NEW SOUTH WALES

ANIMAL HEALTH SURVEILLANCE

July-September 2004 • Number 2004/3

QUARTERLY HIGHLIGHTS

Foot and mouth disease exclusion

DV Gundagai investigated disease affecting three Hereford cows out of a mob of 50. This mob had returned from agistment 3 weeks before the investigation and had recently weaned their calves. Two cows out of the mob had died suddenly about a week earlier and grass tetany was suspected. A neighbour's cattle herd that had returned from the same agistment property on the same truck were normal.

Clinical examination showed that one cow was in poor body condition, with hair loss around the eyes, clear ocular discharge and corneal opacity. She was severely depressed and had an elevated temperature. She was salivating and had ulcerative necrotic lesions over the nares, muzzle, oral mucosa, coronets and teats.

The other two animals exhibited slight ocular discharge and corneal opacity. They were much brighter and in good body condition. They did not have any ulcerative lesions.

A post mortem examination performed on the cow with the ulcerative lesions showed erosions to be extending throughout the oral cavity (with sloughing epithelium on the tongue), pharynx, larynx and oesophagus, to the abomasum, where the lesions were more inflammatory than ulcerative.

Differential diagnoses included mucosal disease, malignant catarrhal fever and foot and mouth disease (FMD). A range of fresh and formalin-fixed tissues was sent to Elizabeth Macarthur Agricultural Institute. Samples were sent to the Australian Animal Health Laboratory for FMD exclusion. A negative result for FMD was obtained. A positive diagnosis of malignant catarrhal fever was made. Exposure to infectious bovine rhinotracheitis and pestivirus was also confirmed by serology.

For further information contact Luzia Rast, DV Gundagai RLPB, on (02) 6944 1588.

Copyright OLIVER Image Library.

Cow with malignant catarrhal fever.
Contributors: P. Windsor and Bill Hartley, with thanks.

In this issue!

NSW DEPARTMENT OF PRIMARY INDUSTRIES

Stillborn acorn calf.
Photo courtesy of Jeff Cave, DPI Victoria.

Acorn calves

An epidemic of acorn calves has occurred again this year. District veterinarians from the Gundagai, Hume and Cooma RLPBs are carrying out an epidemiological survey on affected and unaffected properties in the region where the disease has occurred. The purpose of the survey is to document accurately the number of affected animals in order to determine economic impact, confirm the hypothesis about the epidemic, and look in more detail at the risk factors.

For further information contact Luzia Rast, DV Gundagai RLPB, on (02) 6944 1588.

Encephalitic listeriosis in milking goats

DV Kempsey investigated neurological disease in a herd of milking goats this quarter. Affected animals displayed ataxia, a turned head and falling to one side, slobbering and lateral recumbency, with some animals rigid and unable to stand. Animals had an elevated temperature (41.5 °C). Six out of 50 animals died.

The goats were being fed mouldy lucerne silage (during drought), and mycotoxicosis was considered a possible cause of disease.

A diagnosis of listeriosis was made on histopathological findings: 'Severe subacute necropurulent encephalomyelitis most severe in the caudal brainstem, with gram-positive bacilli consistent with *Listeria* spp. Listeriosis associated with silage feeding.'

Affected animals were isolated and treated with antibiotics, but treatment was unsuccessful. Once overt neurological signs have developed, treatment is rarely effective.

For further information contact Melissa Robertson, DV Kempsey RLPB, on (02) 6562 7822.

Mycoplasma ovis mortalities

Weaner mortality due to Mycoplasma ovis (formerly *Eperythrozoon ovis*) was diagnosed on at least seven properties around the State during the quarter. All reported cases were in Merino weaners that had been marked and mulesed 5 weeks before the mortalities, and then handled or moved into another paddock immediately before the deaths began. In each case diagnosis was made by the presence of anaemia, identification of *M. ovis* on blood smears, and histopathological presence of lesions consistent with *M. ovis*.

Anaemic Merino weaner with pale conjunctiva...

...and gums demonstrated.

Five-month-old lambs with polyarthritis.

Polyarthritis in lambs

There have been a number of cases of sudden-onset, acute polyarthritis in 3- to 6-month-old lambs again this quarter. Affected lambs are depressed, have a fever, and exhibit marked lameness. Severely affected animals are reluctant to move and show a dramatic loss of condition. Outbreaks have generally lasted 2 to 6 weeks, with varying percentages of the mob affected. It is thought that the condition is caused by a Chlamydia. Serological investigation has consistently revealed positive Chlamydia complement fixation tests (CFTs).

A surveillance project to determine the epidemiology and aetiology of this condition is under way. The laboratory side of the project involves serology (Chlamydia CFT) and joint cultures for Erysipelothrix, Chlamydia and Mycoplasma.

For further information contact Sarah Robson, VO Wagga Wagga, on (02) 6938 1967.

Sporadic bovine encephalomyelitis (SBE)

A number of cases of sporadic bovine encephalomyelitis (SBE), caused by a Chlamydia, have been investigated in the Narrandera and Wagga Wagga RLPB districts this quarter. Affected animals are depressed, lethargic and febrile. There is severe lameness and weight loss. The exact method of disease transmission is still unknown, and as yet no direct link to disease in sheep has been made.

NOTIFIABLE DISEASES

Anthrax — Two cases of anthrax were confirmed during September. One was in the Condobolin district and the other in the adjacent Narrandera district, with some 60 kilometres between affected properties. Sheep were affected in both cases. Mortalities were low: death occurred in five out of 560 and four out of 1500 sheep. Both properties were placed in quarantine, carcases were all disposed of by burning, and in contact animals were vaccinated. There had been no stock movements from either property in the preceding 6 weeks.

During the quarter there were 14 mortality investigations that were negative for anthrax. Ten of these were in cattle in which alternative diagnoses included hepatotoxicity and hypocalcaemia. Four investigations were in sheep, one of which had intestinal torsion (red gut) as an alternative diagnosis.

For further information contact Barbara Moloney, Technical Specialist (Disease Surveillance and Risk Management), on (02) 6391 3687.

Chlamydiosis in poultry — Chlamydiosis was suspected on the basis of clinical signs in one flock of pullets and confirmed in several flocks of pullets on another site. Both sites are part of one operation although physically separated by a distance of 400 km. The birds were approximately 7 to 10 weeks old at the time, and response to chlortetracycline in the feed was not achieved. In both flocks clinical signs were restricted to the eye: conjunctivitis of a dry nature (eye irritation rather than mucoid or serous discharge). Both flocks responded well to doxycycline in the drinking water. The source of the infection has not been identified. Both pullet farms have very tight biosecurity programs in place.

A flock of breeders was also diagnosed with chlamydiosis. Unlike in the pullets, clinical signs in this flock were systemic and included pneumonia, pericarditis and airsacculitis. Mortality reached 20% among dams and 12% in the sires. The biosecurity program in this breeder operation is in line with industry standards for breeder flocks. The breeders responded favourably to tetracyclines, initially in the drinking water followed by in-feed medication. The source in this case is suspected to be contaminated shavings used as litter. It is however, not clear why 25 weeks lapsed between the placement of the litter and the appearance of the disease. Chlamydiosis had been diagnosed on this site 7 years ago. Both the pullets and the breeders were subjected to sub-optimal ventilation and high ammonia levels days to weeks before the chlamydiosis outbreak, but the significance of this is not clear.

Chlamydiosis was also diagnosed in a flock of chickens at one of the State's correctional facilities. The clinical signs in this case were mortality and severe conjunctivitis. The disease was initially suspected to be coryza on the basis of clinical signs.

For further information contact George Arzey, Senior Veterinary Officer (Poultry), Menangle, on (02) 4640 6402.

DISEASE SURVEILLANCE AND CONTROL PROGRAMS

NSW Footrot Strategic Plan

Good progress continues to be made in the NSW Footrot Strategic Plan, with the number of flocks in quarantine for footrot throughout the State as at 30 June 2004 now down to 181. During the 6 months from January to the end of June 2004 there were 78 flocks released from quarantine for footrot, with 54 new quarantines imposed. The majority of new quarantines were in Rural Lands Protection Board areas undertaking active surveillance through tracing, or in situations where Boards were able to establish a diagnosis that had previously been uncertain because of unfavourable environmental conditions.

A summary of the footrot quarantine statistics over the last 2 years is presented in Table 1.

Table 1: Footrot quarantine statistics June 2002 – June 2004

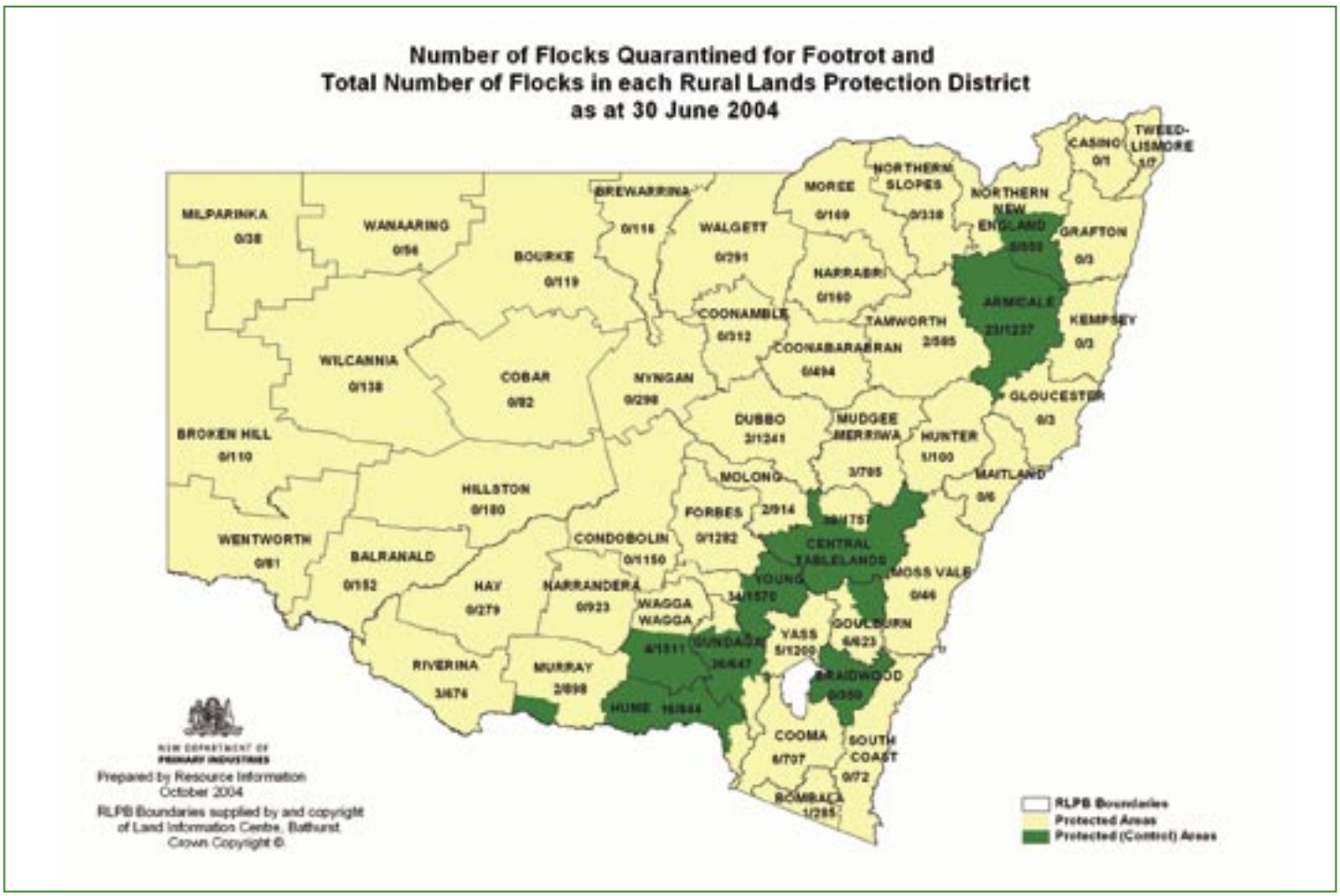
	June '02*	Dec '02	June '03	Dec '03	June '04
Flocks in quarantine	371	292	236	212	181
Total flocks in NSW	29,238	26, 363	25, 158	24, 062	23, 789
Sheep in quarantine	1, 008 ,158	794, 131	597, 370	547, 024	504, 619
Flocks in quarantine > 3 yrs		83	77	60	56
Quarantine releases	94	77	89	65	78
New quarantines		50	14	22	54

**In June 2002 the last Residual Area progressed to Control status and all footrot-infected flocks were required to be quarantined.*

The statistics indicate that there has been a consistent reduction in both the number of flocks in quarantine and the number of sheep (now down to 504 619). Also of significance is the consistent decline in the total number of sheep flocks in NSW, as returned to Rural Lands Protection Boards.

At the meeting of the NSW Footrot Steering Committee in October an application from the Yass Rural Lands Protection Board was approved to progress flocks in all Board areas from Control to Protected Area status. This means that there are now only two Board areas remaining that are entirely Control areas. Another eight Board areas are part Control and part Protected. Many of these Board areas have a footrot flock prevalence below 1% and should be in a position to apply for Protected Area status in 2005. The Footrot Steering Committee considers that the target to have the whole of the State declared a Protected Area by the end of 2005 is still on track.

For further information contact John Seaman, Flock Health Leader, on (02) 6391 3248



Enzootic bovine leucosis

The enzootic bovine leucosis (EBL) status of active NSW dairy herds as at the end of October 2004 is shown in Table 2.

Table 2. Enzootic bovine leucosis status of NSW dairy herds as at the end of October 2004

Status	No. of herds	Percentage
Monitored free	1125	(98.9%) herds
Provisionally clear	2	(0.2%) herds
Not assessed	10	(0.9%) herds
Total	1137	(100%) herds

For further information contact Richard Zelski, VO Tocal, on (02) 4939 8959

National Granuloma Submission Program

Up to the end of September there have been 185 granulomas submitted from NSW abattoirs this year. Quarterly figures are 71 for January to March, 66 for April to June, and 52 for July to September. This compares favourably with last year's submissions, which were 26, 64, and 54 for the first three-quarters of the year. *Actinomyces* and *Actinobacillus* spp. infections are the main causes of lesions, followed by neoplasia. No cases of tuberculosis have been detected so far this year.

For further information contact Keith Newby, VO Grafton, on (02) 6640 1664.

National Johnes Disease Market Assurance Program (MAP)

At the end of the July to September 2004 quarter there were 762 herds enrolled in the Cattle MAP (Table 3). Of these, 185 were MN1 status, 262 were MN2 status and 315 were MN3 status. A total of 635 herds left the scheme reverting to NA status. There were no breakdowns of MAP herds to infected status during the quarter.

Table 3. National Johnes Disease Market Assurance Program: herds by enterprise

Enterprise	Total no. of herds	Stud	Commercial
Beef	533 (69.9%)	400 (75.0%)	133 (25.0%)
Dairy	203 (26.6%)	119 (58.6%)	84 (41.4%)
Mixed	26 (3.4%)	6 (23.1%)	20 (76.9%)
Total	762	525 (68.9%)	237 (31.1%)

For further information contact Yuni Yunamu, VO Goulburn, on (02) 4828 6628.

Transmissible spongiform encephalopathy

For details on transmissible spongiform encephalopathy (TSE) submissions for the quarter see Table 4.

For further information contact Glen Edmunds, NSW DPI State TSE Co-ordinator, Gunnedah, on (02) 6741 8393.

Table 4: TSE submissions by SFVO region and Rural Lands Protection Board for the quarter ending 30 September 2004.

SFVO Region	BOARD	Government		Abattoir		Private		Total	
		Ovine	Bovine	Ovine	Bovine	Ovine	Bovine	Ovine	Bovine
SFVO DUBBO REGION	DUBBO			8				8	
	NYNGAN						1		1
SFVO GOULBURN REGION	BOMBALA	1						1	
	BRAIDWOOD	1						1	
	COOMA	4	1					4	1
	GOULBURN			2				2	
	SOUTH COAST		1						1
SFVO GRAFTON REGION	ARMIDALE	8	4			1		9	4
	CASINO						1		1
	KEMPSEY		1						1
	NORTHERN NEW ENGLAND	3						3	
SFVO GUNNEDAH REGION	NARRABRI	3	4					4	4
	NORTHERN SLOPES	1						1	
	TAMWORTH						1		1
SFVO MAITLAND REGION	GLOUCESTER		1						1
SFVO ORANGE REGION	CENTRAL TABLELANDS	1	1			2		3	1
	FORBES	1					1	1	1
	YOUNG					1		1	
SFVO WAGGA WAGGA REGION	GUNDAGAI						1		1
	HUME	3	1			3	21	6	22
	MURRAY						4		4
	NARRANDERA	3	2					3	2
	RIVERINA						2		2
		29	16	10	0	7	32	46	48

Disclaimer

The information contained in this publication is based on knowledge and understanding at the time of writing (March 2004). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up-to-date and to check the currency of the information with the appropriate officer of New South Wales Department of Agriculture or the user's independent adviser

Getting Information on Animal Diseases

This surveillance report can only convey a very limited amount of information about the occurence 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; Department 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 the National Animal Health Information System (NAHIS) via the internet at: http://www.aahc.om.au/nahis/

Prepared by:

Barbara Moloney
Technical Specialist, Disease Surveillance and Risk Management
Locked Bag 21, Orange NSW 2800

Phone (02) 6391 3687 or fax (02) 6361 9976
e-mail: barbara. moloney@agric.nsw.gov.au

and

Sarah Robson
Veterinary Officer, Wagga Wagga Agricultural Institute,
Wagga Wagga NSW 2650

Phone (02) 6938 1967 or fax (02) 6938 1995
e-mail: sarah.robson@agric.nsw.gov.au

Copies of NSW Animal Health Surveillance reports are available on the internet at:
http://www.agric.nsw.gov/au/QA/Newsletter

NSW DEPARTMENT OF
PRIMARY INDUSTRIES