



ANIMAL HEALTH SURVEILLANCE

QAS

April-June 1997

Number 97/2

LIVESTOCK AND PASTORAL CONDITIONS

Continued dry conditions during the quarter have led to a worsening of the drought situation, with the area of the State drought declared almost doubling from 27% in April to 50% for July. Most of the central and southern parts of the State are now drought declared, extending into some areas of the north west.

In many areas stockowners have either commenced supplementary feeding or have taken the option of selling stock rather than feeding or agisting them. Consequently, saleyard numbers were high, with a noticeable decrease in the quality of stock.

In central and southern areas producers ceased sowing or were temporarily halted due to lack of moisture. In northern areas sowing progressed well using recent rainfall on top of stored soil moisture from the excellent summer rains.

DISEASE TRENDS AND PREDICTIONS

Ovine Johne's Disease Surveillance

NSW Agriculture has now completed an interim report summarising the findings of surveillance activities for Johne's disease carried out as part of Stage 1 of the OJD Strategic Plan, up to 30 June 1997. As a result of this surveillance, NSW Agriculture believes that there is no evidence of a

significant focus of JD infection in sheep outside areas where the disease has already been identified.

Current flock statuses

By 30 June 1997 there were 183 flocks which have had JD confirmed at some time. Figure 1 shows the distribution of flocks in which JD has been confirmed. A further 75 flocks are currently classified as Suspect for Johne's disease as a result of tracing sheep movements from known infected flocks.

New Cases

Since 1 January 1997, 23 new infected flocks have been confirmed, 17 of these since 1 April. Cooma was the only District with its first case detected during this period. For these 23 new cases, 14 occurred in introduced sheep only, 8 in home bred sheep only and 1 in both. Fourteen cases were identified as a result of tracing and 9 as a result of notification and investigation of clinical disease.

Source of infection

Of 37 infected flocks outside the Carcoar, Bathurst, Goulburn and Yass Districts, 8 are the result of local spread, 21 are due to introduction of infected sheep from Bathurst, Carcoar, Goulburn or Yass districts, 1 was from Victoria and for 6 the source is either unknown or not recorded.

Tracings

By 30 June 1997, a total of 872 tracings from infected properties have been identified. Tracings identified include movements on and off infected

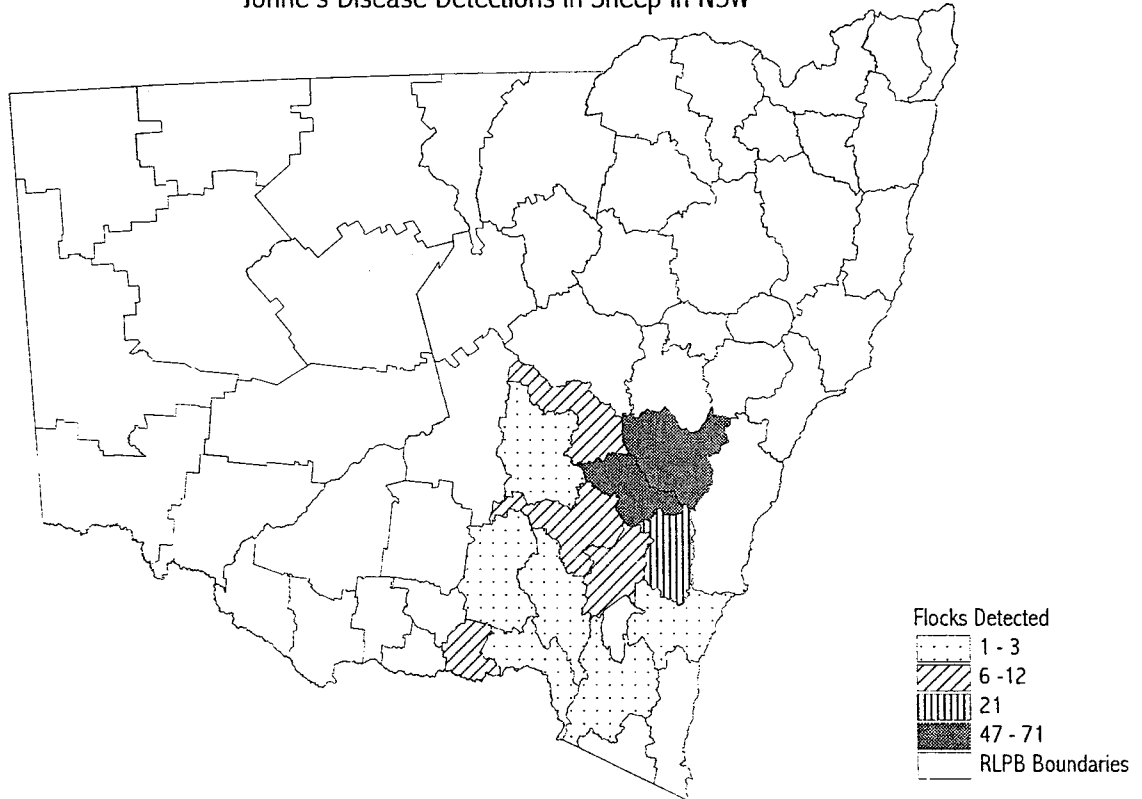
properties, as well as neighbouring properties without specific movements known. Of the tracings identified, 515 are neighbours (391 in Bathurst and Carcoar RLPBs), 260 are Trace Forwards, 93 are Trace Backs and 4 are others. After removal of duplications, these traces led to 760 properties, with 58 of these being infected, 37 suspect and 64 investigated and given a non-assessed status. For

about 600 properties their status is still to be determined.

Almost all tracings identified so far relating to the movement of sheep from infected properties ('trace forwards') lead to properties within areas where JD has already been diagnosed. Very few are to RLP Districts outside the current known distribution of the disease.

Figure 1:

Johne's Disease Detections in Sheep in NSW



Knackery surveys

Knackery surveys of poor condition adult sheep have been conducted at Guyra (New England area) and Tocumwal (Western Riverina). Both knackeries have a substantial throughput of sheep. In both instances sheep are sourced primarily from the local area, although it is not possible to trace the origin of any individual sheep.

By 30 June 1997, 370 sheep had been examined at Guyra, with 263 having been examined by histopathology. At Tocumwal, 166 animals have been examined, with samples submitted for histopathology from all of these. Johne's disease was not confirmed in any of the sheep examined.

Analysis of laboratory records

An analysis of NSW Agriculture laboratory diagnostic records for sheep cases involving ill-

thrift, wasting, or suspicion of ovine Johne's disease during the period 1 Jan 1995 to 30 Apr 1997 has been carried out.

During the survey period there were 4,748 diagnostic accessions from sheep, with 478 being for illthrift or wasting in adult sheep. Of 189 illthrift investigations from RLPB areas of NSW where ovine Johne's disease was not yet known to be present, 89 involved diagnostic techniques sufficient to exclude the likelihood of Johne's disease in the particular sheep examined, with no cases of JD being diagnosed in these areas.

In this investigation it was not possible to identify all records of field investigations of ill-thrift in which one would expect a veterinarian might make a diagnosis of OJD if the disease was present. In addition, there would be some disease investigations

carried out in which OJD may have been excluded on the basis of field investigations by District Veterinarians, without the submission of laboratory specimens. This analysis is therefore likely to underestimate the real level of surveillance for Johne's disease during the period.

Contact: Evan Sergeant, Orange on (063) 91 3687.

DISEASE HIGHLIGHTS

District Veterinarians and private practitioners in NSW are regularly visiting farms and carrying out investigations into a wide range of disease conditions. The results of many of these investigations are now captured through either the field or laboratory information management systems (Fieldvet and Labsys). The Fieldvet system has now been installed for all 40 current District Veterinarians employed by Rural Lands Protection Boards across NSW.

Disease diagnoses of interest that were recorded during the quarter include several cases of illthrift and anaemia in young merino sheep associated with *Eperythrozoon ovis* infection, respiratory disease due to infectious bovine rhinotracheitis virus in feedlot cattle and several cases of mannosidosis in cattle. Several cases of malignant catarrhal fever, and one of St George disease were also diagnosed in cattle. Ross River Fever was diagnosed in a horse at Wagga Wagga, and listeriosis was suspected as the cause of meningoencephalitis in a Boer goat with nervous signs and abortion in a Saanen goat herd.

Anthrax

One case of anthrax was diagnosed during the quarter, affecting cattle in the Nyngan Rural Lands Protection District. This case was dealt with according to policy and rapidly and effectively controlled. This case brings the total number of anthrax cases for the first half of 1997 to five.

Anthrax was excluded as the cause of death in 15 other laboratory investigations during the quarter, making a total of 40 anthrax exclusions for the first half of 1997.

Ephemeral Fever

Cases of bovine ephemeral fever reported last quarter continued to occur in the north west and north coast areas through April and into early May, with one case in early June in the Gloucester area.

Avian tuberculosis

One case of avian tuberculosis was diagnosed in a domestic poultry flock.

Genital salmonellosis in a goat

The National Salmonella Surveillance Scheme, which is coordinated by The University of Melbourne, found that *Salmonella Kottbus* emerged late in 1996 to be amongst the salmonellae most frequently isolated from animals.

RVL Wollongbar isolated *S Kottbus* from a foetus which had been aborted by a Boer goat on a stud near Warialda. The foetus had no lesions attributable to the infection, indicating its death to have been due to placentitis or maternal septicaemia, with infection spreading to the foetus when it was moribund or dead.

The dam recently had diarrhoea but neither faeces nor placenta were examined at the time of abortion.

S Kottbus was isolated from the dam's faeces (there was no diarrhoea) 7 weeks after the abortion (2655), but not from 9 flock-mates, indicating that the infection was of limited distribution. It was also isolated from the dam's genital tract another 3 weeks later, indicating persistent genital infection which, unless eliminated, threatened future pregnancies. Contact John Boulton, Wollongbar (066) 26 1261.

Diarrhoea & deaths

Salmonella typhimurium was isolated from a number of cases of diarrhoea and death in cattle, a single case of diarrhoea in pigs, and deaths in sheep. Several cases of diarrhoea and death in calves and one adult cow were associated with *Salmonella dublin* infection. *Yersinia enterocolitica* was also isolated from several diarrhoeic cows, one of which was also serologically positive for Johne's disease while *Y. pseudotuberculosis* was associated with severe diarrhoea in a group of merino weaners. A number of cases of scouring and deaths in cattle due to persistent pestivirus infection were also diagnosed. Dysentery due to infection with *Serpulina hyodysenterae* was diagnosed in one swine herd.

Reproductive failure

Numerous infertility investigations were carried out in cattle, with bovine venereal campylobacteriosis being the most common finding. Leptospirosis due to *L. Hardjo* was also suspected in several cases of infertility and abortions, while infection with *Neospora* sp. was incriminated as the cause of single abortions on a number of farms. Pestivirus infection was also suspected as the cause of poor reproductive performance in one cattle herd, while porcine

parvovirus infection was diagnosed as the cause of infertility in a piggery.

Contact: *Evan Sergeant, Orange on (063) 91 3687.*

DISEASE CONTROL AND ADVISORY PROGRAMS

Bovine Johne's Disease Market Assurance Program

The Market Assurance Program (MAP) has now been going for just over 12 months, and by the end of June 1997, a total of 310 cattle herds have commenced testing. Of these, 235 have achieved either TN1(228) or MN1(7) status under the. This number is well up from the figures for last quarter of 162 TN1 herds and 6 MN1 herds. Currently, about 70% of assessed herds are beef, while about 66% are studs. The remaining 75 herds are still to have their status confirmed.

A total of about 35,666 cattle have now been tested, with only 86 (0.2%) reactors detected in 60 herds. Of 48 reactor herds resolved to date, only one has been positive on follow-up testing.

A list of assessed herds under the Program is available by Infifax on 1902 940 579.

Contact *Tim Jessep, Goulburn on (048) 23 0744.*

New South Wales Footrot Strategic Plan

Activity with footrot decreased during the quarter, the normal pattern at this time of the year in southern NSW. However the New England footrot survey was completed during April with some follow on effects in other northern tableland districts.

Requests for footrot culture and gelatin gel testing continued through RVL Orange with 59 submissions from 17 districts including 15 submissions for the survey from Armidale and Glen Innes districts. The majority of all submissions, 34/59, coming from northern areas.

Seasonal conditions also have deteriorated in the south and the prospects of an effective challenge (spread) period in the Spring are diminishing by the day.

The State Coordinator visited Western Australia in June to participate in a 2 day industry workshop on Key Issues of the WA footrot eradication program. This was a very stimulating and important workshop dealing with 9 key areas in their campaign. All the

issues have relevance to the NSW plan as we face similar 'final stages' in the eradication process.

The 8th annual meeting of District Veterinarians and Footrot Advisory Officers involved in footrot was held in Young in June and covered some of the implications of the audit/survey of the New England as well as conundrums with clinical benign and gel positive flocks.

Although there were changes in flocks in and out of quarantine the net effect was a small rise (to 169) on last quarter.

Contact *Rob Walker, Wagga Wagga (069) 23 0463.*

New England Footrot Survey

Between February and April 1997, 137 flocks randomly selected from flocks with 500 or more sheep in Armidale and Glen Innes Rural Lands Protection Districts were surveyed by a registered footrot contractor. It was the first in a series of independent audits of Protected areas, carried out under the NSW Footrot Strategic Plan. The results of this survey will have implications to all Protected areas.

Flocks were assessed clinically and where lesions were present samples were submitted to gelatin gel and elastase testing at RVL Orange. 101 flocks in Armidale and 36 flocks in Glen Innes were investigated with flock prevalences of 11.9% in Armidale and 22.2% in Glen Innes found.

10 flocks in Armidale and 3 flocks in Glen Innes were found to have clinically active virulent footrot which were confirmed as gelatin gel stable (virulent). One flock in Armidale and 5 flocks in Glen Innes were found to have gelatin gel positive isolates in swabs from clinically "benign" footrot emphasising the importance of using a laboratory test to differentiate potentially virulent flocks under less than ideal environmental conditions.

Further investigations of the remainder of flocks in both districts will take place over the next 2 years but it seems likely footrot may be confined to relatively small sections of both areas. A Footrot Advisory Officer commenced duties in Armidale in July.

Contact *Rob Walker, Wagga Wagga (069) 23 0463.*

Australian Sheep Johne's Disease Market Assurance Program

The Australian Sheep Johne's Disease Market Assurance Program (ASJDMAP) is now operational,

with two training courses for veterinarians held during June, and a further 2 planned for during July. A total of 48 veterinarians attended the courses in June and are now approved to participate in the ASJDMAP. Veterinarians who are approved for the MAP will also be approved to participate in the NSW sheep Johne's disease program, including supervising Property Disease Eradication Plans and testing for enhanced vendor declarations.

The Standard Definitions and Rules for sheep Johne's disease are still being negotiated through Veterinary Committee, but will eventually provide the framework for a national approach to sheep JD, including support for the MAP, provision for zoning and eradication programs.

Contact Stephen Ottaway, Orange (063) 91 3854.

Enzootic Bovine Leucosis

Table 1 summarises the EBL status of the State's dairy herds, as on 30 June 1997:

Table 1: EBL status of NSW dairy herds

Status	No. herds
Accredited/Certified Free	3
Tested Negative	184
Monitored Negative	1039
BMT Negative	172
Provisionally Clear	77
Infected	318
Not Assessed	35
TOTAL (active dairy herds)	1829

The NSW EBL Control and Eradication Program is still getting strong support from the industry organizations.

- Recently, Australian Co-Operative Foods P/L (ACF) has circulated their members with a proposed new Dairy Farmers EBL Herd Accreditation Scheme. The proposal is based on applying financial penalties to the owners of EBL Infected herds which do not meet the preset targets.
- the NSW Cattle Compensation Fund (CCF) Advisory Council has approved to continue its funding of \$359,040 for the Program during 1997/98. Further \$192,478 is likely to be approved for 1998-2000 years, subject to progress report. The CCF fund is used to pay the laboratory costs of BMT testing and EBL testing of dairy cattle from herds actively participating in eradicating the disease.

Contact Richard Zelski, Maitland (049) 30 2419.

Survey of EBL Monitored Negative Herds

The NSW EBL Eradication scheme is progressing well with only 9% of herds actively infected at the March 1997 bulk milk test. The NSW dairy industry is aiming to eradicate EBL by the end of 2000.

Monitored Negative herds form 57% (1039/1829) of the state's registered dairy herds. A Monitored Negative herd is one which has at least 4 years of consecutively negative bulk milk test results (at 4 monthly intervals) and no other evidence of EBL.

The bulk milk ELISA used for survey work claims to detect one or more positive cows in every 50 cows contributing milk to the vat. In practice it nearly always detects one positive cow in 100 and often one in 150. However, the possibility remains that some Monitored Negative herds, particularly those with over 150 milkers could contain a small number of positive animals.

To be more confident that the dairies are truly free of EBL, a survey of large (>100 milkers) herd - recording dairies was designed. It aims to sample 95 dairies to detect with 97% confidence, at least one infected herd in a population of 1039 MN herds. Selected herds are being intensively milk sampled to increase the level of confidence that MN herds are truly negative. Herd recording samples are being pooled into composite samples representing up to 50 cows and being tested using the milk elisa between June and December 1997.

The NSW EBL Steering Committee will examine the results of the survey and decide if any changes to the eradication scheme are necessary.

Contact Tony Ross, Menangle, (046) 40 6312.

Cattle tick control program

The cattle tick inspection program for 1997 is almost completed, with 9,497 herd inspections carried out. A total of 111 tick infested properties have been detected.

Eradication programs are well under way, and for the infestations detected in December and January the treatment phase of the eradication programs are nearly completed.

For most of the infestations detected later in the season eradication programs will take a winter break, and treatments will recommence in the spring.

Contact: Peter McGregor, Wollongbar (066) 261334.

DISEASE SURVEILLANCE

Transmissible Spongiform Encephalopathy (TSE) surveillance

Pathologists at all NSW Agriculture veterinary laboratories have now received formal training in the diagnosis of transmissible spongiform encephalopathies, and routine screening of submissions of brain tissue from cases of neurological disease has commenced.

During the quarter there were 10 brains examined for evidence of TSE's, 9 from sheep and 1 from cattle. Eight sheep brains and the one cattle brain were negative for TSE's, while for one sheep brain the examination was inconclusive, due to the autolysed nature of the tissues submitted.

Sheep Lice

NSW Agriculture is conducting another sheep lice survey at the Yennora Wool Store for the 1997/8 season. The survey commenced in March 1997, and will run for 12 months, with every fifth clip being examined for three selected brokers. By the end of June, 1997, 250 clips had been examined, with less than 10% having lice detected. This compares very favourably with about 18% positive in the last wool store survey conducted in 1994.

Contact John Plant, Menangle, (046) 40 6403.

Exotic Disease Investigations

Table 2 lists all reported exotic disease investigations during the quarter. This list only contains reported events. Numerous field and laboratory investigations are performed each year for possible exotic diseases. In most cases, exotic diseases are excluded early in the investigation and the case is not reported as such.

Table 2: Suspect exotic disease investigations

Species	Disease Suspected	Diagnosis
Pigs	Porcine respiratory and reproductive syndrome (PRRS)	Infectious foetopathy
Human	Glanders	<i>Br. suis</i>
Sheep	Bluetongue	Negative
Poultry	Avian influenza	Negative
Poultry	Avian Influenza	Negative
Horse	Equine morbillivirus	Negative

Bat paramyxovirus

Bat paramyxovirus (formerly called EMV) has now been isolated from a fruit bat in NSW. The virus was isolated from tissues submitted in October 1996 from a neonatal grey headed flying fox from a bat colony in the Sydney area. Although serological evidence of infection has previously been found, this is the first time the virus has been isolated in NSW. About 80 bats have now been tested for this virus in NSW, with only one serological reactor and one infected animal identified.

Contact: Ian Bell, Orange on (063) 91 3691.

Bee Diseases

Table 3 shows the results of American foul brood (AFB) testing for the current quarter, and cumulative results for the year since 1 July 1996.

Of the 402 positive tests during the 1996-97 season, 247 have been new infections, with the remaining 155 being monitoring tests on known-infected hives.

Table 3: AFB testing summary for New South Wales

	April-June 1997	July 1996-June 1997
Positive	105	402
Negative	195	364
Total	300	766

A monitoring program for *Paenibacillus larvae* (AFB) spores in bulk honey in NSW began in late March. The survey will cover about 850 beekeepers who have more than 20 hives and have not been previously tested for AFB. Honey sampling kits are being forwarded to the beekeepers involved at a rate of about 50 per week.

There have also been 8 reports of chalkbrood detections during the quarter, and 4 nuisance bee complaints.

Contact Keith Oliver, Orange on (063) 91 3689.

Laboratory submissions

Summary information on specimen submission to NSW Agriculture laboratories for the period January 1995 to June 1997 is shown in Figure 2.

The total number of accessions for the quarter has dropped by about 30% since the corresponding period in 1996, although the number of diagnostic accessions has only dropped by about 20%. The actual number of individual samples received during the quarter is almost the same as for the same period last year, although the number of samples submitted

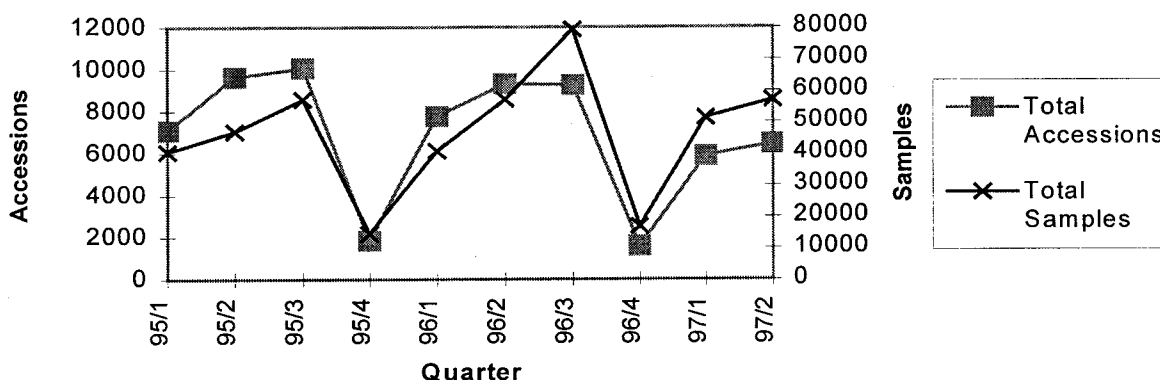
for diagnostic testing has dropped by about 25%. This decrease in diagnostic testing has been offset by a substantial increase in accreditation testing, mainly as a result of testing for the Johne's disease MAP.

Table 4 shows the number of laboratory accessions by laboratory and species for the last two quarters. Contact: Evan Sergeant, Orange on (063) 91 3687.

Table 4: Number of accessions to NSW Agriculture laboratories, by species, April - June, 1997

Laboratory	SHP	CTL	PIG	GTS	AVN	HRS	FSH	BEE	D/C	O.SP	Total
Menangle	1178	1625	76	62	121	162	3	311	118	447	4103
Orange	545	324	17	17	27	19	3	8	18	94	1072
Wollongbar	58	954	35	36	37	11	8	61	5	84	1289
Total	1781	2903	128	115	185	192	14	380	141	625	6464
Total (Jan-Mar, 1996)	2384	4181	180	168	249	222	25	449	164	803	8825

Figure 2: Laboratory throughput by quarter, 1995-97



FROM THE AUSTRALIAN ANIMAL HEALTH COUNCIL

Meetings aim for enhanced national animal health service system

AAHC is undertaking a round of one-on-one meetings with its Members to seek their views on the principles and key recommendations in the Animal Health Services Task Group report. Following these meetings, a small working group - in close consultation with AAHC Members - will develop a draft national animal health strategic plan for Australia. The one-on-one meetings will also address possible funding options.

A high level workshop will be held in conjunction with the AGM of AAHC in Canberra on 20 November 1997 to finalise the draft strategic plan. It is expected an agreed strategic plan would be presented to the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) meeting in February 1998.

AAHC's aim is to seek Members' support for the following principles:

- Contestability of Services;
- Harmonisation of Legislation;
- National Laboratory System;
- Integration of Private Veterinary Services;
- Uniform National Standards;
- National Surveillance and Reporting System;
- Cost Effectiveness; and
- Commitment to a Core Set of National Animal Health Programs, including:
 - consumer protection,
 - international services,
 - national services,
 - barrier assurance,
 - disease surveillance,
 - disease control
 - emergency preparedness, and
 - animal welfare.

National Surveillance

The National Animal Disease Surveillance Task Group, which is developing a national strategy, is due to report by the end of August 1997.

Animal Disease Preparedness

Consultants are due to report in August 1997 on:

1. the current status of ADP training, including how best to develop a competency-based training program, and on

2. a program to raise awareness of emergency animal diseases in Australia.

Johne's Information Management System (JIMS)

This database, initially set up for the Australian Johne's Disease Market Assurance Program for Cattle, but which will be expanded for other uses, is currently in user-acceptance testing stage. It should be fully operational in August 1997.

NAHIS on the Web

The National Animal Health Information System (NAHIS) is accessible via the the Internet at:

<http://www.brs.gov.au/aphb/aha>

The site maintains information on current disease statistics for Australia, as well as summary information on a wide range of animal disease, and copies of the NAHIS quarterly and annual reports, the *Animal Health Surveillance Quarterly* and the *Australian Animal Health Report*.

STOP PRESS!

OJD Eradication to go ahead

Agreement has now been reached by the NSW Sheep Industry Steering Committee, the National JD Liaison Committee and ARMCANZ (the meeting of State and Commonwealth Ministers with Agriculture responsibilities) to proceed with attempts to eradicate ovine Johne's disease.

The program is planned to commence by December 1997, subject to suitable funding arrangements being negotiated. Funding will be based on joint government and industry contributions, with details to be negotiated by the Australian Animal Health Council.

Participation in the program will be voluntary, with compensation available for producers completing approved eradication programs.

Getting Information on the Occurrence of Animal Diseases

This surveillance report can only convey a very limited amount of information about the occurrence and distribution of livestock diseases in New South Wales. If you would like more specific information about diseases occurring in your part of the State, contact your local Rural Lands Protection Board district veterinarian; Departmental senior field veterinary officer; or Regional Veterinary Laboratory.

For statewide information, contact NSW Agriculture's Quality Assurance Program in Orange on (063) 91 3237 or fax (063) 61 9976.

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