



July - September 2002

Number 2002/3

QUARTERLY HIGHLIGHTS

Equine herpes virus (EHV1)

There have been 13 reported instances of EHV1 abortions in NSW during this quarter. The majority of cases were single abortions, there were a couple of instances where more than 1 mare aborted, though there were no wholesale abortion storms.

Some cases related to movement of mares from Victoria, but most were apparently precipitated by the movement of heavily pregnant carrier mares. There seems to be very good compliance with the AEVA Guidelines. One anecdotal field report suggests vaccination may be assisting in the suppression of secondary abortions.

Strangles

Reports of strangles are more than the usual number. A death in a yearling thoroughbred was reported due to an abscess in the pharyngeal area.

Contact: Rod Hoare, EMAI on (02) 4640 6308

Suspected sorghum hay toxicity

100 cows with calves at foot or pregnant were fed oaten hay for 3 weeks, then fed sorghum hay (cut, wilted, and bales were 'hot' inside) for 3 more weeks. In the final week of feeding sorghum hay, 20 to 30 cows died suddenly. The stock were fed at approximately 15-20kg hay per head per day and the cows were in condition score 2-3. Some saltbush was available in the paddock.

On initial clinical examination, one cow was down and another heifer was having fits in lateral recumbency. This second animal was euthanased and the post-mortem was unremarkable. Differential diagnoses included nitrate poisoning and cyanide toxicity.

Laboratory tests on samples of oaten and sorghum hay showed no significant contamination with cyanide or nitrate, and blood taken from the 2 animals was normal for GGT, phosphorus, BHB, Ca and Mg.

Stock were immediately taken off the sorghum hay and the recumbent animals were given water and feed.

Ten days after the cattle were taken off the sorghum hay, 6 animals had gone down, with no further cases of sudden death. Three downer cows were examined and apart from being down, physical examination was normal. Two animals were in calf, and the third had a month old calf at foot. Post mortem undertaken on two animals was unremarkable. Differential diagnoses at this stage included hypomagnesaemia, ketosis, fatty liver disease and delayed effect of toxins from the sorghum hay.

Further laboratory tests on blood taken from the affected cows showed elevated CK and AST (expected for downer cows) in all animals. Two of the animals had hypomagnesaemia, probably secondary to being down (ie lower feed intake), rather than the primary cause of the downer cows. Histopathology of the liver showed marked portal fibrosis, (likely a remnant of previous toxic insult) with mild bile duct proliferation, and hepatocytes appeared normal. There were no fatty changes as would be expected in ketosis. There were no significant findings in brain, heart, lung, spleen and kidney.

Cyanide poisoning is uncommon. However, some plants have a risk of causing cyanide poisoning. Such plants include: the sorghums (sorghum, forage sorghum, Sudan grass, Johnson grass) and other grasses, and shrubs such as Purple plume grass, Birdsfoot trefoil and Bullock bush. A lethal dose of cyanide in a ruminant is 2 mg / kg bodyweight.

The poison is usually in the form of a *cyanogenic glycoside*. These substances require the plant material to be crushed (as with biting and chewing), and an enzyme to release the cyanide (the enzyme is either from the plant or from the digestive tract).

The plants have varying concentrations of cyanogenic glycoside and specific enzymes required. Water stress and frosting increase cyanogenic glycoside content. Plants also have higher levels when young.

To try to prevent cyanide poisoning due to sorghum, the following steps should be undertaken:

- *use a low cyanide cultivar*
- *graze when mature (balance with nutritive value) > 45cm tall*
- *provide a source of sulphur (salt lick with 5% sulphur)*
- *make sure stock have a full gut when put onto sorghum*
- *measure cyanide levels of sorghum pasture or hay*

Contact: Greg Curran, Broken Hill on (08) 8087 1222

DISEASE MONITORING

Cattle Tick Program

During 2002, 39 infestations have been detected in NSW. In 1997, infestation levels reached 110 as a result of removing blanket strategic dipping programs. In 1998, there were 89 detections, 1999 (88), 2000 (80), and 2001 (41). These reductions have occurred with modified policies based on eradication programs on infested properties and treatment programs on those considered to be high risk following a detailed investigation of boundary fences, herd management, and other factors. This policy has significantly reduced the number of herds that are treated. Those properties adjoining infested herds, but not considered to be at high risk of being infested are classified as “low risk”. They are quarantined and monitored; no eradication treatments are required, but permits and treatments are required for movements off these properties. Of the 671 properties classified as “low risk” in the three years between 1999 and 2001, a total 13 were subsequently found to be infested. This is an error rate of less than 2%. Over the three years, 46% to 69% of quarantined properties were classified “low risk”. This has significantly reduced stockowner and departmental workloads compared to the previous policy of requiring eradication treatments on all properties that adjoined an infested herd.

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

Enzootic Bovine Leucosis (EBL)

The July 2002 BMT testing round was completed with clear negative result.

The EBL status of dairy herds in NSW as at October 2002, is outlined in the table 1:

Table 1: EBL Status of NSW Dairy Herds

Accredited/Certified Free	-	4 herds	0.3%
Tested Negative	-	478 herds	35.6%
Monitored Negative	-	850 herds	63.4%
Provisionally Clear	-	4 herds	0.3%
Suspect	-	2 herds	0.1%
Not Assessed	-	3 herds	0.2%
TOTAL	-	1341 herds	100%

The four Provisionally Clear herds are under quarantine. All the herds are expected to be herd tested by end of the year. The origin of the 3 Not Assessed herds is being traced.

The State dairy industry has decided to harmonise the NSW EBL Program with the new National Standard Definitions and Rules for Control of EBL in Dairy Cattle. The EBL herd status will be adjusted to the National EBL SD&R format from the next BMT testing round (Nov 2002).

At the August 2002 meeting, NSW EBL Steering Committee has confirmed the commitment to harmonise NSW EBL Program with the recently completed national "Standard Definitions and Rules for Control and Eradication of Enzootic Bovine Leucosis in Dairy Cattle". The full harmonisation should be accomplished by March 2003.

Contact: Richard Zelski, Tocal on (02) 4939 8959

National Granuloma Submission Program (NGSP)

Submission rates have been very good with targets for eligible cattle met. Most export establishments performed exceptionally well, and domestic works achieved outstanding results. NSW abattoirs continue to kill large numbers of young cattle, with the drought having an effect on kill figures as stockowners reduce herd sizes.

No cases of TB were detected by the NGSP during the quarter.

Contact: Keith Newby, Grafton on (02) 6640 1664

Transmissible Spongiform Encephalopathy Surveillance Program (TSESP)

Numbers for both cattle and sheep are well down on the previous year, possibly due to the drought, and also because several key District Veterinarians have failed to contribute this year.

Other states have now been asked to try to get more sheep, to make up for the likely shortfall in NSW's numbers, so that the national target can still be met. These problems have highlighted our dependence on a few key veterinarians, and the need to source submissions from all over the state, with a more even distribution.

Submissions to the end of September are shown in table 2 below. Also, for your information, Figure 2 is a reminder of the essential sites for TSE examination. We are well short of meeting the targets of 100 cattle and 153 sheep, although we always receive more submissions in the warmer months.

Figure 1: Essential sites for TSE examination

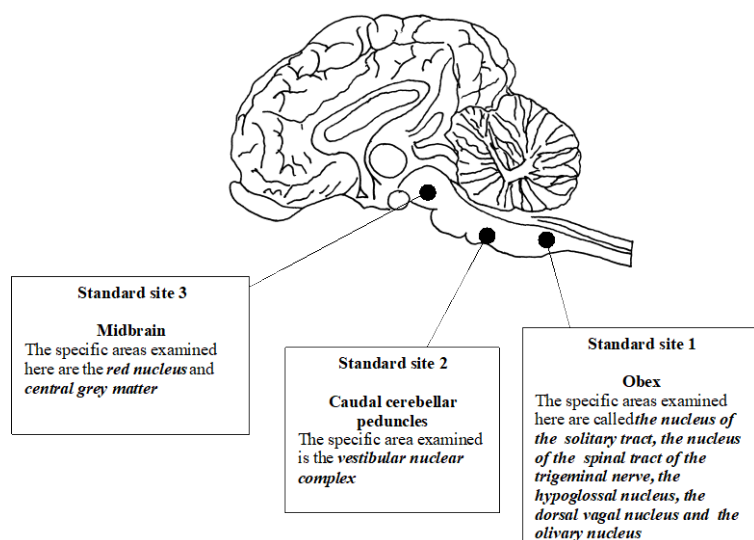


Table 2 TSE submissions by Rural Lands Protection Board 1/01/2002 to 30/09/2002

BOARD	District Vet		Abattoir Vet		Private Vet		Total	
	Sheep	Cattle	Sheep	Cattle	Sheep	Cattle	Sheep	Cattle
SFVO DUBBO REGION								
BREWARRINA			1				1	
BROKEN HILL	1						1	
DUBBO			6			2	6	2
NYNGAN	1						1	
WILCANNIA	2						2	
Region Total	4	0	7	0	0	2	11	2
SFVO GOULBURN REGION								
BOMBALA	11							
COOMA					4		4	
Region Total	1	0	0	0	4	0	5	0
SFVO GRAFTON REGION								
ARMIDALE	8	6			3		11	6
CASINO		4						4
NORTHERN NEW ENGLAND	3	6					3	6
TWEED-LISMORE		1						1
Region Total	11	17	0	0	3	0	14	17
SFVO GUNNEDAH REGION								
COONABARABRAN		1						1
COONAMBLE			1				1	
NARRABRI	6	8					6	8
TAMWORTH	4					2	4	2
WALGETT		2	2				2	2
Region Total	10	11	3	0	0	2	13	13
SFVO MAITLAND REGION								
GLOUCESTER		4						4
MAITLAND		1						1
Region Total	0	5	0	0	0	0	0	5
SFVO ORANGE REGION								
CENTRAL TABLELANDS	2						2	
FORBES	1					1	1	1
MOLONG					1		1	
MUDGEE-MERRIWA			1				1	
Region Total	3	0	1	0	1	1	5	1
SFVO WAGGA WAGGA REGION								
HUME	2	2			16	18	18	20
MURRAY			3			2	3	2
NARRANDERA			1			1		
RIVERINA	1		3		2	2	6	2
WAGGA WAGGA				1	1		1	1
Region Total	3	3	6	1	19	22	28	26
Grand Total	32	36	17	1	27	27	76	64

Training and awareness

There have been several actions taken lately to help increase awareness of the scheme. The first NSW TSE course was held in Wagga Wagga on November 8, and was highly successful, with 20 private vets and DVs attending. Two similar courses at Orange and Dubbo are planned for the new year.

Another initiative that has been set in train is to provide vets with jars labelled TSE, accompanied by an information pack, so that they have a physical reminder on their desk to contribute to the scheme. Also, a "How to claim" document will be sent back to the vet with each TSE case.

Contact: *Belinda Walker, Gunnedah on (02) 6741 8363*

Bovine Johne's Disease

During the quarter there were 26 herds tested under the CattleMAP in NSW. There were 2 reactors from one herd undergoing round 1 testing, 4 reactors in a herd undergoing round 2 testing and 16 reactors from 5 herds undergoing round 3 testing. This reactor rate remains steady at 0.20% of animals tested. There has been one herd detected as infected at/prior to round 3 testing during the quarter.

There have now been 1466 herds tested under the CattleMAP in NSW consisting of 164,278 head of cattle. The current number of herds with a status under the Cattle MAP is outlined in table 3.

Table 3: Summary of status of CattleMAP herds in NSW

NSW CattleMAP Status	30 September 2002	30 June 2002	31 December 2001
MN1	274	282	338
MN2	361	348	326
MN3	309	308	299
Total MN1 – MN3	944	938	963
NA (dropped out)	395	379	305
IN (detected by testing in MAP)	37	36	36

Contact: *Tim Jessep, Goulburn on (02) 4823 0744*

Johne's Disease – *SheepMAP and GoatMAP*

At the end of September there were a total of 284 market assured flocks in NSW, representing about 1% of the State's sheep flocks. There are currently 155 properties in NSW with a MN1 (Monitored Negative 1) status, 112 with a MN2 status, and 17 with a MN 3 status.

There are currently 38 herds in the GoatMAP in NSW with 27 properties with a MN1 (Monitored Negative 1) status, and 11 with a MN2 status.

Ovine Johne's Disease

There have now been 1,188 infected (IN) flocks identified in NSW since 1980, with 1,003 (3.1% of the State's 32,184 flocks) still having an IN status. Of the 1,003 current known infected flocks, 517 (51.5%) are in the Residual Zone. About 15.1% (517/3421) of flocks in the Residual Zone are known to be infected, compared to <1.4% (371/27563) in the Control Zone, and 9.6% (115/1200) in the Residual/Control Zone.

One hundred and fifty-one new infected flocks were reported during the July to September period, with 58 of these in the Yass RLPB district, 45 in the Goulburn RLPB district, 17 in the Central Tablelands RLPB district and 11 in the Young RLPB district.

There were no new Property Disease Eradication Plans (PDEPs) approved during the July to September period, keeping the total at 242 PDEPs that have been approved by NSW Agriculture. There were also no PDEPs reported as completed during the period, keeping the total at 162 PDEPs recorded as completed.

There were 123 Property Disease Management Programs (PDMPs) approved prior to 30 June and a further 183 approved this quarter, making a total of 306 approved to 30 September 2002.

Abattoir Surveillance

This program has been running since the end of November 1999. For the July- September 2002 period 2,738 lines totalling 924,350 sheep were examined.

Of the 2,738 lines examined, 315 lines have had samples of intestine sent to the laboratory for histology examination. 198 of these lines have returned a positive result. Abattoir surveillance has proven an extremely valuable surveillance tool in high, moderate and low prevalence zones across NSW and interstate. It provides information crucial for disease control on individual properties and on a local, regional, state and national basis. Monitoring is occurring in 11 abattoirs in NSW with around 80% of adult sheep killed in NSW being monitored on an annual basis.

Table 4: Abattoir Surveillance for 1 July - 30 September 2002 (for NSW sourced sheep).

	NSW R	NSW C	NSW R/C	Unknown	Total
Total no. of lines screened	198	2,039	104	214	2,555
Total no. sheep screened *	50,932	705,597	33,521	55,789	845,839
No. lines sampled	86	184	28	12	310
No. samples submitted	214	351	65	26	656
No. lines pos.	76	97	19	4	196
No. samples pos.	153	161	33	6	353
Pos. line detection rate	38%	5%	18%	2%	8%

* The total number of sheep screened is the total number of sheep reported in lines examined, not the actual number of sheep examined.

NB No correction has been made for multiple lines from some properties.

Table 5: Abattoir Surveillance Cumulative Totals Nov 1999 - 30 Sept 2002 (NSW sourced sheep)

	NSW R	NSW C	NSW R/C	Unknown	Total
Total no. of lines screened	3,203	21,759	1,031	1,711	27,704
Total no. sheep screened	909,957	6,783,942	313,294	507,492	8,514,685
No. lines sampled	1,367	1,770	305	125	3,567
No. samples submitted	3,375	3,625	657	285	7,942
No. lines pos.	1,111	727	223	78	2,139
No. samples pos.	2,182	1,260	420	135	3,997
Pos. line detection rate	35%	3%	22%	5%	8%

NB Database corrections have led to the alteration of some cumulative totals.

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.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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