



Jessica Doherty



Animal Health Australia



MANAGING ANIMAL HEALTH EMERGENCIES

Emergency animal disease responses in Australia are coordinated nationally — governments, the private sector and other key players work together to ensure a successful outcome.

This chapter describes the arrangements and initiatives that are in place to prepare for, and respond to, emergency animal diseases (EADs).⁵² The chapter also provides information on disease incidents that occurred during 2010.

The Australian Government, state and territory governments, livestock industries, the Commonwealth Scientific and Industrial Research Organisation (CSIRO), private veterinarians and laboratories, and other animal health workers all contribute to the management of EADs. Animal Health Australia (AHA) participates on behalf of its members.

4.1 Response plans and coordination

EAD responses in Australia are coordinated nationally — governments and industry work together to ensure a successful outcome. Responses are underpinned by the Emergency Animal Disease Response Agreement (EADRA), which ensures that the response:

- accommodates the relevant state's or territory's legislative, industry, government and community structures
- is guided by a nationally agreed plan — the Australian Veterinary Emergency Plan (AUSVETPLAN).

⁵² Management of aquatic health emergencies is described in Chapter 5.

4.1.1 Emergency Animal Disease Response Agreement

The EADRA is a legally binding agreement between the Australian Government, the state and territory governments, livestock industries (currently 10 industries) and AHA. It supports a rapid and efficient response to an EAD outbreak.

The agreement, which is a world first, establishes basic operating principles and guidelines, and defines roles and responsibilities of the parties. It includes provisions for formal consultation and dispute resolution between government and industry on resource allocation, funding, training, risk management and ongoing biosecurity arrangements.

The signatories to the EADRA are committed to:

- minimising the risk of EAD incursions by developing and implementing biosecurity plans for their jurisdictions or industries
- maintaining capacity to respond to an EAD by having adequate numbers of trained personnel available to fill roles specified in AUSVETPLAN

- participating in decision making relating to EAD responses, through representation on the Consultative Committee on Emergency Animal Disease (CCEAD) and a National Management Group (NMG)
- sharing the eligible response costs of EAD incursions using pre-agreed cost-sharing formulas.

The EADRA is regularly reviewed so that it remains relevant, flexible and functional.

In 2010, changes to the EADRA included the re-categorisation of bovine tuberculosis as a category 4 disease without condition. The 'EADRA Business Rules — Guidelines for Accounting and Cost Sharing under the EAD Response Agreement' were also prepared for use by participating agencies when submitting claims of eligible costs. Other modifications in 2010 included minor changes relating to procedures. The latest version of the EADRA can be found on the AHA website.⁵³

There were no EADs during 2010 for which cost sharing under the EADRA was invoked.

4.1.2 Australian Veterinary Emergency Plan

AUSVETPLAN⁵⁴ is the national contingency planning framework for the effective management of animal disease emergencies in Australia. The components of AUSVETPLAN are developed and agreed in 'peace time' by the Australian Government, state and territory governments and relevant livestock industries, to ensure that a response can be implemented with minimal delay and in a coordinated manner, including with regard to cost-sharing arrangements.

AUSVETPLAN is a comprehensive framework that sets out the various roles, responsibilities and policies that all agencies will follow in an EAD response. The procedures are contained in a series of manuals that deal with more than 60 diseases and some specific enterprise and operational procedures, including decontamination and compensation.

The AUSVETPLAN Summary Document describes the components of AUSVETPLAN and outlines their functional relationships.

Because the overarching policy, technical issues and arrangements for managing responses have been agreed nationally and are clearly set out in AUSVETPLAN, those involved in the response to an EAD incident are able to focus on controlling the disease according to



Department of Primary Industries Victoria

53 www.animalhealthaustralia.com.au/programs/eadp/eadra.cfm
54 www.animalhealthaustralia.com.au/programs/eadp/ausvetplan/ausvetplan_home.cfm

the particular situation. EAD responses are planned and implemented at three levels — national, state or territory, and local — and involve animal health authorities, emergency management agencies and industry organisations.

In 2010, disease strategies for bee diseases and pests, Newcastle disease and foot-and-mouth disease (FMD), as well the operational manual for destruction and the enterprise manual for feedlots, were updated and published. Significant progress was made on revising the following manuals to ensure their technical and operational currency:

- disease strategies — anthrax, bluetongue, bovine spongiform encephalopathy, equine influenza, Japanese encephalitis and rabies
- operational procedures manual — wild animal response strategy
- enterprise manuals — poultry industries and pig industry.

Industry and government have jointly begun developing risk-based movement control matrixes, which will improve the guidance provided on appropriate conditions for permits for movement of risky commodities (such as live animals, meat and semen) during an outbreak.

A new, modular approach to AUSVETPLAN manuals is also being developed. This will allow manuals to be revised more efficiently, and will also allow those involved in outbreaks to download or print documents that are tailored to their particular operational needs.

National review of the response policy for foot-and-mouth disease

Although a revised FMD manual has recently been published, this disease strategy is undergoing a major review, particularly with regard to the handling of milk and dairy products, and vaccination.

An FMD outbreak would result in the immediate closure of many of Australia's major export markets for livestock and livestock products. The economic effects of even a small-scale outbreak would be enormous for individuals, the farming industry as a whole, and subsidiary and support industries. Significant flow-on losses would affect the economy, including many businesses that rely on livestock industry revenue in rural and regional Australia. In 2002, the Productivity Commission estimated that the total cumulative loss to the national economy would be about \$2–3 billion in gross domestic product for a short outbreak, rising to \$8–13 billion for a 12-month outbreak.

Australia's preferred response policy for an outbreak of FMD is to control and eradicate the disease through stamping out and to re-establish the FMD-free status of Australia as quickly as possible. However, experience with FMD outbreaks in other countries has shown that mass culling of animals to control an outbreak results in enormous livestock losses and is unacceptable to many people. In addition, simulations in Australia have shown that stamping out FMD — a disease that spreads very quickly — in a densely populated dairy farming area would be logistically challenging and could jeopardise the entire eradication effort if infection could not be contained.

In light of improved international understanding of FMD viruses, vaccines and technologies, AHA members have tasked AHA with managing a thorough review of Australia's policy for FMD, using the recently updated AUSVETPLAN disease strategy as a template. The review will ensure that Australia's FMD response plans are current, reflect international best practice, and will allow effective eradication with minimum disruption to industry.

4.1.3 Nationally Agreed Standard Operating Procedures

Nationally Agreed Standard Operating Procedures (NASOPs) have been developed for use by states and territories during responses to EAD incidents and emergencies. Although not formally a part of AUSVETPLAN, NASOPs underpin elements of AUSVETPLAN and describe the actions typically undertaken during a response to an incident. They are provided to guide states and territories in developing local procedures and work instructions.

NASOPs are prepared by the Subcommittee on Emergency Animal Disease, which has representation from the Australian Government, the governments of each state and the Northern Territory, and AHA. The committee is chaired by the Animal Health Committee program leader for EADs (traditionally the Australian Chief Veterinary Officer). NASOPs are reviewed as necessary to ensure they remain up to date.

NASOPs currently published on the AHA website⁵⁵ address topics such as personal decontamination, loading and unloading of carcasses, and stop-and-search of vehicles at checkpoints.

55 www.animalhealthaustralia.com.au/programs/eadp/nasops.cfm

4.1.4 What happens in a response?

Operational responsibility for the response to an EAD lies with the relevant state or territory, which develops an EAD Response Plan (EADRP). In most jurisdictions, the government agriculture or primary industries department manages the response to an EAD outbreak and implements the EADRP. State and territory chief veterinary officers (CVOs) have leadership roles; and state emergency services, public safety services and other government departments are involved in the response, as needed. Pre-existing whole-of-government arrangements allow agriculture or primary industries departments to draw upon resources and expertise from these agencies.

The CCEAD is responsible for technical coordination of an EAD response. The committee is chaired by the Australian CVO or delegate, and comprises the state and territory CVOs, the Director of the CSIRO Australian Animal Health Laboratory, members from Biosecurity Australia and the Australian Quarantine and Inspection Service (AQIS), and technical representatives from relevant industries. Industry representatives comprise one nominee agreed by all industry parties and one nominee from each of the affected industries. AHA attends CCEAD meetings as an observer.

To ensure the most timely and effective response, the CCEAD oversees implementation of EADRPs, strategy development and planning, and the development of technical policy. The CCEAD provides advice to a NMG that is established for each incident. The Secretary of the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) chairs the NMG, and members are chief executives of the state and territory agriculture or primary industries departments, and chief executives from each affected industry. AHA attends NMG meetings as an observer.

When it receives technical advice from the CCEAD, the NMG considers policy and financial issues associated with the EADRP. The NMG's agreement to an EADRP is an undertaking to share costs under the EADRA.

This structure ensures that all the resources needed for agriculture and animal health authorities to deal with an EAD are available and coordinated for the most effective response.

Further information about the mechanism of an EAD response and how cost-sharing provisions are implemented can be found in the AUSVETPLAN Summary Document.⁵⁶

4.2 Preparedness initiatives

4.2.1 Emergency Animal Disease Preparedness Program

Development of Australia's preparedness to manage and respond to EADs is coordinated through the EAD Preparedness Program, which is managed by AHA. The main objective of the program is to ensure that Australia is well prepared for EAD incidents through a range of activities, including public awareness, training, simulation exercises and surveillance. When outbreaks occur, preparedness ensures that Australia can mount a rapid and effective response with minimal disruption to the livestock and food industries. The program is funded through a tripartite arrangement between the Australian Government, state and territory governments, and livestock industry organisations.

4.2.2 National Emergency Animal Disease Training Program

In the event of an EAD incident, government officers, livestock producers, private veterinary practitioners and emergency workers are called upon to help eradicate or control the disease. AUSVETPLAN defines how a response to an EAD incident is to be conducted and the roles that require specific training.

The National Emergency Animal Disease Training Program (NEADTP) was developed by AHA to provide education and training in the various response roles. At the introductory level, face-to-face EAD awareness sessions provide government officers, private practitioners and industry members with a basic understanding of Australia's agreed response strategies.

More formal accredited training, covering the skills and knowledge needed to perform a role or function during an EAD response, is available for government officers through inhouse jurisdictional programs and for industry members through AHA.

AHA holds twice-yearly workshops for industry executives, technical specialists and senior government officers to train them to serve on the two key decision-making bodies — the NMG and the CCEAD — during an EAD response (see Section 4.1.4).

To underpin the NEADTP, AHA continued to improve its EAD Foundation Online module as a generic introduction. The module provides a general understanding of the basic principles of an EAD response, the role of AUSVETPLAN, the people involved in a response and their responsibilities, and the importance of communications during an EAD response.

56 www.animalhealthaustralia.com.au/programs/eadp/ausvetplan/ausvetplan_home.cfm

Australian Veterinary Reserve

The Australian Veterinary Reserve (AVR) was created in 2004 and comprises nongovernment and rural veterinary practitioners. The 100 members of the AVR are trained to immediately adapt to the conditions of an EAD incident and perform veterinary response roles. In the response to the 2007 equine influenza outbreak, nearly half the AVR members were actively deployed to affected states and demonstrated their commitment, expertise and professionalism.

During 'peace time', AVR members maintain their skills and continue their professional development by attending dedicated AVR sessions at annual conferences of the Australian Veterinary Association and by participating in EAD exercises. In addition, they monitor EAD developments worldwide through AVR Intelligence, an electronic bulletin produced by AHA specifically for the AVR.

Rapid Response Team

The national Rapid Response Team (RRT) is an Australian Government initiative that was originally developed to assist smaller jurisdictions with limited expert resources to establish emergency control centres for disease outbreaks. RRT members are employees of agriculture or primary industries departments who, collectively, have expertise in establishing the key components of a local disease control centre or a state disease control headquarters. Members of the RRT participate in professional development programs designed to increase their response skills.

The major activity in the RRT calendar is a professional development workshop and the annual training exercise. The 2010 professional development workshop in Canberra focused on developing RRT members' skills in cognitive decision making. The annual training exercise, Exercise Red Feather,⁵⁷ was held in Queensland and used an avian influenza-based scenario. The exercise comprised three discussion workshops. RRT members acted as facilitators for workshop discussions, contributing their expertise and using their facilitation skills to ensure that exercise outcomes were achieved.

EAD Response Preparedness and Capability Enhancement Program

The EAD Response Preparedness and Capability Enhancement Program (RPCEP) was introduced in 2009. It is designed to increase national EAD response capability and capacity by delivering learning and development to government and nongovernment sectors.

During 2009, more than 50 RPCEP training courses, attended by more than 1000 people, were delivered by the jurisdictions. The training focused on developing the basic responder skills of jurisdictional personnel. In 2010, RPCEP training was broadened to include AUSVETPLAN role-specific training (for example, workshops on tracing and surveillance held in Western Australia) and functional training (for example, incident management team training held in New South Wales, South Australia and Tasmania).

Other training activities

Other EAD preparedness training programs conducted by AHA in 2010 included:

- industry liaison officer training for producers from the sheepmeat, wool, poultry and pork industries
- EAD awareness sessions for the turkey, alpaca and dairy industries
- EAD awareness sessions for AQIS on-plant veterinarians (i.e. those AQIS veterinarians responsible for all AQIS activities at an establishment).

4.2.3 International collaboration on modelling for preparedness

To strengthen EAD preparedness, Australia is a key player in an international collaboration on epidemiology and disease modelling. The EpiTeam is a subgroup of the Emergency Management Working Group of the Quadrilateral Group of countries (Australia, Canada, New Zealand and the United States). The team was formed in May 2005, following a workshop on FMD modelling and policy. It includes members from the Quadrilateral Group, as well as Ireland and the United Kingdom. Priority tasks for the EpiTeam include:

- completing a comparison of countries' FMD models
- developing banks of FMD outbreak scenarios to support policy development
- sharing methodologies for data collection and analysis

57 www.dpi.qld.gov.au/4790_16904.htm

- evaluating the expansion of modelling methods to other priority diseases
- developing decision-support tools for use in the initial stages of an outbreak
- developing guidelines for uses of simulation models both before and during EADs.

In 2010, the findings of the EpiTeam project on comparing and validating simulation models for informing FMD policy were presented at the FMD International Symposium and Workshop held in Melbourne, 12–14 April 2010. This work involved a comparison of FMD models developed by Australia (AusSpread), New Zealand (InterSpread plus), and the United States and Canada (North American animal diseases simulation model — NAADSM). Phase 3 of the study involved simulating a series of more complex scenarios based on a real farm dataset, and realistic livestock movement and marketing data from the Republic of Ireland. These scenarios included an uncontrolled epidemic, as well as epidemics controlled with various stamping-out and vaccination programs. The predicted numbers of infected premises, the duration of each epidemic, and the sizes and patterns of predicted outbreak areas were compared. Within models, variations resulting from the application of different control strategies or different resource constraints were analysed. It is reassuring that the three models led to consistent policy advice, despite the different approaches used.

In 2010, the EpiTeam also developed a project proposal and course outline to promote good practice in the application of modelling in animal health policy and improve the understanding and linkages between all the key players in this field. It came about following the interactive modelling workshop held at the Quadrilateral Group meeting in 2009, where the need for training to enhance collaboration and understanding between all people involved in the development and use of models in animal health policy was identified.

4.3 Increasing awareness and understanding

4.3.1 National agricultural emergency communications arrangements

In 2002, the Council of Australian Governments signed a communications memorandum of understanding (MoU) requiring all jurisdictions to identify a key communications manager, to limit public comment to key spokespeople, to have consistent public comment and to brief the media regularly.

The MoU led to the establishment of the National Communications Network (NCN), which is a central part of the emergency communication arrangements. The NCN comprises communications managers from all Australian agricultural agencies and the communications manager from AHA, representing the industry signatories to the EADRA. It actively manages communications during emergencies, in accordance with the MoU. Key aspects of this include:

- promotion of collaborative communication activities
- agreement on key messaging and spokespeople
- responsibility for dissemination of information within jurisdictions and industry.

These arrangements were used extensively in the 2007 equine influenza response and are also used regularly for smaller incidents, such as the early detection of human H1N1 (2009) influenza virus in pigs in 2009.

The operations of the NCN are currently being reviewed in consultation with its members.

4.3.2 Training in communications for an emergency animal disease response

To date, more than 350 people have participated in the AHA-managed two-day course 'Public Relations in an Emergency Animal Disease Control Centre Environment'. This course will be reviewed and amended once the AUSVETPLAN Public Relations Manual has been updated.

4.3.3 Communicating globally

The communications group of the Quadrilateral Group of countries met in the United States in April 2010. The key issues discussed were 'One Health', early alert systems between countries, effective use of social media (e.g. Twitter and Facebook), and country updates. The group held a joint session with the Animal Health Quads and shared ideas on emergency response communications. This group will next meet in New Zealand in April 2011.

4.3.4 Farm Biosecurity campaign

The Australian Government, state and territory governments, and livestock industries all have biosecurity and communications initiatives to increase awareness of the biosecurity practices needed to protect landholdings and Australia against EADs.

Farm Biosecurity is a national awareness and engagement program that provides information about farm biosecurity and prevention of animal diseases and plant pests. The program, a joint initiative of AHA and

Plant Health Australia, encourages producers to identify risks to their livestock and plant products, and minimise these risks by using biosecurity measures as everyday practice in their enterprises.

Farm Biosecurity uses the media, educational materials and stakeholder engagement to deliver messages to livestock producers and related service providers. It promotes the EAD Watch Hotline⁵⁸ and the Exotic Plant Pest Hotline⁵⁹ to report unusual signs of diseases or pests.

4.4 Biosecurity planning

Effective biosecurity at the enterprise and industry levels is extremely important in reducing the risk of introduction or spread of animal diseases. This is recognised by Australian livestock industries and governments in the EADRA, which requires that all signatories develop, implement and maintain biosecurity plans aimed at industry, regional and farm levels for their sector.

The farm-level biosecurity plans describe the measures to mitigate the risks of disease entry or spread. The plan for each EADRA signatory is endorsed by the other EADRA signatories and is subject to ongoing review and maintenance.

AHA continues to work with its members to ensure the biosecurity plans are science based, relevant, cost effective and contemporary.

4.4.1 Zoo biosecurity

The biosecurity of Australia's zoo industry is an important part of Australia's emergency disease preparedness and response. In 2010, Australian zoos, led by their peak body — the Zoo and Aquarium Association — and assisted by the Australian Wildlife Health Network (AWHN), began work on a National Zoos Biosecurity Manual. This manual will assist those working in Australian zoos to understand, identify and manage biosecurity issues for their industry.

4.5 Preparedness against specific diseases

Historically, many of Australia's EAD preparedness activities have been primarily targeted at FMD. In 2010, a national review of the overall response policy for FMD began, as described in Section 4.1.2. Other important diseases were also a focus, and work continued on ensuring that Australia is well prepared for any incursion of avian influenza.

58 Emergency Animal Disease Watch Hotline: 1800 675 888

59 Exotic Plant Pest Hotline: 1800 084 881

4.5.1 Avian influenza

Global situation

Throughout 2010, outbreaks of highly pathogenic avian influenza (HPAI) were reported across Asia, Europe and Africa, and the global level of human infection and mortalities associated with subtype H5N1 continued to rise. Data from the World Health Organization (November 2010) show that 508 people have been infected worldwide and 302 have died from the disease since 2003. Although the annual number of reported outbreaks and countries affected has declined since 2006, the situation remains dynamic.

Concern remains that some avian influenza (AI) virus subtypes, such as H5N1, have the potential to mutate into a form that is easily transmissible between humans. Such an event would trigger a global human influenza pandemic, with potentially high mortality rates.

Australia is concerned about the HPAI situation in nearby countries and continues to assist with control of the disease in these areas — the aim is to build the capacity of these countries to manage the threat of the disease at the animal source, reduce the risk of an incursion into Australia, and reduce the threat of a human influenza pandemic. To help countries prevent and manage outbreaks of the H5N1 subtype of HPAI, DAFF works closely with the Australian Agency for International Development (AusAID), international agencies and forums, and government agencies in other countries.

The focus of current international activities is on building sustainable capabilities for preventing, detecting and responding to zoonotic and emerging diseases. Regional capacity-building activities have seen the expansion of the Avian Influenza Toolkit,⁶⁰ a website developed by DAFF, in conjunction with AusAID and Asia-Pacific Economic Cooperation (APEC) member economies. The toolkit offers easily accessible web resources to assist countries with managing the threat of EADs such as AI. Since its launch in late 2008, the toolkit has grown to accommodate more than 300 EAD documents, case studies and other resources.

Australian situation

Protection of Australian poultry and other birds from HPAI remains a high priority. DAFF works closely with Australian poultry industry sectors to protect Australia's favourable animal health status and to strengthen Australia's domestic preparedness and response capacities. DAFF's activities aim to strengthen border

60 www.aitoolkit.org

security at airports to help detect illegally imported poultry and poultry products, and to strengthen Australia's early warning systems, on-farm biosecurity and EAD response capabilities.

Wild bird surveillance across Australia provides information on the AI viruses circulating in wild populations, leading to a better understanding of AI risk factors, better decision making and more effective biosecurity measures. Surveillance also provides a critical early warning system. To date, surveillance of wild birds and poultry, including investigation of bird mortality events, has not found the H5N1 subtype of HPAI in Australia. From July 2009 to June 2010, cloacal and faecal swabs and blood samples were collected from 9500 wild birds. Since 2005, nearly 50 000 wild birds have been sampled for influenza viruses under a DAFF program coordinated by the AWHN. As expected, a variety of less pathogenic AI virus subtypes (including H5 and H7) have been found, reinforcing the need for vigilance with farm biosecurity to ensure that these viruses are kept out of commercial flocks. A summary of the program's results for AI and wild birds from 2005 to 2008 was published in *Emerging Infectious Diseases* in November 2010.⁶¹

In addition to AWHN's wild bird surveillance, 1881 birds from 280 laboratory submissions were tested for avian influenza during 2010; there were no positive results for H5 or H7 strains.

The fourth annual Government–Industry Biosecurity Forum (previously the Government–Industry Avian Influenza Forum) was held in June 2010, with attendees from DAFF, state governments, AHA and the poultry industry. Participants discussed the current global AI situation and considered the next steps in vaccination policy, contingency supply arrangements for vaccine, domestic and wild bird surveillance, and biosecurity training for the exhibition and stud poultry sectors. The workshop focused on national vaccine policy, with participants considering the challenges and opportunities associated with establishing vaccine contingency supply arrangements. As a result of the workshop discussions and agreements reached, modelling research is now under way on the potential use of AI vaccine in the event of a disease outbreak in poultry, and potential supply options are being investigated. It is expected that the results of these activities will be reported at the next forum.

61 P Hansbro, S Warner, J Tracey, K Arzey, P Selleck, K O'Riley, E Beckett, C Bunn, P Kirkland, D Vijaykrishna, B Olsen and A Hurt (2010). Surveillance and analysis of avian influenza viruses, Australia. *Emerging Infectious Diseases* 16(12):1896–1904.

To advance national arrangements for surveillance of AI in domestic commercial poultry, the Australian Government works closely with AHA, state and territory governments and poultry industry sectors (meat chickens, layer hens, turkeys, ducks, game birds and ratites) through the Avian Influenza Surveillance Taskforce. The taskforce made considerable progress during 2010, culminating in the publication of the *National Avian Influenza Surveillance Dossier*,⁶² a comprehensive overview of AI surveillance activities across the industry. In conjunction with a scenario tree analysis, which is currently being developed, the dossier will provide a basis for future national AI surveillance activities.

The biosecurity manuals developed by DAFF and poultry industry representatives — the *National Farm Biosecurity Manual: Poultry Production*⁶³ and the *National Water Biosecurity Manual: Poultry Production*⁶⁴ — continued to be distributed to commercial and small farmers, backyard bird owners, feed suppliers, industry organisations, governments and zoos, and at biosecurity and poultry conferences.

Training activities, including DVDs, e-learning programs and workshops, are being prepared to assist producers to implement the biosecurity standards and practices in these manuals. Training will be delivered from 2011. In 2010, more than 6000 feed scoops and magnetised notepads, displaying key biosecurity messages for bird owners and contact details for the Emergency Animal Disease Hotline, were distributed to feed suppliers, to industry organisations and at poultry shows.

DAFF also continues to engage with the noncommercial poultry sector, including the Exhibition and Stud Poultry Association, on biosecurity issues. Biosecurity guidelines and logbooks for exhibitors and show organisers have been drafted for consultation and publication in 2011. Market research is being conducted with poultry exhibitors to determine the most efficient and effective ways of communicating with this sector and influencing their biosecurity behaviour.

Looking forward

It appears that the threat of HPAI will not diminish in the foreseeable future. DAFF will continue working with state and territory governments, industry sectors, AHA,

62 www.daff.gov.au/_data/assets/pdf_file/0007/1846015/national-avian-influenza-sept-2010.pdf

63 www.daff.gov.au/animal-plant-health/pests-diseases-weeds/biosecurity/animal_biosecurity/bird-owners/poultry_biosecurity_manual

64 www.daff.gov.au/animal-plant-health/pests-diseases-weeds/biosecurity/animal_biosecurity/bird-owners/water_biosecurity

AWHN and Australian Government agencies to build Australia's capacity to prevent, prepare for and respond effectively to the threat of AI. Wild bird surveillance, domestic poultry surveillance, biosecurity programs for farms and exhibitors, and work on emergency vaccination policy will continue.

Long-term capacity building in neighbouring countries to address the threat of AI at the animal source will continue through existing programs. In 2011, DAFF will conduct a number of One Health workshops with animal and human health representatives from members of APEC plus Cambodia and the Lao People's Democratic Republic. (One Health is a global movement to link human, animal and environmental health to combat emerging and re-emerging infectious diseases.) A One Health APEC action plan, including steps to combat emerging infectious disease, will also be developed at the workshops.

4.5.2 Wildlife and emergency diseases

The Wildlife and Exotic Disease Preparedness Program (WEDPP) is a joint program of the Australian Government and state and territory governments that was established in 1984–85. It aims to develop practical field strategies for disease eradication, control and management in the event of an emergency, emerging or exotic disease involving wild animals that could threaten Australia's livestock industries. In recent years, the program has focused on improving wildlife disease surveillance.

The WEDPP Management Group considered 11 project applications for 2010–11 and supported funding for five projects. Projects selected for funding this year are:

- *Identifying and mapping Hendra virus strain diversity.* Since Hendra virus causes fatal disease in humans and horses, more knowledge is urgently needed about the ecology of the virus in bats. The project's aim is to expand investigations of Hendra virus strain diversity in flying foxes to include targeted screening of feral horse and feral pig populations. This project has continued from 2009–10.
- *Development and validation of testing for Newcastle disease viruses.* The main objective of this project is to evaluate and refine newly developed real-time polymerase chain reaction (PCR) technology, and to use this technology to understand the epidemiology of Newcastle disease. The knowledge gained will be used to improve strategies for controlling Newcastle disease in wild birds and in commercial farming. The technology will be transferred to state laboratories around Australia. This project has continued from 2009–10.



Department of Agriculture, Fisheries and Forestry Australia

- *Avian migration and movement of pathogens in the Australo–Papuan context: developing novel methods for the accurate assessment of relevant connectivity between populations.* This project will determine population connectivity in an Australian migrant bird species by using phylogenetics to analyse the population structure of a commensal infectious organism.
- *Reservoirs of infection: the epidemiological characteristics of an emerging pathogen.* The aim of this project is to increase our understanding of the distribution of *Escherichia albertii* in native birds and poultry. *E. albertii* has been implicated as a possible human pathogen.
- *Australian Wildlife Health Network.* The main objectives of this project are to improve surveillance and surveillance tools for wild and feral animals, and to improve the management of wildlife health information.

More information about WEDPP and results from previous projects are available on the DAFF website.⁶⁵

Emergency and emerging diseases in wildlife in 2010

The risk of diseases emerging from wildlife is receiving increasing attention from agricultural agencies worldwide. Australia recognises the importance of monitoring wildlife health to address the impacts that diseases and mass mortalities in wild fauna have on livestock, human health, agriculture, aquaculture, biodiversity and trade. The Australian Government, state and territory governments, and the AWHN are constantly on alert for emerging and emergency diseases in wildlife.

65 www.daff.gov.au/animal-plant-health/emergency/wedpp

One of the core duties of the AWHN is to operate a first-alert system to notify relevant authorities of outbreaks of disease in wildlife, such as wild bird mortality events and marine animal mortality events.

Environmental and agricultural agencies were on alert for animal diseases when weather conditions led to flooding and high insect populations in parts of New South Wales and Queensland from November 2009 to February 2010. Based on historical events, mass mortality in kangaroos was considered possible in south-west Queensland and north-west New South Wales. An alert from a local harvester was received through the Kangaroo Management Program (New South Wales Department of Environment, Climate Change and Water), which contacted the AWHN and requested notification of relevant authorities, including New South Wales and Queensland environment and agricultural government agencies. A collaborative investigation by government field veterinarians and veterinary diagnostic laboratories established that the deaths were few and restricted to relatively small areas. Conditions in the area subsequently improved, and no further deaths occurred.

4.6 Emergency animal disease responses in 2010

Appendix 3 lists investigations of potential exotic and other emergency diseases in Australia during 2010. Responses to several diseases are discussed below.

4.6.1 Hendra virus incidents

On 17 May 2010, a horse near Tewantin in Queensland was suspected to be infected with Hendra virus; samples were taken and the horse was subsequently euthanased. Three days later, confirmation was received that the horse was infected with Hendra virus. The property was placed under quarantine by Queensland veterinary authorities. The only other horse on the property did not become ill and tested negative for Hendra virus. Quarantine of the property was lifted on 23 June 2010. A number of people who had potentially been exposed to the infected horse tested negative.

Updated information on precautions against Hendra virus for people who work with horses is available on the website of Primary Industries and Fisheries, Queensland.⁶⁶

The Australian Government and state and territory governments continue to provide funding to relevant scientific organisations, such as the CSIRO Australian

Animal Health Laboratory, for research into EADs. This includes funding for a trial to develop a Hendra virus vaccine for horses. The Queensland Government has also established the Queensland Centre for Emerging Infectious Diseases to strengthen capacity to predict, detect, prevent and manage emerging diseases such as Hendra virus.

4.6.2 Asian honey bees

The Asian honey bee incursion in Cairns (north Queensland) began with the detection of the first nest in May 2007, and continued throughout 2010. By mid-November 2010, more than 200 nests or swarms were detected, bringing the total to nearly 300 detections since the incursion began. The area of infestation grew, with new detections in Innisfail, Flying Fish Point and Waughs Pocket, south of Cairns; and at Kuranda, Mareeba, Malanda and Lake Eacham.

The significant increase in the number of detections is associated with further refinements in surveillance techniques, including the development of an effective bee trap. It is also associated with an increase in surveillance personnel from 8 to 30, which occurred after the national cost-sharing arrangements for funding the response were finalised.

Asian honey bees are not listed under the EADRA. Although they were added to the equivalent response agreement in the plant sector in 2010, provisions of this agreement do not apply retrospectively to the Cairns incursion. However, the Primary Industries Ministerial Council agreed in April 2010 that the costs of the eradication program would be shared between governments and industry until the end of the 2010 calendar year. An independent review of the response conducted in October–November 2010 concluded that at least six months of further surveillance would be necessary to determine whether the eradication campaign will be successful. Subsequently, the Primary Industries Ministerial Council agreed to extend the cost-sharing agreement to the end of March 2011, to allow further assessment of the incursion and response.

As a result of the ongoing incursion and the large increase in the number of nests and swarms detected, the United States has temporarily suspended imports of Australian honey bees because of concerns about the potential for little-known viruses to transfer from the Asian honey bees to the European honey bee population in Australia.

66 www.dpi.qld.gov.au/4790_2900.htm