

Checklist for TSE surveillance program – CATTLE, SHEEP and GOATS

18 November 2020

Contact Emma or Debbie to confirm animal/s are eligible for TSE rule out

Examine animal while it is alive. Up to 2 animals per disease incident per property

Animal/s **clinically consistent** with BSE or Scrapie? (**at least two** clinical signs)

Cattle: age > 30 months but < 9 years

Sheep/Goats: age > 18 mths but < 5

Consider differential diagnosis

Collect appropriate samples for TSE exclusions and your differential diagnoses

Fill in Clinical History and Post Mortem report form

Fill in AHL submission form – full history, indicate this is a TSE exclusion

Give compensation claim form to owner of animal/s

Pack samples correctly and send to AHL Mt Pleasant

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PAYMENT FOR ELIGIBLE SAMPLES:

Cattle:

Owner can claim \$300 (ex GST) for eligible cattle

Practice can claim \$300 (ex GST) for services to collect samples PLUS \$25 for freight

Sheep:

Owner can claim \$100 (ex GST) for eligible sheep

Practice can claim \$200 (ex GST) for services to collect samples PLUS \$25 for freight

Goats:

Practice can claim \$100 (ex GST) ONLY for services to collect samples.

Laboratory testing for TSE (Cattle, Sheep and Goats) and differential diagnoses (for Cattle and Sheep ONLY) at AHL is provided, allowing diagnosis at a reduced cost.

More information and forms for download are available at:

<http://dpiwve.tas.gov.au/biosecurity-tasmania/animal-biosecurity/animal-health/information-for-veterinary-practitioners>

Cattle: 'Clinically consistent' - at least two of the following clinical signs verified by examination of live cattle by a veterinarian:

Mental status	Sensation	Posture and movement
<ul style="list-style-type: none">• altered consciousness• apprehension• behaviour change• excitability• frenzy• hesitation at doors, gates, barriers• herd hierarchy change• moribund without evidence of infection or trauma• teeth grinding	<ul style="list-style-type: none">• blindness• excessive licking of nose and flank• head rubbing or pressing• head shyness• hyperaesthesia (sound, touch)• hypoaesthesia (sound, touch)• kicking persistently when milked	<ul style="list-style-type: none">• abnormal ear position• abnormal head carriage• ataxia• circling• falling• fetlock knuckling• paralysis/paresis• recumbency• tremor

Cattle: Differential Diagnoses:

- Trauma
- Nutritional myopathy - Vit E or Selenium deficiency
- Metabolic diseases - hypo mag, hypo cal, nervous acetoanaemia, hepatic or renal encephalopathy, PEM, heat stress.
- Infectious Diseases - brain or spinal abscess, listeriosis, thromboembolic meningo-encephalomyelitis, sporadic bovine encephalomalacia, bovine malignant catarrhal fever, focal symmetrical encephalomalacia, bovine ephemeral fever (exotic to Tasmania), rabies (exotic).
- Toxicity: lead, plant, botulism, urea toxicoses, snakebite.
- Genetic
- Neoplasia

Sheep and Goats: '**Clinically consistent**' - at least two of the following clinical signs verified by examination of live animal by a veterinarian.

Mental status	Sensation	Posture and movement
<ul style="list-style-type: none">• altered consciousness• apprehension• behaviour change• frenzy• moribund without evidence of infection or trauma• temperament change	<ul style="list-style-type: none">• blindness• hyperaesthesia (sound, touch)• hypoaesthesia (sound, touch)• rubbing/itching• wool loss (flank and hind quarter)	<ul style="list-style-type: none">• abnormal head carriage• ataxia• circling• falling• fetlock knuckling• paralysis/paresis• recumbency• tremor

Sheep and Goats: Differential Diagnoses:

- Parasites: eg lice
- Metabolic diseases (hypomagnesaemia or hypocalcaemia), polioencephalomalacia, hepatic and renal encephalopathy, copper deficiency, Vitamin E or selenium deficiency (nutritional myopathy).
- Infectious Diseases (brain or spinal abscess, listeriosis, Histophilosis, melioidosis, focal symmetrical encephalomalacia, rabies (exotic).
- Toxicity: lead, plant, perennial ryegrass staggers, phalaris staggers, botulism.
- Genetic e.g. cervicothoracic vertebral subluxation and ataxia.
- Neoplasia

Required Samples:

Essential:

Cattle: Whole brain fixed in 10% buffered formalin and 2-3 cm of cervical spinal cord and/or medulla caudal to the obex unfixed but chilled.

Sheep and Goats: as for cattle PLUS the top third of the cerebellum via horizontal approach.

Samples for Differential Diagnosis:

If animal is euthanased by vet: tissue samples (fresh and fixed), blood (EDTA and serum), blood smear, faeces, GI contents.

If animal has already died (i.e. vet examined live but then died): whole fresh eye or sample of aqueous fluid, plus fresh and fixed tissue samples, faeces and GI contents.

If unsure of extra samples: contact pathologists at Mt Pleasant (03 6777 2111)

Resources for brain sampling technique:

Training video <https://www.youtube.com/watch?v=UN4DVoHnsp8>

Brain sampling instruction sheet available at:

http://dpiw.tas.gov.au/Documents/Brain%20removal%20TSE%20sampling_Biosecurity%20Tasmania.pdf

Or ask your regional Veterinary Officer for a printed instruction sheet

Packing and posting samples:

Ensure that: the specimens are securely and correctly packaged for transport AND all relevant details accompany the specimens, especially the required laboratory submission form and the *Clinical history and post mortem report*

Fresh Specimens - some fresh/chilled specimens (i.e. for microbiological culture, blood for biochemistry and haematology) should be dispatched on the day of collection to ensure handling at the laboratory as soon as practicable after death. The specimens must be sent with the laboratory submission form and the *Clinical history and post mortem report* with a clear indication that fixed specimens will follow. The cervical spinal cord and/or medulla caudal to the obex if kept chilled can be submitted with the fixed brain a few days after collection.

Fixed Specimens - to avoid transporting heavy and dangerous volumes of formalin, adequately fixed tissues can be kept moist during transport by placing fixed tissues in a securely tied, double plastic bag with either: 50 ml of 10% formalin, or wrapped in formalin-soaked high absorbency paper towels. The brain and other fixed specimens should be sent to the laboratory with a submission form but indicating on the submission form that fresh specimens had been previously sent.