

ANIMAL HEALTH SURVEILLANCE

October–December 2003 • Number 2003/4

EXOTIC DISEASE INCIDENTS

FMD exclusion

A diagnostic response team has investigated a possible vesicular disease incident on a hobby farm on the outskirts of Sydney. The incident, in early November, followed an alert to the CVO via the Exotic Disease Hotline which was made by a private practitioner. The owner of the property had noticed lesions on the muzzle of an 11-month-old heifer which had been in contact with a stray calf during the previous four weeks. Additionally, lesions were also observed on the teats of the heifer's mother. Lameness was not observed in any of the five animals on the property.

Examination by the diagnostic response team suggested: 'Papular stomatitis of possible viral aetiology but NOT consistent with FMD' as the provisional diagnosis.

For definite exclusion, the serum samples were tested at AAHL with the competitive ELISA and AGID test which were both negative for antibodies. The fresh excised papule from the lip and teat scab were both negative with the antigen capture ELISA and the Tetracore Taqman assay. The first and second passages of virus isolation for FMD and other exotic vesicular diseases were negative.

For more information, contact Steven Hum, Menangle, on (02) 4640 6383.



Ulcers on dental pad.



Papules on muzzle.

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QUARTERLY HIGHLIGHTS

Anthrax

There were two cases of anthrax during the quarter which were confirmed by laboratory examination of peripheral blood smears. The first case occurred in November on a property in the Hay district where 60 out of 1750 sheep died over a 10-day period. The second outbreak occurred in December on a property in the Nyngan district where six out of 900 sheep died over a six-day period. Neither property has a known history of anthrax but both are located in the endemic anthrax area of the State.

For control, the properties were placed in quarantine, all carcasses were burnt, and all at-risk animals were vaccinated.

Eleven other investigations for possible anthrax outbreaks during the quarter were all found to be negative. Six of these were in sheep where alternative diagnoses included bacterial mastitis and suspect pyrrolizidine alkaloid poisoning. Four of the investigations were for cattle where no alternative diagnoses were found. The other negative investigation was in an 8-year-old cat, which died with gross post-mortem signs suggestive of anthrax and which came from the anthrax endemic area.

Acute clostridial infection was suspected as the cause.

For more information, contact Barbara Moloney, Orange, on (02) 6391 3687

Porcine myocarditis syndrome

Porcine myocarditis (PMC) emerged in two co-owned piggeries in New South Wales in June 2003. The incidence of clinical cases in the two piggeries, however, declined rapidly with most production units returning to normal by January 2004. This condition is characterised by stillbirths, mummification, and pre-weaning mortalities due to a non-suppurative myocarditis. Based on a combination of the clinical, pathological, and virological findings, this syndrome is thought to be due to a small virus from the parvovirus, circovirus, or perhaps, picornavirus groups. All known endemic and exotic agents have been excluded as the cause.

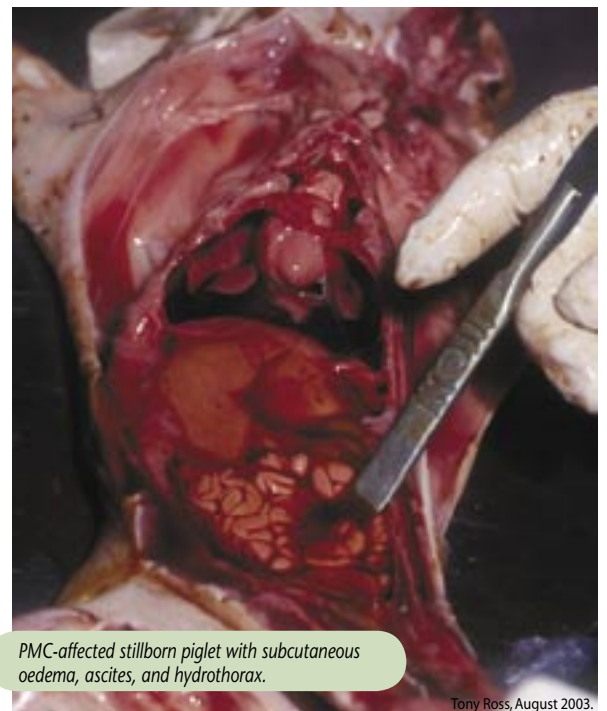
The disease has been confined to two sites and quarantine restrictions are being maintained at these sites. The slaughter and processing of healthy pigs will continue with no restriction on product movement within Australia. Research into verifying the cause is continuing.

For more information, contact Rob Walker, SFVO Wagga Wagga, on (02) 6938 1993



PMC-affected piglet with dilated, pale heart.

Tony Ross, August 2003.



PMC-affected stillborn piglet with subcutaneous oedema, ascites, and hydrothorax.

Tony Ross, August 2003.

Chlamydiosis in poultry

Chlamydiosis was diagnosed in a breeder chicken flock showing minimal clinical signs following the serological diagnosis of the disease in a group of poultry workers. Immunofluorescence testing on splenic and/or conjunctival smears from the birds selected with ocular discharge were positive in at least one bird from each of two of the three sheds on the property.

The flock was treated with in-feed medication and staff were addressed on occupational health and safety issues. Following 45 days on medication, further tests revealed the presence of the infection in one of eight sheds. A further medication regime is being applied.

Infectious Laryngotracheitis (ILT)

ILT was diagnosed on 35-day old broilers in the north-west part of Sydney. This is the fourth such outbreak of the disease on this particular farm. As a clean-cut is practised between batches, the source of the infection is suspected to be a layer farm nearby. In the United States, vaccine strains have been implicated in outbreaks of this disease.

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

Strangles

Eleven cases of strangles were reported in horses during the quarter with most cases involving retropharyngeal abscesses in one or more animals.

Paterson's curse poisoning in horses

The drought followed by last year's autumn rains has produced suitable conditions for the germination of Paterson's curse.

Many horses in the Southern and Central Tablelands therefore had little choice through last winter but to eat the early rosette stage of this weed. The resulting chronic liver damage subsequently caused the deaths of many horses, particularly around the ACT where fires had removed all other pasture. Most of the deaths occurred about six months after exposure with some cases confirmed by histopathology as pyrrolizidine alkaloid poisoning.

Private practitioners have also been carrying out liver function tests on sick horses to provide prognosis. The problem is that Paterson's curse is easily-identified when in flower but, by that time, the damage has often already been done.

For more information, contact Rod Hoare, Menangle, on (02) 4640 6308

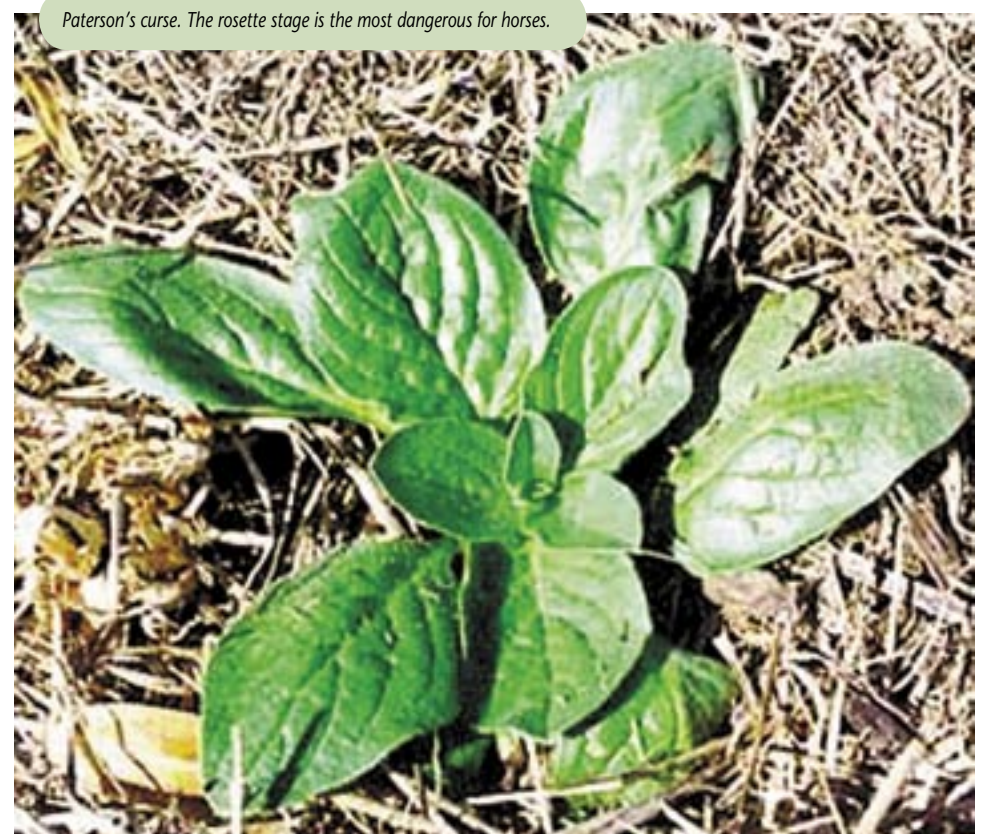
Paterson's curse poisoning in sheep

A total of 20 out of 5000 cross-bred ewes have died on the Central Tablelands within a fortnight of each other from the conditions pyrrolizidine alkaloidosis and chronic copper poisoning.

There have also been five other cases of copper poisoning in sheep around the State this quarter, most due to pyrrolizidine alkaloidosis from Paterson's curse. There were a further three reports of pyrrolizidine alkaloidosis without copper poisoning.



The poisonous weed, Paterson's curse.



Paterson's curse. The rosette stage is the most dangerous for horses.



Suspect vetch poisoning in cattle

Suspect vetch poisoning has occurred on a property in the Moree RLPB district. Out of 53 head of cattle, two animals died and three others were sick. The cattle were grazing a lucerne/ clover-based pasture with Russian vetch present.

Clinical signs included anorexia, ptyalism, polyuria, diarrhoea, dyspnoea, hyperthermia, an inflamed mammary gland, photosensitisation with alopecia of face, trunk, flanks, limbs and tail, epiphora, apparent blindness, photophobia, and depression and lethargy progressing to recumbency.

Post mortem findings included marked icterus; an enlarged, jaundiced heart; pulmonary emphysema and fibrosis; a swollen liver with a 'nutmeg' pattern; an enlarged spleen; thickened and fibrosed bladder wall with inflamed mucosa; and inflamed intestinal mucosa. One animal also showed concurrent, acute mastitis.

Histological examination revealed granulomatous nephritis as seen in vetch poisoning. The clinical and gross post-mortem signs were consistent with a confirmed case of vetch poisoning in the Northern Slopes RLPB district a couple of months earlier. However, the eosinophilic hepatitis and myocarditis with deep dermatitis/furunculosis that are usually seen in classic cases of vetch poisoning were absent in this case. It was thought that this was because the toxic principle may have been lower in the variety of vetch grazed by these cattle.

For more information, contact Andrew Thompson, DV Northern Slopes RLPB, on (02) 6729 1528.

Trichomoniasis exclusion

Trichomoniasis is a sexually-transmitted disease causing infertility in beef herds. Investigations have continued this quarter into an infertility problem typical of IPV which was first reported in August. The affected property, in Hume RLPB, had purchased young bulls from Western Australia in April. The bulls were vaccinated on arrival against vibriosis and leptospirosis. One of the bulls was used to join heifers (single-sire mating) and failed to get any females in calf by 10 weeks of joining.

On examination, this bull was observed to have areas of grey scarring on the penis. A different bull was then joined to the heifers and broke down after 10 days with penile swelling and lesions on the shaft of the penis. The heifers were then found to have small ulcerated lesions around the vulva. A third bull was joined to the heifers but broke down after seven days with penile swelling and erosions/scabs on the shaft of the penis.

Trichomoniasis, IBR, BHV5 and bacterial causes were excluded by laboratory tests. Unfortunately, no diagnosis was made. Therefore, there will be close monitoring of this herd next breeding season.

For more information, contact Sarah Robson, Veterinary Officer, Wagga Wagga on (02) 6938 1967



DISEASE CONTROL AND ADVISORY PROGRAMS

Enzootic Bovine Leukosis (EBL)

The November 2003 bulk milk test (BMT) testing round was completed with all negative EBL results:

Negative BMT	1175	(95.2 %) herds
Not sampled (seasonal, off supply)	59	(4.8 %) herds
TOTAL	1234	(100 %) herds

EBL status of NSW active dairy herds at the end of December 2003:

MONITORED FREE	1226	(99.3 %) herds
INFECTED	2	(0.2 %) herds
SUSPECT	1	(0.1 %) herds
NOT ASSESSED	5	(0.4 %) herds
TOTAL	1234	(100 %) herds

Both of the EBL-infected herds listed are quarantined and have completed their first EBL testing round. A veterinary investigation of the herds indicated that a latent EBL infection may be responsible for the breakdown. The herds are due for their second round of individual EBL testing in March 2004.

Bovine Johne's Disease Market Assurance Program (Cattle MAP)

At the end of the December 2003 quarter, there were 839 herds enrolled in the Cattle MAP. Of these, 213 herds were MN1 status, 306 were MN2 status and 320 herds were MN3 status.

The enterprise breakdown of these herds is shown in Table 1. During the quarter, 10 MAP herds left the scheme and dropped to NA status. There were no breakdowns of MAP herds to Infected during the quarter.

Table 1. Cattle MAP herds by enterprise

Enterprise	Total Herds	Stud	Commercial
Beef	590 (70.3 %)	444 (75.3 %)	146 (24.7 %)
Dairy	219 (26.1 %)	128 (58.4 %)	91 (41.6 %)
Mixed	30 (3.6 %)	8 (26.7 %)	22 (73.3 %)
Total	839 (100 %)	580 (69.1 %)	259 (30.9 %)

For more information contact Yuni Yunamu, Veterinary Officer, Goulburn on (02) 4828 6628.



1. Typical signs of vetch eye in cattle.
Note the photosensitisation.

2. Inflamed udder caused by vetch poisoning.

3. Vetch poisoning icterus as revealed by post mortem.

American Foulbrood (AFB)

For the period from October–November 2003, a total of 24 AFB incidents were reported.

Small Hive Beetle (SHB)

For the period October–November 2003, SHB was confirmed at four locations.

For more information, contact Mick Rankmore, Regulatory Specialist, Apiaries on (02) 6741 8374

DISEASE SURVEILLANCE

Suspect Tick Fever

A disease investigation in the Scone area has demonstrated the difficulty of making a diagnosis of tick fever on the basis of serology. While some mortalities had occurred in this area, they were not continuing nor was there evidence of tick presence. A range of serology tests returned a variable number of positives sufficient to maintain suspicion but none of these samples were sufficiently, consistently positive to maintain a high-level of concern. The property in question was quarantined for the duration of the investigation, a transmission test was carried out in a splenectomised calf, and two inspections for cattle tick were carried out on the affected mobs. The herd inspections were negative for cattle tick, the transmission test was negative, and the quarantine was ended on Christmas eve.

End of an Era

The date 3 October, 2003, saw the end of more than a century of stock movement controls on the Queensland Border from Kilarney to Camerons Corner. This resulted from the introduction of the Standard Definitions and Rules for Cattle Tick Control. This means that, once stock have cleared the Queensland Tick Line, they are now eligible to enter NSW without further treatment. Crossings continue to be staffed from Boonah crossing to Tweed Heads.

The only crossings on the NSW/Queensland border where lead and tractable stock can enter NSW directly from the Infected Area of Queensland are Mount Lindesay and Kirra/Boyd's Bay.

For more information, contact Peter McGregor, Wollongbar on (02) 6626 1334.

Bovine Tuberculosis National Granuloma Submission Program

Results from October to December 2003

97 granulomas submitted from NSW abattoirs

Abscess	5 (5 %)
Actinobacillosis	45 (46 %)
Neoplasm	30 (31 %)
Parasitic	5 (5 %)
Other	12 (12 %)

There were no cases of TB diagnosed for the quarter. A granuloma submitted from Casino Abattoir in August and referred to the Australian Reference Laboratory for Bovine Tuberculosis (Perth) was negative for TB on mycobacterial culture.

For more information, contact Keith Newby, Veterinary Officer, Grafton on (02) 6640 1664.

Transmissible Spongiform Encephalopathies (NTSESP) Submissions for October–December 2003.

SFVO Region	RLPB code	Abattoir vet		Government vet		Private practitioner		Total	
		bovine	ovine	bovine	ovine	bovine	ovine	Bovine	Ovine
DUBBO	Balranald				1			0	1
	Nyngan					2		2	0
	Dubbo		10	1	2	3	5	4	17
	Wentworth			1	1			1	1
DUBBO Total			10	2	4	5	5	7	19
GOULBURN	Bombala				1	1		1	1
	Braidwood	1				1		2	0
	Cooma			2	1	1		3	1
	Goulburn					1		1	0
	Moss Vale					4		4	0
GOULBURN Total		1		2	2	8		11	2
GRAFTON	Armidale	1		4	15		14	5	29
	Casino			5				5	0
	Grafton	2				1		3	0
	Kempsey			2				2	0
	Northern New England			5	7		3	5	10
	Tweed Lismore			2		1		3	0
GRAFTON Total		3		18	22	2	17	23	39
GUNNEDAH	Coonabarabran			1	4		1	2	4
	Coonamble			1	3			1	3
	Northern Slopes				3			0	3
	Narrabri			9	11			9	11
	Tamworth	2		2	3			4	3
	Walgett			2				2	0
GUNNEDAH Total		2		15	24	1		18	24
MAITLAND	Hunter	1		1	1	3		5	1
	Gloucester			6		3		9	0
	Maitland			1				1	0
MAITLAND Total		1		8	1	6		15	1
ORANGE	Central Tablelands	1			2	6	6	7	8
	Condobolin	1					3	1	3
	Forbes						1	0	1
	Molong						1	0	1
	Mudgee-Merriwa					1		1	0
	Young				1		1	0	2
ORANGE Total		1		1	3	7	9	9	12
WAGGA WAGGA	Hume				1	22	16	22	17
	Murray			1		1		2	0
	Gundagai				5	1	4	1	9
	Riverina				2			0	2
	Narrandera				1			0	1
	Wagga Wagga		1	1	7	3	1	4	9
WAGGA WAGGA Total		1	2	16	27	21	29	38	
Grand Total		8	11	48	72	56	52	112	135

Getting Information on 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;

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.com.au/nahis/>

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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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