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ANIMAL QUARANTINE POLICY MEMORANDUM 1998/87

Chief Veterinary Officers, all States and the NT
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Office of the Australian CVO
Emergency Disease Strategies Section, LPD, DAFF
Animal and Plant Health Branch, BRS
Veterinary Counsellors, Washington, Brussels & Seoul
Agricultural Counsellor, Tokyo

Australian Poultry Industries' Association
Australian Egg Industry Association
EU Delegation, Canberra

CSIRO Division of Animal Health
National Farmers' Federation
Quarantine and Animal Health Task Force, NFF
Australian Animal Health Council
Australian Veterinary Association
Australian Livestock Exporters' Council
National Meat Association of Australia
Chief Veterinary Officer, MAF RA, NZ
National Poultry Association
Environment Australia

IMPORT RISK ANALYSIS: HATCHING EGGS OF COMMERCIAL POULTRY DECISION ON REVISED CONDITIONS

This Animal Quarantine Policy Memorandum (AQPM) provides finalised quarantine requirements for the importation of hatching eggs of commercial poultry. Under the new import risk analysis (IRA) procedures the Executive Director of AQIS has considered and agreed to the requirements set out in the attached conditions.

AQPM 1998/05 provided an overview paper setting out the background to the IRA of hatching eggs of domestic poultry, and the main changes proposed to the protocols. In addition, the AQPM provided six draft import protocols incorporating revised importation conditions for hatching eggs of domestic hens, ducks and turkeys, which were subdivided into conditions for eggs from source flocks vaccinated against Newcastle disease (ND) and those from source flocks that have not been vaccinated against ND.

AQIS appreciates comments received from stakeholders on AQPM 1998/05. A number of stakeholders commented that it was not appropriate to base import protocols for hatching eggs of ducks on the protocols developed for hens and turkeys, because of the very different serological response exhibited by ducks when challenged with ND and avian influenza (AI). For this reason, ducks have been removed from the attached final protocols. Import conditions for hatching eggs of ducks will be the subject of a further routine IRA which will be announced shortly.

Other comments received were to the effect that the proposed conditions were extremely complex and difficult to interpret, due to the number of different scenarios based on times and distances from outbreaks of ND and AI. Additionally, there was concern that Australian

import conditions should reflect, as closely as possible, the provisions of other documents such as the OIE Animal Health Code and AUSVETPLAN. Consistency with these provisions would assist in justifying our import conditions in the context of the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement). Changes have been made to the final protocols to address both of these concerns.

Attachments to this AQPM include:

- . an overview paper describing the major changes to the conditions as a result of comments received in response to AQPM 1998/05 (Attachment 1)
- . a paper providing the rationale for the amendments to bring the conditions into accordance with the OIE Animal Health Code and AUSVETPLAN (Attachment 2)
- . revised conditions for the importation of hatching eggs of domestic hens (Attachment 3)
- . revised conditions for the importation of hatching eggs of turkeys (Attachment 4).

Next Steps

This AQPM advises the final conditions endorsed by the Executive Director of AQIS. Stakeholders may appeal against the process followed for this IRA by writing to Mr Ken Matthews, Director of Animal and Plant Quarantine at the following address :

Department of Agriculture, Fisheries and Forestry
GPO Box 858
CANBERRA ACT 2601

Appeals should be received by close of business on 18 December 1998. If there are no appeals, the attached conditions will be adopted on 24 December 1998. AQIS will issue a further AQPM advising adoption or, alternatively, that an appeal has been received. All inquires should be directed to the officer whose contact details appear below.

Confidentiality

Respondents are advised that, subject to the *Freedom of Information Act 1982* and the *Privacy Act 1982*, all submissions received in response to Animal Quarantine Policy Memoranda will be publicly available and may be listed or referred to in any papers or reports prepared on the subject matter of the Memoranda.

The Commonwealth reserves the right to reveal the identity of a respondent unless a request for anonymity accompanies the submission. Where a request for anonymity does not accompany the submission the respondent will be taken to have consented to the disclosure of his or her identity for the purposes of Information Privacy Principle 11 of the Privacy Act.

The contents of the submission will not be treated as confidential unless they are marked 'confidential' and they are capable of being classified as such in accordance with the Freedom of Information Act.

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**Importation of Hatching Eggs of Commercial Poultry
into Australia**

Import Risk Analysis

REVISED CONDITIONS

24 DECEMBER 1998

Australian Quarantine and Inspection Service
GPO Box 858
Canberra ACT 2601
AUSTRALIA

ATTACHMENT 1: OVERVIEW:

HATCHING EGGS OF COMMERCIAL POULTRY

Current conditions for the importation of hatching eggs of commercial poultry were promulgated on 11 November 1994. Since then, situations have arisen where importers have sought dispensations because outbreaks of Newcastle disease (ND) have occurred in the exporting country during the period of collection of eggs. The Snowdon Review, which formed the basis for the existing protocols, did not provide for this situation.

Late in 1996, AQIS commissioned a review of avian importation requirements of hatching eggs of commercial poultry and live birds, relating to ND and Avian Influenza (AI). The report on that review was circulated for stakeholder comment with AQPM 1997/55, dated 22 May 1997. It provided additional information relevant to the development of importation protocols for hatching eggs of commercial poultry from countries with outbreaks of ND and AI. Comments received on the Newcastle Disease and Avian Influenza Review were considered in drafting revised protocols.

AQPM 1998/05 dated 19 January 1998 provided draft revised importation conditions for hatching eggs of domestic hens, ducks and turkeys and sought stakeholder comment. A number of comments were received and these have been taken into account in preparing the attached final conditions.

Major alterations to the protocols and the policies outlined in AQPM 1998/05 include:

1. Time since outbreak/distance from outbreak: In response to concerns that the revised draft protocols were excessively complex, and did not reflect the requirements of either the OIE Animal Health Code, or of AUSVETPLAN, the time and distance conditions have been revised. A further paper describing the rationale for the revision of times and distances is attached as Appendix A to this AQPM.
2. Criteria for country eligibility: Avirulent strains of both ND virus and AI virus type A are present in Australia. Australian policy is to “stamp out” all outbreaks of disease caused by exotic strains of ND virus or AI virus type A. It is possible that some countries having strains of virus with pathogenicity indices higher than Australian strains but lower than that defined by OIE, may not declare themselves as infected countries. For this reason, the pathogenicity of ND and AI strains present in the exporting country will be considered by AQIS in determining country eligibility. Where virulent strains are present, the option for routine importation (ie without HEPA filtration of the post arrival quarantine facility) will not be available.
3. Association between source flocks and infected properties: A requirement that there be no physical association between the source flock and any flock where ND or AI has occurred has been added. This was done to address the risk of disease agent transmission by movement of humans or of materials between poultry establishments, which may account for greater risk of spread than airborne transmission.
4. Disinfectants used for fumigation of eggs: Some concern was expressed by stakeholders in relation to the Occupational Health and Safety aspects of the use of formaldehyde fumigation of eggs. Some alternatives were evaluated, but none was found that was demonstrated to be both effectively virucidal and without adverse effects on hatchability. The protocol allows for the use of alternatives to formaldehyde with the approval of the Director of Animal and Plant

Quarantine. Where alternatives are proposed, details of the method to be used, including reports of efficacy trials, must be advised to the Director of Animal and Plant Quarantine in time to allow a thorough evaluation before approval. Intending exporters should ensure that they have the capability to provide formaldehyde fumigation for any consignment of hatching eggs, unless alternative methods have been approved in advance.

5. Timing of fumigation of eggs after collection: As a result of concerns relating to the practicality of fumigation of eggs within the required time frame, and in recognition of the requirement that floor and dirty eggs not be included in the export consignment, the final conditions require that eggs for export to Australia must be fumigated within 8 hours of lay. Additionally, the conditions have been revised to clarify that eggs must be allowed to cool to storage temperature in the fumigation room, after fumigation and before packing. This is to minimize the possibility of “sweating”.
6. Packaging of eggs: The requirement that only plastic egg separators may be used has been changed, and the conditions require only that eggs for export to Australia be packed on new unused separators. Therefore, new fibreboard separators may now be used. These are considered to be less likely to result in breakages, and therefore should reduce the risk of contamination during transport.
7. Vaccination with live ND vaccine: The conditions have been revised to allow for the use of live vaccine primers, followed by killed vaccine boosters, for ND. Vaccination for ND should not be given less than 10 weeks prior to the commencement of collection of eggs for export.
8. Interpretation of vaccine titres: A number of respondents raised concerns in relation to the interpretation of changes in vaccine titres in individual birds. A number of factors, including imprecision of the test method used, and changes in the bird’s immune competence due to stress or other factors, may influence the result. It is suggested that where paired serological samples are required, and the post-collection sample shows an increase of greater than 2 dilutions in titre, both pre- and post-collection samples should be re-tested under identical laboratory conditions to eliminate variability due to laboratory technique. If this does not resolve the issue, virus isolation techniques may be required before the birds will be released from quarantine.
9. Sample size for TRT vaccinated birds: This has been reduced to 100 paired samples to maintain consistency with the testing requirement for ND vaccinated birds.
10. SPF sentinels in elite breeder flocks: A number of respondents raised concerns about the practicality of using sentinel birds in elite breeder flocks. While the issues raised were valid, the alternative of paired serological sampling is available. The option to use sentinels in preference to paired testing was retained, to allow industry freedom of choice.
11. Certification issues: The “Second veterinary certificate relating to the export of hatching eggs of domestic hens to Australia” has been sub-divided into two parts, to facilitate certification in countries where Government approved veterinarians (as opposed to Government Veterinary Officers) provide flock health monitoring and certification services.

12. Overseas country health status: Provision has been made for certification by a Government Veterinary Officer that the exporting country is free of the specified diseases. Where such certification is provided, to the satisfaction of AQIS, disease testing may not be required.

Appendix A: Rationale for revision of time and distance criteria.

Issue:

Criticisms of the proposed conditions for hatching eggs were received along the lines that:

- . the conditions were not consistent with OIE and AUSVETPLAN;
- . the conditions were inconsistent with Australia's request that other countries recognise our free status with regard to exports, immediately after the expiry of the 21 day period after completion of stamping out and disinfection of premises affected by outbreaks of AI in this country;
- . there was no obvious scientific justification for the time and distance criteria chosen; and
- . the conditions were too complex and in need of simplifying.

OIE Code requirements

Definitions

“Country freedom” - according to OIE Code definitions, a country is considered to be infected with ND or AI until “six months after the occurrence of the last case for countries in which a stamping-out policy is practised with or without vaccination against ND.”

“Free zone” - means a clearly defined territory within a country in which no case of a disease included in the Code has been reported during the period stated for such disease in the Code, and within which and at the borders of which official veterinary control is effectively applied for animals and animal products, and their transportation. In the case of ND and AI, the period is 21 days.

“Incubation period” - for the purposes of the OIE Animal Health Code, the incubation period for ND and AI shall be 21 days.

“Infected Zone” - is defined by OIE (Article 1.4.4.4) as “a zone where the disease is present, in an otherwise disease free country.” This definition is expanded in Article 1.1.0.1 as follows. An “Infected zone” is “a clearly defined territory within a country in which a disease included in this Code has been diagnosed. This area must be clearly defined and decreed by the Veterinary Authority in accordance with the environment, the different ecological and geographical factors as well as all the epidemiological factors and the type of animal husbandry being practised. The territory in question should be part of a country with a radius from the centre or centres of the disease of at least 10 kilometres in areas with intensive livestock-raising and 50 kilometres in areas where extensive livestock-raising is practised.” In the case of ND and AI, OIE states that an “infected zone shall be considered as such until at least 21 days have elapsed after the last case has been reported and following the completion of a stamping-out policy and disinfection procedures, or six months after the clinical recovery or death of the last affected bird if a stamping-out policy is not practised.”

Outbreak of disease” - is defined by OIE as “an occurrence of one of the diseases in List A or B in an agricultural establishment, breeding establishment or premises, including all buildings and all adjoining premises, where animals are present.”

Importation requirements

Article 2.1.15.3 of the OIE Code states that Veterinary Administrations of ND free countries may prohibit importation or transit through their territory, directly or indirectly, from countries considered infected with ND of, *inter alia*, hatching eggs.

However, such a prohibition is not consistent with industry requirement for access to superior genetic material, which may be sourced from countries which do not meet the requirements for country freedom.

Article 2.1.15.11. of the OIE Code states:

“When importing from countries considered infected with ND, Veterinary Administrations should require, for hatching eggs, the presentation of an international animal health certificate attesting that the hatching eggs:

- 1) have been disinfected in accordance with the OIE standards referred to in Appendix 4.2.4.1.;
- 2) come from establishments or hatcheries which are regularly inspected by the Veterinary Authority;
- 3) come from establishments or hatcheries free from ND and not situated in a ND infected zone;
- 4) come from establishments or hatcheries in which birds were not vaccinated against ND; or
- 5) come from establishments or hatcheries in which birds were vaccinated against ND (the nature of the vaccine used and the date of vaccination shall also be stated in the certificate).”

Similar requirements are imposed by the OIE Code (Article 2.1.14.3) in relation to the importation of hatching eggs from countries infected with AI. For the remainder of this paper, conditions of the OIE Code will be intended to refer to both AI and ND, as the conditions for these two diseases are essentially the same.

AUSVETPLAN requirements

Disease definitions

AUSVETPLAN recognises that there are avirulent strains of both AI virus and ND virus, which are present in Australia. In the case of ND, strains present in Australia have similar pathogenicity to the La Sota vaccine strain. Strains of AI present in Australia do not cause mortalities in chicks when tested using the OIE recommended procedure. Strains which are more pathogenic than these would be considered of concern to Australia, although they may not meet the virulence levels specified by the OIE for ND or highly pathogenic AI.

Control policy

AUSVETPLAN defines a restricted area (RA) which can have an irregular perimeter provided the boundary is initially an appropriate distance from the nearest Infected Premises, Dangerous Contact Premises or Suspect Premises. This distance will vary with the size and nature of the potential source

of virus and will generally be in the order of 1–5 km. The boundary will be fixed to take account of the distribution of susceptible birds, as well as traffic patterns to markets, service areas and abattoirs, and areas that constitute barriers to movement.

The declaration of a control area (CA) helps to control the spread of the outbreak from within the RA. The CA is a buffer zone between the RA and the rest of the industry. The boundary does not have to be circular or parallel to that of the RA but should be generally between 2–10 km from the boundary of the RA. Advice from the Livestock and Pastoral Division, Department of Primary Industries and Energy, is that the combined RA and CA are equivalent to the OIE infected zone distance. This provides for a total “infected zone” of 3 kms to 15 kms in radius. Practically, this would be likely to be at least a minimum of 10 kms in radius. The OIE Code and the AUSVETPLAN are therefore considered to be equivalent in terms of the area of the country considered to be infected with AI or ND following an outbreak.

Movement controls etc are applied within the RA and CA, and stamping out and disinfection are undertaken. This is consistent with the requirements of the OIE Code Article 1.4.4.4, and the zone continues to be considered to be infected, according to OIE Code definitions, “until at least 21 days have elapsed after the last case has been reported and following the completion of a stamping-out policy and disinfection procedures, or six months after the clinical recovery or death of the last affected bird if a stamping-out policy is not practised.”

Australia argues that overseas countries should be prepared to accept Australia’s freedom from AI after an outbreak, immediately on the expiry of the 21 days following the completion of stamping out.

Scientific issues

Time and distance

Although for regulatory purposes, the incubation period for ND and AI are taken to be 21 days, the actual time from infection to onset of illness is considered to range from a few hours up to 2-3 days. The survival of ND virus in the environment is influenced by the medium in which the virus is found. However, warm temperatures and solar radiation are reported to facilitate destruction. This suggests that provided at least 21 days have elapsed after the last case has been reported and following the completion of a stamping-out policy and disinfection procedures, there should be no risk of infection.

The longest reported distance over which ND virus is considered to have been spread by wind is approx 40 kms. It has been suggested that direct contact between flocks, by way of movement of personnel, vehicles, feed supplies etc may be more important than windborne spread. This has been addressed by requiring certification that there is no association between the source flock and any other flock where outbreaks of ND or AI have occurred. It is considered highly unlikely that AI virus would be spread by the wind over any significant distance, although it may spread over short distances by aerosols. On this basis, any source flock which is further than 40 kilometres from an infected premises should not be at risk of infection.

Vaccination

The vaccination status of both the country of origin, and of the source flock is important because:

1. if the country allows vaccination, virulent ND may be circulating in the country, without outbreaks becoming apparent, due to the immune status of the birds. It is possible that eggs may be collected from a source flock during the incubation period of the disease following infection

of the flock at a late stage during the egg collection process, before signs such as falling egg production or clinical illness manifest.

2. if the source flock is vaccinated, ND virus (either vaccine strains or wild strains) may be circulating in the flock without clinical signs being evident.
3. although vaccination may possibly mask clinical signs of infection, it has been demonstrated that vaccination also reduces the excretion of virus by infected birds, thus minimising the spread of virus in vaccinated birds.

Where the source flock is vaccinated, paired serological tests taken pre- and post-egg collection should provide evidence of rising titres if infection with ND virus has occurred. Concern has been raised that there can be difficulty in interpretation of vaccine titres, and that there may be increases in titre in vaccinated birds due to sensitivity issues related to the test used, or to individual bird variation. To address these concerns, it is suggested that pre-collection samples be retained after testing, to allow for both pre- and post-collection samples to be tested together, to minimise the effect of laboratory inaccuracies on results. If post-collection samples still show increased titres, PCR or other virus isolation/identification techniques could be used.

HEPA filtration

HEPA filtration of the PAQ facility provides a significantly greater degree of quarantine security than is envisaged in the OIE Code, which does not suggest that HEPA filtration is required. This requirement can be justified as providing extra safety from incursion of ND virus or AI virus.

The two levels of HEPA filtration which were previously proposed are considered to be appropriate. The decision as to which level of HEPA filtration to apply should be closely related to the risk that the source flock may be infected with ND or AI, and therefore the risk that these diseases may be introduced into Australia with imported eggs.

Discussion

A “Decision key” which is intended to provide guidance in assessing the various possibilities involved in these protocols is attached. **The following explanation should be read with reference to the Decision key.** The sections of this discussion are named in accordance with the sections in the key.

COUNTRY APPROVAL

The “Australian conditions for the importation of hatching eggs of commercial poultry” define eligibility criteria for countries wishing to export hatching eggs to Australia. Questions 1-4 of the Decision key address these eligibility criteria. Where a country applies different disease definitions to those applied within Australia, more restrictive quarantine conditions are necessary in order to safeguard Australia’s disease status. These countries are identified as “Non-complying” in the decision key.

DISEASE STATUS OF COUNTRY

Because of the extremely small chance of introduction of ND or AI, to Australia, from a country which meets the requirements for freedom from ND virus and AI virus as defined in the “Australian conditions for the importation of hatching eggs of commercial poultry”, hatching eggs from source flocks in these countries should be allowed entry without the requirement for HEPA filtration of the

PAQ (Question 5). However, if vaccination of birds against Newcastle disease is undertaken, paired serological testing will be required, and certification relating to this testing is necessary (Question 6).

Countries which do not meet the criteria for freedom from ND and AI may fall into one of two categories. There may be current, active infection, or the country may have completed stamping out procedures, but the required 6 months required for recognition of country freedom may not have elapsed (Quest 7).

“INFECTED” COUNTRY, ACTIVE INFECTION

The existence of active infection within the exporting country leads to increased risk of introduction of the diseases to Australia. In keeping with the OIE requirements, Australia will not accept hatching eggs from source flocks which fall within an “infected zone” (Question 8).

When the source flock is not within an infected zone, importation of eggs may be permitted, but HEPA filtration of the PAQ facility will be required. The level of HEPA filtration, and the degree of disease testing required to provide appropriate quarantine security, will vary in accordance with the assessed level of risk. Vaccinated birds pose a higher risk that clinical signs of disease may not be recognised, justifying a higher level of HEPA filtration (Question 9).

“INFECTED” COUNTRY, NO CURRENT ACTIVE INFECTION

Similar reasoning is applied to determine the appropriate level of HEPA filtration to be applied in PAQ when eggs are sourced from an “infected” country, but which has no current active infection. However, the risk is lower when active infection is not present, so the requirement for full HEPA filtration of PAQ facilities for eggs from ND vaccinated source flocks is downgraded to partial HEPA filtration (filtration at least until post-egg-collection testing requirements are completed) (Question 10).

ND virus has been shown to be spread by the wind over distances of up to 40 kms. It follows that any source flock which is less than 40 kms from a previously infected premises represents a higher risk of infection than a flock which is at greater than 40 kms distance. Therefore, importation of eggs from a source flock within 40 kms of a previously infected premises, should only be permitted through a post arrival quarantine facility which provides HEPA filtration at least until post-egg-collection testing requirements are completed. Any source flock which is further than 40 kms from a premises where an outbreak has previously occurred, should not be at risk of infection. No HEPA filtration should be required (Question 11).

COUNTRIES WITH STRAINS OF ND AND AI WHICH CAUSE DISEASE BUT DO NOT MEET OIE DEFINITIONS

Again, similar reasoning applies in relation to determining the risks relative to declared outbreaks of ND and AI, and the effects of vaccination on masking clinical signs. These countries are considered to be infected. The option for routine (non-HEPA filtered) PAQ is removed, to account for the risk that virulent strains of ND or AI which do not meet OIE definitions of pathogenicity, but which would be of concern if introduced to Australia, may be present, but unreported, in the vicinity of the source flock.