Volume 6 Issue 2

Animal Health Surveillance

ISSN 1445-9701

1 April to 30 June 2001

QUARTERLY REPORT

CONTENTS

AnimalHealth AUSTRALIA
Australian Animal Health Council Ltd ACN 071 890 956

Preface

This issue reports on a wide range of topics: a meeting of the world animal health body in May, an exercise to evaluate preparedness for foot-and-mouth disease in the Northern Territory, the mid-term review of the National Ovine Johne's Disease Control and Evaluation Program, and a pilot project to improve the monitoring of animal health in remote central Australia.

Animal Health Surveillance Quarterly includes highlights of disease surveillance activities, items of interest from States and Territories, and summaries of disease surveillance and monitoring programs that report to Australia's National Animal Health Information System (NAHIS). Only summary information is recorded in NAHIS, with detailed data being maintained by the source organisation. The information included in this report is accurate at the time of publication but, because of the short reporting and production time, minor discrepancies may occur. *AHSQ* is available on the Animal Health Australia website (at www.aahc.com.au/nahis).

Gardner Murray
Australian Chief Veterinary Officer

National Ovine Johne's Disease Control and Evaluation Program — mid-term review

Animal Health Australia commissioned a mid-term review of the existing National Ovine Johne's Disease Control and Evaluation Program (NOJDP). The review, conducted from February to May 2001, was a requirement of the program Deed of Agreement to examine whether the program was meeting its agreed objectives.

The report, released in June, is available on the internet (at http://www.aahc.com.au/ojd/midterm_review.htm). It made 46 recommendations that were endorsed (with slight modification of two recommendations) by the Animal Health Australia Board. These recommendations encompass a range of issues associated with research and development, communications, delivery, testing and management of the program.

BACKGROUND

NOJDP is a six-year program that is evaluating the best way to manage OJD in Australia in the long term. This program is managed by Animal Health Australia on behalf of the sheep industries, State and ACT governments and the Commonwealth Government.

In preparing its recommendations, the independent review team considered the outcomes from all previous reviews and inquiries related to the control of OJD. The team also consulted key stakeholders, including sheep industry organisations, Meat and Livestock Australia, Veterinary Committee, the States and the Commonwealth.

ACTION TAKEN

The review highlighted that the key success factor to achieving results for

the program lies with gaining producer support and confidence in the revised program. The provision of financial, managerial and social assistance is crucial to gaining this support.

Animal Health Australia is developing a revised three-year program plan to incorporate the review recommendations. This is based on existing funding formulae and obligations under the Deed of Agreement, in respect of the existing operations, management, research and development, and communications sub-programs. However, a new control sub-program has also been developed to address the producer support issues outlined in recommendation 31 of the mid-term review report:

Providing that some meaningful assistance to producers with infected flocks becomes available, it is recommended that a number of significant changes be made to the existing NOJDP to gain producer support and to better control the spread of the disease. These changes involve:

- *availability of vaccine;*
- *property management planning to minimise disease impact and spread;*
- *access to social support measures;*
- *support for eradication of infected flocks in low prevalence areas;*
- *management plans for studs;*
- *support for group and catchment management programs; and*
- *destocking infected flocks in low prevalence areas.*

This control sub-program also captures some key issues agreed at the National Workshop on Control of OJD in New South Wales held in Canberra in April 2001. Since this workshop, Veterinary Committee has been working with its OJD Technical Advisory Group to agree on changes to the Standard Definitions and Rules. This is particularly in respect of:

- facilitating trade between infected flocks within the residual zone of NSW;
- accommodating wider use of the Gudair™ OJD vaccine within the residual zone of NSW, as agreed by the National Registration Authority for Agriculture and Veterinary Chemicals; and
- refining technical surveillance and testing requirements to meet zone status conditions.

Funding for these enhanced control activities is not available under the existing NOJDP Business Plan. Therefore, Animal Health Australia has developed a discussion paper for use by the national sheep industry to develop a proposal for new assistance measures. Without such financial assistance to affected producers, NOJDP will be unlikely to succeed in delivering its objectives.

A meeting has been scheduled for September for parties to the NOJDP Deed of Agreement to agree on the revised NOJDP Program Plan for the next three years and to discuss its implementation.

Contact: Ralph Hood, 02 6203 3922,
Manager, Johne's Disease, Animal Health Australia

Tuberculosis Freedom Assurance Plan review

The Tuberculosis Freedom Assurance Program (TFAP) is a five-year program, from January 1998 to December 2002, to address any residual bovine tuberculosis (TB) following the completion of the Brucellosis and Tuberculosis Eradication Campaign.

The Deed of Agreement governing the program required a mid-term review to be conducted in 2000. It was agreed that the review would be divided into two sections. The first part, concerning the remaining period of the existing program, was presented to Animal Health Australia in October 2000 (see *AHSQ* Vol. 5 No. 4).

The second part, dealing with any future needs for enhanced TB surveillance, was completed in May. The 21 recommendations were considered by the TFAP Coordination Committee on 29–30 May and its considerations were presented to the Animal Health Australia Board in June. The key issues to come from these considerations include the need for:

- a further program of enhanced surveillance for TB to December 2006;
- a targeted, risk based approach to surveillance, to identify any residual cases as the prevalence approached zero.
- a training program to capture the skills required to address TB; and
- a review of the cost sharing arrangements for the funding of the program.

These issues are being addressed by the TFAP Coordination Committee and other stakeholders, with a view to having a draft plan ready for presentation to the parties to the Deed of Agreement by November 2001.

Contact: Simon Winter, 02 6203 3988
Program Manager, Animal Health Australia

Bovine Johne's Disease South-East Beef Survey

In July 2001, a meeting of cattle industry and government representatives agreed to terminate the Bovine Johne's Disease (BJD) South-East Beef Survey (*AHSQ* Vol. 5, No. 3) because the data indicated the survey was unlikely to meet the 2% or less herd prevalence required for a Protected Zone.

The main objective of the survey, an initiative of the cattle industry, was to determine if the herd prevalence of BJD in beef herds in south-eastern Australia was similar to the level in Protected Zones, with a view to easing the requirements for trading beef cattle into zones of higher status.

By 30 June, approximately 13 100 cattle had been tested in 81 herds of which 77 tested negative. Another 17 of the randomly selected herds had already been tested negative. Four animals, in four different herds, were confirmed as infected. This proportion of infected herds indicated that the survey was unlikely to demonstrate that the prevalence was less than 2%. However, because the level of BJD infection among individual animals in the surveyed herds was very low, the cattle industry will continue to explore options for easing BJD movement restrictions on eligible south-east beef herds.

Stakeholders agreed to form a BJD technical group to develop a new proposal that will use existing data and data collected through voluntary testing, to assess the BJD status of south-east beef cattle herds. A meeting will be held in September to advance this issue and to discuss the development of a national BJD program.

Contact: David Kennedy, 02 6365 6016,
JD Coordinator

Northern Territory FMD exercise

A two-day workshop organised by the Northern Territory Department of Primary Industry and Fisheries (DPIF) in May explored a whole-of-government approach to an outbreak of foot-and-mouth disease (FMD) in Australia. The 29 participants came from a range of organisations including DPIF, Emergency Services, Parks and Wildlife, the Bush Fire Council, Police, the Australian Defence Force, Aboriginal land councils, the cattle industry, and Agriculture, Fisheries and Forestry — Australia. The workshop was a desktop exercise aimed at increasing awareness of the consequences of an outbreak of FMD in Australia and emphasising the whole-of-government response that would be required in the particular State or Territory responding to an outbreak of FMD.

The introductory session describing FMD, included DPIF officers who had recently worked on the response to the FMD epidemic in the United Kingdom.

The scenario for the exercise involved the hypothetical finding of FMD in cattle and in feral pigs on a property that had just exported cattle, which were still on their way by sea to the importing country. Participants were allocated to four groups to explore the areas of feral pig control, operations on infected premises, movement controls and security, and tracing and surveillance. Each of these groups had several tasks to work through and had to identify and set priorities for further investigation of any issues that would affect the success of their operations. The groups explored their tasks separately and then presented their findings in a joint session, which discussed key issues and identified work priorities for the next 12 months.

The exercise successfully met its objective of educating people from a range of agencies on the implications of an outbreak of FMD. DPIF has prepared a report of the exercise, with recommendations for work required to be done in the Northern Territory over the next 12 months:

- develop a detailed operational plan for a FMD response;
- seek government endorsement and commitment to improved whole of government preparedness (including surveillance and response management) for a FMD incursion;
- raise with the AUSVETPLAN Editorial Group a number of technical matters identified during the workshop.
- raise with AFFA and LIVECORP some unique emergency animal disease response issues within the export industry; and
- develop a detailed management plan for the eradication of feral pigs during an emergency animal disease response.

The workshop report is available electronically from Brian Radunz, NT Chief Veterinary Officer, phone 08 8999 2130, fax 08 8999 2089 or e-mail brian.radunz@nt.gov.au

OIE General Session

In the last week of May, the 69th General Session of the International Committee of the Office International des Epizooties (OIE, which is the world organisation for animal health) was held in Paris. Approximately 500 participants representing 140 countries or territories, 11 inter-governmental organisations, and several other bodies were present. Major agenda items included the importance of emerging diseases in public and animal health and trade, and the strategic importance of communications management in supporting veterinary services.

OIE outlined its strategic plan for 2001 to 2005 and detailed a five-year work program, which included four new missions for which *ad hoc* working groups are to be formed. The work program reinforces the traditional priority tasks of the OIE: international animal health information; drawing up health standards and guidelines for the prevention and eradication of animal disease and zoonoses; coordination of veterinary research; and the dissemination of knowledge and veterinary service status. These tasks are in addition to other actions for combating zoonoses and foodborne diseases, standards for animal welfare and the tasks of international solidarity and regional coordination. The first of the four new missions is for more intensive involvement of the OIE in zoonotic disease with an emphasis on foodborne diseases. The second concerns the development of new standards for animal welfare applicable to international trade in animal and animal products based on scientific principles. The third mission will implement changes to the responsibilities of the Foot-and-Mouth Disease and Other Epizootics Commission, and the fourth new area will strengthen the roles of the Regional Commissions and regional representatives.

During the session, Australia proposed or supported a number of issues. These issues included:

- a new approach to the notification of animal diseases, based on the epidemiological and zoonotic potential, adopted to replace the existing system of listing diseases as A or B;
- an increased recognition of member countries' in-kind support, along with support for increased financial contributions by member countries to OIE; and
- stronger linkages between OIE and other international organisations such as the World Health Organization, Food and Agriculture Organization, and the World Trade Organization in an effort to avoid duplication and establish common goals.

There are now new editions of the OIE International Animal Health Code and the Manual (texts used to promote the harmonisation of regulations applicable to trade in animals and animal products) as well as the OIE International Aquatic Animal Health Code and Manual. These documents are available on the internet (at http://www.oie.int). During the session, the Committee updated new chapters or annexes of both Codes including the chapters on the international aquatic animal health code, bluetongue, trade in semen and embryos ,and foot-and-mouth disease.

OIE operates five Regional Commissions to promote cooperation at a regional level. The May meeting gave all member countries the opportunity to be updated on programs and activities of their region. Australia holds the presidency of the Regional Commission for Asia, the Far East and Oceania for the next two years. The meeting discussed many regional issues, including the activities of the South-East Asian Foot-and-Mouth Disease Control and Eradication Program.

Contact: Gardner Murray,
Australian Chief Veterinary Officer

Animal Health Quadrilateral Discussions

The annual Animal Health Quadrilateral Discussions (Quads) were held in April 2001 in Darwin. The discussions provide an opportunity for senior agriculture officials from Australia, Canada, New Zealand and the United States to meet informally to share information on issues of mutual interest concerning animal health and related topics.

BSE AND FMD

All four countries reported on their response to the FMD epidemic in the United Kingdom. Although there were differences in approach, all four countries considered that a strong defence against the introduction of the disease was in the national interest. Both BSE and FMD have led to higher expectations of animal health and quarantine services, an enhanced role in food safety in the future, and a general realisation that a whole-of-government approach was required. Significant resources were being committed to animal health.

Other topics that arose in the course of this discussion included the consequences of ageing staff and succession planning. Members described their recruitment and

graduate traineeship programs and agreed to support staff exchanges and to provide an inventory of capacity building activities to next year's meeting.

Risk communication was also a major theme and it was agreed that the group will express its view to OIE on the importance of risk communication and the role OIE might play in it.

The consensus on BSE was that there was a need to minimise compliance tasks, that surveillance requirements should depend upon the risk factors in the country, and that existing standards are adequate if properly implemented and enforced.

ZONING

A working group on zoning/regionalisation/ surveillance was formed to provide coordinated comments on the OIE Disease Code chapter on zoning for endemic disease and regionalisation. John Edwards of WA reported on the work on zoning for FMD that he is chairing for Veterinary Committee.

FOOD SAFETY QUADRILATERAL DISCUSSIONS

The 10th annual Food Safety Quadrilateral Discussions were held before the main April meeting, in Sydney in March. The participants share information on issues of mutual interest, promote the harmonisation of inspection and certification systems and food safety standards, and minimise technical barriers to trade.

Issues discussed at the meeting included a range of food safety initiatives (some proposed by the World Health Organization), BSE and other transmissible spongiform encephalopathies, foods derived from genetically modified animals and plants, animal feeding, and meat inspection reform.

A recommendation was made to (and accepted by) the April Animal Health Quadrilateral Discussions that a joint Animal Health and Food Safety Quadrilaterals meeting be held in 2002 to progress issues relating to both veterinary public health and animal health. That meeting will also consider traceability and animal identification.

INTERNATIONAL GROUP FORMED

The Quads Working Group on Emergency Management is a newly formed group reporting to the Animal Health Quadrilateral Group. The aims of this new group are to:

- review existing emergency management arrangements, plans and approaches within the Quadrilateral countries, and identify common priority issues in emergency management;
- create efficiencies by considering common emergency preparedness issues, facilitating technical exchange in animal health emergency preparedness, and facilitating training opportunities, reducing duplication and enhancing collaboration; and
- work cooperatively with a proposed counterpart sub-committee of the North American Animal Health Committee (United States, Mexico, Canada).

Since being formed, the group has redrafted for consideration a memorandum of understanding for an international emergency management reserve and is compiling a list of priority activities dealing with common international issues.

Contact: Gardner Murray,
Australian Chief Veterinary Officer

Animal health in remote central Australia

The remote areas of central Australia are characterised by having few people, often with a strong sense of their own community. People living in remote areas are at a considerable distances from services, including government services. These areas carry a large population of livestock and feral animals, generally at low densities and infrequently observed. Remote areas are nevertheless at risk of being the origin of exotic and emerging diseases, introduced by the many visitors to the area, or by the seasonal incursion of insect vectors.

To support international trade, it is no longer acceptable to assume that absence of information in an area indicates absence of disease. It is imperative to capture reliable, accurate and useful information on animal health and disease in remote areas, and this has been recognised by Animal Health Australia and the pastoral companies of northern Australia.

Veterinarians and others interested in animal health and disease issues in the central remote area of Australia have formed the Central Australian Animal Health Network (CAAHN). The Network's terms of reference are to:

- facilitate communication between graziers, private and government veterinarians, and public health personnel in Central Australia;
- facilitate consultation on disease surveillance and control in Central Australia;
- assist effective and efficient delivery of animal health services in Central Australia;

- assist in consultation and communication with respect to livestock production, wildlife health and zoonoses in Central Australia;
- make recommendations to State and Territory animal health managers, and through their NAHIS representatives to Animal Health Australia;
- communicate with all stakeholders; and
- develop surveillance strategies appropriate for extensive rangelands by the end of 2001.

CAAHN operates a web-based listserver (central-aus-animal-health-net at http://lists.dpi.qld.gov.au).

At a recent national remote area animal health monitoring and surveillance workshop organised by Animal Health Australia, it was proposed that an effective remote area animal health monitoring and surveillance system would include three key elements in addition to currently accepted systems:

- be community-based;
- be able to demonstrate the level of health of a population as well as its disease status; and
- lead to prior, agreed or expected, verifiable responses and outcomes.

Including these three elements represents a major change from previous concepts implicit in animal health programs, but is consistent with social and political trends towards democratisation of process in Australia and in other democratic countries.

It is proposed that animal monitoring and surveillance groups be developed, involving interested members of the community who can contribute to the data collection from the area, and who would benefit from the outcomes of the work. People invited to participate might be local graziers, stock agents, pest control officers, public health staff, pastoral company representatives, private veterinarians, or National Parks and Wildlife personnel.

In the past, surveillance programs naturally focussed on disease. Unwittingly, this focus creates a major bias in perceptions; the information generated tells the community that animals are diseased. The community has no idea of how healthy these animals are. Measures to indicate health could include production parameters, management systems, population figures relating to land and vegetation type, climatic variations, and negative disease data. The proposed community surveillance groups would collect this health information as well as evidence of disease occurrence.

In a community-based animal monitoring and surveillance group, where governments do not pay for all expenses involved in collection, analysis and response to disease information, it is vital that the people who participate should both:

- help plan responses and outcomes; and
- know and agree in advance to those responses and outcomes.

The responses to and outcomes of information collected need to be verified or measured so that all participants can consider and determine the effect and usefulness of their efforts.

The group would need to be committed to meeting national reporting requirements, but would also meet local needs for information and feedback. The first local value would be more accessible data and information about the health and well-being of animals in the area. Another would be to enable graziers and others in the group to market the health and well-being of animals in their area. It is expected that there will be major market advantages in being able to document that animals in remote areas are being managed sustainably. At present, the 'clean, green' label remote area livestock producers seek is threatened by perceptions about the frequency of droughts (leading to starvation of stock) and desertification in remote areas. Being able to assess sustainability would be a major advance. Knowing and understanding important endemic diseases and production issues of the area, and applying the principle that the animal monitoring and surveillance groups will respond to important issues, will enable improvement of the general health and productivity of animals in the area.

It is proposed that two pilot projects be initiated, developing community surveillance and monitoring groups in New South Wales and the west of Queensland. For further information contact Janet Berry (QDPI, phone 07 4658 4414) or Greg Curran (NSW Agriculture, phone 08 8087 1222)

Contributed by: Janet Berry, QPDI

Disease Watch Hotline — 1800 675 888

The Disease Watch Hotline is a toll-free telephone number that connects callers to the relevant State or Territory officer to report concerns about potential exotic or other emergency disease situations. Anyone suspecting an exotic disease outbreak should use this number to get immediate advice and assistance.

For information about the Disease Watch Hotline contact Jamie Penrose, Animal Health Australia.

Aquatic animal health

NATIONAL FISH PATHOLOGISTS WORKSHOP

A national workshop, held at the University of Queensland in July was attended by 14 aquatic animal pathologists and aquatic animal health officers from State governments, three CSIRO Livestock Industries scientists and three officers from the Office of the Chief Veterinary Officer (OCVO).

A major topic of discussion was the writing and publishing of Standard Diagnostic Tests (SDTs) and Standard Operating Procedures (SOPs). The workshop participants agreed to peer-review the currently available documents: five SDTs (*Bonamia* spp; crayfish plague; haplosporidiosis; spring viraemia of carp; yersiniosis) and three SOPs (sampling statistics; viral isolation; finfish sampling). After that, the eight documents will be submitted to Veterinary Committee's Sub-Committee on Animal Health Laboratory Standards (SCAHLS) for editing and publishing. A representative of SCAHLS at the workshop indicated that SCAHLS would be happy to administer the editorial/publishing work of aquatic SDTs, under the Australian and New Zealand Standard Diagnostic Protocols (ANZSDP) series provided that scientific input comes from a forum of aquatic animal health specialists. Draft versions of the ANZSDPs are available from the internet (at http://www.affa.gov.au/docs/animalplanthealth/aquatic/program_project.html).

The Commonwealth Government Budget Initiative 'Building a National Approach to Animal and Plant Health' has provided research funding to improve diagnostic techniques for diseases of aquatic animals. Government and industry stakeholders have identified eight priority diseases for investment of these funds:

- birnaviruses/infectious pancreatic necrosis;
- crayfish plague;
- haplosporidiosis;
- marteiliosis;
- piscirickettsiosis;
- spawner mortality virus;
- viral encephalopathy and retinopathy; and
- *Vibrio* spp. (including cold and warm water/ tropical species).

Preparation of an ANZSDP is a required output for each of the projects funded under this initiative. The workshop identified additional SDTs and SOPs that need to be written including *Aeromonas salmonicida*; bacterial isolation; whirling disease; whitespot syndrome virus; and *Renibacterium salmoninarum*.

SURVEILLANCE AND MONITORING CONSULTANCY

Agriculture, Fisheries and Forestry – Australia has retained Ausvet Animal Health Services to prepare a business/operational plan for surveillance and monitoring of diseases of aquatic animals within Australia. The preparation of such a plan was a major recommendation arising from a Fish Health Management Committee sponsored review of the major report (*Current arrangements for monitoring, surveillance and reporting of aquatic animal health in Australia*).

A workshop of industry and government stakeholders to be held in August will refine the draft plan and identify mechanisms for developing a nationally coordinated approach to surveillance and monitoring for diseases of aquatic animals in Australia.

AQUAVETPLAN FURUNCULOSIS DISEASE STRATEGY MANUAL RELEASED

A new manual outlining how to respond in the advent or suspicion of an outbreak of the bacterial disease furunculosis in Australia's salmon and trout populations was released in June. Furunculosis is a highly contagious bacterial disease that affects salmonids (salmon and trout). The bacterium that causes furunculosis (*Aeromonas salmonicida* subspecies *salmonicida*) does not occur in Australia. However, it is found throughout Europe as well as in North America, South Africa and Japan. Furunculosis is currently one of the most economically significant diseases of farmed salmonids in these countries.

The AQUAVETPLAN Furunculosis Disease Strategy Manual is the first in a series of disease-specific manuals to be developed. It was adapted from equivalent AUSVETPLAN disease strategy manuals and aims to provide both terrestrial and aquatic animal health professionals with quick and easy access to the information they need to manage an emergency response in the event of a suspect or confirmed incursion of furunculosis in Australia. The manual contains information about the disease, its diagnosis and an approach to its control, which has been endorsed by government and private sector stakeholders throughout Australia. Like all AQUAVETPLAN Manuals, it will be updated as required. It is available on the internet (at http://www.affa.gov.au/docs/animalplanthealth/aquatic/aquavetplan.html).

Contributed by: Eva-Maria Bernoth, Office of the Chief Veterinary Officer, AFFA

BSE

Australia is internationally recognised as free of Bovine Spongiform Encephalopathy (BSE), and is one of only 14 countries that currently meet the European Union's criteria for the most favourable BSE risk rating.

This rating recognises the rigorous quarantine and other preventive measures Australia has instituted to prevent the introduction and establishment of this serious cattle disease. Australia's BSE control measures were further strengthened at the March and May meetings of the Agricultural and Resource Management Council of Australia and New Zealand. New initiatives include extending the ruminant feed bans to encompass other animal material, establishment of a high level National Management Group (consisting of senior representatives of the Commonwealth Government and State and Territory governments, representatives of industry peak bodies, a consumer representative and technical expertise as required) to coordinate activities and to monitor performance of anti-BSE measures, regular audits of the feed bans in all jurisdictions and a whole-of-life quarantine for all cattle imported from countries that subsequently reported native born cases of BSE.

The National Health and Medical Research Council has destablished a Special Expert Committee on Transmissible Spongiform Encephalopathies (SECTSE) to bring together agriculture and health experts to manage issues that affect both animal and human health. SECTSE meets each second month in person and every other month by teleconference. It is considering a range of issues including animal vaccines, animal feeding practices, tallow, BSE in sheep in Europe, and the Prionics ™ post mortem test trial (see *AHSQ* Vol. 5 No. 4).

Because BSE has wide implications for human health as well as for international trade, and because consumers all over the world increasingly expect food to be safe, it is necessary that the scientific community and veterinary and public health authorities take appropriate actions in response to the growing BSE concern. As a result, a Joint WHO/FAO/OIE international scientific conference on BSE and its risks (to animal health, public health and trade) was held in Paris in June to discuss approaches to disease prevention and policy recommendations.

Contact: Andrew Cupit,
Office of the Chief Veterinary Officer, AFFA

Red imported fire ants

Red imported fire ants (RIFA), *Solenopsis invicta*, are a serious pest recently detected in Queensland. The ants are native to South America and were introduced to the United States in the late 1930s, where they have become a major environmental and economic pest causing losses estimated at some $1000 million a year.

The Queensland Department of Primary Industries (QDPI) has commenced control of RIFA, including treatment of infested sites with chemicals, baiting treatment of nests and an insecticidal drench of nursery stock, followed by monitoring of treated sites for re-infestation.

RIFA are very aggressive and can out-compete other ants, and attack other invertebrates and vertebrates, especially ground-nesting birds. The ants attack if their nest is disturbed and their bite induces a painful, fiery sensation, similar to that of a wasp or bee sting. The ant's sting can cause blisters and allergic reactions that are potentially but rarely fatal. RIFA are 2–6 mm long, red-brown and look very much like ordinary house or garden ants, including the coastal brown ant that is very common in Australia. They form nests or mounds in the soil up to 40 cm tall, and can reach very high nest densities. Small colonies are commonly transported accidentally by human activity, especially via potted nursery plants, landscape materials, soil-moving equipment, turf, hay, vehicles and containers.

Information on RIFA is available on the internet (at http://www.dpi.qld.gov.au/health/3125.html). QDPI is using community-assisted surveillance of high risk areas throughout Australia.

Anyone who may have found RIFA should leave the nest alone and contact the QDPI Call Centre:
phone 13 25 23 (within Queensland) or
07 3404 6999 (outside Queensland) or
e-mail callweb@dpi.qld.gov.au).

AUSVETPLAN

FOOT-AND-MOUTH DISEASE MANUAL

A revised foot-and-mouth disease (FMD) manual was released in May, as part of Australia's response to the outbreaks of FMD in the United Kingdom (UK). The main part of the review was conducted by a consultant, Tony Forman. The fundamental direction of the strategy is unchanged. Some of the additions are:

- expansion of pathogenesis and pathology;
- brief discussion on recent developments such as the Pan-Asia strain of type O virus and the UK epidemic;
- reference to the relative unimportance of deer and camelids in FMD transmission; and
- underlining the option of pre-emptive depopulation of susceptible animals as a strategy option.

The draft was considered by the AUSVETPLAN Editorial Committee in April and endorsed by Veterinary Committee in May. A further update is planned for later in 2001 that will reflect any otherr lessons learnt from the UK outbreaks and further discussions with the dairy industry on milk movements within Restricted Areas.

FASTER PRODUCTION OF MANUALS

A number of changes should lead to faster production of manuals. Biotext Pty Ltd, a Canberra-based scientific editing company that has been involved with AUSVETPLAN for a number of years, will provide a greater range of editorial services and liaison tasks.

Although policy direction and coordination of AUSVETPLAN will remain with AFFA, Animal Health Australia will now be responsible for its management and distribution. Animal Health Australia is considering a number of options concerning AUSVETPLAN and is actively seeking suggestions for its improvement. For further information contact Peter Thornber, Manager, Animal Health and Emergency Services for Animal Health Australia on 02 6203 3944.

WORK IN PROGRESS

Following input from Veterinary Committee and the horse industry, the final round of technical editing of the contagious equine metritis (CEM) manual has now been completed and final agreement is now being sought for its release.

An updated draft of the Control Centres manual has been submitted to Veterinary Committee, while updates of the Newcastle disease and avian influenza manuals have received a final edit and will be available for comment shortly.

Contributed by: Chris Bunn,
Office of the Chief Veterinary Officer, AFFA

FMD vaccine

Australia is re-evaluating the arrangements with the international FMD vaccine bank (IVB) to meet any emergency needs for FMD vaccine. IVB has been requested to obtain further information on registration and good manufacturing practice standards, and to provide a business case so that Australia and other members can make a decision on its viability. Australia has a verbal agreement from the European Commission to obtain FMD vaccine from the European Union's FMD antigen bank to cope with any emergency response in Australia, and is seeking formal confirmation of this arrangement. Animal Health Australia will be establishing a consultancy shortly to develop a business case and tender documentation for possible commercial supply options.

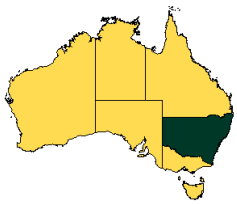
Contact: Neil Tweddle,
Office of the Chief Veterinary Officer, AFFA

Senate inquiry into ovine Johne's disease

The Senate Rural and Regional Affairs and Transport References Committee has recently reviewed several facets of the National Ovine Johne's Disease Control and Evaluation Program (NOJDP). These included the timetable for the program to combat OJD, the likely cost of control or eradication, the extent and nature of research being conducted in relation to OJD testing, the possible role of vaccination, and the respective contribution of governments and industry that would be required for future control or eradication options. The Committee held public hearings in Orange, Goulburn, Melbourne and Canberra. It also received submissions from a range of organisations including government departments and the New South Wales Farmers' Association. The Committee's report was released in July and is available on the internet (at http://www.aph.gov.au/senate/committee/rrat_ctte/ovinei_two/index.htm).

State and Territory reports

New South Wales



Contributed by:
Barbara Moloney
NSW Agriculture

ANTHRAX

Five submissions for investigation of sudden deaths were negative for anthrax. There were no positive anthrax cases during the quarter.

EXOTIC DISEASE EXCLUSIONS

Foot-and-mouth disease (FMD) was excluded on six occasions during May and June. A salivating heifer (no vesicles), a single animal with oral ulcers, a cow with tongue ulcers (and lesions consistent with photosensitisation), and a lame bull were all negative on serology for FMD antibodies. A tissue sample from a steer with a ruptured gum vesicle (and possibly interdigital lesions) tested negative to a number of vesicular diseases using the vesicular disease antigen ELISA, and viral isolation was also negative for FMD virus. A lamb with lip lesions was confirmed as scabby mouth.

Pigs with interstitial pneumonia were negative for porcine circovirus type 2 on polymerase chain reaction (PCR) on spleens.

Hendra virus was excluded as the cause of sudden death in a horse with acute circulatory failure and pulmonary oedema. Immunohistochemistry on fixed sections and viral isolation on fresh tissues were both negative for Hendra virus.

Virulent Newcastle disease (ND) virus was excluded in several incidents involving poultry showing respiratory and/or neurological signs.

NEWCASTLE DISEASE

Data from the national survey, movement testing, testing of previously infected properties and ND exclusion testing showed no evidence of virulent ND. The auditing records demonstrated that a comprehensive process of clean-up and disinfection was followed. The Technical Working Group of the National ND Management Group endorsed lifting of the Control Areas and quarantines on all properties.

BOVINE TUBERCULOSIS

Follow-up work is proceeding as a result of the movement of animals from a Queensland property infected with bovine tuberculosis (TB) (see *AHSQ* Vol. 6 No. 1). Except for one herd that is calving, all of the neighbouring herds of the resultant four infected NSW herds have been tested for TB, with only one reactor being detected. The final destination of 46 of 729 animals being traced is still being determined. TB lesions were found in five animals (1.39%) of the 361 adult cattle from Queensland that were ordered to slaughter. A lesion was also found in a calf, probably born to one of the infected cows. This compares to the detection of one lesion in the 313 cattle (0.32%) slaughtered before the tracing commenced. Although the age of the latter group was lower (mainly heifers rather than cows), the incident highlights the need for vigilance by meat inspection staff.

In a separate incident, cattle have been traced from a large infected cattle property in northern Queensland to another of the owner's properties in southern New South Wales. Dispersals from this herd also went to other properties in Queensland, Northern Territory and South Australia.

A lesion histologically characteristic of TB, detected in a calf at Casino abattoir in March, was found to be negative following laboratory culture. The calf originated from a property near Armidale and was born to a cow that had been introduced from Queensland. The property was quarantined and preliminary investigations undertaken. Quarantine was released when the laboratory reported that the organism grown from the lesion was not *Mycobacterium bovis*.

ARBOVIRUSES

Considering the favourable seasonal conditions, transmission of Akabane virus was less extensive and slower than usual, possible due to interference with transmission caused by the extensive spread of Peaton virus early in the season. Between March and May, there was transmission of Akabane along the entire coastal plain from the far North Coast south to the Hunter Valley, with spread west up the Hunter Valley as far west as Scone. By the end of the season, most animals had seroconverted at coastal locations, although over a much longer period of time than usual.

During April and May moderate seroconversion (about 40–60% of animals) was detected at most sentinel sites on the north-western slopes in districts adjacent to the Queensland border and as far south as Narrabri. Akabane virus is not endemic in these areas (although there was also a moderate incidence last year), so deformed calves were expected, and some were observed during late July.

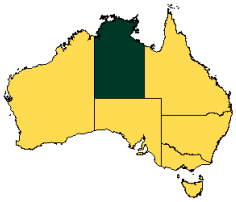
There was no Akabane or Simbu activity detected on the NSW South Coast.

Seroconversions for bluetongue virus were recorded at only two locations in the far north of the State — at Casino and Wallangra (on the north-western slopes just south of the Queensland border), both in mid-June. The incidence was low to moderate (20% at Casino and 50% at Wallangra). The seroconversions at Wallangra were unusual and have not been detected in this area previously. However, during the previous year, there had been extensive bluetongue transmission in nearby districts in southern Queensland. No isolates of bluetongue viruses have been made to date. Serotyping has not been completed.

Although the spread of bovine ephemeral fever (BEF) virus started later than usual, infection was widespread at all sites along the North Coast, the Hunter Valley and the Cumberland region west of Sydney. There were also seroconversions on the north-west slopes and plains the central tablelands and far south coast. Seroconversions were recorded in most coastal locations in April–June and May–June at the inland locations.

The incidence of BEF was high in most coastal locations and the Hunter Valley (60–100%) and low to moderate in inland districts (20–30%). Disease was widespread and severe in the Hunter Valley, Cumberland region and the north west slopes and plains. Cases were observed in most other regions but were generally mild. The widespread nature of BEF infection probably reflected the widespread flooding in many districts in late summer–early autumn.

Northern Territory



Contributed by:
Diana Pinch
NT DPIF

CATTLE

Bovine ephemeral fever (BEF) virus has been active in an area extending to the central part of the Northern Territory. This quarter, seroconversions were noted in the sentinel herds as far south as the Barkly Tablelands where, in other herds, clinical cases of BEF were seen.

CROCODILES

Widespread skin lesions affecting grower crocodiles were noticed at slaughter and resulted in significant economic losses due to downgrading of skins. All pens of that age group had cases. Lesions were typical of dermatophilosis. Water in pens was routinely chlorinated. An effective treatment regime was instigated and there was an apparent improvement in the condition. An organism that was consistent with *Dermatophilus* spp. was observed by histological examination.

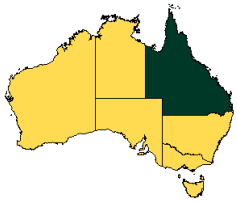
PIGS

A piggery owner reported that all age groups were growing poorly and were unwell, and blamed a mouldy batch of feed pellets. The pigs were coughing and lethargic. Post mortem examination of a ten-week-old weaner did not reveal any gross abnormalities of the organs. There was a heavy burden of *Trichuris suis* in the large intestines. The feed pellets contained more than 50 parts per billion of aflatoxin (a mycotoxin produced by growth of the fungus *Aspergillus flavus*, usually on groundnuts or stored grain) in the top layer of the container. The feed looked better deeper in the container, but still had a concentration of more than 25 ppb (the cut-off for an acceptable level of aflatoxin).

An incidental finding from a blood sample from the same weaner was detection of eperythrozoonosis (*Eperythrozoon suis*). The disease was suspected on this property based on clinical history, but there had been no laboratory confirmation. The initial detection of *E. suis* in Australia was reported on another Northern Territory piggery (see *AHSQ*, Vol 6. No. 1).

A two-month-old pig from a sentinel herd showed consolidation of the lung. *Bordetella bronchiseptica* was isolated from both the lung and liver. Although this organism is associated with pneumonia in pigs, it is not a common diagnosis at Berrimah Veterinary Laboratories.

Queensland



Contributed by:
Janet Berry
QDPI

TRANSIT TETANY IN TRAVELLED CATTLE

During April, nine cows died after travelling from New South Wales to a property in the far north-west of Queensland. The Aberdeen Angus cows, due to calve in August, had been rested for 24 hours at Roma but the total travelling time was 60 hours. One had died in the truck and the remaining eight died in the yards or after turning out into the paddock. A blood sample from one of the cows showed hypocalcaemia indicating transit tetany as the cause of death. Inspectors appointed under Queensland Animal Welfare legislation advise producers on the care of animals during transport over long distances to help avoid such losses.

INFERTILITY IN REMOTE AREA

Concern about low branding rates on an extensive Channel country property near Birdsville prompted the sampling of 15 non-breeder animals. Two cows were serologically positive for campylobacteriosis, 11 positive for *Leptospira hardjo*, 12 positive for infectious bovine rhinotracheitis (IBR) and 15 positive for mucosal disease. All were negative for *Brucella abortus* and *L. pomona*. The extent of the serological conversion to a variety of agents on this rangelands property in the channels of the Diamantina river is remarkably similar to findings in other parts of the State where cattle are kept more intensively. The increasing numbers of feral pigs reported in the area may be contributing to disease transmission.

STRANGLES

Streptococcus equi was isolated from thoroughbred horses on three Darling Downs studs and a property in the centre of the State where there was 25% morbidity. The affected horses had typical clinical signs of strangles including enlarged lymph nodes, respiratory signs and ocular and nasal discharge.

THROMBOSIS OF THE AORTA IN LAMBS

A mortality rate of about 20% occurred in a group of 40 nine-month-old Suffolk lambs over six months. The lambs developed a progressive hindlimb paresis. They were grazing native pasture and being fed a small amount of millet and sunflower screenings. One lamb that clinically presented with hind limb paresis, coolness of the hind limbs and a bilaterally poor femoral pulse was submitted for autopsy. There was mural thrombosis of the aorta at the thoraco-lumbar junction and its quadrification. Both kidneys had multifocal infarcts. The cause could not be determined.

BOVINE PESTIVIRUS

Pestivirus was diagnosed as the cause of different syndromes in cattle around the State. Chronic ill-thrift, scouring, anaemia and mortalities were recorded in young cattle from which the virus was isolated by PCR. In a dairy herd in the south-east that had recently introduced cattle, abortions and three cases of congenital cerebellar hypoplasia in newborn calves were attributed to infection with pestivirus. Cerebellar hypoplasia attributed to infection with pestivirus was diagnosed in older cattle that showed nervous signs and which were included in the national transmissible spongiform encepalopathies surveillance program..

PARAMPHISTOMES IN CATTLE

Faecal samples were submitted from two animals on different properties in the Sarina shire at the end of March. Both had evidence of chronic scouring and ill-thrift. Johne's disease was excluded in both cases through faecal culture. Paramphistome eggs were detected in faecal samples from one animal on one farm. The clinical signs in both these cases were consistent with enteritis caused by migrating paramphistomes, which are common in coastal areas of central Queensland.

GLASSER'S DISEASE

The morning after 234 pigs were transported to a meatworks and held in lairage for slaughter the next day, five pigs were found dead in the pens with a further 18 showing nervous signs consisting of lateral recumbency, paddling and exophthalmos. One dead and two live pigs were submitted for autopsy. Lesions were restricted to the meninges, which showed diffuse fibrinopurulent meningitis. *Haemophilus parasuis* was isolated from brains of each of the three animals. In this case, Glasser’s disease did not manifest as a polyserositis, and only the meninges were involved.

FOWL CHOLERA

Fowl cholera was diagnosed on three poultry properties, two free-range layer farms and a free-range duck farm. Mortalities ranged from 2% to 17%. Consistent findings from post mortem examination included hepatomegaly and splenomegaly, often with miliary foci in the liver, and pericardial and perihepatic fibrinous exudates. *Pasteurella multocida* was recovered from swabs taken from various organs.

SURVEY FOR NIPAH AND HENDRA VIRUS

To protect export markets for Queensland pork, a further survey of commercial pigs has recently been completed. This has built on the results of the abattoir survey of pigs undertaken during 1999 to demonstrate that Queensland pigs are free of both Nipah and Hendra viruses. The Department of Primary Industries, in consultation with the Queensland Pork Producers Organisation, felt that it was necessary to update the information from the 1999 survey. Singapore in particular is now a major market for Queensland pork. The results of the current survey will sustain this market and enhance the position of the Queensland pork industry in the international trading arena.

During November and December 2000, 520 blood samples were collected from porkers at two South Queensland abattoirs that kill pigs from central and south of the State, and a further 55 pigs were sampled in the Atherton Tablelands and Townsville areas of northern Queensland. The samples were tested at Yeerongpilly Veterinary Laboratory using reagents supplied by the Australian Animal Health Laboratory. All samples proved negative for both Nipah and Hendra virus.

ONGOING SURVEILLANCE OF BATS

More than 400 wild-caught bats in northern and western Australia were surveyed for Hendra virus, Australian bat lyssavirus (ABL) and other agents between March and June this year. The project, lead by Queensland and with co-investigators from Northern Territory and Western Australia animal health authorities and wildlife authorities, aims to help define the spatial and temporal distribution of ABL in Australian bat populations. In this survey, families and genera known to host lyssaviruses elsewhere were targeted.

The finding of neutralising antibodies to lyssavirus in the absence of concurrent infection indicates that non-fatal infections occur in species of insectivorous bats and in flying foxes in Australia. This finding, similar to those in rabies-infected bat populations in the United States and elsewhere, suggests a mature host/ parasite relationship, and supports the theory that ABL infection has been in Australian bats for some time. Laboratory investigations are ongoing at Yeerongpilly Veterinary Laboratory in Queensland, and at the CSIRO Australian Animal Health Laboratory. Any isolates of virus from 'new' species and locations will be of particular value for molecular epidemiological studies to explore the origin of both ABL and Hendra viruses.

South Australia

Contributed by:
John Weaver
PISA

OVINE JOHNE'S DISEASE

Annual Market Assurance Program testing detected ovine Johne's disease in a flock near Millicent in the south-east of the State. Tracing detected infection on another five properties that had purchased rams from the property. This is the first major finding of ovine Johne's disease on the SA mainland. (There are more than 40 known infected properties on Kangaroo Island.)

Investigations are continuing into the possible link between detection of cattle strain of *Mycobacterium paratuberculosis* in sheep on a property with a number of feral deer. Some of the deer have tested positive for the cattle strain of *M. paratuberculosis*.

COCCIDIOSIS IN ALPACA

A recently transported alpaca suffered a severe attack of haemorrhagic diarrhoea and died, despite intensive antibiotic and fluid therapy. No samples were submitted for microbiology but histology revealed the presence of a severe coccidial infection in the small intestines. All other tissues appeared normal .

PERKINSOSIS IN ABALONE

Apparently healthy whole abalone were submitted because of 'pink' patches on the body. Histological examination indicated the presence of *Perkinsus* spp.

STAR GAZING IN A SHEEP

The brain of an aged sheep exhibiting head shaking, star gazing and general incoordination and non-responsiveness to Vitamin B1 therapy was submitted as part of the TSE survey. A fluid-filled cyst about 3 cm x 1.5 cm consistent with cysticercus was found on the dorsum of the brain beneath the dura mater.

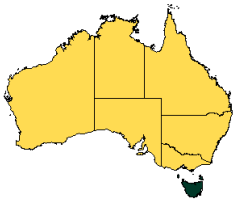
ULCERATION IN KINGFISH

Kingfish with skin ulceration and blotching were found to have many monogean flukes attached to the skin in the affected area. The fluke were not identified.

FMD IN THE UNITED KINGDOM

Ten SA departmental staff have now either been to or are still in the United Kingdom as part of the assistance program for FMD. Those who have returned have given a number of presentations to industry and other groups interested in their experiences.

Tasmania



Contributed by:
John Elliott
DPIWE, Tasmania

MYCOTOXICOSIS

Deaths associated with photosensitivity were investigated on four properties on which 89 cattle died and 170 were affected out of a total of 550 animals. On each property the affected cattle had been grazing pastures with a heavy growth of rough dogs tail (*Cynosurus echinatus*). However, a 220 kg steer fed 2 kg of rough dogs tail did not develop photosensitivity and its liver enzymes remained normal. Since rough dogs tail is very unpalatable, 2 kg was thought to be about what a grazing animal would eat. Rough dogs tail may be an indicator species rather than the actual cause. It grows in poorly managed pastures with a lot of dead material left over from heavy Spring growth.

PNEUMONIA IN PIGS

Samples were submitted from a line of 5-month-old pigs in which 10% had severe pneumonia. *Mycoplasma* spp., *Actinobacillus pleuropneumoniae* and *Pasteurella multocida* were cultured from the

lesions. *A. pleuropneumoniae* and *P. multocida* are secondary infections of mycoplasma pneumonias, resulting in outbreaks of severe pleuropneumonia.

MACROLACTONE RESISTANCE IN *HAEMONCHUS CONTORTUS*

Haemonchus contortus is not a common in mainland Tasmania, being a problem only in unusually wet summers. It is more common on Flinders Island.

Samples examined at Mt Pleasant Laboratory indicate that *H. contortus* on Flinders Island may be resistant to macrolactone (ML) anthelmintics. A weaner, which had 90 eggs per gram 40 days after administration of a weaner capsule, was examined. The capsule was present and had paid out at an appropriate rate. Six *H. contortus* were recovered from a 1/20 aliquot of the abomasum. No other parasites could be detected in the abomasum or the small intestine, although larval differentiation on a sample of faeces from untreated wethers on this property yielded 99% *H. contortus*.

This property has a history of high use of macrolactones in the past under different owners, so it is quite possible that *H. contortus* has become resistant to this drench family.

LABORATORY ACCESSIONS AND NOTIFIABLE DISEASES

During the quarter, there were 882 laboratory accessions (30% cattle, 26% sheep and 25% aquatic animals). Blood samples made up almost 40% of the 13 182 specimens submitted with these accessions. The following table summarises laboratory accessions for suspected notifiable diseases in Tasmania:

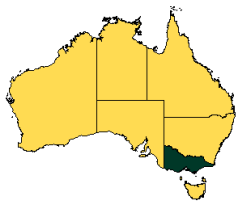
Disease	Animals	Accessions	
Species	Tested	Number	Positive
Hydatids			
Bovine	3	3	1
Ovine	3	3	0
Johne's Disease			
Bovine	2714	66	11
Caprine	2	1	0
Ovine	911	15	2
Leptospirosis			
Bovine	30	8	1
Human	9	3	0
Ovine	4	1	0
Q fever			
Ovine	2	1	0
Salmonellosis			
Avian	17	7	2
Bovine	31	23	0
Caprine	3	3	0
Ovine	21	8	0
Wildlife	3	3	0

SALMONELLA DUBLIN IN CALVES

After 50 heifer calves died from a 700-cow dairy herd, *Salmonella* Dublin, a relatively uncommon pathogen in Tasmania, was isolated., and there was no obvious source of infection. There had been no recent introduction of stock to the herd. Cats and ravens had had access to the milk and colostrum that was fed to the calves.

Victoria

Contributed by:
Tristan Jubb
DNRE, Victoria



BIRTH DEFECTS IN LAMBS ASSOCIATED WITH ONION GRASS

A Wimmera property had a 25% incidence of foreleg deformities among lambs born to 800 five-year-old merino ewes. The affected lambs could walk but could not straighten their forelegs. The carpal joint could not be completely extended. The lambs appeared bright and alert but had varying degrees of proprioceptive reflex deficits of the foreleg. Histopathology of the brains of three lambs revealed periventricular leucomalacia in all three. The condition has not been previously recorded in animals, but is well known in premature babies. It is believed to be caused by anoxia of the foetus due to placental defects near term. Professor KVF Jubb, who reviewed the case, believes it could be related to ingestion of onion grass and has suggested that the early abortion, associated with grazing of this plant, is due to placental breakdown. Three affected lambs were tagged and observed over two weeks after which two of the three appeared to have recovered. The owner estimated the pasture comprised 10% onion grass. Onion grass is often more conspicuous in drier seasons, such as this year, and where soil phosphate levels are low. One lamb and a ewe were negative to serological tests for Akabane and togaviruses that have been incriminated in similar birth defects of the limbs.

INVESTIGATION OF SUSPECT FMD IN A COW

A Goulburn Valley private practitioner called in the district veterinary officer to investigate a potential FMD case recently. A 5-year-old Jersey cow was noticed to be dribbling from the mouth and had been off her milk for three days. She had a temperature of 40^{o}C and was slightly depressed. She had a large 'vesicle' (50 x 30 x 5mm) on each side of her tongue. FMD was considered in the differential diagnosis.

There was no lameness or evidence of coronet lesions, no vesicles on her teats, and there were no further lesions in the mouth or nose. Ventral oedema was present under the jaw and there was slight thickening of the base of the tongue. No others in the mob were affected. The right 'vesicle' was doughy to touch but palpation of the vesicle on the left side of the tongue indicated presence of fluid. No fluid could be extracted by needle puncture, and on incising the lesion, the contents were found to be a gelatinous exudate.

Serum and epithelial tissue were sent to AAHL for exclusion of FMD. These tests were negative. The cow improved after treatment with antibiotics and iodide. The presumptive diagnosis is a local cellulitis following a puncture wound of the base of the tongue.

SALMONELLA OUTBREAK IN A DAIRY HERD

The frequent spreading of poultry manure on pasture on a dairy farm in West Gippsland may have been the source of an outbreak of salmonellosis in a dairy herd. Over the past few months, six clinical cases of salmonellosis were diagnosed in adult milking cows at the point of calving. Induced calving is used on the property, a practice that can lead to immuno-compromisation of the cattle and thus they would be susceptible to contracting clinical salmonellosis

The strains cultured to date from the cattle are *S.* Typhimurium types 4 and 6. In consultation with his private practitioner, the owner is intending to vaccinate the herd with a proprietary *Salmonella* Typhimurium and Dublin vaccine.

ENTEROCOCCUS HIRAE OUTBREAK

A poultry farm in the Dandenong Ranges had an outbreak of *Enterococcus hirae* infection in week-old layer chicks. The chickens presented with nervous signs, torticollis, extreme deviation of the head, and deaths over a period of three days. More than 340 chicks died in the outbreak. Histopathology revealed a multifocal encephalomalacia from which *Enterococcus hirae* was cultured. This disease appears to be self-limiting, and there are uncertainties about the transmission and epidemiology. This may well be an emerging disease of newly hatched chickens.

ORNITHOSIS IN AN AVIARY WORKER

The management of a petshop in south-east Melbourne contacted DNRE after they were notified that one of their clients had become ill with ornithosis. The patient had purchased birds from the pet shop and had handled several birds that had subsequently died in his own aviary. He became ill shortly after returning some of the dead birds to the store. Two of the dead birds were presented to an avian veterinary specialist who conducted a post mortem examination resulting in the diagnosis of psittacosis. DNRE officers visited the petshop and made changes to safety procedures to prevent further human cases. Methods for minimising dust arousal during cleaning were introduced and the use of facemasks is now mandatory.

PHOTOSENSITISATION OF CATTLE ASSOCIATED WITH A NATIVE GRASS

Rough dogs tail (*Cynosurus echinatus*), a native grass, has been thought to be associated with photosensitisation in cattle in the south-west Victoria for many years.

On April 12–13, three south-west Victorian farms experienced outbreaks of photosensitisation. The common link between the farms was the date of occurrence and access to rough dogs tail about 3–4 days previously. A further two farms experienced outbreaks on 27 and 30 April. Cattle on these farms had access to rough dogs tail for some weeks. However, they were close neighbours and approximately 35 mm rain had fallen in the district on 21–22 April. A fifth farm experienced an outbreak of photosensitization on 26 June, the cows having had access to rough dogs tail on 22 June.

Outbreaks of photosensitisation on three other farms were investigated, but there was no evidence of access to rough dogs tail. The dates of these outbreaks were isolated and bore no links to weather patterns. In all nine incidents there was a tendency for young animals to be affected rather than older ones.

There appears to be an association between outbreaks, access to rough dogs tail and local weather factors that would be consistent with a fungal involvement. Facial eczema was initially considered to be a possible cause but there are three inconsistencies with this:

- the latent period of 3–4 days is considerably less than the 10–14 days commonly experienced with facial eczema;
- there has been no histopathological evidence of facial eczema found to date in the limited number of samples examined; and
- there have been no reports of sheep being affected.

Further investigations into possible causes are continuing.

POLIOENCEPHALOMALACIA IN SHEEP

Polioencephalomalacia was diagnosed in a flock of fine wool shedded sheep in north-east Victoria. The sheep were fed a high grain, low roughage diet leading to a potential combination of ruminal thiaminases and insufficient dietary thiamine. No further cases have been seen following the administration of thiamine hydrochloride and an increase in dietary roughage.

PESTIVIRUS IN STEERS

A beef producer purchased 12 ten-month-old Hereford steers at saleyards. At about 16 months of age, eight of the steers began to lose condition, failed to grow well and had intermittent diarrhoea. They were unresponsive to drenching with triclabendazole and ivermectin and one animal died. At 20 months the animals were examined by a veterinarian. The seven affected animals were thin, poorly grown and anaemic. One animal was euthanased and there were no remarkable findings on post-mortem examination. All affected steers were positive for pestivirus anitigen (by ELISA) and negative for pestivirus antibody (by AGID). Healthy steers sampled were negative for pestivirus anitigen and positive for pestivirus antibody.

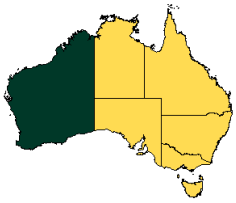
SUSPECTED ANTHRAX

In June, anthrax was excluded as a cause of death in two separate incidents in Gippsland. In both incidents, cattle died suddenly with bloody fluid discharging from all orifices, and rapidly decomposed despite the cold conditions. The age and physiological state of the dead animals did not quite fit the pattern expected of grass tetany or clostridial disease. Smears were negative for *Bacillus anthracis* and the deaths were attributed to clostridial disease and grass tetany, although the diagnoses were not confirmed. No further deaths were reported in other animals in the herds.

KANGAROO ATAXIA

A large population of kangaroos has built up at Puckapunyal in north-eastern Victoria, with an estimated 65 000 animals on 50 000 hectares. Ataxic animals have been observed for several years, with an apparent increase in incidence to about 1% currently. As well as ataxia, the front legs and/or ears of some animals may hang limply. Affected animals are usually the younger kangaroos. Phalaris is present in the pasture. Post mortem examination of several badly affected animals revealed grey–green pigmentation in many brainstem nuclei, and grey discolouration of some muscles of the head as well as the heart. Histologically, dark brown pigment was evident in neurones, myocytes and macrophages. Indole alkaloids were detected in the urine. Cultures for Wallal orbivirus were negative, and no chorioretinitis was apparent histologically. A diagnosis of chronic phalaris staggers was made.

Western Australia



Contributed by:
Richard Norris
WA Department of Agriculture

BOVINE

Nutritional stress was thought to be the predisposing factor in an outbreak of mucosal disease in six-month old calves at Dandaragan. Bovine pestivirus is endemic in WA cattle but usually only produces severe disease when the immune system is damaged, especially in young animals.

Vitamin A deficiency was thought to be the cause of illness in Poll Hereford cattle at Quairading in May. Affected animals displayed a variety of signs including night blindness, fever, dyspnoea, scouring and mouth ulcers. Plasma vitamin A concentrations were extremely low. The long dry spell in WA probably led to nutritional deficiency that caused blindness and susceptibility to common infections.

Polioencephalomalacia was seen on several properties in the Pilbara and in the south-west of the State.

An unusual case of kikuyu poisoning was seen in cows moved onto newly regrown pasture at the break of the season at Mount Barker. Several animals died and half of the rest were ill. Gross and microscopic lesions were typical of kikuyu poisoning. The unusual feature was that this condition is usually seen in cattle grazing rank kikuyu, not new growth.

Glory vine (*Ipomoea muri*) is suspected of causing the death of bulls at a station in the Ashburton River basin. There were degenerative lesions in the white matter of the spinal cord. Local veterinarians report 'outbreaks' involving up to 15 animals at a time in some seasons.

OVINE

Sheep that collapsed after eating mouldy grain at Kendenup were shown to have septicaemic salmonellosis. This condition frequently follows the rumenitis caused by grain poisoning and is a risk whenever sheep congregate for supplementary feeding. Salmonellosis was the cause of mortalities in sheep assembled in feedlots prior to export by sea.

Exuberant supplementation with copper salts caused copper poisoning in weaners at Frankland. Pasture top dressing combined with mild pyrrolizidine alkaloid toxicosis was enough to induce severe liver and kidney damage. One liver had copper levels of 2000 mg/kg.

An unusual stagger syndrome was seen in sheep moved from the drought-affected wheat-belt to good mixed pastures on the south coast. After two weeks of grazing, a large number of animals developed central nervous system signs with intermittent collapse and convulsions, but few died. Perennial ryegrass staggers was suspected but the pasture did not contain *Lolium perenne*. Some affected animal had marginally low magnesium levels, so hypomagnesaemia (grass tetany) was a possible explanation.

PORCINE

Streptococcal infections in a New Norcia piggery caused a variety of syndromes in weaners, including arthritis, enteritis and meningitis. Similar infections at a Merredin piggery caused severe bronchopneumonia with a high mortality rate in pigs 1–6 months of age. In this case *Streptococcus suis* type 2 was isolated.

Deaths in gilts at Esperance following weakness and vomiting, were shown to be caused by infection with *Salmonella* Derby. Acute gastroenteritis was present and one animal also had suppurative meningitis.

Glasser's disease was seen in imported gilts, and associated with fibrinonecrotic pneumonia. *Haemophilus parasuis* was isolated in pure culture from the lungs. The stress of transport may have played a part in this case since this is normally a disease of young pigs.

AVIAN

Marek's disease (MD) was seen in 6-month-old poultry at Geraldton, increasing concern over the apparent increase in virulence in some strains of MD virus and the declining efficacy of vaccines. A contributing factor may have been the consumption of darkling beetle (*Alphitobius diaperinus*), which is a frequent pest in litter (and plentiful in this instance), and considered to have a role in the transmission of some viral and bacterial diseases of poultry.

AQUATIC SPECIES

Uronema (*Uronema marinum*) infection caused disease in prawns and weedy sea dragons at two separate locations. This ciliate protozoan is known to be highly invasive to sea horses and dragons but is not often associated with disease in prawns.

Quarterly disease statistics

Laboratory testing

The results of serological testing for a range of viral diseases from routine laboratory submissions for the quarter are shown in Table 1.

Table 1: Serological testing from routine submissions to State laboratories

	Akabane		Bluetongue		Bovine ephemeral fever		Enzootic bovine leucosis		Equine infectious anaemia		Equine viral arteritis	
	Tests	+ve	Tests	+ve	Tests	+ve	Tests	+ve	Tests	+ve	Tests	+ve
Apr–Jun 00	1345	558	3712	594	1152	162	1734	0	933	6	328	2
Jul–Sep 00	1093	255	4707	654	1596	434	6744	0	1697	11	779	18
Oct–Dec 00	1646	370	5552	393	1937	266	511	0	742	10	388	30
Jan–Mar 01	1143	457	8588	285	1183	182	10812	2	872	11	328	32
Apr–Jun 01	4240	707	11631	443	3151	286	17340	9	1205	11	398	1
NSW	24	3	1232	40	26	3	1707	0	451	0	143	1
NT	602	306	618	146	552	174	0	0	6	0	0	0
QLD	990	211	4358	183	585	78	97	0	266	11	6	0
SA	0	0	232	0	0	0	0	0	51	0	3	0
TAS	30	0	33	0	0	0	685	8	0	0	0	0
VIC	932	0	872	0	217	0	750	1	305	0	144	0
WA	1662	187	4286	74	1771	31	14101	0	126	0	102	0

Control activities

BOVINE BRUCELLOSIS

Although bovine brucellosis is now exotic to Australia, surveillance is maintained through abortion investigations and miscellaneous testing of cattle for export or other reasons. A total of 262 abortion investigations were performed during the reporting period — all with negative results for bovine brucellosis. The results of recent brucellosis surveillance are shown in Table 2.

Table 2: Surveillance for bovine brucellosis

	Abortion Investigations		Test for other reasons	
	Tests	+ve	Tests	+ve
Apr–Jun 00	195	0	2509	0
Jul–Sep 00	336	0	9569	0
Oct–Dec 00	155	0	1292	0
Jan–Mar 01	139	0	9100	0
Apr–Jun 01	262	0	13325	0
NSW	21	0	93	0
NT	0	0	25	0
QLD	49	0	980	0
SA	0	0	0	0
TAS	11	0	0	0
VIC	0	0	313	0
WA	181	0	11914	0

ENZOOTIC BOVINE LEUCOSIS

Enzootic bovine leucosis (EBL) accreditation programs have been operating in the dairy industries in Queensland and NSW for several years. Victoria, South Australia, Western Australia and Tasmania are undertaking a program of bulk milk testing of all dairy herds. Table 3 shows the number of dairy herds tested free of EBL at the end of the quarter.

Table 3: Dairy herds tested free of enzootic bovine leucosis at 30 June 2001

	NSW	NT	QLD	SA	TAS	VIC	WA	AUS
Free	1420	0	1420	653	679	7874	360	12 406
Herds	1447	0	1434	655	741	8017	360	12 654

OVINE BRUCELLOSIS

Contagious epididymitis, caused by *Brucella ovis*, is present in commercial flocks at a low level that varies around the country. Voluntary accreditation programs (usually in stud flocks) for ovine brucellosis freedom are operating in all States. Table 4 shows the number of accredited flocks at the end of the quarter.

Table 4: Ovine brucellosis accredited-free flocks at 30 June 2001

NSW	NT	QLD	SA	TAS	VIC	WA	AUS
1166	0	67	498	131	719	86	2667

TUBERCULOSIS

Australia was declared a Free Area for bovine tuberculosis (TB) on 31 December 1997. The National Granuloma Submission Program is the major surveillance tool for TB. Table 5 summarises results from the program. Activity resulting from the detection of TB in a Queensland property in December 2000 is described in State reports.

Table 5: Results of the National Granuloma Submission Program

	Granulomas submitted	TB +ve
Apr–Jun 00	1194	0
Jul–Sep 00	1200	1
Oct–Dec 00	1139	0
Jan–Mar 01	975	0
Apr–Jun 01	1212	0
NSW	181	0
NT	0	0
QLD	646	0
SA	110	0
TAS	61	0
VIC	82	0
WA	132	0

JOHNE'S DISEASE

Johne's disease (JD) occurs primarily in dairy cattle and sheep in Australia and to a lesser extent in beef cattle, goats and camelids. JD occurs in NSW, Victoria, Tasmania and South Australia. Surveillance programs have not identified endemic JD in Queensland, Western Australia and Northern Territory, and active measures are taken to stamp-out any incursions. Table 6 shows the number of herds and flocks known to be infected. A National Ovine Johne's Disease Control and Evaluation Program will be completed in 2003. Programs for bovine Johne's disease are currently being developed. Market Assurance Programs (MAPs) are in operation for cattle, sheep, goats and alpaca, with the number of herds or flocks that have reached a status of Monitored Negative 1 (MN1) or higher shown in Table 7.

Table 6: Herds/flocks with a JDMAP status of at least MN1/TN1 status at 30 June 2001

STATE	Cattle	Sheep	Goats	Alpacas	Total
NSW	946	351	35	88	1420
NT#	0	0	0	0	0
QLD#	0	8	0	0	8
SA	193	228	3	33	457
TAS	105	34	1	0	140
VIC	212	139	5	27	383
WA#	0	0	0	0	0
AUS	1456	760	44	148	2408

Herds/flocks in Free or Protected Zones have a status of MN1 or better because of the zone status.

Table 7: Herds/flocks with JD at 30 June 2001

STATE	Cattle	Sheep	Goats	Deer	Alpaca	Total
NSW	132	356	3	0	0	491
NT	0	0	0	0	0	0
QLD #	2	0	0	0	0	2
SA	37	50	0	1	0	88
TAS	15	21	3	0	0	39
VIC	1164	21	11	4	6	1206
WA @	0	0	1	0	0	1
AUS	1350	448	18	5	6	1827

The herds in Queensland are in quarantine in response to finding an infected animal introduced from an endemic area.
@ In WA, JD was found in only one goat on one property on which sheep also grazed. The infected property has been destocked of all sheep and goats.

Information about components of the National JD Control Program can be obtained from State coordinators and Animal Health Australia's JD coordinators, David Kennedy 02 6365 6016 or Bruce Allworth 02 6036 9233. Lists of beef, dairy and alpaca herds and sheep flocks assessed in the Market Assurance Programs are available on a fax-back service on 1902 940 579 or on the internet (at http://www.aahc.com.au/jdmap).

Surveillance activities

NORTHERN AUSTRALIA QUARANTINE STRATEGY

In recognition of the special quarantine risks associated with Australia's sparsely populated northern coastline, AQIS conducts an animal disease surveillance program as an integral component of the Northern Australia Quarantine Strategy (NAQS). The NAQS surveillance program provides early warning of disease threats to livestock industries, and in some cases, human health. In addition to both offshore and onshore surveys, NAQS activities in Australia include sentinel herd monitoring and insect trapping programs to provide better information about the time of any disease incursion.

Table 8 summarises NAQS activity over the past five quarters. Table 9 shows the number of times that the insect trap sites were inspected during a quarter for both screw-worm fly (NAQS) and for screw-worm fly, Asian bees and bee parasites (AQIS Port Surveillance program).

Contact: David Banks, Biosecurity Australia

Table 8: Summary of recent NAQS activity

	Apr – Jun 00		Jul – Sep 00		Oct – Dec 00		Jan – Mar 01		Apr – Jun 01		Notes
	Tested	+ve	Tested	+ve	Tested	+ve	Tested	+ve	Tested	+ve	
Aujeszky's disease	184	0	14	0	115	0	5	0	332	0	
Avian influenza	119	0	0	0	0	0	0	0	119	0	
Hog cholera	180	0	13	0	113	0	5	0	325	0	
Infectious bursal disease	92	0	0	0	0	0	0	0	92	0	
Japanese encephalitis	310	12	65	0	171	0	161	5	763	17	a
Newcastle disease	105	0	0	0	0	0	0	0	105	0	
Porcine reproductive and respiratory syndrome	180	0	13	0	119	0	5	0	331	0	
Surra	278	0	75	0	16	0	0	0	369	0	
Transmissible gastroenteritis	7	0	9	0	0	0	0	0	16	0	
Tropical canine pancytopaenia	0	0	13	0	0	0	0	0	13	0	

a In 1995-97, animals at sentinel sites on islands in the Torres Strait, but not the Australian mainland, seroconverted to Japanese encephalitis during the latter part of the wet season (March-April). In March 1998, seroconversions occurred at a number of sentinel sites on islands in the Torres Strait, and for the first time on the mainland at the tip of Cape York Peninsula. In sentinel pigs seroconversions were recorded on Badu Island but not on the mainland in the first quarter of 1999, 2000 and 2001.

Table 9: Number of inspections of insect traps

	Apr – Jun 00		Jul – Sep 00		Oct – Dec 00		Jan – Mar 01		Apr – Jun 01		Notes
	Tested	+ve	Tested	+ve	Tested	+ve	Tested	+ve	Tested	+ve	
NAQS											
Screw-worm fly	154	0	110	0	118	0	67	0	25	0	
AQIS port surveillance											
Asian honeybee					28	0	24	0	23	0	
Screw-worm fly	35	0	36	0	36	0	44	0	42	0	

AUSTRALIAN MILK RESIDUE ANALYSIS SURVEY

The Australian Milk Residue Analysis (AMRA) survey is an independent monitoring program for agricultural, veterinary residues and environmental contaminants in raw cow's milk. The AMRA Survey is currently coordinated by Dairy Food Safety Victoria on behalf of the Australian Dairy Authorities Standards Committee (ADASC) and the Australian dairy industry. The AMRA survey is an integral part of the Australian dairy industry efforts in securing access to major export markets, including the European Union. The samples taken in the Survey are from bulk milk farm pick-up tankers, and all positive samples are investigated by the relevant State dairy authority.

Residues detected in this survey are reported against the Australian Maximum Residue Limits (MRLs). In the 2000–01 financial year, 476 samples were tested for antimicrobials, one of which contained a gentamicin residue at a level exceeding the MRL and for the anthelmintic triclabendazole, three of which exceeded the MRL. As well 204 samples were tested for organochlorines, organophosphates, synthetic pyrethroids and polychlorinated biphenyls (PCBs) — none of these samples had residues detected above MRL. The 2001–02 survey includes the testing of heavy metals (lead, cadmium and mercury). Summary data from the AMRA survey will be held in NAHIS. Table 10 summarises the results for the 2000–01 financial year.

For further information contact: Kelly Long (AMRA Survey Coordinator), Dairy Food Safety Victoria, phone 03 9426 5999; fax 03 9427 1895; e-mail klong@dairysafe.vic.gov.au

Table 10: Australian Milk Residue Analysis Survey, July 2000–June 2001

Each pair of figures gives the number of samples above the maximum residue limit and the number of samples tested.

	NSW		NT		QLD		SA		TAS		VIC		WA		AUS	
Antimicrobials	0	60	0	0	0	39	0	30	0	28	1	300	0	19	1	476
Triclabendazole	0	60	0	0	0	39	0	30	0	28	3	300	0	19	3	476
Organochlorines	0	26	0	0	0	17	0	13	0	12	0	128	0	8	0	204
Organophosphates	0	26	0	0	0	17	0	13	0	12	0	128	0	8	0	204
Synthetic pyrethroids	0	26	0	0	0	17	0	13	0	12	0	128	0	8	0	204
PCBs	0	26	0	0	0	17	0	13	0	12	0	128	0	8	0	204

ZOONOSES

The National Notifiable Diseases Surveillance System (NNDSS) of the Communicable Diseases Network Australia New Zealand (CDNANZ) collects statistics about many human diseases. A summary of information about six important zoonoses is submitted to NAHIS each quarter — see Table 11.

Contact: Communicable Diseases Intelligence, Australian Department of Health and Aged Care (Internet address: http://www.health.gov.au/pubhlth/cdi/cdihtml.htm)

Table 11: Notifications of zoonotic diseases in humans

Disease	Q2-00	Q3-00	Q4-00	Q1-01	Q2-01	Current quarter							
	Australia				AUST	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Brucellosis#	4	7	11	7	31	0	1	0	28	1	0	1	0
Hydatidosis	5	6	8	11	34	0	nn	0	8	0	2	18	6
Leptospirosis	88	34	62	90	341	0	82	8	190	8	2	47	4
Listeriosis	0	0	14	22	42	0	17	0	11	4	2	8	0
Ornithosis	26	23	40	31	147	0	nn	1	nn	7	6	119	8
Q fever	108	147	131	193	791	0	165	0	529	12	2	61	22

nn disease is not notifiable in these States

Brucella melitensis and *Brucella abortus* are exotic to Australia.

NATIONAL TSE SURVEILLENCE PROGRAM

The OIE International Animal Health Code requires that countries (such as Australia) claiming to be free of transmissible spongiform encephalopathies (TSEs) have in place a surveillance system to detect BSE and scrapie should they occur. The National TSE Surveillance Program (NTSESP) is an integrated national program jointly funded by industry and governments to demonstrate Australia's ongoing freedom from BSE and scrapie, and to provide early detection of these diseases should they occur. Table 12 summarises the activity of the program over the last five quarters. Specimens from a small number of animals were unsuitable for testing. All specimens tested were negative for TSEs. Information about NTSESP is available on the internet (at http://www.brs.gov.au/aphb/ntsesp).

Contact: Chris Baldock, Animal Health Australia's NTSESP National Coordinator

Table 12: Number of animals tested under NTSESP (All were negative for TSE)

	Apr – Jun 00		Jul – Sep 00		Oct – Dec 00		Jan – Mar 01		Apr – Jun 01	
	Cattle	Sheep	Cattle	Sheep	Cattle	Sheep	Cattle	Sheep	Cattle	Sheep
NSW	40	25	73	30	40	63	25	22	36	37
NT	1	0	13	0	3	0	6	0	0	0
QLD	38	18	51	16	76	5	37	14	49	7
SA	1	0	3	8	11	44	9	9	1	12
TAS	1	1	2	4	11	5	2	5	3	1
VIC	19	19	54	45	18	18	10	16	43	26
WA	10	30	11	28	19	61	12	37	1	22
AUS	110	93	207	131	178	196	101	103	133	105

SALMONELLA SURVEILLANCE

The National Enteric Pathogen Surveillance Scheme (NEPSS) is operated and maintained on behalf of the Commonwealth and States/Territories by the Microbiological Diagnostic Unit at the University of Melbourne. Data on isolates of salmonellae and other pathogens are submitted to NEPSS from participating laboratories around Australia. Quarterly newsletters and annual reports of both human and non-human isolates are published, and detailed data searches are provided on request to NEPSS. Table 13 summarises *Salmonella* isolations from animals notified to NEPSS for the quarter.

Contact: National Enteric Pathogen Surveillance Scheme, Microbiological Diagnostic Unit, University of Melbourne

Table 13: Salmonella notifications, 1 April to 30 June 2001

Serovars	avian	bovine	canine	equine	feline	ovine	porcine	other	Total
S. Bovismorbificans	0	24	0	1	0	1	0	0	26
S. Dublin	0	50	0	0	0	0	0	0	50
S. Infantis	0	1	0	0	1	0	2	3	7
S. Typhimurium	14	71	3	12	2	3	2	1	108
Other	11	35	16	2	2	1	20	17	104
Total	25	181	19	15	5	5	24	21	295

NATIONAL RESIDUE SURVEY

Of 3529 samples tested during the quarter for agricultural and veterinary chemicals, 17 (0.48%) had residues above the maximum residue limit (MRL). Six contraventions were recorded in pigs, but only one (oxytetracycline) was above the Codex and NRA-proposed MRL of 0.6 mg/kg. This residue was due to slaughter pigs gaining accidental access to spilled, medicated feed.

Of the growth promotant detections, none could be attributed to illicit use (eight nortestosterone residues all resulted from endogenous production and one zeranol residue resulted from natural ingestion). The two insecticide contraventions recorded included a fluazuron detection in a sheep and an endosulfan detection in a horse. The sheep detection resulted from 'off-label' use and the endosulfan detection did not warrant further investigation as the level was less than that recommended by the National Registration Authority for Agricultural and Veterinary Chemicals. Table 14 summarises the results for the quarter.

Further results, reports and information on NRS can be found on the internet (at http://www.affa.gov.au/nrs).

Contributed by: Jonathan Webber, National Residue Survey, AFFA

Table 14: National Residue Survey, 1 April to 30 June 2001
Each pair of figures gives the number of samples above either the maximum residue limit or the maximum permitted concentration and the number of samples tested.

	NSW		NT		QLD		SA		TAS		VIC		WA		AUS	
Anthelmintics																
cattle	0	59	0	6	0	97	0	10	0	11	0	33	0	14	0	230
pigs	0	8	0	0	0	9	0	7	0	4	0	8	0	3	0	39
sheep	0	78	0	0	0	24	0	12	0	9	0	51	0	38	0	212
other	0	3	0	0	0	7	0	4	0	0	0	5	0	1	0	20
Total	0	148	0	6	0	137	0	33	0	24	0	97	0	56	0	501
Antimicrobials																
cattle	0	108	0	3	0	161	0	16	0	12	0	50	0	16	0	366
pigs	3	80	0	1	1	59	0	53	0	9	2	65	0	42	6	309
poultry	0	14	0	0	0	8	0	2	0	2	0	11	0	1	0	38
sheep	0	50	0	0	0	15	0	20	0	4	0	29	0	18	0	136
other	0	7	0	0	0	14	0	7	0	0	0	7	0	1	0	36
Total	3	259	0	4	1	257	0	98	0	27	2	162	0	78	6	885
Growth promotants																
cattle	0	158	0	9	3	254	0	30	0	24	0	40	0	1	3	516
pigs	0	10	0	0	0	4	0	10	0	0	0	15	0	6	0	45
poultry	0	4	0	0	0	1	0	0	0	1	0	2	0	1	0	9
sheep	3	64	0	0	1	22	0	28	0	5	0	32	2	21	6	172
other	0	4	0	0	0	13	0	11	0	0	0	5	0	3	0	36
Total	3	240	0	9	4	294	0	79	0	30	0	94	2	32	9	778
Insecticides																
cattle	0	136	0	10	0	245	0	22	0	13	0	99	0	15	0	540
pigs	0	15	0	0	0	14	0	19	0	2	0	12	0	10	0	72
poultry	0	12	0	0	0	4	0	0	0	2	0	3	0	0	0	21
sheep	0	125	0	0	1	43	0	35	0	9	0	69	0	39	1	320
other	0	6	0	4	1	36	0	11	0	0	0	10	0	2	1	69
Total	0	294	0	14	2	342	0	87	0	26	0	193	0	66	2	1022
Metals																
cattle	0	15	0	0	0	33	0	3	0	4	0	12	0	6	0	73
pigs	0	10	0	0	0	4	0	5	0	1	0	9	0	4	0	33
poultry	0	11	0	0	0	5	0	0	0	2	0	6	0	1	0	25
sheep	0	30	0	0	0	6	1	10	0	2	2	8	6	11	9	67
Total	0	66	0	0	0	48	1	18	0	9	2	35	6	22	9	198
Miscellaneous																
cattle	0	26	0	1	0	31	0	6	0	1	0	7	0	4	0	76
pigs	0	4	0	0	0	5	0	7	0	0	0	10	0	8	0	34
sheep	0	9	0	0	0	2	0	2	0	1	0	3	0	5	0	22
other	0	4	0	0	0	7	0	2	0	0	0	0	0	0	0	13
Total	0	43	0	1	0	45	0	17	0	2	0	20	0	17	0	145

SUSPECT EXOTIC OR EMERGENCY DISEASE INVESTIGATIONS

There were 28 investigations of diseases suspected to be either exotic or a possible emergency reported during the quarter, as shown in Table 15.

Table 15: Exotic or emergency disease investigations reported during 1 April to 30 June 2001

Disease	Species	State	Date	Response (key below)	Finding
Anthrax	bovine	VIC	Jun	2	grass tetany
Anthrax	bovine	VIC	Jun	2	clostridial disease
Avian influenza	avian	VIC	May	2	negative
Avian influenza	avian	SA	Apr	2	negative
Foot-and-mouth disease	bovine	NSW	Jun	3	negative
Foot-and-mouth disease	bovine	WA	Jun	2	negative
Foot-and-mouth disease	bovine	VIC	Jun	3	cellulitis
Foot-and-mouth disease	bovine	VIC	Jun	3	infectious bovine rhinotracheitis
Foot-and-mouth disease	bovine	VIC	Jun	3	photosensitisation
Foot-and-mouth disease	bovine	NSW	Jun	3	photosensitisation
Foot-and-mouth disease	bovine	NSW	Jun	3	negative
Foot-and-mouth disease	bovine	NSW	May	3	negative
Foot-and-mouth disease	ovine	NSW	May	2	scabby mouth
Foot-and-mouth disease	bovine	NSW	May	3	negative
Foot-and-mouth disease	bovine	QLD	May	1	foreign object in throat
Foot-and-mouth disease	bovine	QLD	May	1	bovine ulcerative mammilitis or pseudocowpox
Foot-and-mouth disease	bovine	TAS	Apr	2	negative
Foot-and-mouth disease	bovine	QLD	Apr	3	negative
Hendra virus	feline	VIC	Apr	3	negative
Hendra virus	equine	NSW	Apr	3	circulatory failure
Japanese encephalitis	equine	WA	Apr	3	negative
Newcastle disease	avian	VIC	Jun	2	mycoplasma infection
Newcastle disease	avian	WA	May	3	negative
Newcastle disease	avian	NSW	Apr	2	negative
Newcastle disease	avian	NSW	Apr	2	bacterial pneumonia
Porcine reproductive and respiratory syndrome	porcine	WA	Apr	3	negative
Surra	bovine	WA	Apr	3	negative
Transmissible gastroenteritis	porcine	WA	May	2	negative

KEY to highest level of response:

1 Field investigation by Government Officer
2 Investigation by State or Territory government veterinary laboratory
3 Specimens sent to the Australian Animal Health Laboratory (or CSIRO Division of Entomology)
4 Specimens sent to reference laboratories overseas
5 Regulatory action taken (quarantine or police)
6 Alert or standby

NAHIS contacts

The National Animal Health Information System (NAHIS) collects summaries of animal health information from many sources. NAHIS is on the Internet (at http://www.aahc.com.au/nahis). Because NAHIS does not duplicate the data in those systems, the relevant person below should be contacted if further details are required.

Name	Role	Phone	Fax	e-mail
Chris **Baldock**	National NAHIS Coordinator	07 3255 1712	07 3844 5501	chris@ausvet.com.au
David **Banks**	Northern Australia Quarantine Strategy	02 6272 5444	02 6272 3399	David.Banks@affa.gov.au
Janet **Berry**	Qld State Coordinator	07 4658 4414	07 4658 4433	BerryJ@dpi.qld.gov.au
Chris **Bunn**	Emergency Disease Preparedness, AFFA	02 6272 5540	02 6272 3372	Chris.Bunn@affa.gov.au
John **Elliott**	Tas. State Coordinator	03 6336 5334	03 6336 5374	John.Elliott@dpiwe.tas.gov.au
Graeme **Garner**	Commonwealth NAHIS Coordinator	02 6272 5369	02 6272 4533	Graeme.Garner@affa.gov.au
Angela **Merianos**	Communicable Diseases Intelligence	02 6289 1555	02 6289 7791	http://www.health.gov.au
Tristan **Jubb**	Vic. State Coordinator	03 5430 4545	03 5430 4520	tristan.jubb@nre.vic.gov.au
David **Kennedy**	Johne's Disease Coordinator	02 6365 6016	02 6365 6088	david@ausvet.com.au
Diane **Lightfoot**	National Salmonella Surveillance Scheme	03 9344 5701	03 9344 7833	d.lightfoot@ microbiology.unimelb.edu.au
Barbara **Moloney**	NSW State Coordinator	02 6391 3687	02 6361 9976	barbara.moloney@ agric.nsw.gov.au
Richard **Norris**	WA State Coordinator	08 9368 3637	08 9367 6248	rnorris@agric.wa.gov.au
Diana **Pinch**	NT Coordinator	08 8999 2354	08 8999 2024	diana.pinch@dpif.nt.gov.au
Neville **Spencer**	National Granuloma Submission Program	02 6271 6650	02 6272 5442	neville.spencer@aqis.gov.au
John **Weaver**	SA State Coordinator	08 8207 7925	08 8207 7852	weaver.john2@saugov.sa.gov.au
Jonathan **Webber**	National Residue Survey	02 6272 3762	02 6272 4023	jonathan.webber@affa.gov.au
Simon **Winter**	Animal Health Australia Program Manager	02 6203 3988	02 6232 5511	simon.winter@aahc.com.au

Animal Health Surveillance

This report was prepared for Animal Health Australia by the Office of the Australian Chief Veterinary Officer from information supplied by the many organisations that contribute to the National Animal Health Information System. The information in the report is subject to change as a result of additional or amended data being received. Readers are encouraged to reproduce and distribute information contained in this report, provided due acknowledgment is made of its source.

Animal Health Australia is a public non-profit company established by Australia's Commonwealth Government, State and territory governments and livestock industries to facilitate national approaches that enhance Australia's animal health status.