

**REVIEW OF SUBMISSIONS ON: IMPORT RISK ANALYSIS FOR
HONEY BEE HIVE PRODUCTS AND USED BEEKEEPING
EQUIPMENT**

**Biosecurity Authority
Ministry of Agriculture and Forestry
Wellington
New Zealand**



JUNE 2003

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Animal Biosecurity
Biosecurity Authority

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Approved for general release

Derek Belton
Director Animal Biosecurity
Biosecurity Authority

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EXECUTIVE SUMMARY

In August 2002, the Ministry of Agriculture and Forestry (MAF) released an import risk analysis on honey bee hive products and used beekeeping equipment.

MAF received 19 submissions on the risk analysis; 18 from within New Zealand and one from Australia.

In light of recent information and also as a result of the submissions received, MAF will redraft the risk analysis and release the revised risk analysis for another round of public consultation.

Two submissions from importers of bulk royal jelly expressed concerns that the recommended treatment methods are not suitable for royal jelly and requested that bulk royal jelly be permitted entry to a transitional facility where it could be tested for *Melissococcus plutonius* (the cause of European foulbrood) or encapsulated to render it unattractive to bees.

All other submissions expressed concern over the risks associated with the importation of honey bee hive products, in particular concerns about the potential for introduction of the highly infectious *Melissococcus plutonius*.

MAF does not consider royal jelly can be safely tested to ensure it does not contain *Melissococcus plutonius*. MAF is reassessing the recommendations on heat treatment of honey to destroy *M. plutonius* and will address this issue in the revised risk analysis.

Used beekeeping equipment is to be withdrawn from the risk analysis as there are significant information gaps regarding the safe importation of this equipment. MAF understands that this will not have a significant effect on trade as the equipment is available in New Zealand and consultation has shown that there is little interest in import of such equipment.

MAF has decided that it is not appropriate to develop a generic import health standard for consultation together with the revised risk analysis at this point. Rather, MAF will consider specific applications once the import risk analysis is complete. Any draft import health standards developed as a result of that process will be released for public consultation in the usual way.

Subsequent information has led MAF to review the section on honey bee viruses.

Many submissions requested that all honey bee hive products be excluded from New Zealand and many also expressed concern that a sufficiently precautionary approach was not adopted in the risk analysis. However, under the WTO Sanitary and Phytosanitary (SPS) Agreement, countries can only impose SPS measures that are based on science and are imposed to the extent necessary to protect the health of animal, plant or human populations. Therefore, if there are no reports of an organism causing harm, it is not classified as a hazard in an import risk analysis.

MAF will regard any exotic organism as a potential hazard if there are any reports of adverse affects from the organism overseas. When considering the consequences of introduction of organisms, MAF will assume that the same level of adverse affects that are reported overseas would be likely to occur if the organism were introduced to New Zealand.

MAF will carefully analyse cases where strain differences have been found and will err on the side of caution if there is no information available on the relative pathogenicity of the New Zealand strains. MAF will then seek to obtain the necessary information for a more objective assessment of the risk.

Several submissions expressed concerns about importation of honey from Western Australia, an area that is free from European foulbrood. MAF will address the request from Australia for importation of honey from Western Australia once the revised risk analysis has been finalised and released for public consultation. Any import health standards drafted for such importation will be released for public consultation as usual.

The chapter on small hive beetle (*Aethina tumida*) will be revised.

The Indigenous Flora and Fauna group of MAF expressed concerns that the potential environmental impact of exotic organisms associated with importation of honey bee hive products has not been adequately addressed. This will be addressed in the revised risk analysis.

Several submissions expressed concern that country freedom declarations given by foreign countries would not be accurate. However, MAF permits trade with countries whose Veterinary Administrations are considered trustworthy. If MAF does not have sufficient confidence in the veterinary administration of a particular country, MAF has the option of undertaking an evaluation of that country's veterinary services.

Some submissions expressed concern that exports of honey would be at risk from the bulk importation of inferior quality honey that could be re-exported as New Zealand honey. This is the responsibility of the New Zealand Food Safety Authority, which is aware of this issue and is investigating whether existing export assurance systems require amendment in relation to traceability of New Zealand product.

On the basis of the submissions received MAF has decided that bee venom and propolis will be considered potential risk commodities.

Several submissions expressed concern that oxytetracycline (OTC) resistant strains of *Paenibacillus larvae larvae* (the causative organism of American foulbrood) could be introduced with imported honey bee hive products. However, since the permissible level of AFB spores recommended in the risk analysis is only 1% of the lowest spore level ever recorded to establish an infection of *P l larvae*, MAF considers importation of honey bee hive products with AFB spores levels less than 500,000/L (infectious concentration 5 million spores/L) will have negligible risk of establishing OTC resistant strains of *P larvae larvae*.

INTRODUCTION

Currently the importation of honey bee hive products and used equipment into New Zealand are prohibited. For nearly a decade, trading partners have been requesting that the Ministry of Agriculture and Forestry (MAF) develop import health standards to allow trade in these products, particularly honey. All new import health standards must be based on a scientific analysis of the risks posed by the trade in question. In early 1999 MAF contracted a HortResearch scientist from Ruakura Research centre who had the necessary expertise in honey bee diseases from to draft the risk analysis. After being subjected to MAF's internal scientific review process and to external export review this risk analysis was released for public consultation in July 2002.

This review of submissions has been drafted by MAF with technical assistance from the contractor.

The risk analysis addressed the following commodities: honey, bee-collected pollen, royal jelly, propolis, bees' wax and used beekeeping equipment.

MAF identified as stakeholders the National Beekeeper's Association of New Zealand Inc, importers and exporters of hive products and other government departments. Methods used to communicate with stakeholders included an article in *The New Zealand Beekeeper* (May 2002), notification in *Biosecurity* (1 August 2002, Issue 37) and mail-outs to individual stakeholders ; 30 members of the National Beekeepers Association, 13 importers and 31 exporters of honey bee hive products.

MAF consulted with the following Government Departments:

Sent to:	Date Sent	Date Comments received
AQIS	23 July 2002	4 September 02
MoH	23 July 2002	August 02
DoC	23 July 2002	August 02

Submissions were received from the following:

Submitter	Organisation or location	Date
Barry Foster	Tawari Apiaries	26.08.02
Sue Walker	Honeyland NZ Ltd	30.08.02
Alyson Baker	Senior Advisor (Biosecurity) Ministry of Health	02.09.02

Verity Forbes	New Organisms Officer Department of Conservation	03.09.02
Brian Lancaster		10.09.02
Jane and Tony Lorimer	Hillcrest Apiaries	06.09.02
Wendy Keats	Alpha Laboratories NZ Ltd	28.08.02
Roger Bray	Braesby Farm	29.08.02
Russell Berry	Arataki Honey Ltd (Rotorua Division)	02.09.02
Ian Berry	Berry Beekeeping	
Chris Elmsly	Comvita NZ Ltd Operations Manager	16.08.02
Ernest and Ethel Adamson	Adamson Apiaries	03.09.02
Rae Blair (Secretary)	Canterbury Branch National Beekeepers Association	04.09.02
Christine Reed	MAF	28.09.02
Claudia Stanley	Quality Systems Manager MAF Operations	20.08.02
Pat Boland	AFFA	12.09.02
Richard Benseman n and Roger Bray	Canterbury Branch of the National Beekeepers Association	04.09.02
Steve Gay	MAF Operations	20.08.02
Jane Lorimer	National Beekeepers Association	06.09.02

This document summarises the issues raised in the submissions, and presents the MAF response to each.

SUBMISSIONS

1. Chris Elmsly, Comvita NZ Ltd, Private bag 1, Te Puke, New Zealand

From: "Chris Elmsly" <Chris.Elmsly@comvita.com>
To: <chanj@maf.govt.nz>
Date: 16/08/2002 2:35pm
Subject: Submission on the Import Health standard for bee products.

Dear Jessie Chan,

Comvita NZ Ltd has been importing Royal Jelly powder for use in its products for a number of years. The Royal Jelly is freeze dried, and is used in Food products such as Honey and Royal Jelly, as well as Dietary supplements such as capsules.

As a health company, we try to ensure that our Raw materials are of the highest quality in terms of actives, which concerns us if we are required to heat the Royal Jelly, which will destroy a large part of the actives.

Our concerns in terms of the Draft are.

1) no other means of sterilising the Royal Jelly other than radiation or heating are provided. Heating will destroy the actives and radiation is currently not allowed in food products in NZ., although is probably OK for Dietary Supplements.

2) We would like to see the formation of a Transitional Facility into which Royal Jelly could be placed on importation where it is tested for European Foul Brood. If clear, it could be released or then radiated or heat treated or re-exported if found to be contaminated, or processed into capsules.

3) we are concerned that there was no consultation with the Food Standards Authority in developing the Draft. The draft has recommended radiation as a method of sterilisation, and under New Zealand regulations can't be used for food anyway. If adopted, there is 12 months to two years in terms of applying to the Food standards Authority for the ability to use radiation in foods.

4) under 6.2, it states that Bee Venom can only be imported in retail packs or in bulk packs intended for medical use.

Comvita manufactures products with bee venom in them. They are not medicines and are sold as dietary supplements. Comvita needs to be able to import Bee Venom for use in dietary supplements and would like to see this clause modified to reflect this.

regards,
Chris Elmsly
Operations Manager
Comvita NZ Ltd
private bag 1
Te Puke
New Zealand

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2. If for any reason you are not the intended recipient, you must not peruse, use, disseminate, distribute or copy this message and you must delete it and all copies from your system.

3. Comvita does not represent that the contents of this communication have been maintained or that the communication is free from error, virus, interception or interference.

- 1.1** “Comvita NZ Ltd has been importing Royal Jelly powder for use in its products for a number of years. The Royal Jelly is freeze dried, and is used in Food products such as Honey and Royal Jelly, as well as Dietary supplements such as capsules. As a health company, we try to ensure that our Raw materials are of the highest quality in terms of actives, which concerns us if we are required to heat the Royal Jelly, which will destroy a large part of the actives.

Our concerns in terms of the Draft are.

1)no other means of sterilizing the Royal Jelly other than radiation or heating are provided. Heating will destroy the actives and radiation is currently not allowed in food products in NZ., although is probably OK for Dietary Supplements.”

MAF COMMENT

There are no satisfactory means of killing *Melissococcus pluton* reported other than heat treatment and irradiation. Dietary supplements can be irradiated.

- 1.2** “We would like to see the formation of a Transitional Facility into which Royal Jelly could be placed on importation where it is tested for European Foul Brood. If clear, it could be released or then radiated or heat-treated or re-exported if found to be contaminated, or processed into capsules.”

MAF COMMENT

As the sensitivity of test methods for *M pluton* in honey are low, MAF will not be allowing this option.

- 1.3** “We are concerned that there was no consultation with the Food Standards Authority in developing the Draft. The draft has recommended radiation as a method of sterilisation, and under New Zealand regulations can't be used for food anyway. If adopted, there is 12 months to two years in terms of applying to the Food standards Authority for the ability to use radiation in foods.”

MAF COMMENT

The Food Safety Authority was consulted, and their input requested, in the drafting of the import health standard. Dietary supplements do not require approval prior to irradiation (under the Dietary Supplements Regulations 1985). Food does require approval under the Food Safety Code.

- 1.4** “Under 6.2, it states that Bee Venom can only be imported in retail packs or in bulk packs intended for medical use. Comvita manufactures products with bee venom in them. They are not medicines and are sold as dietary supplements. Comvita needs to be able to import Bee Venom for use in dietary supplements and would like to see this clause modified to reflect this.”

MAF COMMENT

Nothing is known about potential pathogens in bee venom. MAF, therefore, will permit the importation of bee venom in a form that is not attractive to bees, that is in capsule form in retail packs. No bulk packs of capsules will be permitted except where permit is granted to repackage bulk packs of capsules in an approved transitional facility. This policy has arisen as importers have engaged in retrieval of royal jelly powder from imported bulk capsule packs and the inclusion of this powder into such commodities as honey. This constitutes an unacceptable biosecurity risk to the New Zealand beekeeping industry.

2. Berry Beekeeping,

316 Te Aute Road Hastings,
e-mail gwhoop@clear.net.nz

supported by Ian Berry,
Arataki Honey Ltd, Hawke's Bay Division,
PO Box 8016, Havelock North
e-mail ian@aratakihoneyhb.co.nz

SUBMISSION ON THE DRAFT RISK ANALYSIS AND HEALTH STANDARD FOR
HONEY BEE HIVE PRODUCTS AND USED BEEKEEPING EQUIPMENT.

On behalf of Berry Beekeeping, 316 Te Aute Road Hastings,

e-mail gwhoop@clear.net.nz

and supported by Ian Berry, Arataki Honey Ltd, Hawke's Bay Division, PO Box
8016, Havelock North e-mail ian@aratakihoneyhb.co.nz

ACCURACY OF ASSUMPTIONS ABOUT BEE PRODUCTS

Propolis

All through this draft analysis, propolis is treated as being unattractive to bees and therefore unlikely to be collected by them from used beekeeping equipment. This assumption is demonstrably wrong. Bees will actively seek and industriously gather propolis from anywhere that they can find it, including used beekeeping equipment. Propolis gathering behaviour is more pronounced in the spring and autumn but can be seen at most times of the year. I have personally watched them do this on many occasions. I cite one particular incidence where bees were seen to strip propolis off a group of clean dry floors. The floors were waiting to be paraffin dipped as they had come off some suspect hives. A month or so later we burnt 11 hives for AFB.

Failure to recognise propolis as an attractive substance to bees is an elementary mistake, which should not have appeared in such a report as this.

Recommendation

Change the risk analysis for propolis, to one which recognizes its attractiveness to bees.

Assumptions on the dangers of diseases should they be introduced,

Paragraph 2, page 7. Much of the value, or lack of it, in this analysis hinges on this paragraph. "If there are few reports of problems associated with a pathogen, it will be assumed not to be a major disease causing organism.".. Ha!!!! This is New Zealand! Have we not had enough experience of "non problem" species from overseas running wild in our environment.

If this analysis had been written five years ago SMALL HIVE BEETLE would not have rated a mention. Is this the standard of protection you would expect. It is certainly not the standard of protection that I as a beekeeper, and would strongly suspect the public of New Zealand, expect.

"If there are no reports of strain differences with respect to pathogenicity, it will be assumed that there are none", and worse, "If there have been reports of strain differences for organisms already present in New Zealand, it will be assumed that the strains present here are no more or less pathogenic than those elsewhere unless there is data available to prove this."

How a document came to be written, based on such a "she'll be right" attitude eludes me entirely. It is not only New Zealand's beekeeping industry that is being put at risk here but all of the agricultural sector that relies on bee pollination. This attitude has not been an acceptable part of risk analysis for the importation of exotic organisms for a long time. Are we and the rest of the agriculture sector regarded as being too unimportant to be worthy of proper research and risk analysis. This paragraph is a very important part of the terms of reference for this analysis. I can only assume that it was either written in a misguided effort to save costs, or motivated by political expediency.

In just one example the report states that some strains of chalk brood are up to twenty times more virulent than others. It then goes on to ignore this chilling piece of information because the terms of reference say it is irrelevant.

Recommendation

Change the terms of reference to a more cautionary approach so that it would have some scientific validity.

EUROPEAN FOUL BROOD

This is the most likely candidate to come in under these proposals. I have been actively seeking all available information on EFB for the last five years so I do know a fair bit about it for a layman. It is my considered opinion that importation of honey under the proposed treatment regime will lead to the inevitable introduction of EFB. There is NO SAFE DILUTION for EFB. There will inevitably be small slip-ups in the required processing of honey. All it will take is for one bee to come in contact with this honey and we will have a major disaster on our hands, and not just for the beekeeping industry. An outbreak of EFB would almost inevitably mean that at least one pollination season would be severely effected and quite possibly virtually written off. EFB is an extremely infectious pathogen and would infect at least the whole of one island inside twelve months.

I will repeat it again to emphasize the point, there is no safe level of dilution for EFB. Those of us with experience in honey processing understand only too well that some honey will miss the treatment even if it is only the remnants in a pipe, or the cold bit in the middle of a drum.

Recommendation

Continue the ban on the importation of honey as it is impossible to guarantee a product free from EFB on any but a laboratory scale.

VIRUSES

The conclusion states "There is no indication that they would have any major detrimental effect on production or trade, except in association with varroa." It then goes on to "not worry" about the ones that we haven't got yet. This flies in the face of convincing evidence that it is the virus loading that kills the bees, long before the varroa finish them off.

Recommendation

Treat viruses as a serious potential threat.

In conclusion - The risk analysis is obviously deficient on a number of points but its most glaring deficiencies are its assumptions that "if we don't know, its alright" and its failure to grasp the reality of the extreme infectiousness of EFB. It would be appropriate to have an analysis of the likely costs to the whole of New Zealand if one or more of the potential problems in this risk analysis become reality.

2.1 “ACCURACY OF ASSUMPTIONS ABOUT BEE PRODUCTS

Propolis

All through this draft analysis, propolis is treated as being unattractive to bees and therefore unlikely to be collected by them from used beekeeping equipment. This assumption is demonstrably wrong. Bees will actively seek and industriously gather propolis from anywhere that they can find it, including used beekeeping equipment. Propolis gathering behaviour is more pronounced in the spring and autumn but can be seen at most times of the year. I have personally watched them do this on many occasions. I cite one particular incidence where bees were seen to strip propolis off a group of clean dry floors. The floors were waiting to be paraffin dipped as they had come off some suspect hives. A month or so later we burnt 11 hives for AFB.

Failure to recognise propolis as an attractive substance to bees is an elementary mistake, which should not have appeared in such a report as this.

Recommendation

Change the risk analysis for propolis, to one which recognizes its attractiveness to bees.”

MAF COMMENT

MAF considers that it would be prudent to consider propolis as potentially attractive to bees. MAF will, therefore, only permit the importation of propolis products in a form that is not attractive to bees, that is in capsule form in retail packs. Until further research on its attractiveness and its ability to carry pathogens is carried out overseas, no bulk packs will be permitted. This policy has arisen as importers have engaged in retrieval of royal jelly powder from imported bulk capsule packs and the inclusion of this powder into such commodities as honey. This constitutes an unacceptable biosecurity risk to the New Zealand beekeeping industry.

2.2 “Assumptions on the dangers of diseases should they be introduced.

Paragraph 2, page 7. Much of the value, or lack of it, in this analysis hinges on this paragraph. "If there are few reports of problems associated with a pathogen, it will be assumed not to be a major disease causing organism". Ha!!!! This is New Zealand! Have we not had enough experience of “non problem” species from overseas running wild in our environment.

If this analysis had been written five years ago SMALL HIVE BEETLE would not have rated a mention. Is this the standard of protection you would expect. It is certainly not the standard of protection that I as a beekeeper, and would strongly suspect the public of New Zealand, expect.”

MAF COMMENT

Under the Sanitary and Phytosanitary Agreement (SPS), countries can only impose SPS measures that are based on science and are imposed to protect the health of animal, plant or human populations. Therefore, if there are no reports of an organism causing harm, it is not classified as a hazard in an import risk analysis.

MAF will regard any exotic organism as a potential hazard if there are any reports of adverse affects from the organism overseas. When carrying out the consequence assessment MAF will assume that the same degree of adverse affects as reported overseas would be likely to occur if introduced to New Zealand.

- 2.3** "If there are no reports of strain differences with respect to pathogenicity, it will be assumed that there are none", and worse, "If there have been reports of strain differences for organisms already present in New Zealand, it will be assumed that the strains present here are no more or less pathogenic than those elsewhere unless there is data available to prove this.

How a document came to be written, based on such a “she’ll be right” attitude eludes me entirely. It is not only New Zealand’s beekeeping industry that is being put at risk here but all of the agricultural sector that relies on bee pollination. This attitude has not been an acceptable part of risk analysis for the importation of exotic organisms for a long time.

Are we and the rest of the agriculture sector regarded as being too unimportant to be worthy of proper research and risk analysis. This paragraph is a very important part of the terms of reference for this analysis. I can only assume that it was either written in a misguided effort to save costs, or motivated by political expediency.

In just one example the report states that some strains of chalk brood are up to twenty times more virulent than others. It then goes on to ignore this chilling piece of information because the terms of reference say it is irrelevant.

Recommendation

Change the terms of reference to a more cautionary approach so that it would have some scientific validity.”

MAF COMMENT

Under the SPS, member countries cannot impose measures that are not based on science. Thus if there is no evidence of strain differences, it will be assumed that none exist.

As mentioned in 2.2, measures must be science based. Also, as mentioned in the response to 2.2, MAF will not speculate on the consequences of introduction of exotic strains. If there is evidence of exotic strains causing unwanted harm abroad, MAF will assume that the same level of harm would be possible in this country if these strains were introduced.

2.4 EUROPEAN FOUL BROOD

“This is the most likely candidate to come in under these proposals. I have been actively seeking all available information on EFB for the last five years so I do know a fair bit about it for a layman. It is my considered opinion that importation of honey under the proposed treatment regime will lead to the inevitable introduction of EFB. There is NO SAFE DILUTION for EFB.

There will inevitably be small slip-ups in the required processing of honey.”

MAF COMMENT

The risk assessment does not suggest the use of dilution to eliminate the risk of introducing European foulbrood disease.

MAF will require evidence that products have been adequately heat treated; products that are not continuously stirred will need certification of deep core samples that prove required temperatures and time conditions have been met.

- 2.5 All it will take is for one bee to come in contact with this honey and we will have a major disaster on our hands, and not just for the beekeeping industry.

MAF COMMENT

MAF is extremely concerned with the risk of EFB introduction in honey bee hive products and has been proactive in developing conditions which allow trade, yet protect against the introduction of EFB.

MAF initiated research (B Ball unpublished) into the heat destruction of *M pluton* to confirm the evidence given by Australia (Wooton et al 1981) that this method is an acceptable means to reduce risk of imported honey introducing EFB. The MAF initiated research supported the Australian findings. MAF is satisfied that such treatment, properly applied can result in negligible risk of introduction of EFB. The issue of acceptable time/temperature parameters for heat treatment of honey for EFB is under review and will be addressed in the revised risk analysis.

- 2.6 “I will repeat it again to emphasize the point, there is no safe level of dilution for EFB. Those of us with experience in honey processing understand only too well that some honey will miss the treatment even if it is only the remnants in a pipe, or the cold bit in the middle of a drum.”

MAF COMMENT

This is answered in 2.4.

2.7 “Recommendation

Continue the ban on the importation of honey as it is impossible to guarantee a product free from EFB on any but a laboratory scale.”

MAF COMMENT

As stated in 2.2, New Zealand is dependant on trade and has obligations under the Sanitary and Phytosanitary Agreement (SPS).

MAF operates under the policy that risks should be kept off shore whenever possible and that sanitary conditions that minimise risks to acceptable levels (such as heat destruction of *M pluton*) are preferable to laboratory methods to detect unwanted organisms (such as laboratory testing of imported products to give a level of assurance that the unwanted organism is not present). No laboratory test is 100%, just as no risk mitigation measure is 100% effective. In the case of *M pluton* the laboratory test to detect this organism involves a bacterial culture of the product. This is not a sensitive method as the organism is difficult to culture and the presence of contaminants can inhibit the growth of *M pluton* and preclude its detection.

As explained in 2.4, MAF is satisfied that heat treatment, properly applied can result in negligible risk of introduction of EFB in honey and that the parameters to be used is under review.

2.8 “VIRUSES

The conclusion states "There is no indication that they would have any major detrimental effect on production or trade, except in association with varroa." It then goes on to "not worry" about the ones that we haven't got yet. This flies in the face of convincing evidence that it is the virus loading that kills the bees, long before the varroa finish them off.

Recommendation

Treat viruses as a serious potential threat.”

MAF COMMENT

Subsequent information has led MAF to review the section on viruses.

2.10 “It would be appropriate to have an analysis of the likely costs to the whole of New Zealand if one or more of the potential problems in this risk analysis become reality.”

MAF COMMENT

The consequence assessments in the risk analysis address this point.

3. Steve Gay, Ministry of Agriculture and Forestry

From: Steve Gay
To: Slaney, Claudia
Date: 20/08/2002 3:15pm
Subject: Re: Draft bee product standard

Hi Claudia

This is the best reply I could do electronically.

Varroasis is spelt differently the whole way through.

3.1 Attractive to Bees, definition does not go indepth enough

To release the likes of honey coated rices, peanuts, honey marinade, honey and mustard dressings etc

What about a block of dried honey, discarded vials of propollis (definition says that propolis is not attractive but propolis still has strict requirements certs etc

3.1 official veterinarian/Vet administration

What is the Vet Administration for each country, do we need to know?

6.3 the NB in the current standard 6.5 regarding medicines containing alcohol has been ommitted.

7 The current standard 6.7 lists some pacific islands where a cert is required for honey with only 1 endorsement, have they been notified of the change in requirements from their countries.

7.1 Honey (including comb honey)

Comb honey includes wax, wax requires extra endorsements

7.1ia 50000 spores/litre seems like a lot for something so nasty, is irradiation an option if allowed by 2.3

7.2 Bees Wax

Reads that 1 20 ft sea container of 999gm blocks of wax may be imported with only a cert stating it is in blocks and that the honey and pollen has been removed. What about a signed affidavit that it won't be made into foundation??

7.4i and iii

If freedom from etc finish sentence

and if the above freedoms etc finish sentence

7.4ia documents that the comb (or should it be pollen)

7.5 For used equipment all require slightly different wording with regard to cleaning for each disease.

What about standardising the wording for each disease (in case the importer doesn't use the sample certificate eg cleaned or washed in hot water to remove wax, honey and adhering spores)

8 section 6.8 of the current standard in use states :

inspected by an inspector upon arrival

mq's transshipment to another office

small quantities honey down the sink

9 What does the MQS do with the certificates for Bee products that we receive?

Current standard had uponsee 8.1

Steve

>>> Claudia Slaney 08/15/02 10:51am >>>

Hello,

There is a draft been products standard available on the web at
<http://www.maf.govt.nz/biosecurity/imports/animals/standards/drafts/draft-ihs-honey-bee-products.pdf>

Please discuss with staff as appropriate and send any comments to me by 28//8/02.

Regards

Claudia

3.1 “Varroasis is spelt differently the whole way through.”

MAF COMMENT

This will be corrected to standardise the spelling when new draft import health standards are developed.

3.2 “3.1 Attractive to Bees, definition does not go in deep enough to release the likes of honey coated rices, peanuts, honey marinade, honey and mustard dressings etc.”

MAF COMMENT

MAF acknowledges the difficulties border staff experience when faced with making decisions about the likelihood of products to be attractive to bees. However, the large number of products makes individual recommendations in the risk analysis impossible. MAF believes that the definition given (Something is attractive to bees if it will attract bees if it was discarded in the environment) is a workable solution. Whether it is attractive will depend on the concentration of honey, other sugars, and its scent. Using this definition, honey coated rices, peanuts, honey marinade, honey and mustard dressings would be regarded as “attractive to bees” unless the particular product was such that border staff considered attractiveness would not occur (such as a lip stick containing honey where the packaging makes exposure to bees even if discarded negligible). Where the attractiveness of a product containing honey bee hive products cannot be determined it should be treated as potentially attractive and excluded from entry. Commercial companies can apply to MAF for dispensations. MAF would require evidence (such as laboratory trials) that the product was unattractive to bees.

3.3 “What about a block of dried honey, discarded vials of propolis (definition says that propolis is not attractive but propolis still has strict requirements certs etc”

MAF COMMENT

MAF considers that it would be prudent to consider propolis as potentially attractive to bees. MAF will, therefore, only permit the importation of propolis products in a form that is not attractive to bees, that is in capsule form in retail packs. Until further research on its attractiveness and its ability to carry pathogens is carried out overseas, no bulk packs will be permitted. This policy has arisen as importers have engaged in retrieval of royal jelly powder from imported bulk capsule packs and the inclusion of this powder into such commodities as honey. This constitutes an unacceptable biosecurity risk to the New Zealand beekeeping industry.

3.4 “3.1 official veterinarian/Vet administration
What is the Vet Administration for each country, do we need to know?”

MAF COMMENT

The definitions used are from the OIE Code.

MAF has decided that the draft import health standard to cover all countries is not practical and specific import health standards will be drafted (and consulted on) when MAF receives requests for specific imports.

- 3.5** “6.3 the NB in the current standard 6.5 regarding medicines containing alcohol has been omitted.”

MAF COMMENT

The risk analysis does not recommend alcohol as a means of managing risks associated with honey bee hive products. This will no longer be an acceptable means to allow importation of these products.

- 3.6** “7 The current standard 6.7 lists some pacific islands where a cert is required for honey with only 1 endorsement, have they been notified of the change in requirements from their countries.”

MAF COMMENT

The Pacific Island countries that will be affected by changes to existing import health standards have been notified.

- 3.7** “7.1 Honey (including comb honey)
Comb honey includes wax, wax requires extra endorsements.”

MAF POSITION

This has been overlooked and will be corrected in any draft import health standards.

- 3.8** “7.1ia 50000 spores/litre seems like a lot for something so nasty, is irradiation an option if allowed by 2.3.”

MAF COMMENT

Large number of *Paenibacillus larvae larvae* spores need to be fed to a colony to infect it¹. The lowest concentration of spores reported to create an infection is 50 million spores/L of sugar syrup. Irradiation causes honey to boil and hence is unsatisfactory. The risk analysis recommends imported products contain less

¹ Goodwin, R.M. ; Perry, J.H. ; Ten Houten, A. (1994). The effect of drifting honey bees on the spread of American Foulbrood infections. *Journal of Apicultural Research* 33: 209-212.

than 500,000 spores/L; this is 1% of the lowest concentration known to induce an infection. The effectiveness of irradiating honey to kill *P. larvae* larvae spores is also unknown.

3.9 “7.2 Bees Wax

Reads that 1 20 ft sea container of 999gm blocks of wax may be imported with only a cert stating it is in blocks and that the honey and pollen has been removed. What about a signed affidavit that it won't be made into foundation?”

MAF COMMENT

The risk analysis and import health standard will be revised to state that bees wax can not be imported.

3.10 “7.4i and iii

If freedom from etc finish sentence and if the above freedoms etc finish sentence.”

MAF COMMENT

The sentences are finished in the import health standard.

3.11 “7.4ia documents that the comb (or should it be pollen).”

MAF COMMENT

This should read bee-collected pollen. Draft import health standards which are developed will be revised accordingly.

3.12 “7.5 For used equipment all require slightly different wording with regard to cleaning for each disease. What about standardising the wording for each disease (in case the importer doesn't use the sample certificate eg cleaned or washed in hot water to remove wax, honey and adhering spores).”

MAF COMMENT

Used beekeeping equipment is to be withdrawn from the risk analysis as there are significant information gaps in the safe importation of this equipment, MAF understands that the equipment is available in New Zealand and consultation has shown that there is little interest in import of such equipment.

3.13 “8 section 6.8 of the current standard in use states :
inspected by an inspector upon arrival
mqs transhipment to another office
small quantities honey down the sink”

MAF COMMENT

The revised wording reflects the decision that the former import health standard does not provide adequate safeguards.

3.14 “9 What does the MQS do with the certificates for Bee products that we receive?
Current standard had uponsee 8.1”

MAF COMMENT

Once the risk analysis is finalised and draft import health standards have been consulted and issued, only products complying with these import health standards will be allowed entry. Non-compliant products and certificates filed according to MQS policy.

4. Barry Foster, Tawari Apiaries, 695 Aberdeen Road Gisborne

TAWARI APIARIES

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SUBMISSION ON THE DRAFT RISK ANALYSIS AND HEALTH STANDARD FOR HONEY BEE HIVE PRODUCTS AND USED BEEKEEPING EQUIPMENT.

On behalf of Tawari Apiaries, address as above.

Accuracy of assumptions about bee products,

Propolis

All through this draft analysis, propolis is treated as being unattractive to bees and unlikely to be collected by them either in the raw or from used beekeeping equipment. This assumption is demonstrably wrong, bees will actively seek and industriously gather propolis from anywhere that they can find it, this includes used beekeeping equipment. Propolis gathering behaviour is more pronounced in the spring and autumn but can be seen at most times of the year. I have personally watched them do this on many occasions.

Recommendation

Change the risk analysis for propolis, to one which recognises its attractiveness to bees, this is an elementary mistake and should not have appeared in such a report as this.

Assumptions on the dangers of diseases should they be introduced,

Paragraph 2, page 7, much of the value or lack of it in this analysis hinges on this paragraph which is based on assumptions and not scientific fact. About the only fact in this paragraph is the first which reads

?Many honey bee diseases have not been subject to extensive investigation.¹

It goes on to make assumptions in place of fact the first is;

"if there are few reports of problems associated with a pathogen, it will be assumed not to be a major disease causing organism.""

The second assumption reads;

? if there are no reports of strain differences with respect to pathogenicity, it will be assumed that there are none¹.

The third assumption the report makes reads;

? If there have been reports of strain differences for organisms already present in New Zealand, it will be assumed that the strains present here are no more or less pathogenic than those elsewhere unless there are data available to prove this¹.

These are ASSUMPTIONS only upon which this risk analysis is based. Such risk analysis has to be based on clear scientific fact, tested by approved scientific methods under peer review BEFORE it can be incorporated into any risk analysis now or in the future. This risk analysis puts aside the scientific method and puts assumption in its place in these critical areas of the risk analysis.

Recommendation. Rewrite this risk analysis under a far more cautionary approach based around scientific methods, testing and results under peer review. There is no place for assumptions to be incorporated into such a document.

European foul brood

This is the most likely candidate to come in under these proposals, particularly from Western Australia, it is my considered opinion that importation of honey under the proposed treatment regime will lead to the inevitable introduction of EFB, there is NO SAFE DILUTION for EFB and not all of us know about it as a disease only that it is extremely infectious. What is known is that it often appears in a parcel of bacterium acting possibly in combination in a bee larval gut. The level for contamination to take effect is extremely low compared with what we are used to in America Foul Brood AFB and difficult to detect at low initial levels of infection.

There will inevitably be small slip ups in the required processing and heat treating. Those of us with experience in honey processing understand only too well that some honey will miss the treatment even if it is only the remnants in a pipe, or the cold bit in the middle of a drum. This risk analysis assumes that ALL honey processed can be safely heat treated for the required time / temperature to make it EFB free. This is not the case in practice and is a serious failure in the risk analysis.

In November 2001 MAF Bio security put out an information package entitled ? Documents relating to the Western Australian case for freedom from European foul brood.¹ On page 2 of the WA Bee Industry protection plan it states;

As the bacterium responsible for the disease can be present in hives for several months before signs of the disease become evident, early detection is unlikely. Once established, it is very unlikely that the disease could be eradicated.¹

Country, Region, Hive freedom from EFB.

For example, the information package states there are some 50,000 hives in Western Australia and some 2000 or 4% are officially inspected annually for EFB. No honey imports are allowed into Western Australia yet private imports continue to be allowed. If New Zealand were to allow imports from say Western Australia or any other country with area freedom then by extension New Zealand relies on the accuracy and

validity of EFB testing in that country. Yet we know infection levels for EFB are extremely low and difficult to detect at low levels and with some 4% of hives officially tested annually for EFB in for example Western Australia the likely hood of missing an infected product imported in to NZ is extremely high.

Recommendation

Continue the ban on the importation of honey, Royal Jelly, pollen, propolis, beeswax and used beekeeping equipment as it is impossible to guaranty a product free from EFB on any but a laboratory scale.

Small Hive Beetle.

This is a pest that has caused significant hive losses in USA the eggs are tiny about 1.4mm long and hatch within 6 days. It can live in pollen, beeswax and honey. There are some glaring assumptions made in relation to the small hive beetle, they are;

1. Reliance on honey processing to filter out Small Hive beetle eggs. In practice this may not always happen with all of the honey all of the time.
 2. Adult beetles MIGHT be carried on pollen. We don't know.
 3. Eggs / adults could not survive in pollen capsules to be broken open and emerge after being discarded. No research has been done on this & effectiveness or not of freezing to kill eggs / adult beetles in pollen.
- No mention is made of treatment in this way.

Viruses

The conclusion states

"There is no indication that they would have any major detrimental effect on production or trade, except in association with Varroa." Then goes on to not worry about the ones that we haven't got yet, this flies in the face of convincing evidence that it is the virus loading that kills the bees, long before the Varroa finish them off.

Recommendation

Treat viruses as a serious potential threat.

CONCLUSION.

It would seem pointless to labour every little point in the risk analysis, it is obviously deficient on a number of points but its most glaring deficiencies are its assumptions that, if we don't know, then its alright and its failure to grasp the reality of the infectious nature of the various pests & diseases mentioned and the consequences of their establishment in New Zealand.

This Risk Analysis has failed in its very purpose and should be re written with a far more cautionary approach based on fact not assumption. Until more scientific research has been concluded both here and overseas any risk analysis should exclude importation of particually unprocessed bee products and used equipment on the grounds of bringing unacceptable risk into New Zealand.

4.1 “Accuracy of assumptions about bee products,

Propolis

All through this draft analysis, propolis is treated as being unattractive to bees and unlikely to be collected by them either in the raw or from used beekeeping equipment. This assumption is demonstrably wrong, bees will actively seek and industriously gather propolis from anywhere that they can find it, this includes used beekeeping equipment. Propolis gathering behaviour is more pronounced in the spring and autumn but can be seen at most times of the year. I have personally watched them do this on many occasions.

Recommendation

Change the risk analysis for propolis, to one which recognises its attractiveness to bees, this is an elementary mistake and should not have appeared in such a report as this.”

MAF COMMENT

MAF considers that it would be prudent to consider propolis as potentially attractive to bees. MAF will, therefore, only permit the importation of propolis products in a form that is not attractive to bees, that is in capsule form in retail packs. Until further research on its attractiveness and its ability to carry pathogens is carried out overseas, no bulk packs will be permitted. This policy has arisen as importers have engaged in retrieval of royal jelly powder from imported bulk capsule packs and the inclusion of this powder into such commodities as honey. This constitutes an unacceptable biosecurity risk to the New Zealand beekeeping industry.

4.2 “Assumptions on the dangers of diseases should they be introduced.

Paragraph 2, page 7, much of the value or lack of it in this analysis hinges on this paragraph which is based on assumptions and not scientific fact. About the only fact in this paragraph is the first which reads “Many honey bee diseases have not been subject to extensive investigation”. It goes on to make assumptions in place of fact the first is; “if there are few reports of problems associated with a pathogen, it will be assumed not to be a major disease causing organism.”

MAF COMMENT

Under the Sanitary and Phytosanitary Agreement (SPS), countries can only impose SPS measures that are based on science and are imposed to protect the health of animal, plant or human populations. Therefore, if there are no reports of an organism causing harm, it is not classified as a hazard in an import risk analysis.

MAF will regard any exotic organism as a potential hazard if there are any reports of adverse affects from the organism overseas. When carrying out the consequence assessment MAF will assume that the same degree of adverse

affects as reported overseas would be likely to occur if introduced to New Zealand.

4.3 “The second assumption reads;

If there are no reports of strain differences with respect to pathogenicity, it will be assumed that there are none.”

MAF COMMENT

Under the SPS, member countries cannot impose measures that are not based on science. Thus if there is no evidence of strain differences, it will be assumed that none exist.

4.4 “The third assumption the report makes reads;

If there have been reports of strain differences for organisms already present in New Zealand, it will be assumed that the strains present here are no more or less pathogenic than those elsewhere unless there are data available to prove this.”

MAF COMMENT

As mentioned in 4.3, measures must be science based. Also, as mentioned in the response to 4.2, MAF will not speculate on the consequences of introduction of exotic strains. If there is evidence of exotic strains causing unwanted harm abroad, MAF will assume that the same level of harm would be possible in this country if these strains were introduced.

4.5 “European foul brood

This is the most likely candidate to come in under these proposals, particularly from Western Australia, it is my considered opinion that importation of honey under the proposed treatment regime will lead to the inevitable introduction of EFB, there is NO SAFE DILUTION for EFB and not a lot is known about it as a disease only that it is extremely infectious. What is known is that it often appears in a parcel of bacterium acting possibly in combination in a bee larval gut. The level for contamination to take effect is extremely low compared with what we are used to in American Foul Brood AFB and difficult to detect at low initial levels of infection.

There will inevitably be small slipups in the required processing and heat treating. Those of us with experience in honey processing understand only too well that some honey will miss the treatment even if it is only the remnants in a pipe, or the cold bit in the middle of a drum. This risk analysis assumes that ALL honey processed can be safely heat treated for the required time / temperature to make it EFB free. This is not the case in practice and is a serious failure in the risk analysis.”

MAF COMMENT

The risk assessment does not suggest the use of dilution to eliminate the risk of introducing European foulbrood.

MAF will require evidence that products have been adequately heat treated; products that are not continuously stirred will need certification of deep core samples that prove required temperatures and time conditions have been met.

4.6 In November 2001 MAF Bio security put out an information package entitled Documents relating to the Western Australian case for freedom from European foul brood. On page 2 of the WA Bee Industry protection plan it states;

As the bacterium responsible for the disease can be present in hives for several months before signs of the disease become evident, early detection is unlikely. Once established, it is very unlikely that the disease could be eradicated.

Country, Region, Hive freedom from EFB.

For example, the information package states there are some 50,000 hives in Western Australia and some 2000 or 4% are officially inspected annually for EFB. No honey imports are allowed into Western Australia yet private imports continue to be allowed. If New Zealand were to allow imports from say Western Australia or any other country with area freedom then by extension New Zealand relies on the accuracy and validity of EFB testing in that country. Yet we know infection levels for EFB are extremely low and difficult to detect at low levels and with some 4% of hives officially tested annually for EFB in for example Western Australia the likely hood of missing an infected product imported in to NZ is extremely high.

Recommendation

Continue the ban on the importation of honey, Royal Jelly, pollen, propolis, beeswax and used beekeeping equipment as it is impossible to guaranty a product free from EFB on any but a laboratory scale.”

MAF COMMENT

The importation of honey bee hive products will only be permitted where MAF believes it is safe to do so. If MAF believes requests for country or area freedom are not supported by sufficient evidence, these requests will be rejected.

4.7 “Small Hive Beetle.

This is a pest that has caused significant hive losses in USA the eggs are tiny about 1.4mm long and hatch within 6 days. It can live in pollen, beeswax and honey. There are some glaring assumptions made in relation to the small hive beetle, they are;

1. Reliance on honey processing to filter out Small Hive beetle eggs. In practice this may not always happen with all of the honey all of the time.”

MAF COMMENT

Larvae of the small hive beetle are not reported to be able survive on a diet of honey^[2] so there should not be risks associated with honey. In addition, honey and royal jelly cannot be imported in bulk drums only retail containers.

4.8 “2. Adult beetles MIGHT be carried on pollen. We don't know.”

MAF COMMENT

After reassessing the available information, pollen will only be permitted from areas with small hive beetles if it has been irradiated.

4.9 “3. Eggs / adults could not survive in pollen capsules to be broken open and emerge after being discarded.”

MAF COMMENT

See 4.8

4.10 “No research has been done on this & effectiveness or not of freezing to kill eggs / adult beetles in pollen. No mention is made of treatment in this way.”

MAF COMMENT

Although freezing is likely to be effective at killing all stages of the small hive beetle this is yet to be established. It can therefore not be recommended at this stage.

4.11 “Viruses

The conclusion states

"There is no indication that they would have any major detrimental effect on production or trade, except in association with Varroa." Then goes on to not worry about the ones that we haven't got yet, this flies in the face of convincing evidence that it is the virus loading that kills the bees, long before the Varroa finish them off.”

MAF COMMENT

MAF acknowledges that both deformed wing virus and slow paralysis virus are reported to cause production losses in association with varroa.

4.12 “Recommendation

² Lundie, A.E. (1945). The small hive beetle *Aethina tumida*. Union of South Africa Department of Agriculture and Forestry Entomological Series 3 Scientific Bulletin 220: 24 p.

Treat viruses as a serious potential threat.”

MAF COMMENT

Subsequent information has led MAF to review the section on viruses.

4.13 “CONCLUSION.

It would seem pointless to labour every little point in the risk analysis, it is obviously deficient on a number of points but its most glaring deficiencies are its assumptions that, if we don't know, then its alright and its failure to grasp the reality of the infectious nature of the various pests & diseases mentioned and the consequences of their establishment in New Zealand.

This Risk Analysis has failed in its very purpose and should be re written with a far more cautionary approach based on fact not assumption. Until more scientific research has been concluded both here and overseas any risk analysis should exclude importation of particularly unprocessed bee products and used equipment on the grounds of bringing unacceptable risk into New Zealand”.

MAF COMMENT

These concerns have been answered under the specific sections of this submission. Unprocessed bee products will only be permitted entry where methods to ensure safe trade are available. Used beekeeping equipment will not be allowed entry.

5. Christine Reed, Indigenous flora and fauna group MAF

Animal Import Risk Analysis: Honey Bee Hive Products and Used Equipment Dr R.M. Goodwin, HortResearch

General

This analysis considers only those pests and diseases known to be associated with honey bees. It does not consider other invertebrates or potential pests/pathogens that may come in with commodities (particularly bee-keeping equipment). A particular example is that of red imported fire ants (RIFA), a pest of environmental significance. MAFs RIFA risk assessment identifies beehives as a risk pathway for this organism. There is no discussion of this organism (or other potential invertebrates entering with beehives) in this assessment. Of the hazards considered, only effects on New Zealand's bee keeping industry have been discussed. There is no discussion on consequences of hazard entry on environmental values such as native flora (effects on pollination processes through possible reductions in bee numbers) or on New Zealand's native bees or other invertebrate fauna.

Specifically:

Introduction

1. The intention should be to ensure the risks posed to New Zealand (from a human, animal and plant health perspective) are assessed and, where necessary, mitigated so they do not exceed an acceptable level in a manner consistent with our international obligations. It is not a matter of balancing these as both must be achieved.
2. Page 5. The statement that "honey bees were introduced to New Zealand and are, therefore, not classed as wildlife" is erroneous. There are many examples of introduced species that are wildlife. It might be better reworded "honey bees were introduced to New Zealand and are therefore not considered native". No definition of "wildlife" is given in the analysis.
3. Page 5. The analysis considers only pests and diseases known to occur in honey bees. It concludes that only stonebrood is known to affect animals other than honey bees and therefore the remainder are not considered to be "wildlife issues". This is the only reference to environmental effects in the whole analysis and neglects a wider analysis of hazards other than those relating to bees. The requirement under Section 22 of the Biosecurity Act that the nature and effect on the NZ environment (defined as including ecosystems and their constituent parts, all natural and physical resources) be considered in a recommendation to issue an Import Health Standard has not been addressed. This analysis considers only "wildlife" (and without definition) and does not consider hazards other than potential pathogens and parasites of bees.
4. There seems to be no discussion as to whether any organisms that are not specifically pests of honey bees could be expected to be vectored by the products or equipment. These should be covered in a pathway assessment. Are there any closely related native insects that may be affected by organisms vectored by these pathways?
5. Page 6. The decision-making pathway outlined pre-empts the risk assessment process by undertaking a preliminary assessment of likelihood of establishment and possible consequence before firstly identifying the hazard. Potential hazards are excluded before being placed through the full process, by virtue of them being "likely to establish and spread" "[likely] to result in trade losses etc" or "[likely] to have adverse effects on health, welfare or wildlife". The logic is flawed.
6. Within the same diagram, there is also a predetermination that a hazard is one where sanitary measures can be justified, again before applying release, exposure and consequence assessment. This is a circular argument in that a risk assessment will be completed on a hazard, when the list of hazards has already been

refined down in the absence of anything but a seat of the pants assessment.

7. Rather than referring to “wildlife” this decision tree (and the document) may benefit from widening this to “the environment”.
8. Page 7. Commodities considered in the risk analysis: points 1-5 are subject headings, whereas vi) contains detail that for consistency would be better placed on page 9 where used bee keeping equipment is not listed.
9. The assumption that if there are few reports of problems associated with a pathogen that it is not a major disease causing organism is flawed unless the consequences of the organism are also taken into account. The original assumption could exclude newly identified pathogens or those with a small geographic range that have not had much scientific work done on them as yet.
10. There are a number of statements throughout the paper that should be, but are not referenced e.g. page 8: "...venom does not contain sugars", "...presence of venom will elicit stinging behaviour in bees". Also p. 13 "...Africanised honey bees...500 colonies examined...tested for africanisation using morphometric analysis". Also p. 17, "chronic paralysis virus associate" contains no reference.
11. A heading is needed after the section on "bee venom" - possibly above "Honey, pollen, royal jelly...etc" 2nd to last paragraph on page 8. And it would assist with consistency if the list of commodities were labelled points i) to vi) as on page 7.
12. Do the proposed packaging requirements for venom refer to retail or bulk packs of venom only or of venom/other bee product mixes?
13. The statement on page 9 re. dealing with "raw products only" should be made more conspicuous - suggest a section on "scope of the assessment". Assume that this assessment will therefore not impact on the ability to or conditions for import of those bee products historically approved and not covered by the analysis (i.e. other than raw or un processed products).
14. Page 10. The first sentence is incorrect. Table 1 lists not only the current disease status of NZ honey bees but also current status of other pests e.g. lice, beetles, bees. Might be better worded "The current status in New Zealand of pests and pathogens associated with bees and bee keeping equipment".
15. Table 1 does not read very clearly. The Agent should be renamed "Pest or pathogen" and appear first as it is the hazard, not the disease it causes that is being assessed. The way that the table is presented infers that all "agents" to the right hand side of European foulbrood (including the 8 viruses) are causes of that disease. There are also no entries in the "status in NZ" other than unwanted organisms. The other pests/pathogens in this table could be entered as "regulated"
16. Page 11. It is not clear which years "the last 5 years" refers to. The section refers to surveillance since 1994 and removal of some components in 1998. Does "the 5 years" refer to 1994 to 1998 "inclusive" or 1997 to 2002?
17. Page 12. The first paragraph on European foulbrood is repetitive from a previous section.
18. *Paenibacillus alevi* –would it be reasonably expected that this would have been detected from the larval smear that have been collected and examined if it were present?
19. Page 12. The paragraph on viruses refers to a survey conducted "13 years ago". It would be better to state the year of survey.
20. Is there currently any targeted surveillance for bee diseases within New Zealand (other than for AFB and Varroa)?
21. Page 13. The section on "Recommended sanitary measures" makes no reference to where this information is sourced. Should either refer to later sections, or relocate this section to after the "assessments".

22. Page 15: Reference number 11 does not appear in the text.
23. Page 16: The structure of this section does not follow the rest of the document or the outline on page 6. The first section would be better headed "Hazard identification" rather than "hazard assessment" (as would the same heading in following sections). The following section then leads on as "Risk Assessment".
24. Page 16: First line, only "9" viruses appear in Table 1 and not the "10" stated. And the text should refer to Table 1b, not Table 1.
25. Page 16: Second paragraph. The text refers to seven viruses not reported from New Zealand. Table 1a, and the text following this statement both list 8 viruses. It would be more consistent to discuss each virus in the order that they are presented in Table 1a.
26. Page 18/19, conclusion relating to viruses is unacceptable. Is a lack of evidence that these viruses are not in New Zealand justifiable cause not to consider potential sanitary measures to exclude them? This should be identified as an information gap (preferably in a section where all these gaps are pulled together from discussion), and more precaution applied until surveys or beekeepers do identify the viruses.
27. Losses associated with trade – para 1 - deformed wing virus has a wide distribution but is not found in either North America or Australia and therefore could impact on the potential to trade in some products with these countries if it were to establish in New Zealand.
28. Control or eradication costs: While the conclusion re. whether such programmes would be instigated in response to the presence of bee viruses may be pragmatic we would question whether such a comment should be voiced in a MAF document such as this without the benefit of context (e.g. distribution in NZ when found, consequences on bee keeping etc.).
29. Page 22 – AFB – the introduction of antibiotic resistant strains of AFB would reduce the potential effectiveness of feeding antibiotics if in the future this treatment was used. Given the current state of the AFB PMS the loss of such a treatment at this time may not be wise.
30. Page 24 – is there any reason to believe that the treatment required to deactivate *P. larvae larvae* spores on hives should be any different than that required to deactivate those same spores in honey?
31. Sanitary measures recommended – para 3 – is there a specific international standard for the provision of area freedom from organisms such as AFB? If so this should be indicated. Does a visual inspection for symptoms of AFB of 1 January provide adequate assurances that the hive/products are not infected on 31 December of that same year?
32. Should state what form is considered not to be attractive to bees (not just one example).
33. Define “free” from pollen and honey – visually free from, total weight of pollen etc. there? An inspector will need to be able to determine whether this requirement has been met.
34. Why can not irradiation be used at the 10 kGy rate for all products?
35. No information has been provided to show that washing used bee keeping equipment in hot water is an adequate and effective measure.
36. Page 26: references 4 and 9 do not appear in the text. Reference 21 is out of alphabetical order.
37. EFB – page 28 – hazard determination. remove “.” after “...destroyed”.
38. What is meant by “...reported to cause problems...” mean in relation to colonies used for pollination?
39. page 31 – para 2 – Are there examples of countries which currently do require honey sourced from countries that feed antibiotics to be tested? If so it would be worth providing an example at least.

40. Page 30: European foulbrood. Consequence assessment. There is no discussion regarding environmental consequences of this disease capable of destroying hives in terms of effects of further reducing pollinators for native plants (in the already depauperate situation as a result of massive declines in avian pollinators). Reference is made only to consequences for kiwifruit production.
41. Page 32 – Irradiation – if 14kgy is effective against *M. pluton* in honey should it not also be effective at this dose rate against this organism in other products?
42. Bee collected pollen – pollen tablets are given as an example of a form that is not attractive to bees however in other sections (page 30) of the document it is indicated that these may be fed to bees.
43. Used bee keeping equipment – why does this suggested measure differ from that given for the same products in the AFB section? The thermal death points for *M. plutons* within the document accepts a much different time/temp requirement for the organism in honey than on used equipment. The effectiveness of 160°C for 10 minutes does not seem to be referenced.
44. Page 34. Reference 1 does not appear in the text
45. Page 36. *Paenibacillus* is reported to have a wide host range, and the first paragraph infers that at least some of these infections cause clinical symptoms. Its status in NZ is unknown, although it has not appeared in testing over the last 5 years. And yet the conclusion does not consider this a hazard. The general discussion does not present information on whether this is a significant bacterium except for significance to honeybees.
46. Distribution – para 2 – “...although it is frequently associated WITH *Melissococcus pluton*...”
47. Page 40. Spiroplasmas are capable of destroying 40% of foraging bees in the US and yet the consequence of introduction to NZ is low. The paragraph on risk estimation concludes that in the absence of information on likelihood of entry to NZ, consequences, and lack of information from the US that consequence is low. This assumes no information means no or little risk. Again, a precautionary principle is not applied.
48. Page 42 – Hazard determination – the comment that gregarines may cause serious damage to infected colonies does not gel with the consequence assessment (page 43) where it is stated that the damage gregarines cause to honey bees is unclear.
49. Page 43. The statement that “...there is little reason to control gregarine infections in temperate climates” and the risk management conclusion that “they are not considered a significant problem in temperate regions” is contrary to an earlier statement that “they may cause serious damage to infected colonies”. The statements are also contrary to the statement that “there is not enough information ...to conclude that they would not cause some problems in the northern North Island of New Zealand”.
50. Page 44. The conclusion on risk management of chalkbrood that it is “already present in NZ and there is no information that the strain present here is any less virulent than those found elsewhere..” conflicts with earlier statements:
 - “Twenty fold differences between the virulence of some strains have been reported”
 - “It is possible that strains reported outside New Zealand are more virulent”
 - “Chalkbrood does not appear to cause the problems in NZ that have been reported in Israel”
 - “If more virulent strains than that in NZ do exist and were introduced, it is likely to adversely affect production and the pollinating efficiency of colonies”and is therefore not justifiable.
51. Page 51. The conclusion seems reasonable given that these mites do not exist for more than a few hours off an adult bee.
52. Page 52. This section states varroosis is caused by the mite *Varroa destructor*. There is discussion in paragraph 2 about *Euvarroa sinhai* but its relationship to this disease is not clear given the first statement.

The statement relating to the lower North Island being free of *Varroa* requires updating.

53. It is stated that partly submerged mites may possibly be transported in royal jelly (P. 53) and assumes that royal jelly is likely to be frozen or processed. Presumably on that basis the risk management section imposes no restrictions, but the assumption should be stated again. And there is no information on the type of "processing" acceptable to eliminate this risk. If freezing is the measure for *Varroa* in royal jelly this should be explicitly stated as such and not merely assumed as common practise.
54. Page 56, 2nd line, "...only 2 temperatures have been tested,..." should refer to what these 2 temperatures are.
55. Page 61 – Used bee keeping equipment – why is there a requirement for inspection on arrival to ensure freedom from live bees when this requirement is not used for other organisms (e.g. *Varroa* and *Braula*)?
56. Page 64: The discussion on *Braula* is inconsistent with other potential hazards. In this case the risk is considered low, and the consequence low, but sanitary measures are justified.
57. Page 70: Africanised bees. There is no discussion on why life stages other than adults are not a risk.
58. Page 71. Second paragraph is more a discussion of hazard Identification than consequence.
59. para 5 – where is the reasoning/evidence behind this comment? Does this mean any colonies would be likely to be infected with *Varroa* and/or tracheal mites at the time of establishment or that this would occur once they had established?
60. Page 73: Other *Apis* species. There is no discussion about the consequence of other *Apis* species on any values other than bee keeping in New Zealand. And again, no discussion on why adults are the only life stage considered a risk.

This section does not take into account the possible risks posed by *Apis mellifera* of unknown health status entering New Zealand via these pathways.

61. Page 76: "These fungi infect and kill insects..." not "...and kill other insects..."
62. Page 78: Honey – the measure is such processing that removes the beetle and not the packaging in which the honey is placed. If the honey has been filtered/processed to such an extent necessary to remove the beetle why would bulk packs be unsuitable?
63. Royal jelly – again the assumption has been made that this will usually be processed and frozen. If this is the measure it should be explicitly stated as such.
64. Page 81: Used bee keeping equipment – hive parts – why can these not be subjected to methyl bromide fumigation (or similar) to destroy the beetle? Would suggest MAF biosecurity Plants may be able to provide some advice in this area.

5.1 “General

This analysis considers only those pests and diseases known to be associated with honey bees. It does not consider other invertebrates or potential pests/pathogens that may come in with commodities (particularly bee-keeping equipment). A particular example is that of red imported fire ants (RIFA), a pest of environmental significance. MAFs RIFA risk assessment identifies beehives as a risk pathway for this organism. There is no discussion of this organism (or other potential invertebrates entering with beehives) in this assessment. Of the hazards considered, only effects on New Zealand’s bee keeping industry have been discussed. There is no discussion on consequences of hazard entry on environmental values such as native flora (effects on pollination processes through possible reductions in bee numbers) or on New Zealand's native bees or other invertebrate fauna.”

MAF COMMENT

The issue is one that has been termed “hitch-hiker pests”. It includes pests being introduced in all commodities, on aircraft, in containers and on people. There are extensive generic safeguards to prevent such pests. These include inspection of containers, spraying of aircraft and inspection of private consignments mailed to New Zealand at the Auckland mail centre.

The draft import health standard for used beekeeping equipment requires all equipment to be inspected and to be free from honey bees and other insects. Moreover, used beekeeping equipment is to be withdrawn from the risk analysis as there are significant information gaps in the safe importation of this equipment, MAF understands that the equipment is available in New Zealand and consultation has shown that there is little interest in import of such equipment.

MAF agrees that environmental issues have not been addressed in the consequence assessments. This will be addressed in the revised risk analysis.

5.2 “The intention should be to ensure the risks posed to New Zealand (from a human, animal and plant health perspective) are assessed and, where necessary, mitigated so they do not exceed an acceptable level in a manner consistent with our international obligations. It is not a matter of balancing these as both must be achieved.”

MAF COMMENT

This statement will be changed to “This risk analysis evaluates the risk of potentially hazardous organisms entering and establishing in New Zealand, and their probable impact on animal and human health, the environment and the economy, as a result of the purposeful importation of honey bee hive products. Where a hazard is identified, risk management measures will be recommended where appropriate.”

5.3 “Page 5. The statement that "honey bees were introduced to New Zealand and are, therefore, not classed as wildlife" is erroneous. There are many examples of introduced species that are wildlife. It might be better reworded "honey bees were

introduced to New Zealand and are therefore not considered native". No definition of "wildlife" is given in the analysis."

MAF COMMENT

MAF agrees that the suggested wording should be adopted.

5.4 "Page 5. The analysis considers only pests and diseases known to occur in honey bees. It concludes that only stonebrood is known to affect animals other than honey bees and therefore the remainder are not considered to be "wildlife issues". This is the only reference to environmental effects in the whole analysis and neglects a wider analysis of hazards other than those relating to bees. The requirement under Section 22 of the Biosecurity Act that the nature and effect on the NZ environment (defined as including ecosystems and their constituent parts, all natural and physical resources) be considered in a recommendation to issue an Import Health Standard has not been addressed. This analysis considers only "wildlife" (and without definition) and does not consider hazards other than potential pathogens and parasites of bees."

MAF COMMENT

MAF agrees that environmental issues have not been addressed in the consequence assessments. This will be addressed in the revised risk analysis.

5.5 "There seems to be no discussion as to whether any organisms that are not specifically pests of honey bees could be expected to be vectored by the products or equipment. These should be covered in a pathway assessment. Are there any closely related native insects that may be affected by organisms vectored by these pathways?"

MAF COMMENT

This is answered in 5.1.

5.6 'Page 6. The decision-making pathway outlined pre-empts the risk assessment process by undertaking a preliminary assessment of likelihood of establishment and possible consequence before firstly identifying the hazard. Potential hazards are excluded before being placed through the full process, by virtue of them being "likely to establish and spread" "[likely] to result in trade losses etc" or "[likely] to have adverse effects on health, welfare or wildlife". The logic is flawed."

MAF COMMENT

The current MAF flow chart on the risk analysis process will be used in the revised risk analysis. It is included as an appendix to this Review of Submissions document.

5.7 "Within the same diagram, there is also a predetermination that a hazard is one where sanitary measures can be justified, again before applying release, exposure and consequence assessment. This is a circular argument in that a risk assessment will be completed on a hazard, when the list of hazards has already been refined down in the

absence of anything but a seat of the pants assessment”.

MAF COMMENT

MAF agrees that this conclusion could be drawn from the diagram but this is not the methodology used, as explained in the text below the diagram. The diagram will be removed from the revised risk analysis.

5.8 “Rather than referring to “wildlife” this decision tree (and the document) may benefit from widening this to “the environment”.”

MAF COMMENT

Agreed and will be changed.

5.9 Page 7. Commodities considered in the risk analysis: points 1-5 are subject headings, whereas vi) contains detail that for consistency would be better placed on page 9 where used bee keeping equipment is not listed.

MAF COMMENT

Agreed. Bee venom will now be considered in the body of the risk analysis. This section will be amended in the revised risk analysis.

5.10 The assumption that if there are few reports of problems associated with a pathogen that it is not a major disease causing organism is flawed unless the consequences of the organism are also taken into account. The original assumption could exclude newly identified pathogens or those with a small geographic range that have not had much scientific work done on them as yet.

MAF COMMENT

Under the Sanitary and Phytosanitary Agreement (SPS), countries can only impose SPS measures that are based on science and are imposed to protect the health of animal, plant or human populations. Therefore, if there are no reports of an organism causing harm, it is not classified as a hazard in an import risk analysis.

MAF will regard any exotic organism as a potential hazard if there are any reports of adverse affects from the organism overseas. When carrying out the consequence assessment MAF will assume that the same degree of adverse affects as reported overseas would be likely to occur if introduced to New Zealand.

5.11 There are a number of statements throughout the paper that should be, but are not referenced e.g. page 8: "...venom does not contain sugars", "presence of venom will elicit stinging behaviour in bees". Also p. 13 "Africanised honey be 500 colonies examine tested for africanisation using morphometric analysis". Also p. 17, “chronic paralysis

virus associate" contains no reference".

MAF COMMENT

MAF agrees that some of these statements should be referenced, in particular the sentence on page 13.

5.12 A heading is needed after the section on "bee venom" - possibly above "Honey, pollen, royal jelly etc" 2nd to last paragraph on page 8. And it would assist with consistency if the list of commodities were labeled points i) to vi) as on page 7.

MAF COMMENT

See 5.9.

5.13 Do the proposed packaging requirements for venom refer to retail or bulk packs of venom only or of venom/other bee product mixes?

MAF COMMENT

Nothing is known about potential pathogens in bee venom. MAF, therefore, will permit the importation of bee venom in a form that is not attractive to bees, that is in capsule form in retail packs. No bulk packs of capsules will be permitted. This policy has arisen as importers have engaged in retrieval of royal jelly powder from imported bulk capsule packs and the inclusion of this powder into such commodities as honey. This constitutes an unacceptable biosecurity risk to the New Zealand beekeeping industry.

5.14 The statement on page 9 re. dealing with "raw products only" should be made more conspicuous - suggest a section on "scope of the assessment". Assume that this assessment will therefore not impact on the ability or conditions for import of those bee products historically approved and not covered by the analysis (i.e. other than raw or un processed products).

MAF COMMENT

The statement is included in the section on 'commodities considered in this risk analysis'. It is appropriately placed.

5.15 Page 10. The first sentence is incorrect. Table 1 lists not only the current disease status of NZ honey bees but also current status of other pests e.g. lice, beetles, bees. Might be better worded "The current status in New Zealand of pests and pathogens associated with bees and bee keeping equipment".

MAF COMMENT

Agreed. Will be changed in the revised edition.

5.16 Table 1 does not read very clearly. The Agent should be renamed "Pest or pathogen" and appear first as it is the hazard, not the disease it causes that is being assessed. The way that the table is presented infers that all "agents" to the right hand side of European foulbrood (including the 8 viruses) are causes of that disease. There are also no entries in the "status in NZ" other than unwanted organisms. The other pests/pathogens in this table could be entered as "regulated".

MAF COMMENT

Agreed that the format is confusing and will be changed.

5.17 Page 11. It is not clear which years "the last 5 years" refers to. The section refers to surveillance since 1994 and removal of some components in 1998. Does "the 5 years" refer to 1994 to 1998 "inclusive" or 1997 to 2002?

MAF COMMENT

The section refers to 1994 to 1998. This risk analysis was initiated in 1999. This information will be updated in the revised risk analysis.

5.18 Page 12. The first paragraph on European foulbrood is repetitive from a previous section.

MAF COMMENT

The first reference is in the context of the historical situation. The second reference is in the section dealing with the specific pests and pathogens. It is appropriate.

5.19 *Paenibacillus alvei* –would it be reasonably expected that this would have been detected from the larval smear that have been collected and examined if it were present?

MAF COMMENT

Whether it was detected from a larval smear would depend on the number of *P. alvei* spores and the reason the slide was being examined. If the smear was being examined for the presence of *P. larvae larvae* the presence of *P. alvei* would probably go unrecorded as only the lack of *P. larvae larvae* spores would be recorded. If the slide was being examined for the presence of *M. pluton* then *P. alvei* is likely to be detected as *P. alvei* is used as an indicator species for the presence of *M. pluton*.

5.20 Page 12. The paragraph on viruses refers to a survey conducted "13 years ago". It would be better to state the year of survey.

MAF COMMENT

Agreed. The survey will be referenced in the revised risk analysis.

5.21 Is there currently any targeted surveillance for bee diseases within New Zealand (other than for AFB and Varroa)?

MAF COMMENT

Targeted surveillance is carried out to detect American foulbrood disease, European foulbrood disease, Varroa, Tracheal mites, Tropilaelaps, small hive beetle, bee louse and Africanised bees.

The statement on page 11 is somewhat confusing and will be amended in the revised risk analysis.

5.22 Page 13. The section on "Recommended sanitary measures" makes no reference to where this information is sourced. Should either refer to later sections, or relocate this section to after the "assessments".

MAF COMMENT

Agreed. This should come at the end of the risk analysis or in a summary table at the very start.

5.23 Page 15: Reference number 11 does not appear in the text.

MAF COMMENT

The reference does not appear in the text. It will be included in the revised risk analysis.

5.24 Page 16: The structure of this section does not follow the rest of the document or the outline on page 6. The first section would be better headed "Hazard identification" rather than "hazard assessment" (as would the same heading in following sections). The following section then leads on as "Risk Assessment".

MAF COMMENT

In the revised risk analysis those viruses exotic to New Zealand (and therefore potential hazards) will be considered in the body of the text.

5.25 Page 16: First line, only "9" viruses appear in Table 1 and not the "10" stated. And the text should refer to Table 1b, not Table 1.

MAF COMMENT

Changes will be made in Risk Assessment.

5.26 Page 16: Second paragraph. The text refers to seven viruses not reported from New Zealand. Table 1a, and the text following this statement both list 8 viruses. It would be more consistent to discuss each virus in the order that they are presented in Table 1a.

MAF COMMENT

See 5.24.

5.27 Page 18/19, conclusion relating to viruses is unacceptable. Is a lack of evidence that these viruses are not in New Zealand justifiable cause not to consider potential sanitary measures to exclude them? This should be identified as an information gap (preferably in a section where all these gaps are pulled together from discussion), and more precaution applied until surveys or beekeepers do identify the viruses.

MAF COMMENT

See 5.24

5.28 Losses associated with trade – para 1 - deformed wing virus has a wide distribution but is not found in either North America or Australia and therefore could impact on the potential to trade in some products with these countries if it were to establish in New Zealand.

MAF COMMENT

The section on viruses is to be rewritten and DWV is to be treated as a potential hazard in the revised risk analysis.

5.29 Control or eradication costs: While the conclusion re. whether such programmes would be instigated in response to the presence of bee viruses may be pragmatic we would question whether such a comment should be voiced in a MAF document such as this without the benefit of context (e.g. distribution in NZ when found, consequences on bee keeping etc.).

MAF COMMENT

There is currently a co-operative study between IACR-Rothamsted and HortResearch on honey bee virus' in New Zealand. (Reference). This section will be changed in the revised risk analysis.

5.30 Page 22 – AFB – the introduction of antibiotic resistant strains of AFB would reduce the potential effectiveness of feeding antibiotics if in the future this treatment was used. Given the current state of the AFB PMS the loss of such a treatment at this time may not be wise.

MAF COMMENT

The permissible level of AFB spores in imported commodities recommended in the risk analysis is only 1% of the lowest spore level ever recorded to establish an infection. Thus MAF considers importation of honey bee hive products with AFB spores levels less than 500,000/L (infectious concentration 5 million spores/L) will have negligible risk of establishing OTC resistant strains of *P. larvae*.

5.31 Page 24 – is there any reason to believe that the treatment required to deactivate *P. larvae* spores on hives should be any different than that required to deactivate those same spores in honey?

MAF COMMENT

Irradiation is not practical as a means of risk management with honey as the honey foams.

5.32 Sanitary measures recommended – para 3 – is there a specific international standard for the provision of area freedom from organisms such as AFB? If so this should be indicated.

MAF COMMENT

For those bee diseases listed in List B of the OIE *International Animal Health Code*, there is a recommendation that imported countries should require the conditions set out in Appendix 3.4.2 of the *Code*. This contains recommendations for area freedoms for export apiaries. However, as New Zealand has AFB, import conditions cannot be more trade restrictive than any conditions that apply within New Zealand.

5.33 Does a visual inspection for symptoms of AFB of 1 January provide adequate assurances that the hive/products are not infected on 31 December of that same year?

MAF COMMENT

Regardless of the level of assurance it provides, it is equivalent to what is required of beekeepers for AFB control in New Zealand. See 5.32.

5.34 Should state what form is considered not to be attractive to bees (not just one example).

MAF COMMENT

Unfortunately there are too many possibilities to be able to state them all or even anticipate them all.

5.35 Define “free” from pollen and honey – visually free from, total weight of pollen etc. there? An inspector will need to be able to determine whether this requirement has been met.

MAF COMMENT

Visually free from.

5.36 Why can not irradiation be used at the 10 kGy rate for all products?

MAF COMMENT

It has not been tested on all products and therefore cannot be recommended

5.37 No information has been provided to show that washing used beekeeping equipment in hot water is an adequate and effective measure.

MAF COMMENT

It has been assumed in the risk analysis that physically removing spores will be effective. Used beekeeping equipment is to be withdrawn from the risk analysis as there are significant information gaps in the safe importation of this equipment, MAF understands that the equipment is available in New Zealand and consultation has shown that there is little interest in import of such equipment.

5.38 Page 26: references 4 and 9 do not appear in the text. Reference 21 is out of alphabetical order.

MAF COMMENT

Both references 4 and 9 do appear in the text.

5.39 EFB – page 28 – hazard determination. remove “.” after “...destroyed”.

MAF COMMENT

There is no full stop after “destroy”.

5.40 What is meant by “...reported to cause problems...” mean in relation to colonies used for pollination?

MAF COMMENT

This means it weakens colonies so they have fewer bees to act as pollinators.

5.41 page 31 – para 2 – Are there examples of countries which currently do require honey sourced from countries that feed antibiotics to be tested? If so it would be worth providing an example at least.

MAF COMMENT

New Zealand honey for the EU is tested for antibiotic residues.

5.42 Page 30: European foulbrood. Consequence assessment. There is no discussion regarding environmental consequences of this disease capable of destroying hives in terms of effects of further reducing pollinators for native plants (in the already depauperate situation as a result of massive declines in avian pollinators). Reference is made only to consequences for kiwifruit production.

MAF COMMENT

See 5.1.

5.43 Page 32 – Irradiation – if 14kgy is effective against *M. pluton* in honey should it not also be effective at this dose rate against this organism in other products?

MAF COMMENT

The advice received from the scientist who carried out this research was that this assumption could not be made.

5.44 Bee collected pollen – pollen tablets are given as an example of a form that is not attractive to bees however in other sections (page 30) of the document it is indicated that these may be fed to bees.

MAF COMMENT

Pollen tablets and pollen pellets are not the same. Tablets are man made aggregations of pollen while pollen pellets are the balls of pollen that are found

on the legs of bees. Note that pollen tablets will not be permitted as this commodity has now been recognised as a risk commodity. This will be amended in the revised risk analysis.

5.45 Used bee keeping equipment – why does this suggested measure differ from that given for the same products in the AFB section?

MAF COMMENT

The level of irradiation required to kill *M. pluton* bacteria on used beekeeping equipment is different. Used beekeeping equipment is to be withdrawn from the risk analysis (see 5.45).

5.46 The thermal death points for *M. pluton* within the document accepts a much different time/temp requirement for the organism in honey than on used equipment. The effectiveness of 160°C for 10 minutes does not seem to be referenced.

MAF COMMENT

This temperature has not been tested. As the temperature is twice that required for honey it has been assumed that it will be effective.

5.47 Page 34. Reference 1 does not appear in the text.

MAF COMMENT

Will be corrected in Risk Assessment.

5.48 Page 36. *Paenibacillus* is reported to have a wide host range, and the first paragraph infers that at least some of these infections cause clinical symptoms. Its status in NZ is unknown, although it has not appeared in testing over the last 5 years. And yet the conclusion does not consider this a hazard. The general discussion does not present information on whether this is a significant bacterium except for significance to honeybees.

MAF COMMENT

This is a saprophytic soil bacterium. It is not a significant bacterium. In countries where *Melissococcus plutonius* is found, additional measures must be taken in the culture of *M plutonius* as *P alvei* overgrows the culture plates. Also . In countries where *Melissococcus plutonius* is found, there are reports of *P alvei* causing confusion in the diagnosis of American foulbrood.

5.49 Distribution – para 2 – “...although it is frequently associated WITH *Melissococcus pluton*...”

MAF COMMENT

The word “with” has been omitted and will be included in the revised risk analysis.

5.50 Page 40. Spiroplasmas are capable of destroying 40% of foraging bees in the US and yet the consequence of introduction to NZ is low. The paragraph on risk estimation concludes that in the absence of information on likelihood of entry to NZ, consequences, and lack of information from the US that consequence is low. This assumes no information means no or little risk. Again, a precautionary principle is not applied.

MAF COMMENT

Although spiroplasmas have been reported to be capable of destroying as many as 40% of foraging bees during the nectar flow, such reports are rare. The section on spiroplasmas will be rewritten in the revised risk analysis and a section on reported affects on insects in the environment will be included.

5.51 Page 42 – Hazard determination – the comment that gregarines may cause serious damage to infected colonies does not gel with the consequence assessment (page 43) where it is stated that the damage gregarines cause to honey bees is unclear.

MAF COMMENT

This section will be rewritten in the revised risk analysis. The reference more correctly states that, although gregarines do cause pathological changes in the cells where they attach, there is little evidence that they cause measurable damage to infected bees.

5.52 Page 43. The statement that "there is little reason to control gregarine infections in temperate climates" and the risk management conclusion that "they are not considered a significant problem in temperate regions" is contrary to an earlier statement that "they may cause serious damage to infected colonies".

MAF COMMENT

See 5.51.

5.53 The statements are also contrary to the statement that "there is not enough information to conclude that they would not cause some problems in the northern North Island of New Zealand".

MAF COMMENT

The revised risk analysis will state that gregarines appear to be of little measurable consequence to honey bee colonies in temperate regions, but could possibly cause some insignificant problems for bees in the more sub-tropical areas of the North Island of New Zealand.

5.54 Page 44. The conclusion on risk management of chalkbrood that it is "already present in NZ and there is no information that the strain present here is any less virulent than those found elsewhere." conflicts with earlier statements:

"Twenty fold differences between the virulence of some strains have been reported"

" It is possible that strains reported outside New Zealand are more virulent"

"Chalkbrood does not appear to cause the problems in NZ that have been reported in Israel"

"If more virulent strains than that in NZ do exist and were introduced, it is likely to adversely affect production and the pollinating efficiency of colonies" and is therefore not justifiable.

MAF COMMENT

The reference in the risk analysis to "strains of chalkbrood" is confusing, as reports of differences in severity of chalkbrood disease in various countries should not be linked to differences in virulence between strains of *Ascos. apis* without supporting experimental evidence. Factors such as the environmental conditions, including availability of a variety of food sources, affect the severity of chalkbrood disease. In fact it is difficult to set up infection with *Asos apis* in the field when bees have alternative food sources available to dilute any introduced *Asos apis*. This will be clarified in the revised risk analysis.

Moreover, any adverse affects from *Ascos apis* are likely to be transitory, since honey bees show a marked variability in susceptibility to infection. The consequence assessment is therefore negligible.

5.55 Page 52. This section states varoosis is caused by the mite *Varroa destructor*. There is discussion in paragraph 2 about *Euvarroa sinhai* but its relationship to this disease is not clear given the first statement.

MAF COMMENT

Euvarroa sinhai is not a pathogen of *A. mellifera* and therefore does not cause varoosis.

5.56 The statement relating to the lower North Island being free of *Varroa* requires updating.

MAF COMMENT

This will be updated.

5.57 It is stated that partly submerged mites may possibly be transported in royal jelly (P. 53) and assumes that royal jelly is likely to be frozen or processed. Presumably on that basis the risk management section imposes no restrictions, but the assumption should be stated again and there is no information on the type of "processing" acceptable to eliminate this risk. If freezing is the measure for *Varroa* in royal jelly this should be

explicitly stated as such and not merely assumed as common practice.

MAF COMMENT

Agree. This section needs to be rewritten in the revised risk analysis. Condition should be brought through to the sanitary measures.

5.58 Page 56, 2nd line, "only 2 temperatures have been tested," should refer to what these 2 temperatures are.

MAF COMMENT

Agree that the wording is inconsistent and requires further explanation. This will be addressed in the revised risk analysis.

5.59 Page 61 – Used bee keeping equipment – why is there a requirement for inspection on arrival to ensure freedom from live bees when this requirement is not used for other organisms (e.g. *Varroa* and *Braula*)?

MAF COMMENT

Because *Tropilaelaps* is different in that it cannot survive more than 3 days without bees

5.60 Page 64: The discussion on *Braula* is inconsistent with other potential hazards. In this case the risk is considered low, and the consequence low, but sanitary measures are justified.

MAF COMMENT

Even though the risk and consequence was considered to be low, they were not negligible and were thought to be high enough to justify sanitary measures.

5.61 Page 70: Africanised bees. There is no discussion on why life stages other than adults are not a risk.

MAF COMMENT

The other life stages of honey bees cannot survive without the presence of adult bees except under controlled conditions.

5.62 Page 71. Second paragraph is more a discussion of hazard identification than consequence.

MAF COMMENT

Agreed. The section on Africanised bees will be rewritten in the revised risk analysis.

5.63 para 5 – where is the reasoning/evidence behind this comment? Does this mean any colonies would be likely to be infected with Varroa and/or tracheal mites at the time of establishment or that this would occur once they had established?

MAF COMMENT

Africanised honey bee colonies are likely to be infected with varroa and tracheal mites as both are endemic throughout the range of africanised bees (note that tracheal mites are not found in New Zealand).

5.64 Page 73: Other *Apis* species. There is no discussion about the consequence of other *Apis* species on any values other than bee keeping in New Zealand. And again, no discussion on why adults are the only life stage considered a risk.

MAF COMMENT

The consequences of introduction of other *Apis* species is covered in the honey bee genetic material risk analysis. As noted in this (honey bee hive product) risk analysis, live or dead honey bees are not included. Also, as used beekeeping equipment will be removed from consideration, there is no obvious reason for considering other *Apis* species.

5.65 This section does not take into account the possible risks posed by *Apis mellifera* of unknown health status entering New Zealand via these pathways.

MAF COMMENT

The diseases of concern are dealt with in the specific sections of the risk analysis. All potential pathways are covered in these sections.

5.66 Page 76: “These fungi infect and kill insects” not “and kill other insects”

MAF COMMENT

Agreed. This change will be incorporated in the Risk Analysis.

5.67 Page 78: Honey – the measure is such processing that removes the beetle and not the packaging in which the honey is placed. If the honey has been filtered/processed to such an extent necessary to remove the beetle why would bulk packs be unsuitable?

MAF COMMENT

Whereas consumer packs are filtered to remove wax and foreign objects, drums of honey are usually not filtered to the same extent.

5.68 Royal jelly – again the assumption has been made that this will usually be processed and frozen. If this is the measure it should be explicitly stated as such.

MAF COMMENT

Agree. This condition should be brought through to the sanitary measures, see 5.57.

5.69 Page 81: Used bee keeping equipment – hive parts – why can these not be subjected to methyl bromide fumigation (or similar) to destroy the beetle? Would suggest MAF Biosecurity Plants may be able to provide some advice in this area.

MAF COMMENT

Methyl bromide has not been tested against the small hive beetle.

6. Claudia Stanley Brendan McDonald (MAF)

From: Claudia Slaney
To: Brendan McDonald
Date: 8/28/02 1:22pm
Subject: Draft 'IHS for importation into New Zealand of honey bee hive products and usedbeekeeping equipment

Hi Brendan,
Following are comments on the draft standard for Honey Beehive Products and Used Beekeeping Equipment.

1/ There's no mention of the exemption for some pacific islands (eg Niue) which is in the current IHS. Was this forgotten or deliberately omitted?

2/ 6.1 the comment referring users to the General Conditions could easily be overlooked. Perhaps that could be in bold, with a "see section 7" added.

Similarly if there could be a "see section 7.1" at 6.1(i) and other sections as appropriate for the rest of the list under 6.1 it would be helpful, as users in a hurry may take a quick look at that list and assume that a given product is allowed.

3/ 6.5 - the referral to Part C needs to be much clearer.

Also, they need to state emphatically whether or not a permit is required to send samples to a transitional facility, or at least a letter of permission from the T/F operator for the importer to use their facility.

Is it possible to have a link on the website to the current T/F list?

4/ Could we have a referral under each section 7 category to the appropriate section 10 conditions eg under 7.1 refer user to 10.1

5/ 7.5.1 Please add more details of required treatment.

6/ Where the user is required to check certification, please refer user to appropriate example in section D.

7/ What's happened to the products listed as okay in the current IHS eg some honey mustards, carbonated honey drinks etc.

8/ A clear instruction re propolis toothpaste please. NB in definitions, propolis is said to be unattractive to bees, and yet is still covered by various restrictions in section 7. This will lead to confusion.

A reference to 10.1 (Zoosanitary Certificate) should be included in 7.1(ie at the end of 7.1), also 10.2 with 7.2 etc.

See 10.1 for sample Zoosanitary Certificate for honey.

This would help QOs when faced with a certificate.

6.1 1/ There's no mention of the exemption for some Pacific islands (eg Niue) which is in the current HIS. Was this forgotten or deliberately omitted?

MAF COMMENT

MAF has decided that the draft import health standard to cover all countries is not practical and specific import health standards will be drafted (and consulted on) when MAF receives requests for specific imports.

MAF will require evidence from the Pacific Islands to support claims for country freedom once the risk analysis is finalised. This will give confidence that the current import health standards are appropriate. This was deliberate.

6.2 2/ 6.1 the comment referring users to the General Conditions could easily be overlooked. Perhaps that could be in bold, with a "see section 7" added.

MAF COMMENT

Agreed. MAF will not issue a generic import health standard (see 6.1)

6.3 Similarly if there could be a "see section 7.1" at 6.1(i) and other sections as appropriate for the rest of the list under 6.1 it would be helpful, as users in a hurry may take a quick look at that list and assume that a given product is allowed.

MAF COMMENT

Agreed. MAF will not issue a generic import health standard (see 6.1)

6.4 3/ 6.5 - the referral to Part C needs to be much clearer.

Also, they need to state emphatically whether or not a permit is required to send samples to a transitional facility, or at least a letter of permission from the T/F operator for the importer to use their facility.

Is it possible to have a link on the website to the current T/F list?

MAF COMMENT

Agreed. MAF will not issue a generic import health standard (see 6.1) An import health standard for trade samples will need to be developed. A permit to import will be required.

6.5 4/ Could we have a referral under each section 7 category to the appropriate section 10 conditions eg under 7.1 refer user to 10.1

MAF COMMENT

MAF will not issue a generic import health standard (see 6.1)

6.6 5/ 7.5.1 Please add more details of required treatment.

MAF COMMENT

Used beekeeping equipment is to be withdrawn from the risk analysis as there are significant information gaps in the safe importation of this equipment, MAF understands that the equipment is available in New Zealand and consultation has shown that there is little interest in import of such equipment.

6.7 6/ Where the user is required to check certification, please refer user to appropriate example in section D.

MAF COMMENT

MAF will not issue a generic import health standard (see 6.1)

6.8 7/ What's happened to the products listed as okay in the current IHS eg some honey mustards, carbonated honey drinks etc.

MAF COMMENT

It has been decided that a list is not appropriate. Each product that contains bee products will need to have either certification to demonstrate that it has been treated to eliminate the risks of carrying pests or diseases, or shown not to be attractive to bees.

MAF acknowledges the difficulties border staff experience when faced with making decisions about the likelihood of products to be attractive to bees. However, the large number of products makes individual recommendations in the risk analysis impossible. MAF believes that the definition given (something is attractive to bees if it will attract bees if it was discarded in the environment) is a workable solution. Whether it is attractive will depend on the concentration of honey, other sugars, and its scent. Using this definition, carbonated honey drinks and honey and mustard dressings would be regarded as “attractive to bees” unless the particular product was such that border staff considered attractiveness would not occur (such as a drink containing honey where the packaging makes exposure to bees even if discarded negligible). Where the attractiveness of a product containing honey bee hive products cannot be determined it should be treated as potentially attractive and excluded from entry. Commercial companies can apply to MAF for dispensations. MAF would require evidence (such as laboratory trials) that the product was unattractive to bees.

6.9 8/ A clear instruction re propolis toothpaste please. NB in definitions, propolis is said to be unattractive to bees, and yet is still covered by various restrictions in section 7. This will lead to confusion.

MAF COMMENT

Propolis is to be regarded as attractive to bees following consultation. Propolis toothpaste may be deemed unattractive to bees as the packaging will not allow exposure when discarded.

6.10 A reference to 10.1 (Zoosanitary Certificate) should be included in 7.1(ie at the end of 7.1), also 10.2 with 7.2 etc.

MAF COMMENT

MAF will not issue a generic import health standard (see 6.1)

7. HoneyLand New Zealand Ltd., Palmerston North

HONEYLAND N.Z. LTD.

36 CLIFTON TERRACE, PALMERSTON NORTH, NEW ZEALAND
TELEPHONE/FAX (06) 354 0206 EMAIL honeyland@xtra.co.nz

27 August 2002

Submission on the Draft Risk Analysis and Health Standard for the Honey Bee Hive Products and Used Beekeeping Equipment

Firstly, in making this submission, my first such effort, I should acknowledge that the risk analysis is detailed and scientifically validated, a daunting task for a layman to critique. I respond, not in terms of laboratory tests results, but in terms of practicalities, the every day realities of business and life. My motivation is not to wage war against the ideology of free trade, but to speak in the interests of the New Zealand beekeeper, the New Zealand agriculturists, and also, in my own area of interest, the New Zealand honey exporters.

I take issue with the preliminary statement of intention, which seeks to ensure achieving a balance between the risk of disease incursions and the need to fulfil obligations under international trade agreements.

I have been exporting honey to Asia, mostly to Japan, for 16 years and have noted that there are import duties in all these markets against honey. In some countries this customs duty is as high as 60%. Why? I believe this duty is not so much to protect actual honey production, which is insignificant in terms of national agricultural returns; rather, this duty serves to protect beekeeping as an occupation, so vital as it is for pollination in horticulture and agriculture.

Thus, to lift our safe practice of a ban on all honey bee hive products under the premise of international trade obligations would seem extremely foolish. The 'international free trade' agreements with regards to honey are, in practice, non-existent - a consequence of the recognition by each of these countries, of the need to protect the core agricultural services of beekeeping.

The history of my own company, Honeyland NZ Ltd. shows it has been a slow task to break into the Japanese market with New Zealand branded, retail honey products. Prior to this, almost the only New Zealand honey sold to Japan was in bulk 300kg drums - honey as a commodity used to upgrade cheaper, poor quality imported honey, and completely anonymous to the end-user. As a result, there was no profile for New Zealand honey amongst Japanese consumers.

We have now achieved significant markets in Japan, based on the fact that our honey is pure, guaranteed free of antibiotics. This is an undeniable advantage over all other imported honeys, especially those of China, which earlier this year caused such disruption to the international honey trade as a result of unacceptable levels of antibiotic residues.

One of the main reasons that New Zealand can maintain this antibiotic-free status is because we do not have the bee disease, European Foul Brood in New Zealand - a disease that necessitates regular drug-feeding regimes. Of course, if this pest management is managed scrupulously, there should be little risk of contamination. That is where the 'risk analysis' conducted by scientists in laboratory falls down. It fails to take into account the human factor - carelessness or forgetfulness, sometimes innocent, but also sometimes malevolent, which can bring disaster for a whole industry.

The idea that honey and other bee hive products/equipment can be heat treated to prevent the accidental introduction of European foul brood can be scientifically validated, but it fails to deal with this issue of human fallibility, and opens New Zealand beekeeping to dire risks. Inevitably there will be failures. It only needs a small amount of honey, such as might be left in a packing-line pipe, accidentally overlooked in the heat treatment, that could bring to New Zealand European Foul Brood. There is no safe dilution level for

EFB. If it arrives in New Zealand it will spread rapidly throughout the country, much quicker than the varroa mite.

This could be described as an ‘accidental incursion’, but add to this the possibility of some operation in some overseas country, lacking strict verification measures and surveillance, one slightly shoddy episode, outside New Zealand’s control and supervision, with such serious consequences.

And then again there is the scenario of ignorance. The population of New Zealand, thanks to the abundance of media reports about the arrival of varroa, is beginning to understand why they should not bring foreign honey into the country. With the uplifting of the ban on honey importation, (even though it is conditional on heat treatment) there will be imported honey on our New Zealand supermarket shelves. For the majority of New Zealanders there will be no instruction about why this honey is safe. They will not understand that it has been heat treated to prevent disease incursions. Familiarity with such products will lead to the temptation to pick up their own honey from overseas.

There is such an enormous difference between **no** imported honey and **some** imported honey. The first position can be relatively easily communicated to New Zealanders and foreigners. The second position is much more difficult to control and defend. It requires verification, communication, education, and even more, good will and honesty, factors that are not always typical of international trading today.

An important follow up to this risk analysis should be looking at the likely cost to the whole of New Zealand if European Foul Brood, to name just one of the risks, were to arrive here as a result of the importation of honey bee hive products and used beekeeping equipment. Additionally, there should be a consideration as to what authority would be held commercially responsible, liable for the costs. It would be of little use to ask beekeepers to carry the costs, as there would be few left in business. The New Zealand beekeepers are already financially disadvantaged by the recent varroa mite invasion, and if they were then forced to contend with the introduction of European Foul Brood, combined with the flow of cheaper imported honey by the Australian-owned supermarkets, beekeeping would not be economically viable. Varroa will eventually wipe out all the wild hives in New Zealand, and the only pollination will come from beekeeper - managed hives, so it will become even more crucial than ever to make this an attractive industry for present beekeepers and the recruitment of newcomers.

For the above reasons, I strongly oppose any change to our present laws prohibiting the importation of honey bee hive products and used beekeeping equipment.

7.1 I take issue with the preliminary statement of intention, which seeks to ensure achieving a balance between the risk of disease incursions and the need to fulfil obligations under international trade agreements.

MAF COMMENT

MAF agrees that the purpose of the risk analysis is not to “ensure that a balance is achieved between New Zealand’s need to minimise the likelihood of disease incursions and their consequences, and the need to fulfil obligations under international agreements.”

This statement will be changed to “This risk analysis evaluates the risk of potentially hazardous organisms entering and establishing in New Zealand, and their probable impact on animal and human health, the environment and the economy, as a result of the purposeful importation of honey bee hive products. Where a hazard is identified, risk management measures will be recommended where appropriate.”

7.2 Thus, to lift our safe practice of a ban on all honey bee hive products under the premise of international trade obligations would seem extremely foolish.

MAF COMMENT

New Zealand is dependent on trade and has obligations under the Sanitary and Phytosanitary Agreement (SPS). Countries can only impose SPS measures that are based on science and are imposed to protect the health of animal, plant or human populations.

7.3 That is where the ‘risk analysis’ conducted by scientists in laboratory falls down. It fails to take into account the human factor – carelessness or forgetfulness, sometimes innocent, but also sometimes malevolent, which can bring disaster for a whole industry.

MAF COMMENT

As stated above, under New Zealand’s international agreements, countries cannot impose Sanitary and Phytosanitary (SPS) measures that are not based on science.

7.4 The idea that honey and other bee hive products/equipment can be heat treated to prevent the accidental introduction of European foul brood can be scientifically validated, but it fails to deal with this issue of human fallibility, and opens New Zealand beekeeping to dire risks. Inevitably there will be failures. It only needs a small amount of honey, such as might be left in a packing-line pipe, accidentally overlooked in the heat treatment, that could bring to New Zealand European Foul Brood. There is no safe dilution level for EFB.

MAF COMMENT

The risk assessment does not suggest the use of dilution to eliminate the risk of introducing European foulbrood disease.

MAF will require certification that products have been adequately heat treated; products that are not continuously stirred will need certification of deep core samples that prove required temperatures and time conditions have been met.

7.5 This could be described as an ‘accidental incursion’, but add to this the possibility of some operation in some overseas country, lacking strict verification measures and surveillance, one slightly shoddy episode, outside New Zealand’s control and supervision, with such serious consequences.

MAF COMMENT

We trade with countries whose Veterinary Administration we trust. If we do not have sufficient confidence in the veterinary administration of a particular country, we have the option of undertaking an evaluation of that country’s veterinary services, as mentioned in article 1.3.3.3 of the OIE Code, according to the guidelines in Chapter 1.34 of the Code.

7.6 And then again there is the scenario of ignorance. The population of New Zealand, thanks to the abundance of media reports about the arrival of varroa, is beginning to understand why they should not bring foreign honey into the country. With the uplifting of the ban on honey importation, (even though it is conditional on heat treatment) there will be imported honey on our New Zealand supermarket shelves. For the majority of New Zealanders there will be no instruction about why this honey is safe. They will not understand that it has been heat treated to prevent disease incursions. Familiarity with such products will lead to the temptation to pick up their own honey from overseas.

MAF COMMENT

The public will be advised that honey that has not been approved by MAF cannot be brought into New Zealand. Honey will need certification before importation is allowed. Private consignments of honey will not meet these requirements. These consignments will be picked up at the border as currently occurs.

7.7 An important follow up to this risk analysis should be looking at the likely cost to the whole of New Zealand if European Foul Brood, to name just one of the risks, were to arrive here as a result of the importation of honey bee hive products and used beekeeping equipment. Additionally, there should be a consideration as to what authority would be held commercially responsible, liable for the costs. It would be of little use to ask beekeepers to carry the costs, as there would be few left in business. The New Zealand beekeepers are already financially disadvantaged by the recent varroa mite invasion, and if they were then forced to contend with the introduction of European Foul Brood, combined with the flow of cheaper imported honey by the Australian-owned

supermarkets, beekeeping would not be economically viable. Varroa will eventually wipe out all the wild hives in New Zealand, and the only pollination will come from beekeeper - managed hives, so it will become even more crucial than ever to make this an attractive industry for present beekeepers and the recruitment of newcomers.

MAF COMMENT

The consequence assessments in the risk analysis address the issue of economic consequences.

8. Alyson Baker, Ministry of Health

From: Alyson Baker <infowolf@actrix.gen.nz>
To: <bruntonj@maf.govt.nz>
Date: 9/2/02 2:57pm
Subject: Re: Draft IHS and risk analysis for consultation AR60-180

Hi Jennie

Got an auto-reply from Jessie Chan to following e-mail saying to give the send the information to you:

Hi Jessie

Thank you for the opportunity for the Ministry of Health to comment on the draft import risk analysis and import health standard for honey bee hive products and used beekeeping equipment.

The Senior Advisor, Public Health Medicine has asked that we point out that all medicines, health foods and tonics containing bee products need to comply with the Medicines Act 1981 and Dietary Supplements Regulations 1985. She had also advised that there may be a risk of botulism associated with the consumption of honey, and she asks if there is any testing, or are there any appropriate safeguards proposed, for imported honey to address this risk?

Thank you again, look forward to your reply.

Alyson Baker
Senior Advisor (Biosecurity)
Public Health Programmes
Public Health Directorate
Ministry of Health
Mobile: 021 1289202

CC: <sally_Gilbert@moh.govt.nz>

8.1 All medicines, health foods and tonics containing bee products need to comply with the Medicines Act 1981 and Dietary Supplements Regulations 1985.

MAF COMMENT

This will be addressed in any draft import health standards developed.

8.2 There may be a risk of botulism associated with the consumption of honey, and she asks if there is any testing, or are there any appropriate safeguards proposed, for imported honey to address this risk?

MAF COMMENT

There is no routine testing done for botulism spores in New Zealand honey or any reason to suspect that imported honey is more likely to be infected than locally produced honey. It would therefore be inappropriate to place special conditions on imported honey as far as botulism is concerned.

9. Verity Forbes, Department of Conservation.

From: <VFORBES@doc.govt.nz>
To: <bruntonj@maf.govt.nz>
Date: 9/3/02 8:38am
Subject: Honeybee Products & Equipment IRA/IHS AR60-180

Dear Jennie

Thank you for the opportunity to comment on the above import risk analysis and import health standard.

The Department assumes that the risk evaluation and management for all pathogenic agents able to be vectored via honeybee products or equipment (particularly honey) have been identified and appropriately assessed in relation to their potential for release, exposure and consequence to the environment and native biota.

Unfortunately the Department does not currently have in-house expertise to provide advice in these areas, hence, we ask that MAF provide this assurance as the agency developing the IHS.

Thank you for the opportunity to provide input once again.

Regards,
Verity Forbes

Verity Forbes
New Organisms Officer
Department of Conservation
Science & Research
PO Box 10-420
Wellington
Ph: (04) 471 3251
VPN: 8251

This e-mail (and attachments) is confidential
and may be legally privileged.
#####

CC: <cgreen@doc.govt.nz>, <mcguinness@doc.govt.nz>

9.1 The Department assumes that the risk evaluation and management for all pathogenic agents able to be vectored via honeybee products or equipment (particularly honey) have been identified and appropriately assessed in relation to their potential for release, exposure and consequence to the environment and native biota.

Unfortunately the Department does not currently have in-house expertise to provide advice in these areas, hence, we ask that MAF provide this assurance as the agency developing the IHS.

MAF COMMENT

MAF agrees that environmental issues have not been addressed in the consequence assessments. This will be addressed in the revised risk analysis.

10. National Beekeepers Association of New Zealand.



NATIONAL BEEKEEPERS' ASSOCIATION of NEW ZEALAND (INC.)

P O Box 715, Wellington
Tel: (04) 473 7269
Fax: (04) 473 1081
Email: tleslie@fedfarm.org.nz

Submission

On the

***DRAFT* Import Health Standards for the Importation into New Zealand of Honey Bee Hive Products and Used Beekeeping Equipment**

And the

**Animal Import Risk Analysis:
Honey Bee Hive Products and Used Equipment**

On Behalf of the Members

Of the

National Beekeepers Association of New Zealand Inc.

August 2002

Contact Details:

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Introduction

The National Beekeepers Association currently represents all beekeepers who own more than three apiaries, or more than 10 beehives.

This equates to over 800 members, who gain some monetary benefit from the keeping of bees, or solely rely on bees for their living.

Number of beekeepers with more than 10 hives:	823
Number of beekeepers who have more than 250 hives:	281

(Taken from statistics supplied by Agriquality on 25 March 2002)

Exports of Bee products for 12 months Ending December 2001			
	Unit	Volume	FOB \$NZ
Package Bees	NMB	19,193	1,085,959
Bulk Honey	KGM	1,590,469	5,251,013
Retail Packs	KGM	1,235,274	10,941,295
Natural Honey	KGM	29,924	308,296
Comb Honey	KGM	66,440	711,099
Honey Dew	KGM	468,582	1,428,192
Beeswax	KGM	67,192	571,130
TOTAL			20,378,421

Exports

New Zealand produces on average around 8-9,000 tonnes of honey per annum, of which some 1-3,000 tonnes is exported. Beekeepers also produce bees, bees wax, propolis, pollen, royal jelly and bee venom. A portion of these other bee products are also exported.

Source: Statistics New Zealand, Overseas Trade

Many of the beekeepers in the numbers mentioned above, solely trade in commodity products. Others do pack and sell product in a “value added” form, but the return for this product is still largely dependent on the World trade of supply and demand.

The New Zealand Beekeeping industry is currently restricted on what claims can be made on products produced, due to legislation imposed by Government. The Industry will be unable to gain greater monetary benefit from sale of “functional” or “Novel” foods, until this legislation is changed to allow claims where science has proven a benefit from the consumption of bee products.

Pollination

Since the discovery of *Varroa destructor* in the North Island of New Zealand in April 2000, beekeepers in the Upper North Island have had to learn to ‘live’ with Varroa. As has happened from overseas experience,

many beekeepers have chosen to exit the industry, while others have to restructure in order to survive. Many hive losses have resulted from the re-invasion occurring, and pollination of crops such as Kiwifruit, will be seriously affected if a shortage of hives occurs this and next pollination season.

In a brochure recently received in the mail from the Ministry of Agriculture and Forestry (MAF), on New Zealand Agriculture, Forestry and Horticulture – In brief, we were interested to note the dollar value of Exports, and the percentage of total Exports that requires bees to pollinate the plants that either, produce fruit, or food (clover and ryegrass) to feed animals, that in turn provide the exportable product.

(It should be noted that the pollination of the clover plant, ensures its continuance in the pasture sward. The clover produces nitrogen that helps to grow ryegrass. If the clover disappears from the pasture, the farmer will have to apply large amounts of Urea (nitrogen) to get the same benefit gained by having clover present in the pasture. We are already seeing that some waterways are being affected by nitrogen runoff, and some Regional councils are placing restrictions on the amount of nitrogen to be applied.)

In one of the pie graphs, for Agriculture, Forestry and Horticulture Exports, it gives the total exports were valued at \$20.6 billion and accounted for 66% of New Zealand's total exports. Bees either have a direct effect, or an indirect effect on all but forestry production, so it can be deduced from this that bees contributed to \$16.95 billion worth of exports. These figures are for the year ended March 2002.

In another section it gives the value for New Zealand's Fruit Exports for the year ended March 2002, as being \$1,052m fob.

Of interest is:

Kiwifruit	\$578m	- almost solely reliant on bees for pollination
Apples	\$360m	- heavily reliant on bees for pollination
Berry fruit	\$15m	- most require bees for pollination

Avocados and pears also require bees for pollination.

As can be seen from the above figures, bees do play an extremely important part in the ability of New Zealand to export produce. Anything that adversely affects the bees, or the beekeepers ability to derive a profit from their business, will mean that New Zealand will have a lessened Agricultural and Horticultural Export potential.

This will have a negative effect on the New Zealand Economy.

Effect of Varroa

In a thesis on **Varroa Control costs and the Impact on South Island beekeepers**, by Kim van Vuuren from the University of Canterbury, she states in the Executive Summary: **“Overall there is a need to improve profitability for many businesses to become sustainable and then improve profitability by another \$20 to \$30 per hive to cope with the costs of controlling varroa”.**

The Industry contends that any importation of product from overseas will destroy the Beekeeping Industry if further incursions of unwanted organisms, or diseases are ‘accidentally’ bought in with product, or cheaper product imported, that our beekeepers are unable to match because of our higher production costs. Our Industry is, in most years, a net exporter of bee products, and we see little need to import bee products into New Zealand.

Also of concern to us is the fact that if product is allowed entry into New Zealand under strict regulations e.g. honey needing to be heat treated, then the public once they have seen the product on the shop shelf in New Zealand, will think that it is OK to bring in the product when they come back from an overseas trip. The only problem will be that even though they may look like the same product, one will have been heat treated, and the one that they bring in is likely to have not been heat treated.

We consider that there will need to be greater public education on bee product entry requirements into New Zealand, and also there is a need for some labelling requirement to say that the product imported into New Zealand has met strict requirements before entry.

Recommendations

- 1 **The Animal Import Risk Analysis: Honey Bee Hive Products and Used Equipment**, be reviewed, with the view of taking a **“Precautionary” approach** to the importation, i.e. where insufficient information on an organism or disease is indicated, that the importation of products that may harbour these organisms, or diseases, be **not allowed entry into New Zealand** until there is sufficient information to determine there is absolutely minimal chance of negative affects on the beekeeping industry and New Zealand as a whole.
- 2 **The National Beekeepers Association recommends that the Import Health Standard be reviewed, in particular with respect to the Eligibility of products to be imported.**
All of the products listed in 6.1 concerns us, but of particular concern is:
 - honey in bulk drums,
 - bulk bee pollen, and
 - bee pollen coming into the country as a component of pollen supplements for feeding to bees.
 - Used beekeeping equipment – including comb, feeders, pollen traps and dispensers, honey extracting equipment
- 3 **The National Beekeepers Association recommends that the general conditions in Section 7 need to be reviewed, and rewritten to address the Industry concerns over this import health standard.** As an example, in 7.2 for bees’ wax ii) if freedom from European foulbrood has not been approved by MAF then bees wax must be:
 - a) accompanied by a certificate from the official veterinary authority which documents that the bees wax has been gamma irradiated with 14kGy from ⁶⁰Co **OR**
 - b) in blocks of wax less than or equal to 1kg (so that it will not be made into foundation).The Association contends that the practice mentioned in b) above could be very harmful, as that 1kg block could be bought, traded etc and still then be converted into comb foundation.
- 4 **Before product allowed entry into New Zealand, that the Industry gets the opportunity to see proof of the assurance systems that MAF have negotiated, and get an opportunity to make comment on them.**
- 5 The Industry would like to see what is **proposed for auditing the “Quality Systems”** and have an opportunity for comment.
- 6 **That all products when bought into the country to be marked with the “Country of Origin”**, so that consumers can make an informed choice on what they buy. We also ask that products that enter the country should have a better or equivalent - disease status (e.g. spore levels in Honey) and
- Food standard to our domestic product.
- 7 **That any importation of product that may harbour diseases that will compromise our American Foulbrood Pest Management Strategy not be permitted.**
- 8 That consideration be given to our Industry, with regard to what the economic effect will be should imports be allowed into the country. This needs to be considered in the light of what has happened in the likes of the United States, where product has been allowed entry, only to find that it has severely affected an industry to the point where anti –dumping tariffs have been imposed. We know that the New Zealand Government is opposed to any forms of subsidising an industry, or creating trade barriers, or tariffs, but we ask that extreme caution is used before imports allowed.

Animal Import Risk Analysis:
Honey Bee Hive Products and Used Equipment

The National Beekeepers Association is astounded at the format used in this risk analysis. We feel that it is a very irresponsible way of determining what is an acceptable risk, particularly when New Zealanders as a whole are very concerned about the country's Biosecurity, and would rather see more funding put in to stopping possible incursions before they reach our shores.

We find that the number of assumptions made in this analysis are too great, and expose our Industry and New Zealand to irreparable harm.

On page 7 in the introduction we quote: "Many honey bee diseases have not been subject to extensive investigation. It is therefore, necessary to make several assumptions in this risk assessment. The first is that **if there are few reports of problems associated with a pathogen, it will be assumed not to be a major disease causing organism.** The second is that **if there are no reports of strain differences with respect to pathogenicity, it will be assumed there are none.**" And again a few lines down – "If there have been reports of strain differences for organisms already present in New Zealand, **it will be assumed that the strains present here are no more or less pathogenic than those elsewhere unless there are data available to prove this**".

The Beekeeping industry finds this approach deplorable!! Where there is no data on these pathogens, precaution is the only sensible approach, and no importation allowed until the research has been done, and is proven to be safe to import product that could carry these pathogens.

The National Beekeepers Association recommends that:

Where there is insufficient data to reliably determine the risk, that funding be made available to carry out the required research, BEFORE any importation is permitted.

And that an economic Cost benefit analysis be conducted on all of the considered pests and diseases, to give an indicative figure of what it would cost the Agriculture, Horticulture sectors and indeed the whole New Zealand economy, should more pests and diseases enter the country that could have a detrimental effect on the ability of the Beekeeping Industry to produce bee products, and carry out crop pollination.

The National Beekeepers Association would like to ask MAF what is the level of risk that they consider to be acceptable? What are the parameters that are used to determine whether a risk is acceptable? The Association asks that these parameters are made available to us to make comment on. We ask that the risks are quantified rather than qualified.

Areas of Concern

Viruses: In the conclusion it is stated that "Although both deformed wing virus, and slow paralysis virus could be considered a hazard now that *Varroa* is present in New Zealand, the evidence that they are not already here is insufficient to attempt to justify specific sanitary measures to keep them out. Viruses will, therefore, not be considered further in this risk analysis."

The Association notes that we are known to have only 10 out of 17 viruses. We do not wish to have further viruses.

Paenibacillus Alvei: "*P. alvei* will not be regarded as a hazard for this risk analysis, and sanitary measures are not justified".

The Association considers that this should be in fact considered a risk, because of the fact that *P. alvei* is almost always present with European Foulbrood, and this mimics some of the symptoms of American Foulbrood (AFB), so its introduction into New Zealand with European Foulbrood would severely compromise our Pest Management Strategy. The goal of this Pest Management Strategy is to eliminate American foulbrood from New Zealand. This strategy is in force until 2008.

Spiroplasma: in the risk estimation it is stated: “There is not enough information available to reliably predict the likelihood of spiroplasmas being introduced into New Zealand.... Or the consequences if they were introduced. They have only been reported to impact on bees in the southwest of France and in the United States (destroyed 40% of foraging bees), and their economic impact has not been quantified. The consequences of introducing spiroplasmas is considered to be low”.

The Association considers that if there have been reports of problems associated with this bacteria in other countries, then we do not wish to risk having this imported in product.

Chalkbrood : In the risk management: “As chalkbrood is already present in New Zealand and there is no information available that indicates that the strain present here is any less virulent than those found elsewhere, no sanitary measures for risk management are recommended.”

The Association would ask that sanitary measure should be recommended to ensure no other strains of chalkbrood come into the country that may be more virulent than what is currently here.

Acariasis: the tracheal mite,
Tropilaelaps : the Asian mite,
Bee louse *Braula coeca* – a wingless fly,
Africanised bees,
Stonebrood, and
Small Hive Beetle
Vespa species: hornets
European Foulbrood

The National Beekeepers Association wishes to point out that the six organisms listed above, and the fungi causing stonebrood and European foulbrood, are not known to be present in New Zealand, and that its members would be betrayed if they did enter the country due to the fact that the risk analysis was flawed, and the correct measures were not taken to ensure our country remains free of these pests.

We understand from some discussion over the trial on heat treating of honey to determine the heat treatment required to destroy *Melissococcus pluton*, that this trial has only been conducted in a laboratory situation. We are concerned that if honey in bulk is to be heat treated to destroy *M. pluton*, if in fact the heat treatment regime will work. In some cases, depending on the method used for heating a drum of honey, the honey in the centre of the drum may not reach as high a temperature as the other honey in the drum. This may have the consequences of not killing all of the spores, and thus creates an unacceptable risk to our industry members.

Of particular concern is that it is stated in the risk analysis that the minimum infective dose for *M. pluton* is unknown. Therefore any product that is likely to carry these spores should not be allowed entry into New Zealand.

The National Beekeepers Association considers that:

Products that may harbour any pathogen or unwanted organism that may cause honey bee diseases that will cause our members further hardship, in both time and cost, to control or eradicate, should not be permitted entry into the country.

The National Beekeepers Association notes that in the risk analysis, in the table that gives the pest and disease status of New Zealand honey bees, that the Small Hive Beetle is not classed as an unwanted organism. We would like to ask that this status is changed immediately. The reports from overseas indicate that an invasion of the Small Hive Beetle would be catastrophic here in New Zealand, as it is reported to be capable of destroying honeybee colonies.

The Draft Import Health Standard for the importation onto New Zealand of honey bee hive Products and Used beekeeping equipment

User Guide

The National Beekeepers Association is concerned over a section in Part B Importation Procedure

Section 5 Permit to import

- 5.1 reads: “Importation of honey bee hive products and used beekeeping equipment into New Zealand which meet the requirements of this import health standard may, subject to sections 27 and 28 of the Biosecurity Act, be given biosecurity clearance and do not require direction to a transitional facility. **As such they do not require a permit to import.** Note that Trade samples of honey (see section 6.5) will require a permit to import”.

The National Beekeepers Association is concerned that after reading section 27 of the Biosecurity Act, that the decision on what will be allowed entry into the country will rely on the interpretation of the Health Standard, by **one** inspector.

If that Inspector is satisfied that the product meets all of the criteria set in the Health Standard, then a permit will not be required.

The Association maintains that permits should always be required, to allow for traceability of product, should an unwanted organism be found, or product imported that has antibiotic residues.

We understand from some communication with MAF, that in the case of used beekeeping equipment, that it is inspected once landed, fumigated, and if necessary further cleaned in a MAF approved risk goods facility, thus containing any unwanted organisms.

The Association would be very concerned if this inspection were to take place away from the port of entry and moved to another location, as during this movement, bees could gain access to material that could contain bee diseases. Members of our association have reported that they have witnessed the movement of imported vehicles away from port facilities, before being cleaned of soil and debris. We would not want this to happen with used beekeeping equipment.

Bulk honey imports

The National Beekeepers Association notes in the user guide that honey will be allowed in bulk in drums. We maintain that this is one of the most risky ways in which to import honey.

All it needs is for someone to spill honey onto the outside of the drum, and not clean it off, for it to become a major threat, if the honey has not been heat treated to ensure that no European Foulbrood spores are present in the honey, all it would need is for that infected honey to be picked up by a bee, to potentially infect a hive and have another major bee disease in New Zealand.

The National Beekeepers Association recommends that the risk to our country be reviewed in the light of the fact that bulk honey poses a greater risk than is indicated in the guide.

Pollen Imports

We note in the guide that pollen is allowed in to the country in both bulk and in a supplement for feeding to bees.

The National Beekeepers Association considers that this is an extremely dangerous practice to our industry, as in both forms it may harbour diseases such as American Foulbrood. Beekeepers in New Zealand have on occasions fed pollen collected by their bees to other colonies, only to find that the pollen must have been contaminated with American Foulbrood spores, as several colonies fed, later showed clinical symptoms of American foulbrood.

We assume that other diseases such as European Foulbrood could be carried in such a manner as well, creating yet another pathway for diseases to enter the country.

Used beekeeping equipment

The importation of used beekeeping equipment alarms the National Beekeepers Association members. All it needs is one Inspector to clear a shipment of equipment that has not been cleaned properly, to potentially bring many bee diseases into the country. The inclusion of comb in the list absolutely astounds the Association.

We note that in the risk analysis that it suggests that clothing; smokers etc and honey extracting equipment should be free of wax and have been **washed in hot water to remove adhering spores**. We are astounded that this has been suggested, as we know that American Foulbrood spores need to be exposed to heat of 160 degrees Celsius for 10 minutes to destroy the spores. Washing with hot water may still leave viable spores on the equipment.

The National Beekeepers Association is also concerned over the inclusion of:

- Pure Royal Jelly in bulk (EFB has been reported in an importation)
- Raw Propolis (Can still have bees, wax, and honey residues – all could carry diseases)
- Bulk unprocessed bees wax (could have residues of honey etc)

All of the above pose an unacceptable risk of introducing new bee diseases into the country.

The National Beekeepers Association recommends that the Import Health Standard be reviewed, in particular with respect to the eligibility of products to be imported.

Of particular concern is:

- honey, in bulk drums,
- bulk bee pollen, and
- bee pollen coming into the country as a component of pollen supplements for feeding to bees.
- Used beekeeping equipment – including comb, feeders, pollen traps and dispensers, and honey extracting equipment
- Any other bulk or raw bee product not already mentioned

Request for more information

There are three areas that the Association would like more information on. These are:

- A copy of the methodology and results of the trial conducted on Heat Treatment of honey to destroy the bacterium *Melissococcus pluton*, the causative agent of European foulbrood, carried out by Brenda Ball in the UK.
We ask also for the two other trials that we understand were conducted on the heat treatment of honey, where the results were inconclusive or unsatisfactory.
- Some proof of the assurance systems that MAF have negotiated with overseas countries. What are the overseas countries surveillance programmes that will give assurance of area, or country freedoms?
- A copy of the document describing what the Audit systems are going to be to ensure the overseas countries are carrying the necessary sanitary measures to ensure product will not cause any of the unwanted diseases.

Once the Association has received these documents, we would request further time to make submissions.

Conclusions

- 1 The National beekeepers Association considers that the risks of importing diseases and organisms into the country that will adversely affect our Industry to be too great.

It is not only the effect on our industry that needs to be considered, but the effect on the economy **when** another major bee disease or pest enters the country that causes huge bee mortality. What will happen when there are insufficient bees to carry out the pollination of New Zealand's crops? What will happen to new crops being developed in New Zealand, which require bee pollination?

In the "Varroa in New Zealand: Economic Impact Assessment" released in November 2000, it is considered that varroa alone is likely to cost New Zealand between \$400 million and \$900 million, in present value terms, over the next 35 years.

What will the cost be of an additional unwanted organism??

We have already been told that some South Island beekeepers are unlikely to be beekeeping with Varroa, as their operations are currently struggling. Would South Island beekeeping almost disappear with another incursion??

New Zealand is already reeling under the effects of introduced plants, animals, invertebrates, and micro-organisms. What is it costing the country to try to minimise the impact of the possum that has been destroying our natural flora?

The cost to the New Zealand Economy of other unwanted organisms entering our country is too great.

- 2 It is all very well to embrace the "World Economy", with global trade of products that has the inherent risks associated with it of bringing with the goods unwanted organisms.

New Zealand cannot afford to embrace this idea completely, because of its isolation from the markets. It can not compete on a world market because of the cost of production (with high labour costs), and the cost of getting the product to the intended market. With these costs, New Zealand needs to give its exporters some assistance to help to 'level the playing field'.

Beekeepers and Processors have traditionally been net exporters of product – almost every year we produce more bee products than we can consume on the domestic market.

Therefore we argue that, as the New Zealand economy cannot afford to lose its pollinating bees consideration is given to continue the prohibition of imports of bee products, to ensure our bees continue to remain relatively disease free.

The National Beekeepers Association requests that if prohibition of imports of bee products is not continued, then the entire Risk Analysis, and the Import health standards needs to be re-drafted, taking into account the many concerns raised by ourselves, and by other members who have put in their own submissions.

Appendices

The following submission is one that has been prepared by the Chairman of the Exotic Bee Diseases Committee, which is a sub-committee of the National Beekeepers Association. The Association concurs with the comments made in the submission.

SUBMISSION ON THE DRAFT RISK ANALYSIS AND HEALTH STANDARD FOR HONEY BEE HIVE PRODUCTS AND USED BEEKEEPING EQUIPMENT.

On behalf of Berry Beekeeping, 316 Te Aute Road Hastings,

e-mail gwhoop@clear.net.nz

and supported by Ian Berry, Arataki Honey Ltd, Hawke's Bay Division, PO Box 8016, Havelock North e-mail ian@aratakihoneyhb.co.nz

ACCURACY OF ASSUMPTIONS ABOUT BEE PRODUCTS

Propolis

All through this draft analysis, propolis is treated as being unattractive to bees and therefore unlikely to be collected by them from used beekeeping equipment. This assumption is demonstrably wrong. Bees will actively seek and industriously gather propolis from anywhere that they can find it, including used beekeeping equipment. Propolis gathering behaviour is more pronounced in the spring and autumn but can be seen at most times of the year. I have personally watched them do this on many occasions. I cite one particular incidence where bees were seen to strip propolis off a group of clean dry floors. The floors were waiting to be paraffin dipped as they had come off some suspect hives. A month or so later we burnt 11 hives for AFB.

Failure to recognise propolis as an attractive substance to bees is an elementary mistake, which should not have appeared in such a report as this.

Recommendation

Change the risk analysis for propolis, to one which recognizes its attractiveness to bees.

Assumptions on the dangers of diseases should they be introduced,

Paragraph 2, page 7. Much of the value, or lack of it, in this analysis hinges on this paragraph. "If there are few reports of problems associated with a pathogen, it will be assumed not to be a major disease causing organism."... Ha!!!! This is New Zealand! Have we not had enough experience of "non problem" species from overseas running wild in our environment.

If this analysis had been written five years ago SMALL HIVE BEETLE would not have rated a mention. Is this the standard of protection you would expect It is certainly not the standard of protection that I as a beekeeper, and would strongly suspect the public of New Zealand, expect.

"If there are no reports of strain differences with respect to pathogenicity, it will be assumed that there are none", and worse, "If there have been reports of strain differences for organisms already present in New Zealand, it will be assumed that the strains present here are no more or less pathogenic than those elsewhere unless there is data available to prove this."

How a document came to be written, based on such a "she'll be right" attitude eludes me entirely. It is not only New Zealand's beekeeping industry that is being put at risk here but all of the agricultural sector that relies on bee pollination. This attitude has not been an acceptable part of risk analysis for

the importation of exotic organisms for a long time. Are we and the rest of the agriculture sector regarded as being too unimportant to be worthy of proper research and risk analysis. This paragraph is a very important part of the terms of reference for this analysis. I can only assume that it was either written in a misguided effort to save costs, or motivated by political expediency.

In just one example the report states that some strains of chalk brood are up to twenty times more virulent than others. It then goes on to ignore this chilling piece of information because the terms of reference say it is irrelevant.

Recommendation

Change the terms of reference to a more cautionary approach so that it would have some scientific validity.

EUROPEAN FOUL BROOD

This is the most likely candidate to come in under these proposals. I have been actively seeking all available information on EFB for the last five years so I do know a fair bit about it for a layman. It is my considered opinion that importation of honey under the proposed treatment regime will lead to the inevitable introduction of EFB. There is NO SAFE DILUTION for EFB. There will inevitably be small slip-ups in the required processing of honey. All it will take is for one bee to come in contact with this honey and we will have a major disaster on our hands, and not just for the beekeeping industry. An outbreak of EFB would almost inevitably mean that at least one pollination season would be severely effected and quite possibly virtually written off. EFB is an extremely infectious pathogen and would infect at least the whole of one island inside twelve months.

I will repeat it again to emphasize the point, there is no safe level of dilution for EFB. Those of us with experience in honey processing understand only too well that some honey will miss the treatment even if it is only the remnants in a pipe, or the cold bit in the middle of a drum.

Recommendation

Continue the ban on the importation of honey as it is impossible to guarantee a product free from EFB on any but a laboratory scale.

VIRUSES

The conclusion states "There is no indication that they would have any major detrimental effect on production or trade, except in association with varroa." It then goes on to "not worry" about the ones that we haven't got yet. This flies in the face of convincing evidence that it is the virus loading that kills the bees, long before the varroa finish them off.

Recommendation

Treat viruses as a serious potential threat.

In conclusion - The risk analysis is obviously deficient on a number of points but its most glaring deficiencies are its assumptions that "if we don't know, its alright" and its failure to grasp the reality of the extreme infectiousness of EFB. It would be appropriate to have an analysis of the likely costs to the whole of New Zealand if one or more of the potential problems in this risk analysis become reality.

10.1 Bees either have a direct effect, or an indirect effect on all but forestry production, so it can be deduced from this that bees contributed to \$16.95billion worth of exports. These figures are for the year ended March 2002.

In another section it gives the value for New Zealand's Fruit Exports for the year ended March 2002, as being \$1,052m fob.

Of interest is: Kiwifruit \$578m - almost solely reliant on bees for pollination

Apples \$360m - heavily reliant on bees for pollination

Berry fruit \$15m - most require bees for pollination

Avocados and pears also require bees for pollination.

As can be seen from the above figures, bees do play an extremely important part in the ability of New Zealand to export produce. Anything that adversely affects the bees, or the beekeepers ability to derive a profit from their business, will mean that New Zealand will have a lessened Agricultural and Horticultural Export potential.

This will have a negative effect on the New Zealand Economy.

MAF COMMENT

MAF is aware of the importance of the beekeeping industry to the New Zealand economy. However, New Zealand is dependent on trade and has obligations under the Sanitary and Phytosanitary Agreement (SPS) to base trade decisions on risk analyses.

10.2 Effect of Varroa

In a thesis on **Varroa Control costs and the Impact on South Island beekeepers**, by Kim van Vuuren from the University of Canterbury, she states in the Executive Summary: "Overall there is a need to improve profitability for many businesses to become sustainable and then improve profitability by another \$20 to \$30 per hive to cope with the costs of controlling varroa".

The Industry contends that any importation of product from overseas will destroy the Beekeeping Industry if further incursions of unwanted organisms, or diseases are 'accidentally' bought in with product, or cheaper product imported, that our beekeepers are unable to match because of our higher production costs. Our Industry is, in most years, a net exporter of bee products, and we see little need to import bee products into New Zealand.

MAF COMMENT

Under the SPS Agreement, countries have the right to take sanitary and phytosanitary measures to protect human, animal or plant life or health. However, such measures can not be applied in a manner which "would constitute a disguised restriction on international trade" (Article 2.3 of the SPS Agreement). Thus MAF cannot use sanitary measures to protect the beekeeping industry

unless such measures are scientifically justified to protect human, animal or plant life.

10.3 Also of concern to us is the fact that if product is allowed entry into New Zealand under strict regulations e.g. honey needing to be heat treated, then the public once they have seen the product on the shop shelf in New Zealand, will think that it is OK to bring in the product when they come back from an overseas trip. The only problem will be that even though they may look like the same product, one will have been heat treated, and the one that they bring in is likely to have not been heat treated.

We consider that there will need to be greater public education on bee product entry requirements into New Zealand, and also there is a need for some labeling requirement to say that the product imported into New Zealand has met strict requirements before entry.

MAF COMMENT

The public will be advised that honey that has not been approved by MAF cannot be brought into New Zealand. Honey will need certification before importation is allowed. Private consignments of honey will not meet these requirements. These consignments will be picked up at the border as currently occurs.

10.4 Recommendations

The Animal Import Risk Analysis: Honey Bee Hive Products and Used Equipment, be reviewed, with the view of taking a **‘Precautionary’ approach** to the importation, i.e. where insufficient information on a organism or disease is indicated, that the importation of products that may harbour these organisms, or diseases, be **not allowed entry into New Zealand** until there is sufficient information to determine there is absolutely minimal chance of negative affects on the beekeeping industry and New Zealand as a whole.

MAF COMMENT

Under the Sanitary and Phytosanitary Agreement (SPS), countries can only impose SPS measures that are based on science and are imposed to protect the health of animal, plant or human populations. Therefore, if there are no reports of an organism causing harm, it is not classified as a hazard in an import risk analysis.

MAF will regard any exotic organism as a potential hazard if there are any reports of adverse affects from the organism overseas. When carrying out the consequence assessment MAF will assume that the same degree of adverse affects as reported overseas would be likely to occur if introduced to New Zealand.

MAF will carefully analyse cases where strain differences have been found and err on the side of caution if there is no information available on the relative pathogenicity of the New Zealand strains. MAF will then seek to obtain the necessary information for a more objective assessment of the risk.

10.5 The National Beekeepers Association recommends that the Import Health Standard be reviewed, in particular with respect to the Eligibility of products to be imported.

All of the products listed in 6.1 concerns us, but of particular concern is:

- honey in bulk drums,
- bulk bee pollen, and
- bee pollen coming into the country as a component of pollen supplements for feeding to bees.
- Used beekeeping equipment – including comb, feeders, pollen traps and dispensers, honey extracting equipment

MAF COMMENT

MAF has decided that a generic import health standard is not appropriate and will consider specific applications once the import risk analysis is complete.

Bulk products will not be allowed entry unless these products can be treated to ensure such trade is safe. If this cannot be done, the products will not be allowed entry in bulk form but only in such a form that is unattractive to bees such as in capsules.

Used beekeeping equipment is to be withdrawn from the risk analysis as there are significant information gaps in the safe importation of this equipment, MAF understands that the equipment is available in New Zealand and consultation has shown that there is little interest in import of such equipment.

10.6 The National Beekeepers Association recommends that the general conditions in Section 7 need to be reviewed, and rewritten to address the Industry concerns over this import health standard. As an example, in 7.2 for bees' wax ii) if freedom from European foulbrood has not been approved by MAF then bees wax must be:

- c) accompanied by a certificate from the official veterinary authority which documents that the bees wax has been gamma irradiated with 14kGy from ⁶⁰Co **OR**
- d) in blocks of wax less than or equal to 1kg (so that it will not be made into foundation).

The Association contends that the practice mentioned in b) above could be very harmful, as that 1kg block could be bought, traded etc and still then be converted into comb foundation.

MAF COMMENT

The risk analysis and import health standard will be revised to state that bees wax can not be imported.

10.7 4 Before product allowed entry into New Zealand, that the Industry gets the opportunity to see proof of the assurance systems that MAF have negotiated, and get an opportunity to make comment on them.

MAF COMMENT

We trade with countries whose competent veterinary authorities we trust. If we are in doubt, we have the ability under the OIE framework to carry out a country and veterinary assessment (OIE Code 1.3.3.3).

10.8 5 The Industry would like to see what is proposed for auditing the “Quality Systems” and have an opportunity for comment.

MAF COMMENT

See 10.7.

10.9 6 That all products when bought into the country to be marked with the “Country of Origin”, so that consumers can make an informed choice on what they buy.

MAF COMMENT

Labelling is outside the scope of the risk analysis.

Labelling and food quality requirements are the responsibility of the New Zealand Food Safety Authority.

10.10 We also ask that products that enter the country should have a better or equivalent
- disease status (e.g. spore levels in Honey) and
- Food standard to our domestic product.

MAF COMMENT

See 10.9. Where the food status is not considered a biosecurity risk (for example, levels of AFB spores lower than that required to cause an infection), it is outside the scope of this risk analysis.

10.11 7 That any importation of product that may harbour diseases that will compromise our American Foulbrood Pest Management Strategy not be permitted.

MAF COMMENT

MAF will not permit the importation of such products where MAF considers the AFB PMS may be compromised.

10.12 **8** That consideration be given to our Industry, with regard to what the economic effect will be should imports be allowed into the country. This needs to be considered in the light of what has happened in the likes of the United States, where product has been allowed entry, only to find that it has severely affected an industry to the point where anti –dumping tariffs have been imposed. We know that the New Zealand Government is opposed to any forms of subsidising an industry, or creating trade barriers, or tariffs, but we ask that extreme caution is used before imports allowed.

MAF COMMENT

MAF will only allow products to be imported where it is considered that safe trade can occur.

10.13 The National Beekeepers Association is astounded at the format used in this risk analysis. We feel that it is a very irresponsible way of determining what is an acceptable risk, particularly when New Zealanders as a whole are very concerned about the country's Biosecurity, and would rather see more funding put in to stopping possible incursions before they reach our shores.

We find that the number of assumptions made in this analysis are too great, and expose our Industry and New Zealand to irreparable harm.

On page 7 in the introduction we quote: “Many honey bee diseases have not been subject to extensive investigation. It is therefore, necessary to make several assumptions in this risk assessment. The first is that **if there are few reports of problems associated with a pathogen, it will be assumed not to be a major disease causing organism.** The second is that **if there are no reports of strain differences with respect to pathogenicity, it will be assumed there are none.**” And again a few lines down – “If there have been reports of strain differences for organisms already present in New Zealand, **it will be assumed that the strains present here are no more or less pathogenic than those elsewhere unless there are data available to prove this**”.

The Beekeeping industry finds this approach deplorable !! Where there is no data on these pathogens, precaution is the only sensible approach, and no importation allowed until the research has been done, and is proven to be safe to import product that could carry these pathogens.

The National Beekeepers Association recommends that:

Where there is insufficient data to reliably determine the risk, that funding be made available to carry out the required research, BEFORE any importation is permitted.

And that an economic Cost benefit analysis be conducted on all of the considered pests and diseases, to give an indicative figure of what it would cost the Agriculture, Horticulture sectors and indeed the whole New Zealand economy, should more pests and diseases enter the country that could have a detrimental effect on the ability of the Beekeeping Industry to produce bee products, and carry out crop pollination.

MAF COMMENT

See 10.4 for a discussion on the assumptions made in the risk analysis.

Likely adverse affects for the beekeeping industry and agriculture and horticulture sectors are covered in the consequence assessments for the diseases.

10.14 **The National Beekeepers Association would like to ask MAF what is the level of risk that they consider to be acceptable? What are the parameters that are used to determine whether a risk is acceptable? The Association asks that these parameters are made available to us to make comment on. We ask that the risks are quantified rather than qualified.**

MAF COMMENT

Under section 22 of the Biosecurity Act, it is the responsibility of the relevant Chief Technical Officer (in this case the Director of Animal Biosecurity) to assess the risks associated with a proposed import and to recommend to the Director-General an IHS that includes the safeguards considered necessary and scientifically justified to reduce the assessed risk down to a level that is acceptable. Thus, although it is rarely possible to precisely measure either the level of risk posed or the exact risk reduction effect of the recommended safeguards, the acceptable level of risk is that residual level of risk remaining with the proposed import once safeguards have been imposed.

It is sometimes more appropriate to conduct quantitative risk analyses, however there is often insufficient information on which to base assumptions to give such risk analyses value.

10.15 Viruses

In the conclusion it is stated that “Although both deformed wing virus, and slow paralysis virus could be considered a hazard now that *Varroa* is present in New Zealand, the evidence that they are not already here is insufficient to attempt to justify specific sanitary measures to keep them out. Viruses will, therefore, not be considered further in this risk analysis.”

The Association notes that we are known to have only 10 out of 17 viruses. We do not wish to have further viruses.

MAF COMMENT

Subsequent information has led MAF to review the section on viruses.

10.16 Paenibacillus Alvei: “*P. alvei* will not be regarded as a hazard for this risk analysis, and sanitary measures are not justified”.

The Association considers that this should be in fact considered a risk, because of the fact that *P. alvei* is almost always present with European Foulbrood, and this mimics some of the symptoms of American Foulbrood (AFB), so its introduction into New Zealand with

European Foulbrood would severely compromise our Pest Management Strategy. The goal of this Pest Management Strategy is to eliminate American foulbrood from New Zealand. This strategy is in force until 2008.

MAF COMMENT

Melissococcus pluton (the cause of EFB) is not found in New Zealand. *P. alvei* has not been recorded in honey bees in areas where EFB is not found apart from a single isolation in New Zealand in 1980. MAF concludes that *P. alvei* will not cause confusion in the diagnosis of AFB and so compromise the AFB Pest Management Strategy.

10.17 Spiroplasma

In the risk estimation it is stated: “There is not enough information available to reliably predict the likelihood of spiroplasmas being introduced into New Zealand. Or the consequences if they were introduced. They have only been reported to impact on bees in the southwest of France and in the United States (destroyed 40% of foraging bees), and their economic impact has not been quantified. The consequences of introducing spiroplasmas is considered to be low”.

The Association considers that if there have been reports of problems associated with this bacteria in other countries, then we do not wish to risk having this imported in product.

MAF COMMENT

Although spiroplasmas have been reported to be capable of destroying as many as 40% of foraging bees during the nectar flow, such reports are rare and colonies usually recover spontaneously in mid-summer

It is not possible to accurately predict how spiroplasmas would manifest themselves if the organism(s) became established in New Zealand, however there are few reports in the literature of colony mortality associated with spiroplasmas, the effects appear to be transitory and leading beekeeping texts all regard spiroplasmas as a disease of only minor importance.

10.18 Chalkbrood

In the risk management: “As chalkbrood is already present in New Zealand and there is no information available that indicates that the strain present here is any less virulent than those found elsewhere, no sanitary measures for risk management are recommended.”

The Association would ask that sanitary measure should be recommended to ensure no other strains of chalkbrood come into the country that may be more virulent than what is currently here.

MAF COMMENT

The reference in the risk analysis to "strains of chalkbrood" is confusing, as reports of differences in severity of chalkbrood disease in various countries should not be linked to differences in virulence between strains of *Ascos. apis* without supporting experimental evidence. Factors such as the environmental conditions, including availability of a variety of food sources, affect the severity of chalkbrood disease. In fact it is difficult to set up infection with *Ascos. apis* in the field when bees have alternative food sources available to dilute any introduced *Ascos. apis*. This will be clarified in the revised risk analysis.

Moreover, any adverse affects from *Ascos. apis* are likely to be transitory, since honey bees show a marked variability in susceptibility to infection. The consequence assessment is therefore negligible.

10.19 Acariasis: the tracheal mite,
Tropilaelaps : the Asian mite,
Bee louse *Braula coeca* – a wingless fly,
Africanised bees,
Stonebrood, and
Small Hive Beetle
Vespa species: hornets
European Foulbrood

The National Beekeepers Association wishes to point out that the six organisms listed above, and the fungi causing stonebrood and European foulbrood, are not known to be present in New Zealand, and that its members would be betrayed if they did enter the country due to the fact that the risk analysis was flawed, and the correct measures were not taken to ensure our country remains free of these pests.

MAF COMMENT

All of these species have been considered potential hazards in the risk analysis and thus subject to the risk analysis process.

As indicated in the risk analysis both fungi implicated in stonebrood disease, *Aspergillus flavus* and *Aspergillus fumigatus* have already been reported in New Zealand. They have not been reported from New Zealand honey bees, however the surveillance programme is not designed to detect their presence and there are a number of potential pathways for bees to become infected. For these reasons it is not appropriate to recommend sanitary measures on imported bee products to prevent either of these fungi from entering New Zealand.

Risk management measures have been recommended for all of the organisms listed, apart from the fungi responsible for stonebrood disease. In addition, used beekeeping equipment, the principal risk pathway for *Vespa* species, will be withdrawn from the risk analysis.

10.20 We understand from some discussion over the trial on heat treating of honey to determine the heat treatment required to destroy *Melissococcus pluton*, that this trial has only been conducted in a laboratory situation. We are concerned that if honey in bulk is to be heat treated to destroy *M. pluton*, if in fact the heat treatment regime will work. In some cases, depending on the method used for heating a drum of honey, the honey in the centre of the drum may not reach as high a temperature as the other honey in the drum. This may have the consequences of not killing all of the spores, and thus creates an unacceptable risk to our industry members.

MAF COMMENT

As stated in the import health standard '*The certification must document that core samples from bulk honey were tested to ensure the appropriate temperature is reached before timing begins*'. This will ensure that all honey being treated receives the correct treatment. This certification will be required in any subsequent import health standards drafted by MAF for honey.

10.21 Of particular concern is that it is stated in the risk analysis that the minimum infective dose for *M. pluton* is unknown. Therefore any product that is likely to carry these spores should not be allowed entry into New Zealand.

MAF COMMENT

It is known that *M. pluton* is highly infectious. It has been reported that less than 100 *M. pluton* bacteria are required to infect a honey bee larva³. The research showed that ALL bacteria were killed at the temperatures recommended for safe importation.

10.22 The National Beekeepers Association notes that in the risk analysis, in the table that gives the pest and disease status of New Zealand honey bees, that the Small Hive Beetle is not classed as an unwanted organism. We would like to ask that this status is changed immediately. The reports from overseas indicate that an invasion of the Small Hive Beetle would be catastrophic here in New Zealand, as it is reported to be capable of destroying honeybee colonies.

MAF COMMENT

The small hive beetle IS an unwanted organism. This is a mistake in the risk analysis and will be amended. The small hive beetle is subject to active surveillance as part of the MAF Honey Bee Exotic Organisms Surveillance Programme.

10.23 The Draft Import Health Standard for the importation onto New Zealand of honey bee hive Products and Used beekeeping equipment

User Guide

³ Bailey, L. (1960). The Epizootiology of European Foulbrood of the larval honey bee *Apis mellifera* Linnaeus. *Journal of Insect Pathology* 2: 67-83.

The National Beekeepers Association is concerned over a section in Part B Importation Procedure

Section 5 Permit to import

reads: “Importation of honey bee hive products and used beekeeping equipment into New Zealand which meet the requirements of this import health standard may, subject to sections 27 and 28 of the Biosecurity Act, be given biosecurity clearance and do not require direction to a transitional facility. **As such they do not require a permit to import.** Note that Trade samples of honey (see section 6.5) will require a permit to import”.

The National Beekeepers Association is concerned that after reading section 27 of the Biosecurity Act, that the decision on what will be allowed entry into the country will rely on the interpretation of the Health Standard, by **one** inspector.

If that Inspector is satisfied that the product meets all of the criteria set in the Health Standard, then a permit will not be required.

The Association maintains that permits should always be required, to allow for traceability of product, should an unwanted organism be found, or product imported that has antibiotic residues.

MAF COMMENT

Where products are imported such that they do not pose a biosecurity risk, a permit is not required. Permits are required where products must be transported to a transitional facility in order to render the product safe, prior to biosecurity clearance. MAF has a policy of keeping risks off-shore where possible and as such products are treated prior to entry rather than at a transitional facility in New Zealand.

10.24 We understand from some communication with MAF, that in the case of used beekeeping equipment, that it is inspected once landed, fumigated, and if necessary further cleaned in a MAF approved risk goods facility, thus containing any unwanted organisms.

The Association would be very concerned if this inspection were to take place away from the port of entry and moved to another location, as during this movement, bees could gain access to material that could contain bee diseases. Members of our association have reported that they have witnessed the movement of imported vehicles away from port facilities, before being cleaned of soil and debris. We would not want this to happen with used beekeeping equipment.

MAF COMMENT

Used beekeeping equipment is to be withdrawn from the risk analysis as there are significant information gaps in the safe importation of this equipment, MAF

understands that the equipment is available in New Zealand and consultation has shown that there is little interest in import of such equipment.

10.25 Bulk honey imports

The National Beekeepers Association notes in the user guide that honey will be allowed in bulk in drums. We maintain that this is one of the most risky ways in which to import honey.

All it needs is for someone to spill honey onto the outside of the drum, and not clean it off, for it to become a major threat, if the honey has not been heat treated to ensure that no European Foulbrood spores are present in the honey, all it would need is for that infected honey to be picked up by a bee, to potentially infect a hive and have another major bee disease in New Zealand.

MAF COMMENT

If the conditions of the import health standard are met then any spilt honey should not pose a biosecurity threat.

10.26 The National Beekeepers Association recommends that the risk to our country be reviewed in the light of the fact that bulk honey poses a greater risk than is indicated in the guide.

MAF COMMENT

This is not consistent with the conclusion of the risk analysis and no evidence is provided to disprove this analysis.

10.27 Pollen Imports

We note in the guide that pollen is allowed in to the country in both bulk and in a supplement for feeding to bees.

The National Beekeepers Association considers that this is an extremely dangerous practice to our industry, as in both forms it may harbour diseases such as American Foulbrood. Beekeepers in New Zealand have on occasions fed pollen collected by their bees to other colonies, only to find that the pollen must have been contaminated with American Foulbrood spores, as several colonies fed, later showed clinical symptoms of American foulbrood.

MAF COMMENT

The risk assessment recognises the risks of feeding pollen on the spread of American foulbrood disease. The import health standard requires the pollen to come from hives free of American foulbrood disease when checked sometime within the last year. This is the same requirement placed on hives within New Zealand. The only other way in which pollen potentially infected with *P. larvae* spores can be imported is after it has been irradiated to deactivate the spores or in capsules that are unlikely to be fed to bees.

In addition, MAF has decided after consultation that pollen tablets be regarded as a risk good as they have the potential to be fed to bees. Only pollen capsules in retail packs will be permitted entry.

10.28 We assume that other diseases such as European Foulbrood could be carried in such a manner as well, creating yet another pathway for diseases to enter the country.

MAF COMMENT

Pollen potentially infected with *M. pluton* must also be irradiated or packed into capsules where they are unlikely to be fed to bees.

10.29 Used beekeeping equipment

The importation of used beekeeping equipment alarms the National Beekeepers Association members. All it needs is one Inspector to clear a shipment of equipment that has not been cleaned properly, to potentially bring many bee diseases into the country.

MAF COMMENT

Used beekeeping equipment is to be withdrawn from the risk analysis

10.30 The inclusion of comb in the list absolutely astounds the Association.

We note that in the risk analysis that it suggests that clothing; smokers etc and honey extracting equipment should be free of wax and have been **washed in hot water to remove adhering spores**. We are astounded that this has been suggested, as we know that American Foulbrood spores need to be exposed to heat of 160 degrees Celsius for 10 minutes to destroy the spores. Washing with hot water may still leave viable spores on the equipment.

MAF COMMENT

The treatment required in the import health standard is equivalent to what is required in the American foulbrood National Pest Management Strategy Order in Council. Note that for other reasons, used beekeeping equipment will be withdrawn from the risk analysis. See 10.29.

10.31 The National Beekeepers Association is also concerned over the inclusion of:
Pure Royal Jelly in bulk (EFB has been reported in an importation)
Raw Propolis (Can still have bees, wax, and honey residues – all could carry diseases)
Bulk unprocessed bees wax (could have residues of honey etc)

All of the above pose an unacceptable risk of introducing new bee diseases into the country.

MAF COMMENT

The risk assessment recognises that these products may be contaminated with *M. pluton*. Royal jelly may only be imported if it is irradiated, heat treated or in retail packs of capsules. Propolis is now recognised as a risk commodity and will only be permitted entry if treated to destroy pathogens and pests or in capsules in retail packs. Bees wax will not be permitted

10.32 The National Beekeepers Association recommends that the Import Health Standard be reviewed, in particular with respect to the eligibility of products to be imported.

Of particular concern is:

- honey, in bulk drums,
- bulk bee pollen, and
- bee pollen coming into the country as a component of pollen supplements for feeding to bees.
- Used beekeeping equipment – including comb, feeders, pollen traps and dispensers, and honey extracting equipment
- Any other bulk or raw bee product not already mentioned

MAF COMMENT

See 10.25, 10.26, 10.27, 10.29 and 10.31.

10.33 Request for more information

There are three areas that the Association would like more information on. These are:

- A copy of the methodology and results of the trial conducted on Heat Treatment of honey to destroy the bacterium *Melissococcus pluton*, the causative agent of European foulbrood, carried out by Brenda Ball in the UK.
We ask also for the two other trials that we understand were conducted on the heat treatment of honey, where the results were inconclusive or unsatisfactory.
- Some proof of the assurance systems that MAF have negotiated with overseas countries. What are the overseas countries surveillance programmes that will give assurance of area, or country freedoms?
- A copy of the document describing what the Audit systems are going to be to ensure the overseas countries are carrying the necessary sanitary measures to ensure product will not cause any of the unwanted diseases.

Once the Association has received these documents, we would request further time to make submissions.

MAF COMMENT

This information was sent on 19th September 2002.

10.34 Conclusions

1 The National beekeepers Association considers that the risks of importing diseases and organisms into the country that will adversely affect our Industry to be too great.

It is not only the effect on our industry that needs to be considered, but the effect on the economy **when** another major bee disease or pest enters the country that causes huge bee mortality. What will happen when there are insufficient bees to carry out the pollination of New Zealand's crops? What will happen to new crops being developed in New Zealand, which require bee pollination?

In the "Varroa in New Zealand: Economic Impact Assessment" released in November 2000, it is considered that varroa alone is likely to cost New Zealand between \$400 million and \$900 million, in present value terms, over the next 35 years.

What will the cost be of an additional unwanted organism??

We have already been told that some South Island beekeepers are unlikely to be beekeeping with Varroa, as their operations are currently struggling. Would South Island beekeeping almost disappear with another incursion??

New Zealand is already reeling under the effects of introduced plants, animals, invertebrates, and micro-organisms. What is it costing the country to try to minimise the impact of the possum that has been destroying our natural flora?

The cost to the New Zealand Economy of other unwanted organisms entering our country is too great.

MAF COMMENT

MAF will only allow importation of honey bee hive products if this can be done safely.

10.35 2. It is all very well to embrace the "World Economy", with global trade of products that has the inherent risks associated with it of bringing with the goods unwanted organisms.

New Zealand cannot afford to embrace this idea completely, because of its isolation from the markets. It can not compete on a world market because of the cost of production (with high labour costs), and the cost of getting the product to the intended market. With these costs, New Zealand needs to give its exporters some assistance to help to 'level the playing field'.

Beekeepers and Processors have traditionally been net exporters of product – almost every year we produce more bee products than we can consume on the domestic market.

Therefore we argue that, as the New Zealand economy cannot afford to lose its pollinating bees consideration is given to continue the prohibition of imports of bee products, to ensure our bees continue to remain relatively disease free.

The National Beekeepers Association requests that if prohibition of imports of bee products is not continued, then the entire Risk Analysis, and the Import health standards needs to be re-drafted, taking into account the many concerns raised by ourselves, and by other members who have put in their own submissions.

MAF COMMENT

As outlined above, countries can only impose import conditions where there is a biosecurity risk, not to protect trade.

MAF has taken all submissions into consideration and will redraft the risk analysis. As stated, the import health standard in the generic form presented will not be issued. Specific import health standards will be drafted on request and released for public consultation.

10.36 Appendices

The following submission is one that has been prepared by the Chairman of the Exotic Bee Diseases Committee, which is a sub-committee of the National Beekeepers Association. The Association concurs with the comments made in the submission.

MAF COMMENT

This submission has been received from Berry Beekeeping, supported by Ian Berry. See Submission 2 of this document.

11. Brian Lancaster, Darfield.

Submission to the Draft Import Health Standard for the importation into New Zealand of Honey Beehive products and used Beekeeping Equipment.

I am opposed to the importation of Beehive products into New Zealand for the following reasons;

Bees are very efficient pollinators and gatherers of nectar and honey. Trials have shown that bees can travel over 5 km to gather honey from an unprotected source when the conditions are suitable. This means that any discarded honey pot in a rural or residential landfill that is not sterilised, or any honey sandwich that is thrown out of a car window, has the potential to infect a hive with AFB and/or EFB.

Because of this the government of the day realised the necessity of bringing cohesion and order to the Beekeeping industry to enable AFB to be controlled. This allowed beekeeping to develop into a profession (where it was only a hobby before this) that could support a family and at the same time contribute to the development of farming through pollination of our dominant Ryegrass and white clover pastures. Without bees this pastureland would never have been profitable to develop.

Since 1917 the NZ government has seen fit to keep imports of beehive products out of NZ first through The Apiaries Act and since 1998 with a Pest Management Strategy.

NZ is the only country in the world that DOES NOT feed antibiotics to the hive to maintain the health of the colony.

The main endemic pathogen in NZ is AFB. NZ policy for many years has been to maintain a nation wide register of hives, monitor AFB outbreaks and burn infected colonies. The 1998 AFM PMS has a stated aim of eradicating AFB from this country.

Dr Mark Goodwin states that as little as 10 spores are enough to start a clinical case of AFB in 24-hour-old larvae. (It strikes me as ironical that NZ Beekeepers burn infected hives to enable ourselves to produce a premium product when our competitors tip antibiotics into hives to suppress AFB to manageable levels, and then want to send their contaminated products to NZ for consumption.)

For a country to issue area freedom certificates it must have in place a comprehensive and complete national hive register listing all apiaries in the country, the health status of those hives, along with movement, sale and distribution of hives. This needs to be backed up by law, making it a prosecutable offence not to report. This again needs to be backed up by spot checks and a testing regime. This all needs to be able to be audited and verified by a third party to ensure confidence in these certificates. It concerns me that we are relying on the honesty of a lot of individuals who will have a financial incentive to under, or not report incidence of disease that would affect the health status of NZ Bees. Any breach in the protocols, because of bees scavenging ability, would spell financial ruin for the NZ Beekeeping industry. This to me is unacceptable.

The Kim van Vuuren report into the financial health of South Island beekeepers shows very clearly that the financial impact of Varroa on Beekeeping business is going to remove a lot of hives from free pollination services in pastoral areas. Any further costs associated with new diseases/pathogens (and compliance costs to maintain export products) will further reduce hive holdings. It cannot be stated strongly enough that the foreign honey WILL NOT pollinate New Zealand clover and maintain pastoral production.

This public good or service that NZ beekeepers supply free to the economy is estimated at \$400- \$900 million over the next 35 years. This I feel is a conservative estimate.

My main reason for stating this is that I am an organic honey producer, producing a premium product and achieving a premium price because I do not feed antibiotics, or other drugs to my bees. If EFB were allowed into the country my organic status would be revoked. Is there any compensation available for this loss of export Dollars and livelihood?

The reality of the NZ market is that it is currently well supplied by NZ producers with a wide range of prices and varieties available on our shop shelves.

There are currently more brands wanting shelf space than there are spaces available (talk to any honey packer). This is a sign of a healthy domestic supply/demand equation that is working well. The reality is that the internal NZ honey price is determined by the international honey price proving that we do not have a protected pricing structure (What NZ packer would pay more than the international price to supply locally?). In fact producers who have made the effort to locate export markets for themselves achieve superior prices than those who sell locally.

My concern is that the major drive for importing honey onto NZ is not access to our domestic market. We already sell honey cheap on supermarket shelves (due to competition within NZ compared to a lot of countries in the world.) but using NZ to repack foreign honey as a NZ export. This would achieve a superior return as previously stated.

NZ beekeepers have worked very hard to achieve a market premium in the world and nothing should be allowed to jeopardise this. If this is allowed to happen the onus is once again on the NZ producer to prove that their product is produced solely in NZ. This is another cost inflicted on us in the name of “free trade”.

My understanding is that under the Food and Health regulations 1974, honey sold in NZ must contain only honey unless otherwise labelled. My question is who will monitor the foreign honey and who will bear that cost? What antibiotics and chemicals will be tested for? The following is a limited list of chemicals used overseas to maintain bee health;

Chloramphenicol

Teramycin

Streptomycin

Tetracycline

Fumidil B

Fluvininate

Pythroids

Thymol

Cymiazole

Coumaphos (organophosphate)

Other traces in honey that need to be tested for;

Heavy Metals

Agricultural pesticides

Agricultural herbicides

Thank goodness we didn't have to use any of these up until 2 years ago and only then because of a bio security breach that allowed Varroa into NZ. This breach should never have happened under the protocols that were then in place. But history has proved that these protocols were totally inadequate. MAF has stated that Varroa could have been in NZ for up to 4 years undetected. It is my understanding that during this period the NZ Beekeeping industry were contracting MAF for surveillance of bees for exotic diseases. Who will protect the NZ beekeeping industry from a similar problem in the future if you rely on area freedom declarations from other countries when serious breaches occur on NZ soil?

Is there a plan to change the above regulations to allow traces of the above antibiotics, and agriculture pesticides into the NZ food chain? If so what levels will be acceptable and will it be mandatory to label the containers saying such.

The NZ consumer would expect no less as they are convinced that honey sold in NZ is pure. We currently pay for such a service to maintain our exports to the EU.

Dr Mark Goodwin states that there are no known different strains of AFB. It has been reported that strains of AFB have become resistant to oxytetracycline. These must be different and no analyse has yet been done to the effect that this would have on the NZ sub species of bees (no genetic material has been imported and introduced into NZ for 50 years). If EFB were to become established in NZ, drug feeding would be inevitable, how would we survive if a resistant strain of AFB were already here?

The assumption that spore contamination of 50000 spores /l is unlikely to be infective needs more research and validation. How can any country that feeds antibiotics to hives to control EFB verify that hives are free of AFB when the same drug suppresses clinical signs of AFB? To ensure area freedom drugs must be eliminated from routine use. These need to be enforced by law, have a comprehensive testing regime, and AFB hives burnt.

Area freedom from EFB is a misnomer as it is a highly contagious organism. This was demonstrated effectively when EFB took approximately 2 years to travel the length of the eastern seaboard in Australia. This shows that it is almost as infective as foot and mouth. Would a foreign government have systems in place to warn us in time of an outbreak of EFB to ensure that the product was removed from sale in NZ? Product could easily be on NZ supermarket shelves 6 weeks after harvest. This is impossible!

The only way in which NZ can insure itself that these pathogens remain out of the country is firstly through non-importation. If it is deemed necessary to do so, set up a testing regime that guarantees that all honey is tested and spore counts are below acceptable standards that satisfy the NZ beekeeping industry and guarantee our future.

To maintain the integrity of the system it should be stated on the import documentation exactly what penalties would be applied if the importer breaches protocols. All packed lines must carry batch numbers and importer information to enable interested parties to randomly select honey off retail shelves to check compliance. Systems must be in place to enable MAF and/or private individuals to achieve a satisfactory prosecution.

This is absolutely necessary, as breach in the protocols is likely to put a considerable number of beekeepers out of business.

It has yet to be demonstrated that the NZ consumer will gain any advantage from foreign imports relative to the risk that it exposes to the success of the NZ beekeeping future.

In conclusion

- Beehive products must be kept out of NZ to maintain integrity of the NZ bee health status.
- Foreign honey imports will not pollinate NZ pastoral clover and other crops
- Foreign imports cannot be allowed into NZ in bulk form as it will compromise our ability to maintain premium export markets due to traceability assurances
- Beekeeper compliance costs will increase due to demands from export markets for 1. Traceability requirements 2. Testing requirements for the aforementioned chemicals.
- NZ beekeepers goal of elimination of AFB cannot be undermined
- Importation of mutant strains of AFB, which are resistant to antibiotics, is not acceptable as it undermines our ability to control EFB if it becomes established in NZ.
- Protocols must include maximum spore loading for AFB and EFB to maintain safety for NZ producers and not need to rely on area freedom for reasons already stated.
- Who will monitor imported honey for chemical residue and who will pay.
- There is no proof that the NZ consumer will benefit from imports relative to the risks that the beekeeping industry will be continually exposed to.

Thank you for taking the time to consider my submission

Please advise when I will have the opportunity to present this in person

Brian Lancaster
Leaches Rd
RD2 Darfield 8172
29 August 2002

Ph/fax 033186966

11.1 I am opposed to the importation of Beehive products into New Zealand for the following reasons;

Bees are very efficient pollinators and gatherers of nectar and honey. Trials have shown that bees can travel over 5 km to gather honey from an unprotected source when the conditions are suitable. This means that any discarded honey pot in a rural or residential landfill that is not sterilised, or any honey sandwich that is thrown out of a car window, has the potential to infect a hive with AFB and/or EFB.

Because of this the government of the day realised the necessity of bringing cohesion and order to the Beekeeping industry to enable AFB to be controlled. This allowed beekeeping to develop into a profession (where it was only a hobby before this) that could support a family and at the same time contribute to the development of farming through pollination of our dominant Ryegrass and white clover pastures. Without bees this pastureland would never have been profitable to develop. Since 1917 the NZ government has seen fit to keep imports of beehive products out of NZ first through The Apiaries Act and since 1998 with a Pest Management Strategy.

MAF COMMENT

MAF is aware of the unique exposure pathways due to the ability of bees to seek out and feed on honey and other hive products where these may be discarded in the environment. Where conditions such as heat treatment and irradiation are not applicable, MAF requires that any risk products containing honey bee hive products are in a form that is unattractive to bees (something is attractive to bees if it will attract bees if it was discarded in the environment).

11.2 NZ is the only country in the world that DOES NOT feed antibiotics to the hive to maintain the health of the colony. The main endemic pathogen in NZ is AFB. NZ policy for many years has been to maintain a nation wide register of hives, monitor AFB outbreaks and burn infected colonies. The 1998 AFM PMS has a stated aim of eradicating AFB from this country.

Dr Mark Goodwin states that as little as 10 spores are enough to start a clinical case of AFB in 24-hour-old larvae. (It strikes me as ironical that NZ Beekeepers burn infected hives to enable ourselves to produce a premium product when our competitors tip antibiotics into hives to suppress AFB to manageable levels, and then want to send their contaminated products to NZ for consumption.)

MAF COMMENT

To comply with our international agreements, the import conditions MAF applies for AFB cannot be more stringent than those applied within New Zealand (under the AFB Pest Management Strategy).

11.3 For a country to issue area freedom certificates it must have in place a comprehensive and complete national hive register listing all apiaries in the country, the health status of those hives, along with movement, sale and distribution of hives. This

needs to be backed up by law, making it a prosecutable offence not to report. This again needs to be backed up by spot checks and a testing regime. This all needs to be able to be audited and verified by a third party to ensure confidence in these certificates. It concerns me that we are relying on the honesty of a lot of individuals who will have a financial incentive to under, or not report incidence of disease that would affect the health status of NZ Bees. Any breach in the protocols, because of bees scavenging ability, would spell financial ruin for the NZ Beekeeping industry. This to me is unacceptable.

MAF COMMENT

MAF will require certification to ensure that products have been adequately treated prior to biosecurity clearance being granted; for heat treatment, products that are not continuously stirred will need certification of deep core samples that prove required temperatures and time conditions have been met, certificates of irradiation and certificates of laboratory testing for AFB spore levels will need to be provided.

We trade with countries whose Veterinary Administration we trust. If we do not have sufficient confidence in the veterinary administration of a particular country, we have the option of undertaking an evaluation of that country's veterinary services, as mentioned in article 1.3.3.3 of the OIE Code, according to the guidelines in Chapter 1.34 of the Code.

11.4 The Kim van Vuuren report into the financial health of South Island beekeepers shows very clearly that the financial impact of Varroa on Beekeeping business is going to remove a lot of hives from free pollination services in pastoral areas. Any further costs associated with new diseases/pathogens (and compliance costs to maintain export products) will further reduce hive holdings. It cannot be stated strongly enough that the foreign honey WILL NOT pollinate New Zealand clover and maintain pastoral production.

This public good or service that NZ beekeepers supply free to the economy is estimated at \$400- \$900 million over the next 35 years. This I feel is a conservative estimate.

My main reason for stating this is that I am an organic honey producer, producing a premium product and achieving a premium price because I do not feed antibiotics, or other drugs to my bees. If EFB were allowed into the country my organic status would be revoked. Is there any compensation available for this loss of export Dollars and livelihood?

MAF COMMENT

MAF is aware of the importance of the beekeeping industry. This is taken into consideration in the consequence assessments in the risk analysis.

MAF will not permit importation of products unless it considers this can be done safely. Any compensation in the event of an exotic disease incursion will be determined taking the specific circumstances under consideration.

11.5 The reality of the NZ market is that it is currently well supplied by NZ producers with a wide range of prices and varieties available on our shop shelves.

There are currently more brands wanting shelf space than there are spaces available (talk to any honey packer). This is a sign of a healthy domestic supply/demand equation that is working well. The reality is that the internal NZ honey price is determined by the international honey price proving that we do not have a protected pricing structure (What NZ packer would pay more than the international price to supply locally?). In fact producers who have made the effort to locate export markets for themselves achieve superior prices than those who sell locally.

My concern is that the major drive for importing honey onto NZ is not access to our domestic market. We already sell honey cheap on supermarket shelves (due to competition within NZ compared to a lot of countries in the world.) but using NZ to repack foreign honey as a NZ export. This would achieve a superior return as previously stated.

NZ beekeepers have worked very hard to achieve a market premium in the world and nothing should be allowed to jeopardise this. If this is allowed to happen the onus is once again on the NZ producer to prove that their product is produced solely in NZ. This is another cost inflicted on us in the name of “free trade”.

MAF COMMENT

MAF acknowledges the burden of compliance on producers. Issues surrounding labelling of product have been referred to the Food Safety Authority. This issue is outside the scope of this import risk analysis.

11.6 My understanding is that under the Food and Health regulations 1974, honey sold in NZ must contain only honey unless otherwise labeled. My question is who will monitor the foreign honey and who will bear that cost? What antibiotics and chemicals will be tested for? The following is a limited list of chemicals used overseas to maintain bee health;

- Chloramphenicol
- Teramycin
- Streptomycin
- Tetracycline
- Fumidil B
- Fluvaninate
- Pythroids
- Thymol
- Cymiazole
- Coumaphos (organophosphate)
- Other traces in honey that need to be tested for;
- Heavy Metals
- Agricultural pesticides
- Agricultural herbicides

MAF COMMENT

Labelling of products and residue testing is the responsibility of the New Zealand Food Safety Authority (FSA). The FSA will consider what monitoring requirements of imported honey will be required to ensure the New Zealand consumer is protected.

11.7 Thank goodness we didn't have to use any of these up until 2 years ago and only then because of a bio security breach that allowed Varroa into NZ. This breach should never have happened under the protocols that were then in place. But history has proved that these protocols were totally inadequate. MAF has stated that Varroa could have been in NZ for up to 4 years undetected. It is my understanding that during this period the NZ Beekeeping industry were contracting MAF for surveillance of bees for exotic diseases. Who will protect the NZ beekeeping industry from a similar problem in the future if you rely on area freedom declarations from other countries when serious breaches occur on NZ soil?

MAF COMMENT

Illegal imports are difficult to monitor, as is the case with the introduction of varroa. Safe conditions that are open to audit provide an ability to import.

The New Zealand beekeeping industry has never contracted MAF to carry out exotic disease surveillance. This activity has been funded by government.

11.8 Is there a plan to change the above regulations to allow traces of the above antibiotics, and agriculture pesticides into the NZ food chain? If so what levels will be acceptable and will it be mandatory to label the containers saying such.

The NZ consumer would expect no less as they are convinced that honey sold in NZ is pure. We currently pay for such a service to maintain our exports to the EU.

MAF COMMENT

See 11.6.

11.9 Dr Mark Goodwin states that there are no known different strains of AFB. It has been reported that strains of AFB have become resistant to oxytetracycline. These must be different and no analysis has yet been done to the effect that this would have on the NZ sub species of bees (no genetic material has been imported and introduced into NZ for 50 years). If EFB were to become established in NZ, drug feeding would be inevitable, how would we survive if a resistant strain of AFB were already here?

MAF COMMENT

The permissible level of AFB spores recommended in the risk analysis is only 1% of the lowest spore level ever recorded to establish an infection. Thus MAF considers importation of honey bee hive products with AFB spores levels less

than 500,000/L (infectious concentration 5 million spores/L) will have negligible risk of establishing OTC resistant strains of *P larvae larvae*.

11.10 The assumption that spore contamination of 50000 spores /l is unlikely to be infective needs more research and validation.

MAF COMMENT

Two peer reviewed trials have already been carried out on the number of spores required to be fed to a colony to cause an infection. This highest spore level allowed in the import health standard is only 1% of the lowest concentration reported to cause an infection. This allows for a very wide safety margin. This and AFB already being present in New Zealand indicate that the threshold established is appropriate

11.11 How can any country that feeds antibiotics to hives to control EFB verify that hives are free of AFB when the same drug suppresses clinical signs of AFB? To ensure area freedom drugs must be eliminated from routine use. These need to be enforced by law, have a comprehensive testing regime, and AFB hives burnt.

MAF COMMENT

MAF agrees that this is a problem. This will be taken into consideration in any request for recognition of country freedom from AFB.

11.12 Area freedom from EFB is a misnomer as it is a highly contagious organism. This was demonstrated effectively when EFB took approximately 2 years to travel the length of the eastern seaboard in Australia. This shows that it is almost as infective as foot and mouth. Would a foreign government have systems in place to warn us in time of an outbreak of EFB to ensure that the product was removed from sale in NZ? Product could easily be on NZ supermarket shelves 6 weeks after harvest. This is impossible!

MAF COMMENT

MAF agrees that this is problematic especially considering it is estimated that EFB may be present for some time before it becomes apparent. MAF will take such factors as the surveillance systems in place into consideration before agreeing to such requests for recognition of country freedom for EFB.

11.13 The only way in which NZ can insure itself that these pathogens remain out of the country is firstly through non-importation. If it is deemed necessary to do so, set up a testing regime that guarantees that all honey is tested and spore counts are below acceptable standards that satisfy the NZ beekeeping industry and guarantee our future.

MAF COMMENT

The organism that causes EFB is not a spore forming bacterium. Detection in honey is reliant on culture of the bacterium and this has low sensitivity as the organism is difficult to culture and the presence of contaminants can inhibit the growth of *M pluton* and preclude its detection.

11.14 To maintain the integrity of the system it should be stated on the import documentation exactly what penalties would be applied if the importer breaches protocols. All packed lines must carry batch numbers and importer information to enable interested parties to randomly select honey off retail shelves to check compliance. Systems must be in place to enable MAF and/or private individuals to achieve a satisfactory prosecution.

This is absolutely necessary, as breach in the protocols is likely to put a considerable number of beekeepers out of business.

MAF COMMENT

The MAF Biosecurity Special Investigations Group (SIG) Compliance and Audit Team has the responsibility of carrying out audits to ensure the conditions of the Biosecurity Act 1993 are met. Regular audits are carried out in New Zealand and the SIG also carry out prosecutions where there have been breaches.

We trade with countries whose competent veterinary authorities we trust. If we are in doubt, we have the ability under the OIE framework to carry out a country and veterinary assessment (OIE Code 1.3.3.3).

11.15 It has yet to be demonstrated that the NZ consumer will gain any advantage from foreign imports relative to the risk that it exposes to the success of the NZ beekeeping future.

MAF COMMENT

As explained, New Zealand must comply with its international trade agreements. Imports will only be allowed if MAF considers this can be done safely.

12. Canterbury Branch National Beekeepers Association

CANTERBURY BRANCH OF THE NATIONAL BEEKEEPERS ASSOCIATION.

C/- Rae Blair (Secretary) 17 Parnassus Street, WAIATU 8275.

4th September, 2002.

Helen Beban,
National Adviser,
International Animal Trade, Ministry of Agriculture & Forestry, P.O. Box 2526, WELLINGTON.

Dear Helen

Enclosed please find our Canterbury Branch Submission on Draft Import Health Standards for the Importation into NZ of Honey Bee Hive Products and Used Beekeeping Equipment.

Please note, it is in two parts written by separate contributors.

We wish to present this submission in person, at the appropriate forum

Yours faithfully,

**RICHARD BENSEMANN, 13 SPRING PLACE, LEESTON,
Ph 03) 3244410**



ROGER BRAY, BRAESBY FARM, RD 11 ASHBURTON, Ph/fax 03) 3084964

BIOSECURITY COMMITTEE, CANTERBURY BRANCH,
DRAFT IMPORT HEALTH STANDARD FOR THE IMPORTATION INTO NEW ZEALAND OF
HONEY BEE HIVE PRODUCTS AND USED BEEKEEPING EQUIPMENT

SUBMISSION FROM CANTERBURY BRANCH OF NATIONAL BEEKEEPERS ASSOCIATION

12.

National Beekeeping Association

The National Beekeeping Association (NBA) was formed in 1884 and its aims could be generally described as an association to foster beekeeping for the overall benefit of its members.

The organisation is run by an elected executive and various sub committees volunteer work is put in by these people.

Many hours of

This association over the years has been an important partner with the Government to assist in “protecting the health of bees. In 1905 the first Apiaries Act was passed and in 1908 the Government appointed 2 bee inspectors (one in each Island). The position of bee inspectors was to inspect beehives for diseases (mainly American Foul Brood –AFB) and to address beekeepers meetings with an aim of educating and instructing beekeepers.

With the introduction of the Biosecurity Act 1993 which incorporated provisions of the apiaries Act, the NBA formulated a Pest Management Strategy (PMS) and this was put in place with a Biosecurity Order in 1998. This was an industry response to maintain control and the eventual eradication of an endemic disease (AFB). This order has the acceptance of members and is maintaining a control on AFB without the use of drugs.

Since the introduction of varroa the NBA organisation has been placed in considerable stress. This had been compounded with the need to reorganise the financial commitment by the members for the maintenance of the association. At a recent vote in the Commodity Levy (method of funding the Association) a weighted vote achieved a result which effectively deprives the Association of funds to run its business. Without dealing with the issue this “no” vote was achieved because of the inequalities which existed in the funding/voting system and was in fact the “voice” of 20% of the members who contributed 80% of the funding.

2. THE CANTERBURY BRANCH OF THE NBA.

This branch is one of 16 Regional Branches of the NBA. This is the direct contact with members of the NBA. The Canterbury Branch has a large number of commercial beekeepers and is reasonably active in promoting the well-being of bees and beekeeping. The members are a group of practical beekeepers who are aware more of the aspect of keeping bees for sustainability and profit. Whilst they may see the ramifications involved in the Governance and Policy decisions which affect beekeeping, they are often inept at dealing with decisions made by higher authority particularly on an individual basis.

3. CONSULTATION PROCESS.

It is the view of this branch that the consultation process on the Draft Import Health Standards and the Risk Analysis has been lacking and totally inadequate for this industry. Especially since imports have been prohibited for the last 50 years and under severe restriction for a further approx. 25 years. The Canterbury Branch has had no direct notification of the Risk Analysis or the Import Health Standards (in Draft form) nor has it been forwarded the documents for discussion amongst beekeepers or exporters (the affected parties).

The President of our Branch received a personal letter (see Appendix). To send a personal letter directing information via a website to a member of our Branch (who happens to be President) is totally unacceptable

to this branch as “branch consultation”. Contact with other branch members would also suggest that other branches have not been consulted .

Some of our members who are honey exporters (and registered with MAF as such) have indicated no knowledge of the proposed Import Health Standard and Risk Analysis. There are other Sector groups with members in our Branch (eg Comb Honey Producers, Honey Packers etc.) who are unaware of the process.

As a Branch of the NBA the members have indicated a genuine concern with the proposal and also questions the integrity of the consultation process.

4. HAZARD IDENTIFICATION.

The Import Risk Analysis: Honey Bee Hive Products and Used Equipment (RA) has been prepared to identify and manage disease risks posed by the importation of honey bee commodities. It has been prepared (presumably under a terms of references) to look at only one aspect of the import risks. The identification of risk should have been sufficiently developed to include all risks other than diseases, although disease is an important part.

As NZ's ability to offer to the world a quality beehive product (eg honey) may be compromised by the importation of honey we believe this should have been identified and included in the RA. As hive products may have adverse effects in the health of NZ population this should also have been addressed. We refer to toxic honeys and chemicals which have been used in overseas countries. The Hazard identification has largely been played down in the RA. With regard to Viruses little is known about many of the viruses including information which could determine whether or not the viruses could be spread by honey. It is noted that many viruses become apparent with varroa.

The Hazard identification has not defined a base line for NZ bees –the NZ bees have developed from a very select genetic base with a narrow range of genetic material (introduced in limited numbers 1840-80's) with only minor importation of genetic stock (by permit only until approx 1950). It is possible that the NZ bees have become well on their way to becoming a sub species (identification may be difficult as NZ bees have contributed to the world gene pool). However it may be possible that the introduction of a virus (which has developed a symbiotic relationship with its host) may actually cause negative effects on our NZ strain of bee.

5. WORLD RECORD OF DISEASE CONTROL

Apis mellifera the most widely farmed bee species has been farmed in many countries. It is the bee of choice for the production of bee hive products and as such is probably the most common bee and is used in most Continents. Over the years man has learned to use chemicals to control bee diseases. This has led to a situation in a lot of beekeeping countries where the bee has become almost totally dependent on chemicals. The dependence on chemicals is also compounded by the disease and pests becoming resistant to increasing doses of chemicals –for example varroa has shown resistance to increasing doses of chemicals –flufenoxuron, AFB resistant to oxy-tetracycline (OTC).

There has been little co-ordination world wide to control pests and diseases by sustainable methods, NZ on the other hand does have the ability and laws (eg AFB strategy) which enables sustainable beekeeping –this

has been compromised to an extent with the 'fast track' approval of a chemical feeding regime for varroa that may not have been the only solution.

The state of health of world bees appears to be on a downward spiral. This has in no doubt been as a result of a largely unrestricted movement in bee hive product and equipment. If hive product imports were permitted we, as a country risk entering into an area where beekeeping as we know it (sustainable) ceases to exist and is replaced by a system of complete dominance by man (non sustainable). By moving down this track we face becoming a 'third world' nation in beekeeping which means that could face being inflicted with a system which "encourages" a diminished standard of bee health dictated to by the worlds "worst" beekeepers who are dependent on artificial remedies for health issues .

6. EXPOSURE TO RISK.

The RA states 'Honey is attractive to honey bees and they actively seek it' is perhaps an understatement and the significance has maybe not been given the importance which the members of our Branch feel. Bees are very efficient foragers and communicators and can 'clean' traces of honey and are attracted to most beekeeping products and equipment.

As an example in the mid-1980's a container load of honey in glass jars was dropped from a crane and resulted in a rather large sticky mess, the packer who was also a beekeeper collected the container and placed this in a rural area where he had hives, more hives were taken to this area I the doors of the container were opened and the mess exposed to the bees, the result was that honey was recovered by the bees and the sticky mess became a clean mess.

Beekeepers are also on the lookout for cheap forms of feed for their bees. Some of the items which have been fed to bees include –contaminated product from confectionery I food and jam manufacturers, as well as honey processing residues from bee equipment. The contamination usually consists of dirt and process damaged goods.

The Food manufacturers and processors who use honey in bulk form are probably unaware of transmission of bee diseases through an inadequate system of cleaning the bulk containers prior to disposal.

As a branch we appreciate the 'spread of disease' risk when exposing bees to contaminated products however, economies and human nature tend to take o-ver when making choices-

The risk of medicines/health remedies etc of coming into contact with bees is also a possibility although by diminished chances.

Beeswax even in 1 kg blocks is able to be manufactured into foundation for beehives.

Perhaps when looking at exposure to risk we should draw a parallel between say foot and mouth and BSE with regard to exposure to animals. Does the RA for the importation of meat products contain the phrase "Meat is attractive to animals and they actively seek it?"

The chances of confined animals" becoming exposed to meat/animal products is quite remote when compared to the risk of bees being exposed to bee hive products mainly because of the distribution and unconfined nature of bees, along with their communication skills which are used to signal 'finds' to other bees in the colony-

7. ORGANISMS IDENTIFIED/UNIDENTIFIED.

The RA to be of benefit should take into account the possibility that not all pathogens have been discovered nor has the epidemiology of the ones which have been discovered been understood. To dismiss all this with the view that, because there are no reported problems, the problems do not exist nor are likely to cause losses, is unacceptable.

According to JE Digges (Practical Bee Guide 12 edition, 1944), Britain, in the early 1900's was 'wrought almost indescribable destruction among colonies and ravaged and laid waste the domain of beekeeping in every part of the Three Kingdoms,' by the "Isle of Wright Disease". The causative agent was not discovered until 1920's and was called *Acarapi.s woodi* the disease became known as 'Acarine Disease', Thus the RA has not been sufficiently fine grained to suggest mitigation measures which would prevent the transmission of "unknown unwanted organisms" from reaching our shores as per the above example.

8. NZ VARROA EXPERIENCE.

NZ, in theory , should have remained isolated from the rest of the world with regard to varroa incursion. There is still a view that varroa could have been eradicated given time and commitment not only by the beekeepers but also with Government involvement.

The lessons learned from this incursion) is the need for increased biosecurity protection, not only for the protection of our bee stocks but also to allow the Agricultural sector (who is dependent on bees) to have the benefit of these important pollinators of agricultural produce .

We have also realised that any future incursions of harmful organisms will put increased pressure on an already stressed industry, and the NBA as an organised body of industry representatives.

The bottom line is that in the event of another incursion of organisms capable of causing loss the industry, although maybe wanting to eradicate, is possibly not in a position to attempt to eradicate the organism and losses through control/uncontrol could be significant.

12.

TRADE.

Although it has been stated that trade risks will not be accepted in the formation of the HIS, it is the view our branch that the trade reputation of the New Zealand Beekeeping Industry could be damaged by factors which could be attributed to imported honey for example –for access to the European Union countries an intensive sampling regime is undertaken on all honey produced in NZ. It would not be beyond possibility that a drum (or even part) of imported honey could become "mixed up" with a shipment of our "NZ" honey exports. If residues were found it could compromise either our certification procedure or "our" honey and perhaps even both. That this kind of risk has not been dealt with in the RA. And subsequently in the HIS is unacceptable to this Branch.

Countries we currently trade with accept the integrity of our honey and certification process.

There is no drug or chemical feeding of bees in the South Island of NZ –probably the only major area of beekeeping in the world to be able to claim that status .

10. TREATMENT OPTIONS FOR IMPORTED ITEMS.

Perhaps the major risk items would be the Bacterium and Viruses because of their microscopic ability to hide. It does not give members of this branch any confidence that the treatment thresholds are adequate in protecting our livestock. It has not been shown the spore distribution in a sample of honey is constant. In any amount of honey (bee product) if the spores tended to group together in colonies rather than be evenly distributed through out the whole sample then an accurate assessment of spore loading cannot be achieved with any credibility. In trying to achieve a thermal death point for *M. pluton* the researchers were faced with considerable difficulties in even being able to test and locate *M. pluton*. The results of lab. Tests form the basis for an import standard. There appears to have been no trial work done on the commercial application and success of this application on the treatment for European Foul Brood (EFB) is unknown. At best the success or failure of heat treatment measures for treating honey to destroy *M. pluton* is probably only able to be measured if EFB turns up in our hives after importation has occurred. This is unacceptable to our members.

11. IMPORT HEALTH STANDARDS

Our branch has the view that because of health risks to our bees the HIS are insufficient at appropriately dealing with the RA or our further points and concerns.

We also have concerns that antibiotic feeding of hives and possible contamination of imported products has not been addressed in the RA and subsequent HIS. This should also be of concern to the public of New Zealand as consumers of honey.

4th September, 2002

12.1 The processes MAF will require of overseas authorities and their auditing of these authorities as well as the auditing they intend to do on incoming product should be included in the risk analysis.

MAF COMMENT

We trade with countries whose Veterinary Administration we trust. If we do not have sufficient confidence in the veterinary administration of a particular country, we have the option of undertaking an evaluation of that country's veterinary services, as mentioned in article 1.3.3.3 of the OIE Code, according to the guidelines in Chapter 1.34 of the Code.

12.2 Interpretation

The risk assessment is qualitative rather than quantitative. It often provides quantitative data when providing information but uses qualitative words when interpreting the data and assessing the risks e.g.

- Likely and unlikely
- Attractive and less attractive
- Might and may
- High and low probabilities
- Means little
- Probably
- Suggested that
- etc

The problem with this approach is that these types of words mean different things to different people. This approach was probably decided upon because quantitative risk assessments are more difficult as many assumptions have to be made. However, considering the importance of some of the pathogens and pests to both the beekeeping industry and the economy as a whole it would be irresponsible not to quantify the risks.

The risk assessment must actually quantify the risks involved before they can be commented on. The risk assessment should be redone with quantitative measures of risk.

MAF COMMENT

Under section 22 of the Biosecurity Act, it is the responsibility of the relevant CTO (in this case the DAB) to assess the risks associated with a proposed import and to recommend to the Director-General an IHS that includes the safeguards considered necessary and scientifically justified to reduce the assessed risk down to a level that is acceptable. Thus, although it is rarely possible to precisely measure either the level of risk posed or the exact risk reduction effect of the recommended safeguards, the acceptable level of risk is that residual level of risk remaining with the proposed import once safeguards have been imposed.

While it is sometimes more appropriate to conduct quantitative risk analyses, there is often insufficient information on which to base assumptions to give such risk analyses value.

12.3 Generic risk assessments

The approach taken was to produce a generic risk assessment rather than a risk assessment for an individual country or countries. Whether this meets the requirement of the Biosecurity Act will be discussed later. The problem with this approach is that because it doesn't talk about specific countries it doesn't allow for an assessment of the likely level of infected product that will be imported, or the reliability or otherwise of the authorities that will be carrying out the certification.

Assessment needs to be produced for each country. To do otherwise means that too many of the discussions will need to be made by MAF that are not in the risk assessment and therefore open to public scrutiny.

MAF COMMENT

The risk analysis deals with the risks associated with goods imported into New Zealand. Countries must then show that they meet our requirements.

MAF agrees that a generic import health standard, as the draft developed for consultation, is not appropriate and will consider specific applications once the import risk analysis is complete. The draft import health standards developed will be released for public consultation.

12.4 Assessing risks

The risks not covered are those associated with the compliance with the import health standards. In theory, these risks are covered by the auditing carried out by the relevant government officials in the exporting countries. Also the auditing intended to be done by MAF New Zealand to ensure the import health standards are being complied with.

We consider that this is one of the major risks involved with the import of bee products to New Zealand. There are numerous examples of import health standards that are signed by Authorities where the requirements of the import health standard have not been met. We can provide examples of this but would prefer not to in a public document. This suggests that at least some of the zoosanitary certificates are, to put them in the best possible light, unreliable.

We assume MAF has already done an analysis of the reliability of zoosanitary certificates that it and other countries issue as New Zealand's reputation, biosecurity and economy depend on them. The result of this analysis needs to be included in the risk assessment as the reliability of zoosanitary certificates is definitely part of the risk pathway.

MAF COMMENT

See 12.1 and 12.3

12.5 Auditing

In exporting countries

Because this is a generic risk assessment and import health standards the validity of the auditing systems used by individual overseas government authorities cannot be assessed. These need to be at least equivalent to those used by MAF New Zealand. For this reason the auditing systems used by MAF New Zealand need to be provided with the risk assessments so it can be evaluated to determine how they impact on the risks of importing pests and diseases.

MAF COMMENT

See 12.1

12.6 *In New Zealand*

The level of auditing that MAF intends to carry out to ensure that the import health standards are complied with needs to be included in the risk assessment. This should include both the methods that are going to be used and the frequency of the activities and the sensitivity that will be achieved.

MAF COMMENT

MAF has a policy of keeping risks off shore. Thus rather than test honey, royal jelly etc for the organism that causes EFB (*Melissococcus pluton*), MAF will require that imported products are treated to ensure all *M pluton* are destroyed prior to importation.

There will be no regular testing beyond what is mentioned in the risk analysis.

12.7 Detection of non compliance's

If MAF has a comprehensive auditing programme including the testing of product imported into New Zealand it is likely that problems, i.e. the importation of infected product, will occasionally occur. The risk assessment needs to include what will happen in this case. We would expect that all trade in that product would be suspended until the cause of the problem has been identified in case it is a problem with the sanitary requirements not being effective. The reason for asking this question is that having followed the media accounts, this didn't appear to happen when spiders were discovered in table grapes from California.

MAF COMMENT

See 12.6

12.7 Import health standards

The import health standard are being issued pursuant to Section 22 of the Biosecurity Act 1993. However, section 22 states '*issue an import health standard relating to risk goods of a specified kind or description imported from a specified country, specified countries*

or countries of a specified description.’ The health standard does not identify countries or countries of a specified description.

MAF COMMENT

See 12.3

12.8 The import health standard also appears to breach the Food Standards Code (Standard 1.5.3) that prohibits the irradiation of food, or ingredients or components unless a specified permission is given. The import health standard requires the irradiation of honey and royal jelly.

MAF COMMENT

The draft import health standard was drafted with the help of the Food Standards Authority, who administer the Food Standards Code. Food supplements can be irradiated. The information on approval for irradiation of food is given in section 2.3 of the draft import health standard.

12.9 Unknown disease status

In a number of places in the risk assessment the lack of knowledge of the disease status of New Zealand bees is used as justification for not applying sanitary measures. The most important of these are deformed wing virus, slow paralysis virus, strains of chalkbrood (*Ascosphaera apis*) and *Panobacillus alvei*. All of these pathogens have the potential to have a large negative impact on bee health, the viability of the beekeeping industry and as a consequence the viability of those parts of the economy dependent on honey bee pollination.

Varroa has already cost the beekeeping industry in excess of \$3,300,000 (assuming \$14 per treatment, 2 treatments per year, \$5 per hive transport and labour, lost hives and lost production, and 100,000 colonies currently affected). In addition to this *varroa* has cost kiwifruit growers \$2,500,000 per year in increased pollination fees (assuming 50,000 hives and \$50 per in increase in pollination fees). The losses in pollination that have occurred have yet to be quantified. These figures are likely to increase significantly as *varroa* continues spread. MAFpolicy’s own estimates put the losses at up to \$900 million over the next 35 years.

This example has been presented to demonstrate the potential for very large negative effects of honey bee pathogens to the beekeeping industry and the New Zealand economy. The effects of additional pathogens may not be additive because of interactions between pathogens e.g. *varroa* and deformed wing virus and slow paralysis virus. The negative effects on the economics of beekeeping and the downstream effects on the economy may also not be additive. There must be a point where the addition costs to beekeeping by additional pathogens will result in beekeeping no longer being profitable and being abandoned in many areas of New Zealand with a consequent losses to production though the loss of free pollination.

The approach taken in the risk assessment, to rule out sanitary measures where the disease status of New Zealand is unknown, is not a requirement of risk assessments. The Sanitary Phytosanitary Agreement of the World Trade Organisation which was ratified in 1994 states that:

‘ In those cases where relevant scientific evidence is insufficient, a member may provisionally adopt measures on the basis of available pertinent information. Members shall seek to obtain the additional information necessary for more objective assessment of risk and review the measures accordingly within a reasonable period of time’.

The importance of the beekeeping industry to the New Zealand economy is sufficient to justify the imposition of sanitary measures until the status of these pathogens in New Zealand can be established. To do otherwise would be irresponsible.

Full risk assessments, sanitary measures and import health standards should therefore be prepared for deformed wing virus, slow paralysis virus, strains of chalkbrood (*Ascosphaera apis*) and *Panabacillus alvei*

MAF COMMENT

The Sanitary and Phytosanitary Agreement referred to can only be applied to risks posed by specific pathogens.

MAF agrees that full risk assessments should be carried out for deformed wing virus and slow paralysis virus. A full risk assessment was carried out for *P alvei* and chalkbrood. The chapter on chalkbrood will be rewritten in the revised risk analysis.

12.10 Acceptable risk

We understand that it is not possible to eliminate risk while still permitting international trade. All we can hope to do is reduce the risks to an acceptable level. A determination on what is and isn't acceptable risk has been made in a number of places in the risk assessment. However, the process of determining what level of risk is and is not acceptable is not explained in either the introduction of the risk assessment or where the determinations are actually made. This issue needs to be addressed to support the arguments that are made to suggest the risks are acceptable. In the submissions made there will obviously be differences in peoples and MAF opinions as to what is acceptable risk. What level of risk is acceptable, how will it be determined and who will determine it.

MAF COMMENT

Under section 22 of the Biosecurity Act, it is the responsibility of the relevant Chief Technical Officer (in this case the Director of Animal Biosecurity) to assess the risks associated with a proposed import and to recommend to the Director-General an IHS that includes the safeguards considered necessary and scientifically justified to reduce the assessed risk down to a level that is acceptable. Thus, although it is rarely possible to precisely measure either the

level of risk posed or the exact risk reduction effect of the recommended safeguards, the acceptable level of risk is that residual level of risk remaining with the proposed import once safeguards have been imposed.

12.11 Surveillance

As the risk assessment points out, allowing the imports of a range of bee products that were previously not permitted will increase the chance of these pests and diseases dealt with in the risk assessment being introduced into New Zealand. An increase in the risk of introduction of exotic pests should be accompanied by a greater commitment to surveillance. Is this going to happen? Also, allowing the import of bee products may affect which parts of New Zealand are high-risk locations for surveillance. Will New Zealand's honeybee surveillance programme be adjusted to take this into account?

MAF COMMENT

Allowing importation under safe conditions may in fact decrease the probability of exotic disease and pest incursions. MAF considers the proposed irradiation for destruction of EFB in royal jelly to provide confidence that this importation can occur safely. This contrasts to the previous system of testing for *M pluton* in imported royal jelly that was prohibited when contamination was found. *Varroa* was introduced in an environment where importation of honey bees was prohibited. Although the pathway for this introduction is unknown, illegal importation is a strong possibility. If MAF can provide safe methods of importation of honey bee genetic material, such illegal activity will be far less likely to occur.

The level of surveillance and the type of surveillance for exotic pests and diseases is being monitored by MAF. MAF will respond to changes in the beekeeping environment.

12.12 Transitional facilities

We could find no mention in the import health standards on whether risk goods will be permitted into a transitional facilities where they can be reprocessed in New Zealand to reduce its risk profile, i.e. repackaging bulk royal jelly into capsules. Is this going to be permitted and if so what are the conditions that will be applied?

MAF COMMENT

It is MAF's policy to keep risks off-shore. Allowing risk commodities into a transitional facility is not the preferred option.

12.13 Viruses

Although the analysis of the viruses in the risk assessment is strictly correct it is inappropriate to suggest that sanitary measures are not justified. As indicated in the risk assessment, both deformed wing virus and slow paralysis virus could have a detrimental effect on hives in New Zealand now that *varroa* is present in here. A further survey of viruses has been conducted since the risk assessment was completed (Todd and Ball 2002, Poster at the National Beekeepers Association Annual Conference). Although this

survey confirmed the presence of the viruses already reported in New Zealand they were unable to find evidence of either deformed wing virus or slow paralysis virus where *varroa* was present. These survey results should be included in the risk assessment.

The additional survey carried out must bring into doubt that either deformed wing or slow paralysis viruses are present in New Zealand and a full risk analysis should be carried out.

If the additional survey is deemed not to be sufficient evidence for New Zealand to claim freedom from these diseases, the negative impact of these viruses justifies the imposition of sanitary measures until a further survey had been carried out to verify New Zealand's freedom from these viruses.

MAF COMMENT

MAF agrees and subsequent information has led MAF to review the section on viruses.

12.14 Chalkbrood

The risk assessment clearly indicates that there are strains of chalkbrood with a range of pathogenecities. The reason for sanitary measures not being recommended is that we do not know what strains are present in New Zealand. Again as with the viruses this is an inappropriate handling of the risks. As permitted under the SPS agreement we should have sanitary measures until the situation with chalkbrood strains in New Zealand has been established.

It can also be argued that considering the number of strains reported in the literature it is probable that we do not have the most pathogenetic strain already in New Zealand.

MAF COMMENT

The reference in the risk analysis to "strains of chalkbrood" is confusing, as reports of differences in severity of chalkbrood disease in various countries should not be linked to differences in virulence between strains of *Ascos. apis* without supporting experimental evidence. Factors such as the environmental conditions, including availability of a variety of food sources, affect the severity of chalkbrood disease. In fact it is difficult to set up infection with *Asos apis* in the field when bees have alternative food sources available to dilute any introduced *Asos apis*. This will be clarified in the revised risk analysis.

Moreover, any adverse affects from *Ascos apis* are likely to be transitory, since honey bees show a marked variability in susceptibility to infection. The consequence assessment is therefore negligible.

12.15 American Foulbrood Disease

Irradiation

It has been recommended that bees wax, pollen and used beekeeping equipment be treated with 10kGy⁶⁰Co. The effectiveness of this treatment is based on the findings of

Hornitzky and Wills (1983). However, research carried out by Mr G. Cammell and a project carried out on behalf of MAF looking at irradiating Apistan strips with 20 kGy Co to kill *P. larvae* spores (McBrydie and Goodwin 2001), have demonstrated that the method cannot be relied upon to produce consistent results, or to deactivate all *P. larvae* spores. The method should be removed until the reasons for irradiation to deactivate *P. larvae* spores has been determined.

MAF COMMENT

New Zealand is justified in imposing SPS measures against AFB as a result of there being an official control program in place (a National Pest Management Strategy), but under the SPS principle of non-discrimination covered in article 2.3 of the SPS agreement, the measures imposed must not be greater than those achieved under the NPMS rules. The relevant rule under the NPMS is rule 31(1) which prohibits the movement or sale of bee products from hives known or suspected to be clinically affected by AFB. Therefore, it is appropriate to impose measures on imported bee products to provide the same level of protection that would be achieved by the application of that rule.

Given that a minimum spore concentration seems to be required to infect a hive (this is 50 million spores per litre in the case of honey), it is reasonable to consider that same level of spores as the cut-off point between clinical and non-clinical hives. That is, clinical hives can be expected to have spore concentrations higher than this cut-off ("high") while non-clinical hives can be expected to have spore levels lower than this cut-off ("low"). Moreover, notwithstanding the uncertainty surrounding the efficacy of radiation, and in particular the inability of radiation to completely sterilise Apistan strips contaminated with AFB spores, MAF considers it reasonable to assume that radiation is able to reduce spore levels from a "high" level to a "low" level, the latter being equivalent to the most we can expect in NZ as a result of the full implementation of the PMS rule in question.

Also note that used beekeeping equipment will not be considered in the revised risk analysis.

12.16 Antibiotics

As indicated in the risk assessment there are oxytetracycline resistant *P. larvae* strains present overseas. These strains are causing increasing problems in North and South America. Although the risk assessment is correct in its assertion that these strains would have no impact on AFB in New Zealand at present this is a very short-term view. The AFB Pest Management strategy is to undergo its 5-year review in less than a year. Because of the strategies poor performance in some areas and the presence of *varroa* complicating AFB diagnosis the PMS may be abandoned. In that case New Zealand may be forced into antibiotic feeding programme to control AFB. The introduction of resistant strains of AFB could therefore have a negative impact on disease control in New Zealand.

MAF COMMENT

The permissible level of AFB spores recommended in the risk analysis is only 1% of the lowest spore level ever recorded to establish an infection. Thus MAF considers importation of honey bee hive products with AFB spores levels less than 500,000/L (infectious concentration 5 million spores/L) will have negligible risk of establishing OTC resistant strains of *P larvae larvae*.

12.17 Even if oxytetracycline resistant AFB had no impact on disease control measures in New Zealand its presence here may have negative impacts on exports of honey.

MAF COMMENT

MAF agrees that if, as a result of OTC resistant AFB, alternative antibiotics need to be used in the future for AFB control, this may have a negative impact on our exports if the alternative antibiotics are not acceptable to some markets. However the permissible level of AFB spores recommended in the risk analysis is only 1% of the lowest spore level ever recorded to establish an infection. Thus MAF considers importation of honey bee hive products with AFB spores levels less than 500,000/L (infectious concentration 5 million spores/L) will have negligible risk of establishing OTC resistant strains of *P larvae larvae*.

12.18 It is stated in the risk assessment and import health standards that honey can be imported from hives certified to be free of American foulbrood disease. However oxytetracycline can mask AFB disease symptoms. The import health standards should also indicate that the colonies have not been fed antibiotics in the 12 months previously to the honey being removed.

MAF COMMENT

Colonies treated with antibiotics should not have diseased larvae and therefore have a low level of *P. larvae larvae* spores in honey. They would then likely meet the thresholds for spores in honey. A change in the import health standard is therefore not justified.

12.19 *P. alvei* as a human pathogen

As indicated in the risk assessment, *P. alvei* is also a human pathogen. If the Health Dept has not been consulted over this risk assessment it is appropriate that they are.

MAF COMMENT

The Ministry of Health has been consulted on this risk analysis and have put in a submission. There were no comments on *P alvei*.

12.20 *P. alvei* as a pathogen of our native fauna

P. alvei has been reported as a pathogen of molluscs (Gormly et al 1996) and insects (other than honeybees) (Balaraman 1980). It is used as a biopesticide overseas. *P. alvei* therefore has the potential to affect our native fauna. This possible effect should have been covered in the risk assessment.

MAF COMMENT

P alvei is not reported as a pathogen of molluscs in the Gormly (1996) reference. Gormly et al. states that “..the culture medium used stimulated the growth of bacteria naturally found in the test water, which lowered the dissolved oxygen below 5ppm and killed the clam larvae. Because of these difficulties any toxicity that the (*P alvei*) preparation may have had toward the clam larvae would have been overshadowed by the effect of the low dissolved oxygen.”

Balaraman (1980) reference documents a study to ascertain if two bacterial species and two fungal agents which were isolated in the Pondicherry area of India and found to be highly pathogenic to larvae of mosquito in the laboratory, could be stored so that they could be mass produced to be used for control of mosquito larvae. The pathogenicity of *P alvei* for mosquito larvae in the natural environment was not explored. The reference is more than 20 years old. It is possible that the assumption that *P alvei* is a mosquito pathogen in the natural environment could be inaccurate in the same way that *P alvei* was initially assumed to be the cause of European foulbrood of honey bees prior to Bailey (1957)⁴ isolating *Melissococcus pluton* as the causative agent and showing that *P alvei* was a secondary invader.

An earlier article (Balaraman, Bheema and Rajagopalan, 1979)⁵ describes the methods to isolate the bacteria (*Bacillus alvei* and *Bacillus brevis*) that were used in the reference quoted in the submission. I quote “Efforts made by the Vector Control Research Centre, Pondicherry, in search of potential indigenous pathogens of mosquitoes yielded a few saprophytic bacteria, and the laboratory experiments carried out on two of these are reported here.” (underline added) The bacteria were collected from sick or dead larvae.

MAF agrees that the study found *P alvei* isolated in this way to be pathogenic for mosquito larvae in the laboratory. However, the significance to the field situation is uncertain.

MAF understands (personal communications at the 4th Tick and Tick Pathogen conference Canada 2002) that biopesticides are being trailed in several countries (researchers from the UK and Israel gave presentations) but the economic production of these agents to achieve commercial application has not yet been resolved.

⁴ Bailey, L (1957) The isolation and cultural characteristic of *Streptococcus pluton* and further observations on *Bacterium eurydice*. *Journal of General Microbiology* 17: 39-48.

⁵ Balarama, K, Bheema Rao U.S, Rajagopalan P, K. (1979) Bacterial pathogens of mosquito larvae- *Bacillus alvei* (Cheshire and Cheyene) and *Bacillus brevis* (Migula)- isolated in Pondicherry. *Indian J Med res.* 70: 615-619

Any adverse affect *P. alvei* might have on our native flora is unknown. As it appears to have the ability to multiply in any decaying matter, it is probable that it could act as a saprophyte. There is no evidence that *P. alvei* would be a pathogen to our native flora in field conditions.

12.21 *P. alvei* as a secondary invader

It is claimed in the risk assessment that *P. alvei* is only a secondary invader. However, Skrypnik (1984) and Kardokov et. al. (1975) have demonstrated that *P. alvei* can kill larvae when fed to them under laboratory conditions. *P. alvei* has also been reported to increase the death rate of adult bees infected with *Nosema apis* (Grobov 1971). Its reported status as a pathogen of other insect species (Balaraman 1980) also lends support to it being a honey bee pathogen.

The risk assessment should therefore be revised to indicate that *P. alvei* may be a honey bee pathogen.

MAF COMMENT

The Skrypnik and Kardokoy references were not supplied although requested from the submitter. MAF could only obtain abstracts of these references as they were written in Russian. As stated in the risk analysis, Bailey et al. (1973)⁶ found that 10⁵ cells of *P. alvei* fed to individual honey bee larvae caused no mortality. The Grobov reference (also not supplied) appears to support the concept of *P. alvei* as a secondary invader. See MAF comment 2 in relation to the Balaraman reference.

All expert reviewers agreed that *P. alvei* is a saprophyte of honey bee larvae killed by other pathogens in the field situation. The information presented is insufficient for MAF to change the risk analysis.

12.22 Ability to proliferate in the absence of *M. Pluton*

It is suggested in the risk assessment (M. Hornitzky pers comm) that *P. alvei* will not proliferate in larvae in the absence of EFB. However, no evidence is provided to support this conclusion. The only evidence that would be acceptable would be a study that:

Infected larvae killed by things other than EFB were artificially infected with *P. alvei* and it was shown that it could not proliferate.

A large number of larvae from colonies in which *P. alvei* had proliferated were analysed to determine that *M. pluton* was present.

As this information had not been provided by M. Hornitzky, it can probably be assumed that the trials have not been carried out. However considering the wide range of material it has been reported from it is should be assumed that *P. alvei* is able to infect any decaying material.

⁶ Bailey L, Fernando E, F, W, Stanley B. (1973) *Streptococcus faecalis*, *Bacillus alvei* and sacbrood virus in European foulbrood of the honey bee. *Journal of Invertebrate Pathology* 22: 450-453.

MAF comment:

The fact that the distribution of *P alvei* mirrors that of EFB strongly suggests that there is a strong association between the saprophytic *P alvei* and the pathogenic *M pluton*, and this is reflected in the belief by Hornitzky that under natural conditions the vast majority of *P alvei* growth is in larvae killed by *M pluton*.

Given that accounts of *P alvei* multiplying in larvae killed by organisms other than *M pluton* arise from work done in countries where EFB is endemic, there is a strong likelihood of confounding. It is not clear from any reports how it was determined what organism actually killed the larvae that were then colonised by the saprophytic *P alvei*.

12.23 *P. alvei* has been demonstrated to be able to proliferate in dead larvae that have been infected with the secondary invader *Clostridium botulinum* (Nako et al 1994). In a study on the survival of *P. alvei* spores Konlikovskii and Sosnia (1994) reported that the spores adhere readily to the cuticle of larvae and multiply. *P. alvei* has also been reported to be able to multiply in colonies killed by sacbrood (Bailey et al 1973).

MAF comment:

The Bailey (1973) reference is already given in the risk analysis.

The additional references support the information given in the first paragraph of the risk analysis under Distribution that *P alvei* is saprophyte which has been isolated from a variety of sources.

Nakano et al (1994), [note reference is misspelt in the submission], states "Since no *B alvei* was detected in control bee samples, this organism may not necessarily be indigenous to bees and contamination from outside is likely to be the case." This is an important finding in the question of whether *P alvei* is a primary pathogen of honey bees.

Konlikovskii and Sosnina [note misspelt in the submission reference] (1994) shows that, when honey bee larval surfaces are artificially contaminated with *P alvei*, adherence and fast development of the bacterium occurs. It is possible that the process of contamination of the larval surface may have caused devitalization such that *P alvei* could colonize the larvae. This gives some doubt to the conclusion of specific receptors on the surface of the larval cuticle as the reason for this rapid adherence and proliferation of *P alvei*.

12.24 In conclusion the available evidence suggests that M. Hornitzky is incorrect in his assertion that *P. alvei* cannot multiply in the absence of *M. pluton*. As no evidence has been provided to support the Dr Hornitzky's hypothesis and there is compelling evidence against it should be assumed that *M. pluton* is not necessary for *P. alvei* infections of honey bee larvae. The risk assessment should be modified in line with this.

MAF comment:

See 12.22 It is agreed that the comment that *P. alvei* will not proliferate in larvae in the absence of EFB is incorrect.

12.25 *P. alvei* disease symptoms

In the risk assessment it has been stated by Dr Ball that there is nothing to suggest that *P. alvei* can cause AFB like symptoms. This comment is used as part of the justification for there being no consequence for having *P. alvei* in New Zealand bee hives. The comment is however incorrect.

MAF COMMENT

The Dr Ball comment stated “..there is nothing to suggest that *P. alvei* either alone or in association with a primary pathogen produce characteristic clinical syndromes”.

12.26 To quote M. Hornitzky (1999). ‘*One of the most common secondary invaders found with EFB in Australia is Panibacillus alvei. This organism produces signs that mimic AFB and is sometimes confused with this disease necessitating laboratory backup.*’

According to M Hornitzky (Dr Goodwin pers comm.) approximately 20% of samples sent to his lab for confirmation of AFB are in fact *P. alvei*. Again this suggests that that *P. alvei* is capable of causing confusion with AFB.

According to Dr Goodwin who was shown *P. alvei* infected larvae in Australia by Bruce White (Senior Apicultural Advisor in Australia) *P. alvei* infected larvae are a similar colour to AFB larvae, have chewed cell cappings, and rope out like AFB. However the *P. alvei* diseased larvae have a thicker consistency and do not rope out as far. The relationship between the symptoms of both infection types has however not been subjected to rigorous comparison.

In addition to this, Dr Alippi (Allipi 1995) said that ‘*Most samples from colonies suspected of having AFB actually contain spores of Bacillus alvei*’ This also supports our assertion that they are often confused

The question needs to be asked of Dr Ball that if there is no convergence of symptoms why does England not rely on field diagnosis to confirm the presence of AFB, as we do, rather than requiring laboratory confirmation. Interestingly England is also investigating the use of an ELIZA kit for differential diagnosis of AFB in the field.

From Dr Hornitzky, Dr Goodwin and Dr Allipi's analyses, it appears that despite Dr Ball's comment that there is no evidence, *P. alvei* does produce symptoms similar to *P. larvae*.

Although differential diagnosis of *P. alvei* and AFB may be simple for Bee pathologists (although this has yet to be demonstrated) it needs to remember that New Zealand's AFB disease control programmes rely on field diagnosis, carried out by people other than trained pathologists. Even without *P. alvei* beekeepers sometimes still have difficulty in identifying AFB, confusing the symptoms with sacbrood virus. The presence of any other disease symptoms, especially symptoms with some similarities to AFB are likely to further compromise New Zealand's AFB disease control programmes.

The risk assessment therefore needs to be revised to assess the risk *P. alvei* poses to the AFB National Pest Management Strategy.

MAF comment:

The conclusion given in the risk analysis is "any complication that the presence of *P. alvei* may cause in the diagnosis of AFB under the Pest Management System is uncertain in the absence of *M. pluton*". The submission gives no new evidence to contradict this.

P. alvei has not been found in Western Australia, an area of Australia where *M. plutonius* is also not found.

12.27 Status of *P. alvei* in New Zealand

The report by Dr Ball of detecting *P. alvei* in a sample sent from New Zealand in 1980 remains unconfirmed and therefore should not be used to indicate that *P. alvei* is present in New Zealand. The observation that it is a widespread saprophyte also has no bearing on whether it is present in New Zealand.

MAF comment:

There has been one isolation of *P. alvei* in New Zealand in 1980.

12.28 Conclusion

There is evidence to suggest that *P. alvei* is probably a honey bee pathogen which may also adversely affect our endemic fauna. It can infect and multiply in larvae killed by causes other than *M. pluton* and exhibits symptoms similar to American foulbrood disease which may compromise the American foulbrood National Pest Management Strategy should it be imported into New Zealand. There is no evidence that it is already in New Zealand. This is more than enough to justify sanitary measures and the risk assessment should be revised in line with this.

Should the evidence that the *P. alvei* is not in New Zealand be considered to not be strong enough, sanitary measures should be put in place until its presence in New Zealand has been determined.

MAF COMMENT

See 12.26

12.29 European foulbrood disease

Heat treatment

Dr O'neil (MAF) reported at the National Beekeepers Association Annual Conference that trials on treatment of honey were being conducted in Germany. These trials have not been reported on in the risk assessment and they should be.

MAF COMMENT

A copy of this research report has been sent to the submitter (18 September 2002). MAF did not consider this research rigorous enough to be used to provide sanitary measures against *M. pluton* in imported goods, and MAF does not consider the conclusions reached in this report for thermal death time of *M. pluton* in honey (70 °C for 10 minutes) to be adequate.

12.30 Honey type

Australia has previously made application to export heat treated honey to New Zealand. MAF declined the application because Wooton *et al* (1981) had concluded in their study that honey variety could affect the heat treatment required to kill *M. pluton*. This question has still to be answered. MAF needs to either include in the risk assessment why they have changed their concerns over the effect of honey type on the heat treatment of honey or remove heat treatment as an option the sanitary measures included in the risk assessment and the import health standards.

MAF COMMENT

The previous work (Wooton *et al.*, 1981) indicated that there was some variability in the thermal death time of the bacterium when honey from different floral sources was used. However, there seemed to be no simple relationship between bacterial death time and pH or moisture content of the honey. The Ball study used a honey blended from nine honey types obtained from various countries that represented a middle range of values for moisture content, pH and acidity.

12.31 Irradiation

The concerns expressed in the section on *P. larvae* over the reliability of irradiation apply equally to the irradiation of EFB. Until the reasons for the variation in its effectiveness can be established irradiation should be removed from the sanitary measures.

MAF COMMENT

The submission does not give evidence to give MAF reason to doubt the reference MAF used to base recommendations on the use of irradiation for risk

management for EFB. The 1982 Hornitzky paper quoted in the risk analysis has not, to MAF's knowledge, been challenged. This paper found irradiation with a dose of 14 Gy from ^{60}Co (1.4×10^6 rads) eliminated *M. pluton* from honey.

12.32 Infective dose

We assume that MAF will wish to carry out some testing of imported bee products to audit the import health standards. However the number of *M. pluton* bacteria required to infect a honeybee larva and the sensitivity of the testing methods is unknown. This creates large difficulties in determining how sensitive any testing should be. These needs to be investigated before importation of bee products are permitted.

MAF COMMENT

As stated in 12.6, MAF will not test imported honey. Rather than test honey, royal jelly etc for the organism that causes EFB (*Melissococcus pluton*), MAF requires that imported products are treated to ensure all *M. pluton* are destroyed prior to importation. Detection of *M. pluton* in honey is reliant on culture of the bacterium and this has low sensitivity as the organism is difficult to culture and the presence of contaminants can inhibit the growth of *M. pluton* and preclude its detection.

12.33 Thermal death points

The temperatures required in the import health standards to deactivate *M. pluton* do not appear to be appropriate. Simply taking the highest recorded temperature recorded from two studies is insufficient. If a third study was carried out it might find yet a higher temperature was required to deactivate the bacteria. The temperature from both studies needed to be presented along with the replication we assume was carried out. The measures of dispersion can then be used to determine the actual temperature required to give the required level of certainty of killing all bacteria.

MAF COMMENT

Dr Balls' report on the thermal death point of *M. pluton* have been reviewed by Dr Harold Henderson, a statistician for AgResearch. His review has indicated that the analysis carried out by Dr Ball is appropriate. MAF is reviewing the acceptable parameters for heat treatment of honey and this will be addressed in the revised risk analysis.

A copy of the research has been sent to the submitter.

13 Jane and Tony Lorimer, Hamilton

Submission

On the

***DRAFT* Import Health Standards for the Importation into New Zealand of Honey Bee Hive Products and Used Beekeeping Equipment**

And the

**Animal Import Risk Analysis:
Honey Bee Hive Products and Used Equipment**

August 2002

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Introduction

We are beekeepers who manage between 1,000 to 1,200 beehive colonies in the Waikato region. Before the arrival of Varroa into our beehives, we had been managing up to 1500 beehives.

The extra time and cost to control Varroa has meant that we have had to take the step of down sizing our operation to try to fit in the extra work involved.

Our operation revolves around pollen production, honey production, and in more recent times the production of propolis. We also carry out a small amount of pollination in the Waikato around the immediate Hamilton area.

We have found that over the years our honey production area, that is mostly clover based, has been more difficult to obtain crops, so we have diversified to try to maintain our cashflow.

We contend that any importation of product from overseas will destroy the Beekeeping Industry if further incursions of unwanted organisms, or diseases are ‘accidentally’ bought in with product, or cheaper product imported, that we are unable to match because of our higher production costs. Our Industry is, in most years, a net exporter of bee products, and we see little need to import bee products into New Zealand.

Also of concern to us is the fact that if product is allowed entry into New Zealand under strict regulations e.g. honey needing to be heat treated, then the public once they have seen the product on the shop shelf in New Zealand, will think that it is OK to bring in the product when they come back from an overseas trip. The only problem will be that even though they may look like the same product, one will have been heat treated, and the one that they bring in is likely to have not been heat treated.

RECOMMENDATIONS

We recommend that the general conditions in Section 7 of the Import Health Standard need to be reviewed, and rewritten. Some of the OR sections in this import health standard, are considered by us to be inappropriate.

As an example, in 7.2 for bees' wax ii) if freedom from European foulbrood has not been approved by MAF then bees wax must be:

- e) accompanied by a certificate from the official veterinary authority which documents that the bees wax has been gamma irradiated with 14kGy from ^{60}Co **OR**
- f) in blocks of wax less than or equal to 1kg (so that it will not be made into foundation).

We contend that the practice mentioned in b) above could be very harmful, as that 1kg block could be bought, traded etc and still then be converted into comb foundation.

We recommend that the Import Health Standard be reviewed, in particular with respect to the Eligibility of products to be imported.

All of the products listed in 6.1 concerns us, but of particular concern is bulk product, or unprocessed product being allowed into the country. Also we feel that the following are the most likely to bring in new bee diseases:

- bee pollen coming into the country as a component of pollen supplements for feeding to bees.
- Used beekeeping equipment – including comb, feeders, pollen traps and dispensers, honey extracting equipment
- Bulk honey in drums

We ask that: The Animal Import Risk Analysis: Honey Bee Hive Products and Used Equipment, be reviewed, with the view of taking a **“Precautionary” approach** to the importation, i.e. where insufficient information on a organism or disease is indicated, that the importation of products that may harbour these organisms, or diseases, be **not allowed entry into New Zealand** until there is sufficient information to determine there is absolutely minimal chance of negative affects on the beekeeping industry and New Zealand as a whole

That all products when bought into the country to be marked with the “Country of Origin”, so that consumers can make an informed choice on what they buy. We also ask that products that enter the country should have a better or equivalent

- a) disease status (e.g. spore levels in Honey) and
- b) Food standard to our domestic product.

We ask that consideration be given to our Industry, with regard to what the economic effect will be should imports be allowed into the country. This needs to be considered in the light of what has happened in the likes of the United States, where product has been allowed entry, only to find that it has severely affected an industry to the point where anti –dumping tariffs have been imposed. **We know that the New Zealand Government is opposed to any forms of subsidising an industry, or creating trade barriers, or tariffs, but we ask that extreme caution is used before imports allowed.**

Animal Import Risk Analysis:
Honey Bee Hive Products and Used Equipment

We find that the number of assumptions made in this analysis are too great, and expose our Industry and New Zealand to irreparable harm.

On page 7 in the introduction we quote: “Many honey bee diseases have not been subject to extensive investigation. It is therefore, necessary to make several assumptions in this risk assessment. The first is that **if there are few reports of problems associated with a pathogen, it will be assumed not to be a major disease causing organism.** The second is that **if there are no reports of strain differences with respect to pathogenicity, it will be assumed there are none.**” And again a few lines down – “If there have been reports of strain differences for organisms already present in New Zealand, **it will be assumed that the strains present here are no more or less pathogenic than those elsewhere unless there are data available to prove this**”.

We find this approach deplorable!! Where there is no data on these pathogens, precaution is the only sensible approach, and no importation allowed until the research has been done, and is proven to be safe to import product that could carry these pathogens.

Areas of Concern

Viruses: In the conclusion it is stated that “Although both deformed wing virus, and slow paralysis virus could be considered a hazard now that *Varroa* is present in New Zealand, the evidence that they are not already here is insufficient to attempt to justify specific sanitary measures to keep them out. Viruses will, therefore, not be considered further in this risk analysis.”

We note that we are known to have only 10 out of 17 viruses. We do not wish to have further viruses.

Paenibacillus Alvei: “*P. alvei* will not be regarded as a hazard for this risk analysis, and sanitary measures are not justified”.

We consider that this should be in fact considered a risk, because of the fact that *P. alvei* is almost always present with European Foulbrood, and this mimics some of the symptoms of American Foulbrood (AFB), so its introduction into New Zealand with European Foulbrood would severely compromise our Pest Management Strategy. The goal of this Pest Management Strategy is to eliminate American foulbrood from New Zealand. This strategy is in force until 2008.

Spiroplasma: in the risk estimation it is stated: “There is not enough information available to reliably predict the likelihood of spiroplasmas being introduced into New Zealand.... Or the consequences if they were introduced. They have only been reported to impact on bees in the southwest of France and in the United States (destroyed 40% of foraging bees), and their economic impact has not been quantified. The consequences of introducing spiroplasmas is considered to be low”.

We consider that if there have been reports of problems associated with this bacteria in other countries, then we do not wish to risk having this imported in product.

Chalkbrood : In the risk management: “As chalkbrood is already present in New Zealand and there is no information available that indicates that the strain present here is any less virulent than those found elsewhere, no sanitary measures for risk management are recommended.”

We would ask that sanitary measure should be recommended to ensure no other strains of chalkbrood come into the country that may be more virulent than what is currently here.

Acariasis: the tracheal mite,
Tropilaelaps : the Asian mite,
Bee louse *Braula coeca* – a wingless fly,
Africanised bees,
Stonebrood, and

Small Hive Beetle

Vespa species: hornets

European Foulbrood

We would be mortified, if any of the above diseases were to enter the country. As some have said, that if we have the tracheal mite come into the country, it may be the beginning of the end for beekeepers in New Zealand. A few who have large amounts of pollination, or high value honey crops such as Manuka, or Pohutukawa, would likely survive the added costs of treating another incursion, but as for the rest of us, it could be the end.

We understand from some discussion over the trial on heat treating of honey to determine the heat treatment required to destroy *Melissococcus pluton*, that this trial has only been conducted in a laboratory situation. We are concerned that if honey in bulk is to be heat treated to destroy *M. pluton*, if in fact the heat treatment regime will work. In some cases, depending on the method used for heating a drum of honey, the honey in the centre of the drum may not reach as high a temperature as the other honey in the drum. This may have the consequences of not killing all of the spores, and thus creates an unacceptable risk to us.

Of particular concern is that it is stated in the risk analysis that the minimum infective dose for *M. pluton* is unknown. Therefore any product that is likely to carry these spores should not be allowed entry into New Zealand.

We consider that:

Products that may harbour any pathogen or unwanted organism that may cause honey bee diseases that will cause us further hardship, in both time and cost, to control or eradicate, should not be permitted entry into the country.

We note that in the risk analysis, in the table that gives the pest and disease status of New Zealand honey bees, that the Small Hive Beetle is not classed as an unwanted organism. We would like to ask that this status is changed immediately. The reports from overseas indicate that an invasion of the Small Hive Beetle would be catastrophic here in New Zealand, as it is reported to be capable of destroying honeybee colonies.

The Draft Import Health Standard for the importation onto New Zealand of honey bee hive Products and Used beekeeping equipment

Bulk honey imports

We maintain that this is one of the most risky ways in which to import honey.

All it needs is for someone to spill honey onto the outside of the drum, and not clean it off, for it to become a major threat, if the honey has not been heat treated to ensure that no European Foulbrood spores are present in the honey, all it would need is for that infected honey to be picked up by a bee, to potentially infect a hive and have another major bee disease in New Zealand.

Pollen Imports

We note in the guide that pollen is allowed in to the country in both bulk and in a supplement for feeding to bees.

We consider that this is an extremely dangerous practice to our industry, as in both forms it may harbour diseases such as American Foulbrood. Beekeepers in New Zealand have on occasions fed pollen collected

by their bees to other colonies, only to find that the pollen must have been contaminated with American Foulbrood spores, as several colonies fed, later showed clinical symptoms of American foulbrood.

We assume that other diseases such as European Foulbrood could be carried in such a manner as well, and indeed note in the risk analysis that the feeding of bee-collected pollen to colonies has been suggested as a factor involved in the spread of EFB in Western Canada

Used beekeeping equipment

The importation of used beekeeping equipment alarms us. All it needs is one Inspector to clear a shipment of equipment that has not been cleaned properly, to potentially bring many bee diseases into the country.

We note that in the risk analysis that it suggests that clothing; smokers etc and honey extracting equipment should be free of wax and have been **washed in hot water to remove adhering spores**. We are astounded that this has been suggested, as we know that American Foulbrood spores need to be exposed to heat of 160 degrees Celsius for 10 minutes to destroy the spores. Washing with hot water may still leave viable spores on the equipment.

We are also concerned over the inclusion of:

- Pure Royal Jelly in bulk, as EFB has been reported in an importation already
- Raw Propolis as it can still have bees, wax, and honey residues – all could carry diseases
- Bulk unprocessed bees wax as it could have residues of honey etc

All of the above pose an unacceptable risk of introducing new bee diseases into the country.

General Comment

We would like to make an observation that it seems rather ironic that one section of MAF is currently spending time and money trying to assist in the control of one bee disease incursion (the Varroa mite), while another section is actively encouraging the importation of bee products that could result in yet another major Biosecurity, and economic disaster for New Zealand.

Conclusions

- 1 We consider that the risks of importing diseases and organisms into the country that will adversely affect our Industry to be too great.

It is not only the effect on our industry that needs to be considered, but the effect on the economy **when** another major bee disease or pest enters the country that causes huge bee mortality. What will happen when there are insufficient bees to carry out the pollination of New Zealand's crops? What will happen to new crops being developed in New Zealand, which require bee pollination?

We have already been told that some South Island beekeepers are unlikely to be beekeeping with Varroa, as their operations are currently struggling. Would South Island beekeeping almost disappear with another incursion??

New Zealand is already reeling under the effects of introduced plants, animals, invertebrates, and micro-organisms. What is it costing the country to try to minimise the impact of the possum that has been destroying our natural flora?

The cost to the New Zealand Economy of other unwanted organisms entering our country is too great.

- 3 It is all very well to embrace the “World Economy”, with global trade of products that has the inherent risks associated with it of bringing with the goods unwanted organisms.

New Zealand cannot afford to embrace this idea completely, because of its isolation from the markets. It can not compete on a world market because of the cost of production (with high labour costs), and the cost of getting the product to the intended market. With these costs, New Zealand needs to give its exporters some assistance to help to ‘level the playing field’.

Beekeepers and Processors have traditionally been net exporters of product – almost every year we produce more bee products than we can consume on the domestic market.

Therefore we argue that, as the New Zealand economy cannot afford to lose its pollinating bees consideration is given to continue the prohibition of imports of bee products, to ensure our bees continue to remain relatively disease free.

We requests that if prohibition of imports of bee products is not continued, then the entire Risk Analysis, and the Import health standards needs to be re-drafted, taking into account the many concerns raised by ourselves, and by other members who have put in their own submissions.

13.1 We contend that any importation of product from overseas will destroy the Beekeeping Industry if further incursions of unwanted organisms, or diseases are ‘accidentally’ bought in with product, or cheaper product imported, that we are unable to match because of our higher production costs. Our Industry is, in most years, a net exporter of bee products, and we see little need to import bee products into New Zealand.

MAF COMMENT

MAF is aware of the importance of the beekeeping industry to the New Zealand economy. However, New Zealand is dependent on trade and has obligations under the Sanitary and Phytosanitary Agreement (SPS). APS measures can only be applied to the extent necessary, and with scientific justification. MAF will not allow trade unless such trade can occur without causing harm to the health of animal, plant or human populations.

13.2 Also of concern to us is the fact that if product is allowed entry into New Zealand under strict regulations e.g. honey needing to be heat treated, then the public once they have seen the product on the shop shelf in New Zealand, will think that it is OK to bring in the product when they come back from an overseas trip. The only problem will be that even though they may look like the same product, one will have been heat treated, and the one that they bring in is likely to have not been heat treated.

MAF COMMENT

The public will be advised that honey that has not been approved by MAF cannot be brought into New Zealand. Honey will need certification before importation is allowed. Private consignments of honey will not meet these requirements. These consignments will be picked up at the border as currently occurs.

13.3 We recommend that the general conditions in Section 7 of the Import Health Standard need to be reviewed, and rewritten. Some of the OR sections in this import health standard, are considered by us to be inappropriate.

As an example, in 7.2 for bees’ wax ii) if freedom from European foulbrood has not been approved by MAF then bees wax must be:

- g) accompanied by a certificate from the official veterinary authority which documents that the bees wax has been gamma irradiated with 14kGy from ⁶⁰Co **OR**
- h) in blocks of wax less than or equal to 1kg (so that it will not be made into foundation).

We contend that the practice mentioned in b) above could be very harmful, as that 1kg block could be bought, traded etc and still then be converted into comb foundation.

MAF COMMENT

The risk analysis and import health standard will be revised to state that bees wax can not be imported.

13.4 We recommend that the Import Health Standard be reviewed, in particular with respect to the Eligibility of products to be imported.

All of the products listed in 6.1 concerns us, but of particular concern is bulk product, or unprocessed product being allowed into the country. Also we feel that the following are the most likely to bring in new bee diseases:

- bee pollen coming into the country as a component of pollen supplements for feeding to bees.
- Used beekeeping equipment – including comb, feeders, pollen traps and dispensers, honey extracting equipment
- Bulk honey in drums

MAF COMMENT

MAF has decided that a generic import health standard is not appropriate and will consider specific applications once the import risk analysis is complete.

Bulk products will not be allowed entry unless these products can be treated to ensure such trade is safe. If this cannot be done, the products will not be allowed entry in bulk form but only in such a form that is unattractive to bees such as in capsules.

Used beekeeping equipment is to be withdrawn from the risk analysis as there are significant information gaps in the safe importation of this equipment, MAF understands that the equipment is available in New Zealand and consultation has shown that there is little interest in import of such equipment.

13.4 We ask that: The Animal Import Risk Analysis: Honey Bee Hive Products and Used Equipment, be reviewed, with the view of taking a “**Precautionary**” **approach** to the importation, i.e. where insufficient information on a organism or disease is indicated, that the importation of products that may harbour these organisms, or diseases, be **not allowed entry into New Zealand** until there is sufficient information to determine there is absolutely minimal chance of negative affects on the beekeeping industry and New Zealand as a whole

MAF COMMENT

Under the Sanitary and Phytosanitary Agreement (SPS), countries can only impose SPS measures that are based on science and are imposed to protect the health of animal, plant or human populations. Therefore, if there are no reports of an organism causing harm, it is not classified as a hazard in an import risk analysis.

MAF will regard any exotic organism as a potential hazard if there are any reports of adverse affects from the organism overseas. When carrying out the

consequence assessment MAF will assume that the same degree of adverse affects as reported overseas would be likely to occur if introduced to New Zealand.

MAF will carefully analyse cases where strain differences have been found and err on the side of caution if there is no information available on the relative pathogenicity of the New Zealand strains. MAF will then seek to obtain the necessary information for a more objective assessment of the risk.

13.5 That all products when bought into the country to be marked with the “Country of Origin”, so that consumers can make an informed choice on what they buy. We also ask that products that enter the country should have a better or equivalent a) disease status (e.g. spore levels in Honey) and b) Food standard to our domestic product.

MAF COMMENT

Labelling is outside the scope of the risk analysis which deals with “the risk of potentially hazardous organisms entering and establishing in New Zealand, and their probable impact on animal and human health, the environment and the economy, as a result of the purposeful importation of honey bee hive products”.

Labelling requirements are the responsibility of the New Zealand Food Safety Authority.

13.6 We find that the number of assumptions made in this analysis are too great, and expose our Industry and New Zealand to irreparable harm.

On page 7 in the introduction we quote: “Many honey bee diseases have not been subject to extensive investigation. It is therefore, necessary to make several assumptions in this risk assessment. The first is that **if there are few reports of problems associated with a pathogen, it will be assumed not to be a major disease causing organism.** The second is that **if there are no reports of strain differences with respect to pathogenicity, it will be assumed there are none.**” and again a few lines down – “If there have been reports of strain differences for organisms already present in New Zealand, **it will be assumed that the strains present here are no more or less pathogenic than those elsewhere unless there are data available to prove this**”.

We find this approach deplorable!! Where there is no data on these pathogens, precaution is the only sensible approach, and no importation allowed until the research has been done, and is proven to be safe to import product that could carry these pathogens.

MAF COMMENT

See 13.4

13.7 Viruses: In the conclusion it is stated that “Although both deformed wing virus, and slow paralysis virus could be considered a hazard now that *Varroa* is present in New

Zealand, the evidence that they are not already here is insufficient to attempt to justify specific sanitary measures to keep them out. Viruses will, therefore, not be considered further in this risk analysis.

We note that we are known to have only 10 out of 17 viruses. We do not wish to have further viruses.

MAF COMMENT

Subsequent information has led MAF to review the section on viruses.

13.8 Paenibacillus Alvei: “*P. alvei* will not be regarded as a hazard for this risk analysis, and sanitary measures are not justified”.

We consider that this should be in fact considered a risk, because of the fact that *P. alvei* is almost always present with European Foulbrood, and this mimics some of the symptoms of American Foulbrood (AFB), so its introduction into New Zealand with European Foulbrood would severely compromise our Pest Management Strategy. The goal of this Pest Management Strategy is to eliminate American foulbrood from New Zealand. This strategy is in force until 2008.

MAF COMMENT

Melissococcus pluton (the cause of EFB) is not found in New Zealand. *P. alvei* has not been recorded in honey bees in areas where EFB is not found. It is also not known how *P. alvei* may present in the absence of *M. pluton*. Thus, MAF concludes that it is not possible to state that *P. alvei* will have the potential to cause confusion in the diagnosis of AFB and so compromise the AFB Pest Management Strategy.

13.9 Spiroplasma: in the risk estimation it is stated: “There is not enough information available to reliably predict the likelihood of spiroplasmas being introduced into New Zealand. Or the consequences if they were introduced. They have only been reported to impact on bees in the southwest of France and in the United States (destroyed 40% of foraging bees), and their economic impact has not been quantified. The consequences of introducing spiroplasmas is considered to be low”.

We consider that if there have been reports of problems associated with this bacteria in other countries, then we do not wish to risk having this imported in product.

MAF COMMENT

Although spiroplasmas have been reported to be capable of destroying as many as 40% of foraging bees during the nectar flow, such reports are rare and colonies usually recover spontaneously in mid-summer

It is not possible to accurately predict how spiroplasmas would manifest themselves if the organism(s) became established in New Zealand, however there are few reports in the literature of colony mortality associated with

spiroplasmas, the effects appear to be transitory and leading beekeeping texts all regard spiroplasmas as a disease of only minor importance.

13.10 Chalkbrood : In the risk management: “As chalkbrood is already present in New Zealand and there is no information available that indicates that the strain present here is any less virulent than those found elsewhere, no sanitary measures for risk management are recommended.”

We would ask that sanitary measure should be recommended to ensure no other strains of chalkbrood come into the country that may be more virulent than what is currently here.

MAF COMMENT

The speculation about "strains of chalkbrood" is confusing, as there is no convincing evidence that strains of *Ascosp. apis* with different levels of virulence exist anywhere, let alone that more virulent strains exist abroad. Since factors such as the resistance of bee stocks to chalkbrood infection and environmental conditions affect the severity of chalkbrood infections, differences in reported severity of the disease in various countries cannot be attributed to *Ascosp. apis* strain differences without supporting experimental evidence. This will be corrected in the revised risk analysis.

Moreover, any adverse affects from *Ascosp. apis* are likely to be transitory, since honey bees show a marked variability in susceptibility to infection. The consequence assessment is therefore negligible.

13.11 Acariasis: the tracheal mite,
Tropilaelaps : the Asian mite,
Bee louse *Braula coeca* – a wingless fly,
Africanised bees,
Stonebrood, and
Small Hive Beetle
Vespa species: hornets
European Foulbrood

We would be mortified, if any of the above diseases were to enter the country. As some have said, that if we have the tracheal mite come into the country, it may be the beginning of the end for beekeepers in New Zealand. A few who have large amounts of pollination, or high value honey crops such as Manuka, or Pohutukawa, would likely survive the added costs of treating another incursion, but as for the rest of us, it could be the end.

MAF COMMENT

All of these species have been considered potential hazards in the risk analysis and thus subject to the risk analysis process.

As indicated in the risk analysis both fungi implicated in stonebrood disease,

Aspergillus flavus and *Aspergillus fumigatus* have already been reported in New Zealand. They have not been reported from New Zealand honey bees, however the surveillance programme is not designed to detect their presence and there are a number of potential pathways for bees to become infected. For these reasons it is not appropriate to recommend sanitary measures on imported bee products to prevent either of these fungi from entering New Zealand.

Risk management measures have been recommended for all of the organisms listed, apart from the fungi responsible for stonebrood disease. In addition, used beekeeping equipment, the principal risk pathway for *Vespa* species, will not be permitted entry.

13.12 We understand from some discussion over the trial on heat treating of honey to determine the heat treatment required to destroy *Melissococcus pluton*, that this trial has only been conducted in a laboratory situation. We are concerned that if honey in bulk is to be heat treated to destroy *M. pluton*, if in fact the heat treatment regime will work. In some cases, depending on the method used for heating a drum of honey, the honey in the centre of the drum may not reach as high a temperature as the other honey in the drum. This may have the consequences of not killing all of the spores, and thus creates an unacceptable risk to us.

MAF COMMENT

As stated in the import health standard '*The certification must document that core samples from bulk honey were tested to ensure the appropriate temperature is reached before timing begins*'. This will ensure that all honey being treated receives the correct treatment. This certification will be required in any subsequent import health standards drafted by MAF for honey.

13.12 Of particular concern is that it is stated in the risk analysis that the minimum infective dose for *M. pluton* is unknown. Therefore any product that is likely to carry these spores should not be allowed entry into New Zealand.

MAF COMMENT

It is known that *M. pluton* is highly infectious. It has been reported that less than 100 *M. pluton* bacteria are required to infect a honey bee larva⁷. The research showed that ALL bacteria were killed at the temperatures recommended for safe importation.

13.13 We note that in the risk analysis, in the table that gives the pest and disease status of New Zealand honey bees, that the Small Hive Beetle is not classed as an unwanted organism. We would like to ask that this status is changed immediately. The reports from overseas indicate that an invasion of the Small Hive Beetle would be

⁷ Bailey, L. (1960). The Epizootiology of European Foulbrood of the larval honey bee *Apis mellifera* Linnaeus. *Journal of Insect Pathology* 2: 67-83

catastrophic here in New Zealand, as it is reported to be capable of destroying honeybee colonies.

MAF COMMENT

The small hive beetle IS an unwanted organism. This is a mistake in the risk analysis and will be amended. The small hive beetle is subject to active surveillance as part of the MAF Honey Bee Exotic Organisms Surveillance Programme.

13.14 The Draft Import Health Standard for the importation onto New Zealand of honey bee hive Products and Used beekeeping equipment

Bulk honey imports

We maintain that this is one of the most risky ways in which to import honey.

All it needs is for someone to spill honey onto the outside of the drum, and not clean it off, for it to become a major threat, if the honey has not been heat treated to ensure that no European Foulbrood spores are present in the honey, all it would need is for that infected honey to be picked up by a bee, to potentially infect a hive and have another major bee disease in New Zealand.

MAF COMMENT

If the conditions of the import health standard are met then any spilt honey should not pose a biosecurity threat.

13.14 Pollen Imports

We note in the guide that pollen is allowed in to the country in both bulk and in a supplement for feeding to bees.

We consider that this is an extremely dangerous practice to our industry, as in both forms it may harbour diseases such as American Foulbrood. Beekeepers in New Zealand have on occasions fed pollen collected by their bees to other colonies, only to find that the pollen must have been contaminated with American Foulbrood spores, as several colonies fed, later showed clinical symptoms of American foulbrood.

MAF COMMENT

The risk assessment recognises the risks of feeding pollen on the spread of American foulbrood disease. The import health standard requires the pollen to come from hives free of American foulbrood disease when checked sometime within the last year. This is the same requirement placed on hives within New Zealand. The only other way in which pollen potentially infected with *P. larvae* spores can be imported is after it has been irradiated to deactivate the spores or in capsules that are unlikely to be fed to bees.

In addition, MAF has decided after consultation that pollen tablets be regarded as a risk good as they have the potential to be fed to bees. Only pollen capsules in retail packs will be permitted entry.

13.15 We assume that other diseases such as European Foulbrood could be carried in such a manner as well, and indeed note in the risk analysis that the feeding of bee-collected pollen to colonies has been suggested as a factor involved in the spread of EFB in Western Canada

MAF COMMENT

Pollen must be irradiated or in a form not attractive to bees if it is to be imported from a country with EFB.

In addition, MAF has decided after consultation that pollen tablets be regarded as a risk good as they have the potential to be fed to bees. Only pollen capsules in retail packs will be permitted entry.

13.16 Used beekeeping equipment

The importation of used beekeeping equipment alarms us. All it needs is one Inspector to clear a shipment of equipment that has not been cleaned properly, to potentially bring many bee diseases into the country.

MAF COMMENT

Used beekeeping equipment is to be withdrawn from the risk analysis

13.17 We note that in the risk analysis that it suggests that clothing; smokers etc and honey extracting equipment should be free of wax and have been **washed in hot water to remove adhering spores**. We are astounded that this has been suggested, as we know that American Foulbrood spores need to be exposed to heat of 160 degrees Celsius for 10 minutes to destroy the spores. Washing with hot water may still leave viable spores on the equipment.

MAF COMMENT

The treatment required in the import health standard is equivalent to what is required In the American foulbrood National Pest Management Strategy Order in Council. Note that for other reasons, used beekeeping equipment will be withdrawn from the risk analysis. Used beekeeping equipment is to be withdrawn from the risk analysis

13.18 We are also concerned over the inclusion of:

- Pure Royal Jelly in bulk, as EFB has been reported in an importation already
- Raw Propolis as it can still have bees, wax, and honey residues – all could carry diseases
- Bulk unprocessed bees wax as it could have residues of honey etc

All of the above pose an unacceptable risk of introducing new bee diseases into the country.

MAF COMMENT

The risk assessment recognises that these products may be contaminated with *M. pluton*. Royal jelly may only be imported if it is irradiated, heat treated or in retail packs of capsules. Propolis is now recognised as a risk commodity and will only be permitted entry if treated to destroy pathogens and pests or in capsules in retail packs. Bees wax must be irradiated. Bulk bees wax will not be permitted entry.

13.19 Conclusions

- 1 We consider that the risks of importing diseases and organisms into the country that will adversely affect our Industry to be too great.

It is not only the effect on our industry that needs to be considered, but the effect on the economy **when** another major bee disease or pest enters the country that causes huge bee mortality. What will happen when there are insufficient bees to carry out the pollination of New Zealand's crops? What will happen to new crops being developed in New Zealand, which require bee pollination?

We have already been told that some South Island beekeepers are unlikely to be beekeeping with Varroa, as their operations are currently struggling. Would South Island beekeeping almost disappear with another incursion??

New Zealand is already reeling under the effects of introduced plants, animals, invertebrates, and micro-organisms. What is it costing the country to try to minimise the impact of the possum that has been destroying our natural flora?

The cost to the New Zealand Economy of other unwanted organisms entering our country is too great.

MAF COMMENT

MAF will only allow importation of honey bee hive products if this can be done safely.

13.20 It is all very well to embrace the "World Economy", with global trade of products that has the inherent risks associated with it of bringing with the goods unwanted organisms.

New Zealand cannot afford to embrace this idea completely, because of its isolation from the markets. It can not compete on a world market because of the cost of production (with high labour costs), and the cost of getting the product to the intended market. With these costs, New Zealand needs to give its exporters some assistance to help to 'level the playing field'.

Beekeepers and Processors have traditionally been net exporters of product – almost every year we produce more bee products than we can consume on the domestic market.

Therefore we argue that, as the New Zealand economy cannot afford to lose its pollinating bees consideration is given to continue the prohibition of imports of bee products, to ensure our bees continue to remain relatively disease free.

We request that if prohibition of imports of bee products is not continued, then the entire Risk Analysis, and the Import health standards need to be re-drafted, taking into account the many concerns raised by ourselves, and by other members who have put in their own submissions.

MAF COMMENT

As outlined above, countries can only impose import conditions where there is a biosecurity risk, not to protect trade.

MAF has taken all submissions into consideration and will redraft the risk analysis. As stated, the import health standard in the generic form presented will not be issued. Specific import health standards will be drafted on request and released for public consultation.

14 .Submission on Import Health Standard: Canterbury Branch of the National Beekeepers Association

CANTERBURY BRANCH OF THE NATIONAL BEEKEEPERS ASSOCIATION.

c/- Rae Blair (Secretary) 17 Parnassus Street, WAIATU 8275.

4th September, 2002.

Helen Beban,
National Adviser ,
International Animal Trade, Ministry of Agriculture & Forestry, P.O. Box 2526, WELLINGTON.

Dear Helen

Enclosed please find our Canterbury Branch Submission on Draft Import Health Standards for the Importation into NZ of Honey Bee Hive Products and Used Beekeeping Equipment.

Please note, it is in two parts written by separate contributors.

We wish to present this submission in person, at the appropriate forum

Yours faithfully,

**RICHARD BENSEMANN, 13 SPRING PLACE, LEESTON,
ph 03) 3244410**



ROGER BRAY, BRAESBY FARM, RD 11 ASHBURTON, ph/fax 03) 3084964

BIOSECURITY COMMITTEE, CANTERBURY BRANCH.
DRAFT IMPORT HEALTH STANDARD FOR THE IMPORTATION INTO NEW ZEALAND OF
HONEY BEE HIVE PRODUCTS AND USED BEEKEEPING EQUIPMENT

SUBMISSION FROM CANTERBURY BRANCH OF NATIONAL BEEKEEPERS ASSOCIATION

1. National Beekeeping Association

The National Beekeeping Association (NBA) was formed in 1884 and its aims could be generally described as an association to foster beekeeping for the overall benefit of its members.

The organisation is run by an elected executive and various sub committees volunteer work is put in by these people.

Many hours of

This association over the years has been an important partner with the Government to assist in "" protecting the health of bees. In 1905 the first Apiaries Act was passed and in 1908 the Government appointed 2 bee inspectors (one in each Island). The position of bee inspectors was to inspect beehives for diseases (mainly American Foul Brood -AFB) and to address beekeepers meetings with an aim of educating and instructing beekeepers.

With the introduction of the Biosecurity Act 1993 which incorporated provisions of the apiaries Act, the NBA formulated a Pest Management Strategy (PMS) and this was put in place with a Biosecurity Order in 1998. This was an industry response to maintain control and the eventual eradication of an endemic disease (AFB). This order has the acceptance of members and is maintaining a control on AFB without the use of drugs.

Since the introduction of varroa the NBA organisation has been placed in considerable stress. This had been compounded with the need to reorganise the financial commitment by the members for the maintenance of the association. At a recent vote in the Commodity Levy (method of funding the Association) a weighted vote achieved a result which effectively deprives the Association of funds to run its business. Without dealing with the issue this "no" vote was achieved because of the inequalities which existed in the funding/voting system and was in fact the "voice" of 20% of the members who contributed 80% of the funding.

2. THE CANTERBURY BRANCH OF THE NBA.

This branch is one of 16 Regional Branches of the NBA. This is the direct contact with members of the NBA. The Canterbury Branch has a large number of commercial beekeepers and is reasonably active in promoting the well-being of bees and beekeeping. The members are a group of practical beekeepers who are aware more of the aspect of keeping bees for sustainability and profit. Whilst they may see the ramifications involved in the Governance and Policy decisions which affect beekeeping, they are often inept at dealing with decisions made by higher authority particularly on an individual basis.

3. CONSULTATION PROCESS.

It is the view of this branch that the consultation process on the Draft Import Health Standards and the Risk Analysis has been lacking and totally inadequate for this industry .Especially since imports have been prohibited for the last 50 years and under severe restriction for a further approx. 25 years. The Canterbury Branch has had no direct notification of the Risk Analysis or the Import Health Standards (in Draft form) nor has it been forwarded the documents for discussion amongst beekeepers or exporters (the affected parties).

The President of our Branch received a personal letter (see Appendix). To send a personal letter directing information via a website to a member of our Branch (who happens to be President) is totally unacceptable

to this branch as "branch consultation". Contact with other branch members would also suggest that other branches have not been consulted .

Some of our members who are honey exporters (and registered with MAF as such) have indicated no knowledge of the proposed Import Health Standard and Risk Analysis. There are other Sector groups with members in our Branch (eg Comb Honey Producers, Honey Packers etc.) who are unaware of the process.

As a Branch of the NBA the members have indicated a genuine concern with the proposal and also questions the integrity of the consultation process.

4. HAZARD IDENTIFICATION.

The Import Risk Analysis: Honey Bee Hive Products and Used Equipment (RA) has been prepared to identify and manage disease risks posed by the importation of honey bee commodities. It has been prepared (presumably under a terms of references) to look at only one aspect of the import risks. The identification of risk should have been sufficiently developed to include all risks other than diseases, although disease is an important part.

As NZ's ability to offer to the world a quality beehive product (eg honey) may be compromised by the importation of honey we believe this should have been identified and included in the RA. As hive products may have adverse effects in the health of NZ population this should also have been addressed. We refer to toxic honeys and chemicals which have been used in overseas countries. The Hazard identification has largely been played down in the RA. With regard to Viruses little is known about many of the viruses including information which could determine whether or not the viruses could be spread by honey. It is noted that many viruses become apparent with varroa.

The Hazard identification has not defined a base line for NZ bees -the NZ bees have developed from a very select genetic base with a narrow range of genetic material (introduced in limited numbers 1840-80's) with only minor importation of genetic stock (by permit only until approx 1950). It is possible that the NZ bees have become well on their way to becoming a sub species (identification may be difficult as NZ bees have contributed to the world gene pool). However it may be possible that the introduction of a virus (which has developed a symbiotic relationship with its host) may actually cause negative effects on our NZ strain of bee.

5. WORLD RECORD OF DISEASE CONTROL

Apis mellifera the most widely farmed bee species has been farmed in many countries. It is the bee of choice for the production of bee hive products and as such is probably the most common bee and is used in most Continents. Over the years man has learned to use chemicals to control bee diseases. This has led to a situation in a lot of beekeeping countries where the bee has become almost totally dependent on chemicals. The dependence on chemicals is also compounded by the disease and pests becoming resistant to increasing doses of chemicals -for example varroa has shown resistance to increasing doses of chemicals -fluvalenate, AFB resistant to oxy-tetracycline (OTC).

There has been little co-ordination world wide to control pests and diseases by sustainable methods, NZ on the other hand does have the ability and laws (eg AFB strategy) which enables sustainable beekeeping -this

has been compromised to an extent with the 'fast track' approval of a chemical feeding regime for varroa that may not have been the only solution.

The state of health of world bees appears to be on a downward spiral. This has in no doubt been as a result of a largely unrestricted movement in bee hive product and equipment. If hive product imports were permitted we, as a country risk entering into an area where beekeeping as we know it (sustainable) ceases to exist and is replaced by a system of complete dominance by man (non sustainable). By moving down this track we face becoming a 'third world' nation in beekeeping which means that could face being inflicted with a system which "encourages" a diminished standard of bee health dictated to by the worlds "worst" beekeepers who are dependent on artificial remedies for health issues .

6. EXPOSURE TO RISK.

The RA states 'Honey is attractive to honey bees and they actively seek it' is perhaps an understatement and the significance has maybe not been given the importance which the members of our Branch feel.

Bees are very efficient foragers and communicators and can 'clean' traces of honey and are attracted to most beekeeping products and equipment.

As an example in the mid-1980's a container load of honey in glass jars was dropped from a crane and resulted in a rather large sticky mess, the packer who was also a beekeeper collected the container and placed this in a rural area where he had hives, more hives were taken to this area I the doors of the container were opened and the mess exposed to the bees, the result was that honey was recovered by the bees and the sticky mess became a clean mess.

Beekeepers are also on the lookout for cheap forms of feed for their bees. Some of the items which have been fed to bees include -contaminated product from confectionery I food and jam manufacturers, as well as honey processing residues from bee equipment. The contamination usually consists of dirt and process damaged goods.

The Food manufacturers and processors who use honey in bulk form are probably unaware of transmission of bee diseases through an inadequate system of cleaning the bulk containers prior to disposal.

As a branch we appreciate the 'spread of disease' risk when exposing bees to contaminated products however, economies and human nature tend to take o-ver when making choices-

The risk of medicines/health remedies etc of coming into contact with bees is also a possibility although by diminished chances.

Beeswax even in 1 kg blocks is able to be manufactured into foundation for beehives.

Perhaps when looking at exposure to risk we should draw a parallel between say foot and mouth and BSE with regard to exposure to animals. Does the RA for the importation of meat products contain the phrase "Meat is attractive to animals and they actively seek it?"

The chances of confined animals" becoming exposed to meat/animal products is quite remote when compared to the risk of bees being exposed to bee hive products mainly because of the distribution and unconfined nature of bees, along with their communication skills which are used to signal 'finds' to other bees in the colony-

7. ORGANISMS IDENTIFIED/UNIDENTIFIED.

The RA to be of benefit should take into account the possibility that not all pathogens have been discovered nor has the epidemiology of the ones which have been discovered been understood. To dismiss all this with the view that, because there are no reported problems, the problems do not exist nor are likely to cause losses, is unacceptable.

According to JE Digges (Practical Bee Guide 12 edition, 1944), Britain, in the early 1900's was 'wrought almost indescribable destruction among colonies and ravaged and laid waste the domain of beekeeping in every part of the Three Kingdoms,' by the "Isle of Wright Disease". The causative agent was not discovered until 1920's and was called *Acarapis woodi* the disease became known as 'Acarine Disease'. Thus the RA has not been sufficiently fine grained to suggest mitigation measures which would prevent the transmission of "unknown unwanted organisms" from reaching our shores as per the above example.

8. NZ VARROA EXPERIENCE.

NZ, in theory , should have remained isolated from the rest of the world with regard to varroa incursion. There is still a view that varroa could have been eradicated given time and commitment not only by the beekeepers but also with Government involvement.

The lessons learned from this incursion) is the need for increased biosecurity protection, not only for the protection of our bee stocks but also to allow the Agricultural sector (who is dependent on bees) to have the benefit of these important pollinators of agricultural produce .

We have also realised that any future incursions of harmful organisms will put increased pressure on an already stressed industry, and the NBA as an organised body of industry representatives.

The bottom line is that in the event of another incursion of organisms capable of causing loss the industry, although maybe wanting to eradicate, is possibly not in a position to attempt to eradicate the organism and losses through control/uncontrol could be significant.

9 TRADE.

Although it has been stated that trade risks will not be accepted in the formation of the IHS, it is the view of our branch that the trade reputation of the New Zealand Beekeeping Industry could be damaged by factors which could be attributed to imported honey for example -for access to the European Union countries an intensive sampling regime is undertaken on all honey produced in NZ. It would not be beyond possibility that a drum (or even part) of imported honey could become "mixed up" with a shipment of our "NZ" honey exports. If residues were found it could compromise either our certification procedure or "our" honey and perhaps even both. That this kind of risk has not been dealt with in the RA. and subsequently in the IHS is unacceptable to this Branch.

Countries we currently trade with accept the integrity of our honey and certification process.

There is no drug or chemical feeding of bees in the South Island of NZ -probably the only major area of beekeeping in the world to be able to claim that status .

10. TREATMENT OPTIONS FOR IMPORTED ITEMS.

Perhaps the major risk items would be the Bacterium and Viruses because of their microscopic ability to hide. It does not give members of this branch any confidence that the treatment thresholds are adequate in protecting our livestock. It has not been shown the spore distribution in a sample of honey is constant. In any amount of honey (bee product) if the spores tended to group together in colonies rather than be evenly distributed through out the whole sample then an accurate assessment of spore loading cannot be achieved with any credibility. In trying to achieve a thermal death point for *M. pluton* the researchers were faced with considerable difficulties in even being able to test and locate *M. pluton*. The results of lab. tests form the basis for an import standard. There appears to have been no trial work done on the commercial application and success of this application on the treatment for European Foul Brood (EFB) is unknown. At best the success or failure of heat treatment measures for treating honey to destroy *M. pluton* is probably only able to be measured if EFB turns up in our hives after importation has occurred. This is unacceptable to our members.

11. IMPORT HEALTH STANDARDS

Our branch has the view that because of health risks to our bees the IHS are insufficient at appropriately dealing with the RA or our further points and concerns.

We also have concerns that antibiotic feeding of hives and possible contamination of imported products has not been addressed in the RA and subsequent IHS. This should also be of concern to the public of New Zealand as consumers of honey.

4th September, 2002

14.1 CONSULTATION PROCESS

It is the view of this branch that the consultation process on the Draft Import Health Standards and the Risk Analysis has been lacking and totally inadequate for this industry. Especially since imports have been prohibited for the last 50 years and under severe restriction for a further approx. 25 years. The Canterbury Branch has had no direct notification of the Risk Analysis or the import Health Standards (in Draft form) nor has it been forwarded the documents for discussion amongst beekeepers or exporters (the affect parties).

The President of our Branch received a person letter (see Appendix). To send a personal letter directing information via a website to a member of our Branch (who happens to be President) is totally unacceptable to this branch as “branch consultation”. Contact with other branch members would also suggest that other branches have not been consulted.

Some of our members who are honey exporters (and registered with MAF as such) have indicated no knowledge of the proposed Import Health Standard and Risk Analysis. There are other Sector groups with members in our Branch (eg Comb Honey Producers, Honey Packers etc.) who are unaware of the process.

As a Branch of the NBA the members have indicated a genuine concern with the proposal and also questions with integrity of the consultation process.

MAF COMMENT

Section 22 of the Biosecurity Act 1993 states the MAF must “...consult with those persons considered by the chief technical officer to be representative of the classes of persons having an interest in the standard.” MAF’s policy is to be inclusive rather than exclusive in identifying stakeholders. MAF identified the National Beekeeper’s Association of New Zealand Inc, importers and exporters of hive products and other government departments as stakeholders for the consultation process. Methods used to communicate with stakeholders included an article in *The New Zealand Beekeeper* (May 2002), notification in *Biosecurity* (1 August 2002, Issue 37) and mail-outs to individual stakeholders ; 30 members of the National Beekeepers Association, 13 importers and 31 exporters of honey bee hive products.

MAF had a good response to the public consultation process.

14.2 HAZARD IDENTIFICATION

The Import Risk Analysis : Honey Bee Hive Products and Used Equipment (RA) has been prepared to identify and manage disease risks posed by the importation of honey bee commodities. It has been prepared (presumably under a terms of references) to look at only one aspect of the import risks. The identification of risk should have been sufficiently developed to include all risks other than diseases, although disease is an important part.

MAF COMMENT

The risk analysis evaluates the risk of potentially hazardous organisms entering and establishing in New Zealand, and their probable impact on animal and human health, the environment and the economy, as a result of the purposeful importation of honey bee hive products. Where a hazard is identified, risk management measures will be recommended where appropriate.

14.2 As NZ's ability to offer to the world a quality beehive product (eg honey) may be compromised by the importation of honey we believe this should have been identified and included in the RA.

MAF COMMENT

The consequence assessments in the risk analysis address the issue of economic consequences.

14.3 As hive products may have adverse effects in the health of NZ population this should also have been addressed. We refer to toxic honeys and chemicals which have been used in overseas countries.

MAF COMMENT

The issue of food quality was formerly the responsibility of the Ministry of Health (MoH) but is the responsibility of the New Zealand Food Safety Authority (FSA). The MoH and FSA have been consulted in drafting the risk analysis and import health standard.

14.4 The Hazard identification has largely been played down in the RA. With regard to Viruses little is known about many of the viruses including information which could determine whether or not the viruses could be spread by honey. It is noted that many viruses become apparent with varroa.

MAF COMMENT

Subsequent information has led MAF to review the section on viruses.

14.5 The Hazard identification has not defined a base line for NZ bees – the NZ bees have developed from a very select genetic base with a narrow range of genetic material (introduced in limited numbers 1840-80's) with only minor importation of genetic stock (by permit only until approx 1950). It is possible that the NZ bees have become well on their way to becoming a sub species (identification may be difficult as NZ bees have contributed to the world gene pool). However it may be possible that the introduction of a virus (which has developed a symbiotic relationship with its host) may actually cause negative effects on our NZ strain of bee.

MAF COMMENT

New Zealand exports large numbers of queens overseas and there have not been any suggestions from countries receiving these queens that they are more susceptible to diseases.

14.6 WORLD RECORD OF DISEASE CONTROL

Apis mellifera the most widely farmed bee species has been farmed in many countries. It is the bee of choice for the production of bee hive products and as such is probably the most common bee and is used in most Continents. Over the years man has learned to use chemicals to control bee diseases. This has led to a situation in a lot of beekeeping countries where the bee has become almost totally dependent on chemicals. The dependence on chemicals is also compounded by the disease and pests becoming resistant to increasing doses of chemicals – for example varroa has shown resistance to increasing doses of chemicals – fluvalenate, AFB resistant to oxytetracycline (OTC).

There has been little co-ordination world wide to control pests and diseases by sustainable methods, NZ only the other hand does have the ability and lows (eg AFB strategy) which enables sustainable beekeeping – this has been compromised to an extent with the ‘fast track’ approval of a chemical feeding regime for varroa that may not have been the only solution.

MAF COMMENT

Without the fast track approval of chemical treatments for varroa it is likely that most hives in the upper North Island would have been killed by varroa.

14.7 The state of health of world bees appears to be on a downward spiral. This has in no doubt been as a result of a largely unrestricted movement in bee hive product and equipment. If hive product imports were permitted we, as a country risk entering into an area where beekeeping as we know it (sustainable) ceases to exist and is replace by a system of complete dominance by man (non sustainable). By moving down this track we face becoming a “third world” nation in beekeeping which means that could face being inflicted with a system which “encourages” a diminished standard of bee health dictated to by the worlds “worst” beekeepers who are dependent on artificial remedies for health issues

MAF COMMENT

See 14.16.

14.8 EXPOSURE TO RISK

The RA states ‘Honey is attractive to honey bees and they actively seek it’ is perhaps an understatement and the significance has maybe not been given the importance which the members of our Branch feed.

Bees are very efficient foragers and communicators and can ‘clean’ traces of honey and are attracted to most beekeeping products and equipment.

As an example in the mid 1980’s a container load of honey in glass jars was dropped from a crane and results in a rather large sticky mess, the packer who was also a beekeeper collected the container and placed this in a rural area where he had hives, more hives were taken to this area, the doors of the container were opened and the mess exposed to the bees, the result was that honey was recovered by the bees and the sticky mess became a clean mess.

Beekeepers are also on the lookout for cheap forms of feed for their bees. Some of the items which have been fed to bees include – contaminated product from confectionery, food and jam manufacturers, as well as honey processing residues from bee equipment. The contamination usually consists of dirt and process damaged goods.

The Food manufacturers and processors who use honey in bulk form are probably unaware of transmission of bee diseases through an inadequate system of cleaning the bulk containers prior to disposal.

As a branch we appreciate the ‘spread of disease’ risk when exposing bees to contaminated products however, economies and human nature tend to take over when making choices. The risk of medicines/health remedies etc of coming into contact with bees is also a possibility although by diminished chances.

Beeswax even in 1kg blocks is able to be manufactured into foundation for beehives.

The changes of confined animals becoming exposed to meat/animal products is quite remote when compared to the risk of bees being exposed to bee hive products mainly because of the distribution and unconfined nature of bees, along with their communication skills which are used to signal ‘finds’ to other bees in the colony.

MAF COMMENT

MAF is aware of the unique exposure pathways due to the ability of bees to seek out and feed on honey and other hive products where these may be discarded in the environment. Where conditions such as heat treatment and irradiation are not applicable, MAF requires that any risk products containing honey bee hive products are in a form that is unattractive to bees (something is attractive to bees if it will attract bees if it was discarded in the environment).

Bees wax will not be permitted entry.

14.9 ORGANISMS IDENTIFIED/UNIDENTIFIED

The RA to be of benefit should take into account the possibility that not all pathogens have been discovered nor has the epidemiology of the ones which have been discovered been understood. To dismiss all this with the view that, because there are not reported problems the problems do not exist nor are likely to cause losses, is unacceptable.

According to JE Digges (Practical Bee Guide 12 edition, 1944), Britain, in the early 1900's was 'wrought almost indescribable destruction among colonies and ravaged and laid waste the domain of beekeeping in every part of the Three Kingdoms', by the "Isle of Wright Disease". The causative agent was not discovered until 1920's and was called *Acarapis woodi* the disease became known as 'Acarine Disease'. Thus the RA has not been sufficiently fine grained to suggest mitigation measures which would prevent the transmission of "unknown unwanted organisms" from reaching our shores as per the above example.

MAF COMMENT

Under the SPS Agreement, countries have the right to take sanitary and phytosanitary measures to protect human, animal or plant life or health. However, such measures can not be applied in a manner which "would constitute a disguised restriction on international trade" (Article 2.3 of the SPS Agreement). The measures must be based on science and thus there must be some evidence of the potential for harmful effects before import conditions can be imposed.

14.10 NZ VARROA EXPERIENCE

NZ, in theory, should have remained isolated from the rest of the world with regard to varroa incursion. There is still a view that varroa could have been eradicated given time and commitment not only by the beekeepers but also with Government involvement.

The lessons learned from this incursion is the need for increased biosecurity protection, not only for the protection of our bee stocks but also to allow the Agricultural sector (who is dependent on bees) to have the benefit of these important pollinators of agricultural produce.

We have also realised that any future incursions of harmful organisms will put increased pressure on an already stressed industry, and the NBA as an organised body of industry representatives.

The bottom line is that in the event of another incursion of organisms capable of causing loss the industry, although maybe wanting to eradicate, is possibly not in a position to attempt to eradicate the organism and losses through control/uncontrol could be significant.

MAF COMMENT

MAF is aware of the importance of the beekeeping industry to the New Zealand economy. However, New Zealand is dependent on trade and has obligations under the Sanitary and Phytosanitary Agreement (SPS). MAF will not allow trade unless such trade can occur without causing harm to the health of animal, plant or human populations.

Allowing importation under safe conditions may in fact decrease the probability of exotic disease and pest incursions. MAF considers the proposed irradiation for destruction of EFB in royal jelly to provide confidence that this importation can occur safely. This contrasts to the previous system of testing for *M pluton* in

imported royal jelly that was prohibited when contamination was found. *Varroa* was introduced in an environment where importation of honey bees was prohibited. Although the pathway for this introduction is unknown, illegal importation is a possibility. If MAF can provide safe methods of importation of honey bee genetic material, such illegal activity (which is not subject to any audit) will be far less likely to occur.

14.11 TRADE

Although it has been stated that trade risks will not be accepted in the formation of the IHS, it is the view of our branch that the trade reputation of the New Zealand Beekeeping Industry could be damaged by factors which could be attributed to imported honey for example – for access to the European Union countries an intensive sampling regime is undertaken on all honey produced in NZ. It would not be beyond possibility that a drum (or even part) of imported honey could become “mixed up” with a shipment of our “NZ” honey exports. If residues were found it could compromise either our certification procedure of “our” honey and perhaps even both. That this kind of risk has not been dealt with in the RA and subsequently in the IHS is unacceptable to this Branch. Countries we currently trade with accept the integrity of our honey and certification process. There is no drug or chemical feeding of bees in the South Island of NZ – probably the only major area of beekeeping in the world to be able to claim that status.

MAF COMMENT

The New Zealand Food Safety Authority is aware of this issue and is investigating whether existing export assurance systems require amendment in relation to traceability of New Zealand product.

14.12 TREATMENT OPTIONS FOR IMPORTED ITEMS

Perhaps the major risk items would be the Bacterium and Viruses because of their microscopic ability to hide. It does not give members of this branch any confidence that the treatment thresholds are adequate in protecting our livestock. It has not been shown the spore distribution in a sample of honey is constant. In any amount of honey (bee product) if the spores tended to group together in colonies rather than be evenly distributed through out the whole sample then an accurate assessment of spore loading cannot be achieved with any credibility.

MAF COMMENT

The permissible level of AFB spores recommended in the risk analysis is only 1% of the lowest spore level ever recorded to establish an infection. Thus MAF considers importation of honey bee hive products with AFB spores levels less than 500,000/L (infectious concentration 5 million spores/L) will have negligible risk even if there is uneven distribution of spores in the honey. The methods of sampling need to be addressed in the import health standard eg honey must be stirred.

14.13 In trying to achieve a thermal death point for *M. pluton* the researchers were faced with considerable difficulties in even being able to test and locate *M. pluton*. The results

of lab. tests form the basis for an import standard. There appears to have been no trial work done on the commercial application and success of this application on the treatment for European Foul Brood (EFB) is unknown. At best the success or failure of heat treatment measures for treating honey to destroy *M. pluton* is probably only able to be measured if EFB turns up in our hives after importation has occurred. This is unacceptable to our members.

MAF COMMENT

The heat treatment of honey has been subject to two research reports. The Australian report (Wooton et al, date) has been published in a peer reviewed scientific journal. The research commissioned by MAF has been carried out at a well respected research institute in the UK. It has not yet been published but is going through this process.

Although the submitter is correct in stating that *M pluton* is difficult to detect by culture of honey due to the culture requirements and the presence of contaminants that can inhibit growth, the methodology of culture in the research work resulted in a very sensitive detection procedure. Optimal culture conditions were used and the honey used in the research was subjected to heating at 65°C until no bacteria contaminating could be grown from the honey (this took 5 days). This resulted in good sensitivity of detection. Most colonies were very small, indicating that they had originated from single bacterial cells or short chains.

MAF will require certification to show that the bulk honey has been continuously stirred or core samples to be taken to ensure the middle of the honey has reached the required temperature for the required time.

14.14 We also have concerns that antibiotic feeding of hives and possible contamination of imported products has not been addressed in the RA and subsequent HIS. This should also be of concern to the public of New Zealand as consumers of honey.

MAF COMMENT

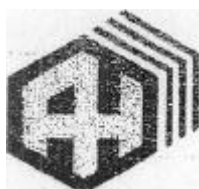
This is not a biosecurity issue but the responsibility of the New Zealand Food Safety Authority. The FSA will consider what monitoring requirements of imported honey will be required to ensure the New Zealand consumer is protected.

15 ARATAKI HONEY LTD

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Date: 2 September 2002

To: Jessie Chan MAF, Wellington

Fax No: 044744133

Re: SUBMISSION ON THE:

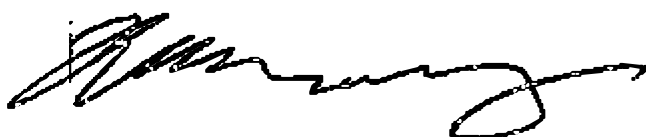
ANIMAL IMPORT RISK ANALYSIS: HONEY BEE HIVE PRODUCTS AND
USED EQUIPMENT By Dr R.M. Goodwin

Dear Jessie,

Please find enclosed submission as above.

A further submission on the draft **Import Health Standard For The Importation Into New Zealand Of Honey Bee Hive Products And Used Beekeeping Equipment.** will be faxed to you later today.

Thank you,



Russell Berry

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ANIMAL IMPORT RISK ANALYSIS: HONEY BEE HIVE PRODUCTS AND USED EQUIPMENT By
Dr R.M.Goodwin

I. Russell Berry, past president of the National Beekeepers' Association Inc, a commercial beekeeper for 45 years, director of Arataki Honey Ltd the largest commercial beekeeping business in New Zealand which is substantially involved in pollination, queen raising, exporting bees, packing honey and marketing, have a very good understanding of commercial beekeeping in New Zealand and the likely affect on New Zealand beekeeping of European Brood Disease or a different strain of American Foulbrood.

Setting the Scene:

Most countries of the world recognise the public good and public benefit of beekeeping to their country's economy and subsidises beekeepers in some manner, some more apparent than others!

Because bees fly long distances it is very hard to get up-to-date, reliable information on any country's disease status. This adds substantially to the risk of importing bee products into New Zealand. Unless it can be confirmed that a full survey has been carried out during the last five years, then it must be assumed, if we allow imports in or not, that that country wishing to export to us is likely to have the disease risk concerned.

The first thing that must be surveyed for is the difference in the strains of AFB in New Zealand and the country wishing to export to us. If this is not done, no imports of their produce should be allowed into New Zealand.

It appears highly likely that EFB would be deadly to New Zealand bees under NZ conditions, now that our bees have varroa. EFB is highly contagious and it only needs one drip of honey to be exposed to NZ bees, and that would be the beginning of the end. Has there been adequate research done on other diseases that may be associated with EFB? If not, this has to be done also.

New Zealand commercial beekeeping is the most advanced in the world. Why? Because New Zealand is small and looks at the rest of the world. USA is large and tends to look inwardly. But also New Zealand is not favoured by good climatic conditions so our beekeepers have to be very smart to survive. New Zealand honey production is one of the lowest in the world considering the expertise and capital we invest into our bees.

One thing that is very important is that New Zealand's economy is very reliant on honey bee pollination of pip and stone fruits, kiwifruit and many other food and seed crops, but most of all clover. Clover fixes nitrogen in the soil, without clover one has to apply massive doses of nitrogen. New Zealand already has very high amounts of nitrogen in underground water in some places, well above the acceptable health standards. As a country we cannot afford any risk of allowing bee diseases into New Zealand. AFB and EFB are both highly contagious. Bees seek out and collect any honey, pollen and propolis at certain times of the year.

We do not accept that beekeepers in the world are any better at quality assurance than New Zealand beekeepers. It is virtually impossible to ascertain low levels of disease in the hives. I guarantee that you could find AFB spores in some New Zealand honey overseas. We cannot afford the risk of receiving AFB spores from overseas. It may well be a different strain.

EFB is even far worse than AFB as it is more virulent. One drop of untreated honey on the outside of a drum is all that it would take to devastate New Zealand's economy. One motor accident causing damage to pollen capsules so bees can pick up contaminated pollen, one person throwing out pollen capsules is also all that is required to devastate not only New Zealand beekeeping but all other industries that rely on bees for pollinating crops.

This risk does not need to be taken. We are exporters of most bee product. Beekeepers and beehives are already dropping rapidly in number because of varroa mites. In areas that have been infested with varroa for two years bee numbers are now 1/2 to 1/4 of what they were. Beekeeper numbers have dropped by approx. 25%.

I am very happy to try to answer any questions you may have on technical matters regarding commercial beekeeping world wide as I have dealt and traded with beekeepers throughout the world. If you allow imports as proposed, New Zealand beekeeping will be devastated within a few years. Now that varroa is going to kill most, if not all feral hives, devastation of beekeeping will have an immediate effect on New Zealand's economy!

Do not allow this to happen. Please accept that other countries' governments do support their beekeeping - New Zealand does not. New Zealand beekeepers subsidise New Zealand's economy with free pollination. If any imports of bee products are allowed into New Zealand because the risk is acceptable, let overseas exporters to New Zealand subsidise New Zealand's economy with free pollination. We believe that almost no bee products can be imported into New Zealand safely.

We note that submissions may be made public. We have no problem with this as we believe it would be wise to open this whole subject to the public and members of Parliament for comment.

ANIMAL IMPORT RISK ANALYSIS: HONEY BEE HIVE PRODUCTS AND USED EQUIPMENT

by **Dr R.M. Goodwin**

Italics -from Risk Management Analysis **Non-Italics -Arataki Honey's comments**

PAGE

Page 5.

The intention is to ensure that a balance is achieved between New Zealand need to minimise the likelihood of disease incursions and their consequences, and the need to fulfill obligations under international trade agreements.

The need to minimise is very high. The need to fulfill is very low because of unknown disease risks and subsidies on beekeeping world wide.

Page 5, para 2 and 3

if any strains in New Zealand are different from those in the exporting country and show variations in pathogenicity if the organisms are subject to official control or eradication in New Zealand

We believe that strains of AFB are substantially different and further research by the exporting COWltry is required. We have a National Pest Management Strategy for AFB. No honey should be allowed in, putting this Strategy at risk. e.g. AFB that is resistant to Terramycin.

Page 5, para 4

if introduced, is the organism likely to

** spread or become established*

Yes, in all cases new strains of AFB and EFB will spread by natural causes and by the fact that New Zealand are migratory beekeepers to pollinate crops.

** result in losses associated with*

-trade

Yes, live bees, honey, kiwifruit, faml produce and all other seed and :fruit crops that need pollinating by bees

-production

Loss of production, of course

-control of eradication costs.

Yes, **substantial**

Page 7, para 2

Many honey bee diseases have not been subject to extensive investigation- It is, therefore, necessary to make several assumptions in this risk assessment. The first is that if there are few reports of problems

associated with a pathogen, it will be assumed not to be a major disease/causing organism. The second is that, if there are no reports of strain differences with respect to pathogenicity, it will be assumed that there are none. Although this assumption is not covered in the official Office International des epizooties (OIE) guidelines for risk analysis, it is implied in the Ministry of Agriculture and Forestry's policy on animal import risk analysis. If there have been reports of strain differences for organisms already present in New Zealand, it will be assumed that the strains present here are no more or less pathogenic than those elsewhere unless there are data available to prove this.

The lack of data we believe, means there is an unacceptable risk. Do not allow the product from a beehive to be allowed into New Zealand until there is adequate proof provided by the exporting Country that their strains of bee diseases will not have a devastating effect on New Zealand's beekeeping and economy.

Page 7, para VI Used beekeeping equipment

Does not include second hand drums, commonly used in all countries in beekeeping and often used for many years with various types of honey with various disease risks. No mention of any secondhand packing equipment which has a risk factor, be it less than extracting equipment.

Page 8, top

This risk assessment does not include live or dead honey bees, honey bee semen, or bee-collected pollen used for artificial pollination.

Bulk honey, pollen, propolis and beeswax will contain dead honeybees. Risk analysis cannot be put in place that assumes no dead bees will come into New Zealand in these products. It is bound to fail if it does.

Honey, Pollen, Royal Jelly, Propolis, Beeswax

The discussions around these commodities will deal with raw products only.

We believe this is not acceptable. The disease and virus levels should be known on all beekeeping products before they enter New Zealand. 'Why? Example -processed propolis is attractive to bees, products like honey and pollen can be picked up from rubbish dumps or at the site of any damaged packaging, pollen capsules etc.

Page 12, Viruses

The status of viruses in the exporting country must be known before allowing imports of any product that may contain viruses, into New Zealand from that country.

Page 16, Deformed Wing Virus

...the virus is usually found in A.Mellifera colonies infested with Varroa jacobsoni, where it is associated with mortality of both adult bees and brood.

If we have not got this in New Zealand we must keep it out as it is worse: with varroa. Likewise Slow Paralysis Virus.

Page 18, Conclusion

the evidence that they are not already here is insufficient to attempt to justify specific sanitary measures to keep them out. Viruses will, therefore, not be considered further in this risk analysis.

We disagree strongly with this statement as Varroa in New Zealand has proved to be a lot worse than in many other countries. So the effect of additional viruses could be very serious and must be taken into account in any risk analysis. Parasitic Mite Syndrome has killed substantial numbers of beehives in our operation during the past year. Estimated to be \$50,000 worth.

Page 20, Hazard Determination

AFB is present in New Zealand and is subject to an official control programme under the Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998...

This NPMS is subject to a review and possible termination. Because of the cost of operating the NPMS or the introduction of EFB, New Zealand may be forced into using Teramycin to control AFB. To keep this option viable resistant strains of MB to Teramycin must be kept out of New Zealand. Beekeeping in Canada and the USA are currently being severely damaged because of AFB resistance to Teramycin. This means that the risk assessment of Dr Mark Goodwin is not nearly robust enough. It is not designed and it will not keep New Zealand free from AFB Teramycin resistant spores. It should be designed to do exactly this.

Page 22, Propolis

Propolis is unlikely to be attractive to bees or to be fed to colonies

We are large collectors and processors of propolis and we disagree with this statement strongly, as bees will collect propolis wherever it may be found. We have observed it many, many times.

Page 22, Consequence Assessment

it is unlikely that oxytetracycline will be fed in New Zealand for AFB control. As long as New Zealand does not feed oxytetracycline, the importation of these strains should have no consequences.

We disagree, we may be forced into feeding Teramycin through financial or Biosecurity border incursion of EFB.

Page 23, Risk Estimation

All of the commodities considered have the ability to be contaminated with P.larvae larvae spores and all, except propolis, have a high probability of coming into contact with bees.

We disagree propolis also has a high chance of coming into contact with bees.

Page 24, Irradiation

Exposure of hives infected with P.larvae larvae to 10 kGy from 60 Co has been shown to inactivate P.larvae larvae spores. The exposure required to deactivate P.larvae larvae spores in honey has not been reported.

It is also shown to be, that in New Zealand, mistakes can be made and that goods that should have been AFB free, were not. (refer Graham Cammell, Auckland). He has suffered severe losses in hives since irradiating beekeeping equipment.

Page 28, European Foulbrood Hazard determination .

Colonies can be destroyed, or seriously crippled, by EFB. In the United States, EFB has been reported to cause problems when colonies are used for pollination. As similar problems are likely to occur in New Zealand; Mpluton will be classified as a hazard.

EFB spread through Eastern Australia very fast and killed many hives, is considered to be very contagious and probably partially spread by infected water.

One drop of honey or any other bee product could infect New Zealand beehives with EFB. In conjunction with varroa results will be expected to be more severe than Australia. Research is required to ascertain what else will travel with EFB if it survives in New Zealand.

Page 30, Propolis

Propolis is unlikely to be attractive to bees or to be fed to colonies a

We repeat, propolis is attractive to bees

Page 30, Consequent Assessment Beekeepers in Australia find it necessary to feed antibiotics to control EFB and this would be necessary if the disease was introduced to New Zealand. This has implications for the American FoulBrood (AFB) Pest Management Strategy, which relies on beekeepers being able to diagnose clinical signs of AFB. Feeding antibiotics has been reported to suppress AFB disease Signs, thus making it more difficult to control.

Also very important not to have imported AFB resistant to Teramycin.

Page 32, Sanitary Measure Recommended

.All commodities can be imported without further sanitary measures if they come from an area that is free from Mpluton and this area freedom is supported by appropriate monitoring and quarantine measures.

We disagree with this as EFB spreads very rapidly, is hard to detect in the field, so all products should be treated as positive for EFB, if EFB is in the exporting country .

Page 33, Propolis

Should be processed so that it is free from pollen honey and wax.

Not sufficient treatment to protect the New Zealand beekeeping industry from diseases and viruses

Page 33, Bee Collected Pollen

Packed into Capsules for, human consumption

Not an acceptable risk, as pollen exposed in landfills or during handling accidents. Bees freely collect pollen from other than flowers at certain times of the year.

Page 45, Chalkbrood

Page 48, Risk Management

As Chalkbrood is already present in New Zealand and there is no information available that indicates that the strain present here is any less virulent than those found elsewhere, no sanitary measure for risk management is recommended.

We believe this statement is incorrect. There is information available that indicates strains are more virulent overseas. recommend you speak to commercial beekeepers overseas and do required research comparing overseas Chalkbrood and New Zealand Chalkbrood. Research to be carried out overseas please!

Page 58, Tropilaelaps Clareae and Tropilaelaps Koenigerum

Because of the seriousness of these mites it appears that more research should be carried out on how they are likely to get to New Zealand before products are allowed from infected parts of the world.

A handwritten signature in black ink, appearing to read 'Russell Berry', with a vertical line drawn through the first letter 'R'.

Russell Berry

Managing Director Rotorua Division

Managing Director Greenvale Apiaries, Gore Director Arataki Bee Products Ltd, Mapua

A handwritten signature in black ink, appearing to read 'Russell Berry', with a vertical line drawn through the first letter 'R'.

15.1 Because bees fly long distances it is very hard to get up-to-date, reliable information on any country's disease status. This adds substantially to the risk of importing bee products into New Zealand. Unless it can be confirmed that a full survey has been carried out during the last five years, then it must be assumed, if we allow imports in or not, that that country wishing to export to us is likely to have the disease risk concerned.

MAF COMMENT

MAF will require evidence to support requests to recognise country freedom. MAF agrees that area freedom applications will be unlikely to be granted due to the dispersal of bees. Note that MAF has decided that a generic import health standard is not appropriate and will consider specific applications once the import risk analysis is complete.

15.2 The first thing that must be surveyed for is the difference in the strains of AFB in New Zealand and the country wishing to export to us. If this is not done, no imports of their produce should be allowed into New Zealand.

MAF COMMENT

The permissible level of AFB spores recommended in the risk analysis is only 1% of the lowest spore level ever recorded to establish an infection. Thus MAF considers importation of honey bee hive products with AFB spores levels less than 500,000/L (infectious concentration 5 million spores/L) will have negligible risk of establishing OTC resistant strains of *P larvae larvae*.

15.3 Has there been adequate research done on other diseases that may be associated with EFB? If not, this has to be done also.

MAF COMMENT

A large amount of research has been carried out into other bacteria associated with European Foulbrood disease.

15.4 One thing that is very important is that New Zealand's economy is very reliant on honey bee pollination of pip and stone fruits, kiwifruit and many other food and seed crops, but most of all clover.

MAF COMMENT

MAF is aware of the importance of the beekeeping industry to the New Zealand economy. However, New Zealand is dependent on trade and has obligations under the Sanitary and Phytosanitary Agreement (SPS). MAF will not allow trade unless such trade can occur without causing harm to the health of animal, plant or human populations.

15.5 It is virtually impossible to ascertain low levels of disease in the hives. I guarantee that you could find AFB spores in some New Zealand honey overseas. We cannot afford

the risk of receiving AFB spores from overseas. It may well be a different strain.

MAF COMMENT

See 15.2

15.6 EFB is even far worse than AFB as it is more virulent. One drop of untreated honey on the outside of a drum is all that it would take to devastate New Zealand's economy. One motor accident causing damage to pollen capsules so bees can pick up contaminated pollen, one person throwing out pollen capsules is also all that is required to devastate not only New Zealand beekeeping but all other industries that rely on bees for pollinating crops.

MAF COMMENT

No untreated honey consignments will be permitted entry to New Zealand. Any honey spilled on the outside of a drum will also have come from treated honey.

MAF considers the probability of capsules being broken open so that the contents are exposed to bees in a motor accident, negligible.

15.7 This risk does not need to be taken. We are exporters of most bee products.

MAF COMMENT

See 15.2

15.8 Page 5

The intention is to ensure that a balance is achieved between New Zealand need to minimise the likelihood of disease incursions and their consequences, and the need to fulfil obligations under international trade agreements.

The need to minimise is very high. The need to fulfil is very low because of unknown disease risks and subsidies on beekeeping world wide.

MAF COMMENT

MAF agrees that the purpose of the risk analysis is not to "ensure that a balance is achieved between New Zealand's need to minimise the likelihood of disease incursions and their consequences, and the need to fulfil obligations under international agreements."

This statement will be changed to "This risk analysis evaluates the risk of potentially hazardous organisms entering and establishing in New Zealand, and their probable impact on animal and human health, the environment and the economy, as a result of the purposeful importation of honey bee hive products.

Where a hazard is identified, risk management measures will be recommended where appropriate.”

15.9 Page 5, para 2 and 3

...if any strains in New Zealand are different from those in the exporting country and show variations in pathogenicity if the organisms are subject to official control or eradication in New Zealand.

We believe that strains of AFB are substantially different and further research by the exporting country is required. We have a National Pest Management Strategy for AFB. No honey should be allowed in, putting this Strategy at risk.
e.g. AFB that is resistant to Terramycin.

MAF COMMENT

See 15.2

15.10 page 7, para 2

Many honey bee diseases have not been subject to extensive investigation. It is, therefore, necessary to make several assumptions in this risk assessment. The first is that if there are few reports of problems associated with a pathogen, it will be assumed not to be a major disease/causing organism. The second is that, if there are not reports of strain differences with respect to pathogenicity it will be assumed that there are none. Although this assumption is not covered in the official Office International des epizooties (OIE) guidelines for risk analysis, it is implied in the Ministry of Agriculture and Forestry’s policy on animal import risk analysis. If there have been reports of strain differences for organisms already present in New Zealand, it will be assumed that the strains present here are not more or less pathogenic than those elsewhere unless there are data available to prove this.

The lack of data we believe, means there is an unacceptable risk. Do not allow the product from a beehive to be allowed into New Zealand until there is adequate proof provided by the exporting country that their strains of bee diseases will not have a devastating effect on New Zealand’s beekeeping and economy.

MAF COMMENT

Under the Sanitary and Phytosanitary Agreement (SPS), countries can only impose SPS measures that are based on science and are imposed to protect the health of animal, plant or human populations. Therefore, if there are no reports of an organism causing harm, it is not classified as a hazard in an import risk analysis.

MAF will regard any exotic organism as a potential hazard if there are any reports of adverse affects from the organism overseas. When carrying out the consequence assessment MAF will assume that the same degree of adverse affects as reported overseas would be likely to occur if introduced to New Zealand.

Under the SPS, member countries cannot impose measures that are not based on science. Thus if there is no evidence of strain differences, it will be assumed that none exist.

MAF will carefully analyse cases where strain differences have been found and err on the side of caution if there is no information available on the relative pathogenicity of the New Zealand strains. MAF will then seek to obtain the necessary information for a more objective assessment of the risk.

15.11 Page 7, para V1 beekeeping equipment

Does not include second hand drums, commonly used in all countries in beekeeping and often used for many years with various types of honey with various disease risks. No mention of any secondhand packing equipment which has a risk factor, be it less than extracting equipment.

MAF COMMENT

Used beekeeping equipment is to be withdrawn from the risk analysis as there are significant information gaps in the safe importation of this equipment, MAF understands that the equipment is available in New Zealand and consultation has shown that there is little interest in import of such equipment.

15.12 Page 8, top

This risk assessment does not include live or dead honey bees, honey bee semen, or bee-collected pollen used for artificial pollination

Bulk honey, pollen, propolis and beeswax will contain dead honeybees. Risk analysis cannot be put in place that assumes no dead bees will come into New Zealand in these products. It is bound to fail if it does.

MAF COMMENT

The risk analysis does not deal with the importation of live bees or bee semen. The likelihood of introduction of bees with commodities is discussed, particularly in relation to used beekeeping equipment. However, used beekeeping equipment will be removed from consideration in the revised risk analysis. Dead honey bees are not protective of the organisms determined to be hazards. Thus normal measures apply for each organism.

15.13 *Honey, Pollen, Royal Jelly, Propolis, Beeswax*

The discussion around these commodities will deal with raw products only.

We believe this is not acceptable. The disease and virus levels should be known on all beekeeping products before they enter New Zealand. Why? Example – processed propolis is attractive to bees, products like honey and pollen can be picked up from rubbish dumps or at the site of any damaged packaging, pollen capsules etc.

MAF COMMENT

The large number of products makes individual recommendations in the risk analysis impossible. MAF believes that the definition given (Something is attractive to bees if it will attract bees if it was discarded in the environment) is a workable solution. Whether it is attractive will depend on the concentration of honey, other sugars, and its scent. Using this definition, honey coated rices, peanuts, honey marinade, honey and mustard dressings would be regarded as “attractive to bees” unless the particular product was such that border staff considered attractiveness would not occur (such as a lip stick containing honey where the packaging makes exposure to bees negligible even if discarded). Where the attractiveness of a product containing honey bee hive products cannot be determined it should be treated as potentially attractive and excluded from entry. Commercial companies can apply to MAF for dispensations. MAF would require evidence (such as laboratory trials) that the product was unattractive to bees.

15.14 *Page 12, Viruses*

The status of viruses in the exporting country must be known before allowing imports of any product that may contain viruses, into New Zealand from that country.

MAF COMMENT

Subsequent information has led MAF to review the section on viruses.

15.15 *Page 16, Deformed Wing Virus*

.....the virus is usually found in *A. Mellifera* colonies infested with *Varroa jacobsoni*, where it is associated with mortality of both adult bees and brood.

If we have not got this in New Zealand we must keep it out as it is worse with varroa. Likewise Slow Paralysis Virus.

MAF COMMENT

See 15.14

15.16 *Page 18, Conclusion*

.....the evidence that they are not already here is insufficient to attempt to justify specific sanitary measures to keep them out. Viruses will, therefore, not be considered further in this risk analysis.

We disagree strongly with this statement as varroa in New Zealand has proved to be a lot worse than in many other countries. So the effect of additional viruses could be very serious and must be taken into account in any risk analysis. Parasitic Mite Syndrome has killed substantial numbers of beehives in our operation during the past year. Estimated to be \$50,000 worth.

MAF COMMENT

See 15.14

15.17 *Page 20, Hazard Determination*

AFB is present in New Zealand and is subject to an official control programme under the Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998.....

This NPMS is subject to a review and possible termination. Because of the cost of operating the NPMS or the introduction of EFB, New Zealand may be forced into using Teramycin to control AFB. To keep this option viable resistant strains of AFB to Teramycin must be kept out of New Zealand. Beekeeping in Canada and the USA are currently being severely damaged because of AFB resistance to Teramycin. This means that the risk assessment of Dr Mark Goodwin is not nearly robust enough. It is not designed and it will not keep New Zealand free from AFB Teramycin resistant spores. It should be designed to do exactly this.

MAF COMMENT

The permissible level of AFB spores recommended in the risk analysis is only 1% of the lowest spore level ever recorded to establish an infection. Thus MAF considers importation of honey bee hive products with AFB spores levels less than 500,000/L (infectious concentration 5 million spores/L) will have negligible risk of establishing OTC resistant strains of *P larvae larvae*.

15.18 *Page 22, Propolis*

Propolis is unlikely to be attractive to bees or to be fed to colonies.

We are large collectors and processors of propolis and we disagree with this statement strongly, as bees will collect propolis wherever it may be found. We have observed it many, many times.

MAF COMMENT

Propolis is now recognised as a risk commodity and will only be permitted entry if treated to destroy pathogens and pests or in capsules in retail packs.

15.19 *Page 22, Consequence Assessment*

...it is unlikely that oxytetracycline will be fed in New Zealand for AFB control. As long as New Zealand does not feed oxytetracycline, the importation of these strains should have no consequences.

We disagree, we may be forced into feeding Teramycin through financial or Biosecurity border incursion of EFB.

MAF COMMENT

See 5.17

15.20 *Page 23, Risk Estimation*

All of the commodities considered have the ability to be contaminated with *P. larvae* larvae spores and all, except propolis, have a high probability of coming into contact with bees.

We disagree – propolis also has a high chance of coming into contact with bees.

MAF COMMENT

Propolis is now recognised as a risk commodity and will only be permitted entry if treated to destroy pathogens and pests or in capsules in retail packs.

15.21 *Page 24, Irradiation*

Exposure of hives infected with *P. larvae* larvae to 10 kGy from 60 Co has been shown to inactivate *P. larvae* larvae spores. The exposure required to deactivate *P. larvae* larvae spores in honey has not been reported.

It is also shown to be, that in New Zealand, mistakes can be made and that good that should have been AFB free, were not. (refer Graham Cammell, Auckland). He has suffered severe losses in hives since irradiating beekeeping equipment.

MAF COMMENT

New Zealand is justified in imposing SPS measures against AFB as a result of there being an official control program in place (a National Pest Management Strategy), but under the SPS principle of non-discrimination covered in article 2.3 of the SPS agreement, the measures imposed must not be greater than those achieved under the NPMS rules. The relevant rule under the NPMS is rule 31(1) which prohibits the movement or sale of bee products from hives known or suspected to be clinically affected by AFB. Therefore, it is appropriate to impose measures on imported bee products to provide the same level of protection that would be achieved by the application of that rule.

Given that a minimum spore concentration seems to be required to infect a hive (this appears to be about 50 million spores per litre in the case of honey), it is reasonable to consider that same level of spores as the cutoff point between clinical and non-clinical hives. That is, clinical hives can be expected to have spore concentrations higher than this cutoff ("high") while non-clinical hives can be expected to have spore levels lower than this cutoff ("low"). Moreover, notwithstanding the uncertainty surrounding the efficacy of radiation, and in particular the inability of radiation to completely sterilise aphistan strips contaminated with AFB spores, MAF considers it reasonable to assume that radiation is able to reduce spore levels from a "high" level to a "low" level, the latter being equivalent to the most we can expect in NZ as a result of the full implementation of the PMS rule in question.

Also note that used beekeeping equipment will not be considered in the revised risk analysis.

15.22 *Page 28, European Foulbrood*

Hazard determination

Colonies can be destroyed, or seriously crippled by EFB. In the United States, EFB has been reported to cause problems when colonies are used for pollination. As similar problems are likely to occur in New Zealand, *M. pluton* will be classified as a hazard.

EFB spread through Eastern Australia very fast and killed many hives, is considered to be very contagious and probably partially spread by infected water.

One drop of honey or any other bee produce could infect New Zealand beehives with EFB. In conjunction with varroa results will be expected to be more severe than Australia. Research is required to ascertain what else will travel with EFB if it arrived in New Zealand.

MAF COMMENT

MAF appreciates that *M pluton* is highly infectious. MAF is committed to keeping this disease out of New Zealand.

15.23 *Page 30, Consequent Assessment*

Beekeepers in Australia find it necessary to feed antibiotics to control EFB and this would be necessary if the disease was introduced to New Zealand. This has implications for the American Foulbrood (AFB) Pest Management Strategy, which relies on beekeepers being able to diagnose clinical signs of AFB. Feeding antibiotics has been reported to suppress AFB disease signs, thus making it more difficult to control.

Also very important not to have imported AFB resistant to Teramycin.

MAF COMMENT

The permissible level of AFB spores recommended in the risk analysis is only 1% of the lowest spore level ever recorded to establish an infection. Thus MAF considers importation of honey bee hive products with AFB spores levels less than 500,000/L (infectious concentration 5 million spores/L) will have negligible risk of establishing OTC resistant strains of *P larvae larvae*.

15.23 *Page 32, Sanitary Measure Recommended*

All commodities can be imported without further sanitary measures if they come from an area that is free from *M. pluton* and this area freedom is supported by appropriate monitoring and quarantine measures.

We disagree with this as EFB spreads very rapidly, is hard to detect in the field, so all products should be treated as positive for EFB, if EFB is in the exporting country.

MAF COMMENT

MAF agrees that it is unlikely that a case for area freedom for EFB would be granted. This may be the case where there are effective natural barriers, such as between the North and South Islands of New Zealand.

15.24 *Page 33, Propolis*

Should be processed so that it is free from pollen honey and wax.

Not sufficient treatment to protect the New Zealand beekeeping industry from diseases and viruses.

MAF COMMENT

Propolis is now recognised as a risk commodity and will only be permitted entry if treated to destroy pathogens and pests or in capsules in retail packs.

15.25 *Page 33, Bee Collected Pollen*

Packed into Capsules for human consumption

Not an acceptable risk, as pollen exposed in landfills or during handling accidents. Bees freely collect pollen from other than flowers at certain times of the year.

MAF COMMENT

MAF considers the likelihood of retail containers of pollen capsules being discarded in a landfill and then becoming damaged and subsequently exposed to bees as negligible.

15.26 *Page 45, Chalkbrood*

Page 48, Risk Management

As Chalkbrood is already present in New Zealand and there is no information available that indicates that the strain present here is any less virulent than those found elsewhere, no sanitary measure for risk management is recommended.

We believe this statement is incorrect. There is information available that indicates strains are more virulent overseas. Recommend you speak to commercial beekeepers overseas and do required research comparing overseas Chalkbrood and New Zealand Chalkbrood. Research to be carried out overseas please!

MAF COMMENT

The reference in the risk analysis to "strains of chalkbrood" is confusing, as reports of differences in severity of chalkbrood disease in various countries should not be linked to differences in virulence between strains of *Ascos. apis* without supporting experimental evidence. Factors such as the environmental conditions, including availability of a variety of food sources, affect the severity of chalkbrood disease. In fact it is difficult to set up infection with *Asos apis* in the

field when bees have alternative food sources available to dilute any introduced *Asos apis*. This will be clarified in the revised risk analysis.

Moreover, any adverse affects from *Ascospis* are likely to be transitory, since honey bees show a marked variability in susceptibility to infection. The consequence assessment is therefore negligible.

15.27 Page 58, *Tropilaelaps Clareae* and *Tropilaelaps Loenigerum*

Because of the seriousness of these mites it appears that more research should be carried out on how they are likely to get to New Zealand before products are allowed from infected parts of the world.

MAF COMMENT

MAF has sought expert review of this risk analysis and no information gaps in the case of these mites were identified.

16. ADAMSON APIARIES LTD

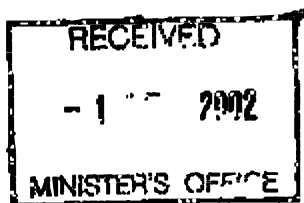
SUBMISSION ON THE DRAFT RISK ANALYSIS AND HEALTH STANDARD FOR HONEYBEE HIVE PRODUCTS AND USED BEEKEEPING EQUIPMENT .

On Behalf of

ADAMSON APIARIES Lm McPherson Road No 1 RD Alexandra. Ph / Fax 034492036

E-mail e.e.adamson@xtra.co.nz

ACCURACY OF ASSUMPTIONS ABOUT BEE PRODUCTS



Propolis

All through this draft analysis, propolis is treated as being unattractive to bees and therefore unlikely to be collected by them from used beekeeping equipment. This assumption is demonstrably wrong. Bees will actively seek and industriously gather propolis from anywhere that they can find it, including used beekeeping equipment. Propolis gathering behaviour is more pronounced in the spring and autumn but can be seen at most times of the year. I have personally watched them do this on many occasions.

Failure to recognise propolis as an attractive substance to bees is an elementary mistake, which should not have appeared in such a report as this.

RECOMMENDATION

Change the risk analysis for propolis, to one which recognizes its attractiveness to bees.

DANGERS OF DISEASES SHOULD THEY BE INTRODUCED

Paragraph 2, page 7. Much of the value, or lack of it, in this analysis hinges on this paragraph. "If there are few reports of problems associated with a pathogen, it will be assumed not to be a major disease causing organism." "... Ha! !!! This is New Zealand! Have we not had enough experience of "non problem" species from overseas running wild in our environment.

If this analysis had been written five years ago SMALL HIVE BEETLE would not have rated a mention. Is this the standard of protection you would expect. It is certainly not the standard of protection that I as a beekeeper, and would strongly suspect the public of New Zealand, expect.

"If there are no reports of strain differences with respect to pathogenicity, it will be assumed that there are none", and worse, "If

there have been reports of strain differences for organisms already present in New Zealand, it will be assumed that the strains present here are no more or less pathogenic than those elsewhere unless there is data available to prove this."

How a document came to be written, based on such a "she'll be right" attitude eludes me entirely. It is not only New Zealand's beekeeping industry that is being put at risk here but all of the agricultural sector that relies on bee pollination. This attitude has not been an acceptable part of risk analysis for the importation of exotic organisms for a long time. Are we and the rest of the agriculture sector regarded as being too unimportant to be worthy of proper research and risk analysis. This paragraph is a very important part of

the terms of reference for this analysis. I can only assume that it was either written in a misguided effort to save costs, or motivated by political expediency.

In just one example the report states that some strains of chalk brood are up to twenty times more virulent than others. It then goes on to ignore this chilling piece of information because the terms of reference say it is irrelevant.

RECOMMENDATION:

Change the terms of reference to a more cautionary approach so that it would have some scientific validity.

EUROPEAN FOUL BROOD

This is the most likely candidate to come in under these proposals. I have been actively seeking all available information on EFB for the last five years so I do know a fair bit about it for a layman. It is my considered opinion that importation of honey under the proposed treatment regime will lead to the inevitable introduction of EFB. There is NO SAFE DILUTION for EFB. There will inevitably be small slip-ups in the required processing of honey. All it will take is for one bee to come in contact with this honey and we will have a major disaster on our hands, and not just for the beekeeping industry. An outbreak of EFB would almost inevitably mean that at least one pollination season would be severely effected and quite possibly virtually written off. EFB is an extremely infectious pathogen and would infect at least the whole of one island inside twelve months.

I will repeat it again to emphasize the point, there is no safe level of dilution for EFB. Those of us with experience in honey processing understand only too well that some honey will miss the treatment even if it is only the remnants in a pipe, or the cold bit in the middle of a drum.

RECOMMENDATION:

Continue the ban on the importation of honey as it is impossible to guarantee a product free from EFB on any but a laboratory scale. Importation of honey will without doubt bring in EFB which will add extra treatment chemicals to the food chain that will increase HUMAN illnesses.

VIRUSES

The conclusion:

It states "There is no indication that they would have any major detrimental effect on production or trade, except in association with varroa." It then goes on to "not worry" about the ones that we haven't got yet. This flies in the face of convincing evidence that it is the virus loading that kills the bees, long before the varroa finish them off

RECOMMENDATION:

Treat viruses as a serious potential threat.

In conclusion - The risk analysis is obviously deficient on a number of points but its most glaring deficiencies are its assumptions that "if we don't know, it's alright" and its failure to grasp the reality of the extreme intensity of EFB. It would be appropriate to have an analysis of the likely impacts to the whole of New Zealand if one or more of the potential problems in this risk analysis become reality.

Ernest Adams

Ethel Adamson

27/8/2002.

16.1 “ACCURACY OF ASSUMPTIONS ABOUT BEE PRODUCTS

Propolis

All through this draft analysis, propolis is treated as being unattractive to bees and therefore unlikely to be collected by them from used beekeeping equipment. This assumption is demonstrably wrong. Bees will actively seek and industriously gather propolis from anywhere that they can find it, including used beekeeping equipment. Propolis gathering behaviour is more pronounced in the spring and autumn but can be seen at most times of the year. I have personally watched them do this on many occasions.

Failure to recognise propolis as an attractive substance to bees is an elementary mistake, which should not have appeared in such a report as this.

Recommendation

Change the risk analysis for propolis, to one which recognizes its attractiveness to bees.”

MAF COMMENT

MAF agrees that propolis is potentially attractive to bees. MAF will, therefore, only permit the importation of propolis products in a form that is not attractive to bees, that is in capsule form in retail packs. No bulk packs will be permitted. This policy has arisen as importers have engaged in retrieval of royal jelly powder from imported bulk capsule packs and the inclusion of this powder into such commodities as honey. This constitutes an unacceptable biosecurity risk to the New Zealand beekeeping industry.

16.2 “Assumptions on the dangers of diseases should they be introduced.

Paragraph 2, page 7. Much of the value, or lack of it, in this analysis hinges on this paragraph. "If there are few reports of problems associated with a pathogen, it will be assumed not to be a major disease causing organism". Ha!!!! This is New Zealand! Have we not had enough experience of “non problem” species from overseas running wild in our environment.

If this analysis had been written five years ago SMALL HIVE BEETLE would not have rated a mention. Is this the standard of protection you would expect. It is certainly not the standard of protection that I as a beekeeper, and would strongly suspect the public of New Zealand, expect.”

MAF COMMENT

Under the Sanitary and Phytosanitary Agreement (SPS), countries can only impose SPS measures that are based on science and are imposed to protect the health of animal, plant or human populations. Therefore, if there are no reports of an organism causing harm, it is not classified as a hazard in an import risk

analysis.

MAF will regard any exotic organism as a potential hazard if there are any reports of adverse affects from the organism overseas. When carrying out the consequence assessment MAF will assume that the same degree of adverse affects as reported overseas would be likely to occur if introduced to New Zealand.

16.3 "If there are no reports of strain differences with respect to pathogenicity, it will be assumed that there are none", and worse, "If there have been reports of strain differences for organisms already present in New Zealand, it will be assumed that the strains present here are no more or less pathogenic than those elsewhere unless there is data available to prove this.

How a document came to be written, based on such a "she'll be right" attitude eludes me entirely. It is not only New Zealand's beekeeping industry that is being put at risk here but all of the agricultural sector that relies on bee pollination. This attitude has not been an acceptable part of risk analysis for the importation of exotic organisms for a long time.

Are we and the rest of the agriculture sector regarded as being too unimportant to be worthy of proper research and risk analysis. This paragraph is a very important part of the terms of reference for this analysis. I can only assume that it was either written in a misguided effort to save costs, or motivated by political expediency.

In just one example the report states that some strains of chalk brood are up to twenty times more virulent than others. It then goes on to ignore this chilling piece of information because the terms of reference say it is irrelevant.

Recommendation

Change the terms of reference to a more cautionary approach so that it would have some scientific validity."

MAF COMMENT

Under the SPS, member countries cannot impose measures that are not based on science. Thus if there is no evidence of strain differences, it will be assumed that none exist.

MAF will carefully analyse cases where strain differences have been found and err on the side of caution if there is no information available on the relative pathogenicity of the New Zealand strains. MAF will then seek to obtain the necessary information for a more objective assessment of the risk.

16.4 EUROPEAN FOUL BROOD

"This is the most likely candidate to come in under these proposals. I have been actively seeking all available information on EFB for the last five years so I do know a fair bit about it for a layman. It is my considered opinion that importation of honey under the

proposed treatment regime will lead to the inevitable introduction of EFB. There is NO SAFE DILUTION for EFB.

There will inevitably be small slip-ups in the required processing of honey.”

MAF COMMENT

The risk assessment does not suggest the use of dilution to eliminate the risk of introducing European foulbrood disease.

MAF will require evidence that products have been adequately heat treated; products that are not continuously stirred will need certification of deep core samples that prove required temperatures and time conditions have been met.

16.5 All it will take is for one bee to come in contact with this honey and we will have a major disaster on our hands, and not just for the beekeeping industry.

MAF COMMENT

MAF is extremely concerned with the risk of EFB introduction in honey bee hive products and has been proactive in developing conditions which allow trade, yet protect against the introduction of EFB.

MAF initiated research (B Ball unpublished) into the heat destruction of *M pluton* to confirm the evidence given by Australia (Wooton et al 1981) that this method is an acceptable means to reduce risk of imported honey introducing EFB. The MAF initiated research supported the Australian findings. MAF is satisfied that such treatment, properly applied will result in negligible risk of introduction of EFB. MAF is reviewing the heat/temperature parameters that will be acceptable to give confidence of elimination of *M pluton* in imported products. This will be addressed in the revised risk analysis.

16.6 “I will repeat it again to emphasize the point, there is no safe level of dilution for EFB. Those of us with experience in honey processing understand only too well that some honey will miss the treatment even if it is only the remnants in a pipe, or the cold bit in the middle of a drum.”

MAF COMMENT

This is answered in 2.4.

16.7 “Recommendation

Continue the ban on the importation of honey as it is impossible to guarantee a product free from EFB on any but a laboratory scale.”

MAF COMMENT

New Zealand is dependant on trade and has obligations under the Sanitary and Phytosanitary Agreement (SPS). MAF operates under the policy that risks should be kept off shore whenever possible and that sanitary conditions that minimise risks to acceptable levels (such as heat destruction of *M pluton*) are preferable to laboratory methods to detect unwanted organisms (such as laboratory testing of imported products to give a level of assurance that the unwanted organism is not present). No laboratory test is 100%, just as no risk mitigation measure is 100% effective. In the case of *M pluton* the laboratory test to detect this organism involves a bacterial culture of the product. This is not a sensitive method as the organism is difficult to culture and the presence of contaminants can inhibit the growth of *M pluton* and preclude its detection.

As explained in 2.4, MAF is satisfied that heat treatment, properly applied can result in negligible risk of introduction of EFB in honey.

16.8 “VIRUSES

The conclusion states "There is no indication that they would have any major detrimental effect on production or trade, except in association with varroa." It then goes on to "not worry" about the ones that we haven't got yet. This flies in the face of convincing evidence that it is the virus loading that kills the bees, long before the varroa finish them off.

Recommendation

Treat viruses as a serious potential threat.”

MAF COMMENT

Subsequent information has led MAF to review the section on viruses.

16.9“It would be appropriate to have an analysis of the likely costs to the whole of New Zealand if one or more of the potential problems in this risk analysis become reality.”

MAF COMMENT

The consequence assessments in the risk analysis address this point.

17. Pat Boland AFFA

From: <Pat.Boland@affa.gov.au>
To: <bruntonj@maf.govt.nz>
Date: 9/12/02 8:45pm
Subject: Comments on the draft IRA and IHS on honey etc

File: 00/5022

Dr Jennie Brunton
MAF Biosecurity Authority
PO Box 2526,
Wellington

Dear Jennie

Thank you for the opportunity to comment on the draft import risk analysis and import health standard for honey bee hive products and used beekeeping equipment.

Biosecurity Australia is generally supportive of the statements and conclusions in the draft import risk analysis and congratulates the authors on a concise and well presented document. The following comments pertain to the "draft import health standard for importation into New Zealand of honey, bee hive products and used beekeeping equipment".

Clause 7.1 i) - It would be possible to provide the official certification required for American foulbrood on the basis of a vendor declaration that the hives have been free of signs of AFB during the one year period prior to harvest. This would generally be provided by the bee keeper who sells the honey to the packer. Since apiary officers are not in a position to continuously inspect individual hives, we would anticipate that such a basis for government certification would be acceptable. We would appreciate an opportunity for further discussion if the intention is otherwise.

Clause 7.1 ii) c - Again, it would be possible to provide the official certification here on the basis of processing records of the company responsible for heat treatment.

In this same clause, the reference to core samples is not relevant if the honey is continuously stirred during the heat treatment.

We agree with the table in this clause showing a range of time/temperature combinations for inactivation of *Melissococcus pluton*. However we would request that at least one additional time/temperature combination be set. At present, we have a requirement within Australia that honey going to Western Australia (which is free of EFB) must be heat treated to kill *Melissococcus pluton* at a temperature of 65°C for 8 hours. This time/temperature combination is in fact a little above the equivalent of the range shown in the table in this draft IHS. The attached spreadsheet and graph illustrate the point. The acceptance of this as being equivalent to the other time/temperature combinations would potentially enable Australian honey packers to use a consistent process for either the New Zealand or the Western Australian market.

Clause 7.4 - At several points, this section relaxes requirements if the

pollen is in a "form what would not be attractive to honeybees such as capsules or tablets for human consumption". Biosecurity Australia would caution against exempting such forms since it is a simple economic decision whether such products are in fact used by bee keepers for the feeding of bees. In certain circumstances in Australia, tablets have been reported to be a relatively cheap source of pollen for breaking up and feeding to bees.

Clause 7.5.2 - A minor typo: "providing the country provided the country" should read "provided the country".

Comments on Australia's disease status:

The draft Import Health Standard does not list any countries as being recognised as free of the various diseases of concern. We assume that countries will be listed later on the basis of bilateral discussions. For the moment, we would wish to indicate that Biosecurity Australia considers the following status to apply to the diseases in question:

Western Australia is recognised as being free of European foulbrood. A full submission in support of this is currently under consideration by New Zealand authorities.

Australia is free of *Varroa* spp except for the Dauan Island in the Torres Strait where it was discovered in 1994. Quarantine and surveillance systems are in place to contain the mite and for early detection of any mainland incursion should it occur.

Australia is free of tracheal mite *Acarpis woodi* and tropilaelaps mite *Tropilaelaps clearae* and *Tropilaelaps koeniger*.

Australia is free of "bee louse" *Braula coeca* except for Tasmania. The requirements for movement of comb honey from Tasmania to the mainland is similar to the requirements recommended in the draft Import Health Standard.

Australia is free of the small hive beetle *Aethina tumida*.

Australia is free of africanised strains of honeybees.

I trust that these comments are useful. Thank you again for the opportunity to have an input into this import risk analysis. Should you have any queries about these comments, please do not hesitate to contact me.

Best regards, Pat Boland

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17.1 Biosecurity Australia is generally supportive of the statements and conclusions in the draft import risk analysis and congratulates the authors on a concise and well presented document. The following comments pertain to the "draft import health standard for importation into New Zealand of honey, bee hive products and used beekeeping equipment".

Clause 7.1 i)

It would be possible to provide the official certification required for American foulbrood on the basis of a vendor declaration that the hives have been free of signs of AFB during the one year period prior to harvest. This would generally be provided by the bee keeper who sells the honey to the packer. Since apiary officers are not in a position to continuously inspect individual hives, we would anticipate that such a basis for government certification would be acceptable. We would appreciate an opportunity for further discussion if the intention is otherwise.

MAF COMMENT

The requirements of the AQIS certifying officer in order that he/she can be confident that this clause has been met can be discussed between MAF and AFFA.

17.2 Clause 7.1 ii) c

Again, it would be possible to provide the official certification here on the basis of processing records of the company responsible for heat treatment.

In this same clause, the reference to core samples is not relevant if the honey is continuously stirred during the heat treatment.

MAF COMMENT

MAF would need to be satisfied that the processing and sampling of the honey meets the conditions of the risk analysis. Continuous stirring would negate the need for core samples.

17.3 We agree with the table in this clause showing a range of time/temperature combinations for inactivation of *Melissococcus pluton*. However we would request that at least one additional time/temperature combination be set. At present, we have a requirement within Australia that honey going to Western Australia (which is free of EFB) must be heat treated to kill *Melissococcus pluton* at a temperature of 65°C for 8 hours. This time/temperature combination is in fact a little above the equivalent of the range shown in the table in this draft IHS. The attached spreadsheet and graph illustrate the point. The acceptance of this as being equivalent to the other time/temperature combinations would potentially enable Australian honey packers to use a consistent process for either the New Zealand or the Western Australian market.

MAF COMMENT

MAF is reviewing the heat/temperature parameter that are acceptable. This will be addressed in the revised risk analysis.

17.4 Clause 7.4

At several points, this section relaxes requirements if the pollen is in a "form what would not be attractive to honeybees such as capsules or tablets for human consumption". Biosecurity Australia would caution against exempting such forms since it is a simple economic decision whether such products are in fact used by bee keepers for the feeding of bees. In certain circumstances in Australia, tablets have been reported to be a relatively cheap source of pollen for breaking up and feeding to bees.

MAF COMMENT

Thank you for this information. MAF has decided that pollen, royal jelly and propolis will only be permitted entry in capsules in retail packs. MAF has been made aware that a similar practice involving royal jelly capsules being broken up and the powder added to other bee products, was occurring in New Zealand

17.5 clause 7.5.2

A minor typo: "providing the country provided the country" should read "provided the country".

MAF COMMENT

Noted.

17.5 Comments on Australia's disease status:

The draft Import Health Standard does not list any countries as being recognised as free of the various diseases of concern. We assume that countries will be listed later on the basis of bilateral discussions. For the moment, we would wish to indicate that Biosecurity Australia considers the following status to apply to the diseases in question:

Western Australia is recognised as being free of European foulbrood. A full submission in support of this is currently under consideration by New Zealand authorities.

Australia is free of Varroa spp except for the Dauan Island in the Torres Strait where it was discovered in 1994. Quarantine and surveillance systems are in place to contain the mite and for early detection of any mainland incursion should it occur.

Australia is free of tracheal mite Acarapis woodi and tropilaelaps mite Tropilaelaps clearae and Tropilaelaps koeniger.

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Australia is free of the small hive beetle Aethina tumida.

Australia is free of africanised strains of honeybees.

MAF COMMENT

Thank you for this information. Since this submission was drafted small hive beetle has been detected in Australia.

18. Roger Bray, Braesby Farm

**Braesby Farm, RD1
ASHBURTON.**

29th August 2002.

**Helen Beban,
Ministry of Agriculture & Forestry,
P.O. Box 2526,
WELLINGTON.**

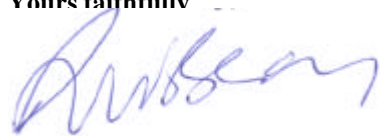
Dear Madam,

Enclosed please find submission to Import Health Standard for Honey Bee Hive Products and Used Beekeeping Equipment.

Would you please inform me of arrangements to present or talk on this submission at the appropriate forum

Thank you.

Yours faithfully



ROGER BRAY.
ph.fax 03) 3084964,

**DRAFT IMPORT HEALTH STANDARD FOR THE IMPORTATION INTO NEW ZEALAND OF
HONEY BEEHIVE PRODUCTS AND USED BEEKEEPING EQUIPMENT**

SUBMISSION FROM ROGER BRAY

1 INTRODUCTION.

I am writing this submission as a concerned beekeeper. I have been a beekeeper since 1965. I am a full time beekeeper in partnership with my wife and run approx 700 beehives in the Mid-Canterbury area. This area could be classed as an intensive agricultural area -grain and seed, dairy, sheep and horticulture. We also have beehives in the high country which has a pastoral base. Our family income is based mainly on honey production with a small amount of paid pollination.

2. IMPORTANCE OF BEES TO NZ.

Bees were introduced to NZ in the 1840 -1870's partly for honey production but more importantly to assist the European way of life in the production of agriculture products. There were very few native pollinators to pollinate the european agricultural products and pasture. The species of native plants in pre-european times relied on birds, wind or with assistance from minor insects for pollination. Much of our pastoral farming has been greatly assisted with improved pasture of ryegrass- clover mixtures. The clover is generally self sustaining with adequate pollination by bees to ensure a seed set. The diversification into fruit production with stone fruit, pip fruit, and berry fruit has all been dependent on the honey-bee for pollination, as has the small seed industry. Some information on the importance of beekeeping on agriculture products has been produced as a result of the introduction of varroa to the Auckland region. This is produced in the report 'Varroa in New Zealand: Economic Impact Assessment. MAF Policy, November 2000'. The information suggests likely costs to NZ agriculture as a result of varroa to be in the region of \$400-900m over the next 35 years- Regardless of the accuracy of the figures it should be seen that the viability of much of the agricultural produce is dependent on the viability of the beekeeping industry .Whilst the agricultural sector has a large dependence on beekeeping the beekeepers play only a minor part in the actual production of agricultural revenue in the form of honey and hive products.

3. THE NEED TO IMPORT HONEY/BEEHIVE PRODUCTS.

New Zealand has for many years had an import restriction on beehive products etc during this time the domestic market has been fully supplied by the NZ beekeepers with locally produced products. During this time there have also been exports of honey, wax and also live bees and queen bees etc (particularly of special niche market products). There has also been exports of beekeeping equipment manufactured in NZ - much of the equipment has been designed by 'entrepreneur type' beekeepers. The beekeeping industry has the ability to fully provide for domestic consumption of beehive products.

4. IMPORT RISK ANALYSIS -Report by Dr RM Goodwin.

I have read the report by Dr Goodwin and I appreciate his scientific acumen. This report is very clinical, based on many assumed situations. It is at best a scientific view based on some knowledge available and assumptions where knowledge is not available. The draft import health standards for the importation into

NZ of honey, bee hive products appears to be based on this risk analysis. Some of my concerns relate to both those documents and I wish to add input as a practical commercial beekeeper. It is of particular concern that many of the listed viruses have not been fully researched and the method of transfer and effects are not fully known,

When perusing the Import Certification Certificates for importing hive products, I note the large number of clauses all linked with an QR, this in fact sets the bottom line on importation from any country in the world (providing certain conditions are met). Under the import protocol it could be that honey is able to be imported from any country regardless of the health standard of bees and regardless of any chemicals which may have been used in that country. This ability to import from such beekeeping areas is unacceptable to me both for disease risk and NZ honey integrity. Through out the rest of this submission, I will relate the areas, where I have conflict with the Goodwill Report and the Draft Import Health Standard, as a practical beekeeper.

5. HISTORY OF NZ BEEKEEPING. -DISEASE CONTROL.

First hives arrived 1839.

First Italian bees arrived 1880.

In 1907 the first Apiaries Act was passed. In 1917 there were further regulations added making it the most complete Apiaries Act in the world. It provided for hives to be registered and disease control methods to be adopted including the mandatory requirements to keep bees in a movable frame hive (for disease identification). There was also a requirement to control American Foul Brood (AFB) by either treatment or destruction by fire. It was also an offence for a beekeeper to sell, barter or give away bees or appliances from an apiary known to be infected by disease.

In 1924 the importation of bees or used appliances was prohibited except under consent of the Minister of Agriculture. Amendments to the Apiaries Act took place in the 1950's and the final Act in 1969 placed many requirements and restrictions on beekeepers most of which were to control the spread of AFB an endemic disease which had in earlier times been a severe problem to beekeepers. The most significant requirements of the latest act were refinements of the prohibition of imports of bees honey etc and the destruction of AFB infected hives along with a requirement specifically not to allow infected hives/honey etc to be "exposed" in such a manner that bees may gain access to such material (ie robbing) see Goodwin report "honey is attractive to honey bees and they actively seek it" this known to beekeepers as "robbing" and can range from a casual collection of exposed beekeeping products such as propolis or pollen to a frenzied attack on products such as honey and honey/pollen mixes etc. Perhaps this is where the old saying 'like bees round the honey pot' comes from. Another provision of the act prohibited the use of chemicals to treat diseases.

As the provisions of the Apiaries Act were incorporated in the Biosecurity Act 1993 the old apiaries act was rescinded. The beekeepers of NZ in co-operation with MAF proposed a National AFB Pest Management Strategy order in 1998. This order promoted the official control of AFB without using chemical treatment and the objectives of this strategy are to eradicate this disease from NZ. As an individual beekeeper I have had experience in dealing with this disease and firmly believe that the complete

eradication of this disease is possible -we are only limited by those of lesser ability and experience as beekeepers .

From the above resume of the respective Apiaries Acts it can be seen that Governments of the day (probably in consultation with a somewhat different MAF structure than at present, and with input from beekeepers) have contributed to the good health of our bees in NZ. As a keeper of bees which hopefully will be passed on to the next generation of beekeepers, I am indebted to our previous Governments and Beekeepers in that their controls have contributed to making this one of the best countries in the world to keep bees (from a disease point of view).

8. NZ BEEKEEPING STANDARDS

New Zealand's reputation as a beekeeping nation is on a pedestal compared to most other beekeeping countries. On a world ranking of honey producers we hardly rate a mention (less than 1% of world production). As far as bee health, beekeeping methods etc we are respected as leaders in commercial beekeeping. Our hive products command a premium on overseas markets because of our reputation and integrity of our products. Until varroa hit NZ we were not feeding any chemicals to our bees (may the South Island remain free for some time yet), and there is a growing market to consumers who require safe food, safely produced.

If honey in bulk form was impolled there are serious implications to our health standards of our NZ produced honey. I can foresee a situation whereby unscrupulous dealers in honey could impol inferior honey and either 'repack' or 'rebrand' as "NZ honey" and then re-export to more lucrative overseas markets - I believe that these such people exist in our industry ie these are commodity traders who have no commitment to actual beekeeping.

7. AMERICAN FOUL BROOD IN NZ.

NZ beekeepers recognise the importance in controlling this disease and are committed to the eventual eradication of this disease. The Australia Bee M annual c 1904 has very little information on diseases of bees in NZ but has listed foul brood with the name *Bacillus Alvei* (diagram and description is more like AFB than European Foul Brood (EFB) as the name relates) there appears at that time to be no scientific basis as to cause of this disease nor a knowledge of how it is spread. In the early days of beekeeping AFB appears to have been a problem to NZ beekeepers perhaps because of the lack of knowledge of the disease and the use of many 'grannies remedies' which appeared to have been tried. In the 1920's a Mr E Sage, Waikato marketed "Apiarists Joy" for AFB control unfortunately this individual died along with his amazing cure! In 1950 78% of beehives were inspected and the clinical cases of AFB were 2.02%. There have been ups and downs in the recorded cases of AFB and in 1998 the AFB incidence was put at 0.38%.

Paenibacillus larvae larvae spores can last many years (at least 35) and with modern scientific methods can be used as an indicator of AFB status. Future methods of AFB eradication in NZ will possibly need to be directed at lowering spore count in beehive products and I for one would be

fully supportive of moving toward the eradication by scientific methods (ie the eventual reduction of AFB spores in honey to zero). Dr Goodwin's report refers to Elimination of AFB without the use of Drugs- M Goodwin & C van Eaton has stated that as low as 10 spores (or fewer) may infect a larva (24hrs old) whereas it also states that a dilution rate of 5 million spores/100mls sugar is the lowest number of spores required to create an infection. As a practical beekeeper I suggest that further work needs to be done with regard to the dilution rate as there appears to be every chance that this dilution rate could create an infection if conditions were appropriate. There is no indication of the spore level currently in NZ domestic honey in Dr Goodwin's report and I would expect a report such as this to ascertain the spore loading in both random samples from beekeepers and samples from commercially packed lines, ie blended honeys available through retail outlets. Test results 2002 made available to me indicate that from 145 honey samples received from beekeepers to the accredited testing facility, there were 2 samples which returned a positive spore count (1.4%) there is no indication of the number of spores in the positive samples. The results of testing in Dr Goodwin's report (p20) would indicate that NZ honey is considerably "cleaner" than the overseas honeys. The proposed level of AFB spores in imported honey appears to be an arbitrary measure and I would suggest further work is needed to arrive at a definitive figure. The proposed level of AFB spores should take into account the spore loading in our domestic honey and not be above that figure or the lowest infection threshold, whichever is the lowest bearing in mind that NZ beekeepers' commitment to reducing the incidence to nil.

8. EUROPEAN FOUL BROOD (EFB).

NZ has escaped the ravages of EFB, more a result of good management rather than good luck. Dr Goodwin's reference to beekeepers not being required to check for EFB (p11) is rather misleading. Beekeepers are always on the look out for any abnormal conditions which may be encountered from time to time, in my own case I had a concern in a beehive situated in a rural township and because of the proximity to the local rubbish tip -approx 1.5km as the bee flies, I submitted a sample for testing for EFB. When varroa was discovered by an amateur beekeeper in Auckland it was also a coincidence that MAF Quality Management confirmed it from bee samples they were holding within hours after the reports from the amateur beekeeper. Also the previous years live bee samples had apparently been mislaid without testing! It would appear that the introduction of EFB would have serious implications to the NZ beekeeping industry and to the pollination industry. It would also appear that there is inadequate testing and knowledge of the disease and a complete lack of data. As a result of this lack of information I would suggest that more work needs to be done on this bacterium before any introduction of hive products etc is contemplated. It is also a concern of mine that at least one commercial packer of honey in NZ is packing a mixture of royal jelly and clover honey. Following the confirmation of *Melissococcus pluton* in Royal Jelly from China I am uneasy about the risk of EFB in this operation. I would assume that the Royal Jelly is from China as this company to my knowledge do not appear to look for sources in NZ. I am unaware of any royal jelly being commercially produced in NZ.

9. SCIENTIFIC KNOWLEDGE OF OTHER ORGANISMS.

There are many other organisms which appear to affect bees (table 1 a ,p10) many of these have already been classified as unwanted organisms. There are some which have not been classified perhaps because of lack of knowledge. There are also probably unidentified organisms which could cause harm to bees -it is highly likely new organisms will turn up in future.

Varroa although discovered in Java in 1904 did not rate a mention in scientific circles until recently. I have a 1946 edition of the ABC & XYZ of Beekeeping by AI Root. There is no mention of varroa in that publication. I also have a 1980 copy (34th edition) in which appears only limited notes. Reading this copy it states that varroa was first noticed in 1964 in Russia and in Bulgaria in 1967, it goes on to state varroa had been found recently in Paraguay (1979) it goes on to state "In areas where varroa exists apiarists consider it a very destructive disease" little did the scientists at the time consider the significance of this beast in terms of world-wide damage to bees (this organism has been spread by mainly beekeepers through trade and hive movements).

Many other organisms in table 1 a and also many viruses in table 1 b have not been mentioned in my 1980 edition ABC XYZ. The small hive beetle is another unwanted organism which has only recently been identified and could have disastrous effects on the sustainable beekeeping industry . With respect to organisms of which we have little knowledge or which we are unaware of I believe that it should be viewed cautiously to allow any importation of any material which could place our industry at risk -this is not a scientific view it is purely a view based on recent events and a fear of similar events happening in the future.

10. ASSESSMENT OF RISK FROM PRACTICAL POINT OF VIEW.

10.1 IMPORT RISKS

In the scientific perspective as viewed by Dr Goodwin the risk of importation of diseases and pests have been given the overall view of being relatively minor if certain conditions are met. From a practical point of view I see the risks as being considerably greater and this view is able to be demonstrated by the passage round the world of pests and diseases in countries which are both importers and exporters of bee products and where movements of hives/bees are largely unrestricted. These countries are perhaps less dependent on bees than the agricultural based NZ economy. Processing of NZ honey is done by very few processors and most of these processors also have beehives which they operate. The risk of contamination from any overseas products into NZ beehives is greatly increased simply because of this close relationship with processor and hive owner. Mr Goodwin's report suggests for example that remaining honey in discarded retail packs could be attractive to bees the assumption here is that these packs could obtain traces of residual honey however, a person may discard a complete pack nearly full of honey because it has not suited the purchasers particular taste. The discard of contaminated products from packing processes could also cause problems.

Most bee products are "surplus" of bees taken by the beekeeper, in times that the bees need feeding these 'surplus's' may be returned to the hive. In NZ beekeepers remove honey during the season and supplementary feeding is usually done with sugar syrup, it is not beyond possibility that imported honey

could be pumped directly into beehives as feed. This could be a considerable disease risk but the economics would likely dictate the action for some less caring individuals.

If imported honey was available in the supermarkets the NZ public would perhaps be unaware of the health requirements for importing bee products and compromise border security by bringing in honey as undeclared baggage.

10.2 EXPORT RISKS.

The importation of foreign honeys would probably compromise our present health status particularly with regard to export to EU countries. The protocols for the export of NZ honey to EU countries involves testing a percentage of the whole domestic crop for residues of chemicals and heavy metals. To add an imported product to our domestic crop increases the testing procedures and also the likelihood of rejection through actions taken overseas. In the world honey market there are large producing countries which have been severely restricted to markets for example Canada has been restricted entry to the European market because of a Genetic Modification issue. China and Argentina have been restricted from USA who have placed quotas and dumping duties on honey to protect USA domestic markets, China has been denied access to Europe because of antibiotic residues in honey. These countries are actively seeking alternative pathways to allow access to their former markets. It is possible that the honey traders are viewing NZ as a transit point to "rebrand" honey in an underhand method to gain access to our markets which we supply with a quality product and a disease history which can stand scrutiny and possess integrity, ie use our good name. Overseas countries also appear to have problems with adulteration of honey mainly because of cheap forms of sugar -high fructose corn syrup is sometimes used to "extend" natural honey it is relatively cheap and hard and expensive to detect. NZ does not have this product available at a price which would make this a viable option our sugar price is also high compared to other beekeeping countries. The concern is that NZ may import "corn syrup" as "honey" to then blend with NZ honey for re export -if this action was undertaken then it would place the integrity of all NZ honey in jeopardy as would honey imported with high chemical (antibiotic) level.

Appendix A is a copy of Federal Council of Australia Apiarists Assn report and is from the Australian Beekeeper, September 2001.

The interesting points in this article by the Secretary are;

- "rebranding" of Chinese Royal Jelly
- "Imported" honey being "repacked and exported"
- "Health Certificate" integrity concerns

11. VIABILITY OF NZ BEEKEEPING

NZ beekeeping since the introduction of varroa has been placed in a considerable state of upheaval. Studies being conducted at the moment to assess the viability of NZ beekeeping and its ability to fund varroa control suggest that a great number of South Island beekeepers are not in a position to face varroa financially and any further problems inflicted on the beekeeping community is likely to have far reaching

effects. It would probably be beyond our industry or individual beekeepers to fund further controls of other diseases or to attempt to eradicate such. Losses of beehive production to the beekeeper and perhaps a loss of pollination for farmers could cause a compounding of losses through the introduction of an unwanted organism.

12. THE "HUMAN" FACTOR.

In Society we have laws and regulations to maintain an order and to protect those aspects which enhance the wellbeing of community and environment. The proposed regulations and import standards are part of this 'system'. Any such standard/regulation needs to be considered along with the issue of non-compliance, abuse, manipulation and a general 'bending the rules' situation which would have an adverse effect on what these regulations were designed for .

In a true 'clinical' world I can appreciate that the 'conditions' and controls on imports may offer that that protection (but only just) likewise the risks as outlined in the Goodwin analysis may be adequately addressed (but only just). However there are members of our society who will 'cheat the rules' either knowingly or because of a 'don't care/selfish' attitude. The proposed standards are insufficiently fine grained to provide any safeguards to the beekeeping industry and the downstream beneficiaries of that industry , with regard to the 'human factor' of responsible actions to these standards.

The 'irresponsible actions' supported by the inadequacy of the proposed imported standards could have dramatic effects on the health of our beehives (and a direct effect on viability) and also have serious implications on our ability in the world trade, with this aspect I find the proposal to be unacceptable.

13. CONCLUSION.

New Zealand is a self sufficient in hive products and does not need (nor has the need been shown) to import hive products at the risk of compromising the beekeeping industry nor the wider agricultural community.

There are significant risks to the beekeeping industry with the introduction of existing disease/pests and an unquantifiable risk of unknown or little known diseases which may appear in the future.

There are significant risks with regard to our present defined export protocols being compromised with the importation of foreign beehive products.

There is a significant risk of an increase in AFB disease which we have a solid history of controlling without drugs and future commitment to control with the view to eradication may be compromised (varroa may be a benefit here in the assistance of removing feral hives).

It has not been shown that an AFB spore loading of 50,000/1tr spores has a relevance to NZ conditions. Nor has the current status of AFB spore loading in NZ honey been given.

The treatment for EFB by heat treatment and irradiation had been conducted on very limited bases and the test for inactivity by storage ~~was~~ conducted in 1920 and would probably need further work.

The irradiation of food items need further clarification by the Food Safety Authority.

The r\lodel Veterinary Certificates which contain the word ~~ has reduced the effectiveness of obtaining the product from "clean" areas/hives. This is unacceptable considering NZ's freedom from many diseases which affect other paris of the world.

The importation of honey or beehive products in a bulk form for reprocessing is unacceptable because of contamination/disease risks and also compromised export opportunities for NZ produced honey.

It has not been shown that there is any advantage to New Zealand in the importation of beehive products or used beekeepers equipment .

As there is usually a considerable time delay between discovering, identification and scientifically based classification, any organism may have well and truely escaped into our environment making eradication difficult if imports of new organisms were a product of relaxed hive product imports.

14. RECOMMENDATIONS.

Whilst I firmly believe that it is in the best interest of NZ beekeepers, NZ farmers, NZ agriculture and the general public of NZ that the importation of beehive products be prohibited on the basis of unacceptable disease risks and potential NZ export trade compromise, in certain instances trade should not be restricted on this premise. There are some small countries (eg Pacific Island nations) where beekeeping is progressing along sound lines with appropriate disease serveillance and import restrictions. These countries have perhaps an even better endemic disease history than NZ. There should in this instance be only minor impediments to trade with these countries.

As most items listed in 'used beekeeping equipment' are relatively inexpensive and able to be readily purchased either new or second-hand in NZ, I do not believe that importation would be a sound move.

Honey products from countries with a proven history of freedom from unwanted organisms be allowed to be imported in retail packs only ready for the consumer without further processing in NZ. These products would be equal to or "cleaner" than our domestic product.

I would strongly oppose the importation of hive products in bulk form for reprocessing in NZ.

I further see a need to change the proposed Model Veterinary Certificates. The main change would be to substitute the word OR to AND. Further refinements would be to establish an AFB spore loading which is equal to or less than our domestic product. Further refinements on the EFB treating need to be done.

Thank you for your consideration in this submission.



ROGER BRAY

Braesby Farm, RD1

ASHBURTON.

Ph/Fax 03) 308 4964 28th August 2002.

References:

Australian Bee Manual -I Hopkins, 1904 (approx).

Practical Beekeeping -Isaac Hopkins, 1926 (approx).

Beekeeping in NZ -TS Winter (Dept of Agriculture), 1961. Practical Beekeeping in NZ -A Matheson, 1984.

ABC & XYZ in Bee Culture -AI Root, 1945. ABC & XYZ in Bee Culture -AI Root, 1980.

Australian Beekeeper- Magazine, Sept 2001.

Elimination of American Foulbrood without the use of Drugs -

M Goodwin & C van Eaton, 1999.

Varroa in NZ -Economic Import Assessment -MAF Policy, November 2000. Import Risk Analysis: Honey beehive products and Used Equipment - Dr RM Goodwin, July 2002.

18.1 THE NEED TO IMPORT HONEY/BEEHIVE PRODUCTS

New Zealand has for many years had an import restriction on beehive products etc during this time the domestic market has been fully supplied by the NZ beekeepers with locally produced products. During this time there have also been exports of honey, wax and also live bees and queen bees etc (particularly of special niche market products). There has also been exports of beekeeping equipment manufactured in NZ – much of the equipment has been designed by ‘entrepreneur type’ beekeepers. The beekeeping industry has the ability to fully provide for domestic consumption of beehive products.

MAF COMMENT

Under the SPS Agreement, countries have the right to take sanitary and phytosanitary measures to protect human, animal or plant life or health. However, such measures can not be applied in a manner which “would constitute a disguised restriction on international trade” (Article 2.3 of the SPS Agreement). Thus MAF cannot use sanitary measures to protect the beekeeping industry unless such measures are justified to protect human, animal or plant life.

18.2 It is of particular concern that many of the listed viruses have not been fully researched and the method of transfer and effects are not fully known.

MAF COMMENT

Subsequent information has led MAF to review the section on viruses.

18.3 When perusing the Import Certification Certificates for importing hive products, I note that large number of clauses all linked with an **OR**, this in fact sets the bottom line on importation from any country in the world (providing certain conditions are met). Under the import protocol it could be that honey is able to be imported from any country regardless of the health standard of bees and regardless of any chemicals which may have been used in that country. This ability to import from such beekeeping areas is unacceptable to me both for disease risk and NZ honey integrity.

MAF COMMENT

This is not the case. If MAF agrees (based on evidence of freedom from the country) that a pest or pathogen of concern does not occur in the country or zone, then importation is allowed in regard to this specific pest or pathogen. If this is not the case then MAF will allow importation only if there are safe means of managing the risk. Thus the OR statements in the import health standard are appropriate. If MAF believes requests for country or area freedom are not supported by sufficient evidence, these requests will be rejected.

Labelling of products and residue testing is the responsibility of the New Zealand Food Safety Authority (FSA). The FSA will consider what monitoring requirements of imported honey will be required to ensure the New Zealand

consumer is protected.

18.4 If honey in bulk form was imported there are serious implications to our health standards of our NZ produced honey. I can foresee a situation whereby unscrupulous dealers in honey could import inferior honey and either ‘repack’ or ‘rebrand’ as “NZ honey” and then re-export to more lucrative overseas markets – I believe that these such people exist in our industry ie these are commodity traders who have no commitment to actual beekeeping.

MAF COMMENT

The New Zealand Food Safety Authority is aware of this issue and is investigating whether existing export assurance systems require amendment in relation to traceability of New Zealand product.

18.5 AMERICAN FOUL BROOD IN NZ

Paenibacillus larvae larvae spores can last many years (at least 35) and with modern scientific methods can be used as an indicator of AFB status. Future methods of AFB eradication in NZ will possibly need to be directed at lowering spore count in beehive products and I for one would be fully supportive of moving toward the eradication by scientific methods (ie the eventual reduction of AFB spores in honey to zero). Dr Goodwins report refer Elimination of AFB without the use of Drugs – M Goodwin & C van Eaton has stated that as low as 10 spores (or fewer) may infect a larvae (24 hrs old) whereas it also states that a dilution rate of 5 million spores/100 mls sugar is the lowest number of spores required to create an infection. As a practical beekeeper I suggest that further work needs to be done with regard to the dilution rate as there appears to be every chance that this dilution rate could create an infection if conditions were appropriate.

MAF COMMENT

The permissible level of AFB spores recommended in the risk analysis is only 1% of the lowest spore level ever recorded to establish an infection. Thus MAF considers importation of honey bee hive products with AFB spores levels less than 500,000/L (infectious concentration 5 million spores/L) will have negligible risk of establishing infections of *P larvae larvae*.

18.6 There is no indication of the spore level currently in NZ domestic honey in Dr Goodwins report and I would expect a report such as this to ascertain the spore loading in both random samples from beekeepers and samples from commercially packed lines, ie blended honeys available through retail outlets. Test results 2002 made available to me indicate that from 145 honey samples received from beekeepers to the accredited testing facility, there were 2 samples which returned a positive spore count (1.4%) there is no indication of the number of spores in the positive samples. The results of testing in Dr Goodwins report (p20) would indicate that NZ honey is considerably “cleaner” than the overseas honeys. The proposed level of AFB spores in imported honey appears to be an arbitrary measure and I would suggest further work is needed to arrive at a definitive figure. The proposed level of AFB spores should take into account the spore loading in our domestic honey and not be above that figure or the lowest infection threshold,

whichever is the lowest bearing in mind that NZ beekeepers commitment to reducing the incidence to nil.

MAF COMMENT

See 18.5

18.7 EUROPEAN FOUL BROOD (EFB)

NZ has escaped the ravages of EFB, more a result of good management rather than good luck. Dr Goodwin's reference to beekeepers not being required to check for EFB (p11) is rather misleading.

MAF COMMENT

MAF agrees that this statement is confusing. It will be re-written.

18.8 It would appear that the introduction of EFB would have serious implications to the NZ beekeeping industry and to the pollination industry. It would also appear that there is inadequate testing and knowledge of the disease and a complete lack of data. As a result of this lack of information I would suggest that more work needs to be done on this bacterium before any introduction of hive products etc is contemplated.

MAF COMMENT

EFB has been the focus of much research. This work is referenced in the risk analysis. MAF is aware of the potential serious consequences of EFB introduction and has initiated more research before the recommendations of this risk analysis were drafted. MAF is reviewing the heat treatment parameters for heat treatment of honey and this will be addressed in the revised risk analysis.

18.9 It is also a concern of mine that at least one commercial packer of honey in NZ is packing a mixture of royal jelly and clover honey. Following the confirmation of *Melissococcus pluton* in Royal Jelly from China I am uneasy about the risk of EFB in this operation. I would assume that the Royal Jelly is from China as this company to my knowledge do not appear to look for sources in NZ. I am unaware of any royal jelly being commercially produced in NZ.

MAF COMMENT

Royal jelly will not be allowed entry unless the product meets the requirements of this risk analysis. As royal jelly is damaged by heat treatment, irradiation or encapsulation (only retail packs of capsules will be permitted) are the only safe alternatives.

18.10 SCIENTIFIC KNOWLEDGE OF OTHER ORGANISMS

There are many other organisms which appear to affect bees (table 1a, p10) many of these have already been classified as unwanted organisms. There are some which have not been classified perhaps because of lack of knowledge. There are also probably

unidentified organisms which could cause harm to bees – it is highly likely new organisms will turn up in future.

With respect to organisms of which we have little knowledge or which we are unaware of I believe that it should be viewed cautiously to allow any importation of any material which could place our industry at risk – this is not a scientific view it is purely a view based on recent events and a fear of similar events happening in the future.

MAF COMMENT

Under international trade agreements, countries cannot impose trade conditions unless there is a risk to animals, plants, people or the environment. New Zealand is bound by these agreements. MAF cannot impose trade restrictions unless there is some identified hazard and the specific risk management measures must be based on science.

18.11 Processing of NZ honey is done by very few processors and most of these processors also have beehives which they operate. The risk of contamination from any overseas products into NZ beehives is greatly increased simply because of this close relationship with processor and hive owner. Mr Goodwin's report suggests for example that remaining honey in discarded retail packs could be attractive to bees the assumption here is that these packs could obtain traces of residual honey however, a person may discard a complete pack nearly full of honey because it has not suited the purchasers particular taste. The discard of contaminated products from packing processes could also cause problems.

Most bee products are "surplus" of bees taken by the beekeeper, in times that the bees need feeding these 'surplus's' may be returned to the hive. In NZ beekeepers remove honey during the season and supplementary feeding is usually done with sugar syrup, it is not beyond possibility that imported honey could be pumped directly into beehives as feed. This could be a considerable disease risk but the economics would likely dictate the action for some less caring individuals.

MAF COMMENT

The assessment of risk is based on the unique situation in bees in that bees will actively seek out certain products such as honey, royal jelly, pollen and propolis. Note that MAF agrees that propolis will be regarded as a product that attracts bees. Any product that has the potential to be attractive to bees will only be permitted entry if it is treated in such a way to render it safe, or in a form that will not be attractive to bees if discarded into the environment. Thus the honey and the container will only be permitted entry if it is considered safe by MAF.

18.12 If imported honey was available in the supermarkets the NZ public would perhaps be unaware of the health requirements for importing bee products and compromise border security by bringing in honey as undeclared baggage.

MAF COMMENT

The public will be advised that honey that has not been approved by MAF cannot be brought into New Zealand. Honey will need certification before importation is allowed. Private consignments of honey will not meet these requirements. These consignments will be picked up at the border as currently occurs.

18.13 EXPORT RISKS

The importation of foreign honeys would probably compromise our present health status particularly with regard to export to EU countries. The protocols for the export of NZ honey to EU countries involves testing a percentage of the whole domestic crop for residues of chemicals and heavy metals. To add an imported produce to our domestic crop increases the testing procedures and also the likelihood of rejection through actions taken overseas. In the world honey market there are large producing countries which have been severely restricted to markets for example Canada has been restricted entry to the European market because of a Genetic Modification issue. China and Argentina have been restricted from USA who have been placed quotas and dumping duties on honey to protect USA domestic markets, China has been denied access to Europe because of antibiotic residues in honey. These countries are actively seeking alternative pathways to allow access to their former markets. It is possible that the honey traders are viewing NZ as a transit point to “rebrand” honey in an underhand method to gain access to our markets which we supply with a quality product and a disease history which can stand scrutiny and possess integrity, ie use our good name. Overseas countries also appear to have problems with adulteration of honey mainly because of cheap forms of sugar – high fructose corn syrup is sometimes used to “extend” natural honey it is relatively cheap and hard and expensive to detect. NZ does not have this product available at a price which would make this a viable option our sugar price is also high compared to other beekeeping countries. The concern is that NZ may import “corn syrup” as “honey” to then blend with NZ honey for re export – if this action was undertaken then it would place the integrity of all NZ honey in jeopardy as would honey imported with high chemical (antibiotic) level.

Appendix A is a copy of Federal Council of Australia Apiarists Assn report and is from the Australian Beekeeper, September 2001.

The interesting points in this article by the Secretary are;

- “rebranding” of Chinese Royal Jelly
- “Imported” honey being “repacked and exported”
- “Health Certificate” integrity concerns

MAF COMMENT

Labelling of products and residue testing is the responsibility of the New Zealand Food Safety Authority (FSA). The FSA will consider what monitoring requirements of imported honey will be required to ensure the New Zealand consumer is protected. See also 18.4

18.14 Losses of beehive production to the beekeeper and perhaps a loss of pollination for farmers could cause a compounding of losses through the introduction of an unwanted

organism.

MAF COMMENT

MAF is aware of the impact of varroa on the viability of beekeeping and the importance of beekeeping to the agriculture/horticulture sectors. MAF has drafted this risk analysis, sought expert review and public consultation to ensure only safe importation will occur.

18.15 THE “HUMAN” FACTOR

In a true ‘clinical’ world I can appreciate that the ‘conditions’ and controls on imports may offer that protection (but only just) likewise the risks as outlined in the Goodwin analysis may be adequately addressed (but only just). However there are members of our society who will ‘cheat the rules’ either knowingly or because of a ‘don’t care/selfish’ attitude. The proposed standards are insufficiently fine grained to provide any safeguards to the beekeeping industry and the downstream beneficiaries of that industry, with regard to the ‘human factor’ of responsible actions to these standards.

MAF COMMENT

All risk managements measures are assessed using a precautionary approach. Thus, as stated in the risk analysis, the lowest concentration of *P larvae larvae* spores to cause infection has been reported as 50 **million** per litre. However MAF requires that honey contain no more than 50 **thousand** spores per litre.

18.16 The treatment for EFB by heat treatment and irradiation had been conducted on very limited bases and the test for inactivity by storage was conducted in 1920 and would probably need further work.

MAF COMMENT

See 18.8

18.17 The irradiation of food items need further clarification by the Food Safety Authority.

MAF COMMENT

The Food Safety Authority were consulted in the drafting of the import health standard.

18.18 The importation of honey or beehive products in a bulk form for reprocessing is unacceptable because of contamination/disease risks and also compromised export opportunities for NZ produced honey.

MAF COMMENT

See 18.11 and 18.13

18.19 It has not been shown that there is any advantage to New Zealand in the importation of beehive products or used beekeepers equipment.

MAF COMMENT

Under the SPS Agreement, countries have the right to take sanitary and phytosanitary measures to protect human, animal or plant life or health. However, such measures can not be applied in a manner which “would constitute a disguised restriction on international trade” (Article 2.3 of the SPS Agreement). Thus MAF cannot use sanitary measures to protect the beekeeping industry unless such measures are justified to protect human, animal or plant life.

18.20 As there is usually a considerable time delay between discovering, identification and scientifically based classification, any organism may have well and truly escaped into our environment making eradication difficult if imports of new organisms were a product of relaxed hive product imports.

MAF COMMENT

See 18.10.

18.21 There are some small countries (eg Pacific Island nations) where beekeeping is progressing along sound lines with appropriate disease surveillance and import restrictions. These countries have perhaps an even better endemic disease history than NZ. There should in this instance be only minor impediments to trade with these countries.

MAF COMMENT

These countries have been asked to supply MAF with evidence of their disease free status. If this evidence is satisfactory, trade will not be impeded.

18.22 As most items listed in ‘used beekeeping equipment’ are relatively inexpensive and able to be readily purchased either new or second-hand in NZ, I do not believe that importation would be a sound move.

MAF COMMENT

Used beekeeping equipment is to be withdrawn from the risk analysis as there are significant information gaps in the safe importation of this equipment, MAF understands that the equipment is available in New Zealand and consultation has shown that there is little interest in import of such equipment.

19 ALPHA LABORATORIES (NZ) LTD

Submission to: Ministry of Agriculture & Fisheries

Regarding: Draft Import Risk Analysis and Import Health Standard For Honey Bee Hive Products And Used Beekeeping Equipment.

Submission from: Alpha Laboratories (NZ) LTD

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Date: 28 August 2002

Background

This submission relates to the secondary processing industry: (namely Alpha Laboratories) the manufacturing (eg soft gel encapsulating) of primary products into dispensable form. It addresses the Royal Jelly (in powder form) part of the analysis only.

We acknowledge the importance of protecting the New Zealand production arena from biosecurity threats associated with the importation of all honey and honey related products that could contain potentially harmful organisms.

We believe that the issues relating to powdered Royal Jelly are straightforward and that simple and effective processes can be implemented by the regulatory authorities swiftly , and with industry consensus. This is largely because it is much easier to control issues relating to a powdered product.

We anticipate this will not be the case for honey.

We are concerned that if powdered royal jelly product is treated in the same importation standard as honey, It will cause unnecessary delays and confusion that will be harmful for the industry.

Issues

Royal Jelly Powder Importation options

The options presented in the Standard create major difficulties for secondary processors

- Gamma irradiation raises Ministry of Health issues
- Gamma irradiation also has extensive labelling requirements making the product difficult to market.
- Heat treatment destroys active values of the royal jelly powder.

Transitional facilities provide an option for secondary processors to proceed without negative impact to the product (refer below)

Transitional facility

The potential risks raised in this report can be satisfactorily addressed by a Transitional Facility importing the Royal Jelly powder under bond and operating under a Good Manufacturing Practices licence.

The draft Standard does not address the option of importation of the royal jelly powder under bond and processing (encapsulating) in a transitional facility.

Transitional Facilities, such as those that manufacture dietary supplies, have the air control, structures and operational procedures to effectively manage the risks identified in the report. Most packers of honey would not be in that position.

Many of the existing secondary processors are already exporting bee products as a transitional facility.

Recommendations

That royal jelly powder be considered separately from honey in the draft Import Risk Analysis and Import Health Standard

That Transitional Facilities be approved to import and encapsulate royal jelly powder under approved programmes

That, given the potential cost to the Royal Jelly Powder industry from further delays, the first two recommendations be implemented immediately (and separately from & honey)

19.1 We believe that the issues relating to **powdered** Royal Jelly are straightforward and that simple and effective processes can be implemented by the regulatory authorities swiftly and with industry consensus. This is largely because it is much easier to control issues relating to a powdered product.

We anticipate that this will not be the case for honey.

We are concerned that if powdered royal jelly product is treated in the same importation standard as honey, it will cause unnecessary delays and confusion that will be harmful for the industry.

MAF COMMENT

Powdered royal jelly is identified as a risk commodity in that it is attractive to bees in the same way as honey.

19.2 Royal Jelly Powder Importation Options

The options presented in the Standard create major difficulties for secondary processors

- Gamma irradiation raises Ministry of Health issues
- Gamma irradiation also has extensive labelling requirements making the product difficult to market
- Heat treatment destroys active values of the royal jelly powder

MAF COMMENT

The New Zealand Food Safety Authority is responsible for issues surrounding gamma irradiation of food (formerly a Ministry of Health issue). Irradiation of royal jelly products has been discussed with the FSA. Irradiated food supplements can be sold as the dietary supplement regulations do not prohibit this, unlike the Food Safety Code which prohibits irradiation of food unless this has been approved and listed in the table to clause 4 in s 1.5.3.

There are no requirements to label dietary supplements as being gamma irradiated. However, under the Fair Trading Act consumers cannot be misled. This may be used as justification that information be given on the label that a dietary supplement has been irradiated.

MAF is aware that heat treatment is not appropriate for royal jelly.

19.3 Transitional facilities provide an option for secondary processors to proceed without negative impact to the product (refer below)

The potential risks raised in this report can be satisfactorily addressed by a Transitional Facility importing the Royal Jelly powder under bond and operating under a Good Manufacturing Practices licence.

The draft Standard does not address the option of importation of the royal jelly powder under bond and processing (encapsulating) in a transitional facility.

Transitional Facilities, such as those that manufacture dietary supplies, have the air control, structures and operational procedures to effectively manage the risks identified in the report. Most packers of honey would not be in that position.

Many of the existing secondary processor are already exporting bee products as a transitional facility.

MAF COMMENT

The major hazard identified in royal jelly powder is *Melissococcus pluton*, the cause of European foulbrood. This is a highly infectious disease. In order that an application to MAF for a facility to be approved as a transitional facility to produce royal jelly capsules from bulk, untreated imported royal jelly powder is accepted, the importer would be required to address all issues associated with this importation such as; safety during transportation to the facility, storage of the product, prevention of exposure to bees, prevention of contamination of the product on equipment, workers clothing, shoes and bodies and destruction of used containers. A facility such as the PC3 isolation unit at the National centre for Disease Investigation could be necessary to give adequate protection against such an infectious exotic organism.

APPENDIX 1 The risk analysis process.

