

ANIMAL HEALTH SURVEILLANCE

July–September 2003 • Number 2003/3

QUARTERLY HIGHLIGHTS

Acorn calves (Congenital dyschondroplasia) — An outbreak of 'Acorn calves' was reported this quarter from the Gundagai District. It involved a property with 400 spring calvers split into mobs of 20–40 head with three mobs affected. One mob of 40 5–7-year-old cows produced only 23 live calves with 18 of these affected with varying degrees of malformations and stunted growth. The remaining 17 calves died during or shortly after birth with most of these also deformed. The other two mobs had one out of 21 and two out of 34 calves affected. The affected mobs were run on a hilly, forested part of the property with the unaffected mobs run on open, flatter country. Calves born in the previous autumn were all normal.

Affected calves generally suffer shortened 'long' bones. The forelimbs are typically bowed outwards, as illustrated in Figure 1. The head is also enlarged with maxillary brachygnathia and there is often a defect in the spine with a vertebral protrusion.

Other cases of this condition have also been reported in the Wagga Wagga and Hume Districts during the quarter, as well as in northern Victoria. The last outbreak of Acorn calves occurred in 1991 (June–October) with more than 20 beef cattle properties on the South-West Slopes experiencing deformed calves. Outbreaks also occurred in 1957, 1958 and 1960 (June–August) in the Albury district. Routine bacteriological and virological examinations failed to implicate an infectious cause.

The condition appears to follow a prolonged dry summer and autumn. As yet, no aetiological agent has been revealed. Current speculations include a plant toxin, vitamin or mineral deficiency, or an insect-borne virus.

For more information, contact Luzia Rast, District Veterinarian, Gundagai RLPB on (02) 6944 1588.



Figure 1. 'Acorn calf' displaying the typical bowed forelimbs.



Figure 2. Acorn calf, stillborn.

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Arsenic poisoning in Wagga Wagga Board

— Two cases of arsenic poisoning occurred in the Wagga Wagga District this quarter. One case was a mob of lambing ewes with access to a small paddock where some old farm sheds had been recently demolished and burnt. A total of 80 out of 340 ewes died. The other case involved a mob of calves that accessed bags of arsenic at an old tip site. Seven out of 35 of the calves died with 18 treated with sodium thiosulphate — with some of this number recovering.

For more information, contact Tony Morton, District Veterinarian, Wagga Wagga RLPB on (02) 6921 3034.

Post-mulesing arthritis — Five properties in southern NSW and two properties in the Central Tablelands have recently experienced a high-incidence of arthritis in lambs. *Chlamydia* was found to be the cause of the outbreak on the two Central Tablelands properties (merino and dorset x merino). In a cross-bred flock in southern NSW, *Chlamydia* spp., *Staphylococcus* spp. and *Enterobacter agglomerans* were involved.

In a southern poll dorset flock, *Chlamydia* was present and probably involved along with other bacteria. However, in this case, bacteria which regularly cause arthritis in lambs such as *Erysipelothrix* spp., *Streptococcus* spp. and *Histophilus ovis*, have all been ruled out. This property has had problems with arthritis annually and it has been previously reported in their dorset and poll dorset animals. A targeted surveillance project will commence on this property in the near future.

Erysipelas was the agent involved on another property running merinos which has also been experiencing problems for the last three lambing seasons. *Staphylococcus aureus* was the agent involved on another merino breeding property. On the remaining property, the causal agent was undetermined.

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

Campylobacter abortion in sheep — An outbreak of late-term abortions, stillbirths, and perinatal mortalities in sheep was reported on two properties in the Hume District. On one property, approximately 500 out of 15,000 lambs were lost with *Campylobacter coli* isolated. On the other property, about 80 out of 400 lambs died with a diagnosis of *C. jejuni* made. While both *C. jejuni* and *C. coli* are believed to be pathogenic in sheep, it is also highly-likely that *C. fetus* was also involved in the above outbreaks.

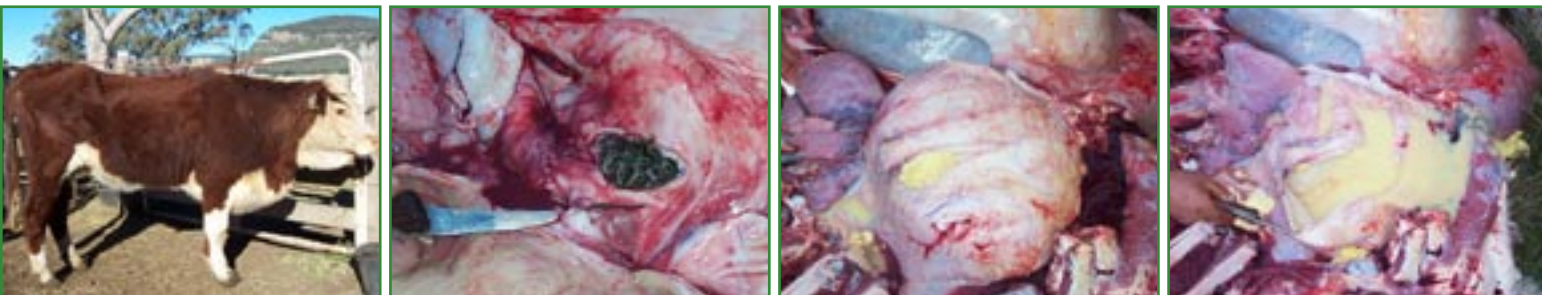
Other properties in the Hume District also had campylobacter abortion suspected. However, due to difficulties with sample submission, this diagnosis was not confirmed. A vaccine trial (Intervet® Campylobacter vaccine for sheep) is planned on the first property in autumn 2004.

C. fetus was also diagnosed as the cause of abortions in five out of 270 sheep on a property near Wagga Wagga.

For more information, contact Steve Whittaker, District Veterinarian, Hume RLPB on (02) 6040 4210.



Figure 3. Hock joint with suppurative arthritis.



Figures 4, 5, 6, and 7. Cow with 'hardware disease'. This cow had massive oedema build-up due to cardiac dysfunction. On post mortem, the offending piece of wire was found adjacent to the reticulum and had penetrated the pericardial sac causing a massive pus accumulation.

Hardware disease — An increase in 'hardware disease' in the Gunnedah region has been reported in association with the drought. This condition is caused by cattle grazing close to the ground and being fed hay containing foreign material such as wire off-cuts.

For more information, contact Belinda Walker, Veterinary Officer, Gunnedah on (02) 6741 8363.

Stillbirths and increased pre-weaning mortality rates in piglets — Stillbirths and increased pre-weaning mortalities have been observed at a NSW pig enterprise. The syndrome is characterised by non-suppurative myocarditis consistent with viral infection, either in-utero or soon after birth. Clinical effects in piglets cease by about five weeks of age. Sows do not appear to be affected. Virus-like particles consistent with viruses of the parvovirus and circovirus group are present in affected tissues.

All known exotic agents have been excluded, but the agent involved has not yet been formally identified. Movement restrictions are in place on this enterprise.

NOTIFIABLE DISEASE INVESTIGATIONS

Anthrax — Reports that two out of 415 beef cows on a NSW property died late September with another death in early October. Anthrax was confirmed by laboratory examination with the property having no known history of anthrax.

However, it is located in the endemic area. The property was placed in quarantine, carcasses were burnt, with all the remaining cattle (412) on the property vaccinated against anthrax.

Anthrax was suspected, but excluded, in 15 other investigations during the quarter (10 in beef cattle, five in sheep). Alternative diagnoses in sheep included lactic acidosis and enterotoxaemia; and in cattle, a suspected plant-induced hepatopathy and blackleg (*Clostridium chauvoei*). For more information, contact Barbara Moloney, Technical Specialist (Disease Surveillance & Risk Management) on (02) 6391 3687.

Notifiable disease of horses — In the 2003 breeding season, there was only one occurrence of herpes virus abortion diagnosed in NSW, compared to abortions in 17 herds in 2002.

Strangles cases, however, showed an increase. In the past 12 months, there were 48 notifications compared to 39 in the previous 12 months. During this quarter, there have been a number of isolations of *Streptococcus equi* var. *equi* from unusual sites, such as from pneumonia, wounds, and abscesses unrelated to the respiratory tract.

There were no clinical cases of equine infectious anaemia or equine viral arteritis diagnosed or reported in NSW in the past 12 months.

For more information, contact Rod Hoare, Technical Specialist Equine Health, Menangle on (02) 4640 6308.

Trichomoniasis in large beef herd — Scans revealed poor pregnancy rates, mummified foetuses, and pyometron in a group of beef cows in the Tablelands of northern NSW. Trichomoniasis was confirmed in 13 out of 110 bulls by culture of preputial washings. Only one group of cows had obviously low pregnancy rates but the breeding cows are moved between four properties. Therefore, the bulls on all four properties were tested.

Twelve positives in a group of 32 bulls on one property were found to be infected with a further positive detected during a second round of testing. Quarantine and a management plan based on movement restrictions, testing, and culling have been implemented on this property. Another property in the group was diagnosed with trichomoniasis five years ago. The problem was managed and the property was released from quarantine one year ago.

For more information, contact Tony Ross, Veterinary Pathologist, Menangle on (02) 4640 6312.

Apiaries — During the quarter, there were 15 new reports of American foulbrood (*Bacillus larvae*), 14 reports for European foulbrood (*Melissococcus pluton*), and four reports of small hive beetle (*Aethina tumida*), in NSW apiaries.

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

DISEASE CONTROL AND ADVISORY PROGRAMS

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

At the end of the September 2003 quarter, there were 835 herds enrolled in the Cattle MAP. Of these, 210 herds were MN1 status, 311 herds were MN2 status and 314 herds were MN3 status.

The enterprise breakdown of these herds is shown in Table 1. During the quarter, 56 MAP herds left the scheme and dropped to NA status. There were no break-downs of MAP herds to Infected during the quarter.

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

Table 1. Cattle MAP herds by enterprise

Enterprise	Total Herds	Stud	Commercial
Beef	581 (69.6 %)	444 (76.4 %)	137 (23.6 %)
Dairy	222 (26.6 %)	127 (57.2 %)	95 (42.8 %)
Mixed	32 (3.8 %)	9 (28.1 %)	23 (71.9 %)
Total	835 (100 %)	580 (69.5 %)	255 (30.5 %)

DISEASE SURVEILLANCE

Bovine Tuberculosis — National Granuloma Submission Program (NGSP)

No cases of bovine tuberculosis were detected by the NGSP during the quarter. A total of 54 granulomas were submitted during the quarter, five from domestic works and 49 from export works.

For more information, contact Keith Newby, NSW NGSP Coordinator, Grafton, on (02) 6640 1664.

Table 2. Diagnoses of granulomas

Diagnosis	Number of granulomas (percentages)
Abscess	14 (26 %)
Actinobacillosis	31 (57 %)
Neoplasm	4 (7 %)
Parasitic	3 (6 %)
Rhodococcus equi	1 (2 %)
Other	1 (2 %)

Enzootic Bovine Leukosis (EBL)

Table 3 lists the July 2003 bulk milk testing (BMT) round which was completed with two positive test results.

Table 3. EBL testing results

Result	Number of herds (percentages)
Negative BMT	1189 (94.9%)
Positive BMT	2 (0.2 %)
Not sampled (seasonal, off-supply, etc.)	62 (4.9 %)
TOTAL	1253 (100 %)

A confirmatory BMT testing of both the BMT positive herds gave a clear positive test result. Currently, these herds are under an intensive EBL investigation from the relevant RLPB District Veterinarians. A part-herd test was completed for one of the herds identified with one positive milker — the herd has been allocated 'EBL INFECTED' status. The second BMT positive herd is still being investigated.

For more information, contact Richard Zelski, Veterinary Officer, Tocal on (02) 4939 8959.

Table 4. EBL status of NSW dairy herds at the end of the quarter

Herd Status	Number of herds (percentages)
Monitored free	1247 (99.4 %)
Infected	1 (0.1 %)
Under investigation	1 (0.1 %)
Suspect	2 (0.2 %)
Not assessed	2 (0.2 %)
TOTAL	1253 (100%)

Submissions to NSW Agriculture Veterinary Laboratories

Analysis of data from LABSYS shows that there were approximately 4150 submissions for animal health and disease related investigations during the quarter. The breakdown by species and geographic region is shown in figures 8 and 9.

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

Figure 8.

SFVO	TOTAL
Unspecified	461
Interstate	519
Dubbo	188
Goulburn	819
Grafton	523
Gunnedah	370
Hunter	224
Orange	573
Wagga Wagga	473
Grand Total	4150

Figure 9.

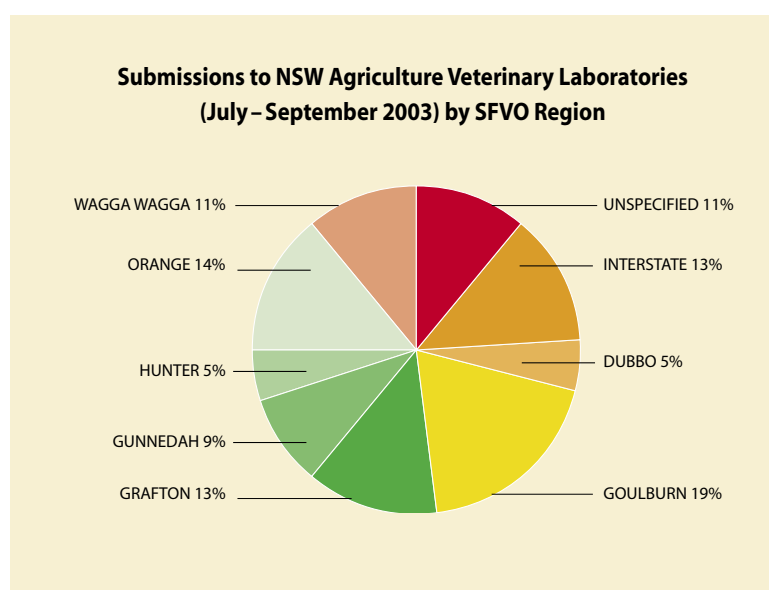


Table 5. TSE Submissions by Rural Lands Protection Board from 1/7/2003 to 30/09/2003

SFVO Region	RLPB	Abattoir		Total	Government		Total	Private		Total	Grand Total
		Cattle	Sheep		Cattle	Sheep		Cattle	Sheep		
DUBBO	DUBBO							1	3	4	4
DUBBO Total								1	3	4	4
GOULBURN	GOULBURN							1		1	1
	MOSS VALE							1		1	1
GOULBURN Total								2		2	2
GRAFTON	ARMIDALE				2	2	4		4	4	8
	CASINO				1		1				1
	NORTHERN NEW ENGLAND				1	2	3		1	1	4
	TWEED-LISMORE							1		1	1
GRAFTON Total					4	4	8	1	5	6	14
GUNNEDAH	NARRABRI					5	5				5
	NORTHERN SLOPES					2	2				2
	WALGETT				1		1				1
GUNNEDAH Total					1	7	8				8
MAITLAND	GLOUCESTER							3		3	3
	HUNTER							1		1	1
	MAITLAND				1		1				1
MAITLAND Total					1		1	4		4	5
ORANGE	CENTRAL TABLELANDS				1	2	3	3	5	8	11
	FORBES								1	1	1
ORANGE Total					1	2	3	3	6	9	12
WAGGA WAGGA	GUNDAGAI					1	1		1	1	2
	HUME							11	3	14	14
	RIVERINA					1	1				1
	WAGGA WAGGA		1	1		3	3	1	1	2	6
WAGGA WAGGA Total			1	1		5	5	12	5	17	23
Grand Total			1	1	7	18	25	23	19	42	68

National Transmissible Spongiform Encephalopathy Program (NTSESP)

Table 5 summarises the submissions for the NTSESP for the quarter by Senior Field Veterinary Officer region. Sheep submissions have more than doubled from the

previous quarter, which will help meet the required total for 2003 (165).

For more information, contact Glen Edmunds, SFVO Gunnedah on (02) 6741 8393.

Disclaimer

The information contained in this publication is based on knowledge and understanding at the time of writing (November 2003). 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 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.om.au/nahis/>

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



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