New South Wales

ANIMAL HEALTH SURVEILLANCE

September - October 1995

Number 95/5

Livestock and Pastoral Conditions

At the end of October, most of the northern half of NSW was drought affected. On the north coast only the coastal fringe had received good rains however variable to scattered rain during the period, with warm to hot days, produced a much needed improvement in pastures. Although the quantity of feed was still limited, stock were also improving in condition.

Lambing performance has been excellent in some north western areas reflecting the good pastoral conditions of summer and early autumn. Calving percentages however had been down in line with the poor nutrition available last spring. Cattle that were on agistment in the north-west have now being moved off and significant numbers have also been sold.

Fortunately the southern half of NSW has received good rains and in some areas pastoral conditions are better than they have been for several seasons and stock are in excellent condition.

Disease Trends and Predictions

In the Hunter region, diseases associated with nutritional stress and plant poisonings were common. On the north coast, paralysis tick mortalities are expected to increase and buffalo fly incursions are anticipated. Wetter conditions will promote transmission of infections including leptospirosis, coccidiosis, cryptosporidiosis and yersiniosis.

As expected, akabane disease was common with widespread agistment and restocking following good rains on the north coast last summer. This was despite warnings of the danger of moving pregnant stock into the endemic area. In winter, dystocia due to arthrogryposis was common and, as expected, hydranencephaly has been the dominant foetal deformity in recent months. There still appears to be a widespread lack of understanding of the epidemiology of the disease and this results in repeated episodes of foetal deformities in cattle. The commercial effects of the virus and how to avoid them were presented in the *Aust vet J* in 1993 (vol 70:56-58).*(Contact: Peter Harper, Grafton, 066 420 420)*

In addition to various plant poisonings, yersiniosis was diagnosed with increased frequency in scouring beef cattle on the north coast. Formerly this disease had followed periods of flooding, but may be adapting to cause disease in stressed animals under drier conditions as well. Bovine veneral campylobacteriosis ("vibriosis") was also frequently identified, associated with chronic infertility or abortion problems in beef and dairy herds.

On the nothern tablelands conditions have improved and are very favorable for trichostrongylosis in sheep. Haemonchosis is also expected to be a problem from November when larval migration gets underway. Monitoring will be important in especially in susceptible young sheep and periparturient ewes.In the Dubbo region, *Haemonchus* was

commonly identified in faecal cultures form sheep and may pose a significant threat to sheep this summer.

In drought affected areas, internal parasites and mineral deficiencies will continue to cause problems for nutritionally stressed stock. Mixed strongyle infestations and fascioliasis were commonly encountered in illthrifty cattle on the north coast. Low or marginal blood concentrations of copper and selenium were detected in weaners and adult cattle with diarrhoea and/or illthrift.

Investigations of Suspected Exotic Diseases

Equine Morbillivirus

Four horses were traced to NSW from a Mackay (Queensland) horse stud following confirmation that EMV had infected horses and a person there in August 1994. Serological assessment of the horses that had been on the property in the past 15 months, found no evidence of EMV infection. This is consistent with investigations of other contact horses, both on the property and elsewhere.

The source of the Mackay infections has not been established but serological testing of other horses and wild animals near the property is being undertaken by the Queensland Department of Primary Industries.

EMV was excluded in a case involving two horses with sudden onset of respiratory tract disease in central western NSW. Samples forwared from Orange RVL to AAHL were negative and the cause of the two deaths is thought to have been *Echium* spp. hepatic encephalopathy.

Sections from lung and kidney from all equine cases received at the Wollongbar laboratory since 1991 were re-examined. No lesions consistent with morbillivirus were found. *(Contact: Ian Bell, Orange, 063 913 691).*

Significant Disease Events

Rabbit Calicivirus Disease (RCD)

RCD was confirmed at two sites in NSW west of Broken Hill, near the South Australian border in mid-November. To date, investigations of rabbit deaths across the State and monitoring of localities with large rabbit populations in other areas has not confirmed any eastward advance of the epidemic.

Rural Lands Protection Boards and NSW Agriculture are working with CSIRO and other organisations to monitor the spread and epidemiology of the infection and the longer term indirect impacts on the environment and agricultural productivity. The virology laboratory at EMAI Menangle has acquired the antigen capture ELISA test from AAHL so that it is available for diagnostic investigations in NSW.

Cyanamid-Websters hold adequate stocks of vaccine for supply to veterinary surgeons for use on commercial, research and pet rabbits.*(Contact: Roger Toffolon, Orange, 063 913 727)*

Pyrrolizidine alkaloidosis in cattle

Several properties on the Lachlan River between Booligal and Oxley lost over 600 cattle over the last 6 months from chronic pyrrolizidine alkaloidosis. On one property, most deaths probably resulted from prolonged intakes of pyrrolizidine alkaloids in Patterson's curse, heliotrope species and bushy groundsel or *Senecio cunninghamii*.

This last plant is a native "fireweed" that is not normally eaten by stock. However its density had increased in the affected area and it may have been ingested with medics and other pasture species. In the past it has been recorded as contributing to PA in horses and cattle. *(Contact: Ian Masters, Hay, 069 931 403 or Ken Jubb, Hay, 069 931 608)*

Emerging pig disease

Intestinal spirochaetosis was confirmed as the cause of severe watery to grey diarrhoea in 50% of porkers in a large intensive piggery on the northern tablelands. Suspected swine dysentery during the winter had been controlled by lincomycin, however antibiotic cover was

withdrawn and the disease recurred. Overcrowding and a shortage of water had compromised hygiene management and the condition spread from porkers to weaners and to growers.

PCR for spirochaetosis at Murdoch University was positive on 4 of ten samples in Stuart transport media and on 8 of 10 faecal samples.

Intestinal spirochaetosis is a recently recognised disease that affects growing pigs, between the ages of four and 20 weeks. It is caused by a newly identified species of intestinal spirochaete called *Serpulina piloscoli*. This spirochaete is related to *S hyodysenteriae*, the cause of swine dysentery.

Intestinal spirochaetosis is less severe than swine dysentery. Affected pigs develop loose faeces that stick to the pen floor and may have an oily sheen. This may then develop into diarrhoea which lasts between two and 14 days. Occasionally, flecks of blood and mucus may appear in the faeces. Reinfection often occurs and recovered pigs may develop clinical signs again. Death is uncommon. Affected pigs have reduced weight gain and lowered feed conversion ratios.

Intestinal spirochaetosis is treated using the same antibiotics that are employed to control swine dysentery, although reinfection may sometimes occur after antibiotic treatment has ceased. *(Contact: Barbara Vanselow, Armidale, 067 701 822)*

Anthrax again

As the seasonal conditions warm up and pastures shorten in drought affected areas, sporadic anthrax incidents can be expected. The first case to be reported since the autumn was confirmed in 4 of 400 young ewes that died over 2 weeks at Tullibigeal in the Condobolin district in late October. The property had a previous outbreak three years ago and the ewes had been vaccinated once at about 8 months of age. The low death rate may reflect adequate immunity in the majority of the mob.

Two cattle deaths in a mob of 50 at Coonamble were investigated for anthrax with negative results and anthrax was also quickly excluded as a cause of two sudden deaths in cattle in the Armidale district.

The NSW policy on anthrax control is currently being finalised. Supplies of anthrax vaccine are expected to remain adequate this season. *(Contact: David Kennedy, Orange, 063 913 626).*

Locomotor disease in sheep

A locomotor disorder affected almost all of 100 pregnant merino ewes after being walked about 1 km and held for an hour in a small paddock. Clinical signs were downward arching of the back, flexion of both hindlimbs and recumbency. Dog-sitting was observed in some animals. The ewes rose readily and strongly when approached but would repeat the procedure after a short time. All animals recovered in the next 48 hours. The cause has not been identified but is suspected to be a plant toxin.*(Contact: Helge Grant-Frost, Mudgee, 063 721 573)*

Ovine Johne's disease

Seven new infected flocks were identified during the two month period, an increase of approximately 10% in the number of flocks confirmed to have been infected in the past 15 years.

The slope of the curve of known infected flocks is increasing rapidly and the geographic distribution of known infected flocks is widening within the endemic central tablelands area. This has resulted in increased awareness of the disease and the local, State and national sheep industries currently evaluating options with RLPB's and NSW Agriculture and developing a strategic plan for the control of ovine JD.*(Contact: Laurie Denholm, Orange, 063 913 863)*

Disease Surveys and Studies

OB still prevalent

In the western Riverina, rams in commercial flocks are being surveyed to assess the

prevalence of ovine brucellosis. Despite the high rate of accreditation in sheep studs, the disease is still widespread in the commercial sector. In the Moulamein district, scrotal lesions were common in most ram flocks with 17 of 24 flocks infected with *Br ovis*. In these infected flocks, 24% or rams had palpable epididymitis or reacted on the CFT. Overall 21% of the 1300 rams examined were affected. Similar investigations in the adjoining districts are also detecting high prevalences of ovine brucellosis in flocks and rams. These results will be reported next year. *(Contact: Dan Salmon, Deniliquin, 058 811 055)*

Throughout NSW, this year to the end of October , 19% of 3575 diagnostic tests for ovine brucellosis were positive (Source: Labsys).

Developments in Disease Recording and Reporting

National Animal Health Information System

The NAHIS has been taken on as the first key program of the new Australian Animal Health Council and Dr Chris Baldock from Brisbane is being contracted as the part-time national coordinator. The States, Territories and Commonwealth have endorsed the business plan for NAHIS which requires that NSW devotes 0.6 of a staff member to data and information management for the program. NAHIS will be the main means of assuring overseas countries and promoting Australia's animal health status.

Coordinators met in Canberra in October and reviewed the data and information to be incorporated in the system. It was proposed that NAHIS will produce a national animal health quarterly, an annual report and develop an on-line "home page" on the internet. The quarterly bulletin will contain timely summary data for that quarter, news and a lead article on an important animal health matter. On the home page, it is planned to include background information on important diseases as found in the series of handbooks, *Animal Health in Australia,* data on disease incidence and distribution and information on disease control policies and programs.

NSW submitted laboratory data to the National Animal Health Information System (NAHIS) for the first time in October, thanks largely to the work of Don Jones and Owen Elvery at EMAI. Users of *Labsys* can now access test summary reports, mainly for serology and virology at present. Other results are coming on-line as laboratory sections start using the system fully. *(Contact: David Kennedy, Orange, 063 913 626).*

Field Disease Reporting

In the Dubbo region, new DV's at Nyngan, Coonamble and Coonabarabran have been trained and have quickly taken up *Fieldvet 2.* After a changeover in three districts this year, all 6 DV's in that region are now reporting electronically. The importance of quality records to provide background information on disease occurrence and to substantiate certification is being more widely recognised by RLPB's. Board directors were introduced to the potential uses of *Fieldvet 2* in Orange in September and noted that it could be used to provide property histories for quality assurance programs.

A training day on *Epi Info 6* and *Fieldvet 2* was held for Senior Field Veterinary Officers at Orange to review the system and determine improvements for an upgrade to it in early 1996.

Several improvements are being incorporated in *Fieldvet 2* to assist users on data entry and to improve data quality, analysis and reporting. Standard locality lists are being developed so that each Board can eventually map disease events by locality within districts. Concurrently Evan Sergeant is assisting CDC Atlanta evaluate the test versions of *Epi Info 6.03* and of *Epi Map 2.* The former particularly will help overcome some difficulties that have been experienced by Boards with version 6. *(Contact: Evan Sergeant, Tamworth, 067 662 384).*

SFVO Gunnedah, Steve Dunn, has left for three years in East Timor with the Eastern Islands Veterinary Services Project. Steve has been generously helping DV's, SFVO's and Head Office with the development and

implementation of *Fieldvet* and his skills will be difficult to replace in the short term.

Laboratories and surveillance

The proposed closure of two regional veterinary laboratories at Wagga and Armidale will affect the surveillance of animal health in NSW. The proposal comes as the need for better disease surveillance is increasing to comply with the GATT Sanitary and Phytosanitary agreement relating to trade and animal health.

The sites for RVL's were selected to service the major livestock producing areas and their role as disease investigation and surveillance centres has grown because of their proximity to and understanding of local animal health problems. Analysis of submissions to the RVL's shows that they primarily service the immediate region. Centralising government diagnostic services poses a challenge to the livestock industries and to people and organisations servicing them to ensure that surveillance continues to adequately support trade and disease control.*(Contact: David Kennedy, Orange, 063 913 626)*

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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