



New South Wales



ANIMAL HEALTH SURVEILLANCE

April - June 1998

Number 98/2

STAFF

Steve Ottaway (currently SFVO Orange) was the successful applicant for SFVO Grafton (which became vacant when Peter Harper commenced an extended period of leave overseas). Sally Spence is acting SFVO until Steve commences duties in Grafton in early October, when he will swap the challenges of OJD for those of BJD.

Eric Davis is vacating SFVO Dubbo to take up the role of Program Leader (Vertebrate Pest Control). Quality Assurance's loss is Agricultural Protection's gain! In the meantime, Bob Coverdale has agreed to look after the Dubbo SFVO region as well as his own Armidale region.

Clive Roberts is working as a locum District Veterinarian at Condobolin. Clive is a long standing British graduate with many years diverse experience in the UK, New Zealand and Australia.

Braidwood Rural Lands Protection Board is once again without a District Veterinarian following the resignation of John Sullivan.

LIVESTOCK AND PASTORAL CONDITIONS

Flood and famine sums up the situation across NSW.

The far south-west corner continues to be drought affected with only 20 mm of rain recorded in the Wentworth area increasing to the north where Wilcannia, Ivanhoe and Cobar have had valuable falls of up to 100 mm.

The Monaro region has also missed out on significant rainfall and is experiencing an extremely tough winter.

In the north-west heavy rainfall and flooding have been the usual with moderate to major flooding in the Namoi Valley and Barwon Darling, moderate levels in the Macintyre, Gwydir, Castlereagh and moderate to minor flooding in the Macquarie and Lachlan Valleys.

The prolonged wet conditions and flooding has caused considerable losses to winter crops but the full extent will not be able to be assessed until the water recedes.

Stock losses are not high at this stage but as the levels increase and stock are forced onto smaller islands and channel and levee banks, the need for

fodder drops has increased. Generally stock downstream have been removed where possible, but the wet conditions over the last two months have limited access to stock on the flood plain. It should be noted that all floods are quite different in their impact and levels. Irrigation development on the flood plain and record high levels at some creeks which do not have measuring stations, have caused problems in the Burren junction, Pilliga and Walgett areas.

Contact: John Bowler, Orange on (02) 6391 3680.

QUARTERLY HIGHLIGHTS

Avian Influenza Outbreak, Tamworth, 1997.

The Tamworth Avian influenza outbreak was officially declared over on 12 June following the completion of all surveillance and the elapse of 6 months since the last case.

Contact: Ian Bell, Orange on (02) 6391 3691

DISEASE TRENDS AND PREDICTIONS

Anthrax

There were 8 anthrax investigations carried out during the quarter, all with negative results. The total number of incidents for the 1997/98 season remains at 13 - 7 in cattle, 5 in sheep and 1 in pigs.

Contact: Evan Sergeant, Orange on (02) 6391 3687

Risk of Post-Mulesing Arthritis (PMA)

This year is shaping to bring a significant risk of PMA to areas of northern and western NSW.

PMA is caused when mulesing and marking wounds are contaminated by faecal material. The infectious process centres on *Fusobacterium necrophorum*, potentiated by *E. coli*.

High risk periods are associated with mulesing in late August to November, and when we have wet winters and/or springs.

The two bacteria involved are frequent faecal contaminants. Wet years may allow both organisms to survive better in faecal material in

yards, on walking tracks, and in paddocks. *F. necrophorum* is involved in a number of other disease entities where wet faecal material comes in frequent contact with animal tissues: as a potentiator of *D. nodosus* in footrot; in scald in sheep; in foot abscess; and in footrot in cattle.

When lambs are mulesed and tipped back into yards, the risk of them lying down and their wounds being soiled is very high. Good mulesing practice should include tipping all lambs back into clean paddocks, and not back into yards. Various methods have been tried to reduce faecal contamination of wounds as lambs are tipped out of mulesing cradles, but none are sure bets. They may be helpful.

A number of other risk factors are known to play a part in increasing or decreasing incidence:

- presence of small black fly (+)
- soil type (black soil +)
- method of marking and mulesing
- using wet mulesing dressings (+)
- location
- being on channels

PMA can claim 5% of lambs in bad years in some areas (Brewarrina, Bourke and Wilcannia). Some flocks may lose 50% of lambs mulesed. The only solution people in very high risk situations have is to defer mulesing, which is a much safer option than mulesing and risking PMA.

Contact: Greg Curran, Cobar (02) 6836 2108

“Mild” Pleuropneumonia strains cause severe disease

Pig industry veterinarians meeting in Sydney recently were very interested in experimental studies on pig respiratory diseases carried out at the EMAI pig research facility. EMAI's Dr Graeme Eamens described infection trials involving the major strains of the agent causing pleuropneumonia in Australian pigs. The series of studies at EMAI provided evidence of devastating illness from infection with serotype 12. This strain has widely been thought of as insignificant. This new evidence supports some reports from the field of the seriousness of the disease and raises new questions about how the industry should manage pigs with this strain.

Contact: Graeme Eamens, EMAI (02) 4640 6358

DISEASE CONTROL AND ADVISORY PROGRAMS

Bovine Johne's Disease Market Assurance Program

There are now 548 herds enrolled in the cattle JD MAP in NSW, with 292 at TN1 status, 66 MN1, 82 TN2 and 23 MN2. Twenty nine herds have had their status lapse to NA after not doing their second round test. The remaining 56 herds are still awaiting confirmation of their status. To date, 80,186 cattle have been tested, with 133 reactors (0.2%) requiring follow-up in 95 herds. Seventy eight reactor herds have been resolved, with three infected herds now identified by MAP testing. The ratio of beef to dairy herds in the MAP remains steady at about 70:30, and about 66% of herds are studs.

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

Contact Tim Jessep, Goulburn on (02) 4823 0744.

Australian Sheep Johne's Disease Market Assurance Program

By 21 July 1998, there were 79 Market Assured flocks in NSW. A further 51 flocks have registered their intent to join the program but have not yet completed testing.

Contact: Maurie Ryan, Orange (02) 6391 3964

New South Wales Footrot Strategic Plan

Despite difficulties with drought conditions for most of the year, the survey in the Northern Tablelands has been completed. Some laboratory tests are to be finalised, but preliminary results indicate a much lower prevalence of disease than that detected in the areas surveyed last year. The survey planned for the Monaro was, however, not carried out because of the drought conditions.

Contact Rob Walker, Wagga Wagga (02) 6923 0463.

Cattle Tick Control Program

Cattle Tick Detections

The cattle tick examination program is almost completed. By late May, 73 infested properties had been detected; 23 of these were associated

with last year's infestations, 17 were as neighbours, while six are where ticks re-appeared on properties where mustering problems prevented eradication. Of the 50 new infestations detected, 36 infested properties are related due to straying, common use of yards or stock movements in 10 groupings.

This year, 10 infestations have been detected by saleyard monitoring and five have been reported by stock-owners. This represents a significant increase in detections by means other than on-property inspection.

Contact: Peter McGregor, Wollongbar (02) 6626 1334.

Enzootic Bovine Leucosis

There is a strong support for the NSW EBL Control and Eradication Program from the industry. Recently, the Dairy Industry Conference has approved the following recommendations from the NSW EBL Steering Committee:

- from 1 July 1999, a penalty payment of 4c/L will be imposed on all milk which is contaminated with EBL virus and supplied to NSW Dairy Corporation. The penalty will be applied for 7 days after each positive vat milk test result. The affected dairies will be vat milk tested at weekly intervals until 4 consecutive negative weekly test result obtained. A flow chart and detailed information on the scheme will be distributed to all involved Officers.
- invoking provisions of Stock Disease Act for EBL from 1 July 1999. The details will be determined by the EBL Steering Committee in conjunction with NSW Agriculture following EBL Workshop for DVs scheduled for late August 1998.
- immediate application of "milk quota appeal mechanism" for dairies temporarily producing below quota caused by culling of EBL reactors.

- the Conference recognised the need to continue EBL monitoring of NSW dairies past year 2000.

Preparations for the Second EBL Workshop for District Veterinarians are under way. The Workshop will be held at EMAI Camden on 27 and 28 August 1998 and will involve all RLPB DVs from dairying districts.

The Dairy Farmers EBL Scheme is being successfully implemented. Over 98% of dairy herd owners have supplied to the Co-op a signed authority to release their EBL status. The Co-op is aiming to apply a financial pressure - after consultation with the relevant RLPB DV - onto the owners of EBL INFECTED herds which are not implementing the recommended disease control strategies.

As the Program is in its final stages of EBL eradication it was necessary to update and revise the guidelines for EBL testing and status progression for herds in the State. A set of the new guidelines have been distributed. At the same time, revised and "more user friendly" EBL VENDOR DECLARATION FORM (VDF) went into circulation. A special attention has been paid (again and again) to notifying Stock and Station agents of the availability of the EBL VDF. Every dairy farmer will receive a copy of the new EBL VDF in mail.

Contact Richard Zelski, Maitland (02) 4930 2419.

Salmonella Enteritidis (commercial layers)

The NSW *Salmonella enteritidis* Accreditation Scheme, the first scheme of its kind in Australia, is now covering 60 commercial egg farms in NSW (consisting of 135 flocks). The farms range in size from a 1 shed farm to 15 sheds farm. Each farm is monitored under the scheme at monthly intervals for *S. enteritidis* by environmental sampling. Since the inception of the scheme, 12 months ago, no *S. enteritidis* or *S. pullorum* have been detected in any of the monitored flocks

The scheme is now part of the HACCP program of 2 of the major egg marketers in NSW.

Salmonella pullorum

All major poultry breeding flocks in NSW are participants in the NSW *Salmonella pullorum* Accreditation Scheme. The scheme requires each breeding flock at the nucleus, Great Grandparent and Grandparent level to be subjected to either a sample serological testing or Early Microbiological Monitoring once every 12 months. Most of the flocks in the Scheme are also being monitored for *S. enteritidis* every 1-3 months depending on the ration. No *S. pullorum* or *S. enteritidis* have been found in any of the participating flocks.

Contact: George Arzey, Menangle on (02) 4640 6402.

DISEASE SURVEILLANCE

National Transmissible Spongiform Encephalopathy (TSE) Surveillance Program

The National TSE Surveillance Program has now been implemented in NSW. District Veterinarians and veterinary practitioners are being asked to submit brain and other tissues for TSE exclusions from any cases of neurological disease in sheep or cattle. Summary information on all cases will be collated nationally to support Australia's case for freedom from TSE.

During the quarter, 3 cattle and 8 sheep brains were examined for TSE's with negative results.

Contact: Evan Sergeant, Orange on (02) 6391 3687

Arbovirus Monitoring

During this quarter sampling was mostly conducted as scheduled. At Tamworth there was a major disruption due to the avian influenza outbreak.

Akabane virus

Commencing in early January, there was extensive Akabane transmission with seroconversions on the Far North Coast and later spreading south through all sites as far as Camden and west throughout the Hunter Valley. In the period from April to June the virus spread further down the east as far as Nowra. The virus has spread slightly beyond the limits of the endemic area, with limited "spill-over" at the margins (including several sites in the vector "Buffer zone"). Seroconversions were

recorded at Merriwa, Mudgee, Inverell, Narrabri, Glen Innes and Tenterfield. The drought conditions have probably limited the potential for this year's early transmission to develop into a major epidemic. In the marginal areas (and beyond), there has been limited occurrence of disease due to Akabane, with firstly cases of new born calves with encephalitis (infection in the last 6 weeks of gestation) and now followed by cases with arthrogryposis.

Bluetongue Virus

Initially during the season there has been sporadic and very limited seroconversions in 2 herds on the far North Coast. Transmission continued during this quarter, with infection detected in all coastal herds as far south as Taree. Type-specific serology has shown that animals were only infected with Type 21. It is about 10 years since there was any evidence of infection with Type 21 in NSW, and probably never so extensively. Infections in the past tended to be very sporadic and limited to a few herds. There was no evidence of infection with Type 1. A number of Bluetongue virus isolations have been made. These will soon be sent for topotyping at AAHL.

Bovine Ephemeral Fever Virus

There have been no Ephemeral Fever seroconversions detected anywhere in the State. There have been occasional cases of EF-like disease reported in the north and north-west of the State, but none have been confirmed as BEFV infection, despite collection of good paired sera.

Contact: Peter Kirkland, Menangle on (02) 4640 6331

Ovine Johne's Disease Surveillance

Current Situation

As at 11 July 1998, there were 278 flocks with a known history of infection, of which 249 are still classified as infected. The great majority of these flocks are located within the central and southern tablelands area, with some infected flocks in the south-west slopes area and isolated cases elsewhere. A further 294 flocks have been identified as suspect as a result of tracing from known infected flocks and are being further investigated under the Interim Surveillance Program (see maps 1 & 2 for detailed distributions of infected and suspect flocks).

Source of infection

Where investigation of known infected flocks has been completed there have been two distinct patterns regarding the source of infection:

- In the Central Tablelands, Goulburn and Yass districts, the majority of infections relate to local spread of disease (within the RLP district), or disease of unknown origin.
- In all other Boards, the majority of infected flocks have been due to introduction from other districts (primarily Central Tablelands, Goulburn or Yass), or from limited local spread within the district. Identification of the source of infection has occurred for most flocks in these districts.

Interim Surveillance Program

The National Interim Surveillance Program (ISP) for OJD was implemented in NSW from 1 April 1998. This program has concentrated on investigation of flocks identified by tracing from known infected flocks, subsidised testing for OJD for entry of flocks into the Market Assurance Program, and testing of identified 'at risk' flocks in potential protected and control zones.

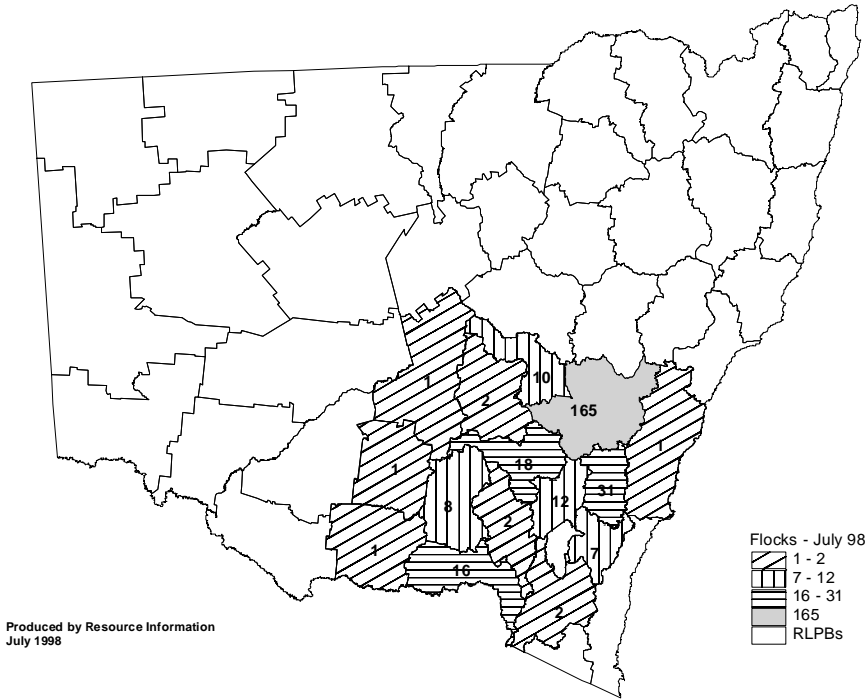
By 11 July 1998, 537 investigations have been carried out in 428 flocks (52,000 blood samples) under the ISP, with OJD confirmed in 36 of these flocks. Most of the new infected flocks are in areas with previously identified infected flocks, rather than representing new foci of infection. A further 47 flocks had serological positive animals which are still being followed up to confirm their status. Of the 428 flocks tested under the ISP, 345 (80%) have had negative results.

Serological Testing

Since 1994, more than 111,000 blood samples have been serologically tested for OJD in NSW, including testing under the ISP. While much of this testing has obviously been associated with investigation of infected and suspect flocks in the infected areas, a considerable volume has also been due to surveillance activities in other areas (see map 3 for distribution of testing). Despite the testing carried out in these areas, no further infected flocks have been detected other than those already reported above.

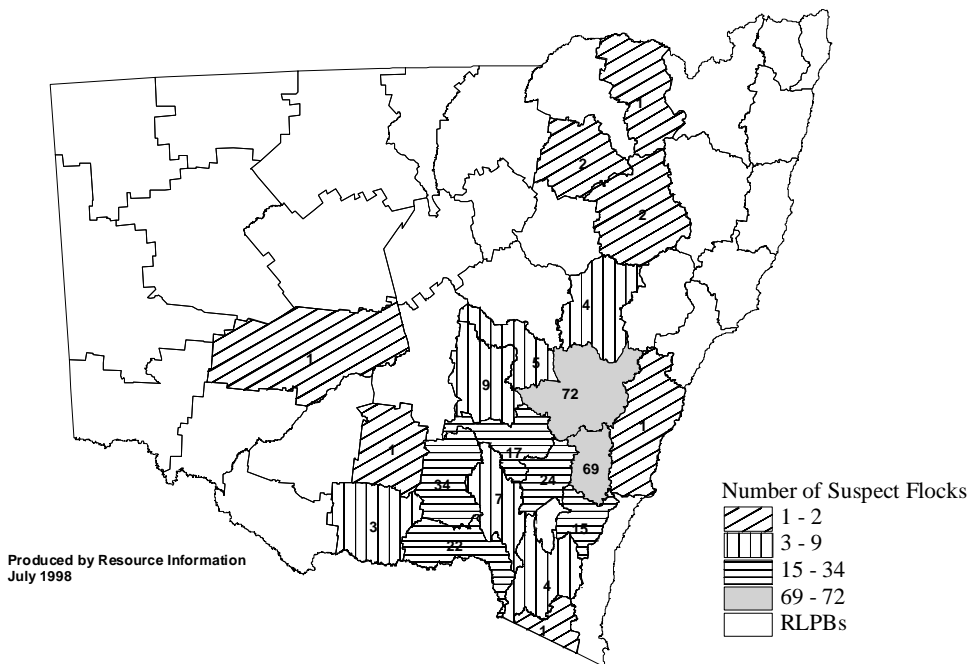
Map 1

Flocks Confirmed with OJD since 1980



Map 2

Suspect OJD Flocks Identified by Tracing



Bat viruses

During the quarter, 16 fruit bats and 2 micro-bats were examined for evidence of lyssavirus infection. Infection was confirmed in one fruit bat, with the remaining animals all negative. A total of 166 fruit bats and 39 micro bats have now been examined in NSW, with 10 fruit bats being infected.

Two horses were examined for evidence of bat paramyxovirus infection during the quarter, with negative results. Thirteen horses have now been examined for evidence of paramyxovirus infection in NSW, all with negative results.

Contact: Evan Sergeant, Orange on (02) 6391 3687.

Bee Diseases

Table 1 shows the results of American foul brood (AFB) testing for the current quarter, and the financial year since July 1997.

Table 1: AFB testing summary for New South Wales

| | January-March, 1998 | Since July, 1997 |
|----------|------------------------|---------------------|
| Positive | 36 | 390 |
| Negative | 88 | 429 |
| Total | 124 | 819 |

Of the 390 positive reports since July, 264 were new cases, while the remaining 126 were repeat tests on previously confirmed cases. 81 of the 264 'new cases' had also had positive reports during the 1996-97 financial year.

Five reports of chalkbrood were received during the quarter.

Contact Keith Oliver, Orange on (02) 6391 3689.

Exotic Disease Investigations

Fractionous feline falsely forces fearful fate!

A cat with deranged behaviour caused a significant exotic disease alert when the Sydney veterinary practitioner reported suspected rabies on the Disease Watch Hotline. Coupled with a suspicious history (the cat was imported from a rabies-endemic country through proper quarantine channels last year), legal action was initiated to secure the animal. Fortunately, the owner consented to euthanasia following advice from a specialist veterinary neurologist. EMAI arranged

prompt collection and testing of the animal and, in collaboration with AAHL, was able to exclude both rabies and lyssavirus within 27 hours of the alert commencing.

Subsequent testing showed within three days that the cat suffered from a progressive and incurable brain disease called ceroid lipofuscinosis. The responses of EMAI and HO staff to this alert were outstanding (with special thanks to Tony Ross, Kevin O'Grady, Barbara Jones and Judy Kramer) and showed that our animal disease emergency communication and response systems work well. The professional actions by the practitioner are also commendable.

Rabies exclusion testing was also carried out on four other cats brains during the quarter.

Laboratory submissions

Table 2 shows the throughput of submissions through the laboratory system since 1 January 1998, and figure 1 shows throughput since January 1996. Sample numbers increased by almost 50% during the current quarter. This increase was mainly associated with the large volume of testing associated with the Ovine Johne's Disease Interim Surveillance Program

Contact: Evan Sergeant, Orange on (02) 6391 3687

Figure 1: Laboratory throughput by quarter.

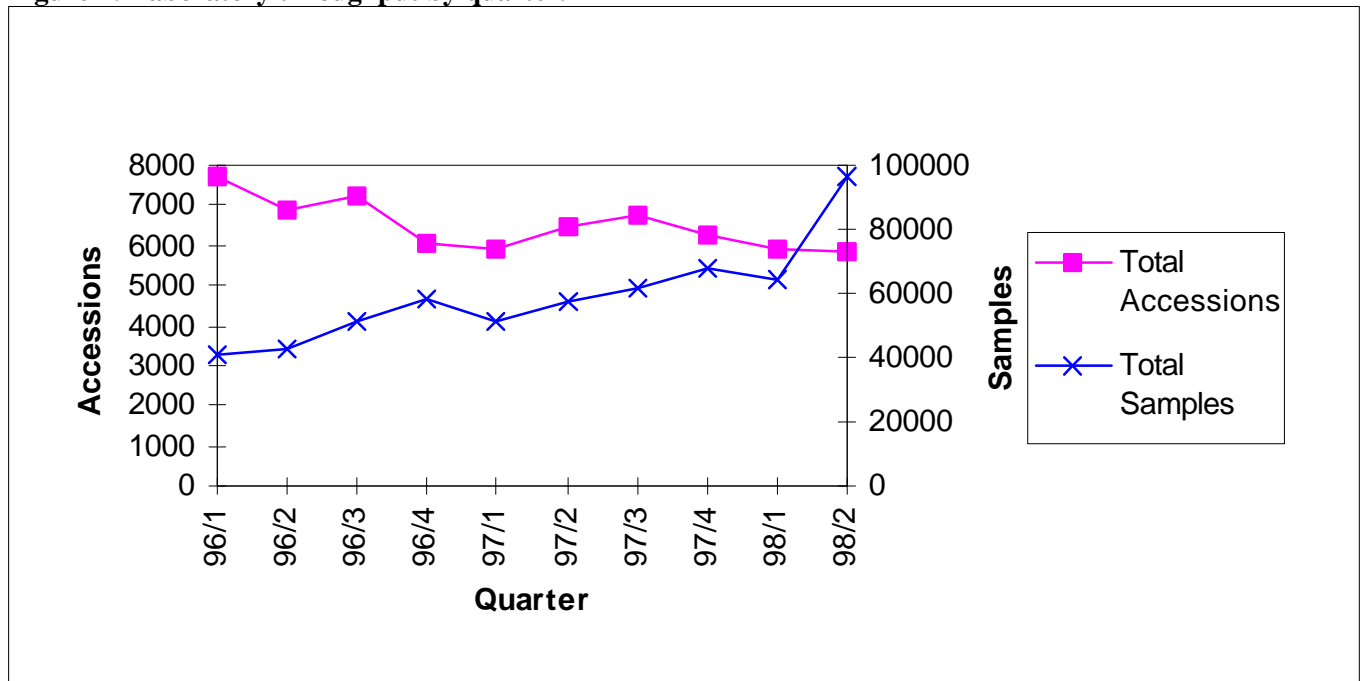


Table 2: Number of accessions to NSW Agriculture laboratories by species, April - June 1998

| | SHP | CTL | PIG | GTS | AVN | HRS | FSH | BEE | D/C | O.SP | Total |
|--------------|-------------|-------------|------------|------------|------------|------------|-----------|------------|------------|------------|-------------|
| Menangle | 962 | 1570 | 71 | 70 | 146 | 207 | 3 | 105 | 109 | 458 | 3701 |
| Orange | 652 | 241 | 11 | 15 | 20 | 7 | 0 | 4 | 9 | 81 | 1040 |
| Wollongbar | 67 | 783 | 41 | 25 | 21 | 17 | 19 | 51 | 6 | 58 | 1088 |
| TOTAL | 1681 | 2594 | 123 | 110 | 187 | 231 | 22 | 160 | 124 | 597 | 5829 |

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 (02) 6391 3237 or fax (02) 6361 9976.

For more information on national disease status check out the National Animal Health Information System (NAHIS) via the the Internet at:

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

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