



New South Wales



## ANIMAL HEALTH SURVEILLANCE

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*April - June 2000*

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**Number 2000/2**

### **STAFF**

Dr Joan Lloyd, a Veterinary Research Officer based in the parasitology section at EMAI has left NSW Agriculture to take up a position with the private sector. During her 3 ½ years at EMAI Joan was heavily involved in the large closantel resistance survey recently conducted by NSW Agriculture and RLPBs in northern NSW. Her research work included development of the closantel resistance assay, refinement of liver fluke ELISAs, development and testing of an irradiated *Haemonchus* larval vaccine, and initial developmental work on an assay for the detection of macrocyclic lactone resistance. Joan was also leading a reconnaissance survey for drug resistance in liver fluke and was involved in early stages of the SCIPS project (sustainable control of internal parasites in sheep). We wish her well in her new position.

Russell Graydon, a Veterinary Research Officer based as a diagnostic pathologist in the RVL at Menangle resigned during the quarter. During Russell's employment with NSW Agriculture one of his roles was to assist the genetic disease testing functions of the laboratory. He also worked as a consultant in Kurdistan to assist them with the running of their laboratories. Russell's diagnostic ability is missed and we wish him well with his future endeavours.

Helen Walker started as the new District Veterinarian at Goulburn during April. Helen graduated from Sydney University in 1995 and initially worked in private practice in Newcastle. She then travelled to England and worked as a locum before returning to Canberra to work for AQIS on the importation of biological products such as vaccines.

During the quarter Berwyn Squire (DV Molong), Buster Neilson (DV Warialda), Rob Williams (DV South Coast), Peter Daley (Senior Regulatory Officer Tamworth), Aarn (VO, Balranald) & Brien Hodge (VO Bourke) attended AAHL in Geelong for an exotic disease training course.

### **LIVESTOCK AND PASTORAL CONDITIONS**

#### **Seasonal Conditions**

The excellent Autumn break continued over much of the state with many areas reporting the best Autumn for many years. June was generally a dry and cool to cold month with severe fronts and a series of dry cold fronts moving across the state. Below average rainfall was received in the north-west corner of the state as well as in the New England and on the Northern Slopes.

### **Floods**

Large areas remained flooded and waterlogged in the upper western, north and west of the Darling River for long periods of time. There is exceptional pasture growth in these areas and there has been an excellent recovery in many species such as Mitchell grass and spear grasses.

### **Plague Locusts**

The highest locust populations for more than 20 years has resulted in major control campaigns in the Tibooburra, White Cliffs and Broken Hill areas with locust populations widespread over the whole northern half of the Western Division. Over-wintering locusts are still causing some isolated problems in the south-western areas, especially in newly established cereal crops. The high vegetative cover and excellent soil moisture is providing protection in these areas. The excellent soil moisture over most of the Western Division has almost guaranteed major locust populations in spring throughout western and southern New South Wales. South Australia and Western Australia are also predicting severe plague populations in the spring.

### **Mice**

Mice are still causing localised damage to emerging and developing crops in some areas. There is potential for further mouse problems this spring and farmers need to keep an eye out for mouse activity in their crops.

## **QUARTERLY HIGHLIGHTS**

### **Newcastle Disease**

Surveillance programs for virulent virus to confirm the absence of VNDV on the depopulated and sanitised farms in the Moonbi area commenced in June. Serology on all 3 farms (2 broiler and 1 pullet rearing) appears to indicate that decontamination was successful. Private practitioners will be providing recommendations to the QA program on whether these properties should be released from Quarantine. The national NDV survey has progressed in the quarter but results will not be available until late 2000.

*Contact: Rory Arthur, Orange on  
(02) 6391 3719*

### **Ovine Brucellosis diagnosed in ewes**

Ovine Brucellosis has been diagnosed in ewes in the Central Tablelands and Wagga Wagga RLPB after insemination with semen from a ram imported from WA. The ram had a *Brucella ovis* CF titre of 8 and was semen culture positive for *B. ovis*. Reactions to the CF Test in the ewes included titres of 8, 16 and 32. Further investigations are continuing.

*Contact: John Seaman, Orange on  
(02) 6391 3248*

### **Traceback from a WA buck with OJD**

Investigations are being undertaken on a few locations in NSW after ovine Johne's disease was diagnosed in a 5 year old buck born in WA. The infected buck was the progeny of a WA born dam and a NSW born buck. Until the age of 18 months the infected buck grazed with other goats from NSW from the same property as the imported buck. This property in NSW was the location of a goat group breeding scheme which was disbanded. The infected buck then grazed on three other properties for a period of approximately 10-12 months until it was detected on the 3<sup>rd</sup> property in a routine serological test. The last 2 properties the buck grazed (at approximately 3 ½ and 4 ½ years of age) have had introductions from properties in NSW that are known to have OJD.

*Contact: Rory Arthur on (02) 6391 3719*

### **Bovine Ephemeral Fever in the Hunter**

The Hunter district experienced a major outbreak of Bovine Ephemeral Fever in April and June with more mortalities than usual. The disease first appeared in the Singleton district before spreading north to Scone and east to Maitland. During the quarter it was also confirmed serologically at Raleigh.

*Contact: Ross Kemp, Singleton on  
(02) 6572 2944*

### **Remember the exotics – think the worst first**

During May a 30 month old steer presented with clinical signs indicative of an exotic disease in northern NSW. The dead steer had crusting of

the muzzle, serous ocular discharge and diarrhoea. There were about 10 erosion's 1 to 4 cm diameter inside the lips, on gums, and on the hard palate. The abomasal and small intestinal mucosa were congested. Laboratory testing quickly eliminated differential diagnoses of Salmonellosis and Bovine Malignant Catarrh, and confirmed the diagnosis of Mucosal Disease.

Encephalomyocarditis viral infections were confirmed in 2-3 week old piglets on 2 properties. The diagnosis of EMC ruled out the possibility of Foot & Mouth Disease as a possible cause of myocarditis and death in young cattle and pigs.

### **On the look-out for Hendra virus**

During the quarter Hendra virus infection was excluded as a cause of fatal subacute active pneumonitis in an 18 year old horse and a 15 year old mare. The diagnosis in both cases was Crofton weed poisoning. There was also no evidence of Hendra virus infection in the lung of a 12 year old pony that had died following a short, febrile respiratory illness which was diagnosed as non-suppurative myocarditis.

## **DISEASE TRENDS AND PREDICTIONS**

### **Buffalo Fly at Narrabri**

In mid-March the presence of the cattle pest Buffalo Fly was confirmed on a property close to Narrabri. Buffalo Fly are a yearly problem at Goondiwindi and Kempsey though are generally not seen at Narrabri. By mid-May, 24 properties centring on Narrabri had reported the presence of Buffalo Fly in their cattle. At the end of May the cold snap brought reports of the disappearance of the flies by the third frost from these properties. These properties will be visited in September this year and throughout Spring and Summer as part of a surveillance program to monitor the possibility of over-wintering by the Buffalo Fly.

*Contact: Shaun Slattery, Narrabri on  
(02) 6792 2533*

### **A nervous time for sheep**

During the quarter Paroo Staggers caused a morbidity rate of 2.1% (8000) and a case fatality

### **Streptomycin supplies cease as of 30 June**

All supply of Streptomycin (and combination products) ceased as of 30 June. The National

rate of 11.8% amongst adult merinos at Bourke. Clinical signs included pelvic limb ataxia, knuckling over at fetlocks, recumbency and death. Cooma ataxia caused progressive ataxia in Merino weaners at Dalgety, and oxalate nephrosis caused a morbidity rate of 7.6% (620) and a case fatality rate of 36.2% at Wagga Wagga with signs of clinical depression, recumbency and death.

### **Akabane goes west**

Akabane virus infection has occurred further west than usual this year so that naive pregnant cows have been affected. The congenitally affected calves have had arthrogryposis and craniofacial abnormalities. Abortion, stillbirth and arthrogryposis have occurred in cattle at Barraba, Lismore and Coonamble during the quarter.

### **Horse abortions**

Eight of fourteen mares on a property near Port Macquarie have aborted between 7 and 9 months pregnancy. The first horse aborted in early May and the most recent abortion occurred at the end of July. No infectious or toxicological cause is readily apparent.

Five aborted foetuses have been submitted for laboratory investigation. Of those investigated to date, no consistent pattern has emerged. EHV and EIA have been excluded as causes and while Leptospira antibody titres have been demonstrated in the mares, their significance is unclear.

The horses are fed a diet of proprietary feed, chaff and hay. The ration is being tested for ergot contamination. Concern has been expressed at feeding the proprietary feed above the rate recommended on the label. Excess lactic acid in the gut may lead to increased permeability to endotoxins. Investigations are continuing into this perplexing problem.

*Contact: Steve Ottaway, Grafton on  
(02) 6640 1687*

Registration Authority for Ag and Vet chemicals (NRA) has however issued a permit to allow supply and use of a 500mg/mL streptomycin

product from Jurox Pty Ltd, but only for treatment of stock for export, or artificial breeding activities (when treatments are required by State or Commonwealth legislation). The NRA is sympathetic to the need for streptomycin as a treatment for animals infected with leptospirosis and an additional permit for this purpose may be issued at some time in the future. Current and future users of streptomycin should be advised of the long-lasting residues which occur in kidneys and livers of treated animals. The current permit requires that the offal does not enter the human food chain and the supplying/treating veterinarian is required to ensure a mechanism is in place to achieve this.

*Contact: Lee Cook, Orange on  
(02) 6391 3722*

## **DISEASE CONTROL AND ADVISORY PROGRAMS**

### **Bovine Johne's Disease Market Assurance Program**

At 30 June there were 1163 herds which had been tested under the CattleMAP within NSW, consisting of 138,584 head of cattle. This is an increase of 55 herds since the last quarter. Of these, 395 herds (42,272 head) have had 2 screening tests. The percentage of herds tested with reactors remains steady at around 0.20% (218) where there have been 185 herds with reactors in round 1 testing and 33 herds with reactors in round 2 testing. The number of herds diagnosed as infected during MAP testing by investigation of serological reactors is currently 27 (1.4%), with 23 detected at round 1 testing and 4 detected at round 2 testing.

There are currently 1,015 herds with a MAP status in NSW. Table 1 outlines the number of herds

with different MAP statuses for this quarter, the last quarter and at 30 June 1999.

**Table 1: Number of herds with statuses under the CattleMAP**

MAP Herd Status	This Quarter	Last Quarter	At 30 June 1999
TN1	57	69	174
MN1	381	366	202
TN2	23	37	79
MN2	278	273	134
MN3	158	91	0
NA	118	110	61
<b>TOTAL</b>	<b>1015</b>	<b>966</b>	<b>650</b>

*Contact: Tim Jessep, Goulburn on  
(02) 4828 6614*

### **Australian Sheep Johne's Disease Market Assurance Program**

During the quarter 19 new flocks entered the SheepMAP from a status of non-assessed (NA), 4 reverted from MN1 to NA, 11 progressed from MN1 to MN2 and one MN1 flock was found to be infected. The infected flock was detected during sample testing undertaken to progress to MN2.

There are currently 327 flocks in the SheepMAP representing about 1% of the State's sheep flocks, 309 with a status of MN1 and 18 with a status of MN2. Of these, 56 MN1 flocks and 2 MN2 flocks lie within the Residual Zone and 253 MN1 flocks and 16 MN2 flocks lie within the Control Zone for OJD.

*Contact: Catherine Taragel, Orange on (02)  
6391 3924*

### **Australian Goat Johne's Disease Market Assurance Program**

There were 6 new herds entering the GoatMAP program during the quarter from a status of non-assessed (NA) to bring the total number of goat herds in the scheme to 25. The majority of herds involved are either fibre (Angora or Cashmere) or meat (Boer) goats with only a small number (2) herds including dairy goats (Saanen and British Alpine).

*Contact: Catherine Taragel, Orange on (02)  
6391 3924*

**Australian Alpaca Johne’s Disease Market Assurance Program**

There are currently 64 herds registered in the AlpacaMAP with a total of 1912 Alpaca. At the end of the quarter 10 herds have progressed to MN2 status and 54 are MN1.

*Contact: Bob Coverdale, Dubbo on (02) 68811275*

**Ovine Brucellosis Accreditation Scheme**

There are currently approximately 2,500 flocks enrolled in the scheme within New South Wales. During the quarter there were a total of 2 new flocks entering the scheme and 14 flocks that were cancelled from the accreditation scheme. Of the 14 cancellations, 12 were voluntary. The large increase in cancellations during the quarter is mainly attributable to the administration system being updated and flocks which had been missed for re-accreditation and were no longer operating being detected.

*Contact: Catherine Taragel, Orange on (02) 6391 3924*

**Cattle Tick Control Program**

A total of 70 infestations were detected in the far north coast area of NSW. Autumn treatments have been completed and eradication programs will commence in October on infested and at risk properties.

Three infestations were detected in the Tenterfield area last year. No spring eradication program was undertaken on these properties as it was expected that the cold winters in the area would eliminate these ticks. As a result of the milder winter light infestations were detected on two of the 3 properties and spring eradication programs are planned.

An infestation at Hawthorne Park in South Grafton was reported last quarter. Tracing and examination of neighbours and at risk properties has identified a total of eight infested properties in the area. These include Hawthorne Park, the index case, three cattle properties adjoining Hawthorne Park, a cattle property at Coutts Crossing adjoining a property in common management with Hawthorne Park and three

horses on separate horse paddocks not associated with cattle.

Eradication programs are in progress and Hawthorne Park has been destocked as this provides the quickest route to eradication lifting of quarantine restrictions. The Grafton infestations are resistant to all synthetic pyrethroids. There are no effective treatments to clear horses for movement from quarantined holdings.

*Contact: Peter McGregor, Wollongbar on (02) 6626 1334*

**Enzootic Bovine Leucosis**

The NSW EBL Control and Eradication Program is in the final stage of eradicating the infection from dairy herds in the State. The current EBL status of herds in NSW as of 1 July 2000 is outlined in Table 2.

**Table 2: EBL Status of dairy herds in New South Wales at 1 July, 2000**

EBL Status	Number of herds (% of total dairy herds)
Accredited & Certified Free	5 (0.3%)
Tested Negative	542 (32.1%)
Monitored Negative	1033 (61.1%)
BMT Negative	37 (2.2%)
Provisionally Clear	47 (2.8%)
Provisionally Clear New	2 (0.1%)
Infected	14 (0.8%) plus 2 infected dairy heifer rearing farms
Under Investigation	0 (0.0%)
Not Assessed	10 (0.6%)
<b>TOTAL</b>	<b>1690 (100%)</b>

A total of 1580 herds (93.5%) have completed their EBL testing and considered to be free of the disease. This consists of 5 Accredited and Certified Free, 542 Tested Negative and 1033 Monitored Negative herds.

There are 86 herds (5.1%) remaining which require one whole herd test with all clear negative result to attain a final status indicating the herds are free of EBL. These consist of 37 BMT Negative, 47 Provisionally Clear and 2 Provisionally Clear New herds.

The last group of 24 herds (1.4%) consisting of 14 Infected and 10 Not-Assessed herds requires at least two whole herd tests at 6 monthly intervals with all clear negative results before the herds may be considered EBL free. For the 14 Infected herds the first clean test must be completed at least 6 months after removal of the last known EBL positive animal. All the Infected herds are currently quarantined.

Before the industry can claim EBL freedom, testing of an estimated 53,600 animals/tests may need to be completed. This would consist of 86 herds with a minimum of one whole herd test (approx.34,400 animals/tests) and 24 herds, with at least two whole herd tests (approx. 19,200 animals/tests).

Contact: Richard Zelski, Maitland on (02) 4930 2419

## DISEASE SURVEILLANCE

### National Transmissible Spongiform Encephalopathy surveillance Program (NTSESP)

Differential diagnosis for cattle during the quarter tested under the TSE surveillance program included encephalomyelitis, hypocalcaemia, urea poisoning, mucosal disease and degenerative hydatid. In sheep PEM and intestinal carcinoma were the main differential diagnoses. To date we are on target for cattle and at current submission rates should achieve our target of 100 by the end of the calendar year. After 6 months we should have received 77 sheep submissions, though have only received 42 and are behind on our target.

The source of submissions from within the state are outlined below in Table 3.

**Table 3. Source of submissions by RLPB since 01/01/2000**

RLPB	SPECIES		Grand Total
	Bovine	Ovine	
Armidale	1	12	13
Bombala		1	1
Central Tablelands	1	1	2
Cooma	3	6	9
Dubbo	1	3	4
Gundagai		1	1
Hume	26	3	29
Hunter	4		4
Molong		1	1
Murray	7		7

Narrabri	5	2	7
Northern New England		1	1
Northern Slopes		1	1
Riverina	1	4	5
Wagga		3	3
Walgett		2	2
Young		1	1
<b>TOTAL</b>	<b>49</b>	<b>42</b>	<b>91</b>

This report does not contain submissions still to be processed / finalised and reports for submissions since and including 01/07/2000 as these will most likely need invoices from the submitters for GST.

Contact: Steve Dunn, Gunnedah on (02) 6742 9293

### Bee Diseases

There were 96 submissions for American Foul Brood from 10 April 2000 to 7 July 2000, of which 24 were positive and 72 were negative as outlined in Table 4. This brings a total of 140 total positive reports for the yearly period July 1999 – July 2000. Of the 140 positive reports during the year, 48 individuals had positive reports during the previous financial year.

**Table 4: American Foul Brood (AFB) Testing Summary**

	This quarter	Since July 99
Positive	24	140
Negative	72	535
<b>TOTAL</b>	<b>96</b>	<b>675</b>

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

### Ovine Johne's Disease Surveillance

524 infected flocks have now been identified in NSW since 1980, with 453 (1.4% of the State's flocks) still having an IN status. Of the 453 current known infected flocks, 305 (67%) are in the Residual Zone. About 8% (305/3,988) of flocks in the Residual Zone are known to be infected, compared to about 0.5% (148/27,887) in the Control Zone. One new infected flock was reported during the month.

Table 5 summarises the current status situation in NSW. The distribution of status between zones has changed this quarter due to the progression of

Braidwood and the remainder of Molong RLPB district from a Residual to a Control Zone.

**Table 5: Summary of current status by zone**

Zone	Flocks *	IN	Current Status			
			SU	NA	US	Total
Control	27887	148	275	883	558	1863
Residual	3988	305	291	321	810	1727
Total	31,875	453	566	1204	1368	3590

\* Total flock numbers in Control and Residual zones are approximate only

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

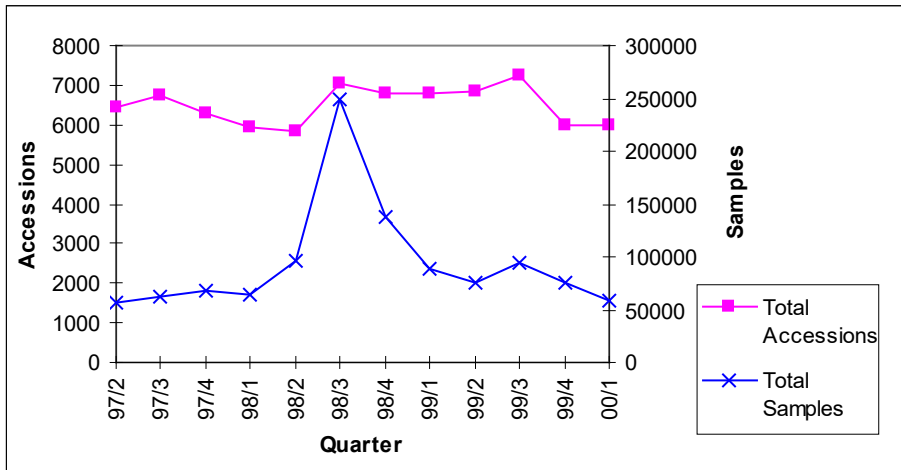
**Bat Viruses**

There was no evidence of lyssavirus infection in a black-headed flying fox which had exhibited leg spasticity during life or a microbat which had been found at a Narrabri school. An incoordinate juvenile black flying fox was diagnosed with non-suppurative encephalomyelitis suspected to be due to a parasitic infection.

**Laboratory submissions**

The graph below shows the throughput of laboratory submissions and the number of samples processed.

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



### ***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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***Copies of NSW Animal Health Surveillance reports are available on the Internet at***

**<http://www.agric.nsw.gov.au/QA/Newsletter>**



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