

# ANIMAL HEALTH SURVEILLANCE

## October–December 1996

Number 96/4

### LIVESTOCK AND PASTORAL CONDITIONS

There was a continued general improvement in seasonal and pasture conditions across much of the State during the quarter.

Only 17% of the State remained drought-declared for January, compared to 29% in October and 56% for July. Continuing drought-declaration was limited to western areas and part of the Southern Tablelands which have missed out on useful rains. This is the lowest level of drought declaration since May 1994 when 16% of the State was drought-declared.

### DISEASE TRENDS AND PREDICTIONS

#### Cryptosporidiosis in New South Wales, 1991–1996

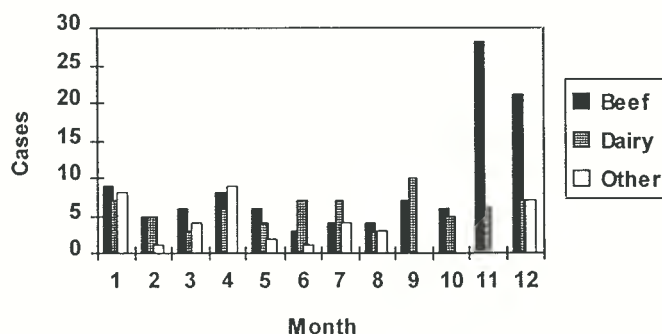
A review of cases of cryptosporidiosis has been conducted, with data from the *Labsys* laboratory database for the period January 1991 to October 1996 being reviewed.

Summary information was extracted from the database for all diagnostic accessions which had a finding of cryptosporidiosis. A total of 216

cases were identified: including 107 in beef cattle; 70 in dairy cattle; and 39 in other species. Cases occurred in all years and all months of the year, and in most cattle producing areas of the State.

Of 90 accessions for which the age of affected animals could be determined: 65 (72%) were three weeks of age or less; 83 (92%) were 10 weeks or less and only three cases were in animals over four months old. Of 115 accessions which provided information on the number of animals affected, only seven (6%) were single cases.

Figure 1: Cryptosporidiosis cases in NSW, 1991-96



There was a notable tendency for more cases to occur during November and December in beef cattle, although this pattern was not apparent in dairy cattle or other species (see **Figure 1**). This was evident despite the fact that data for November and December were not available for inclusion in 1996. The higher rate of accessions at this time of year is probably associated with seasonal calving patterns in beef herds. This results in an increased population of calves at risk at this time although other risk factors may also be involved.

## SIGNIFICANT DISEASE EVENTS

### Anthrax

Two anthrax outbreaks were recorded during the period: one in the Bourke area; and the other in the Hillston area. Both outbreaks involved only sheep.

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

### Tick fever

During November, tick fever, due to *Babesia bigemina* infection, was diagnosed in one of 25 steers in the Tamworth area. These cattle had

been transported from the Rockhampton area five days previously, with appropriate tick treatments for entry to New South Wales. It appears that the infected animal may have had a latent or incubating infection which developed into clinical disease following the stress of transport. There was no evidence of spread of infection within New South Wales or of the introduction of the cattle tick vector.

(Contact: Peter McGregor, Wollongbar on [066] 24 0334.)

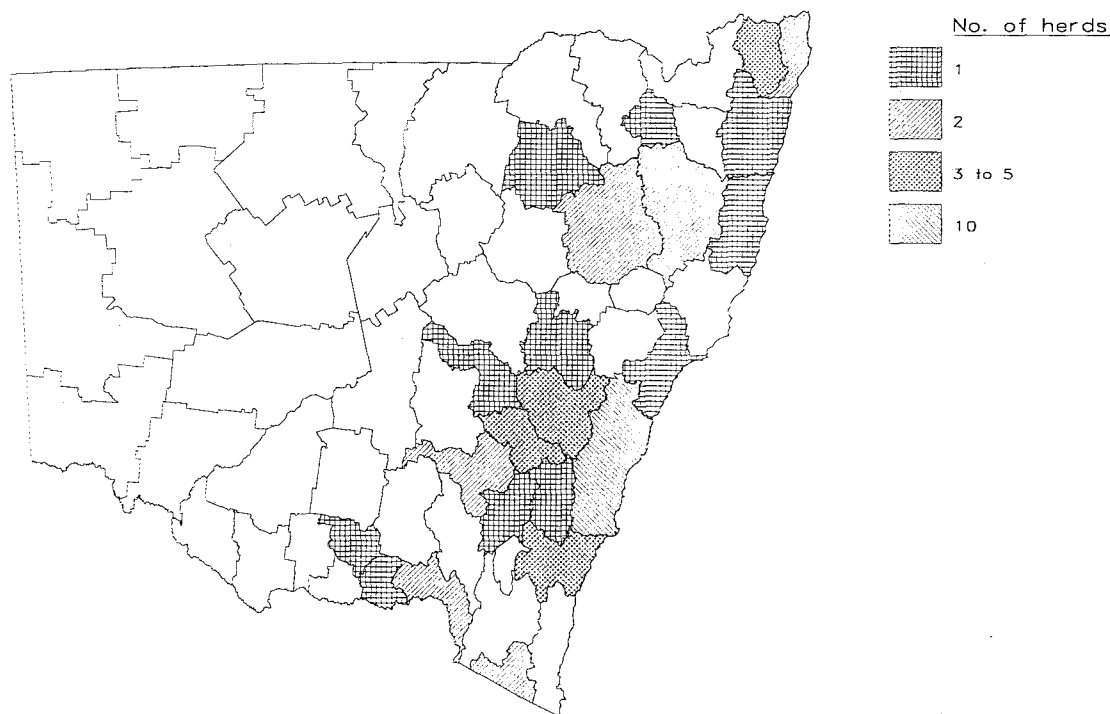
## DISEASE CONTROL AND ADVISORY PROGRAMS

### Bovine Johne's Disease Market Assurance Program

By early January, 13,359 animals in 125 herds have been tested under the National Johne's Disease Market Assurance Program. Of these, 41 (0.3%) reactors have been detected in 31 herds. Seven of these herds have since been investigated and found to be negative. Of the 125 herds tested; 52 are now officially TN1 status; two are MN1, 47 are awaiting notification of status and 24 are still under investigation.

Figure 2: Distribution of NJDMAP TN1 and MN1 herds

17 January, 1997



About 90% of the assessed herds are beef herds, with the remaining 10% being dairy herds. The geographic distribution of assessed herds is shown in **Figure 2**.

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

### **Chlorfluazuron residues**

Chlorfluazuron residue levels continue to fall in affected herds and the Government is confident that all affected herds have been identified and that effective control measures are in place to prevent 'leakage' from these herds.

By December 1996, there were 330 cattle in 13 herds still under detention. Of these, eight herds have less than 10 head detained, while two herds have 52 and 200 head under detention respectively and the other three have between 10–50 head detained. All movements of detained cattle are subject to the prior approval of an inspector and the issuing of a permit. Any stock approved for movement remain subject to detention at their new location until testing confirms residues have fallen below the Maximum Residue Limit (MRL).

At the end of 1996, 79 tailtags remained on the targeted testing list for Chlorfluazuron, compared with about 370 at the start of the year. Some of these tags are registered to producers who do not currently have cattle, but the owners have not provided evidence to justify removal from the list. Vendors are required to disclose the status of any cattle which have been in a herd on the testing list within six months prior to sale.

There are also about 2500 cattle on 36 properties under management agreements. These cases involve one or more mobs with one or more cattle with confirmed residues between the Level of Reporting and MRL at their last test. The tailtags of these cattle have been removed from the testing list after the owner has signed an agreement in relation to the management of the residue-affected cattle. These cattle may not be sold without the prior approval of the District Veterinarian and full disclosure of their residue status.

*(Contact: Dan Byrne, Tamworth on [067] 63 1103.)*

### **New South Wales Footrot Strategic Plan**

Weather and pasture conditions in spring and early summer 1996 over most of New South Wales were excellent with above average-pasture growth following good falls of rain in the south together with mild to warm temperatures. For the first time in a number of years, the same conditions were repeated in the north of the State later in the season. In footrot terms however this was an ideal situation for outbreaks of the disease.

In terms of the performance indicators, the number of properties under quarantine rose from the previous quarters 150 to 162 with most of that change coming from the Riverina region. The flock prevalence within the 314 footrot groups (7922 flocks and 13.3 million sheep) was 5.4% midway through the quarter with every chance of this being reduced further following summer eradication.

The late harvest was likely to interfere with the start of summer footrot eradication programs but field staff were optimistic that any of the latent properties had been identified and all have control programs in place.

*(Contact: Rob Walker, Wagga Wagga on [069] 23 0463.)*

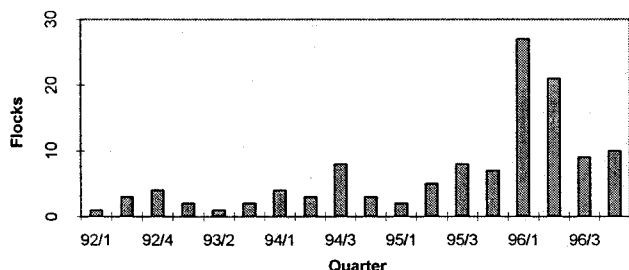
### **Ovine Johne's Disease (OJD)**

Johne's disease (JD) in sheep was first diagnosed in New South Wales in 1980. Since then, a total of 156 flocks have been confirmed as infected. Of these, 120 are still classified as infected, while the remainder have either de-stocked or not had any reported cases for at least five years.

Detection rates for ovine JD have increased greatly over the last few years. Much of this increase however has occurred as a result of increased publicity about the disease in late 1995 and early 1996. The number of detections peaked in the first quarter of 1996 and has declined since then (see **Figure 3**). Only ten new cases were identified during the last quarter of 1996. Many of the more recently-identified cases

have been found following the tracing of sheep movements from known infected flocks. Infection of these new flocks has been found in recently-introduced sheep only.

Figure 3: New detections of ovine JD, by quarter.



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

The New South Wales Sheep Johne's Disease Strategic Plan identifies the need for a Market Assurance Program, to provide a source of sheep from flocks identified as having a "low risk" of being infected with ovine Johne's disease.

Flocks participating in the program will be an important source of replacement sheep for those flocks restocking after the completion of a Johne's disease eradication program or uninfected flocks wanting to purchase sheep with source assurance that they do not have Johne's disease. The Scheme will also provide a way for flocks in high prevalence areas to demonstrate their status and continue trading despite the reputation of the area.

Discussions with the NSW sheep industry, other states and national industry bodies have resulted in a draft program being developed. Agreement to a final national program should be reached early in 1997.

Consistent with other MAP programs, all factors relative to the property, its management and the flock are assessed, not only to ensure the disease is very unlikely to be present, but to ensure that there is an adequate mechanism to keep it out of the flock.

In addition to testing the flock, the program requires assessment of the history of sheep introductions into the flock and the status of neighbours, and only allows the introduction of sheep from other MAP flocks of equal or higher status.

Assessment and testing of flocks for the MAP will be carried out by approved veterinary practitioners. A sample of the flock will be serologically tested for Johne's Disease, sufficient to be 95% confident of detecting at least 1 infected sheep if the prevalence is 2%. The sheep tested are biased towards thin sheep in the flock.

An ELISA test is proposed as the serological test for the program. An estimated test sensitivity of 50% means that between 250-300 sheep will be tested. All serologically positive sheep must be subjected to the highly specific 'histopathological examination' of the intestine following slaughter. This will determine whether reactors are positive or negative for the purposes of the program.

A flock will require a negative flock test every 2 years to remain in the program. The status of the flock will increase at the time of each negative test. In intervening years, the status flock will be assessed by post mortem examination of sheep showing symptoms consistent with Johne's Disease.

The Rules of the scheme are currently being refined prior to release. Training of practitioners will soon commence and the ELISA test is in the final stages of validation.

(Contact: Stephen Ottaway, Orange on [063] 91 3854.)

### Enzootic Bovine Leucosis

The New South Wales Enzootic Bovine Leucosis (EBL) Control and Eradication Program is progressing well with 1649 of 1826 herds negative to bulk milk testing (BMT) in

Table 1: New South Wales Enzootic Bovine Leucosis herd status, December 1996

Status	December 1996		October 1996	
	No. of Herds	Percentage	No. of Herds	Percentage
Accredited Free	2	0.1	1	0.1
Certified Free	1	0.1	1	0.1
Tested Negative	150	8.2	146	8.0
Monitored Negative	1048	57.4	41	2.2
BMT Negative	170	9.3	1178	64.6
Provisionally Clear	53	2.9	52	2.9
Infected	381	20.9	383	21
Not Assessed	21	1.2	20	1.1
<b>TOTAL</b>	<b>1826</b>	<b>100</b>	<b>1822</b>	<b>100</b>

November 1996. Of the remaining herds, 167 were positive and 10 were not tested.

As a result of this testing, about 1000 herds were able to progress from BMT Negative to Monitored Negative status. In addition, many of the herds with infected status had a negative BMT, indicating good progress towards eradication in these herds. Table 1 lists the current EBL status of the State's dairy herds, compared to the status prior to the November test.

For the 381 herds classified as Infected, the estimated EBL prevalence within the milking herd in November 1996 is detailed in Table 2.

Table 2: Estimated within-herd prevalence of Enzootic Bovine Leucosis

Estimated prevalence	No. of Herds	%
Less than 2%	212	55.7
Less than 5%	57	14.9
Between 5% and 15%	73	19.2
More than 15%	37	9.7
<b>TOTAL</b>	<b>167</b>	<b>100</b>

(Contact: Richard Zelski, Maitland on [049] 30 2419.)

### Cattle tick control program

As anticipated, there has been an increased rate of detection of cattle tick infestations in the Cattle Tick Protected Area (CTPA) following the removal of compulsory dipping requirements. No infestations have been found outside the CTPA.

In the past, routine dipping has masked low-level infestations, allowing them to persist without being detected. With the cessation of compulsory dipping, it is now easier to detect these infestations and eradicate the ticks. These changes have resulted in a major reduction in the amount of dipping being undertaken, decreasing the level of selection on tick populations for resistance, and having significant environmental and financial benefits.

By mid-January 1997, 34 infestations have been detected, mostly in the Kyogle area. Most of the detections are single-tick infestations; some are light; and a few are medium infestations. Tick fever has been confirmed on two adjoining affected properties.

An operations centre has been set up at Kyogle Cattle Tick Control Office to ensure that the outbreaks are fully investigated and dealt with appropriately.

The finding of numerous infestations in the Kyogle area fully justifies the change to a search-and-destroy policy. Under the previous buffer program, incomplete musters and haphazard suppressive treatments allowed the survival of ticks at undetected levels. Continuation of the suppressive-dipping policy would have only served to delay the expression of infestations and would eventually have led to the emergence of resistant tick populations.

(Contact: Peter McGregor, Wollongbar on [066] 24 0334.)

## DISEASE SURVEYS AND STUDIES

### Bat lyssavirus

Surveillance for the recently-detected bat lyssavirus has increased following the confirmation of a human infection during October. By early January 1997, a total of four positive fruit bats have been identified in New South Wales, including one from archival material. One infected bat has now been identified in the Central Western region of the State and this was associated with human exposure. This is the first isolation in New South Wales outside the North Coast area.

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

**Table 1: Bat Lyssavirus Testing**

Location	Species	Source	Number tested	Number* positive	Comments
North Coast	Bats	Fresh	38	2	Includes the first documented case: a black flying fox associated with human exposure. The other case was a grey-headed flying fox.
	Bats	Archival	4	1	Black flying fox.
	Cat	Fresh	1	0	Behavioural changes in the animal with a history of hunting bats.
Sydney and Central Coast	Bats	Fresh	8	0	Two cases associated with human exposure, one of these also with a dog.
Central West Slopes	Bat	Fresh	1	1	Little red flying fox associated with human exposure.
<b>TOTAL</b>			52	4	

\* Some cases are negative to date but final results are pending

## ***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 NSW. 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 or departmental senior field veterinary officer or Regional Veterinary Laboratory.*

*For statewide information contact NSW Agriculture's Quality Assurance and Animal Health Program in Orange (063) 91 3237 or Fax (063) 61 9976.*

***Prepared by:***

***Evan Sergeant  
State Coordinator  
Animal Health Surveillance & Information  
NSW Agriculture  
Locked Bag 21  
ORANGE NSW 2800  
Phone: (063) 913687 or Fax: (063) 619976***



**NSW Agriculture**