

*Import Risk Analysis:*  
Psittacine Hatching Eggs

*REVIEW OF SUBMISSIONS*

5 May 2010

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Import Risk Analysis: Psittacine Hatching Eggs

*REVIEW OF SUBMISSIONS*

5 May 2010

Approved for general release

A handwritten signature in black ink, appearing to read 'Christine Reed'.

Christine Reed  
Manager, Risk Analysis  
MAF Biosecurity New Zealand

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# 1. Executive Summary

MAF Biosecurity New Zealand released the draft document *Import Risk Analysis: Psittacine Hatching Eggs* for public consultation on 13 August 2009. The closing date for public submissions on this document was 24 September 2009. At their request, the closing date for the submission from Auckland Zoo was extended to 13 November 2009.

Based on comments made by stakeholders in response to the published draft import risk analysis, this review of submissions document makes recommendations for changes required to amend the draft document to a final risk analysis.

The next step in this process will be for the Animal Imports and Exports Section of the Border Standards Directorate of MAFBNZ to draft an import health standard alongside a document that outlines the rationale for the preferred risk management measures. These documents will then be published for a six-week period of public consultation.

As a result of comments made in these submissions, it is recommended that the following changes should be made in the final risk analysis:

- References regarding parvoviruses should be corrected as described in response to 3.1.6.
- Further consideration should be given to the likelihood of *Coxiella burnetii* being present in psittacine eggs as discussed in 3.1.9.
- The entry assessment for *Salmonella* Typhimurium DT104 should be considered non-negligible as discussed in 3.1.19 and Chapter 12 of the risk analysis amended as appropriate.
- References to the OIE *Code* in Section 12.3 of the risk analysis should be amended as described in response to 3.1.20.





## 2. Introduction

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

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

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

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

MAF Biosecurity New Zealand released the draft document *Import Risk Analysis: Psittacine Hatching Eggs* for public consultation on 13 August 2009. Every step was taken to ensure that the risk analysis provided a reasoned and logical discussion, supported by references to scientific literature. The draft risk analysis was peer reviewed internally and externally and then sent for interdepartmental consultation. Relevant comments were incorporated at each stage of this review process. The closing date for public submissions on the risk analysis was 24 September 2009. At their request, the closing date for the submission from Auckland Zoo was extended to 13 November 2009.

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

This document is MAF Biosecurity New Zealand's review of the submissions that were made by interested parties following the release of the draft risk analysis for public consultation. Public consultation on risk analyses is primarily on matters of scientific fact that affect the assessment of risk or the likely efficacy of any risk management options presented. For this reason, the review of submissions will answer issues of science surrounding likelihood, not possibility, of events occurring. Speculative comments and economic factors other than the

effects directly related to a potential hazard are beyond the scope of the risk analysis and these will not be addressed in this review of submissions.

Table 1. Submitters and Organisations Represented

Submitter	Organisation Represented/Location
Michael Brooks	Poultry Industry Association of New Zealand and Egg Producers Federation of New Zealand
Gavin White	Avicultural Society of New Zealand Inc.
Glen Holland	Wildlife Connections
Graham Butler	N/A
Philip Danby	Auckland Door To Door Distributors Limited
Bruce Simpson	Biosecurity Consultant
Jim Bradshaw	N/A
Brooke Noonan	Auckland Zoo



### 3. Review of Submissions

#### 3.1. MICHAEL BROOKS, POULTRY INDUSTRY ASSOCIATION OF NEW ZEALAND AND EGG PRODUCERS FEDERATION OF NEW ZEALAND

3.1.1. The New Zealand Poultry Industry agrees with the observation that “illegal importations pose a greater risk than importations through legal channels with biosecurity measures in place to minimise the likelihood of diseases entering the country with those importations”. However, industry notes that in order for the risk to be reduced when importing through legal channels, it is imperative that comprehensive monitoring is in place when such imports are allowed.

**MAFBNZ Response:** Noted.

3.1.2. ...in the light of the levels of ownerships, and in particular value, of many psittacine species, industry accepts that where extensive literature views have been undertaken and no reports of disease have been found, it is reasonable to conclude that the agent should not be regarded as a preliminary hazard in the species.

**MAFBNZ Response:** Noted.

3.1.3. Industry acknowledges that Biosecurity New Zealand work hard to maintain links with international agencies and to amend import health standard requirements when outbreaks of disease occur. However, industry is unclear on the procedures which Biosecurity New Zealand adopt in order to ensure that, with continued improvements in knowledge, the risks evaluated in import risk analyses and, where necessary, controlled through import health standards are kept up to date. For example, does Biosecurity New Zealand regularly review appropriate publications and if the status of knowledge on a disease agent has changed, does Biosecurity New Zealand reconsider the relevant import risk analyses. Industry would value further discussion with Biosecurity New Zealand in order to clarify the processes which Biosecurity New Zealand has in place to deal with such events.

**MAFBNZ Response:** Groups within MAFBNZ regularly collect, filter, and interpret risk data from a wide range of sources. Emerging risk information is captured by the Risk Analysis Group from formal peer reviewed literature sources, non-peer reviewed literature sources, other (mainly internet) sources (PROMED and other e-mail alert services, Swinecast, WAHID etc), conferences, and from discussions with colleagues in MAFBNZ, other government departments, and from domestic and international networks of contacts, including membership of specialist groups such as the Australian wildlife health network. MAF also places great value on any relevant information provided by domestic stakeholder groups.

3.1.4. The final sentence of the 2<sup>nd</sup> paragraph on page 3 of the IRA states “It is probable that the relatively low level of disease surveillance allows a number of these diseases to remain undetected but, for the purposes of this risk analysis, in the absence of diagnosis they have been regarded as not present in New Zealand”... Industry notes the statement in the final paragraph on page 3 which states “Surveillance for many of these organisms in New Zealand is

relatively insensitive so that the lack of recognition of these organisms does not provide a basis for confidence that they are not present". This statement seems to be in conflict with the position taken by Biosecurity New Zealand in regards to the risk associated with a commodity where a lack of published information is considered sufficient to support a conclusion that the disease is not present in the exporting country or species in question.

**MAFBNZ Response:** The first statement referred to above advocates the position that in the absence of a diagnosis of a *disease* in New Zealand, it is reasonable to suggest that disease is not present in New Zealand. In contrast, the second statement referred to above relates to the detection of *organisms that are not commonly associated with clinical disease* in birds. In this latter case, it is reasonable to suggest that there may be little confidence in claims of organism freedom in the absence of active surveillance.

3.1.5. The Poultry Industry notes that what appears to be a new format has been used in the preliminary hazard lists which helps to clarify the available evidence and logic used in reaching the conclusions documented in the preliminary hazard list. The Industry commends Biosecurity New Zealand on the adoption of this new format.

**MAFBNZ Response:** Noted.

3.1.6. The 2nd sentence of the first explanatory paragraph included for parvovirus includes a reference to "Gough 2003" which according to the reference list refers to a chapter in the 11th Edition of diseases of poultry. However, this chapter deals with pneumoviruses which are distinct from parvoviruses. In addition, it was not possible to find any reference to psittacines in this chapter.

**MAFBNZ Response:** Noted. This statement has been incorrectly attributed and should refer to the publication:

**Weissenbock H, Fuchs A (1995).** Histological and ultrastructural characterisation of hepatic intranuclear inclusion bodies in psittacine birds and pigeons. *Avian Pathology* 24(3), 507-21.

The second reference to Gough (2003) in this section is also incorrect and should refer to:

**Gough RE (2003)** Goose parvovirus infection. In Saif YM 9ed) Diseases of Poultry, Pp 367-74, Iowa State Press, Ames, Iowa.

It is recommended that these references be amended in the final version of the import risk analysis that accompanies this review of submissions document.

3.1.7. There is evidence to suggest that parvoviruses are a cause of enteric disease in chickens (Runting-Stunting syndrome) and turkeys (Poult Enteritis Mortality Syndrome). The introduction of these diseases to New Zealand could be a significant cause for concern. Industry therefore requests that Biosecurity New Zealand review the hazard assessment for parvoviruses.

**MAFBNZ Response:** There is insufficient evidence to conclude that parvoviruses are likely to be associated with psittacine species so they should not be considered as preliminary hazards in this risk analysis.

3.1.8. Avian retroviruses as a single group of viruses are considered in the IRA to be present in New Zealand. In contrast, the IRA for live budgerigars from the United Kingdom and the IRA for pigeons from Australia consider avian leucosis virus, lymphoproliferative disease virus and reticuloendotheliosis virus separately. Industry notes that separate consideration of the individual disease agents will not change the conclusion of the IRA, but Industry suggests that for the purposes of transparency and clarity, all three disease agents should be considered separately as, in contrast to the IRA, some avian retroviruses are not present in New Zealand.

**MAFBNZ Response:** The different presentations noted reflect the different authors used for these documents. However, as noted above, this would have no impact on the conclusion reached so amendment is considered unnecessary in this case.

3.1.9. In our review of the literature, the New Zealand Poultry Industry came across two papers which referred to the presence of *Coxiella*-like organisms in psittacines<sup>1,2</sup>. A third paper<sup>3</sup>, only the abstract of which was available to the industry, refers to the isolation of *Coxiella burnetti* from a parrot. Industry therefore requests that Biosecurity New Zealand reconsider the conclusion that *Coxiella burnetti* (or other species) has not been reported in psittacines. In light of this, and given that two of the papers refer to fatal infection of the birds in question, Industry suggests that further consideration should be given to this hazard.

**MAFBNZ Response:** Agreed. It is recommended that the final version of the import risk analysis that accompanies this review of submissions be amended to reflect these recent publications.

3.1.10. Industry notes that details relating to the reported presence of various disease agents in psittacines or in New Zealand are detailed in Table 2 when they would be more appropriately included in Table 1 (as is the case with other disease agents).

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<sup>1</sup> Shivaprasad HL, Cadenas MB, Diab SS, Nordhausen R, Bradway D, Crespo R and Breitschwerdt EB (2008) *Coxiella*-Like Infection in Psittacines and a Toucan. *Avian Diseases*, 52, 3, 426 – 432.

<sup>2</sup> Woc-Colburn AM, Garner MM, Bradway D, West G, D'Agostino J, Trupkiewicz J, Barr B, Anderson SE, Rurangirwa FR and Nordhausen RW (2008) Fatal Coxiellosis in Swainson's Blue Mountain Rainbow Lorikeet (*Trichoglossus haematodus moluccanus*). *Veterinary Pathology*, 45, 2, 247 – 254.

<sup>3</sup> Eb F, Orfila J and Lefebvre JF (1975) Morphological ultrastructural and immunological studies of a rickettsia isolated from a parrot. *Annales de microbiologie*, 126, 3, 333 – 359.

**MAFBNZ Response:** The information is presented in this way to illustrate the available relevant information that was considered before determining if an agent was considered likely to be transmitted in psittacine eggs.

3.1.11. Industry notes that while the main mode of transmission for infectious bronchitis virus (IBV) is considered to be horizontal, Cavanagh and Naqi (2003)<sup>4</sup> stated that “there are reports of virus isolations from eggs up to 43 days after recovery” even though chickens have been hatched from infected flocks and raised free of IBV.

**MAFBNZ Response:** This statement regarding the egg transmission of IBV has been removed from the latest (12<sup>th</sup>) edition<sup>5</sup> of the text referred to above. Furthermore, this unreferenced statement by Cavanagh and Naqi (2003) is the only reference that could be found to egg transmission of this virus as discussed in MAFBNZ’s import risk analysis for chicken hatching eggs<sup>6</sup>.

3.1.12. The New Zealand poultry industry supports the conclusion that the risk estimate for AI viruses in the commodity is non-negligible.

**MAFBNZ Response:** Noted

3.1.13. Industry notes that the current import health standard for chicken hatching eggs requires that eggs are sourced from flock in countries, zones or compartments that are free from NAI disease as defined in the OIE Terrestrial Animal Health Code (Option 1), that a sample of birds from each source flock is tested to confirm absence of disease (Option 2) and that the hatching eggs and hatchlings are maintained in quarantine for a specified time period (Option 4). Industry would therefore support the application of these three risk management measures when psittacine hatching eggs are imported into New Zealand.

**MAFBNZ Response:** Comments on the suitability of the options presented for risk management will be considered by the Animal Imports and Exports Section of the Border Standards Directorate of MAFBNZ when drafting any import health standards developed from this import risk analysis.

3.1.14. Industry notes that a disruption of current sero-surveillance following the introduction of a lentogenic strain of Newcastle disease could have a significant negative effect on the export markets for day old chicks and hatching eggs which have been established by poultry breeders operating in New Zealand.

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<sup>4</sup> Cavanagh D and Naqi SA (2003) Infectious Bronchitis. In: *Diseases of Poultry*, 11<sup>th</sup> Edition. Eds: Saif, Y. M, Iowa State Press, 101 - 119.

<sup>5</sup> Cavanagh D and Gelb Jr J (2008) Infectious bronchitis. In *Diseases of Poultry*, 12 Edition, Ed Saif YM, Blackwell Publishing, 117-135

<sup>6</sup> See: <http://www.biosecurity.govt.nz/files/regs/imports/risk/hatching-eggs-eu-ra.pdf>

**MAFBNZ Response:** Disruption of sero-surveillance is noted in Section 4.2.3 of the risk analysis.

3.1.15. The New Zealand poultry industry supports the conclusion that the risk estimate for APMV-1, 2 and 3 in psittacine eggs and APMV-5 in budgerigar eggs is non-negligible.

**MAFBNZ Response:** Noted

3.1.16. As with AI, the New Zealand Poultry Industry would be supportive of the application of at least option 1, 2 and 4 for the importation of psittacine hatching eggs.

**MAFBNZ Response:** Comments on the suitability of the options presented for risk management will be considered by the Animal Imports and Exports Section of the Border Standards Directorate of MAFBNZ when drafting any import health standards developed from this import risk analysis.

3.1.17. Industry notes that the effects of the introduction of psittacine reovirus on the poultry industry are negligible. However, Industry supports the risk assessment conclusions in light of the effect which the introduction of psittacine reovirus would have on the native parrot population.

**MAFBNZ Response:** Noted.

3.1.18. Industry acknowledges that Proventricular dilatation disease (PDD) does not affect poultry and the introduction of the disease into New Zealand would have no impact on the poultry industry. However, Industry supports the risk assessment conclusions in light of the effect which the introduction of PDD would have on the New Zealand (caged and native) parrot population.

**MAFBNZ Response:** Noted.

3.1.19. Industry notes the conclusion that the entry assessment for *S. Typhimurium* DT104 is considered to be negligible. This is in contrast to the risk estimation reached in the import risk analysis for chicken hatching eggs<sup>7</sup>. Industry requests therefore that the entry assessment conclusion for *Salmonellae* is reviewed ... As noted for Section 12.2.2 (Entry assessment) above, the import risk analysis for chicken hatching eggs concluded that the risk estimate for *S. Typhimurium* DT104 was non-negligible. As it concluded in section 12.2.1 that "since there is no evidence relating to psittacines it must be assumed that serovars that can infect chicken eggs can also infect psittacine eggs", it would be reasonable to expect that the risk estimation

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<sup>7</sup> **MAF Biosecurity New Zealand (2009).** Import Risk Analysis: Hatching eggs from chickens (*Gallus gallus*) from the European Union, Canada, the United States of America, and Australia. Available online at <http://www.biosecurity.govt.nz/files/regs/imports/risk/hatching-eggs-eu-ra.pdf>.



detailed in the IRA for chicken hatching eggs would be the same as that detailed in the current IRA.

**MAFBNZ Response:** The assessment in the chicken hatching eggs import risk analysis that there was a non-negligible likelihood of for *S. Typhimurium* entry in chicken hatching eggs reflected the findings of Williams et al (1998)<sup>8</sup> who reported the recovery of this organism from experimentally infected hens. MAF agrees that, given the stated position in this risk analysis that all *Salmonella* spp. that can infect chicken eggs should be assumed to be able to infect psittacine eggs, the entry assessment of *S. Typhimurium* DT104 should be re-considered in the final version of the risk analysis that accompanies this review of submissions document.

3.1.20. Although the IRA refers to the OIE code provisions “in Article 6.4.3 relating to *S. Gallinarum-Pullorum*, for importation of poultry hatching eggs (OIE, 2008)”, the details included in the IRA relate to the OIE Code recommendation for *S. Enteritidis* and *S. Typhimurium*. Industry suggests that as the entry assessment for *S. Gallinarum-Pullorum* and *S. Enteritidis* have been considered non-negligible (and that for *S. Typhimurium* should also be considered non-negligible) it would be appropriate to included the OIE recommendations currently included in chapters 6.6<sup>9</sup> and 10.10 of the OIE Code<sup>10</sup>.

**MAFBNZ Response:** The draft risk analysis is incorrect where it describes the measures in Article 6.4.3 of the OIE Code (2008) as being for *S. Gallinarum-Pullorum* as this Chapter in the 2008 edition of the Code describes recommendations in relation to *S. Enteritidis* and *S. Typhimurium* in poultry (Chapter 6.6 of the current 2009 Code). It is recommended that this error be corrected in the final version of the risk analysis that accompanies this review of submissions document.

3.1.21. Industry would support the adoption of at least option 2 to provide some level of assurance that the flocks from which the eggs are collected are free from the *Salmonella* strains of concern.

**MAFBNZ Response:** Comments on the suitability of the options presented for risk management will be considered by the Animal Imports and Exports Section of the Border Standards Directorate of MAFBNZ when drafting any import health standards developed from this import risk analysis.

3.1.22. The isolation of *M. iowae* from a psittacine, despite the fact that it was not thought to result in disease in the affected bird is a cause for concern. Industry notes that if infection of psittacines with *M. iowae* in the absence of disease is possible, then it would be possible to

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<sup>8</sup> Williams DA, Davies AC, Wilson J, Marsh PD, Leach S and Humphrey TJ (1998) Contamination of the contents of intact eggs by *Salmonella Typhimurium* DT104. *Veterinary Record* 143, 562-563.

<sup>9</sup> OIE (2009) *Salmonella Enteritidis* and *Salmonella Typhimurium* in poultry. Chapter 6.6. Terrestrial Animal Health Code. Available online at [http://www.oie.int/eng/normes/mcode/en\\_chapitre\\_1.6.6.htm](http://www.oie.int/eng/normes/mcode/en_chapitre_1.6.6.htm).

<sup>10</sup> OIE (2009) Fowl typhoid and Pullorum disease. Chapter 10.10. Terrestrial Animal Health Code. Available online at [http://www.oie.int/eng/normes/mcode/en\\_chapitre\\_1.10.10.htm](http://www.oie.int/eng/normes/mcode/en_chapitre_1.10.10.htm).

unknowingly import the disease agent into New Zealand. Industry acknowledges that the impact on the parrot population may be limited. However, the possibility that *M. iowae* enters the turkey population does exist. Industry therefore requests that Biosecurity New Zealand reconsiders the risk posed by *M. iowae*.

**MAFBNZ Response:** The risk analysis acknowledged that Bozeman et al (1984)<sup>11</sup> described the recovery of *M. iowae* as part of a mixed mycoplasmal growth from the sinuses of one of five sick yellow-naped Amazon parrots, although there have been no subsequent reports of the recovery of this organism from psittacines. As stated in the import risk analysis, *Mycoplasma* infections in psittacines are uncommon and present as upper respiratory disease. Infections other than *M. gallisepticum* are rare and there is no evidence that psittacines act as reservoir hosts for *Mycoplasma* spp. Reflecting this, *M. iowae* is not considered to be a potential hazard in psittacine eggs.

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<sup>11</sup> **Bozeman LH, Kleven SH and Davis RB (1984)** *Mycoplasma* challenge studies in budgerigars (*Melopsittacus undulatus*) and chickens. *Avian Diseases* 28, 426-434.

## 3.2. GAVIN WHITE, AVICULTURAL SOCIETY OF NEW ZEALAND INC

3.2.1. Our concern is in pre-export quarantine, source flock testing, and other suggested testing methods as mentioned. If too many conditions other than common sense ones like flock history, egg surface sterilisation are imposed on a supplier of a few eggs, they would throw their arms in the air and tell us they are not interested in supplying.

**MAFBNZ Response:** Import health standards issued under Section 22 of the Biosecurity Act (1993) must provide for the effective management of the risks associated with an imported commodity. The risk analysis presents a number of options for sanitary measures that may be considered to provide effective management of the risks due to hazards that are likely to be associated with imported psittacine eggs although the final decision on which measures would be most appropriate has not yet been made. Comments on the suitability of the options presented for risk management will be considered by the Animal Imports and Exports Section of the Border Standards Directorate of MAFBNZ when drafting any import health standards developed from this import risk analysis.

3.2.2. Unlike the poultry industry where 1000's of eggs can be produced very quickly, parrots produce very few in number. To move breeding pairs to quarantine facilities would jeopardise that season's production. The costs would be horrendous for so few eggs to be imported. We would prefer more monitoring and testing after incubation in quarantine in NZ.

**MAFBNZ Response:** MAF notes that post-entry quarantine and testing has been presented as a risk management option for avian influenza and avian paramyxoviruses and that the risk management options presented for the other identified hazards (reovirus, proventricular dilatation disease, and *Salmonella*) include measures that do not require the movement of breeding pairs into quarantine facilities. As indicated above, comments on the suitability of the options presented for risk management will be considered by the Animal Imports and Exports Section of the Border Standards Directorate of MAFBNZ when drafting any import health standards developed from this import risk analysis.

### 3.3. GLEN HOLLAND, WILDLIFE CONNECTIONS

3.3.1. Excluding countries that have had AI will narrow the potential to Australia and one or two others - the latter that are unlikely to be a source of eggs. Excluding areas would be fine.

**MAFBNZ Response:** Noted

3.3.2. For many of the risk management measures it mentions having to handle the birds - this is not practical on top of the breeding season - I would be weary catching birds less than 6 weeks before you expect the breeding season to commence. Not only is it upsetting to the pair but all the other birds in view will go in to a panic when they see you catching their neighbours - this stress will have an impact on potential breeding.

**MAFBNZ Response:** Please see the response to 3.2.2 above. Furthermore, the risk management options presented for all five identified hazards include measures that do not require laying birds to be handled.

3.3.3. One of the options mentioning isolation of birds - I think this is a good idea but isolation will need to be well defined in the IHS - a breeding unit as mentioned below would be ideal - perhaps stating that no other psittacines to be held within ....m of the breeding unit. If all the breeding birds were isolated a minimum of say 3-4 months before the breeding season, tests run on them when they are handled and then no new birds introduced, it would be a good/practical start.

**MAFBNZ Response:** Noted. These comments will be considered by the Animal Imports and Exports Section of the Border Standards Directorate of MAFBNZ when drafting any import health standards developed from this import risk analysis.

3.3.4. Breeding "indoors" is not practical/feasible. This is going to be a very expensive operation as it is and to add the cost of having to build a solid building would add a hurdle that I would suggest would put off any potential egg supplier. It would however be practical to say the facility supplying the eggs has to be fully roofed and meshed on the sides to exclude any potential avian vermin - mesh down to 10mm (need to exclude all potential avian intrusion and there are some quite small seedeaters overseas that would have access). A concrete floor would help with hygiene and the collection of faeces for sampling. Rachelle - the same for passerines if that IHS progresses.

**MAFBNZ Response:** Noted. These comments will be considered by the Animal Imports and Exports Section of the Border Standards Directorate of MAFBNZ when drafting any import health standards developed from this import risk analysis.

3.3.5. Proventricular Dilation Disease - the need for four years of testing means no imports in <4 years. People will complain but in reality it will take 2-3 years to set up the facilities and stock required overseas so OK. There are a handful of organisations such as Loro Parque, Tenerife who will have already run such tests on their stock. Perhaps best if we could say the isolated birds must consist of birds with a proven history of checks for the disease for a minimum of four years.

**MAFBNZ Response:** Noted. These comments will be considered by the Animal Imports and Exports Section of the Border Standards Directorate of MAFBNZ when drafting any import health standards developed from this import risk analysis.

3.3.6. There was mention under *Salmonella* of sacrificing a certain number off eggs for testing - considering the value of the birds and the small clutches they lay I think this would be a major hurdle. The reality is that the greatest need with the psittacines is for high value and the larger birds - Amazons, Macaws, Caiques etc - mention sacrificing eggs, particularly after all that the breeder would have gone through to produce the "clean" eggs and I think it would be the final nail in the coffin.

**MAFBNZ Response:** Noted. MAF accepts that sacrificing and culturing eggs from high value psittacine species is unlikely to be acceptable. Other options to manage the risk associated with *Salmonella* have been presented in the risk analysis and these comments will be considered by the Animal Imports and Exports Section of the Border Standards Directorate of MAFBNZ when drafting any import health standards developed from this import risk analysis.

### 3.4. GRAHAM BUTLER, NEW PLYMOUTH

3.4.1. ...the catching, handling and introduction to a different environment would not be conducive to successful egg production, not to mention the stress that would be experienced by the birds.

**MAFBNZ Response:** Please see the response to 3.3.2 above.

3.4.2. I doubt the willingness of any potential egg supplier to implement these suggested measures and put their successful breeding stock at risk.

**MAFBNZ Response:** Please see the response to 3.2.1 above.

3.4.3. I support Option 4 risk Management 3.3 where eggs are hatched in a quarantine factory in New Zealand and chicks and eggs material tested prior to release.

**MAFBNZ Response:** Noted

3.4.4. The exclusion of countries that have had AI is paramount and Australia must be a major consideration given its close proximity and similar disease status.

**MAFBNZ Response:** Noted

3.4.5. It is important that an IHS is produced that is practical and a legal method for importation of psittacines be available to prevent the arrival of foreign diseases here by illegal means. I think importation of eggs on your current recommendation would be impractical and far too expensive and out of reach of the average person.

**MAFBNZ Response:** As noted in 3.2.1 above, import health standards issued under Section 22 of the Biosecurity Act (1993) must provide for the effective management of the risks associated with an imported commodity. The risk analysis presents a number of options for sanitary measures that may be considered to provide effective management of the risks due to hazards that are likely to be associated with imported psittacine eggs although the final decision on which measures would be most appropriate has not yet been made. Comments on the suitability of the options presented for risk management will be considered by the Animal Imports and Exports Section of the Border Standards Directorate of MAFBNZ when drafting any import health standards developed from this import risk analysis.

### 3.5. PHILIP DANBY, AUCKLAND DOOR TO DOOR DISTRIBUTORS LIMITED

3.5.1. As a layman I find that some of the conclusions seem to draw a long bow, partly around the terminology used. IE Non-negligible or Negligible. I find this use of terminology confusing as it seems that if it's not a risk therefore it draws the assumption that the risk is therefore extreme, and I do find it odd in what is a scientific based and therefore mathematical report to resort to what is effectively an emotional score card .

**MAFBNZ Response:** The terminology used in the draft risk analysis is consistent with internationally-accepted procedures for conducting qualitative risk analyses as described by the OIE<sup>12</sup> and as stated in MAFBNZ's published procedures<sup>13</sup>.

3.5.2. No one will be looking to import a Hawaiian Minor Bird which will let loose to become another pest; these imported birds by and large will be expensive. Not only in the original cost but the cost of importing and quarantining of them here

**MAFBNZ Response:** Noted. However, accidental release should be considered.

3.5.3. The Risk Management I would prefer on each case is the cheapest and easiest from overseas and then test and destroy the birds here if necessary. That way you have made it the aviculturist financial responsibility to buy his eggs from a good supplier. MAF still looks good and respected and the onus has been passed to the importer.

**MAFBNZ Response:** As noted in 3.2.1 above, import health standards issued under Section 22 of the Biosecurity Act (1993) must provide for the effective management of the risks associated with an imported commodity. The risk analysis presents a number of options for sanitary measures that may be considered to provide effective management of the risks due to hazards that are likely to be associated with imported psittacine eggs although the final decision on which measures would be most appropriate has not yet been made. Comments on the suitability of the options presented for risk management will be considered by the Animal Imports and Exports Section of the Border Standards Directorate of MAFBNZ when drafting any import health standards developed from this import risk analysis.

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<sup>12</sup> OIE (2004) Handbook on Import Risk Analysis for Animals and Animal Products, Volume 1. OIE, Paris.

<sup>13</sup> MAF Biosecurity New Zealand risk analysis procedures version 1, 12 April 2006. See: <http://www.biosecurity.govt.nz/files/pests/surv-mgmt/surv/review/risk-analysis-procedures.pdf>

3.5.4. I would like to make the comment that in the last 150 years with almost no import restrictions in place only 3 species of Psittacines have established themselves in NZ, so I think it's reasonably safe to assume that allowing imports and have them escape and colonise the country is not a reasonable position to take, in fact Aviculturists should be congratulated not vilified for this, the much vaunted Horticulture industry has an appalling escape rate, but MAF managed to bring in controls for that powerful industry group, so I would ask that you keep an objective outlook regarding this position.

**MAFBNZ Comment:** Noted.

3.5.5. I would think it a must for the eggs and the subsequent hatchlings to come through one quarantine station to put some real and effective control over the situation

**MAFBNZ Comment:** Noted.

3.5.6. Maybe the imported birds could be put on a non clearance register so that no chicks could be bought or sold for the 4 year incubation period of PDD. Once again some birds are still sexually immature at 4 years and the smaller birds could be held by the Breeder which should enable him to build a little stock and make a bigger financial gain, which once again is a win win for everybody.

**MAFBNZ Response:** There is no legal basis for a non-clearance register as suggested. Under Section 25(1) of the Biosecurity Act (1993) any item not given a biosecurity clearance must enter either a biosecurity control area or a transitional facility.

3.5.7. With over 30 convictions for smuggling and with over 40 new species of Parrots and Mutations arriving since the 80's its abundantly clear the present situation is not working, and is not healthy for all concerned.

**MAFBNZ Response:** The biosecurity risks associated with illegal smuggling activities are recognised in the introduction of the risk analysis.



### 3.6. BRUCE SIMPSON, BIOSECURITY CONSULTANT

3.6.1. I believe that the “Entry assessment” for AI in psittacine eggs should be “negligible”, however, if MAF Biosecurity wish to be ultra-cautious, a requirement that birds from which eggs are to be collected be subject to a period of pre-export isolation (primarily from passerines) prior to and during egg-laying should suffice. This is similar to Option 3 in the draft RA as released. I do not consider that any of options 1, 2 or 4 are appropriate for managing the minute risk (if such risk exists) associated with the importation of clean, sanitised, psittacine hatching eggs.

**MAFBNZ Response:** Noted. MAF also notes other stakeholder comments (3.3.2 and 3.4.1) suggesting that pre-export isolation may not be a suitable risk management measure. All stakeholder comments on the suitability of the options presented for risk management will be considered by the Animal Imports and Exports Section of the Border Standards Directorate of MAFBNZ when drafting any import health standards developed from this import risk analysis.

3.6.2. If it is accepted that APMV-5 is not a hazard in live budgerigars from the UK, then it is not logical for the organism to be considered a hazard in hatching eggs. This conflict needs to be resolved.

**MAFBNZ Response:** Whilst the live budgerigar import risk analysis concluded that APMV-5 was not a potential hazard in budgerigars from the United Kingdom, that risk analysis was limited to the consideration of live budgies only from regularly inspected flocks from an individual country, that are maintained as closed flocks with minimal introductions of birds of certified health status that have been strictly quarantined. This earlier risk analysis also noted that infection of budgies with APMV-5 was associated with high mortality. Given the broader scope of the psittacine egg import risk analysis, which covers all countries and is not restricted to flocks under regular scrutiny from the competent veterinary authority, it is reasonable to consider APMV-5 to be a potential hazard.

3.6.3. With the commodity to which this risk analysis applies, PSHV is not a hazard, because there is negligible risk of entry in eggs. However, if consideration were given to the importation of live psittacines, PSHVs should be regarded as a hazard. This is because the paucity of reports of PSHV-associated disease in New Zealand suggests that the range of PSHVs in NZ is likely to be small and that such viruses may of low pathogenicity. It seems likely that PSHVs of greater threat to the NZ psittacine population may be present in bird populations outside NZ.

**MAFBNZ Response:** Noted.

3.6.4. Positive evidence for the existence of PDD in this country has been found... There are a number of possible explanations for the finding of only one case of PDD in New Zealand... In the event that NZ MAF Biosecurity was to decide that risk management procedures for PDD were desirable, there can be no confidence in the efficacy of the measures proposed.

**MAFBNZ Response:** As discussed in the draft import risk analysis, the evidence for the existence (or otherwise) of PDD in New Zealand is limited to the results of a single

histopathological examination in 1996 that has not been published and subject to peer review. Given that PDD is invariably fatal it is reasonable to suggest that further cases of this disease would be likely to have been documented if it were established in this country. Furthermore, given the iconic status of many of New Zealand's native psittacine species, where there is uncertainty such as this a cautious approach is warranted.

As a result of this submission, MAFBNZ recently asked for the histological slides from 1996 to be reviewed. Whilst the preserved material shows a lymphocytic/plasmacytic inflammatory reaction associated with occasional nerves in the wall of the proventriculus and gizzard, the inflammatory changes in the gizzard are associated more commonly with small blood vessels in the muscular layers. In both tissues the histopathological changes are much milder than those illustrated in published reports of PDD and their association with blood vessels suggests that they might not be specifically targeting nerves, especially since nerves and blood vessels tend to travel close together<sup>14</sup>.

Whilst it is acknowledged in the risk analysis that there are limited diagnostic tests that can provide confidence of freedom from this disease, it is suggested that (given the dramatic clinical signs associated with this disease) a requirement to demonstrate a four year freedom from clinical disease is a suitable sanitary measure in this case.

3.6.5. The paucity of reports of *S. Gallinarum*-*Pullorum* or *S. Enteritidis* PT 4 in psittacine birds is consistent with lack of host adaptation of these organisms to psittacine species ... The release (entry) assessment for these bacteria in the commodity is negligible.

**MAFBNZ Response:** Given the lack of evidence regarding the likelihood of these *Salmonella* spp. infecting the reproductive tract of psittacines, MAF considers there to be sufficient uncertainty to warrant the assumption clearly stated in Section 12.2.1 of the risk analysis:

*The Salmonella serovars infecting the reproductive tracts of chickens and turkeys are highly host adapted. However, since there is no evidence relating to psittacines it must be assumed that serovars that can infect chicken eggs can also infect psittacine eggs.*

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<sup>14</sup> Thompson K (2010) Personal Communication. E-mail to Cobb SP, 25 March 2010.

### 3.7. JIM BRADSHAW, AUCKLAND

3.7.1. This rate of convictions supports that a large number of the “Aviculture Community” are prepared to go to extremes to obtain stock for breeding. To the extent of risking their own liberty. This also supports that there is a considerable interest and demand for this Import Health Standard to succeed in its application. I must again applaud MAF for finally taking ints head out of the sand.

**MAFBNZ Response:** The risks associated with illegal importations are acknowledged in the introduction of the import risk analysis.

3.7.2. There are several logistical concerns that come to mind with the establishment of the Health Standard. I believe these issues are paramount in the ‘actual feasibility of this process’. If we are to assume that persons importing eggs from abroad have a ten to fourteen day window to import thsier eggs. i.e. : eggs known to be fertile, and from a pre-tested, disease-free flock. The first two concerns are:

1. Obtaining a CITES permit for the proposed importation, which can take up to two months. With no extensions granted.
2. Obtaining an import permit from MAF which has in the past taken, in my own personal experience, up to six weeks.

By the time permits are issued, the eggs will be well and truly hatched on past performances from both these departments.

**MAFBNZ Response:** This issue is outside the scope of this review of submissions document.

3.7.3. For this process to work and succeed, it must be within the reach of the common man, and it must be affordable by all persons who wish to import birds. Most importantly it must be reasonable and workable.

**MAFBNZ Response:** Noted. Stakeholder comments in this review of submissions document on the suitability of the options presented for risk management will be considered by the Animal Imports and Exports Section of the Border Standards Directorate of MAFBNZ when drafting any import health standards developed from this import risk analysis.

3.7.4. ...the rational for this proposed Import Health Standard is to prevent the illegal importation of Parrots and eggs into New Zealand. If MAF can truly make this process feasible, and not a hassle, then I am sure it would be successful in securing the borders to some extent.

**MAFBNZ Response:** Noted

### 3.8. BROOKE NOONAN, AUCKLAND ZOO

3.8.1. p8-9 *Klebsiella*. We have a record of this organism being associated with the death of the first captive-hatched kakapo here at Auckland Zoo.

**MAFBNZ Response:** The risk analysis described the presence of *Klebsiella* spp. in New Zealand and their association with disease in psittacines.

3.8.2. p11 *Macrorhabdus ornithogaster* is wrongly identified as not being associated with disease in psittacines. It is a well-known cause of gastritis in budgerigars.

**MAFBNZ Response:** The risk analysis notes that macrorhabdosis is predominantly associated with proventriculitis in budgerigars and that whilst some consider *Macrorhabdus ornithogaster* to be a pathogen, others have suggested that it is part of the normal gut flora of birds.

3.8.3. p13 The categorisation of PBFD as being transmitted through eggs is unproven. There is evidence of finding the virus DNA in eggs but it is thought to be non-infectious. So there should be a question mark after the 'Yes?' at this stage.

**MAFBNZ Response:** Table 2 categorises organisms on the basis of whether there is any evidence of *possible* transmission through eggs. Given that there is evidence of PBFD viral DNA in eggs, the categorisation of PBFD in Table 2 of the risk analysis is therefore appropriate. The uncertainty surrounding egg transmission did not require elaboration in the chapter on PBFD because it is concluded that this organism is widely distributed in psittacines in New Zealand.

3.8.4. For all of the diseases for which there is evidence of vertical transmission there should be some supporting documentation.

**MAFBNZ Response:** Where appropriate this is provided in the risk analysis in the risk assessment chapters of the individual organisms.

3.8.5. Some of the risk management options provided are, I believe, impractical and, given other options, should not be included in an Import Health Standard. Specifically the following: p30 Option 4 (also Option 3 would need to be clarified as to what is required for pre-export isolation as it would necessarily have to be set up at the breeder's premises); p 39 Options 3 and 4 same applies, p64 Option 2 and p74 Option 3.

**MAFBNZ Response:** Noted. Stakeholder comments in this review of submissions document on the suitability of the options presented for risk management will be considered by the Animal Imports and Exports Section of the Border Standards Directorate of MAFBNZ when drafting any import health standards developed from this import risk analysis.



## 4. Copies of Submissions

### 4.1. MICHAEL BROOKS, POULTRY INDUSTRY ASSOCIATION OF NEW ZEALAND AND EGG PRODUCERS FEDERATION OF NEW ZEALAND

#### Import Risk Analysis for Psittacine Hatching Eggs

The Poultry Industry Association of New Zealand (PIANZ), contactable at the above address, represents almost all of the poultry breeding and processing companies in New Zealand. Similarly, the Egg Producers Federation of New Zealand (EPF) represents all commercial egg producers in New Zealand. The PIANZ and EPF Veterinary Technical Committee has reviewed the Import Risk Analysis for the importation of psittacine hatching eggs (subsequently referred to as the IRA). The New Zealand Poultry Industry (including PIANZ and the EPF) subsequently notes the following points in this regard.

#### Section 1.2 Background

The New Zealand Poultry Industry agrees with the observation that “illegal importations pose a greater risk than importations through legal channels with biosecurity measures in place to minimise the likelihood of diseases entering the country with those importations”. However, industry notes that in order for the risk to be reduced when importing through legal channels, it is imperative that comprehensive monitoring is in place when such imports are allowed.

The New Zealand Poultry Industry has raised concerns, in previous submissions on the Import Risk Analysis for pigeons from Australia and the Import Risk Analysis for live budgerigars from the United Kingdom, that the lack of published information on a disease agent or hazard in any given country / species is not sufficient to make an assumption on the presence or absence of the disease agent or hazard in the country or species in question. Industry acknowledges Biosecurity New Zealand’s response to our concerns in the subsequent review of submissions for the risk analyses in question. Industry accepts as reasonable Biosecurity New Zealand’s position that given the level of ownership of both pigeons and budgerigars, it would be reasonable to conclude that significant pathogens associated with either species are likely to have been documented in scientific literature and therefore “where extensive literature reviews have been unable to identify specific agents associated with budgies [or pigeons] it is reasonable to conclude that agent should not be regarded as a preliminary hazard in this species”. It appears to industry that a similar approach has been taken in this import risk analysis, and in the light of the levels of ownerships, and in particular value, of many psittacine species, industry accepts that where extensive literature views have been undertaken and no reports of disease have been found, it is reasonable to conclude that the agent should not be regarded as a preliminary hazard in the species.

However, Industry notes, and Biosecurity New Zealand is no doubt aware, that occasionally new research which reports the presence of previously unreported disease agents in a species is published. For example, Cavanagh and Naqi (2003) stated in the 11<sup>th</sup> Edition of Diseases of Poultry that “It is generally considered that the chicken is the only bird that is naturally infected by IBV and in which the virus causes disease”. In contrast, Cavanagh and Gelb (2008) state in the 12<sup>th</sup> Edition of Diseases of Poultry that “It is no longer considered that the chicken is the only host for IBV, although it is possible this it is only in the chicken that IBV would cause disease”.

Industry acknowledges that Biosecurity New Zealand work hard to maintain links with international agencies and to amend import health standard requirements when outbreaks of disease occur. However, industry is unclear on the procedures which Biosecurity New Zealand adopt in order to ensure that, with continued improvements in knowledge, the risks evaluated in import risk analyses and, where necessary, controlled through import health standards are kept up to date. For example, does Biosecurity New Zealand regularly review appropriate publications and if the status of knowledge on a disease agent has changed, does Biosecurity New Zealand reconsider the relevant import risk analyses. Industry would value further discussion with Biosecurity New Zealand in order to clarify the processes which Biosecurity New Zealand has in place to deal with such events.

The final sentence of the 2<sup>nd</sup> paragraph on page 3 of the IRA states “It is probable that the relatively low level of disease surveillance allows a number of these diseases to remain undetected but, for the purposes of this risk analysis, in the absence of diagnosis they have been regarded as not present in New Zealand”. Industry supports the decision to consider New Zealand free of the diseases in question. Industry would not support a change to this position unless Biosecurity New Zealand were to review their position that “where extensive literature reviews have been unable to identify specific agents associated with [the species in question], it is reasonable to conclude that agent should not be regarded as a preliminary hazard in this species”.

Industry notes the statement in the final paragraph on page 3 which states “Surveillance for many of these organisms in New Zealand is relatively insensitive so that the lack of recognition of these organisms does not provide a basis for confidence that they are not present”. This statement seems to be in conflict with the position taken by Biosecurity New Zealand in regards to the risk associated with a commodity where a lack of published information is considered sufficient to support a conclusion that the disease is not present in the exporting country or species in question. It is also unclear to industry why, Biosecurity New Zealand would require a greater level of certainty in order to consider New Zealand free from a disease agent than the level of certainty required to consider the exporting country or species in question free of a disease agent.

In short, having reviewed this section (**Section 1.2 Background**) of the IRA the New Zealand Poultry Industry is concerned that the approach taken to evaluate risk associated with imported commodities is somewhat less rigorous than that taken when determining New Zealand’s disease free status. Industry acknowledges that Biosecurity New Zealand works hard to implement equitable standards for both imports and exports and to adhere to World Trade Organisation Standards when conducting import risk analyses. However, the way this section of the IRA is currently written and taking account of the position adopted by Biosecurity New Zealand in response to earlier concerns raised by the New Zealand Poultry Industry, leaves Industry and no doubt other readers somewhat confused as to Biosecurity New Zealand’s position. Industry therefore requests that Biosecurity New Zealand review and rewrites this section to remove this confusion.

## Section 2 Preliminary hazard list

The Poultry Industry notes that what appears to be a new format has been used in the preliminary hazard lists which helps to clarify the available evidence and logic used in reaching the conclusions documented in the preliminary hazard list. The Industry commends Biosecurity New Zealand on the adoption of this new format.

Table 1: Organisms considered in this risk analysis

### Parvoviruses

The 2nd sentence of the first explanatory paragraph included for parvovirus includes a reference to “Gough 2003” which according to the reference list refers to a chapter in the 11th Edition of diseases of poultry. However, this chapter deals with pneumoviruses which are distinct from parvoviruses. In addition, it was not possible to find any reference to psittacines in this chapter.

There is evidence to suggest that parvoviruses are a cause of enteric disease in chickens (Runting-Stunting syndrome) and turkeys (Poult Enteritis Mortality Syndrome). The introduction of these diseases to New Zealand could be a significant cause for concern. Industry therefore requests that Biosecurity New Zealand review the hazard assessment for parvoviruses.

### Avian retroviruses

Avian retroviruses as a single group of viruses are considered in the IRA to be present in New Zealand. In contrast, the IRA for live budgerigars from the United Kingdom and the IRA for pigeons from Australia consider avian leucosis virus, lymphoproliferative disease virus and reticuloendotheliosis virus separately. Industry notes that separate consideration of the individual disease agents will not change the conclusion of the IRA, but Industry suggests that for the purposes of transparency and clarity, all three disease agents should be considered separately as, in contrast to the IRA, some avian retroviruses are not present in New Zealand.

### *Coxiella burnetti*

In our review of the literature, the New Zealand Poultry Industry came across two papers which referred to the presence of *Coxiella*-like organisms in psittacines<sup>15,16</sup>. A third paper<sup>17</sup>, only the abstract of which was available to the industry, refers to the isolation of *Coxiella burnetti* from a parrot. Industry therefore requests that Biosecurity New Zealand reconsider the conclusion that *Coxiella burnetti* (or other species) has not been reported in psittacines. In light of this, and given that two of the papers refer to fatal infection of the birds in question, Industry suggests that further consideration should be given to this hazard.

Table 2: Organisms considered for their potential to be present in, or on, psittacine eggs

### General observations

Industry notes that details relating to the reported presence of various disease agents in psittacines or in New Zealand are detailed in Table 2 when they would be more appropriately included in Table 1 (as is the case with other disease agents). This is the case for

- Coronavirus
- Avipoxvirus

<sup>15</sup> Shivaprasad, H. L., Cadenas, M. B., Diab, S. S., Nordhausen, R., Bradway, D., Crespo, R. and Breitschwerdt, E. B., 2008. *Coxiella*-Like Infection in Psittacines and a Toucan. *Avian Diseases*, 52, 3, 426 – 432.

<sup>16</sup> Woc-Colburn, A. M., Garner, M. M., Bradway, D., West, G., D’Agostino, J., Trupkiewicz, J., Barr, B., Anderson, S. E., Rurangirwa, F. R. and Nordhausen, R. W., 2008. Fatal Coxiellosis in Swainson’s Blue Mountain Rainbow Lorikeet (*Trichoglossus haematodus moluccanus*). *Veterinary Pathology*, 45, 2, 247 -

<sup>17</sup> Eb, F., Orfila, J. and Lefebvre, J. F., 1975. Morphological ultrastructural and immunological studies of a rickettsia isolated from a parrot. *Annales de microbiologie*, 126, 3, 333 – 359.



- Papillomavirus
- Alphaviruses
- West Nile virus
- Orbivirus
- *Pasteurella*-like and *Haemophilus*-like organisms
- *Bordetella avium*
- *Borrelia anserina* and
- *Aegyptianella* spp.

### Coronavirus

Industry notes that while the main mode of transmission for infectious bronchitis virus (IBV) is considered to be horizontal, Cavanagh and Naqi (2003)<sup>18</sup> stated that “there are reports of virus isolations from eggs up to 43 days after recovery” even though chickens have been hatched from infected flocks and raised free of IBV. In addition, Biosecurity New Zealand considered that IBV could be found in the contents of eggs in their Import Risk Analysis for Belovo Egg Powders (2003)<sup>19</sup>.

### Section 3.1.3 New Zealand Status

Biosecurity New Zealand recently completed an extensive survey of the New Zealand Poultry population which failed to show evidence of notifiable avian influenza (AI) in broilers and layers<sup>20</sup>. This paper is referenced in the IRA but, the IRA does not refer to the extensive surveillance of commercial poultry in New Zealand.

### Section 3.2.4 Risk estimation

The New Zealand poultry industry supports the conclusion that the risk estimate for AI viruses in the commodity is non-negligible.

### Section 3.3 Risk Management

Industry notes that the current import health standard for chicken hatching eggs requires that eggs are sourced from flock in countries, zones or compartments that are free from NAI disease as defined in the OIE Terrestrial Animal Health Code (Option 1), that a sample of birds from each source flock is tested to confirm absence of disease (Option 2) and that the hatching eggs and hatchlings are maintained in quarantine for a specified time period (Option 4). Industry would therefore support the application of these three risk management measures when psittacine hatching eggs are imported into New Zealand.

Industry notes that although there is no requirement to keep chicken flocks from which hatching eggs are sourced in pre-export quarantine, the biosecurity measures in place on those breeding farms from which chicken hatching eggs are sourced are usually comprehensive.

<sup>18</sup> Cavanagh, D. and Naqi, S. A., 2003. Infectious Bronchitis. In: *Diseases of Poultry*, 11<sup>th</sup> Edition. Eds: Saif, Y. M, Iowa State Press, 101 - 119.

<sup>19</sup> MAF Biosecurity, 2003. Import Risk Analysis: Belovo Egg Powders. Available online at <http://www.biosecurity.govt.nz/files/regs/imports/risk/belovo-egg-powder-ra.pdf>.

<sup>20</sup> Tana T., Rawdon, T. And Stanislawek W., 2007. Avian influenza surveillance programme. *Surveillance*, 34, 2, 11 – 13.

### Section 4.2.3 Consequence assessment

Industry notes that a disruption of current sero-surveillance following the introduction of a lentogenic strain of Newcastle disease could have a significant negative effect on the export markets for day old chicks and hatching eggs which have been established by poultry breeders operating in New Zealand. New Zealand has a unique international status in terms of poultry disease freedom and freedom from Newcastle disease (combined with the ability to demonstrate this through sero-surveillance) is a vital part in ensuring continued access to many export markets.

### Section 4.2.4 Risk estimation

The New Zealand poultry industry supports the conclusion that the risk estimate for APMV-1, 2 and 3 in psittacine eggs and APMV-5 in budgerigar eggs is non-negligible.

### Section 4.3 Risk Management

As with AI, the New Zealand Poultry Industry would be supportive of the application of at least option 1, 2 and 4 for the importation of psittacine hatching eggs.

### Section 9 Reovirus

Industry notes that the effects of the introduction of psittacine reovirus on the poultry industry are negligible. However, Industry supports the risk assessment conclusions in light of the effect which the introduction of psittacine reovirus would have on the native parrot population.

### Section 10 Proventricular dilatation disease

Industry acknowledges that Proventricular dilatation disease (PDD) does not affect poultry and the introduction of the disease into New Zealand would have no impact on the poultry industry. However, Industry supports the risk assessment conclusions in light of the effect which the introduction of PDD would have on the New Zealand (caged and native) parrot population.

### Section 12.2.1 Entry assessment

Industry notes the conclusion that the entry assessment for *S. Typhimurium* DT104 is considered to be negligible. This is in contrast to the risk estimation reached in the import risk analysis for chicken hatching eggs<sup>21</sup>. Industry requests therefore that the entry assessment conclusion for *Salmonellae* is reviewed.

### Section 12.2.4 Risk estimation

As noted for **Section 12.2.2 (Entry assessment)** above, the import risk analysis for chicken hatching eggs<sup>21</sup> concluded that the risk estimate for *S. Typhimurium* DT104 was non-negligible. As it concluded in section 12.2.1 that “since there is no evidence relating to psittacines it must be assumed that serovars that can infect chicken eggs can also infect psittacine eggs”, it would be reasonable to expect that the risk estimation detailed in the IRA for chicken hatching eggs<sup>21</sup> would be the same as that detailed in the current IRA.

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<sup>21</sup> MAF Biosecurity New Zealand, 2009. Import Risk Analysis: Hatching eggs from chickens (*Gallus gallus*) from the European Union, Canada, the United States of America, and Australia. Available online at <http://www.biosecurity.govt.nz/files/regs/imports/risk/hatching-eggs-eu-ra.pdf>.

## Section 12.3 Risk Management

Although the IRA refers to the OIE code provisions “in Article 6.4.3 relating to *S. Gallinarum*-*Pullorum*, for importation of poultry hatching eggs (OIE, 2008)”, the details included in the IRA relate to the OIE Code recommendation for *S. Enteritidis* and *S. Typhimurium*. Industry suggests that as the entry assessment for *S. Gallinarum*-*Pullorum* and *S. Enteritidis* have been considered non-negligible (and that for *S. Typhimurium* should also be considered non-negligible) it would be appropriate to include the OIE recommendations currently included in chapters 6.6<sup>22</sup> and 10.10 of the OIE Code<sup>23</sup>.

Industry would support the adoption of at least option 2 to provide some level of assurance that the flocks from which the eggs are collected are free from the *Salmonella* strains of concern.

### 13.1.5 Hazard identification conclusion

The isolation of *M. iowae* from a psittacine, despite the fact that it was not thought to result in disease in the affected bird is a cause for concern. Industry notes that if infection of psittacines with *M. iowae* in the absence of disease is possible, then it would be possible to unknowingly import the disease agent into New Zealand. Industry acknowledges that the impact on the parrot population may be limited. However, the possibility that *M. iowae* enters the turkey population does exist. Industry therefore requests that Biosecurity New Zealand reconsiders the risk posed by *M. iowae*.

Thank you for the opportunity to comment on the Import Risk Analysis. Please do not hesitate to contact our offices should you have any questions.

Kind regards,

Michael Brooks  
**Executive Director**

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<sup>22</sup> OIE, 2009. *Salmonella Enteritidis* and *Salmonella Typhimurium* in poultry. Chapter 6.6. Terrestrial Animal Health Code. Available online at [http://www.oie.int/eng/normes/mcode/en\\_chapitre\\_1.6.6.htm](http://www.oie.int/eng/normes/mcode/en_chapitre_1.6.6.htm).

<sup>23</sup> OIE, 2009. Fowl typhoid and Pullorum disease. Chapter 10.10. Terrestrial Animal Health Code. Available online at [http://www.oie.int/eng/normes/mcode/en\\_chapitre\\_1.10.10.htm](http://www.oie.int/eng/normes/mcode/en_chapitre_1.10.10.htm).

## 4.2. GAVIN WHITE, AVICULTURAL SOCIETY OF NEW ZEALAND INC

### Submission on the Import Risk Analysis: Psittacine Hatching Eggs

The Avicultural Society of New Zealand Inc. supports the effort to produce an Import Health Standard for the importation of psittacine eggs. We do not have the expertise to comment on the technical issues surrounding the various Organisms/ Diseases.

Our concern is in pre-export quarantine, source flock testing, and other suggested testing methods as mentioned. If too many conditions other than common sense ones like flock history, egg surface sterilisation are imposed on a supplier of a few eggs, they would throw their arms in the air and tell us they are not interested in supplying.

Unlike the poultry industry where 1000's of eggs can be produced very quickly, parrots produce very few in number. To move breeding pairs to quarantine facilities would jeopardise that season's production. The costs would be horrendous for so few eggs to be imported. We would prefer more monitoring and testing after incubation in quarantine in NZ.

Our members are only interested in importing eggs to increase the gene pool of existing species. Not to bring in new species.

Yours sincerely

Gavin White  
Secretary

### 4.3. GLEN HOLLAND, WILDLIFE CONNECTIONS

I have had a brief look at the draft psittacine egg IHS (really focused on the risk mitigation) so thought I would offer a few comments aimed primarily at the avicultural practicalities. Hopefully these could be borne in mind when finalising the Risk Measures.

One of the key things to remember is the willingness of a potential supplier of the eggs/species to jump through hurdles - this has turned off many for example the flamingo egg suppliers (Slimbridge) said never again, too difficult. As you know I am heading overseas so don't have a vested interest but I think opening a legal channel is a must and would hate to see some of the foreign diseases land here through the illegal.

Hatching eggs in aviculture means just that - eggs that are hatching. There are two viable options to move the eggs and both need to be included if possible:

- Eggs that have been freshly laid /not incubated
- Eggs that are in their final 1/4 of incubation/near hatching

Comments on draft IHS:

1. Excluding countries that have had AI will narrow the potential to Australia and one or two others - the latter that are unlikely to be a source of eggs. Excluding areas would be fine.
2. For many of the risk management measures it mentions having to handle the birds - this is not practical on top of the breeding season - I would be weary catching birds less than 6 weeks before you expect the breeding season to commence. Not only is it upsetting to the pair but all the other birds in view will go in to a panic when they see you catching their neighbours - this stress will have an impact on potential breeding.
3. One of the options mentioning isolation of birds - I think this is a good idea but isolation will need to be well defined in the IHS - a breeding unit as mentioned below would be ideal - perhaps stating that no other psittacines to be held within ....m of the breeding unit. If all the breeding birds were isolated a minimum of say 3-4 months before the breeding season, tests run on them when they are handled and then no new birds introduced, it would be a good/practical start.
4. Breeding "indoors" is not practical/feasible. This is going to be a very expensive operation as it is and to add the cost of having to build a solid building would add a hurdle that I would suggest would put off any potential egg supplier. It would however be practical to say the facility supplying the eggs has to be fully roofed and meshed on the sides to exclude any potential avian vermin - mesh down to 10mm (need to exclude all potential avian intrusion and there are some quite small seed eaters overseas that would love access). A concrete floor would help with hygiene and the collection of faeces for sampling. Rachelle - the same for passerines if that IHS progresses.
5. Proventricular Dilation Disease - the need for four years of testing means no imports in <4 years. People will complain but in reality it will take 2-3 years to set up the facilities and stock required overseas so OK. There are a handful of organisations such as Loro Parque, Tenerife who will have already run such tests on their stock. Perhaps

best if we could say the isolated birds must consist of birds with a proven history of checks for the disease for a minimum of four years.

6. There was mention under Salmonella of sacrificing a certain number off eggs for testing - considering the value of the birds and the small clutches they lay I think this would be a major hurdle. The reality is that the greatest need with the psittacines is for high value and the larger birds - Amazons, Macaws, Caiques etc - mention sacrificing eggs, particularly after all that the breeder would have gone through to produce the "clean" eggs and I think it would be the final nail in the coffin.

Hope these comments help a little. I am sure you will agree that producing an IHS that is not practical would not benefit anybody but I know you are in a very precarious situation and need to tie up every risk.

#### 4.4. GRAHAM BUTLER, NEW PLYMOUTH

##### Re: Import Risk Analysis Psittacine Hatching Eggs

I am pleased that the draft psittacine egg IHS is out for public consultation.

As an aviculturist, I can only comment on the practicalities of the risk analysis, as I don't have the knowledge to assess the disease status information.

The breeding of psittacines is far more complex than that required for poultry. Successful breeding of psittacines is reliant on many more factors than are necessary for poultry. If we are to assume that persons importing eggs from abroad have a ten to fourteen day window to import their eggs, ie: eggs known to be fertile and from a pre tested disease free flock. Some psittacines may only lay one or two eggs and days apart. Therefore, the catching, handling and introduction to a different environment would not be conducive to successful egg production, not to mention the stress that would be experienced by the birds.

On top of all this, I doubt the willingness of any potential egg supplier to implement these suggested measures and put their successful breeding stock at risk.

I support Option 4 risk Management 3.3 where eggs are hatched in a quarantine facility in New Zealand and chicks and egg material tested prior to release.

The exclusion of countries that have had AI is paramount and Australia must be a major consideration given its close proximity and similar disease status.

It is important that an IHS is produced that is practical and a legal method for importation of psittacines be available to prevent the arrival of foreign diseases here by illegal means.

All in all, I think importation of eggs on your current recommendation would be impractical and far too expensive and out of reach of the average person.

Yours sincerely  
Graham Butler

## 4.5. PHILIP DANBY, AUCKLAND DOOR TO DOOR DISTRIBUTORS LIMITED

Thank you for this opportunity to comment on the proposed Risk Analysis for Psittacine Hatching Eggs.

With regard to the specific 4 questions we have been asked to comment on

1 As a layman I find that some of the conclusions seem to draw a long bow, partly around the terminology used. IE Non-negligible or Negligible.

I find this use of terminology confusing as it seems that if it's not a risk therefore it draws the assumption that the risk is therefore extreme, and I do find it odd in what is a scientific based and therefore mathematical report to resort to what is effectively an emotional score card . I would explain it as such:

Non-negligible could be 1; 1,000,000

The risk of owning a motor vehicle could be considered non-negligible, but if I imported a Vintage car and kept in my showroom, under lock and alarm that car still carries a risk of being stolen, polluting, causing an accident in the wrong hands etc, and the risk might have doubled to 2:1,000,000. But its realistic chances of that happening are still negligible. Driving that same car to the occasional Vintage car club day may double that risk again to 4:1,000,000, but once again being driven by the owner who has paid a lot of money for it; he is not going to be careless, more likely to extremely careful not to ruin his prized possession, so I still don't see the risk as extreme.

I see the same situation around birds. No one will be looking to import a Hawaiian Minor Bird which will let loose to become another pest; these imported birds by and large will be expensive. Not only in the original cost but the cost of importing and quarantining of them here

2 Obviously without some scientific background one can't comment too much around these issues, but they seem sound and logical, but some would seem too extreme to be practical.

3 Based on the executive summary that outlines that the present situation is one that encourages smuggling It might feel good politically to make the import restriction draconian and difficult but it will defeat the purpose of allowing the imports in the first place, because if its not practical for a aviculturist point of view, the present situation will likely continue, therefore The Risk Management I would prefer on each case is the cheapest and easiest from overseas and then test and destroy the birds here if necessary. That way you have made it the aviculturist financial responsibility to buy his eggs from a good supplier. MAF still looks good and respected and the onus has been passed to the importer.

4 Firstly I would like to make the comment that in the last 150 years with almost no import restrictions in place only 3 species of Psittacines have established them selves in NZ, so I think it's reasonably safe to assume that allowing imports and have them escape and colonise the country is not a reasonable position to take, in fact Aviculturists should be congratulated not vilified for this, the much vaunted Horticulture industry has an appalling escape rate, but



MAF managed to bring in controls for that powerful industry group, so I would ask that you keep an objective outlook regarding this position.

I would think it a must for the eggs and the subsequent hatchlings to come through one (1) quarantine station to put some real and effective control over the situation

I have recently got my gun licence (rabbits are becoming a problem) and someone had to come to my place and check that where my gun is stored is a secure place, and if I want to sell my gun I have to check to see that that person has a licence, and if I'm not of suitable character I can be refused a gun licence. I don't see why someone bring in an exotic bird should not have to pass the same sort of scrutiny. This way the controls could be brought in by choice rather than force.

Maybe the imported birds could be put on a non clearance register so that no chicks could be bought or sold for the 4 year incubation period of PDD. Once again some birds are still sexually immature at 4 years and the smaller birds could be held by the Breeder which should enable him to build a little stock and make a bigger financial gain, which once again is a win win for everybody.

In summary

I have only been serious about bird breeding for the last 5 years, and as a responsible aviculturist I joined the parrot Society of which I'm a committee member. Clearly there is some animosity between MAF and the Breeders and one could spend hours in a circular argument about who's responsible for this, but the bottom line is this. With over 30 convictions for smuggling and with over 40 new species of Parrots and Mutations arriving since the 80's its abundantly clear the present situation is not working, and is not healthy for all concerned.

Signs don't work. They haven't stopped the Varroa mite or Didymo from getting here and one policeman at the border is not going to stop anything else from getting here either.

Brett Gartrell has an Australian reputation and we should be leveraging that position to let science find the answer, before we have the next problem, and then let the Aviculturist put that knowledge into practical use, and then all birds will be better off. We live in a user pays society so it shouldn't be too difficult to come up with something to help the funding.

There is no situation in this report which by the authors own words don't have a remedy, so the situation as I see it is this.

Does MAF have the strength to change the present no win situation, and the Breeders the courage to accept the changes and controls that will come with this.

Every industry group works with the Govt Depts. involved in its area of interest, from Real Estate Agents, to fishing, to the motor industry, to the insulation industry, it's time we worked together. This is clearly a do-able proposition, but a lot of big changes are going to be required by both sides and I think its time to move on from the old entrenched positions, and adopt a position of respect for what each is trying to achieve.

This report is titled a consultation so I trust that this consultation will continue and not evolve into telling.

I'm not sure if this is the correct place for this but I see Waiheke Island as a suitable place for a quarantine station, as it has all the advantages of being close to the city, without being physically attached to it. It has a population that is almost universally conservation minded, with the added advantage of having one of the Parrot Societies go to vets Brian Gartrell set up practice here, and the new resident vet Dan Marincas is also very experienced in birds, and I'm sure the MAF personnel involved in the bogus foot and mouth scare, will confirm this.

Yours faithfully

Philip Danby

Does MAF have the strength to change the present no win situation, and do the breeders and enthusiasts have the courage to accept the necessary changes to the way they operate.

#### 4.6. BRUCE SIMPSON, BIOSECURITY CONSULTANT

Stakeholder comments on the draft Import Risk Analysis for Psittacine Hatching Eggs placed on the MAF Biosecurity website on 13 August 2009.

In presenting the following comments I am mindful that this risk analysis refers specifically to eggs of psittacines and of the need to ensure that legal importation should be more attractive to aviculturists than illegal importations have been to some in the past. The introduction to the draft risk analysis comments on

*“the difficulties in ensuring that diseases will not enter New Zealand with legal importations and the need to accept that “zero risk” is not an attainable standard”*

and that

*“illegal importations pose a greater risk than importations through legal channels with biosecurity measures in place to minimise the likelihood of diseases entering the country with those importations”.*

I am also mindful of the importance that New Zealand places of the protection of its iconic psittacine species.

I have not presented this document as a fully referenced scientific treatise but comments are based on a very thorough consideration of the scientific literature and much, but not all, of the literature upon which it is based was referred to in a draft risk analysis for the importation of psittacine hatching eggs provided to Biosecurity New Zealand in January 2008.

Comments are made with respect to five potential hazards as listed below. I concur with the assessment of all other potential hazards in the risk analysis.

##### 1. Avian Influenza

There is no evidence that psittacines act as reservoir hosts for Avian Influenza (AI). In an extensive review of AI in psittacines Kaleta et al. (2007) failed to identify any reports except under circumstances where the birds had been shipped internationally, or internally, or where the birds had recently come from pet shops. The evidence supports a conclusion that AI in psittacine birds results from close exposure to birds of other Orders (particularly passerines) which are recognised as reservoir hosts of AI. The experience with the introduction of H9N2 virus to Japan, together with the results from monitoring one bird infected with H5N2 in California (infection cleared by day 8 of monitoring), supports the hypothesis that psittacines gain infection from birds of other Orders but remain infected for only a short period of time.

The only reports of natural infection of eggs, as opposed to the surface of eggs, with AI are from poultry infected with HPAI.

I believe that the “Entry assessment” for AI in psittacine eggs should be “negligible”, however, if MAF Biosecurity wish to be ultra-cautious, a requirement that birds from which eggs are to be collected be subject to a period of pre-export isolation (primarily from passerines) prior to and during egg-laying should suffice. This is similar to Option 3 in the draft RA as released.

I do not consider that any of options 1, 2 or 4 are appropriate for managing the minute risk (if such risk exists) associated with the importation of clean, sanitised, psittacine hatching eggs.

## 2. Avian paramyxoviruses

There is a major difference in the treatment of APMV-5 in this draft RA and in the final RA for importation of budgerigars from the UK. If APMV-5 is not a hazard in live budgerigars from the UK it seems inconsistent to regard it as a hazard in hatching eggs from any country. The justification presented for not regarding APMV-5 to be a hazard in budgerigars from the UK is that the organism has been reported only once (1993) from the UK and is therefore thought to be not endemic.

A search of the literature confirms that APMV-5 has been reported from budgerigars only once from Australia (in 1974) and once from Japan (virus isolations between 1974 and 1976). (There is no documentation to support the suggestion that APMV-5 was associated with disease in lorikeets in Australia – see draft RA on psittacine eggs delivered to MAF in January 2008). The reports from Australia and Japan were almost 20 years earlier than the report from the UK. Thus, following the model applied to APMV-5 in budgerigars in the UK one might conclude that APMV-5 is not endemic in any budgerigar population. Following the isolation of the virus in Japan, however, antibodies to the virus were found in a number of healthy birds and the authors suggested that “it seems reasonable to assume that Kunitachi virus (APMV-5) represents a new subtype of paramyxoviruses infecting budgerigars in nature”. Similar serology follow-up has not been reported from the UK or Australian incidents. Based on the isolated nature of incidents of disease associated with APMV-5, and the positive serology in healthy birds in Japan, it seems likely that APMV-5 may be present in budgerigar populations (or, possibly, in populations of other species) but only rarely causes disease. The conclusion, in the budgerigar RA, that APMV-5 is not endemic in the UK can not be justified.

If it is accepted that APMV-5 is not a hazard in live budgerigars from the UK, then it is not logical for the organism to be considered a hazard in hatching eggs. This conflict needs to be resolved.

## 3. Psittacine herpesvirus (PsHV) – Pacheco’s disease

The cases of herpesviral hepatopathy with focal necrosis and intranuclear inclusion bodies in psittacines in the South Island of New Zealand reported by Durham *et al.* in 1977 comply in every respect with the criteria for the diagnosis of Pacheco’s disease. A negative result to testing using *in situ* hybridisation on material from 20 year old paraffin-embedded, formalin fixed tissue does nothing to reverse the findings made by Durham *et al.* We still have deaths of psittacine birds with clinical signs and pathology, including intranuclear inclusion bodies, typical of those reported from birds diagnosed with Pacheco’s disease. Further, we still have the reporting of viral particles with morphology typical of herpes viruses and cultured virus showing the chemical characteristics and behaviour in hens eggs typical of herpesviruses. These were cases of herpesviral hepatitis in psittacines. Having exhaustively searched the scientific literature I have not found a single report of a case of naturally occurring herpesviral hepatitis in psittacines in which the author has proposed that the disease was something other than Pacheco’s disease (or the synonym, Psittacine herpesvirus hepatitis). Nor can I find reports of validation of an *in-situ* hybridisation test applied to PsHV of unknown serotype or genotype whether in fresh or paraffin embedded, formalin-fixed tissues. Any proposal that such a test has 100% sensitivity without production of validation data is

unacceptable. If the cases reported by Durham et al. were not Pacheco's Disease, what were they?

"Pacheco's disease" is used as a "catch-all" term for herpesviral hepatitis in psittacines and may be caused by a range of PsHV. I note that discussion of the range of PsHVs that have been reported (serotypes and genotypes) and the different behaviours of some of them has been excluded from this draft RA. I believe that a perspective on this issue is important in considering New Zealand's PsHV and Pacheco's disease status, together with the treatment of these viruses as potential hazards. With the commodity to which this risk analysis applies, PsHV is not a hazard, because there is negligible risk of entry in eggs. However, if consideration were given to the importation of live psittacines, PsHVs should be regarded as a hazard. This is because the paucity of reports of PsHV-associated disease in New Zealand suggests that the range of PsHVs in NZ is likely to be small and that such viruses may of low pathogenicity. It seems likely that PsHVs of greater threat to the NZ psittacine population may be present in bird populations outside NZ.

One bench mark in consideration of NZs status with respect to PsHV is "Would I sign a document that asked me to certify that Pacheco's disease has not been diagnosed in New Zealand". Most certainly, I would not.

#### 4. Proventricular Dilatation Disease (PDD)

PDD has been diagnosed in New Zealand. The RA is correct in saying that lymphoplasmacytic inflammation of the nerves of the gastrointestinal tract etc. are considered pathognomonic for PDD. It is also correct in saying that such pathology has been found in a conure in New Zealand. *Ipso facto* (by virtue of those facts) PDD has been diagnosed in New Zealand. On the basis that pathology pathognomonic for PDD has been identified in a psittacine bird in New Zealand, the statement in the last sentence of the section on New Zealand status "in the absence of positive evidence of the presence of this disease (PDD) in this country" can not be correct. Positive evidence for the existence of PDD in this country has been found. The only basis for making a definitive diagnosis of PDD is the finding of pathology such as that found in the New Zealand conure and authors in the scientific literature consistently recognise birds with such pathology as being affected by PDD.

There are a number of possible explanations for the finding of only one case of PDD in New Zealand. These include

a. **Insensitive surveillance** – this case came to light only because I asked a relevant question of the keeper of the New Zealand registry of veterinary pathology. For this case to be identified required the owner of the bird to be concerned and to request the services of a veterinarian, the veterinarian to choose to send material to a diagnostic laboratory, the veterinarian to choose to send materials that allowed recognition of the relevant pathology, and the diagnostic laboratory choose to refer materials to the pathology registry. The surveillance system was interrupted by the none-publication of the unique pathology found. We have no idea whether other cases of PDD have occurred but not progressed through this series of filters (see comments about of surveillance in the "Introduction – Background" section of the RA).

b. **There has been only one bird in New Zealand infected by the agent causing PDD.** – This could occur if the bird was an imported bird and infection had not spread to other birds. Alternatively, we could suggest that an agent causing PDD arose spontaneously in this bird

and that it did not spread to other birds. In the absence of evidence that the affected bird had been recently imported, neither of these scenarios should be relied on.

c. PDD might not be a contagious disease – There is ample evidence in the scientific literature to support conclusions that PDD is caused by a contagious agent.

d. Many infections with the agent causing PDD do not result in clinical disease and clinical disease is rare in New Zealand. – There is ample evidence in the scientific literature indicating that PDD is caused by a contagious agent and patterns of disease support the hypothesis that incubation periods before clinical disease develops may be very long. An alternative (or related) hypothesis would be for clinical disease to develop only when other causative factors are present. It may be that a contagious causative agent causing PDD is much more common than indicated by the number of clinical cases identified.

A combination of scenarios **a** and **d** is most likely.

The references, in the RA, to the history of PDD in Australia are relevant. PDD was diagnosed in one bird in Australia in 1993. In 1999, while acknowledging that one case of PDD had been diagnosed in Australia, AQIS suggested that it should be regarded as a hazard in the importation of psittacines. By 2005, in the absence of further legal importations of psittacines, a cluster of cases of PDD was being recognised as widespread in south east Queensland and the disease is now being reported as further south beyond Sydney. The most likely explanation is that PDD had been present but unrecognised, or unreported, for approximately 12 years.

### Risk management

In the event that NZ MAF Biosecurity was to decide that risk management procedures for PDD were desirable, there can be no confidence in the efficacy of the measures proposed.

Option 1. – Eggs to come from aviaries with a four year history of freedom from disease. Although various authors propose incubation periods for PDD (i.e. time from infection until expression of disease) these do not explain the periodic occurrence of individual cases of PDD. It seems likely that any infectious agent might be present for long periods of time and cause disease only when other risk factors arise. Flock freedom from disease for four years might reduce the likelihood of the presence of a PDD agent but there is no information indicating the extent of such a reduction. There is evidence that a PDD agent might be present in flocks for many years without causing disease. Would such a requirement include a provision that there should have been no introduction of new birds during that four year period? Would that be acceptable to potential suppliers? Would it be enforceable? What level of protection might such a requirement afford?

Option 2. – Histological examination of crop biopsies has limited sensitivity birds with disease. It is most unlikely that crop biopsies will provide evidence of infection in clinically healthy birds.

PDD has been diagnosed in New Zealand and there is no basis for supposing that the causative organism is not endemic, at least in some aviaries. Justification for the application of biosecurity measures to limit the likelihood of PDD entering NZ in hatching eggs is questionable. If MAF Biosecurity determines that PDD is an unacceptable hazard in imported psittacine eggs, then such importations should not be allowed. Biosecurity measures known to be even moderately effective are not available.

## 5. Salmonellae

Reports of natural *Salmonella* infection of the reproductive tract of hosts appear limited to serotypes and phage types that are highly adapted to the specific host. Host-adapted organisms are found exclusively, or predominantly, in the adaptive host (*S. Abortusequi* - horses, *S. Abortusovis* - sheep, *S. Dublin* - cattle, *S. Pullorum-Gallinarum* – Gallinae esp. chickens and turkeys, *S. Enteritidis* PT 4 – chickens). The organism-host relationship involves specific biological mechanisms which are genetically based. This is illustrated by difference in susceptibility of different strains of chickens to *S. Pullorum-Gallinarum*. (There is a considerable volume of literature on the mechanisms of host adaptation and their long-term evolution in concert with the host.) The likelihood of an organism being highly host-adapted to two hosts well separated in the taxonomic tree (chickens/turkeys and psittacines) is remote. The paucity of reports of *S. Gallinarum-Pullorum* or *S. Enteritidis* PT 4 in psittacine birds is consistent with lack of host adaptation of these organisms to psittacine species. It is also consistent with findings reported in the literature that infections with *S. Gallinarum-Pullorum* in species other than chickens or turkeys can usually be traced to exposure to those gallinaceous species (see Draft RA).

On the bases of low prevalence of infection, evidence suggesting that these salmonellae are not host adapted to psittacine birds and the lack of evidence that transovarial spread takes place in species other than those to which specific salmonellae are host adapted, I consider that the likelihood of transovarial spread of these organisms is negligible. The release (entry) assessment for these bacteria in the commodity is negligible. (c.f. assessment in final risk analysis for the importation of passerine hatching eggs

<http://www.biosecurity.govt.nz/files/regs/imports/risk/ira-passerine-eggs-eu.pdf> )

#### 4.7. JIM BRADSHAW, AUCKLAND

##### Re: Import Risk Analysis Psittacine Hatching Eggs

Dear Directorate,

Thank you for the opportunity to comment on the proposed Risk Analysis (RA) for the importation of Psittacine Hatching Eggs dated the 4<sup>th</sup> August. I must congratulate the author for the realistic approach in relation to the unauthorised trade in Smuggled Parrots in New Zealand. However some species sell for up to \$35,000.00 NZD not \$10,000.00 NZD as suggested in your 'background remarks.'

It is clear that the system we have now does not work. MAF have caused and created a smugglers haven here in New Zealand. With some, "*32 convictions for illegal bird or eggs importations to date*" (Jockie Jensen, Director Enforcement, MAF 2008), and the arrival of 45 new species of Parrots and mutations into New Zealand since the late 1980's. (Please see attached).

This rate of convictions supports that a large number of the "Aviculture Community" are prepared to go to extremes to obtain stock for breeding. To the extent of risking their own liberty. This also supports that there is a considerable interest and demand for this Import Health Standard to succeed in its application. I must again applaud MAF for finally taking its head out of the sand.

There are several logistical concerns that come to mind with the establishment of this Health Standard. I believe these issues are paramount in the 'actual feasibility of this process'. If we are to assume that persons importing eggs from abroad have a ten to fourteen day window to import their eggs, i.e.: eggs known to be fertile, and from a pre tested, disease free flock. The first two concerns are.

1. Obtaining a CITES permit for the proposed importation, which can take up to two months. With no extensions granted.
2. Obtaining an import permit from MAF which has in the past taken, in my own personal experience, taken up to six weeks.

By the time the permits are issued, the eggs will be well and truly hatched on past performances from both these departments. Please advise as to how you propose to address these issues? Unlike chickens, Parrots don't lay on demand. The departments concerned with any importations, will need to have their procedures streamlined to fit in with the timing, of the production of eggs. Can you (MAF) guarantee this will happen?

Historically MAF have managed to come up with one reason or another, to either revoke permits, as was the case in the Auckland Zoo or destroy the entire importation, as was the case in both the finch importation in the early 1990's and the live parrot importation in the late 1990's. It would seem that MAF are acting



within the powers of the Act. It does not put the department in good standing with persons interested in importing.

If your service does in fact, fail your customer. Will the fees be waived and the out of pocket expenses covered, by the crown ?? Will there be any form of compensation ?

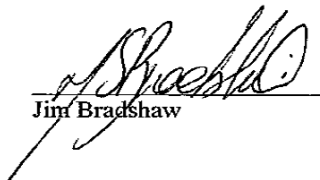
For this process to work and succeed, it must be within the reach of the common man, and it must be affordable by all persons who wish to import birds. Most importantly, it must be reasonable and workable.

If MAF applies costly fee's to this process, people will carry on doing what they are doing now, Smuggling ! Before I spend a large amount of money testing studs of birds off shore. I would need to know that all the above matters have been addressed by the crown. These assurances will need to be in writing, and signed off by a person who has the power to bind the crown.

As the author of the (RA) has laid out, the rationale for this proposed Import Heath Standard is to prevent the illegal importation of Parrots and eggs into New Zealand. If MAF can truly make this process feasible, and not a hassle, then I am sure it would be successful in securing the borders to some extent.

It must also be noted that with the importation of live Parrots into Australia the market prices dropped considerably. This will remove the financial gains from illegal activities. If MAF can not succeed in making the process user friendly people will just carry on 'running the gauntlet.'

Yours Sincerely,



Jim Bradshaw

#### 4.8. BROOKE NOONAN, AUCKLAND ZOO

Hi Christine,

The below are comments from Richard pertaining to the Psittacine egg IRA document.

Thank you again for the timeline flexibility.

1. Overall, a well-written and thorough risk analysis and I have only a few minor comments
2. p8-9 Klebsiella. We have a record of this organism being associated with the death of the first captive-hatched kakapo here at Auckland Zoo.
3. p11 Macrorhabdus ornithogaster is wrongly identified as not being associated with disease in psittacines. It is a well-known cause of gastritis in budgerigars.
4. p13 The categorisation of PBFD as being transmitted through eggs is unproven. There is evidence of finding the virus DNA in eggs but it is thought to be non-infectious. So there should be a question mark after the 'Yes?' at this stage.
5. For all of the diseases for which there is evidence of vertical transmission there should be some supporting documentation.
6. Some of the risk management options provided are, I believe, impractical and, given other options, should not be included in an Import Health Standard. Specifically the following: p30 Option 4 (also Option 3 would need to be clarified as to what is required for pre-export isolation as it would necessarily have to be set up at the breeder's premises); p 39 Options 3 and 4 same applies, p64 Option 2 and p74 Option 3.

Brooke Noonan  
Curator - Exotics  
Auckland Zoo  
New Zealand