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NSW Agriculture
ORANGE



NSW Agriculture & Rural Lands Protection Boards

ANIMAL HEALTH SURVEILLANCE REPORT

July - August 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 Conditions and Disease Trends and Predictions

The most significant factor influencing the health of NSW livestock in recent months has been the spreading and increasingly intense drought. At the end of August more than 80% of the State was officially declared drought affected. Only the far south west and small districts on the far north coast and in the eastern Riverina have not been declared. The outlook for significant rain during the next few months is poor.

There has been numerous enquiries about feeding and related husbandry practices throughout the affected areas. Advice along with drought management skills developed over recent years is enabling most producers to cope with the current situation. However, grain and hay are expensive and difficult to source. Despite stockowners' earnest desires to look after their animals, the critical financial situation of many owners is contributing to their inability to prevent stock losses. About 100 of 500 aged merino ewes died of pregnancy toxæmia on a Dubbo property. The RSPCA investigated the case which was also publicised on regional television.

The northern parts of the Western Division have little feed left and even in southern areas that have reasonable to good quantities of dry feed, stock are affected by nutritional deficits, mainly in protein, energy, phosphorus and vitamin A. Vitamin E deficiency is also expected. Dense stands of *Pimelia* sp have been observed growing on large areas of river flood-out and channel country in the Bourke district. This plant will pose a significant St George disease risk after it dries out in the next month.

Throughout the Orana region, the feed situation continues to deteriorate with no agistment available and handfeeding widespread. The incidence of nutritional and metabolic problems

has increased and will continue to escalate until effective rainfall occurs. Marginal deficiencies of selenium and copper have also been reported during the period. Significant losses of lambs are being reported and are expected to continue. Nutritional deficits will affect joining of both cattle and sheep. Plant poisonings have been few but Ellangowan Poison Bush killed 15 of 450 cattle in the Walgett area.

On the north coast, dry and warmer days with occasional westerly winds has seen a continuation of declining pasture growth and further reduction of water reserves. On some properties the lactational drain on freshly calved cows with declining energy intake has led to numerous health problems. Problems of undernutrition, plant poisonings and supplementary feeding related problems, particularly grain poisoning and possibly urea poisoning will continue. Coccidiosis is being commonly diagnosed in calves and helminthiasis, yersiniosis and salmonellosis is associated with scouring cattle of all ages. This is associated with the declining physical condition of stock and their concentrating in and contaminating "soak areas".

In the Hunter, only properties very close to the coast that have received coastal showers are not drought affected. In the Gloucester district, hepatopathies are occurring in cattle and are probably due to increased intake of pyrrolizidine alkaloids in fire weed.

A new publication entitled "Plants Poisonous to Livestock on the NSW North Coast" has been distributed at drought management field days and by Council Weeds Inspectors, in order to highlight the importance of poisonous plant management in drought. The incidence of plant poisonings has increased dramatically in recent dry years.

Generally, intestinal parasites were less abundant due to the dry and cool conditions however significant burdens of *Haemonchus contortus* were still present in areas of the Southern Highlands and the Monaro often causing mortalities in lambing ewes. Monitoring has shown the dramatic differences in worm burdens between farms in the same locations and with similar management. This further reinforces the need for individual monitoring of worm burdens at key periods of the year.

Investigations of Suspected Exotic Diseases

Bluetongue was excluded from single investigations of cattle and sheep problems in the Dubbo region.

Significant Disease Events

Blindness Syndrome in Kangaroos

During the last 3 months, cases of blindness in kangaroos have been noted in western New South Wales and north-western Victoria by producers and National Parks officers, particularly in areas associated with major river systems. The syndrome is occurring over a broad arc of

land from Walgett to Wentworth. Grey kangaroos have been the major species affected with attack rates up to 20% in individual populations. However the incidence is much lower in most areas. A small number of red kangaroos have been affected.

The only clinical signs in the kangaroos are secondary to blindness and the principal histopathological finding has been inflammation of the choroid and retina. Literature searches indicate that a wide range of infections and parasites in other animals are known to cause damage similar to that seen in kangaroos. At this stage, the most likely cause is thought to be a viral infection.

Sporadic cases of unexplained blindness has also been noted in sheep and in a young horse, but these have not been examined in detail. NSW Health has had no unusual reports of blindness in people in the Western Division. (Contact: Greg Curran, Cobar, 068-362 108)

Anthrax and Sudden Deaths

The first anthrax incidents since last summer were confirmed in NSW in August. A single heifer died within a few hours of becoming ill on a drought affected property in the Narrabri district. The property has had no previous record of anthrax and the disease has not been diagnosed in the district for decades. Although hay and meal were being fed to the stock, they are not suspected of being the source of the infection. A second outbreak occurred in 3 of 70 cattle in a Jerilderie district herd. This property's last recorded anthrax case was 30 years ago. As contact between hungry stock and exposed soil increases with the drought, the incidence of anthrax may increase. Stocks of vaccine are limited at present and should be used judiciously until the manufacturer has new batches available.

Anthrax was excluded in a single cow death in the Walgett district and in the deaths of 90 of 800 sheep being supplementary fed in the Cobar district. The latter exclusion was reassuring as several hundred sheep from the property had been trucked off to an export abattoir only hours before the deaths were detected.

A case of unexplained sudden death was reported of 7 animals from 240 agisted near Ivanhoe in the Hillston district. The animals were watering from a trough and died suddenly over a short period within 100 metres of one another. This is the second such incident in this general area in 2 years. Anthrax was excluded in the previous case but the current case could not be investigated.

Moxidectin resistant worms

Moxidectin resistance in *Ostertagia spp* was confirmed by a faecal egg count reduction trial in goats imported from New Zealand. A program has been developed for treating the goats when they are released from quarantine and the importation protocol has been changed to prevent future problems. (Contact: Peter Rolfe, Menangle, 046 293 333)

Johne's disease

Thirteen new herds have been diagnosed this year on the north coast, particularly in Lismore (6) and Casino (5) districts. Of concern is that 5 of these herds are beef enterprises. Johne's disease was also confirmed in the Armidale district for the first time recently. The case was

a 12 year-old cow that developed clinical signs within a few months of being purchased from another herd in the same district. Johne's disease was also confirmed in a suspect case from a new herd in the Bega district, and, in the Molong district, another herd's status is being investigated following confirmation of the disease in a valuable imported cow.

Meanwhile progress continues to be made in developing a herd classification system for Johne's disease in cattle. In August, Animal Health Committee endorsed a proposed National Market Assurance Program for Johne's Disease, that had been developed by all States in consultation with cattle industry peak bodies. The proposal is now being distributed more widely in the cattle industries for endorsement or revision by December. At the State level, the consultants reviewing options for JD in NSW have submitted their report to the Cattle Compensation Fund Advisory Council. (*Contact: David Kennedy, Orange, 063 913 626*)

Graeme Eamens, SVRO at EMAI, attended the 4th International Colloquium on Paratuberculosis at Cambridge in July, with the generous financial support of the NSW Dairy Corporation on behalf of the NSW Dairy industry.

Tuberculosis surveillance

Tuberculosis was excluded as the cause of a positive intradermal tuberculin test in one of over 1000 deer tested for entry to quarantine isolation prior to export to Korea.

Poultry health surveillance

A total of 159 avian submissions were received at EMAI Menangle in the six months ending July 1994, with just over half of these for diagnostic purposes. Of the diagnostic submissions, 40% were from the commercial integrated poultry industry, 20% from other commercial poultry, and 40% from other sources (including backyard flocks and research flocks).

In chickens, Marek's disease continued to be the most common problem diagnosed at the laboratory level with 13 submissions from all classes of flocks. Clinical signs varied from classical paralysis, through low grade on-going mortalities (often with intercurrent disease), to pale streaks seen in muscle at slaughter, with no observed clinical problems in the live birds. Infectious laryngotracheitis (ILT) was confirmed twice in backyard flocks from Moruya and from Moss Vale.

Losses in 4 week-old chickens with neurological signs was confirmed to be the result of vitamin E deficiency. A subsequent problem on the same farm several weeks later, with similar clinical signs had no lesions of vitamin deficiency, but toxicity due to the coccidiostat, DOT, was diagnosed. The level of a premix had been increased to supply more vitamin E, and safe levels of DOT were inadvertently exceeded. (*Contact: Keith Walker, Menangle, 046 293 333*).

Disease Surveys and Studies

Salmonella abortus ovis

Monitoring in a sheep flock in the Moree district to determine if it is infected with *S abortus*

ovis is being jointly funded by the Meat Research Corporation, Commonwealth Government, NSW Agriculture and the Moree Rural Lands Protection Board. Children from the property had been previously found to be carrying the organism. Pregnancy testing by ultrasound examination in August did not detect any evidence of early abortions or of metritis. Pregnant ewes will be "wet and dried" in early September and lambing will be closely monitored.

A second isolation of *S abortus ovis* was made from a dried commercial kangaroo meat product for human consumption. The product was processed in Western Australia and sampled in April 1994 as part of routine quality control monitoring. The raw frozen meat used in the product was sourced from a Sydney processor in January 1994 and the kangaroos had been shot in northern and western NSW. The Sydney processor had commenced a salmonella monitoring program in July 1994 to test pooled samples from consignments from 10 shooters per week. In the first 45 pools, representing approximately 700 carcasses, no salmonella were isolated. A recent check by NSW Health detected only a single isolate which has been identified as *S adelaide*.

EBL status of NSW dairy herds

Bulk milk monitoring of NSW dairy herds during the past year has indicated that 29.5% of 1928 herds are infected with EBL. As dairy herds on the program undertake individual animal testing and dispose of reactor cattle, other dairy and beef cattle buyers should be wary of buying EBL infected animals. The status of individual herds is confidential, however, where buyers wish to assure themselves of the EBL status of dairy cattle they are buying, they should be encouraged to demand a valid completed Owner/Vendor Declaration form from the vendor.

The State policy on EBL in dairy cattle and the supporting technical manual were published and recently distributed widely to veterinarians and other people servicing the dairy industry. (Contact: Richard Zelski, Maitland, 049 302 444).

Protozoan abortion in cattle

Protozoan abortion was diagnosed on foetal histopathology from dairy cattle on three farms, at Singleton (where 4/90 cows aborted), from the southern highlands where a 15 % abortion rate was reported and from a single abortion at Maitland. The condition is being more commonly diagnosed in eastern NSW and is the most commonly diagnosed cause of bovine abortion on the north coast of NSW. A collaborative program with the University of Technology and funded in part by the Cattle Compensation Fund and industry cooperatives (Norco, Northern Co-operative Meat Company) has commenced. It aims to isolate *Neospora* sp. from cattle and to develop serological tests. An "abortion awareness" campaign has been reactivated on the north coast to encourage the submission of foetuses to the laboratory for diagnosis. (Contact: Peter Harper, Grafton, 066 420 467).

Leptospirosis

Staff at Elizabeth Macarthur Agricultural Institute at Menangle have completed developmental work on an ELISA for detection of serum antibody against *Leptospira interrogans* serovars *hardjo* and *pomona* in cattle. Although data still requires analysis, the indications are that the ELISA detects almost all animals which react with a titre ≥ 30 in the current microscopic

agglutination test (MAT). The ELISA also detects animals which fail to react in the MAT after exposure to leptospiral antigens. At present the MAT will still be required to identify the serovar causing reactions in the ELISA, but with further research the ELISA could be used for serovar specific investigations. (Contact: Richard Whittington, Menangle, 046 293 333).

Developments in Disease Recording and Reporting

Register of Anthrax Incidents

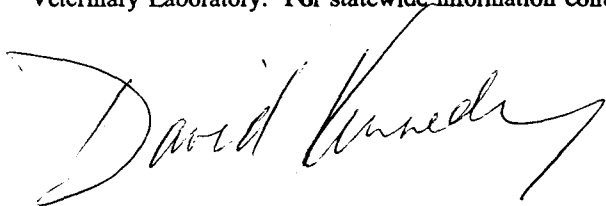
Anthrax records for most districts for at least the past 5 years have been incorporated into a computerised database to facilitate area certification for exports and to aid further control of the disease. A summary will be published in the next Report. The reported incidence has been steadily decreasing in recent years and, despite the Narrabri case in August, records suggest that the affected area is also contracting. The database has also been incorporated as a related database for prospective recording and collation in the new version of *Fieldvet*.

Fieldvet Developments

Epi Info version 6 is now commercially available and, with the new version of *Fieldvet*, will be demonstrated and used at a training course for Senior Field Veterinary Officers later in September. A test version of *Fieldvet 2* is currently on trial with District Veterinarians in the Gunnedah region and will be released more widely with any necessary improvements later this year.

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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