NEW SOUTH WALES

ANIMAL HEALTH SURVEILLANCE

April–June 2003 • Number 2003/2

Feedback on the first issue of the new-look surveillance newsletter has been very positive. In industry news, drought and feed-related issues continue to dominate the animal health scene in NSW. This edition of our newsletter contains regular features on ongoing disease control programs and routine surveillance activities as well as figures on investigations of notifiable endemic diseases during the quarter. For more information, to comment, or to contribute, contact Barbara Moloney, Sarah Robson or Rory Arthur (contact details on back page).

— Barbara Moloney, Technical Specialist (Disease Surveillance and Risk Management).

In this issue!

QUARTERLY HIGHLIGHTS

Drought-related losses and poisonings

Acute phalaris poisoning — This condition was reported from the Wagga Wagga district in May. It occurred in a mob of 120 wethers that had previously been locked up that were put onto phalaris pasture. Within 24 hours on the pasture, there were eight mortalities. Clinical signs included a stiff gait, high head carriage, slight staggering along fence lines, and apparent blindness. This was followed by a fast progression to recumbency with struggling, muscle tremors/convulsions causing a high body temperature, along with cold, cyanotic mucous membranes and salivation.

Death occurred approximately one-hour after the animals went down. The paddock showed obvious evidence of grazing of the middle (new shoot area) of the phalaris crowns. Nitrate poisoning was ruled out with characteristic histological changes in the cerebral cortex confirming the diagnosis of PE-like sudden death syndrome phalaris poisoning. Other histopathologic findings included extensive, severe, peracute, periacinar to massive, hepatocyte necrosis with severe periportal congestion, marked multifocal sub-epicardial haemorrhages, and moderate pulmonary and renal congestion.

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

NSW Agriculture

Figure 1. Rock fern (Cheilanthes seberi)

Figure 2. Rock fern toxicity — haemorrhage in mesentery.

Rock fern toxicity — This problem was found recently in weaner cattle in the Warialda district. Affected steers displayed weakness, tarry scouring, stertorous respiration with swelling around the throat, drooling, and haemorrhagic nasal discharge. Post mortem examination revealed extensive haemorrhaging (petechiae and frank haemorrhages) throughout the carcase. This was due to ptaquiloside toxin causing bone marrow depression, increased capillary fragility, and secondary bacteriaemia.

For more information, contact Andrew Thompson, District Veterinarian (Northern Slopes) on (02) 6729 1528.

Nitrate poisoning — Several episodes of nitrate poisoning were reported around the State this quarter. Excessive nitrate levels were also found in millet hay, sorghum hay and grazing oats. This followed two notable losses in feedlot lamb enterprises. In one of these cases, 300 out of 3000 lambs died over a period of a few weeks; two of these animals were diagnosed with calcium carbonate urinary calculi and it is likely that the other deaths were from urethral obstruction by calculi. The other notable loss involved 80 out of 160 lambs which died after ingesting cactus (*Crassula* spp.). These lambs exhibited acute abdominal pain and respiratory distress with mortality within 24 hours of plant ingestion. The toxic compound in these cases is unknown. However, as this plant is related to mother-of-millions, a cardiac glycoside could be involved.

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

Pimelea poisoning — The recent death of 30 steers at Wilcannia was suggestive of Pimelea poisoning. Clinically, the animals were scouring and showing various degrees of bottle jaw (subcutaneous oedema associated with right-sided heart failure). There have also been considerable problems with the management of cattle, particularly agistment stock, in the area due to infestations of Pimelea in pastures.

For more information, contact Greg Curran, Veterinary Officer, (Broken Hill) on (08) 8087 1222.

Other poisonings — Mortalities occurred recently due to chronic grain poisoning producing rumen and liver abscesses in cattle, urea toxicity, and phalaris sudden-death in sheep. Bracken fern poisoning in cattle has also been reported in Yass and Gloucester.

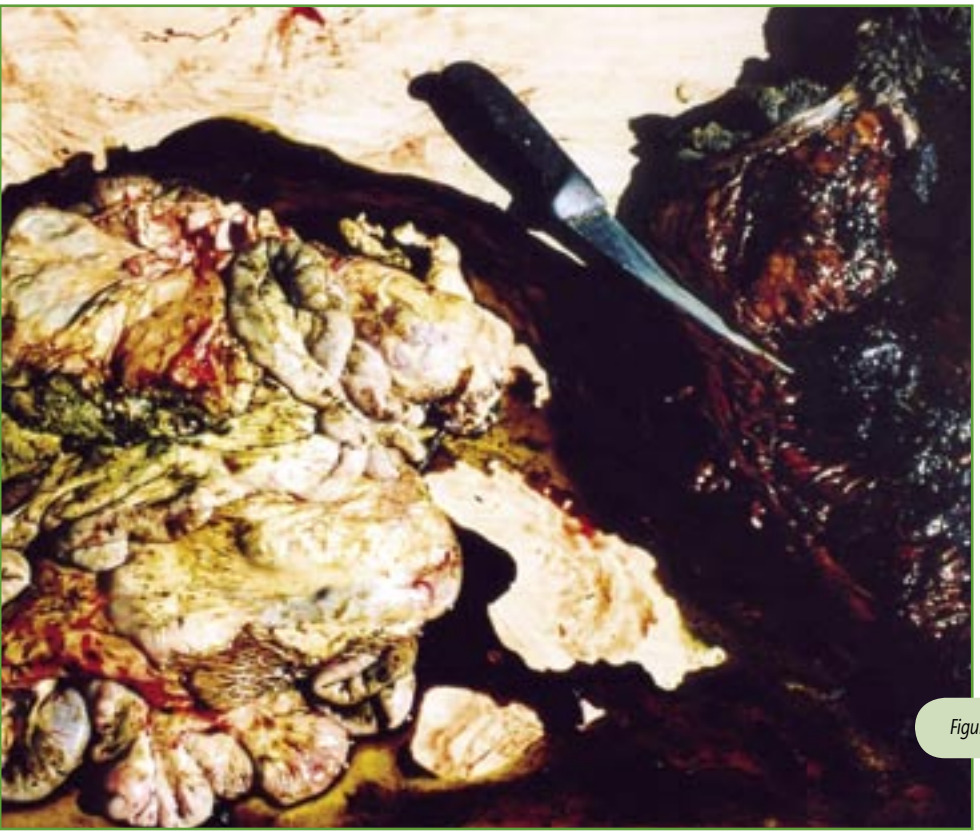


Figure 3. Rock fern toxicity — large blood clot in abomasum.

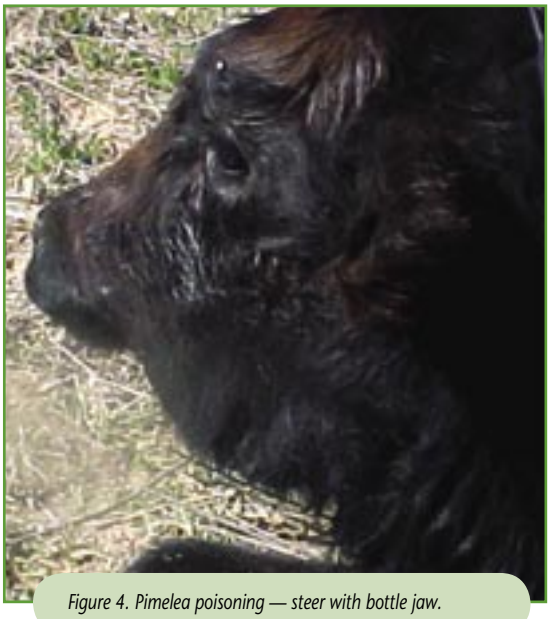


Figure 4. Pimelea poisoning — steer with bottle jaw.

Notifiable disease investigations

Anthrax — Two anthrax incidents were reported during the quarter. The first incident occurred in sheep on a Condobolin property which has a previous history of anthrax. In late March, deaths that had been occurring over the previous month (and thought to be due to plant poisoning) were investigated and found to be due to anthrax. A total of eight out of 1050 sheep on the property were reported to have died.

The second incident occurred in cattle on a Hillston district property where six out of 332 stock died. Although this property does not have a history of anthrax, it did have neighbours with an anthrax outbreak 18 years ago. In both cases, the properties were placed under quarantine, carcases were burnt, and in-contact animals were vaccinated.

Anthrax was excluded as the cause of death for 11 other investigations during the quarter involving cattle (eight) and sheep (three). Alternative diagnoses included nitrate toxicity and lead poisoning.

Lyssa virus exclusions — Three investigations for lyssa virus were conducted during the quarter with two of these involving human exposure. All of the cases involved grey-headed flying foxes and were all negative for lyssa virus.

***Brucella abortus* exclusion** — One animal out of a consignment of 437 head of dairy cattle recently headed for Vietnam from Queensland (originating in NSW) gave a positive result (64) on the *B abortus* CFT. Follow-up testing of the original sample was negative on the ELISA and Rose Bengal tests but positive on the SAT. Post mortem examination of the reactor was conducted by the Queensland Department of Primary Industry with no gross abnormalities detected. Lymph nodes and other tissues were also negative on culture for *B abortus*.

Avian chlamydophilosis (psittacosis) — A number of galahs recently found either dead or wasting with diarrhoea in the Goulburn district had pathology consistent with psittacosis and were positive on immunofluorescence testing of tissue smears. A cockatoo from the Blue Mountains district (where a human outbreak of psittacosis occurred in 2002) with muscle wastage and diarrhoea also had gross pathology consistent with avian chlamydophilosis and was positive IFAT on spleen. Psittacosis was also recently diagnosed in crimson rosellas and was found as a subclinical problem in pigeons with coccidiosis.

Mycobacterium avium — Avian tuberculosis was recently confirmed histologically for some backyard poultry from the Narrandera district. This followed considerable losses occurring in younger birds with granulomas grossly visible in multiple organs.

Lymph node lesions were recently detected at slaughter for one of 50 pigs at a northern NSW abattoir. Histopathology and microbiology confirmed *M avium* as the cause.

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

Internal Parasites

Liver fluke; on the rise? — The monthly overview of worm egg count testing throughout NSW (WormFax: www.agric.nsw.gov.au/reader/6305) indicates that quite a few farms in liver fluke-endemic areas of the State still have sheep and cattle with fluke burdens going into winter. Having stock fluke-free over winter is an important part of effective liver fluke control.

Figure 5. Pimelea spp.

Macrocyclic lactone (ML) resistance — It has recently been estimated that as many as 30 per cent of farms in the *Haemonchus contortus* endemic areas of northern NSW have resistance in *Haemonchus* to the ML drenches. One reason for this may be the increased use of MLs to control *Haemonchus* once resistance to closantel became more common from the early 1990s. Many farmers however have not done resistance testing in recent years and so do not have objective information on which to base drench choices. Some may still have closantel as an option.

ML resistance in *Ostertagia* in southern NSW, although somewhat less prevalent than resistance in *Haemonchus* in the New England, is also becoming more common.

For more information, contact Stephen Love, State Worm Control Coordinator, (Armidale) on (02) 6776 5013.

DISEASE CONTROL AND ADVISORY PROGRAMS

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

At the end of the quarter, there were a total of 872 MAP herds: 226 being MN1; 336 MN2; and 310 MN3. A total of 508 herds left the program and reverted to NA — the bulk of these are where the herd and/or the property have been sold. There is now a total of 22 MAP herds that are confirmed infected, 14 of these were found infected at or prior to the second test, seven at or prior to the third test, and one at or prior to the fourth test.

For more information, contact Tim Jessep, Goulburn, on (02) 4828 6614.

DISEASE SURVEILLANCE

Enzootic Bovine Leukosis

At the end of June 2003, the EBL status for NSW dairy herds was 1277 herds (99.8%) monitored free, two herds (0.1%) suspect and one herd (0.1%) not assessed.

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

National Granuloma Surveillance Program (NGSP)

Sixty four granulomas (38 from animal heads, 15 from the thorax, eight from the abdomen, one from the rump, one from the hock, and one unspecified) were submitted during the current quarter, compared to 26 for the first quarter.

The system of 'Inspector Discretion' has been well accepted with the proportion of 'Actinos' (16 submissions) decreasing to 25% of submissions from around 70% during NGSP and NGSP2. Inspector discretion involves the risk-assessment of samples with only the submitting of cases which might be tuberculosis or of uncertain cause, rather than all granulomas (see attached panel on 'Inspector Discretion'.)

Other diagnoses include squamous cell carcinoma (10), parasitic origin (8), various tumours (9), and bacterial causes (8).

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

For more information, contact Keith Newby, Veterinary Officer (Grafton) on (02) 6640 1664.

INSPECTOR DISCRETION

The new level of surveillance for tuberculosis in NSW is to be known as 'Inspector Discretion'. AQIS have provided the following guidelines to provide a consistent approach to 'Inspector Discretion':

'ALL granulomas detected in buffalo and deer are to be submitted to approved laboratories for analysis.

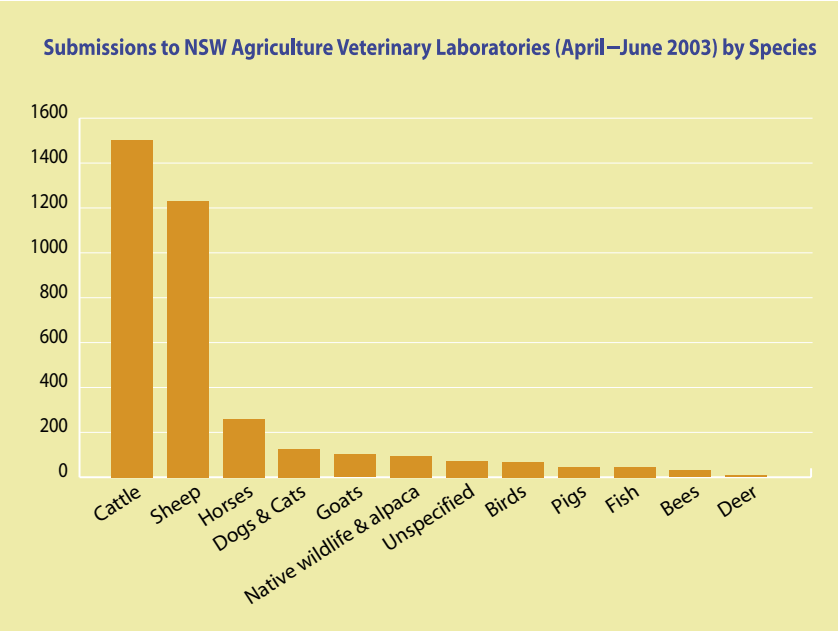
1. Meat Inspection staff will use their judgement as to whether or not to submit granulomas detected in cattle for the purposes of tuberculosis surveillance.

2. Inspectors should use the following criteria as a guide for submissions:

- Older cattle — those with two or more permanent teeth;
- The head and lungs;
- Lymph nodes; or
- If the Inspector is unsure of the cause of the lesion.'

This means that if there is ANY doubt as to the cause of a granuloma, the inspector must submit the granuloma.

Figure 6.



SUBMISSIONS TO NSW AGRICULTURE VETERINARY LABORATORIES

Analysis of data from LABSYS shows that there were 3585 submissions for animal disease-related testing during the quarter. The breakdown of submissions by species and geographic region is shown in Figures 6, 7 and 8.

Figure 7.

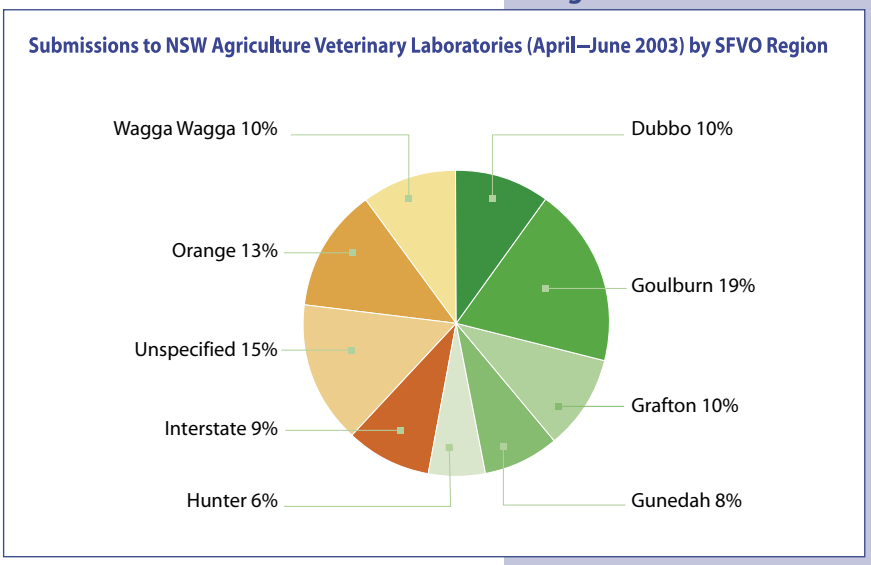
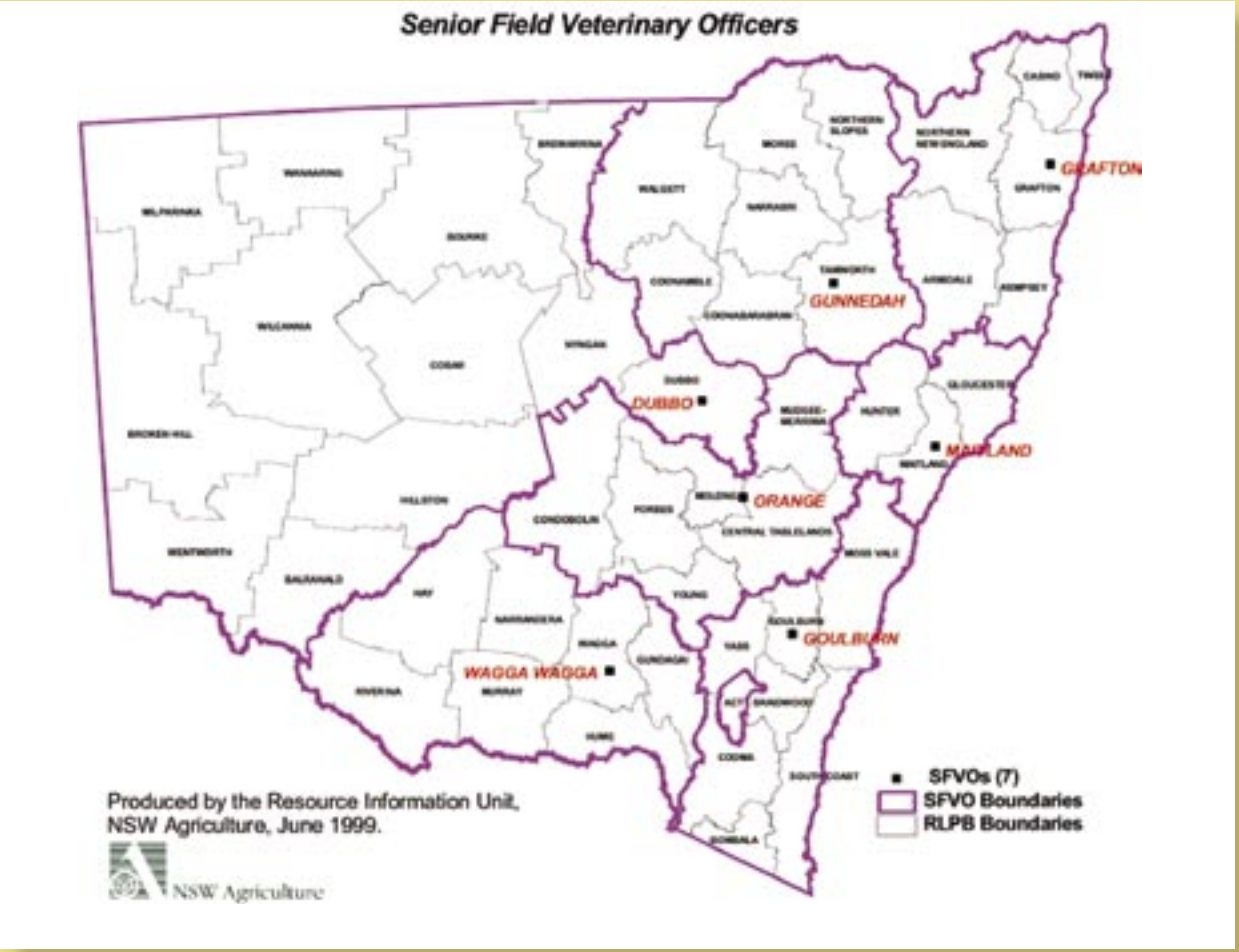


Figure 8. NSW showing Senior Field Veterinary Officer (SFVO) Regions.



NATIONAL TRANSMISSIBLE SPONGIFORM ENCEPHALOPATHY SURVEILLANCE PROGRAM (NTSESP)

A third TSE workshop was held in Orange on May 22. This was another very successful day with 22 vets attending, comprising nine private practitioners, five District Veterinarians one AQIS veterinarian, two laboratory-based veterinarians and five other NSW Agriculture veterinarians.

Submissions from the various Senior Field Veterinary Officer (SFVO) regions are shown in Table 1 below. Cattle numbers are likely to reach the required total of 87 before the end of the year, whereas sheep numbers still need to improve to reach the 165 required for the year from NSW. District Veterinarians are being encouraged to submit more sheep, while limiting their cattle submissions to those with the most obvious nervous signs.

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

Table 1: TSE Submissions by Rural Lands Protection Board from 1/4/03 to 30/6/03

		Abattoir		Total	Government		Total	Private		Total	Grand Total
SFVO Region	RLPB	Cattle	Sheep		Cattle	Sheep		Cattle	Sheep		
DUBBO	DUBBO		5	5		1	1	1		1	7
	NYNGAN							1		1	1
	WENTWORTH				1	1	2				2
DUBBO Total			5	5	1	2	3	2		2	10
GOULBURN	BRAIDWOOD	1		1							1
	COOMA				1		1				1
	MOSS VALE							2		2	2
GOULBURN Total		1		1	1		1	2		2	4
GRAFTON	ARMIDALE	1		1	1		1		1	1	3
	CASINO				2		2				2
	NORTHERN NEW ENGLAND				2		2				2
GRAFTON Total		1		1	5		5		1	1	7
GUNNEDAH	COONABARABRAN							1		1	1
	NARRABRI				6		6				6
	TAMWORTH	1		1	2		2				3
GUNNEDAH Total		1		1	8		8	1		1	10
MAITLAND	GLOUCESTER				4		4				4
	HUNTER	1		1				1		1	2
MAITLAND Total		1		1	4		4	1		1	6
ORANGE	CENTRAL TABLELANDS	1		1	1		1				2
	CONDOBOLIN				1		1				1
	MOLONG				1		1				1
	MUDGEE-MERRIWA							1		1	1
	YOUNG					1	1		1	1	2
ORANGE Total		1		1	3	1	4	1	1	2	7
WAGGA WAGGA	GUNDAGAI					4	4		2	2	6
	HUME							6	2	8	8
	MURRAY							1		1	1
	WAGGA WAGGA							1		1	1
WAGGA WAGGA Total						4	4	8	4	12	16
Grand Total		5	5	10	22	7	29	15	6	21	60

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 occurence 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.com.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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