



New South Wales



ANIMAL HEALTH SURVEILLANCE

October - December 1998

Number 98/4

ON THE WEB

The NSW Animal Health Surveillance report is now available on the world wide web at:

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

STAFF

Robert Pottie finished as a temporary Veterinary Research Officer at the Orange RVL on 4th December. Jeff Marshall has commenced duty as SFVO, Orange, and we congratulate Patrick Staples who was the successful applicant for the Diagnostic Pathologist (Veterinary) position in the Orange RVL vacated by Jeff. Patrick has been working at AgriQuality New Zealand, Animal Health Laboratory at Palmerston North as a diagnostic veterinary pathologist. He will be starting at Orange early in the New Year. Bob Coverdale is now permanently based in Dubbo in the position of SFVO, Dubbo.

Coonamble has a new District Veterinarian, Simone Tolson who will be starting in January, 1999. Simone is a new graduate from Queensland. Bombala Rural Lands Protection Board will be without a Veterinarian when Marcus Holdsworth takes up the position of District Veterinarian, Scone in the New Year.

Bob Coverdale SFVO Dubbo, John Evers District Veterinarian Young, Catherine Taragel VO

Orange and Keith Oliver ROC Animals also from Orange attended an Exotic disease training workshop at AAHL, Geelong in December.

LIVESTOCK AND PASTORAL CONDITIONS

Seasonal Conditions

Excellent conditions continued in much of New South Wales during the early part of the quarter with above average rainfall in most areas of northern and central western New South Wales. This provided for one of the wettest springs on record for the area bounded by Inverell, Tamworth, Coolah and Wellington in the east to Condobolin in the south and through Cobar and Bourke in the west. This has resulted in a huge body of water moving down the Darling system, with widespread major flooding. The continual high rainfall caused major problems in stock due to blowfly strike, internal parasites, metabolic diseases and bloat, especially in cattle.

Floods

The flood peak continued to move down the Darling River to the Burtundy area. Flows were managed using the storage capacity of the Menindee Lakes system. Minimal damage or problems were reported as graziers in these areas are well-versed in managing these events.

Drought

The record wet unfortunately did not extend to the south-west and south-east of the State. Conditions in the south-west, (including Hay, Balranald, Hillston, Wentworth, Broken Hill and Cobar Rural Lands Protection Boards) are severely drought-affected and the Monaro is marginal with deteriorating to poor conditions in the south.

Plague Locusts

Cool conditions during October and November have delayed hatchings of plague locusts in the north-west with only a few reports received.

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

QUARTERLY HIGHLIGHTS

Anthrax

During November, there was one case of anthrax diagnosed in the Condobolin Rural Lands Protection Board. The disease presented in five sows which died suddenly. The source was suspected to be a contaminated lamb carcass which died on the fenceline, enabling pigs in the adjacent paddock access to the carcass.

Four out of 10 dogs which may also have had access to the carcass had swollen heads and were treated with Engemycin. There have been no further cases in six other at-risk pigs. Anthrax had not previously occurred on this property, although it had been diagnosed on an adjacent property in 1984 and 1992.

This case brings the total for 1998 to 10, seven in cattle, two in pigs and one in sheep. Laboratory examination excluded anthrax as the cause of death in nine other investigations during the quarter, bringing the total number of exclusions for the year to 33.

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

Newcastle Disease Eradicated

Decontamination has now been completed on all affected properties. Two of the three properties have been restocked with sentinel birds and surveillance is continuing to confirm that the disease has been successfully eradicated.

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

DISEASE TRENDS AND PREDICTIONS

Bovine Ephemeral Fever Virus

In early summer 1998-99 there were widespread outbreaks of ephemeral fever on the north coast for the first time in many years. Young animals have been affected and many herds have experienced high levels of morbidity.

The mild winter of 1998 has also contributed to survival of buffalo fly and early fly activity in what are normally considered marginal areas.

Contact: Steve Ottaway, Grafton (02) 6640 1687

Internal Parasites - Sheep.

Apart from the south west of the state, much of NSW received well above average rainfall during the latter half of 1998. As a result, worm egg counts in sheep in the drier western parts of the state were somewhat higher than normal.

There has been increased interest in worm monitoring ("WormTest") in recent months over much of NSW. This is due in part to generally favourable seasonal conditions, but is also due to increased promotion of "WormTesting" by NSW Agriculture and Rural Lands Protection Board staff as part of the effort to increase adoption of "integrated worm management" (IWM).

Much of the impetus for IWM comes from the ever-worsening resistance problem: Resistance to benzimidazoles, levamisole and their combinations is widespread, resistance to closantel is common in *Haemonchus*-endemic areas, and resistance to the macrocyclic lactones is no longer a rarity.

Contact: Stephen Love, Armidale on (02)6773 7249

DISEASE CONTROL AND ADVISORY PROGRAMS

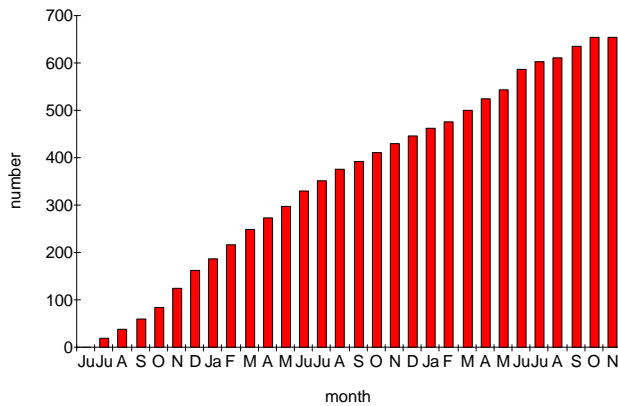
Bovine Johne's disease Market Assurance Program

There are now 670 herds enrolled in the JD MAP in NSW, with 221 at TN1 status, 151 MN1, 82 TN2 and 91 MN2. Forty-four herds have had their status lapse to NA. The remaining 125 herds are still awaiting conformation of their status. To date, 81,221 cattle have been tested. There have been 145 reactors in 100 herds in round one testing, and 23 reactors in 14 herds during round

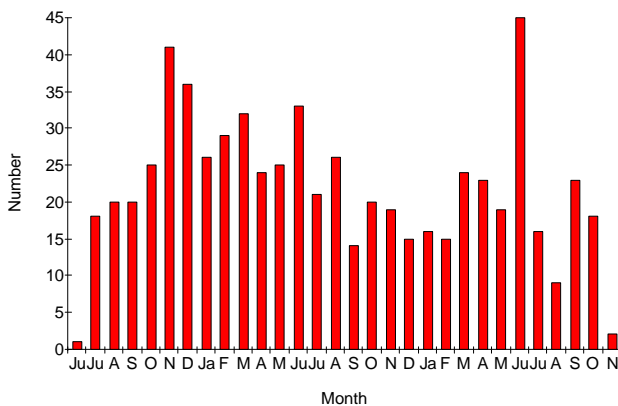
two testing, (0.15%) requiring following up. Of these, 97 reactor herds have been resolved with three infected herds now identified by MAP testing. The ratio of beef to dairy herds in the Map remains steady at about 70:30, and about 66% of herds are studs.

Progress of the CattleMAP, June 1996 – September 1998

Herds enrolling in the MAP



Monthly Enrollment in MAP



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

Australian Sheep Johne’s disease Market Assurance Program

By 31 December 1998 there were 272 Market assured flocks in NSW from 217 properties. This is a large increase from July 1998 when there were 79 flocks in the program.

There have been 195 flocks tested under option A and 76 flocks tested under option B to MN1 level and one flock has tested under option B to MN2. Option B for entry into the MAP was suspended in September, 1998, and flocks which tested under this option will have to test under option A when their biennial serological screening test is due.

One flock in NSW has failed its annual assessment at MN1 level during the quarter, and is now infected (IN). This brings the total number of flocks in NSW that have failed their annual assessment at MN1 level to two.

A list of assessed flocks is available by Infolink on 1902 940 579, or via the Internet at <http://www.brs.gov.au/aphb/aha/jdmap>

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

Ovine Brucellosis

During the quarter there were 212 submissions for ovine brucellosis testing under the OB Accreditation Scheme. Of these, 30 submissions had serological reactors and there were 10 inconclusive reactors. There were also 199 submissions for other reasons (generally diagnostic/monitoring), with 80 submissions serologically positive and 4 inconclusive.

The number of flocks accredited in the scheme remains steady. The majority of reactors are from flocks in the western areas and Western division of NSW. Many cases involved high numbers of reactors, indicating Ovine Brucellosis is still a significant disease problem in western areas.

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

New South Wales Footrot Strategic Plan

Excellent seasonal conditions over wide areas of the state during late spring and early summer were ideal for expression of footrot and therefore evaluation of success or failure of the previous summer eradication programs and uncovering new cases.

In much of southern NSW breakdowns in programs were minimal. Lameness investigations by all field staff were extensive and largely in response to owner requests.

Footrot quarantines increased in each region with most activity continuing to be in the New England. Overall, flocks in quarantine rose from 195 to 237 for the quarter or 0.76% of the state’s 31,291 flocks.

Laboratory work surged in response to the season with 208 footrot submissions handled through RVL Orange. Submissions were distributed evenly between north and south. Auditing

continued in Narrabri and a small scale survey in Goulburn commenced targeting 40 flocks with a history of benign disease.

During the quarter, 97 of the footrot submissions were from the northern part of the state.

Results of Footrot Submissions received during the Quarter and for 1998

D. nodosus	No. cases October	No. Cases November	No. cases December	Total No. cases Quarter	Total No. cases 1998
Gel stable	11	12	25	48	158
Mixed stable/unstable	13	12	12	37	82
Unstable	18	24	26	68	138
Negative	6	14	4 & 1*	25	83
TOTAL	48	62	68	178	461

* inconclusive

Contact: Rob Walker, Wagga Wagga on (02) 6938 1993

Cattle tick control program

The examination program commenced in December in Kyogle and Murwillumbah. By mid January, 469 herds had been examined and 19 infestations detected within the Cattle Tick Protected Area (CTPA). Three infestations have been detected outside the CTPA. At this stage the rate of detection is higher than the two previous years at 3.3% of herds examined.

All infestations detected to date are related to infestations detected in 1996/97 and 1997/98.

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

Enzootic Bovine Leucosis

The results of the EBL ELISA Bulk Milk Test (BMT) in November 1998 and the updated herd status to the end of 1998 indicate the continued reduction in the disease prevalence in NSW dairy cattle herds.

The results of the latest two BMT testing rounds are shown in following table:

BMT test results

	July '98	November '98
BMT negative	1694 herds (95.6%)	1705 herds (97.4%)
BMT positive	54 herds (3.0%)	35 herds (2.0%)
Not sampled (seasonal)	24 herds (1.4%)	10 herds (0.6%)
TOTAL	1772 herds	1750 herds

The table below shows the current EBL status of herds at the end of December 1997 and 1998, confirming the progress that has been made.

EBL status of NSW dairy herds, 31 December 1997 and 31 December 1998

Status	1997	1998
Accredited/Certified Free	4	5
Tested Negative	266	383
Monitored Negative	1062	1043
BMT Negative	110	82
Provisionally Clear	88	100
Infected	254	113
Not Assessed	23	24
Total	1807	1750

The industry objective is for all dairy herds to achieve one of the "top four statuses" by the end of 2000.

Contact: Richard Zelski, Maitland (02) 4930 2419

DISEASE SURVEILLANCE

National Transmissible Spongiform Encephalopathy surveillance Program (NTSESP)

During the quarter, TSEs were excluded by histological examination of brains from 9 cattle, 16 sheep. This brings the total number of eligible cases where TSEs have been excluded under the NTSESP during 1998 to 33 cattle and 43 sheep.

These numbers are well below the targets of 100 brains for cattle and 153 for sheep, set in the Business Plan for the program. Increased promotion of the program, and the availability of incentive payments for producers and their veterinarians should increase the submission rate for the coming year.

Roger Cook conducted three training workshops for veterinarians during the quarter, at Wagga Wagga, Braidwood and Narrabri. District Veterinarians throughout the State are now familiar with the program, and have been trained in an easy technique for removal of cattle brains.

Bee Diseases

The table shows the results of testing for American Foul brood (AFB) for the current quarter and since July 1998.

AFB testing summary for New South Wales

	October-December, 1998	Since July, 1999
Positive	97	132
Negative	110	190
Total	207	322

The positive results consist of 73 new notifications and 59 monitoring reports. Of the 73 new notifications, 41 had positive reports during the last financial year.

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

Ovine Johne’s Disease Surveillance

The current numbers of infected, suspect and under surveillance properties in NSW are listed in the table following. The large increase in Under Surveillance (US) properties in NSW is due to the increased level of reporting of neighbours to Infected properties due to the change in policy. The majority of new US properties are in the Central Tablelands Rural Lands Protection Board.

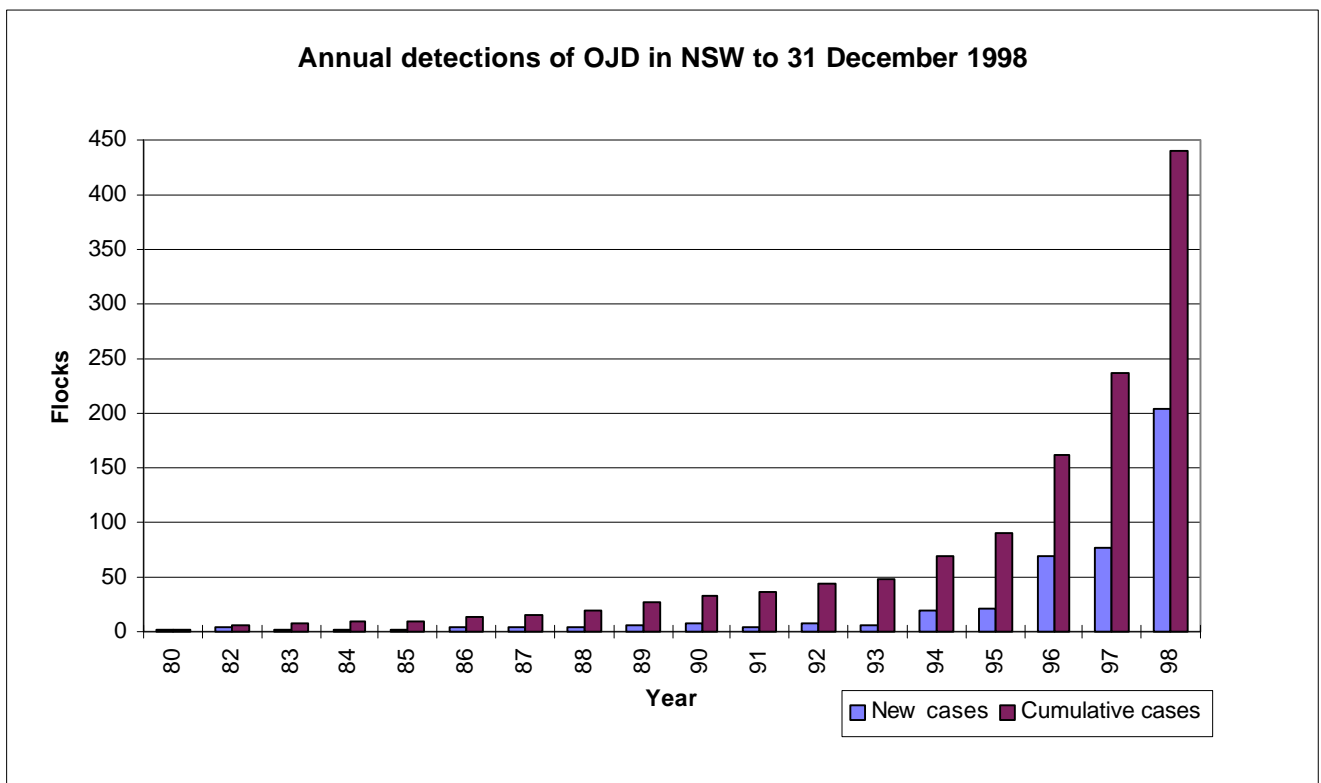
Number of Properties in NSW with a current status of Infected, Suspect or Under Surveillance for ovine Johne’s disease (OJD)

Status	This Quarter	Previous Quarter	June 1997
Infected	398	345	156
Suspect	429	333	89
Under Surveillance	1052	477	9
TOTAL	1879	1155	254

The graph below shows the annual detections of OJD and the cumulative total of infected properties since 1980.

There are now 30 properties in quarantine for OJD in NSW and a further 133 have signed undertakings. A total of 90 properties are in the process of implementing Property Disease Eradication Plans that have been approved by NSW Agriculture.

Contact: Maurie Ryan, Orange on (02) 6391 372



Bat Viruses

During the quarter, 25 grey headed fruit bats, two little red fruit bats and three black headed fruit bats were examined for evidence of lyssavirus infection with one testing positive. Two grey

headed fruit bats had serological evidence of Menangle paramyxovirus, one grey headed fruit bat had verminous meningoencephalitis and a black headed fruit bat was diagnosed with streptococcal lymphadenitis and cellulitis.

A total of 187 fruit bats and 41 micro-bats have now been tested for lyssavirus in NSW, with 12 positive fruit bats identified.

Researchers at EMAI have further evidence that flying foxes are a reservoir of the Menangle paramyxovirus. Paramyxovirus have been identified in the faeces of some flying foxes by electron microscopy and has been confirmed as Menangle virus by immunogold labelling. A proportion of flying foxes possess antibodies to the virus.

National Arbovirus Monitoring Program (NAMP)

During this quarter sampling was conducted at all coastal NAMP sites in NSW as scheduled. The outbreak of virulent Newcastle Disease near Sydney and staff changes have caused major disruptions to sampling of herds at some inland (arbovirus free) sites. These problems should be overcome in the near future. Most herds have already been sampled in January.

There have been reports of clinical ephemeral fever along the north and mid-north coast since October 1998. Laboratory confirmation has been sought for only a few of these cases, with confirmation of most of them. Seroconversions were recorded in the Lismore and Casino sentinel herds in December, with further activity already detected in these and other herds in January.

Light traps have been located at all of the sites required by the NAMP and for the monitoring of port facilities. Collections are well underway, samples are being received and are currently being sorted for counting.

Key sites at Taree and Paterson have been checked for the presence of *Culicoides brevitarsis*. *C. brevitarsis* was present at Taree in November and at Paterson in December. This is consistent with the predicted occurrences and with data from previous years.

Contact: Peter Kirkland, (02) 4640 6331

National Granuloma Submission Program

Testing of abattoir submissions as part of the NGSP during the quarter has ruled out bovine tuberculosis in 226 cases. The survey has revealed the majority of granulomas are club forming

colonies consistent with actinobacillosis (143), abscesses (20), rhodococcosis (10), eosinophilic or verminous lymphadenitis (6) or squamous cell sarcomas (5).

A suspect TB case referred from Queensland was found to have acid fast organisms with a morphology consistent with *Mycobacterium bovis* following staining by the Ziehl Nielsen method.

Contact: Roy Everett, Orange on (02) 6391 3719

Exotic Disease Investigations

Canines ticked off when travelling

During the quarter, three cases of tropical canine pancytopenia (canine ehrlichiosis) were detected by testing at Australian Animal Health Laboratory. One of the cases was presented to a Sydney veterinary clinic and thrombocytopenia was suspected. The dog had been recently released from Quarantine after returning from Spain, where it had been infested by a tick 8 weeks previously.

The second case was detected in a dog by routine testing at the Animal Quarantine Station prior to release. The dog was also carrying a species of tick which is exotic to Australia.

The third case was detected in Katherine in a dog travelling through northern Australia prior to returning to NSW. The dog was euthanased in NSW at the request of the owner prior to confirmation of results.

Tropical canine pancytopenia is a tick-borne rickettsial disease of dogs that generally occurs in tropical and semitropical regions. The disease is caused by *Ehrlichia canis*, which is an obligate intracellular parasite that infects canine blood mononuclear cells. It is transmitted by the common brown dog tick, *R. sanguineus*. The incubation period is generally 10-15 days, though can be longer and carrier states can exist. There are a range of clinical syndromes from acute to chronic, though dogs generally exhibit nervous signs, bleeding disorders or uraemia.

The disease is not known to be endemic in Australia. There has been suspicion of *Ehrlichia canis*-like organisms in dogs in northern Australia causing a tick-like fever syndrome, but its presence has yet to be definitely confirmed. Unfortunately, the differential diagnosis with

Babesia canis is difficult and quite often they can co-exist.

The three incursions are a reminder of the importance to include Exotic diseases in a list of differential diagnosis, and how important our quarantine service is in the prevention of exotic diseases entering into Australia.

Laboratory submissions

The table below shows the throughput of submissions through the laboratory system since 1 October 1998, and the graph shows the throughput

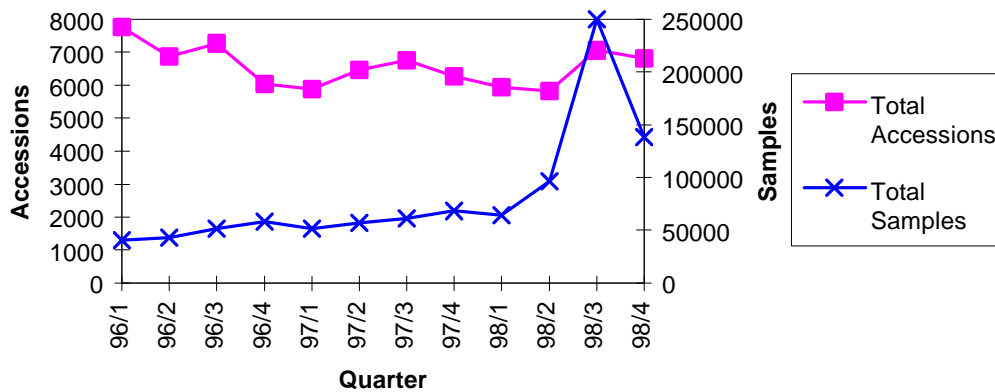
of samples through the laboratory system since 1 January 1996. Over the period, accession numbers have declined slightly, while total sample numbers have increased. The dramatic increase in sample numbers during the 3rd quarter of 1998 was mainly due to the increased testing undertaken under the ovine Johne’s disease interim surveillance program, with testing declining again in the last quarter.

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

Number of laboratory accessions by species, for the period 1 October – 31 December 1998.

	SHP	CTL	PIG	GTS	AVN	HRS	FSH	BEE	D/C	O.SP	Total
Menangle	1015	1237	152	81	461	273	1	148	104	528	4000
Orange	1075	196	18	28	28	18	0	16	3	80	1462
Wollongbar	149	891	31	31	37	20	5	81	5	91	1341
All labs	2239	2324	201	140	526	311	6	245	112	699	6803

Figure 1: Laboratory throughput, 1 January 1996 – 31 December 1998



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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