Submission No. 05
(Quarantine Facility)
Date: 19/03/13

The Australasian Veterinary Poultry Association Ltd

The Australasian Veterinary Poultry Association (AVPA) submission to the Parliamentary Standing Committee on Public Works for construction of a new post-entry quarantine facility (PEQ) at Mickleham

including a response to aspects in the

The Department of Agriculture Fisheries and Forestry (DAFF) and Department of Finance and Deregulation (DFD) joint submission

Written information on the 30% design of the PEQ and other details became available through the submission made by the Department of Finance and Regulation to the Standing Committee on Public Works in relation to post entry quarantine facilities. http://www.aph.gov.au/Parliamentary_Business/Committees/House_of_Representatives_Committees?url=pwc/quarantinefacility/subs.htm.

The AVPA submission addresses concerns about the facility and its design as could be evaluated from the DAFF/DFD joint submission.

Members of the AVPA attended information sessions on the PEQ facility, as well as the avian PEQ facility specifically, on the 6/3/13 in Melbourne and comments in the submission reflect the concern of members following the session.

Aspects of the verbal advice given during the session were encouraging but the AVPA must ultimately respond to the current written plan.

Whilst the AVPA appreciates that the Parliamentary Standing Committee on Public Works is not looking for detailed technical arguments about biosecurity aspects, some are provided since it is difficult to separate the justifications for financial consideration from the 3 objectives for the facility which are:

1. Support Industry continued access to imported genetic material

2. Deliver the best value to the Australia Government for its investment over the whole of the life of the assets and buildings.

3. Provide a facility that provides effective biosecurity and accommodate the PEQ need for the next 50 years.

Summary

The joint DAFF/DFD submission to the Committee indicated that this project has been designed to protect a significant fraction of $42 billion agricultural industries, the unique native fauna, tourism and lifestyle and is guided by a key criterion – "ability to reduce biosecurity risks for Australia".

There appears to be a lack of comprehensive studies to assess the merits and risks of the proposed one multi-species, $379 million facility, before short listing sites, investing in preliminary proposals and progression to 30% design stage.

The value for money outcome for Australia depends largely on importers' trust in the biosecurity of this facility and its ability to minimise both real and perceived risks.

The AVPA:

- Supports the continued importation of poultry hatching eggs and live birds into Australia using agreed importation conditions.

- Supports new facilities that can meet the changing requirements for additional users, increased batch sizes and increased frequency of imports as expressed by users and which can meet users' reasonable expectations regarding biosecurity and usage fees.

- Acknowledges that a single consolidated facility for fertile eggs and live birds may have economic and operational advantages but, from a biosecurity risk perspective, the AVPA questions the merits of a single facility for multiple species and especially the amalgamation of the hatching egg and live bird importation programs in one location. It is felt that the biosecurity aspects have not been sufficiently investigated or reported and appears to have failed to take into account the users' concerns about real and perceived poor biosecurity associated with adjacent fertile egg and live bird facilities.

Additionally, the AVPA is concerned about the lack of transparency in relation to the case for the following aspects of the proposed facilities:

- The lack of staff accommodation on site, in relation to response time to emergencies associated with equipment failure when valuable consignments of incubating eggs and hatchlings are involved.

- The provision of insufficient information regarding design and costing of the facility and the likely usage fees.

- The biosecurity grounds on which decisions have been made about the isolation of the whole site at Mickleham from future livestock in the environs.

- The ability of the facility to accommodate future needs for increases in the number of importers, increased batch size and frequency of currently approved species or of additional species. These added demands could be encouraged if new protocols are developed to address the expressions of interest in such imports as new technology allows the testing requirements for agents of quarantine concern and the logistics of hatching and rearing new species.

Background

The AVPA is an independent association of scientists involved with poultry health that formed over 50 years ago to promote exchange of practical and scientific knowledge among its members in Australia and New-Zealand and to represent health, welfare and food safety issues associated with poultry production to governments, the public and to research organisations. It is a member of the World Veterinary Poultry Association and has a close direct alliance with the Australian Veterinary Association and indirectly through the Commercial Poultry Veterinarians Special Interest Group of the Australian Veterinary Association.

The AVPA has been a recognised stakeholder for issues involving the importation of hatching eggs, poultry meat and table eggs into Australia. The AVPA also provided submissions regarding the importation of non-poultry avian species. The AVPA has had no formal opportunity to comment previously on issues associated with the proposed post entry quarantine facility (PEQ) at Mickleham Victoria and appreciates the opportunity to do so.

Aspects the AVPA submission is seeking to address

The AVPA is seeking to address paragraph 17. (1) Subsection 3 under the Public Works Committee Act 1969:

- 3) In considering and reporting on a public work, the Committee shall have regard to- the stated purpose of the work and its suitability for that purpose;
    - (b) the necessity for, or the advisability of, carrying out the work;
    - (c) the most effective use that can be made, in the carrying out of the work, of the moneys to be expended on the work;
    - (d) where the work purports to be of a revenue-producing character, the amount of revenue that it may reasonably be expected to produce; and
    - (e) the present and prospective public value of the work.

The objectives of the PEQ development are stated to be among others:

1. Support Industry continued access to imported genetic material
2. Deliver the best value to the Australia Government for its investment over the whole of the life of the assets and buildings.
3. Provide a facility that provides effective biosecurity and accommodate the PEQ need for the next 50 years.

The AVPA strongly supports objective 1 through the availability of efficient biosecure PEQ facilities that are able to accommodate Australia's needs for the importation of poultry hatching eggs and for importation of live birds, now and into the foreseeable future. These facilities are important to ensure the sustainability and efficiency of commercial poultry production in Australia (and other animal species) and to guard the health status of Australian domestic animals and native fauna.

It is objectives 2 and 3 where aspects are unclear and where the effectiveness of the proposed structure is questioned.

A. Single consolidated multi-species facility

1. Poultry hatching eggs and live birds

A single consolidated facility may enable some operational savings but from a biosecurity perspective it is questionable that a single, multiple species facility, separated into compounds could provide the same level of biosecurity as individual, separate facilities. Separation distance is one of the most important elements of biosecurity and in the absence of an appropriate separation distance, biosecurity becomes totally reliant on equipment, protocols and human behaviour.

There have been at least two detections of exotic poultry pathogens during the life time of live bird importation. The first was the detection of Avian Influenza virus and Newcastle disease virus infection (antibodies) among imported Canadian pigeons that arrived at the PEQ facility at Spotswood on the 5th of September 2005. These pigeons were subsequently euthanased. The second case was again with live pigeons in which a pathogenic Newcastle disease virus was detected in October 2010. These birds were imported from the USA.

In the USA viruses of concern were isolated from 26.3% of officially imported birds including Newcastle disease virus (Paramyxoviruses- subtypes PMV1, PMV2 and PMV3) and Avian Influenza viruses (Senne et al Avian Disease Vol 27).

During the lifetime of the poultry hatching egg program there has not been any detection of a pathogen of quarantine concern in any of the imported hatching eggs and the repeated incidents in pigeons demonstrate that a higher level of risk is associated with the live bird importation program despite the rigorous pre-quarantine testing in the countries of origin.

The facility with separate incubators is designed to enable multiple hatching egg importations (attachment 11 in the DAFF/DFD joint submission). This could result in the presence of multiple avian species within the hatching egg program at the same time (e.g. ducks and chickens). While the structures and the protocols could provide

independent operation of the multiple species, nevertheless, the protocols are only as good as the weakest link – the human factor. Therefore, the risk of disease spread could be higher than what it is currently where PEQ facilities are being separated geographically.

No independent risk analysis to evaluate the level of risk in the proposed new PEQ has been published and it is unclear whether pre-importation health requirements for various avian species (e.g. psittacine, pigeon, chicken, duck and turkey) are closely aligned to address any cross species issues with viral and bacterial agents.

Even without spread of pathogens between avian consignments or between avian species, the potential for disruption of schedules and impact on poultry breeding programs could be significant if a pathogen of quarantine concern was detected in birds in the live bird importation program.

2. Multiple species other than avian

From Attachment 3 (in the DAFF/DFD joint submission), it appears that the horse and cat/dog compounds are adjacent to the avian facility and that these facilities have no HEPA filtration planned to prevent microorganisms exiting the facilities (not necessarily an understandable situation considering the capacity for airborne and vicinity spread of some pathogens, even if these facilities operated as a single facility separated geographically). However, being a multiple species facility the lack of HEPA filtration in the compounds of other species is of greater concern. Particularly why is only the avian facility equipped with HEPA filtration when all are on one location in one facility? Are dog/cats and equine pathogens incapable of transmission by wind, insects or other means of vicinity spread?

Pathogens from horses, dogs or cats have the potential to spread within and outside the facility and although perhaps the risk is low, no evidence is provided that this has been assessed. The pathogens could include, for example, some subtypes of influenza viruses where the Equine Expert Panel in their Draft IRA, 2009 Risk Assessment of the importation of horses into Australia concluded that the unrestricted risk of introduction of Equine Influenza was **moderate –** a 50 % chance that the event will occur.

Air borne transmission of equine influenza virus even from a small number of horses over significant distances (between 1 - 2 kilometres) was reported by several authors following the Equine Influenza outbreak in Australia in 2007 (NSW Public Health Bulletin, Nob 2009, Davis et al Transboundary and Emerging Diseases, 2009, Vol 56, Molony et al Australian Veterinary Journal, Vol 56–63, July 2011). Transmission from horses to dogs has been reported in Australia (Kirkland et al, Emerg Infect Dis. 2010 April; 16(4): 699–702). Thus, vicinity and airborne spread of influenza viruses over

distances significantly further than the distance between the equine PEQ, the dog PEQ and the avian PEQ have been reported

Even if a properly functioning HEPA filtration system in the avian facility enables a complete elimination of the risk of airborne entry and spread of various pathogens to the avian facility, it does not eliminate the potential for constant or intermittent presence of airborne pathogens in the immediate vicinity and subsequently the complete dependence on continuous optimal operation of all biosecurity aspects in the facility.

The plan does not specify what backup exist in case of a breakdown of the system or how the risk of spread of infections from other species to birds could be mitigated at the end of the PEQ period (when birds are released from the HEPA filtered rooms and are exposed during loading to the facility air that may contain dust and infected particles)

How can exchange of potential pathogens be prevented between different consignments of birds in the facility and even without spread, it is uncertain what risk the owners of high value genetic stock will accept.

In case of a disease outbreak in the facility what additional tests may be required to demonstrate no spread, what delays may be experienced by importers sharing the facility until the epidemiological picture becomes clearer?

Actions in such cases are under the discretion of the Director of Quarantine. Would this be the case or are there any firm policies to address such issues, including mechanisms in place to compensate parties suffering collateral damage if spread did occur?

During the post entry quarantine period, rigorous testing is completed for diseases of quarantine concern. This enables detection before release of birds from the PEQ facility. Birds may not be tested for infections that are not of quarantine concern or that are only of minor disease concern for that species. Some of the diseases not of quarantine concern or of minor disease concern for one species may be of significant disease concern for another species. Examples include West Nile Virus (infectious to birds that are the multiplying host), or bacterial agents including Chlamydophila, Pasteurella and Salmonella that although they may not be of quarantine concern, nevertheless may affect the health status and productivity of poultry once released from quarantine. These diseases can affect the production and profitability of high level breeding programs and the economic impact on the importer, and potential impact on the commercial industry's genetic progress, could be significant if such infections moved between neighbouring consignments of different species of birds within the hatching egg or live bird facilities.

Arguments can be mounted that the previously mentioned risks are very low or are acceptable but ultimately, unless a thorough risk assessment is done and published and the risks are determined, the perception of risk may gain unnecessary momentum and affect the usefulness of the facility.

When the potential for vicinity spread as well as airborne spread is considered in the context of the interspecies transmission of some pathogens, it is enigmatic why such a highly biosecured avian facility, with so much capital investment has been placed next to facilities with no equivalent biosecurity standards without a transparent, comprehensive risk assessment?

While Biosecurity Australia undertook several comprehensive Import Risk Assessments on the risk from importation of individual species, the AVPA is not aware of any Independent Risk Assessment (IRA) that examined the risk of spread from one species to another in a PEQ under the same roof. Considering the significant capital outlay involved, the value of animals in the facility and the confidence that the facility must engender among users, the AVPA believes that an IRA of the biosecurity aspects of the proposal should be required before more public moneys are channelled into this project.

B. Location

The DAFF/DFD joint submission specifies the PEQ facility is located in areas that are free of specific endemic diseases and vectors and a distance of 2km is specified between it and commercial poultry. However no information is provided on how the area has been defined as free of specific endemic diseases, what these endemic diseases are or how the endemic disease status will be preserved.

No information is provided as to what distance will be achieved between it and horse stables or other livestock in the area. The figure given for the land on which the facility is proposed - 144Ha, does not provide the AVPA with any idea of the buffer zones and what relevant facilities have been included in the buffer zone consideration. While a rapidly growing area like the Hume Council region provides an advantage for gaining access to a suitable workforce, such growth may lead to the emergence of risk enterprises in the proximity of the PEQ.

C. Accommodation

A major omission identified in the PEQ plans is the lack of proposed accommodation on site. This is a concern on welfare and economical grounds. Lack of on-site accommodation may affect hatching eggs and young birds in rearing through a prolonged response time to temperature fluctuations or power failure in the facility.

In modern fan-forced incubators, the manufacturer's recommended temperature setting is between 37.5 and 37.64^{o}C, a very narrow margin for error. The lethal temperature for eggs is 39.4^{o}C. The constant and rapid air movement within incubators keeps the eggs' temperature and humidity in the correct zone but power or mechanical failure could be critical as in the absence of rapid air movements the optimal conditions will deteriorate quickly.

The operating environment of incubators containing embryonated eggs and live bird areas are alarmed in case of operational failure - to alert staff when the environment inside the incubators/facility has moved outside optimum range. Response must be within a short time to ensure the viability of embryos and the welfare of young birds. Therefore, it is not practical for poultry staff managing the facility to be located more than a short distance away. All currently approved avian PEQ facilities have at least one, and usually two, accommodation sites within five minutes. This ensures that a suitably qualified person is available to attend alarms and resolve any issues 24 hours a day. If DAFF believes that accommodation on site is not critical, a risk analysis should be done to demonstrate that the current plans are sufficient to effectively accommodate emergencies.

D. Usefulness and design.

It is difficult to decipher the facility plan beyond the allocation of areas to certain functions or animals. Thus, the flexibility of the design to accommodate future needs is of concern.

Future needs may require; increases in the frequency of import batches, increases in the size of import batches, importation of new species of birds and ability to handle new or emerging diseases.

In the Summary of the DAFF/DFD joint submission, paragraph 3 states the five current DAFF Quarantine facilities are over 25 years old and are near the end of their useful life. Would the proposed facility support useful quarantine functions beyond 25 years and are there any allowances and structural flexibility to enable expansion or modifications that may be required in the future?

The AVPA question whether the design of the avian facility on three levels is the most cost efficient manner to build this facility.

The AVPA is aware of discussions amongst stakeholders indicating that the proposed facility is not large enough to accommodate their needs, and also that some stakeholders would not countenance hatching chickens near pigeons or parrots. These stakeholders feel their objections were ignored and consequently they are unlikely to use the facility. Should this eventuate the facility would then fail to achieve the stated objectives 1 and 3 of the PEQ facility.

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