



# **Submission to the Quarantine and Biosecurity Review**

**APRIL 2008**

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NOTE: This submission has been prepared by AHA management in consultation with the AHA Board. The opinions and proposals do not necessarily reflect the views of AHA Members; due to the limited timelines, it has not been possible to comprehensively canvass the views of all Members.

## ABBREVIATIONS

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AAHL	Australian Animal Health Laboratory (CSIRO, Geelong)
AB CRC	Australian Biosecurity Cooperative Research Centre
ABIN	Australian Biosecurity Intelligence Network
AHA	Animal Health Australia
AHC	Animal Health Committee
AusBIOSEC	Australian Biosecurity System for Primary Production and the Environment
AUSVETPLAN	Australian Veterinary Emergency Plan
AQIS	Australian Quarantine and Inspection Service
BioSIRT	Biosecurity, Surveillance, Incident Response and Tracing (information system)
BRG	Biosecurity Reference Group
BSE	Bovine Spongiform Encephalopathy ('mad cow disease')
CRC	Cooperative Research Centre
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	Department of Agriculture, Fisheries and Forestry
EAD	Emergency Animal Disease
EADRA	Emergency Animal Disease Response Agreement ( <i>Government and Livestock Industry Cost Sharing Deed in respect of Emergency Animal Disease Responses</i> )
EI	Equine Influenza
FSV	Field Surveillance Veterinarian
ILO	Industry Liaison Officer
IRA	Import Risk Assessment
LDCC	Local Disease Control Centre
NAH	National Animal Health
NAMP	National Arbovirus Monitoring Program
NCRIS	National Collaborative Research Infrastructure Strategy
NMG	National Management Group
OIE	Office Internationale des Epizooties (World Organisation for Animal Health)
PHA	Plant Health Australia
PIAPH	Product Integrity, Animal and Plant Health (division of DAFF)
SDCHQ	State Disease Control Headquarters
WTO	World Trade Organisation

## EXECUTIVE SUMMARY

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Animal Health Australia (AHA) is a not-for-profit company established by all Australian governments and the major livestock industries in 1996; see Appendix 1 for further details. The company has gained a commendable reputation for strengthening Australia's national animal health status by facilitating collaborative partnerships between AHA members and other stakeholders in the interests of the national animal health system. The system includes all organisations, government agencies, commercial companies and individuals that are involved in livestock production and their use.

This submission is structured around questions raised in the *Issues Paper* (14 March 2008) circulated to assist contributors to the Quarantine and Biosecurity Review. The AHA Business Plan and many of the associated national animal health projects managed by the company place particular emphasis on post-border biosecurity arrangements. Therefore, animal health post-border is the main focus of this AHA submission to the Review. Related programs and projects include preparedness for Emergency Animal Disease (EAD) incursions and the enhancement of biosecurity at an organisational and individual enterprise level as outlined in the National Strategic Framework (Appendix 2). A copy of the AHA Strategic Plan and the Business Plan for 2007-08 has been included. (Appendix 3)

The submission seeks to emphasise three major points:

- The need to develop a biosecurity continuum across all organisations; industry and the community, with the sharing of information and the joint development of strategic priorities to enhance the system.
- The value of effective biosecurity at all levels, across the whole quarantine-biosecurity continuum, in the national interest.
- The urgent need for commitment to and investment in improved post-border biosecurity, especially the capability and capacity to respond to emergency animal disease incursions.

### Recommendations

Quarantine and biosecurity continuum

- 1) **The Australian Government should immediately assess levels of risk across the whole quarantine/biosecurity continuum and ensure that there is adequate investment in the post-border area.**
- 2) **Governments should actively advocate and support implementation of effective biosecurity at all levels across Australia's livestock industries.**

#### Shared responsibility and national leadership

- 3) **A significant component of the quarantine function can be viewed as public good and should be funded by government. However, where a direct beneficiary (beneficiaries) of the national quarantine system can be clearly identified, in terms of gaining commercial advantage, appropriate cost sharing should be implemented.**
- 4) **Noting that it is proposed to amend the NAH Performance Standards to include specific reference to animal quarantine and biosecurity, AQIS should be encouraged to continue its active participation in this assessment process.**
- 5) **The national animal health system needs proactive, innovative and insightful leadership across all sectors.**

#### Changing operating environment

- 6) **Import Risk Assessments should include in addition to the benefits of prohibiting importations, consideration of the potential for long-term disadvantages to the community, such as loss of productivity improvement.**

#### Risks across the continuum

- 7) **High standards of quarantine and biosecurity must be established and maintained across the continuum; these standards must be subject to robust, rigorous compliance audit processes, and be publicly funded, as a 'public good'.**
- 8) **AQIS should establish and maintain a verifiable, audited, whole-of-life system to trace imported biological materials including livestock, feedstuffs, and genetic materials, with clear agreed responsibility for all post-border surveillance.**
- 9) **There should be a consistent national approach to post-border biosecurity and surveillance for livestock diseases, based on a sound risk assessment process, underpinned by appropriate resourcing, a range of audit arrangements and meaningful consultation.**
- 10) **There should be joint industry/government planning, management and investment at appropriate parts of the quarantine and biosecurity continuum, including post-border surveillance.**
- 11) **In order to redress current gaps in apicultural expertise across all levels of government, jurisdictions should identify a number of suitable staff and provide staff development opportunities to allow them to develop apicultural skills.**
- 12) **The Australian Government should continue to provide financial support to the Sentinel Hive Program, subject to a favourable benefit/cost analysis.**

- 13) **Mechanisms for enhanced communications between governments and industry at all levels should be implemented, so as to maximise the sharing and use of all available disease surveillance information.**

EADRA issues – emergency response plans

- 14) **Government needs to ensure that AHA is adequately resourced to regularly review and update the *AUSVETPLAN* series, recognising its importance as the essential technical reference for emergency animal disease responses.**
- 15) **Governments should comply with their obligations under the *Emergency Animal Disease Response Agreement*, to ensure that there is a national capacity and capability to respond to animal disease emergencies. This includes provision of adequate funding and a willingness to release staff for training events.**
- 16) **Livestock industries, consistent with their obligations under the *Emergency Animal Disease Response Agreement*, should ensure that suitable people are nominated for training and deployment to assist in an animal disease emergency.**
- 17) **There is a need to clarify the roles and responsibilities of the Commonwealth and the states and territories and to ensure all parties understand their roles and responsibilities in the regulation of quarantine and biosecurity.**
- 18) **AQIS should be resourced to enable more frequent audits related to administration of the *Australian Livestock Export Standards* to ensure ‘mandatory minimum compliance’ across the livestock export chain.**

Jurisdictional and institutional arrangements

- 19) **Government at all levels should ensure that executive and senior staff is fully familiar with the risks and consequences of breaches in biosecurity across the continuum.**
- 20) **Relevant technical expertise and experience is fundamental to the effective management of AQIS programs, and should be recognised and contribute to decision-making at the highest level.**
- 21) **AQIS, BA and PIAPH need strong and unified leadership to ensure that there is a common vision and purpose, connected with external realities, to drive organisational behaviour and cultural change.**

Culture, efficiency and resourcing

- 22) **Increased emphasis should be given to post-border surveillance particularly in relation to new and emerging diseases, opportunities for synergies such as enhanced abattoir surveillance to include EADs and rationalisation of existing surveillance programs to achieve efficiencies.**

- 23) **AQIS should ensure that the surveillance data it collects contributes to national reporting in a timely fashion, subject to confidentiality requirements.**
- 24) **Governments and livestock industries should support initiatives aimed at addressing the critical under-supply of diagnostic laboratory specialists.**
- 25) **Training is needed at all levels for all roles and functions that have to be performed in an EAD response. Government and industry need to recognise the importance of such preparedness training to ensure their compliance with the EADRA.**
- 26) **CSIRO needs to undertake an international recruiting campaign to recruit a specialist entomologist who can provide specialist apicultural diagnostic services.**

Communications and consultation

- 27) **Funding for additional human resources within jurisdictions and industry organisations is required to drive biosecurity messages through existing communication channels.**
- 28) **The Commonwealth and other jurisdictions should ensure that early and continuous consultation with industry occurs, for the successful development of any new policy or program proposal.**
- 29) **Additional government investment should be provided to ensure the continued work of cooperative research centres, in areas related to biosecurity.**

## 1. THE QUARANTINE AND BIOSECURITY CONTINUUM (Section B2)

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AHA supports the Review's broader definition of the Quarantine and Biosecurity Continuum, as opposed to the more focussed definition of a continuum that places particular emphasis on the border activities. It is important to recognise that both biosecurity and quarantine measures can be applied at various points along the biosecurity continuum, from an international level to an individual production enterprise.

What exactly is 'biosecurity'? Put simply, it is shorthand for all of the measures designed to protect a country, state, or individual farming properties from the entry and spread of unwanted animals, pests, diseases and weeds. It includes not only measures such as quarantine, but also policy, legislation, research, monitoring, movement controls, responses to incursions and so on. The Australian Biosecurity Cooperative Research Centre (<http://www1.abrc.org.au>) provides an alternative definition:

*"Biosecurity' is the protection of people, animals and ecological systems against disease and other biological threats. Biosecurity is achieved through systems that aim to protect public health, animal and plant industries, and the environment, from the entry, establishment and spread of unwanted pests and diseases."*

To the extent that quarantine and biosecurity are issues of concern for the general public and the political process, the focus has tended to be on the need to ensure effective and highly visible protective measures at the border. As shown in the recent equine influenza outbreak, this is a misguided perception; post-border biosecurity was shown to be a crucial factor in the control and eradication of the disease. It is essential to ensure there are adequate and appropriate biosecurity measures (including where necessary, quarantining of animals) implemented post-border at both regional and individual enterprise levels.

In considering the national requirement for effective protection across the whole quarantine and biosecurity continuum, it is important to recognise the need for increased investment in the post-border area of this 'multi-layered' system. In response to shrinking resource allocations, state/territory agencies are adopting a more integrated approach to animal/plant/aquaculture/environmental biosecurity. There is concern that this will result in an effective 'dilution' of funding available for more mainstream animal and plant biosecurity.

Based on the recent experience with equine influenza, and utilising existing resources, it is questionable whether Australia would be able to mount an effective sustained national response to an incursion of foot-and-mouth disease affecting more than one jurisdiction.

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| <p><b>1) The Australian Government should immediately assess levels of risk across the whole quarantine/biosecurity continuum and ensure that there is adequate investment in the post-border area.</b></p> |
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In addition to the activities of the Australian Government and state/territory jurisdictions, it is important to recognise the initiatives taken by industry to implement and strengthen biosecurity at the level of individual premises. Biosecurity requirements are an integral element of several industry-based, auditable quality assurance programs, together with husbandry procedures, hygiene, and animal welfare. During recent years, there has been an increasing rate of adoption of such programs, as industries have come to recognise these measures as an essential pre-requisite for customers further along the supply chain – wholesalers and retailers. Such proposals should be seen as part of the quarantine continuum and supported on a national basis, with a harmonised approach.

**2) Governments should actively advocate and support implementation of effective biosecurity at all levels across Australia’s livestock industries.**

*Emergency Animal Disease Response Agreement (EADRA) – refer also page 23*

It should be noted that the Australian Government, state and territory governments and peak livestock industry bodies are signatories to the *Government and Livestock Industry Cost Sharing Deed in respect of Emergency Animal Disease Responses (EADRA)*. While the primary purpose of the EADRA is to establish a mechanism that allows rapid responses for the control, containment and eradication of some 63 animal diseases, signatories are also committed to specific biosecurity requirements. Section 14 (a) of the Deed explicitly states:

*“The Parties acknowledge the need for a program of risk reduction measures, complementary to the Deed, to reduce the risk of the entry and spread of EADs including biosecurity measures for implementation and maintenance at national, regional and individual premises levels.”*

Obviously there is a responsibility for all signatories of the EADRA to have programs to reduce the risk of the entry and spread of an emergency animal disease. Section 14 of the EADRA is reproduced in full at Appendix 4.

In order to manage this area of the EADRA, AHA has established the Biosecurity Reference Group (BRG) which has representatives from the Australian and state/territory governments; and the livestock industries. The BRG has responsibility for endorsing any changes that the members make to their own plans on an annual or biannual basis. The BRG is a representative yet relatively-independent body that provides a mechanism for setting standards for the members. However to date this mechanism has not been used by the Australian Government (DAFF/AQIS) in setting quarantine/biosecurity measure for border activities. Consequently an important opportunity to link border quarantine activities with the broader biosecurity continuum and overview quarantine policy has been lost.

AHA maintains a number of projects related to the introduction of biosecurity standards/plans in the livestock industries. These aim to provide biosecurity principles to as many individual farm operations as possible. Each industry has their own plan which sets out the minimum requirements of operation and expectation.

There is now increased understanding about the importance of biosecurity, amongst other stakeholders in the national animal health system, such as saleyard operators, stock agents, dairy and meat processors, and the various sectors of the horse industry. Incidents such as the equine influenza outbreak, foot and mouth disease outbreaks in the United Kingdom and the bovine spongiform encephalopathy (BSE) incidents in North America and Japan have heightened this awareness.

As custodian of the EADRA, AHA's role is to ensure that the obligations of signatories, including biosecurity commitments, are honoured. This includes facilitation of various projects that deal specifically with an AHA member or is extended across a number of members. AHA spends approximately \$100,000 annually on the operations of the BRG and other discrete projects agreed by company members.

## 2. SHARED RESPONSIBILITY (Section B2)

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It is important to recognise that the fundamental purpose of quarantine, at the national level can be viewed from several aspects. It is necessary to firstly consider Australia's overall 'quarantine philosophy'. Is our approach to quarantine appropriate in the current international trading and socioeconomic climate? AHA believes that there needs to be a broader, more informed public debate on the benefits and disadvantages of Australia's approach to quarantine, to counter some current narrow industry responses to particular proposals that are linked to the untenable (historic) approach that we need to keep out exotic pests and diseases at all costs.

The primary role of quarantine is to allow the safe import of commodities (live animals, animal and plant genetic material, animal and plant products, food) and the safe movement of people for the benefit of the country. A significant component of the quarantine function can be viewed as public good. This introduces potentially complex cost:benefit elements into previous, more superficial/simpler discussions – but should result in a more effective cost-efficient approach.

Quarantine measures in general aim to meet an appropriate level of protection as determined by the Australian Government, consistent with our international commitments under the rules of the WTO Sanitary and Phytosanitary Agreement. As a major exporter of livestock and livestock products, Australia is heavily reliant on accessing overseas markets; this in turn depends on our ability, based on those international agreements, to demonstrate our favourable animal health status. That status is partly dependent on the maintenance of effective quarantine.

Particular quarantine measures, while taking into account public and industry opinion, must be based on a sound risk assessment process, which should be supported by the best available technical information – recognising that this will always be imperfect and incomplete.

The view of AHA is that there are undoubted public benefits in having an effective national quarantine system. It is essential that processes involving the development, review and implementation of all relevant legislation, together with underpinning regulations, protocols, standard operating procedures, other standards and guidelines, etc. should be appropriately and adequately funded on a recurring basis by the Australian Government. In addition, there should be access to appropriate contingency funding in the event of unforeseen emergencies.

It is reasonable that government provides a range of resources (people, services, and infrastructure) in support of a national quarantine system. However some components of quarantine may be viewed as a shared responsibility and commercial proposals should be utilised to support government facilities wherever feasible. Where a direct beneficiary (beneficiaries) can be identified, the cost of quarantine/biosecurity procedures (including those conducted overseas) should be met by those parties. Importantly, with joint funding there must be joint management and appropriate structures to support the joint decision making.

**3) A significant component of the quarantine function can be viewed as public good and should be funded by government. However, where a direct beneficiary (beneficiaries) of the national quarantine system can be clearly identified, in terms of gaining commercial advantage, appropriate cost sharing should be implemented.**

## **National Animal Health Performance Standards**

The National Animal Health (NAH) Performance Standards have been developed to establish benchmarks against which the capability of Australia's animal health services can be assessed and improvement measured. The Performance Standards are intended to provide a common focus for AHA's different stakeholder groups in pursuing national objectives. An important objective is to achieve national consistency in outcomes without necessarily imposing uniformity in delivery.

Each signatory to the EADRA has undertaken, as part of the Agreement to (self) assess their performance against the Performance Standards as a means of showing that their organisation has the appropriate and adequate resources in place, as stipulated in the Deed. Although AQIS participated in the Australian Government's latest self-assessment process, the Performance Standards did not include adequate detail regarding national outcomes related to animal quarantine and biosecurity. AHA proposes to rectify this deficiency in developing the next version of the NAH Performance Standards.

**4) Noting that it is proposed to amend the NAH Performance Standards to include specific reference to animal quarantine and biosecurity, AQIS should be encouraged to continue its active participation in this assessment process.**

An assessment against version 3 of the Standards (Appendix 5) was carried out in the latter half of 2006 and the independent auditors completed their report in May 2007. Several findings are particularly pertinent to this Review:

### *Surveillance*

The auditors reported a lack of coordination of surveillance activities (other than in areas where there are national programs such as NAMP). The approach to passive surveillance in particular, varies considerably between jurisdictions, and the type and quantum of data collected is a significant concern. There is considerable scope for improving disease surveillance and various initiatives are currently being implemented through the endemic diseases program and the *National Animal Health Surveillance Strategy* managed by AHA; refer page 17.

### *Leadership*

The audit of the Performance Standards showed there is scope for more clearly defining responsibility for proactive, innovative and insightful leadership in a number of areas of animal health management. The following statement is taken from the auditors' report:

*“There is an absence of clearly assigned leadership responsibilities, a chain of command and control appropriate to the cooperative nature of Australia’s animal health system.*

*Leadership uncertainties are connected to virtually all recommendations and are an obvious impediment to the implementation of effective remedial treatments.*

*Uncertainties about leadership roles and responsibilities became patently obvious during the course of the audit. These have far-reaching implications for the sustainability, effectiveness and excellence of Australia’s animal health system.”*

**5) The national animal health system needs proactive, innovative and insightful leadership across all sectors.**

*Trade and Market Access*

Market access is an area where those people who set policy, tend to assess risk from a different perspective to those agencies and industry sectors that have to actually bear the risk. This was frequently recognised by AHA members, both from the states/territories and livestock industry sectors. The Australian Government is clearly recognised as being the ‘Central Authority’ where it takes a leading role in meeting international expectations and is responsible for international reporting obligations. This position is readily supported by the state/territory governments with the implementation of supportive legislation and appropriate programs.

*Emergency Preparedness and Response*

In the assessment of the NAH Performance Standards, ‘Emergency Preparedness and Response’ was the area identified by both government and industry as the area of highest concern. Additional personnel and appropriately trained personnel are urgently required to strengthen EAD response preparedness at state and national level. Refer to Recommendation 25.

Although the assessment tool did not allow the auditors to identify the magnitude and nature of deficiencies, it is the opinion of the auditors that in some jurisdictions, resources (especially human resources) are dangerously low. This is common across the system, not just for emergency preparedness resources. AHA is currently developing plans for an independent audit of Australia’s preparedness for an emergency animal disease; these plans are still to be negotiated with members of the Company.

*Communications*

Livestock industries, followed closely by the jurisdictions, have a major concern about the capability for communication that cuts across all functions of the NAH Performance Standards. Particular areas of concern relate to information sharing, the effectiveness of liaison and contingency planning in the animal health system, and the prompt reporting of animal health problems. Both sectors expressed particular concern about the challenges of increasing biosecurity awareness among smaller landholders.

### 3. CHANGING OPERATING ENVIRONMENT (Section B3)

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The *Quarantine and Biosecurity Review Issues Paper* lists various developments that have added to the complexity of managing biosecurity and quarantine risks. AHA is in general agreement with most of the matters raised in the Issues Paper. In addition, it is suggested that the following factors are also of significance:

- The importation of vaccines for emergency animal diseases is of particular interest to AHA. In general, the risks associated with vaccine importation have been regarded at two levels – routine commercial imports and importation under emergency conditions. This differentiation reflects reality, in that the urgent need for vaccine importation to deal with an emergency situation might force government and industry to accept a higher level of risk, than would normally be the case.
- The establishment of vaccine banks and/or agreed preferential access to commercial vaccine stocks held overseas will continue to be an important part of Australia's EAD response strategies. AHA presently manages vaccine banks for foot and mouth disease and anthrax, and has negotiated the necessary approvals to enable the import of avian influenza vaccines under emergency permit conditions, should that be required. (It has been tentatively agreed that the unused stocks of EI vaccine held in Australia will be treated as a 'bank', until the expiry dates are reached.)
- Development of new technology, including 'point-of-care' (pen-side) diagnostic tests that could enable early detection of EADs in the field. While such tests might allow a more rapid response to be mounted, it should be noted that there also will be risks attached to their use, in terms of false positives, failure to report results and/or equivocal results that might be exploited by our trade competitors and customers. Declaration of an EAD incident will still depend on recognised laboratory testing.
- New technology will include the development of improved vaccines and other preventative or therapeutic measures. There is a natural tendency to place too much reliance on such treatments to protect Australian livestock from EADs but, apart from particular export requirements, these vaccines can only be used routinely once the disease occurs in the country, ie becomes endemic.
- The 2007 equine influenza outbreak, the most significant EAD incident yet experienced in Australia, has highlighted significant areas for improvement at the local, state and national levels in government and industry, in our preparedness and resourcing for such emergency situations.
- Increasing consumer and producer expectations regarding access to overseas commodities, genetic material, food items, etc.
- The emergence within Australia of previously unknown diseases, such as Hendra virus infection, Menangle virus and Bungowannah virus. Most of the new and emerging animal diseases detected recently have been found to also impact on human health (zoonotic diseases).
- There are disadvantages in implementing some policies, preventing the importation of newer genetic material for some livestock industries. The pig industry is now disadvantaged in terms of productivity efficiencies as a

consequence of this policy, and the gap continues to widen, thereby lessening Australian producers' capacity to meet domestic demands and international competitiveness.

- 6) Import Risk Assessments should include in addition to the benefits of prohibiting importations, consideration of the potential for long-term disadvantages to the community, such as loss of productivity improvement.**

#### 4. RISK ACROSS THE QUARANTINE AND BIOSECURITY CONTINUUM (Section C1)

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*Q: Is there adequate auditing and verification of pre-border, border and post-border measures to ensure that policy determinations and permit conditions, including arrangements for co-regulation with industry, are in fact meeting the appropriate standard?*

*Q: How should the quarantine and biosecurity continuum (pre-border, border and post-border) be monitored to ensure that the system functions (to prevent and respond to pest and disease incursions)?*

From an AHA perspective, the policies and procedures for issue of import permits appear to be satisfactory and generally effective. However on occasions there appears to be inadequate verification to ensure that permit conditions are meeting appropriate standards. Import permits are substantially paper-based, available only from the point of entry and do not always correlate with the quantities actually imported; for example, a permit may be issued for the importation of 15 head of cattle and only 12 will arrive; this is only recorded at the point of entry into Australia. Note that this applies to other products such as semen or embryos.

AQIS does not accept any responsibility for post-entry surveillance on animals or materials that have been imported once they have cleared the border requirements, irrespective of whether they have been placed under lifetime quarantine or other levels of quarantine. The state/territory governments provide some level of surveillance when and where required but this has recently been an area of disagreement between state governments and AQIS. There is a lengthy and time-consuming process to check permits against actual imports, requiring funds to be specifically identified for this task.

The 2006 audit of Australian biosecurity arrangements conducted by the Food and Veterinary Office (European Union) for BSE also highlighted the fact that import testing protocols were not being followed for the importation of stock feed or component ingredients of stock feed. Either the protocols need to be rewritten or the existing protocols need to be followed. Deficiencies in such a crucial area leave Australia open to criticism from our trading partners.

The recent EI incident would suggest that while the quarantine protocols for horse importations were demonstrably adequate, there were weaknesses in their implementation. As these matters are the subject of a judicial inquiry, it is not appropriate for AHA to make further specific comment.

In the case of imported animal products, eg pork; AQIS only inspects importing processors three times per year. Two of these inspections are scheduled and the third is unannounced. Because of the lack of a 'paper trail' to enable tracing of imported animal feed products such as meat and bone meal or fish meal, AQIS is unable to maintain any post-border control over such products. As a consequence, national biosecurity is placed at risk.

**7) High standards of quarantine and biosecurity must be established and maintained across the continuum; these standards must be subject to robust, rigorous compliance audit processes, and be publicly funded, as a ‘public good’.**

**8) AQIS should establish and maintain a verifiable, audited, whole-of-life system to trace imported biological materials including livestock, feedstuffs, and genetic materials, with clear agreed responsibility for all post-border surveillance.**

The effectiveness of the quarantine/biosecurity continuum should be monitored by various means, including:

- Regular desk-top audits of policies and procedures.
- Random, unannounced compliance checks undertaken by an independent body, similar to Ausmeat P/L.
- Periodic simulation exercises that test different aspects of the system.
- Liaison between affected parties via robust consultative processes.
- Joint industry/government planning and investment at appropriate parts of the continuum.

In establishing whole-of-life traceability for imported biological materials, consideration could be given to possible mechanisms whereby the beneficiaries contribute to the costs of such a system.

At present, the various organisations involved at different levels of the continuum operate almost independently, with minimal coordinating mechanisms. By contrast, AHA operates within a framework that encourages effective consultation and shared ownership of national programs, with appropriate accountability.

AHA is responsible for managing the *National Animal Health Surveillance Strategy* that has been endorsed by PISC and industry members. The Strategy aims to establish projects and systems for ongoing targeted monitoring for a number of livestock diseases. The objectives of the Strategy are to:

- Ensure the rapid detection of exotic, new and emerging, re-emerging and endemic diseases that threaten human health, food safety, animal welfare, animal productivity, market access, wildlife health, and environment.
- Establish and monitor the distribution and occurrence of diseases of national and international significance to Australia’s terrestrial and aquatic animal production industries.
- Provide reliable and timely information on the animal health status of Australia’s terrestrial and aquatic animal production industries to satisfy domestic and international market access and reporting, human health, food safety and animal welfare requirements.
- Establish collaborative arrangements between the public, animal owners, industry and governments to enable the collection and sharing of animal health

information in relation to human health, production and aquatic animals, wildlife and companion animal sectors.

- Identify short and medium term training needs to underpin surveillance requirements. Ensure surveillance priorities are integrated with Australia's laboratory and testing capabilities.

Post-border issues relating to imported livestock and livestock products are mainly the responsibility of the states and territories, though most of the relevant legislation rests with the Commonwealth Government. With diminishing resources, states and territories have found it increasingly difficult to service this part of the continuum. The NAH Performance Standards Auditors report that in the NT, for instance, the imposition of an 'efficiency dividend' has reduced the animal health staff from 28 to 18 over a 10-year period. Under such circumstances it would be difficult to accept that Australia is not at risk from EAD incursions because of an inability to maintain effective surveillance (and respond effectively).

For post-border disease surveillance, monitoring at a project level is undertaken regularly to ensure that particular project objectives and goals are being met. However, with several of the passive surveillance programs undertaken by the states and territories, the objectives, outcomes or outputs are less evident and there appear to be no defined parameters of operation or reporting commitments.

**9) There should be a consistent national approach to post-border biosecurity and surveillance for livestock diseases, based on a sound risk assessment process, underpinned by appropriate resourcing, a range of audit arrangements and meaningful consultation.**

Currently many surveillance activities are project-based, dependent for their continuity on the vagaries of funding cycles. The 'compartmentalisation' of funding often precludes efficiencies that might be possible with more strategic investment covering a broader range of activities. AHA believes there is merit in developing a rationalised approach to the Surveillance Strategy to encourage synergies and efficiencies in surveillance activities. Changing to this approach will require commitment from government at all levels.

**10) There should be joint industry/government planning, management and investment at appropriate parts of the quarantine and biosecurity continuum, including post-border surveillance.**

#### *E-surveillance initiative*

The important, inextricable link between surveillance for exotic animal diseases and those diseases that are endemic in Australia is often overlooked. In many field situations, endemic diseases can be indistinguishable from a range of significant emergency (exotic) animal diseases, and it is essential that we have a good understanding of the incidence and distribution of the former.

During the past 18 months, informal discussions between AHA, AQIS and Meat and Livestock Australia have led to the establishment of the 'E-surveillance' project that aims to utilise modern computer technology to capture information at abattoirs about a range of economically-significant diseases and other conditions, for the benefit of producers and others along the production chain. This is an excellent example of a collaborative project where useful information will be obtained by enhancing existing mechanisms, then shared for potential economic and public health benefit.

#### *Apiculture industry*

The apiculture industry is particularly vulnerable to the risk of an EAD incursion, and the effectiveness of present surveillance activities can be questioned. The Varroa mite (*Varroa destructor*) is undoubtedly the greatest present threat to beekeeping in Australia and the \$1.7 billion plant industries that are dependent upon pollination by honeybees.

Australia is one of the few countries free from *Varroa*. In early 2000 the mite was found in the North Island of New Zealand and has since spread to the South Island; many believe it is inevitable that *Varroa* will eventually enter Australia. Overseas experience suggests that should the mite become established here, it would spread rapidly and would, within a few years, kill most colonies not being treated with an appropriate acaricide. Treatment is expensive both for the purchase of the acaricide and for the additional labour involved.

The National Sentinel Hive Program was established in 2000 to enhance surveillance for honeybee parasites (most notably *Varroa*) and exotic bees in the vicinity of seaports. The program operates at 27 ports, where the sentinel hives are provided by cooperating beekeepers under the coordination of the Australian Honeybee Industry Council. In some cases, the hives are provided by the respective state departments of agriculture.

The program is currently funded and coordinated by the Australian Government (DAFF). There are significant 'in kind' costs which are met by state departments of agriculture and participating beekeepers. It has been agreed that after July 2009, AHA should manage the program and the company has accepted this task in-principle, subject to adequate resourcing.

During the past few years, there has been a steady reduction in the number of apiculture specialists in government, with greater reliance being placed on bee producers whose average age is increasing. AHA understands there is now only one specialist bee entomologist working in Australia, and he is contemplating retirement. There is an urgent need to redress current gaps in apicultural expertise across all levels of government. Jurisdictions should identify a number of suitable staff and provide staff development opportunities to allow them to develop apicultural skills.

**11) In order to redress current gaps in apicultural expertise across all levels of government, jurisdictions should identify a number of suitable staff and provide staff development opportunities to allow them to develop apicultural skills.**

**12) The Australian Government should continue to provide financial support to the Sentinel Hive Program, subject to a favourable benefit/cost analysis.**

*Q: Are the arrangements for sharing pest and disease information between the Commonwealth, the states/territories and industries working adequately?*

*Routine information sharing*

The routine sharing of animal disease information between the Commonwealth, other jurisdictions and industries could be significantly improved. Informal networks provide opportunities for individuals to share information, but leave no audit trail and no guarantee that information gained will be shared with those who need to know.

The situation with respect to industry sharing information with regulatory authorities is less clear. A report by Andrew Turner Consulting (2005) found that pig industry veterinarians in particular were critical of communications during an investigation into suspect Post-weaning Multi-systemic Wasting Syndrome (PMWS) cases in SA and NSW. Turner noted that confidentiality issues must not be allowed to hinder government communicating with veterinarians associated with the industry in which an EAD is suspected or occurring and recommended a number of ways of improving this communication. The opposite can be said in the poultry industry where surveillance data collected by the industry is not shared with the governments.

As a member of the OIE, Australia has obligations to report on disease incidents accurately and in a timely manner. Transparency through information sharing is necessary for this obligation to be met.

*Information sharing during an EAD response*

The formal framework and structures for pest and disease information sharing and joint decision making during an EAD response are established under the EADRA (National Management Group and Consultative Committee on Emergency Animal Disease) and AUSVETPLAN (LDCC interstate liaison officer and LDCC/SDCHQ Industry Liaison Officer/Coordinator). The development of the proposed ABIN and BioSIRT projects appear to be designed to enhance electronic sharing of information, but access to the information, particularly that within BioSIRT will be restricted to authorised users.

The recent equine influenza experience showed that the arrangements between the states and the Commonwealth generally work well, however timeliness of the information required at meetings continues to be an issue. Access to agenda information by industry members of NMG and CCEAD was dependent on their ability to access dedicated websites, creating reliance on adequate broadband connections. There was a lack of clarity about the confidentiality of this information and the degree to which industry members could use the information as the basis for consultation to achieve cohesive decision-making by affected industry representatives.

Broader industry access to timely information presented some difficulties. A post-EI survey of trained ILOs indicated they got their information about the disease from the media (newspapers, television and radio), DPI websites, friends and TAFE. Providing industry and the broader community with relevant, timely and sufficient information to engender on-going confidence and support during a response remains challenging. Multi-faceted approaches need to be developed, maintained and on-going to ensure information gets to people at the right time.

**13) Mechanisms for enhanced communications between governments and industry at all levels should be implemented, so as to maximise the use of all available disease surveillance information.**

*Q: Are Australia's emergency response plans for exotic pests and disease outbreaks adequate?*

**AUSVETPLAN**

AUSVETPLAN is the national plan for responding in a consistent manner to an outbreak, or suspected outbreak, of an emergency animal disease (EAD) anywhere in Australia. The plan has been developed and agreed to by the Australian national, state and territory governments and relevant livestock industries to ensure that a prompt, efficient and effective response can be implemented with minimal delay.

The recent incursion of an EAD, equine influenza, whilst clearly demonstrating the value of AUSVETPLAN, has identified areas for improvement, not only in the effectiveness of border security, but in several important areas of EAD preparedness and response. The resourcing of related operational plans; the lack of trained personnel to undertake a wide range of response roles; and a lack of knowledge about well-established response mechanisms and agreements are examples.

AUSVETPLAN provides a comprehensive framework that sets out the various roles, responsibilities and procedures that will be followed by all agencies in an EAD response. These procedures are contained in a series of 52 manuals that deal with 30 diseases, nine specific types of enterprise and various operational procedures, including valuation and compensation. All AUSVETPLAN manuals are available on the AHA website. Exotic diseases not covered by a specific disease manual are considered either highly unlikely to occur in Australia or, if they did, would have minimal consequences and be relatively simple to eradicate. Shorter summaries have been developed for these diseases.

AUSVETPLAN is used as the reference for training activities conducted by the jurisdictions, industry, the Australian Government and by AHA. The outcomes of training and exercises provide input to the updating of the AUSVETPLAN. Adequate training and exercise opportunities are critical to ensure that AUSVETPLAN is relevant to an EAD incident. Resources for and the expertise to conduct EAD training and exercises are critically important to ensuring that AUSVETPLAN is always ready for use in the event of an incident.

It is also noteworthy, that AUSVETPLAN manuals have been used by various overseas countries, as a basis for their own emergency animal disease response plans.

AHA manages the development and maintenance of AUSVETPLAN on behalf of its government and industry members. Manuals undergo a thorough endorsement process before publication. This involves consultation with all interested parties including government and industry. This endorsement process can become extended if any of the parties is unable to assign people with the necessary skills and experience to review the documents. This has been a significant reason why some manuals have not been updated since 1996, although extra resources provided to AHA by DAFF have assisted in updating some of the older manuals. With policy on emergency disease response under constant review and with technical changes to response options also constantly changing and improving, there is need for both industry and government expertise to be readily available.

**14) Government needs to ensure that AHA is adequately resourced to regularly review and update the AUSVETPLAN series, recognising its importance as the essential technical reference for emergency animal disease responses.**

*Q: Are the current cost-sharing arrangements between Commonwealth, state and territory governments and affected industries that apply in the event of a disease incursion, appropriate?*

The *Government and Livestock Industry Cost Sharing Deed in respect of Emergency Animal Disease Responses (EADRA)*, signed in March 2002, has been used for several EAD incidents and also in a number of EAD simulations, where response capabilities have been tested. In general, the EADRA has proved to be a very useful mechanism whereby cost sharing arrangements are agreed before the occurrence of an EAD incursion. It is noteworthy that several overseas countries are using the EADRA as a model on which to base their own contingency plans.

The EADRA brings together, in a cooperative relationship, the Commonwealth and State/Territory Governments with groups that are nationally representative of the livestock industries (Parties to the Deed). Signed in 2002, the EADRA established ‘*a mechanism to facilitate the making of rapid responses to, and the control and eradication or containment of, certain animal diseases*’<sup>1</sup>.

The EADRA sets the framework for managing and funding responses to EAD incursions. By its very nature it encourages interdependencies, collaboration, information exchange and cost-sharing. Since its introduction it has contributed to cultural change. The strength of the EADRA as a tool to guide a response and a mechanism to bring together parties to a response has been ably demonstrated during the recent equine influenza outbreak.

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<sup>1</sup> EADRA Variation No 03/02 – 02/02/06, Recital A

Although the initial negotiation of the Agreement was a notable achievement, experience since 2002 has shown various areas where the document could be refined and improved. As part of an on-going improvement process, AHA convenes an annual EADRA workshop, where Parties to the Deed have been able to consider a series of revisions and amendments. During 2007, consistent with the terms of the Deed, a major five-year review was conducted; due to the subsequent equine influenza incident, it was necessary to defer consideration of the review outcomes.

It is important to note that the obligations of signatories to the EADRA extend well beyond the sharing of costs in the event of an EAD incident. They also commit to an agreed management process in the event of an incursion; the maintenance of an acceptable level of response capability, availability of trained personnel and the preparation and implementation of biosecurity plans; reference to the latter appears elsewhere in this submission.

During the equine influenza response, as expenditure on the response increased to significant amounts, the horse industry initiated a request that the disease be re-categorised from Category 4 (80:20 = industry:government apportionment of costs) to Category 2 or 3. Such a change would have significant implications for cost sharing.

According to the terms of the EADRA, AHA established an EAD Categorisation Panel, that has now concluded its deliberations and made its recommendations, one of which is that the definitions and criteria for the categorisation of diseases be reviewed and updated. The Panel found that the current guidelines to be vague, inconsistent and outdated in the present economic environment. In this regard, it is interesting to note that many of the arguments surrounding the categorisation of particular diseases relate more to economic issues than strictly technical matters. It is proposed to pick up these issues in the next round of the EADRA review process.

**15) Governments, consistent with their obligations under the Emergency Animal Disease Response Agreement, should ensure that there is a national capability to respond to animal disease emergencies. This includes provision of adequate funding and a willingness to release staff for training events.**

**16) Livestock industries, consistent with their obligations under the Emergency Animal Disease Response Agreement, should ensure that suitable people are nominated for training and deployment to assist in an animal disease emergency.**

## 5. LEGISLATIVE FRAMEWORK (Section C2)

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*Q: Are the current roles and responsibilities of the Commonwealth and the states and territories well understood and operating effectively?*

During the national consultative process employed to develop the NAH Performance Standards, working groups identified the need for:

- *'harmonised legislation for control of exports and imports of livestock and products', and*
- *'effective and efficient regulatory systems to ensure a high level of compliance with relevant legislation with periodic review'.*

It is clear from the responses given by AHA government and industry stakeholders during the first audit of the NAH Performance Standards that the current roles and responsibilities of the Commonwealth and the states and territories are not well understood and nor are they operating effectively.

In relation to the control of exports and imports of livestock and products, the state/territory governments have a role of supporting the Australian Government and appropriate legislation. This approach was audited by AHA as part of the NAH Performance Standards, where the following risks were identified:

- *'Fragmented, duplication and inefficient regulatory framework breaks down the national system'.*
- *'Regulatory system does not achieve compliance.'*

Industry rated these risks as being high whilst the government sector only rated the second risk as medium-to-high.

Clearly, there is a need to clarify roles and to ensure parties understand their roles and responsibilities.

**17) There is a need to clarify the roles and responsibilities of the Commonwealth and the states and territories and to ensure all parties understand their roles and responsibilities in the regulation of quarantine and biosecurity.**

### *Animal welfare*

AQIS is responsible for certifying animal welfare at export abattoirs and for live animal exports under the *Australian Standards for Export of Livestock, Version 2.1* (ASEL V2.1). Animal welfare is increasingly becoming an issue of community and worldwide concern that may impact upon market access. Livestock industries require a robust auditable system that demonstrates welfare standards have been met, mitigating the risk of a challenge from animal welfare activists.

The assurance process for live export welfare is conducted under a system of audit of exporter declarations, third party veterinarians' declarations and livestock inspections in pre-export facilities. The standards contained in the ASEL V2.1 developed by DAFF are considered world's best practice. Nonetheless there are some aspects of the Commonwealth and jurisdictional regulatory systems where improvements could provide more effective regulation of the live export industry. Communication

between the relevant Commonwealth and jurisdictional agencies could be improved, and a strengthening in regulatory policy would be indicated.

Recent changes to the *Export Control Act 1982* place greater emphasis on compliance by exporters and private veterinarians involved in certification. In 2002, the Livestock Export Review (*Keniry Report, page 35*) referred to the existing legislation thus:

*“...breaches of the standards do not necessarily attract any sanction unless Livecorp withdraws accreditation from an exporter. The Review has heard that this rarely occurs. Whatever regulatory system is in place, its effectiveness will only serve Australia’s interests if its outcomes are adequately audited to ensure compliance. This, of course, has resourcing implications for government.”*

The 2002 Review recommended that *“Government must be solely responsible in the relevant legislation for granting export licences and permits and enforcing compliance by exporters against the national standard.”*

**18) AQIS should be resourced to enable more frequent audits related to administration of the Australian Livestock Export Standards to ensure ‘mandatory minimum compliance’ across the livestock export chain.**

## 6. JURISDICTIONAL AND INSTITUTIONAL ARRANGEMENTS (Section C3)

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*Q: Is the division of roles and responsibilities between government, industry and individuals appropriate? Are they working well in practice?*

Suggestions for the harmonised legislation for control of exports and imports of livestock and products, and effective and efficient regulatory systems to ensure a high level of compliance referred to in the previous section should provide clarification of the division of roles and responsibilities.

In the event of an emergency animal disease the roles and responsibilities of government and industry are clearly defined in the EADRA and AUSVETPLAN. Recent experience has shown that it is not automatic that these roles and responsibilities are clearly understood or applied consistently. Personnel in industry and government who have been trained for EADRA or AUSVETPLAN roles were patently better equipped and more confident in their roles responsibilities. Those who had no previous training took significant time to ‘get up to speed’ and in some instances, their lack of understanding of their roles and responsibilities was an impediment to the response.

Under normal business arrangements relating to routine or endemic disease surveillance, roles and responsibilities are better, but not fully understood.

The loss of technical expertise and of corporate memory through staff turn-over, corporate down-sizing or corporate rationalisation has had a negative impact on the understanding of roles and responsibilities and operational effectiveness. The lines have become blurred and in many instances it is at the most senior, policy and decision making level where the impact is most keenly felt.

**19) Government at all levels should ensure that executive and senior staff are fully familiar with the risks and consequences of breaches in biosecurity across the continuum.**

**20) Relevant technical expertise and experience is fundamental to the effective management of AQIS programs, and should be recognised and contribute to decision-making at the highest level.**

*Q: Is there appropriate interaction between Biosecurity Australia, AQIS and the Product Integrity, Animal and Plant Health Division and other relevant Commonwealth and state and territory agencies?*

*Q: Should the current approach, which separates the roles and responsibilities of AQIS, Biosecurity Australia and the Product Integrity Animal and Plant Health Division (DAFF), be integrated?*

The 1996 report by Nairn *et al* “*Australian Quarantine – A Shared Responsibility*” recommended the formation of a single statutory body (recommendations 9-22) to oversee quarantine services and policy. The report also emphasised the need to take a broader approach to quarantine than just a “barrier approach”. The new approach would include pre-border, border and post-border activities. With the separation of BA and AQIS, there has been a separation of the technical expertise from the service delivery and the gap appears to be widening. Observations would suggest that Quarantine would be better provided with the two organisation amalgamated into the one body.

The report also emphasised the need for national surveillance and monitoring within Australia. Within Australia the livestock industries have generally rejected the idea of active surveillance for possible EADs, preferring the passive surveillance approach. While this approach is a low cost option it may be less tenable in the future as trading partners require demonstrated ‘proof of freedom’.

Jurisdictions appear to be reluctant to become involved in active surveillance for either exotic or endemic diseases for reasons of cost and lack of technical resources, however at least one state (Victoria) has implemented a scheme to pay for extended investigations by private veterinarians into clinical cases that may be potential EADs or an emerging disease.

It is noted that the outcomes of the Equine Influenza Inquiry (Callinan) may be of relevance, especially regarding the relationship between BA and AQIS. AQIS, Biosecurity Australia and PIAPH all reside within the broader corporate structure which is DAFF. The functions and activities of the three entities are closely linked, but not currently integrated.

As with any large organisation, the establishment of open, proactive rather than reactive, communication and effective working relationships will minimise a ‘silo mentality’ and encourage cross-functional communication and enhanced outcomes.

Integration of AQIS, BA and PIAPH may not necessarily overcome any perceived problems. Fundamental to the solution is the need to ensure that there is a common vision and purpose, connected with external realities, to drive organisational behaviour and cultural change.

**21) AQIS, BA and PIAPH need strong and unified leadership to ensure that there is a common vision and purpose, connected with external realities, to drive organisational behaviour and cultural change.**

## 7. CULTURE, EFFICIENCY AND RESOURCING (Section C4)

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*Q: Is there sufficient priority given to monitoring and surveillance post-border?  
Who should provide these functions and resources?*

Most of the current AQIS focus appears to be on border control, based on the premise that most investment should be aimed at keeping out exotic pests and diseases at all costs. There is an equally cogent argument that the recent discovery within Australia of previously-unknown organisms such as Hendra, Menangle and Bungowannah viruses points to a need for a greater post-border effort. There are significant public health implications because most of the new and emerging animal diseases detected recently have been found to also cause disease in humans, ie zoonotic diseases.

Post border whole-of-life surveillance to trace and audit all imported biological materials (eg. livestock, feedstuffs, genetic materials), previously referred to in Section C1, should be given a much higher priority. AQIS cannot abrogate its on-going responsibility relating to permitted imports, nor should it assume that its obligations will be covered by other surveillance programs provided by the jurisdictions. There must be an effective transfer of responsibility and sharing of information along the biosecurity continuum.

The monitoring and surveillance for animal diseases is a high priority for AHA; this was one of the main reasons for the Company's establishment. The responsibility for provision of on-going surveillance activities rests primarily with the state/territory governments as they have the relevant legislative powers.

AHA has recently negotiated arrangements with AQIS to provide abattoir surveillance (including sample collection and despatch) in NSW and Victoria for up to 20 endemic diseases. The program will provide regular, timely reporting into local state DPIs, national disease surveillance information systems and to industry. AHA is currently negotiating similar arrangements for the provision of abattoir surveillance services in WA. There is potential, with adequate resourcing, for the program to be extended to all states and territories and to encompass a greater spectrum of diseases.

There are numerous monitoring/surveillance programs run by individual states and industry organisations (including private companies) that are not recorded at the national level. The collection of this data would be beneficial for trade negotiations, etc.

During the 2007 NAH Performance Standards audit, the auditors reported a lack of coordination of surveillance activities (other than in areas where there are national programs). The approach to passive surveillance, in particular, varies considerably between jurisdictions, and is seen as a concern. There is considerable scope for improving disease surveillance currently in place through the endemic diseases program and the NAH Surveillance Strategy, and for an extension of these programs to include AQIS surveillance activities related to their ongoing responsibilities for permitted imports.

Post border surveillance should be a shared responsibility involving:

- the individual producer through on-farm biosecurity programs
- jurisdictions through their implementation of endemic diseases program and the NAH Surveillance Strategy
- AQIS through NAQS, enhanced abattoir surveillance and whole-of-life surveillance to trace and audit all imported biological materials; and
- the Australian Government through specific surveillance programs such as NAMP and the Sentinel Hive Project.

Consideration should be given to providing industry incentives (not necessarily financial) to ensure that disease data collected at the industry level contributes to national data collection.

**22) Increased emphasis should be given to post-border surveillance particularly in relation to new and emerging diseases, opportunities for synergies such as enhanced abattoir surveillance to include EADs and rationalisation of existing surveillance programs to achieve efficiencies.**

**23) AQIS should ensure that the surveillance data it collects contributes to national reporting in a timely fashion, subject to confidentiality requirements.**

*Q: Are the requisite skills and disciplines available to deliver optimal quarantine and biosecurity systems?*

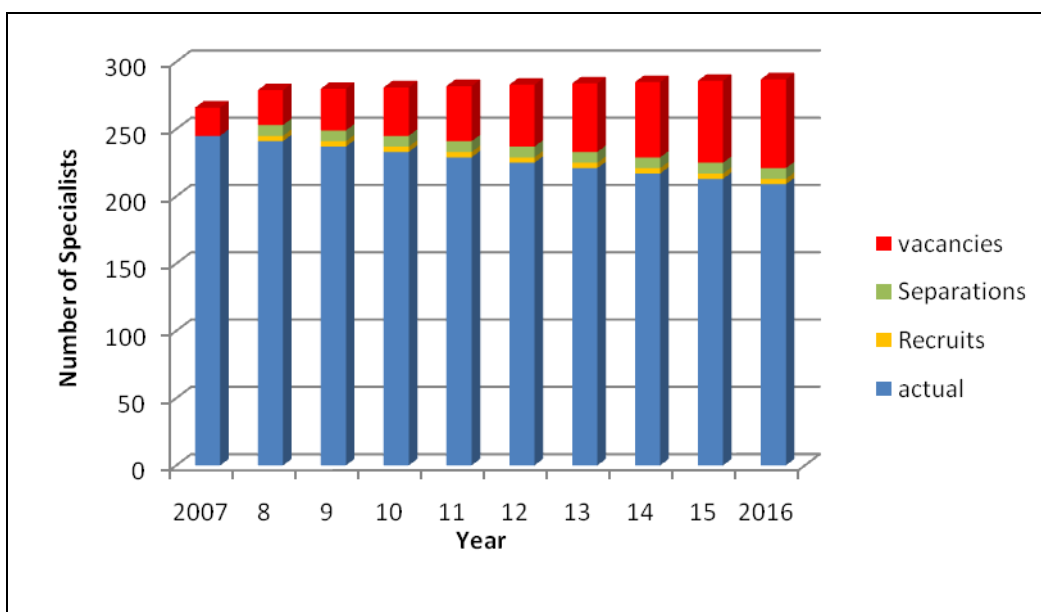
*Q: Is the education and training of personnel with these skills adequate? If not what are the highest priority areas?*

*Parasitologists, entomologists and veterinary diagnosticians*

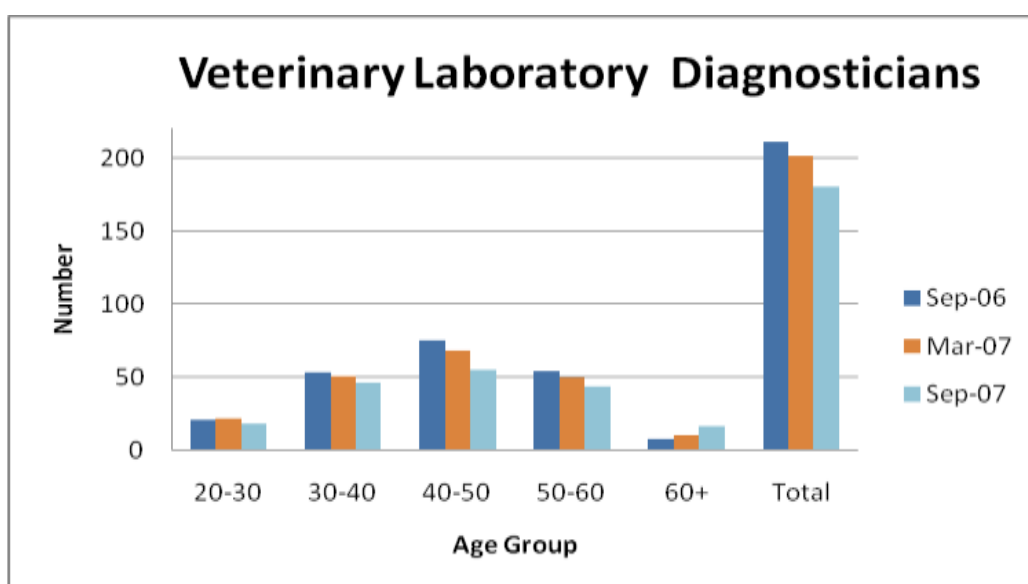
The overwhelming anecdotal evidence indicates that parasitologists and entomologists are in short supply. Animal disease laboratory diagnosticians, especially pathologists have reached critically low numbers. There are now very few registered specialists in these disciplines in Australia (24 specialist pathologists in the state/territory laboratories, including AAHL – half of which are over 50 years of age). The following histogram shows that if no training initiative is put in place there will be 75 unfilled positions by 2016. This is a conservative estimate (Source: *The Australian Animal Disease Diagnosis Training Initiative*, Report to AHA, May 2007). At the time this survey was undertaken there were 25 unfilled vacancies in the diagnostic sector.

Currently the universities do not have the resources required to train an additional 5-10 post graduate pathology students per year. The National Animal Health Laboratory Strategy, Training and Employment Committee, in collaboration with Australia's seven veterinary schools, have initiated the establishment of a consortium to provide networked training across Australia. The new initiative *Australian Consortium for Animal Disease Diagnosis* would provide the much-needed training for animal disease diagnosticians, with a target of 50 trained or in training after a 5-year period. The initiative will require collaborative funding of \$21 million. Funding sources are yet to be identified.

## Supply and Demand for Veterinary Laboratory Diagnosticians



**Figure 1:** The current situation. Assumptions: starting population of 245, with a deficit of 21 positions, demand increases by one position per year, eight leave and four are recruited.



**Figure 2:** Age distribution of veterinary laboratory diagnosticians, showing an overall decline in skilled diagnostic staff in jurisdictional and private diagnostic laboratories over 18 months (15%).

Following training, Masters Degree graduates can pursue separate examination by the Australian College of Veterinary Scientists, the American College of Veterinary Pathologists and the European College of Veterinary Pathologists. This will provide for specialist accreditation and international benchmarking of graduates.

**24) Governments and livestock industries should support initiatives aimed at addressing the critical under-supply of diagnostic laboratory specialists.**

*EAD Response personnel*

Australia's national system for preparing for and responding to emergency animal diseases (EADs) encompasses all activities relating to disease surveillance, monitoring and response. These activities are carried out by Australian national, state and territory governments, livestock industries, CSIRO, private veterinarians and laboratories, and other animal health workers.

The following comments focus on the post-border responsibilities and obligations within the purview of AHA, its jurisdictional and industry members.

Australia has well established arrangements for responding to an emergency animal disease outbreak, such as equine influenza. Central to these arrangements are the *Government and Livestock Industry Cost Sharing Deed in respect of Emergency Animal Diseases* (EADRA) and the Australian Veterinary Response Plan (AUSVETPLAN), which provide guidance on the management of EAD responses.

The EADRA clearly recognises the primacy of jurisdictional legislation in relation to “*responsibilities of the state and territory agencies for managing the eradication or containment of animal disease within their jurisdictions*”.

How a Party to the EADRA resources its EAD response capability is the responsibility of the Party. The EADRA does not specify a model; however, it does place certain obligations on Parties to:

*“wherever possible, use personnel for the roles listed in Part B of Schedule 4 who are accredited pursuant to the National EAD Training Program conducted by AHA and listed on the national data base of accredited personnel; and*

*take appropriate steps to have appropriate numbers of their personnel trained and accredited pursuant to the National EAD Training Program. AHA may advise each Party of the number of persons it considers to be appropriate.”*

The roles listed in Part B, Schedule 4 cover AUSVETPLAN roles in State Disease Control Headquarters (SDCHQ), Local Disease Control Centres (LDCC) and Forward Command Posts (FCP) and in the field (including the role of Field Surveillance Veterinarian [FSV]).

The ability to discharge the responsibilities listed in the Recitals to the Deed necessarily involves the jurisdiction ensuring that those deployed to respond to a disease outbreak in their jurisdiction will be appropriately trained and accredited to a standard agreed by the Parties. Collectively, the signatories to the EADRA require this as a condition for access to the benefits available through the EADRA.

EAD preparedness training extends beyond conventional formal training for AUSVETPLAN roles and includes, but is not limited to, biosecurity awareness campaigns, workshops, professional development opportunities, exercising, etc. At the jurisdictional level, the level, type and nature of EAD preparedness training should be commensurate with the jurisdictions assessment of its own risk.

Resourcing an EAD response is challenging, as has been demonstrated in the equine influenza response. The capacity of government agencies to resource from within their organisations has diminished over time. Outsourcing, ageing demographics and reducing numbers of auxiliary personnel (such as stock inspectors) have contributed to a reduced capacity to respond. Despite jurisdictional moves towards a whole-of-government approach to resourcing, the need to access and use private practitioners and contract staff to resource a response is now a necessity. (refer Appendix 6 for statistics)

An EAD response often is a long, drawn-out affair. To meet our international animal health obligations and ensure continuity of livestock and livestock products, Australia needs to eradicate the disease and demonstrate proof of freedom. Both take time and dedicated resources.

Deficiencies in adequate levels of preparedness amongst personnel at all levels became glaringly evident during the EI outbreak. Being prepared to contribute effectively in the quarantine-biosecurity continuum in the event of an EAD response requires carefully-planned training and periodic refresher courses. Preparedness training is needed at all levels and for all roles and functions performed in an EAD response. Government and industry need to recognise the importance of preparedness training to ensure their compliance with the EADRA and to have confidence in their ability to respond efficiently and effectively in the event of an EAD.

Exercising is not a substitute for training. The use of EAD related exercises is a strategic process that is used to monitor the effectiveness of the biosecurity continuum at all levels. These exercises provide important feedback as to how the various roles and responsibilities are enacted on a day-to-day basis and during emergencies. However, without preparatory training, those participating in an exercise will feel less than satisfied with exercise outcomes and their own performance.

It is critical that the lessons identified during exercising and responses are translated into improvements in preparedness systems and personnel. To allow recommendations to languish on the shelf is not a solution. Government needs to commit both time and resources to ensure the requisite skills and disciplines are available to deliver optimal quarantine and biosecurity systems.

**25) Training is needed at all levels for all roles and functions that have to be performed in an EAD response. Government and industry need to recognise the importance of such preparedness training to ensure their compliance with the EADRA.**

*Q: Is infrastructure such as diagnostic laboratories adequate to meet quarantine and biosecurity needs? If not what are the highest priority areas?*

Various initiatives to upgrade and co-locate diagnostic facilities are currently in train. When these are completed, most state and territory laboratories will be able to meet their biosecurity needs. AHA understands that South Australia may be facing the biggest challenge in this regard. However as mentioned above, it is the critical shortage of specialist diagnostic personnel that poses the biggest problem for laboratories, rather than a lack of facilities.

The *National Animal Health Laboratory Strategy* aims to develop and deliver a national animal (terrestrial and aquatic) health laboratory service capability that supports the effective surveillance and control of animal diseases, residues or other harmful conditions of major importance to Australia. By this means, it will help to improve animal and human health, food safety and quality, market access, animal welfare, animal productivity, biodiversity, wildlife health and national biosecurity.

The objectives of the Strategy are to:

- Enable the rapid and accurate diagnosis of exotic, endemic, new and emerging animal diseases and other harmful conditions that threaten human and animal health, food safety and quality, market access, animal welfare, animal productivity, biodiversity, wildlife health and national biosecurity.
- Identify and maximise opportunities for collaboration between Commonwealth, state/territory, university and private laboratories, and strengthen links with relevant public health and analytical laboratories.
- Ensure that the NAHL system will meet future requirements for on-going disease surveillance, in-depth case investigations and surges in demand for testing during emergency situations.
- Strengthen the national research capability in animal health, including molecular-level pathology, test development, test standardisation and test validation.
- Implement an agreed laboratory information management system based on uniform reporting standards, to facilitate the exchange of information.
- Strengthen training capabilities for the NAHL system.
- Provide an improved source of advice to industry funding bodies on research and development for laboratory tests/services, and contribute to R&D strategies.

#### *Australian Biosecurity Intelligence Network (ABIN)*

The ABIN is a welcome initiative that will provide an important biosecurity tool. Under the National Collaborative Research Infrastructure Strategy (NCRIS), the Government is providing \$542 million over 2005-2011 to provide major research facilities, supporting infrastructure and networks necessary for world-class research. While the primary focus is on research, it is recognised that the benefits of such infrastructure can flow through to operational/applied areas, such as emergency response capability.

The ABIN Investment Plan emphasised that the network should be of benefit to both researchers and biosecurity operators. Following in-principle support from the AHA and PHA Boards, and based on the Investment Plan, a joint AHA/PHA bid to host the new ABIN organisation was submitted and subsequently approved, with the addition of Queensland Department of Primary Industries and Fisheries as a partner. It is proposed that ABIN (and the \$16.5 million initial NCRIS funding) be managed by a Board, with a CEO and small support group based at Coopers Plains, Queensland.

AHA is currently responsible for the management of two major national programs that would directly benefit from the ABIN – the National Animal Health Surveillance Strategy and the National Animal Health Laboratory Strategy. The latter aims to develop a national laboratory network, with a cooperative, shared approach to resourcing, training, diagnostic and research capabilities, etc. One of the proposed pilot projects that has been selected to test the ABIN concept, *Veterinary Pathology*, aims to improve national collaboration of pathologists working in biosecurity research, animal disease surveillance and emergency response.

These objectives neatly mesh with those of the Australian Animal Pathology Standards Program (managed by AHA), where considerable progress has been made in developing a series of on-line learning modules, access to a national register of digitised case materials and a specialist referral service for difficult diagnostic cases. Increasingly, this will allow veterinary pathologists in remote locations to have access to the full suite of diagnostic technologies. The Pathology Standards Program (and the broader National Laboratory Strategy) includes strong linkages to both the wildlife and aquatic sectors.

Another important AHA activity concerns the preparation and delivery of biosecurity training for the livestock industries, both intensive and extensive. The availability of an integrated information sharing and communication network will greatly assist implementation of these programs.

From the animal health perspective, the strategic importance of having a sophisticated national communications network – to provide essential access to a range of databases and an effective, robust emergency response tool – is of considerable significance. Additionally, the availability of a modern communications network would be of immense benefit to animal health research and workers located at scattered locations across Australia. Through its various partnership arrangements with government primary industries research agencies, R&D organisations, universities and Cooperative Research Centres, AHA is cognisant of the significant benefits that would flow from such closer linkages between individual researchers and institutions.

#### *Erosion of technical expertise in government*

For some time AHA industry members have expressed concern about the progressive erosion of technical expertise and retention of corporate knowledge in government through ‘departmental down-sizing’ and staff turnover. In particular, risk assessments by the poultry, horse and bee industries indicate a significant risk in the lack of skilled people at jurisdictional level with knowledge of their particularly industry/species.

This is a critical shortage in relation to the diagnosis of bee pests and diseases. Currently, there is only one entomologist, of international renown, at CSIRO who provides specialist apiary diagnostic services. He is about to retire.

**26) CSIRO needs to undertake an international recruiting campaign to recruit a specialist entomologist who can provide specialist apicultural diagnostic services.**

## 8. COMMUNICATION AND CONSULTATION (Section C5)

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*Q: Are current quarantine and biosecurity education and awareness programs effective? What methods can be used to assess the effectiveness of quarantine and biosecurity communication?*

*Q: Are existing communication tools to encourage the reporting of suspected exotic pests and diseases such as the 'Spotted anything Unusual?' effective?*

In terms of the two specific questions posed by the Review which relate to the activities of AHA, it is difficult to provide definitive answers regarding the effectiveness of biosecurity education/awareness programs and communication tools. AHA has just commenced implementation of the new *Farm Biosecurity* communications campaign with governments and industry. It is still too early for quantitative data on the effectiveness on *Farm Biosecurity*, but all the informal feedback from stakeholders has been positive; examples are included at Appendix 7.

*Farm Biosecurity* has been built upon the lessons learned from the first phase of the 'Protect Australian Livestock' campaign (Appendix 7), *Spot the Risk*<sup>2</sup>, which included the:

- Need to move from awareness to behaviour change in terms of livestock producers' biosecurity practices,
- Need to ensure engagement and active participation from governments and industry to drive and support desired behavioural change.

Research was undertaken to understand the issues and behaviour of livestock producers regarding on-farm biosecurity and disease risk mitigation, and to identify tactics that could be used to alter farmer behaviour.

An Issues Audit was then conducted by AHA with each of its government and livestock industry members, to share the findings of the research and to get a holistic view of the environment influencing on-farm biosecurity practices and communication.

It was on these strong foundations that the *Farm Biosecurity* campaign was built. The starting point was the understanding that livestock producers are overloaded with competing information and requirements from a range of sources. So the goal is to make farm biosecurity a simple part of everyday enterprise management practices so that there is sustained behavioural change by livestock producers.

To ease the 'information overload' being experienced by producers, every effort has been made to deliver key biosecurity messages using existing jurisdictional and industry communication channels. While it is acknowledged that additional AHA funding would enable a greater range of biosecurity communication activities, AHA believes

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<sup>2</sup> AHA manages the *Protect Australian Livestock* Campaign on behalf of its members. There have been two communication initiatives implemented under this program – *Spot the Risk* and *Farm Biosecurity*. The annual budget for this program is \$250,000.

that a potential limiting factor is the lack of human resources available within jurisdictions and industry organisations who can drive the biosecurity messages with livestock producers.

**27) Funding for additional human resources within jurisdictions and industry organisations is required to drive biosecurity messages through existing communication and extension channels.**

*Farm Biosecurity - secure your farm – secure your future* commenced in July 2007. Components of the campaign include:

- website ([www.farmbiosecurity.com.au](http://www.farmbiosecurity.com.au))
- five key biosecurity risks
  - animal movement (including fencing)
  - feed
  - water
  - people movement (including vehicles and equipment)
  - pests
- e-newsletter
- producer polling
- media relations
- promotional material
- alliance strategy.

#### *Evaluation*

Evaluation of *Farm Biosecurity* will commence in the 2008 financial year with the gathering of baseline data from livestock providers so that the effectiveness of the campaign can be tracked over time. Regular contact with government and industry representatives and the monitoring of website statistics, producer polling, e-newsletter subscriptions and media activity are providing real time feedback on the effectiveness of the various components of the campaign.

#### *Emergency animal disease watch hotline*

All *Farm Biosecurity* activities include a call to action – *If you see anything unusual, call the Emergency Animal Disease Watch Hotline on 1800 675 888*. The effectiveness of this message was demonstrated during the equine influenza outbreak.

#### *Link between animal and plant biosecurity*

Given that there are many synergies between animal and plant biosecurity and overlap in the target audiences, AHA is working closely with Plant Health Australia to more closely involve the plant industries in the *Farm Biosecurity* campaign.

From a broader perspective, communication and consultation is critical to the effective operation of the national animal health system. The National Animal Health Strategic Framework (Appendix 2) sets out the various roles and responsibilities for the stakeholders in the systems which focus on post-border biosecurity activities;

‘biosecurity’ is used here in its widest sense – covering animal disease preparedness, surveillance and emergency response.

The livestock industry members of AHA rely on communication and consultation to ensure industry involvement and engagement, due to the potential financial implications that new policy or programs have for them and other participants along the production chain through cost sharing and compliance costs.

**28) The Commonwealth and other jurisdictions should ensure that early and continuous consultation with industry occurs, for the successful development of any new policy or program proposal.**

AHA would welcome the opportunity to provide the Review Panel with a separate presentation on the *Farm Biosecurity* project and the range of communications materials which have been developed.

## 9. RESEARCH (Section C6)

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*Q: Is the distribution of the research effort appropriate along the biosecurity and quarantine continuum?*

There is a wide spectrum of research that is directly or indirectly related to animal health and the quarantine/biosecurity continuum; this research is conducted by the Australian Animal Health Laboratory (CSIRO), state/territory primary industries agencies, universities, Cooperative Research Centres and private laboratories. Much of the research is undertaken as an integral part of a diagnostic service, and it is important to recognise that there is an inextricable link between research and diagnosis.

Another important aspect of research is the long delay period that follows either funding cuts or a replenishment or restoration of funding. During the past 20 years there has been a progressive reduction in government funding for animal health research, and the consequent diminution of research output has been insidious but steady. A restoration of the funding base is urgently needed, but it would take several years before the effects became noticeable.

A brief overview of relevant research is at Appendix 8.

### *Australian Animal Health Laboratory*

CSIRO's Australian Animal Health Laboratory (AAHL) at Geelong plays a vital role in maintaining Australia's capability to quickly diagnose exotic and emerging animal diseases. 'On average, AAHL is now receiving almost one suspected emergency disease sample for testing every day. Underpinning any program in exotic disease diagnosis and response, it is critical to have people who really understand the disease doing the research.'<sup>3</sup>

As a direct result of the EI outbreak a laboratory network for EAD diagnosis and response is being developed by the Animal Health Committee and the Sub-Committee of Animal Health Laboratory Standards. The network is in its development phase, but will come under the umbrella of the National Animal Health Laboratory Strategy and report through approved laboratory service deliverables and KPIs.

### *Australian Biosecurity Cooperative Research Centre (AB CRC)*

AHA is a partner in the AB CRC, is represented on the CRC Board, and actively participates in various related activities, including input into the assessment and prioritisation of research projects. This is an example where the Company is able to provide an independent technical perspective, taking into account the views and priorities of our constituent industry and government Members.

Continuity of key CRCs to address national priorities and challenges in the quarantine-biosecurity continuum is of critical importance. Is the distribution of the

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<sup>3</sup> CSIRO Livestock Horizons Vol 2 No 2 April 2006, <http://www.csiro.au/files/files/p6fr.pdf>

research effort appropriate along the biosecurity and quarantine continuum? The answer is yes, but more investment is needed if Australia is to better:

- detect, diagnose and manage disease
- screen of people and products entering the country
- develop the technology and resources to detect and respond to disease threats
- combat the rising incidence of zoonoses brought about by climate stresses, human behaviour or globalisation.

**29) Additional government investment should be provided to ensure the continued work of cooperative research centres, in areas related to biosecurity.**

## 10. REVIEW (Section C7)

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*Q: Is monitoring of the quarantine and biosecurity continuum targeted at the right areas (e.g. primarily at the border)? Is there a process to ensure that the results of monitoring are being used effectively to improve the operation of the system?*

The quarantine and biosecurity continuum is a complex system containing a number of essential, inter-related and inter-dependent elements. These elements are subject to an impressive array of reviews, audits and verification processes, as noted in the Review's *Issues Paper*. In many cases, these reviews examine one particular aspect or operational activity of the continuum. In order to effectively address the deficiencies identified, it is essential to consider all aspects of pre-border, border and post-border activities and their inter-relationships.

It should be noted that AHA and DAFF have developed a comprehensive national review process for the recent response to the EI incursion. While this is being coordinated at a national level, most jurisdictions and industry organisations are conducting their own reviews and debriefing sessions; where appropriate, the outcomes will be fed into the final national review. It is anticipated that there will be significant recommendations coming forward that should greatly improve our EAD response capability.

In order to obtain real and sustainable benefit from the plethora of recommendations flowing from the various review/evaluation processes, it is necessary to have strong leadership at all levels and a genuine commitment to implement the necessary changes.

In the view of AHA, there has been inadequate monitoring of post-border activities, representing an unacceptable level of risk to Australia's livestock industries. The suggested solutions are set out in various recommendations, earlier in this submission.

As with the 1996 Nairn Review, this 2008 Quarantine and Biosecurity Review presents an outstanding opportunity to comprehensively re-assess the effectiveness of current quarantine and biosecurity arrangements across the entire continuum, in the national interest. Importantly, the Review also will be able to address the identified areas requiring improvement, and propose remedial measures in its recommendations.

## APPENDICES

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1. About Animal Health Australia
2. National Animal Health Strategic Framework
3. AHA Business Plan 2007-10
4. *Government and Livestock Industry Cost Sharing Deed in Respect of Emergency Animal Disease Responses (EADRA) – extract*
5. National Animal Health Performance Standards (Version 3)
6. Numbers of veterinarians and auxiliary personnel 2003-07
7. *Protect Australian Livestock* campaign
8. Animal Health Research