



NSW Agriculture & Rural Lands Protection Boards

ANIMAL HEALTH SURVEILLANCE REPORT

January - February 1994

Contributions to this Report are warmly welcomed.

Please submit them as Wordperfect documents on disk or to the COMMON area on the Agnet computer, DEEP.

Livestock and Pastoral Summary

The weather conditions on the north and central coast in January were very hot and dry. At the beginning of the month, relative humidity below 10% and temperatures around 35°C precipitated huge bush fires. The extent and the intensity of the fires created major concern over the agricultural losses but fortunately very few livestock were injured. However animal welfare groups and private veterinarians were kept extremely busy caring for burnt native animals. A small number of farmers needed assistance on relocation of their stock from burnt pastures. RLPB staff have organised moving of the stock to TSR's.

There were no significant bushfires west of the range and feed supplies remained generally adequate during January. In February the weather turned very humid and patchy storms provided highly variable rainfall to some areas. In the north inland hot conditions prevailed in January, with good storm rain and some effect from the extensive northern lows being experienced in February. Unfortunately rain was not evenly distributed on in sufficient quantity to fill major storages. Despite the rain, on the northern tablelands there is only "sheep pick", with cattle being fed or away on adjustment.

Although abundant pastures hayed off in central tableland areas, leaving a large mass of dry feed no serious bushfires occurred. Storms have been a feature resulting in what could be termed a "wet summer" with green feed present in most pastures.

The state of pastures in western NSW is playing a major role in health problems occurring currently. In the south, the very poor quality of the enormous quantities of dry corkscrew grass, combined with moderate worm burdens, is leading to malnutrition and starvation in weaner sheep. In the north, the excellent winter rains along the Darling and its feeder streams has brought a number of problems, including St George Disease in cattle and flat billy button poisoning of sheep and cattle. After warnings had been broadcast about the threat of these conditions, good preventive grazing management of flat billy button and *Pimelea* prevented bigger losses. Isolated cases of floodplain staggers occurred in cattle on blowaway grass (*Agrostis*) affected by nematodes and toxigenic bacterial infection. Infected *Agrostis* has been seen over a wide area but has caused few problems.

Investigations of Suspected Exotic Diseases

Another Suspected Screw Worm Fly

In 1992 SWF was confirmed in a person who had recently returned to Wagga Wagga from South America. This year another person, recently returned from Central America, presented to doctors with lesions on his arm in which he thought there was something moving. As in the Wagga case the cause of the lesions went unidentified for some time. However the interested patient persisted and presented two maggots which were identified by Garry Levot at BCRI Rydalmere as *Dermatobia hominis*, an exotic bot fly. The eggs of this fly are spread by intermediate insect vectors such as mosquitoes and the resulting myiasis affects people and causes serious losses in livestock in endemic tropical areas and could establish in northern Australia if suitable vectors are present. (Contact: Ian Bell 063-913691)

Fatal Alimentary Tract Syndrome in Cattle

Two more outbreaks of the serious cattle mortality seen in the Walgett district in December and mentioned in the last report came to light during the period. A similar syndrome of alimentary haemorrhage and ulceration occurred in two other mobs of cattle that returned to southern Queensland from agistment in northern riverine NSW, near Tilpa and Moree. Many veterinarians around Australia contributed to deliberations on the case and pathologists at RVL's Orange and Toowoomba presented their findings at the recent pathology scientific meeting in Canberra. Pathologically the cases from the three properties are the same and tricothecenes toxicity appears to be the most likely cause. Tricothecenes are produced by *Stachybotrys* fungus growing on dry vegetation. (Contacts: George Perry Walgett 068-281047 or John Seaman 063-913864.)

Congestion of the coronary band alerted Barry Kemp DV at Forbes to the possibility of bluetongue being involved in an outbreak of what appeared to be photosensitisation in sheep in the Forbes district. Fortunately bluetongue was excluded.

Significant Disease Events

Arsenic Poisoning

A Dubbo landowner found 5 dead cattle with a further 2 sick among 27 vealers. Although the cattle had been in the paddock for a number of months, they rummaged through a yard surrounding an abandoned cottage. Containers were found containing a white powder which proved to be arsenic.

Salmonellosis

An isolation of *S enteritidis* phage type 4 was made from a child with enteritis in the Hunter region. NSW Agriculture is assisting the Health Department investigate possible sources amongst small fancy bird and poultry flocks in the locality with which the child had had close contact. Most cases of the infection in Australia have been detected in people recently returned from overseas. *S enteritidis* PT4 has been isolated from sources in Queensland but this case appears to be the first locally acquired infection in NSW. Intensive monitoring of broiler carcasses have not detected the organism in recent years. (Salmonella isolations in Australia in recent years are reviewed in the March issue of the Australian Veterinary Journal.)

Anthrax

The first reported anthrax incident this year occurred in 7 of 100 mixed cattle near Bourke. The property had the disease last summer also, highlighting the need to maintain vaccination in areas at high risk. Anthrax was also reported on a Goolgowi property where five of 760 two-year old wethers died. Cattle in a Finley dairy herd were vaccinated on suspicion of anthrax after 4 cows died, as were cattle on a Nyngan property where 2 of 20 cattle died. In both cases, suspicious bacilli were seen in smears.

Anthrax was excluded by investigations into sheep deaths on 8 properties in the Dubbo region and in another 3 cases involving cattle deaths and one involving horses.

A shortage of anthrax vaccine has caused concern this summer, however stocks have been located and can be procured if needed. (*Contact: Laurie Pryde 068-811275*)

Bovine Ephemeral Fever

BEF has been reported from the north coast, Hunter, central coast and the Cumberland area. Seroconversions have not always been found in convalescent sera and some of the suspected cases are not be BEF. It appears that vaccination has protected stock well. The persistence of the outbreak and its extension inland and southward will depend on how soon cooler weather sets in. At this stage it could continue to spread during March and April. (Please refer also to sentinel herd results below).

Johne's Disease

The inaugural meeting of the NSW Johne's Disease Steering Committee agreed on the need for a national, commercially driven program to reduce the impact of the disease on trade in cattle. Subsequently a draft voluntary market assurance program has been developed by an Animal Health Committee working party. The aim of the program, if approved, is to classify herds according to their JD history and testing record and to provide a recognised path of disease control and testing along which they can progress to improve their herd status. It is expected that movement of cattle between States and herds will be based on these herd classifications. The NSW steering committee also identified priorities for research which will be discussed at a meeting this month with scientists from CSIRO and the Victorian Department of Agriculture.

Although a new infected sheep flock was identified at Portland some 25-30kms from the nearest known infected flock in the Bathurst district, the understanding of most people on JD in sheep was enhanced by a comprehensive situation report completed by Laurie Denholm at Orange. This formed the basis for discussion with sheep industry in late February representatives on options for control of JD in sheep. (*Contact: John Plant 046-293333*)

Protein Deficiency in Dairy Cows

Dairy cows on six farms feeding a new batch of 1993 barley in Dungog and Gloucester districts experienced a sudden drop of milk production by up to 30% and a small number exhibited clinical signs typical of hypocalcaemia. Clinically affected cows responded well to calcium borogluconate treatment. Feed analysis of the barley revealed very low protein content of 6-7%. and production recovered dramatically following supplementation with cottonseed meal and the addition of 1-2% lime in the diet. It is believed that poor quality pastures and the low protein and the calcium/phosphorus imbalance in the new batches of barley precipitated the problem. Similar problems also occurred on a number of dairies in the Kempsey district.

Disease Trends and Predictions

Worm Monitoring

Some 45 submissions for worm monitoring were made from the Dubbo region and found *Haemonchus* and *Trichostrongylus* predominating in those that were cultured. The highest count of 14,400 epg was recorded in Coonamble in lambs that were also suffering from eperythrozoonosis. In a Dubbo flock of 650 of 700 six-month old lambs died largely of haemonchosis with anaemia, pulmonary oedema and soft bones as presenting signs. One faecal sample contained 56,800 epg.

On the central tablelands faecal cultures detected mainly *Trichostrongylus* and *Ostertagia*, with low *Haemonchus* counts in 50% of submissions.

On the southern tablelands, 1993 was a bad year for worms. However flocks on Drenchplan (with a reduced frequency of drenching) fared well compared with those not drenching strategically. Analysis of Drenchtest results revealed that a "white" or "clear" drench alone was only likely to be effective in about half the properties tested.

In the Western Division moderate worm burdens, of *Trichostrongylus* in particular, aggravated malnutrition in weaner sheep on dry cork-screw grass with mortalities in weaners of the order of 20 to 60 %.

Sheep Fertility

The widespread occurrence of ovine brucellosis in commercial flocks was demonstrated by monitoring testing in 8 flocks in the Dubbo area with 128 rams tested. Nineteen positives were detected in 2 flocks, one of these being in a large mob on a stock route in the Nyngan district. Ovine brucellosis has recently been proclaimed as a disease under the Stock Diseases Act and these rams were removed from the TSR. In one flock in the Gunnedah region, 35 of 104 merino rams tested positive despite rams with clinical lesions having been excluded from test.

Another infectious cause of infertility in sheep was detected in a flock with epididymitis and scrotal abscesses in 6 of 176 young rams. Although OB serology was negative, *Actinobacillus seminis* was cultured from lesions.

Disease Surveys and Studies

Tuberculosis

Granulomatous lesions detected in cattle at slaughter are being monitored around the country to detect residual cases of TB. *Pseudomonas* was cultured from extensive grape like lesions found lining the peritoneal cavity of an animal slaughtered at Gunnedah abattoir. Auromine O and ZN smears were negative, as were histopathology and culture for tuberculosis.

Arbovirus Monitoring

The attached tables detail the results of some of the testing for the National Arbovirus Monitoring Program in NSW so far this summer. Twenty-four herds are involved. For the second consecutive year bluetongue virus has been detected on the north coast, at Coffs Harbour, Kempsey and Gloucester. Epizootic haemorrhagic disease of deer (EHD) virus has also been spreading on the north coast. The extent of the ephemeral fever outbreak mentioned above is not reflected by seroconversions in February. This may be

because samples were collected early in the month. Akabane activity has so far been weak, except on the far north coast. (Contact: Peter Kirkland 046-293333)

Paralysis Ticks

The importance of paralysis tick in north coast cattle production was illustrated by a small survey of 50 beef producers recently. It found that half of them treat cattle to prevent losses from *Ixodes* ticks and that one in 5 had lost one or more calves already this season. An average of \$200 was spent annually on controlling paralysis tick. (Contact: Peter Harper 066-420467)

Developments in Disease Recording and Reporting

European Veterinary Assessment

A team of two veterinarians from the European Union visited the eastern mainland States in February to assess the standard of veterinary services. Assessment of veterinary services is one aspect of risk analysis for trade in animals and animal products developed by OIE and expected to become more critical in trade negotiations after the successful Uruguay Round of GATT negotiations. They were particularly interested in how we maintain surveillance over large stock populations distributed over such wide areas. In NSW they witnessed surveillance and control procedures at head office, at laboratories and at the Yass RLPB. Their report is expected shortly.

Field Disease Recording

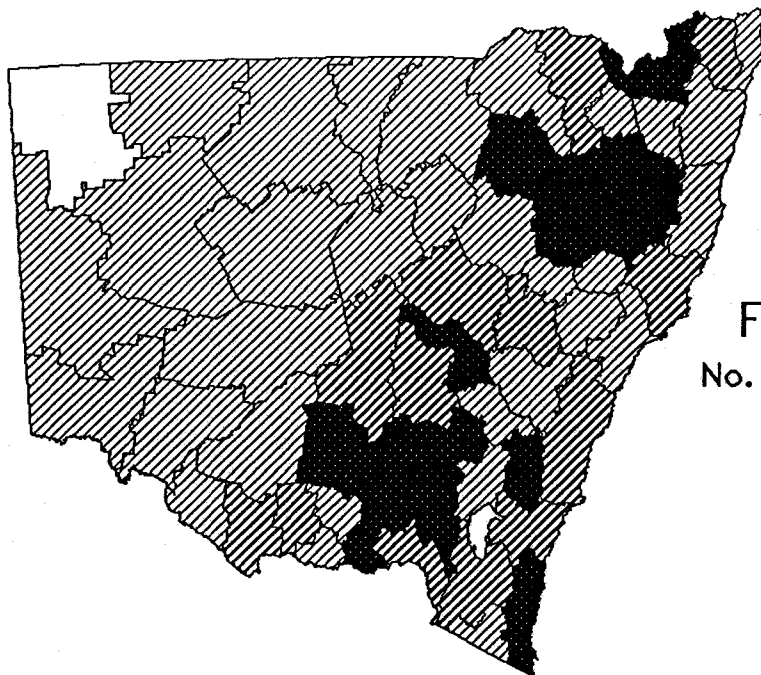
The *Fieldvet* database for 1993 includes over 6000 records of disease events reported by RLPB district veterinarians and departmental veterinary officers during the year. The intensity of reporting in each district is illustrated below. More than half of the State's 41 DV's are now recording disease events on computer and reporting them electronically to NSW Agriculture. Several others plan to change to computerised recording when *Fieldvet* version 2 is released in conjunction with version 6 of *Epi Info*, hopefully in the next two months.

Steve Dunn at Gunnedah has taken over the role as departmental contact person for problems and suggested improvements to *Fieldvet*. He is working closely with Evan Sergeant at Tamworth who is finalising development of version 2. (Contact: Steve Dunn 067-429253, Evan Sergeant 067-662384)

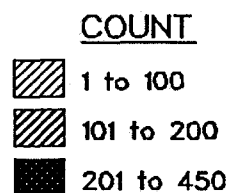
Animal Health Information in the Western Division

Western RLPB's have a keen interest in developing a better system of analysis and assessment of the store of information available from their Rangers' annual shearing inspections. Information that can be summarised includes trends in lice infestations and their severity and the effectiveness of dipping methods and chemicals.

The western Boards have also been planning how to ensure that animal health records are available to support certification of stock moving interstate or for export. The system developed at the Walgett RLPB will be used as a model.



Fieldvet 1993
 No. of Events Reported



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 RLPB District Veterinarian or departmental Senior Field Veterinary Officer or Regional Veterinary Laboratory. For statewide information contact David Kennedy.

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 Program Leader Animal Health Surveillance
 NSW Agriculture
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 16 March 1994

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BLUETONGUE VIRUS AGID.

LOCATION	O/N	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
LISMORE	0*	0	0	0					
CASINO	(1)	0	0	0					
GRAFTON	NS	0	0	0					
COFFS HARBOUR	0	NS	8	10					
DORRIGO	NS	0	0	0					
KEMPSEY	0	0	0		4				
TAREE	0	0	0	0					
GLOUCESTER	0	0	0	0	1				
PATERSON	NS	0	0	0					
SINGLETON	0	NS	0	0					
SCONE	0	0	0	0					
CAMDEN	0	NS	0	0					
NOWRA	NS	0	0	0					
BODALLA	NS	0	NS	0					
BEGA	NS	0	NS						
MUDGEES	NS	0	0	0					
TAMWORTH	NS	NS	0	0					

OTHER LOCATIONS: INVERELL, MOREE, BOURKE, DUBBO, WAGGA, YANCO, WENTWORTH.

KEY: * No of Positives. () Indicates maternal antibody or non-specific reaction

EPHEMERAL FEVER VIRUS VNT.

LOCATION	O/N	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
LISMORE	0	0	0	4					
CASINO	0	0	0	1					
GRAFTON	NS	0	0	0					
COFFS HARBOUR	0	NS	0	0					
DORRIGO	NS	0	0	0					
KEMPSEY	0	0	0						
TAREE	0	0	0	0					
GLOUCESTER	0	0	0	0					
PATERSON	NS	0	0	2					
SINGLETON	0	NS	0	0					
SCONE	0	0	0	0					
CAMDEN	0	NS	0	0					
NOWRA	NS	0	0	0					
BODALLA	NS		NS	0					
BEGA	NS	0	NS						
MUDGEES	NS	0	0	0					
TAMWORTH	NS	NS	0	1					

OTHER LOCATIONS: INVERELL, MOREE, BOURKE, DUBBO, WAGGA, YANCO, WENTWORTH.

KEY: * No of Positives. () Indicates maternal antibody or non-specific reaction.

AKABANE VIRUS AGID.

LOCATION	O/N	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
LISMORE	0	0	0	9					
CASINO	(1)	0	7	8					
GRAFTON	NS	0	0	9					
COFFS HARBOUR	0	NS	0	10					
DORRIGO	NS	0	0	0					
KEMPSEY	0	0	0						
TAREE	0	0	0	0					
GLOUCESTER	0	0	0	0					
PATERSON	NS	0	0	0					
SINGLETON	0	NS	0	0					
SCONE	0	0	0	0					
CAMDEN	(1)	NS	0	0					
NOWRA	NS	0	0	0					
BODALLA	NS	0	NS	0					
BEGA	NS	0	NS						
MUDGEES	NS	0	0	1					
TAMWORTH	NS	NS	0	0					

OTHER LOCATIONS: INVERELL, MOREE, BOURKE, DUBBO, WAGGA, YANCO, WENTWORTH.

KEY: * No of Positives. () Indicates maternal antibody or non-specific reaction

AKABANE VIRUS VNT.

LOCATION	O/N	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
LISMORE	(4)	(4)	0	6					
CASINO	(7)								
GRAFTON	NS	(1)	0	1					
COFFS HARBOUR	(1)	NS	(1)	8					
DORRIGO	NS	(2)	0	1					
KEMPSEY	(2)	(2)	0						
TAREE	(2)	(3)	(1)	(1)					
GLOUCESTER	0	0	0	0					
PATERSON	NS	(1)	0	1					
SINGLETON	0	NS	0	1					
SCONE	(1)	(5)	0	0					
CAMDEN	(2)	NS	0	0					
NOWRA	NS	(1)	0	0					
BODALLA	NS	0	NS	0					
BEGA	NS		NS						
MUDGEES	NS	(2)	0	1					
TAMWORTH	NS	NS	0	0					

OTHER LOCATIONS: INVERELL, MOREE, BOURKE, DUBBO, WAGGA, YANCO, WENTWORTH.

KEY: * No of Positives. () Indicates maternal antibody or non-specific reaction