant protein.

Similarly the Industry requests that, in development of any subsequent IHS, Biosecurity New Zealand pay particular attention to the ability of the renderer to demonstrate that time and temperature requirements are consistently met.

[3] Mitscherlich E and Marth EH (1984) Microbial survivial in the environament. Springer-Verlag, Berlin, Heidelberg, New York, Tokyo.

MAF response: The above comments are noted and will be considered by the MAF border standards team responsible for drafting any IHS based on this risk analysis.

3.3 MEAT INDUSTRY ASSOCIATION OF NEW ZEALAND (INC)

The Meat Industry Association of New Zealand (inc) submission is included in Appendix 1.

This submission raises no technical challenges to the published draft risk analysis and supports the findings of this work.

3.4 FEDERATED FARMERS OF NEW ZEALAND

The Federated Farmers of New Zealand submission is included in Appendix 1. The discussion below summarises the points of concern and gives MAF's responses to them.

3.4.1 Federated Farmers is concerned that the methods identified for use with water-sourced fish food (Section 4) would not be enough to kill the organisms that are a danger to our own fishing industry and water health. E.g. Bonamia*, Styela clava, Pyrodinium bahamense* and other marine biotoxin producers.

*MAF response: Styela clava*is (sea squirt) is a multi-cellular organism and, as indicated in Section 4.2 of the risk analysis, MAF considers it reasonable to assume that complex multi-cellular organisms would not survive the rendering processes.

The survival of protozoan parasites such as *Bonamia* spp. has been examined by the European Commission Scientific Committee on Animal Health and Animal Welfare[4]. This report concluded that, "in principle, parasites are generally more heat-sensitive than bacteria or viruses, and consequently will be inactivated by the treatments applied to kill these or other pathogens. Although very little inactivation data is available for the parasites of fish, and no specific inactivation data is available for some of them, the risk of their transmission to other fish or to humans can be assumed to be low after desiccation and/or appropriate heating to over 65°C".

Toxic dinoflagellates (such as *Pyrodinium* spp.) are recognised as a particular risk associated with ballast water and studies into the heat treatment of ballast water have shown that heating dinoflagellate cysts to temperatures of 40°C to 45°C for very short periods of time (90s to 30s) results in death[5].

MAF therefore considers that the organisms listed in this submission would not survive the rendering processes described in the risk analysis.

[4] The use of fish by-products in aquaculture. Report of the Scientific Committee on Animal Health and Animal Welfare. Adopted 26th February 2003. See http://ec.europa.eu/food/fs/sc/scah/out87_en.pdf

[5] Bolch CJ and Hallegraeff GM (1993) Chemical and physical treatment options to kill toxic dinoflagellate cysts in ships' ballast water. *J Mar Environ Eng* 1: 23-29.

3.4.2 It is understood that the listed organisms in 3.4 are present in New Zealand waters and so risk is always present. However, it would be disappointing to add to the current load or contribute to the geographical spread by knowingly importing risk material.

MAF response: As the methodology outlined in the introduction to the risk analysis indicates, if importation of a commodity is considered likely to result in an increased exposure to an organism already present in New Zealand, then that organisms is regarded as a potential hazard and subject to a risk assessment.

3.4.3 Federated Farmers is very concerned with the possibility of importing rendered ruminant meal (Section 8). Based on our knowledge there is a real and perceived risk that scrapie and bovine spongiform encephalopathy (BSE) pose for New Zealand's agricultural industry. It is known that prions survive extreme conditions and material that arrives from infected countries will always pose a risk and should therefore be prohibited.

MAF response: The risk associated with these agents is recognised in Section 8.3 of the risk analysis. The risk analysis has presented as an option that material from countries which are known to have a lower health status than New Zealand with regard to these diseases could be prohibited from importation.

3.4.4 Federated Farmers views the BNZ suggestion that the importation of rendered ruminant meal could be limited to those countries known to be free of scrapie and recognised as having a negligible BSE risk, as unacceptable. The BNZ assumption is based on the country's past history and, given the length of incubation time before the disease manifests itself, importation from certain countries as outlined is not supported.

MAF response: Under our current procedures, the risk analysis presents options for the management of identified risks associated with a commodity. The measures required to meet New Zealand's appropriate level of protection are yet to be determined. These comments will considered by the MAF border standards team before drafting an IHS. Any draft IHS developed from this risk analysis will also be released for a six-week period of stakeholder consultation. Stakeholder submissions in relation to a draft IHS will then be reviewed before a final IHS is issued.

3.4.5 'Negligible risk' is considered enough of a risk when it comes to the fertiliser industry. The current New Zealand regulations covering the use of blood and bone in agriculture states that one should not 'Allow ruminant proteins such as meat and bone meal (including blood and bone) which has been applied as a fertilizer to be consumed by ruminant animals during subsequent grazing.'[6] This regulation covers product sourced from New Zealand, a country recognised by the OIE as having a negligible BSE risk. Perceptions are as important as real risks when it comes to BSE.

MAF response: This matter is beyond the scope of the import risk analysis.

[6] http://www.biosecurity.govt.nz/faq/term/898/bse-15)

3.4.6 Given that there is insufficient scientific knowledge available about the transfer of prions (the agents associated with BSE and scrapie) from infected animals, it is unknown whether these prions would survive in fish. In reality such fish could subsequently be fed to ruminants and humans, or drinking water could be sourced from streams downstream from fish farms. Therefore it is believed rendered ruminant meal (which includes blood and bone) should not be fed to fish.

MAF response: MAF is unaware of any published studies to explore this hypothesis. However, the import risk analysis does recognise that there is a potential (albeit accidental) pathway for ruminants to be exposed to prions in imported fishfood and options for management of this risk described.

MAF also notes that this submission indicates a preference for the prohibition of importation of any rendered ruminant meals and these comments will be considered by our border standards team before an IHS is drafted.

3.4.7 Federated Farmers argues that importation of rendered ruminant meal should be treated the same way as New Zealand treats the importation of maize seed for sowing. Maize seed is only allowed into New Zealand where there is a one hundred percent certainty that no genetically engineered material is present, and this certainty (or zero tolerance) should follow for the importation of rendered ruminant meal, i.e. there should be a zero tolerance for prions. Until such time as zero tolerance can be guaranteed, Federated Farmers will oppose the importation of all rendered ruminant meal.

MAF comment: As indicated above, MAF notes the proposal put forward by Federated Farmers that risks associated with rendered ruminant meal could managed by a total ban on importation. These comments will be considered by our border standards before an IHS is drafted.

4 Appendix 1: Copies Of Submissions

4.1 UNIVERSITY OF AUCKLAND

From: David Jenkins [d.jenkins@auckland.ac.nz]

Sent: Wednesday, 19 December 2007 2:47 p.m.

To: Martin Van Ginkel

Cc: Alhad Al Mahagaonkar; peter cattin

Subject: Re: import risk analysis ornamental fish

Martin

The University of Auckland received a copy of Import Risk Analysis:

Fishfood in November. The activities affected by this proposed risk assessment are the husbandry of zebrafish in two zebrafish containment facilities in the University of Auckland. Consequently the personnel actively involved with these facilities have read and commented on this document.

The fishfood used in these two facilities falls into three categories:
Fishmeal, Artemia and Zooplankton.

The most crucial element of raising these fish is that they have the correct type of food at the various stages in their life cycle. The optimal food (which can be specific to one overseas supplier) has been determined by painstaking trail and error. It is therefore absolutely crucial that these facilities have uninterrupted supply of the correct type of food. Asking for overseas suppliers to take extra steps (such as irradiating food) is very difficult and the suppliers are very reluctant to assist as the quantities ordered by University facilities are generally quite small in comparison to most of their customers.

While the report focussed on fishfood for commercial and domestic applications, we believe that the risk analysis should acknowledge that fishfood is imported and used within the bounds of specialist containment facilities. We also believe that these containment facilities will significantly mitigate the risks identified in the analysis and therefore importation into these facilities should be considered as a risk management strategy.

Regards

--
David Jenkins,
Hazards and Containment Manager
University of Auckland

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Poultry Industry Association of New Zealand (Inc)

1st Floor, 96D Carlton Gore Road, Auckland 1001, New Zealand
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Email: michael@pianz.org.nz

Martin Van Ginkel
MAF Biosecurity New Zealand
P. O. Box 2526
Wellington

15 February 2008

Dear Martin
Import Risk Analysis: Fish Food
The Poultry Industry Association of New Zealand (PIANZ), contactable at the above address, represents almost all of the poultry breeding and processing companies in New Zealand. Similarly, the Egg Producers Federation of New Zealand (EPF) represents all commercial egg producers in New Zealand. The PIANZ and EPF Veterinary Technical Committee has reviewed the Import Risk Analysis for the importation of Fish Food into New Zealand (subsequently referred to as the IRA).

In addition, the New Zealand Feed Manufacturers Association (NZFMA), contactable at the above address, has also reviewed the draft IRA. The NZFMA represents almost all of the animal feed manufacturing companies in New Zealand, with NZFMA members producing in excess of 80 % of animal feed produced in New Zealand.

The New Zealand Poultry Industry (including PIANZ and the EPF) and the NZFMA subsequently note the following points in this regard.

Chapter 3. Rendered Poultry Products

3.1 Commodity Definition
The first paragraph states “rendered animal by-products including poultry meal, ...”. For reasons of clarity and to prevent confusion, this should be reworded “Rendered poultry byproducts including poultry meal, ...”.

Industry notes that for the purposes of the OIE Terrestrial Animal Health Code (2007) (subsequently referred to as the Code) in chapter 2.7.12, poultry is defined as “all domesticated birds, including backyard poultry, used for the production of meat or eggs for consumption, for the production of other commercial products, for restocking supplies of game, or for breeding these categories of birds, as well as fighting cocks used for any purpose”. Birds that are kept in captivity for any reason other than those reasons referred to in the definition are not considered to be poultry. However, definitions of poultry are not currently included in other chapters of the Code dealing with avian diseases. The industry therefore requests, for purposes of clarity, that a definition of poultry be included in the IRA.

3.2.2.1 Viral Agents
Paragraph 3 of this section states "As poultry meal under consideration here is to be used as an ingredient in fish food, a >4D reduction in the amount of any IBDV present is considered sufficient to provide a high level of protection".

Industry acknowledges that the poultry meal under consideration is not intended for use in poultry. However, Industry notes that under *Section 8.3.2.2* (Exposure Assessment), the risk analysis states "the possibility of accidental exposure of ruminants to this material cannot be excluded entirely" despite the fact that there is legislation in place which specifically forbids the feeding of ruminant protein to ruminants. Industry is concerned that despite the fact that there is currently no legislation in place which forbids the feeding of poultry to poultry, the potential for accidental feeding of contaminated poultry meal to poultry has not been given the same level of consideration.

Industry acknowledges that the economic consequences of an outbreak of BSE within New Zealand will have a "marked negative effect on the national economy". However, Industry notes that New Zealand is the only country in the world which is free of Infectious bursal disease (IBD). Should an outbreak of IBD occur in New Zealand and the poultry industry be required to vaccinate birds or the disease become endemic, there are a multitude of negative consequence which will impact on both the industry and New Zealand as a whole. These include

- Increased costs of production (and subsequently retail prices) for both chicken meat and eggs due to decreased bird performance.
- Increased vaccination and treatment costs for IBD as well as other "opportunistic" diseases.
- A potentially increased requirement for the therapeutic use of antibiotics to treat sick birds.
- A potential decrease in the overall status of poultry welfare as birds will be more susceptible to disease and infection.
- Export markets for non-vaccinated broilers and broiler breeders may be compromised.

These added costs and losses in productivity would have a significant negative impact on the poultry industry. Industry therefore requests that no amendments are made to the current time temperature combinations stated in the current Import health Standard for the Importation into New Zealand of Fish Food, Fish Bait, *Artemia Salina* and *Artemia Fransiscana* from All Countries.

Industry further requests that any poultry meal which is imported for use in fish food must be labeled as such and must not be fed to poultry.

Industry notes the statement under *section 3.2.1.1* (Viral agents present in New Zealand) that infectious laryngotracheitis (ILT) virus is recognised as present in New Zealand. Industry acknowledges the presence of mild ILT strains in New Zealand but notes that strains present in other countries (such as Australia) are far more virulent than those reported in New Zealand. Therefore, the statement that ILT is present in New Zealand and as such the agent requires no further consideration is unacceptable. Industry therefore requests that due and appropriate consideration is given to ILT in the import risk analysis and that it is included in the summary of disease agents (*section 3.2.1.4*) requiring further consideration.

Chapters 3, 4 and 8. (Rendered Poultry Products, Fishmeal and Fish Oil and Rendered Ruminant Meals)

Commodity definition
The New Zealand Poultry Industry acknowledges the risks associated with the uses of rendered animal material derived from animals slaughtered for disease control purposes. Industry supports the inclusion of the requirement that rendered poultry (and other animal products) are not derived from poultry (or animals) which have been slaughtered for disease control purposes. However, industry notes that the same measures are not always taken in all countries and the response to the presence of the disease is determined by historic and prevailing conditions within the country concerned. In addition, the potential impact of the disease outbreak on the human population and the potential for the spread of the disease will have a significant bearing on whether birds (or animals) are slaughtered for disease control purposes.

In the interests of consistency therefore, the New Zealand Poultry and Feed Industries request that additional clarification around the statement "which have not been slaughtered for disease control purposes" is included in the IRA.

The industry also notes that the definition of rendered meals included in the IRA does not specifically exclude animals which have died as a result of a disease outbreak, although this is obviously the intention of the IRA. The Poultry and Feed Industries believe that the definitions for various rendered meals which are currently included in the IRA do not address many of the risks associated with "Category 1" and "Category 2" material detailed in the EC Regulation 1774/2002. Industry strongly believes that Biosecurity New Zealand must review the definitions included for rendered animal products to more accurately reflect the intention.

Appendix 1: Preliminary Hazard List (Rendered Poultry Products)
The industry notes that the list of preliminary hazards is incomplete and that intestinal spirochetes should be included. The list of bacterial disease requiring further consideration and included under *section 3.2.1.4* (Summary) should also be updated to reflect this.

Traceability and Cross Contamination
The New Zealand Poultry and Feed Industries acknowledges that the IRA is simply intended to identify the potential risks associated with the importation into New Zealand of different commodities for use in fish food. Industry acknowledges that the IRA is not intended to detail how potential risks will be addressed or managed and that this will be covered under any Import Health Standard (IHS) developed by Biosecurity New Zealand prior to the importation of any of the commodities included in the draft.

However, the Industry believes that this is an opportune time to highlight concerns around the risks associated with rendered products. In particular, Industry notes that

1. The use of rendered ruminant protein in poultry feeds is allowed in certain countries around the world.
2. Depending on the country under consideration, there may be limited controls around the processing of ruminant and poultry by-products in the same rendering facility and potential for cross-contamination does exist.

As such, Industry strongly recommends that any IHS which is developed subsequent to the completion of the consultation process pays close attention to the potential for contamination of poultry by-product meal with ruminant protein.

Similarly the Industry requests that, in development of any subsequent IHS, Biosecurity New Zealand pay particular attention to the ability of the renderer to demonstrate that time and temperature requirements are consistently met.

The New Zealand Poultry and Feed Industries appreciate the opportunity to comment on the draft IRA. We look forward to continued work with Biosecurity New Zealand on this topic to ensure the establishment of a robust and appropriate IHS.

Please do not hesitate to contact our offices should you have any queries.

Kind regards

Michael Brooks
Executive Director

4.3 MEAT INDUSTRY ASSOCIATION OF NEW ZEALAND (INC)

Meat Industry Association Comment on the Import Risk Analysis: Fish Food, Draft for Public Consultation

I: ABOUT THE MEAT INDUSTRY ASSOCIATION

1. The Meat Industry Association of New Zealand Incorporated ('MIA') is a voluntary trade association representing New Zealand meat processors, marketers and exporters. It is an Incorporated Society that represents companies supplying virtually all of New Zealand sheepmeat exports and all beef exports, producing 15 per cent of our nation's exports by value. This amounts to 29 percent of New Zealand's primary sector export revenue.

2. A list of Association members is attached as Appendix 1.

II: CONSULTATION

3. In developing this comment on the Import Risk Analysis: Fish Food, Draft for Public Consultation ("the Analysis") all MIA members and affiliate members were consulted and asked for their contributions, although individual members may also make their own comment specific to the view of their operations.

III: COMMENT

4. The MIA supports the risk based approach taken by BNZ in the analysis of risks associated with imported fish food, particularly with regard to rendered ruminant material.

5. The MIA commends BNZ on the quality of the analysis.

6. The MIA supports the conclusion that, given the time/temperature conditions described, prion agents associated with BSE, Scrapie, and bovine parvovirus are potential hazards which may be present in rendered ruminant material.

7. Because thermal treatment cannot be used reliably to ensure that agents of BSE and scrapie are inactive in imported ruminant meals, the MIA supports the risk management option that only material from animals in flocks and herds in countries known to be free of scrapie, and recognised as having negligible BSE risk, could be considered as acceptable for importation.

8. The MIA is of the view that the risk management objectives appear to be reasonable.

9. The MIA is not aware of any alternative measures that would achieve better risk management objectives.

10. For any queries relating to these comments, please contact Tracy Galland or email tracy.galland@mia.co.nz

4.4 FEDERATED FARMERS OF NEW ZEALAND

SUBMISSION TO BIOSECURITY NEW ZEALAND ON THE IMPORT RISK ANALYSIS: FISH FOOD

1. INTRODUCTION

1.1 Federated Farmers welcomes the opportunity to submit on the Import Risk Analysis: Fish Food.

1.2 Federated Farmers of New Zealand is a primary sector organisation that represents farming and other rural businesses. Federated Farmers has a long and proud history of representing the interests of New Zealand's farmers.

1.3 The Federation aims to add value to its members' farming business. Our key strategic outcomes include the need for New Zealand to provide an economic and social environment within which:

- Our members may operate their business in a fair and flexible commercial environment;
- Our members' families and their staff have access to services essential to the needs of the rural community; and
- Our members adopt responsible management and environmental practices.

2. EXECUTIVE SUMMARY

2.1 Federated Farmers of New Zealand agrees with the need to complete a risk analysis of imported fish food and agrees with the criteria outlined by Biosecurity New Zealand.

2.2 Federated Farmers is concerned that the importation of rendering-resistant organisms, some of which may already be indigenous, could increase the disease burden within New Zealand's aquaculture and agricultural industries, and the public health area.

2.3 Federated Farmers has strong concerns over the suggested importation of rendered ruminant meal. Based on our knowledge there is a risk that this will result in the importation of prions, the agents that can cause bovine spongiform encephalopathy (which cause BSE in ruminants and Creutzfeldt Jacob disease in humans) and also the risk of Scrapie.

2.4 Federated Farmers argues that there should be zero tolerance to importing products which could contain prions as there is a real risk of prions passing into both the animal and human food chain. Having zero tolerance to risk would prohibit the importation of ruminant meal. This zero tolerance is the New Zealand standard that is used which forbids the fertilising of crops with blood and bone that may then be eaten by ruminants. In addition, there is a risk of contamination when handling the product during the feeding of fish.

3. FEDERATED FARMERS' COMMENT

3.1 Federated Farmers of New Zealand agrees with the need to complete a risk analysis of imported fish food.

3.2 Federated Farmers agrees with the risk assessment criteria that Biosecurity New Zealand (BNZ) has chosen.

3.3 No comment can be made by Federated Farmers on the methods or efficacy of the methods identified by BNZ on the management of identified risks.

3.4 Federated Farmers is concerned that the methods identified for use with water-sourced fish food (Section 4) would not be enough to kill the organisms that are a danger to our own fishing industry and water health. E.g. Bonamia, *Styela clava, Pyrodinium bahamense* and other marine biotoxin producers. Can this please be confirmed?

3.5 It is understood that the listed organisms in 3.4 are present in New Zealand waters and so risk is always present. However, it would be disappointing to add to the current load or contribute to the geographical spread by knowingly importing risk material.

3.6 If New Zealand allows the importation of fish food contaminated with organisms that survive the rendering process and that are already present in New Zealand then there is the potential to have an added cost to the agricultural industry and public health.

3.7 Federated Farmers is very concerned with the possibility of importing rendered ruminant meal (Section 8). Based on our knowledge there is a real and perceived risk that scrapie and bovine spongiform encephalopathy (BSE) pose for New Zealand's agricultural industry.

3.8 It is known that prions survive extreme conditions and material that arrives from infected countries will always pose a risk and should therefore be prohibited.

3.9 Federated Farmers views the BNZ suggestion that the importation of rendered ruminant meal could be limited to those countries known to be free of scrapie and recognised as having a negligible BSE risk, as unacceptable. The BNZ assumption is based on the country's past history and, given the length of incubation time before the disease manifests itself, importation from certain countries as outlined is not supported.

3.10 'Negligible risk' is considered enough of a risk when it comes to the fertiliser industry. The current New Zealand regulations covering the use of blood and bone in agriculture states that one should not 'Allow ruminant proteins such as meat and bone meal (including blood and bone) which has been applied as a fertilizer to be consumed by ruminant animals during subsequent grazing.'[7] This regulation covers product sourced from New Zealand, a country recognised by the OIE as having a negligible BSE risk. Perceptions are as important as real risks when it comes to BSE.

[7] http://www.biosecurity.govt.nz/faq/term/898/bse-15)

3.11 Given that there is insufficient scientific knowledge available about the transfer of prions (the agents associated with BSE and scrapie) from infected animals, it is unknown whether these prions would survive in fish. In reality such fish could subsequently be fed to ruminants and humans, or drinking water could be sourced from streams downstream from fish farms. Therefore it is believed rendered ruminant meal (which includes blood and bone) should not be fed to fish.

3.12 There is also the real and perceived risk of human exposure to prions from handling the product when feeding fish.

3.13 Federated Farmers argues, therefore, that importation of rendered ruminant meal should be treated the same way as New Zealand treats the importation of maize seed for sowing. Maize seed is only allowed into New Zealand where there is a one hundred percent certainty that no genetically engineered material is present, and this certainty (or zero tolerance) should follow for the importation of rendered ruminant meal, i.e. there should be a zero tolerance for prions

3.14 Until such time as zero tolerance can be guaranteed, Federated Farmers will oppose the importation of all rendered ruminant meal.