

OVERVIEW

- Neonatal pulpy kidney in a suckled calf
- Mineral drench inhalation in young lambs
- *Listeria monocytogenes* as a cause of mastitis and septicaemia in a ewe

DISEASE ALERTS

The following conditions were reported by SRUC VS disease surveillance centres in August 2025. Given similar climatic and production conditions, they could also be important this year.

Hemlock water dropwort toxicity

All parts of hemlock water dropwort (*Oenanthe crocata*) are poisonous with losses usually seen following ingestion of the tuberous roots by cattle. A spell of dry weather with falling water levels in ditches can allow easier access to these. Affected cattle can show salivation, ataxia, dyspnoea, and convulsions. However, oenanthotoxin is very fast acting and most cases are found dead. Fragments of root within the rumen contents on postmortem examination confirms the diagnosis.

Haemonchosis in sheep

Multiple diagnoses of haemonchosis were recorded during August 2025 with most outbreaks preceded by a move to pasture previously grazed by other sheep. Clinical presentations ranged from sudden death in adult ewes to poor growth and pallor in lambs. Typical postmortem examination findings include pale mucous membranes, subcutaneous oedema and body cavity effusions. Faecal worm egg counts tended to be high often with over 10,000 strongyle eggs per gram (epg). Large numbers of *Haemonchus contortus* are easily visible within the abomasum of a fresh carcase however, the distinctive red appearance fades with autolysis making them harder to spot. Nematode burdens were mixed with *Teladorsagia* and *Trichostrongylus* spp also present.

GENERAL INTRODUCTION

May was a month of temperature contrasts with the first two weeks being generally colder than average. This was reversed in the second half of the month when it became significantly warmer than usual for the time of year. Overall, the mean temperature for May was 9.6°C which is 0.5°C above the thirty-year average. It was a dry month with 78 per cent of average rainfall and 87 per cent of average sunshine hours.

CATTLE

Generalised and systemic conditions

The carcase of a two-day-old Limousin cross calf was submitted after it was found dead. It had been weak since birth and required bottle feeding due to inadequate dam milk supply. Postmortem examination was not diagnostic although there were concerns regarding inadequate milk intake. Based on the history, the main differential diagnosis was hypogammaglobulinaemia with secondary colisepticaemia however blood proved unsuitable for zinc sulphate turbidity (ZST) testing. *Escherichia coli* was isolated from the lung and liver in mixed growth casting doubt on its significance. Histopathological examination ruled out neonatal septicaemia as the cause of death and demonstrated perivascular proteinaceous oedema within the brain, plus alveolar oedema and haemorrhage. This suggested the possibility of clostridial enterotoxaemia type D and epsilon toxin was detected in ileal contents. Although more commonly diagnosed in rapidly growing lambs, pulpy kidney disease can cause peracute death in neonatal calves with minimal observable pathology.

Alimentary tract disorders

A three-month-old shorthorn calf was found dead having been treated for suspected pneumonia four days earlier. It was the first loss in a group of 17 housed cows and calves. The carcass was severely dehydrated, and a 2 x 3 x 8cm potato was found obstructing the oesophagus at the thoracic inlet with multifocal mucosal ulceration at this site. It was unexpected that a calf of this age had managed to swallow a potato of this size highlighting that the risk of choke in calves should be considered when potatoes are being fed to their dams.

Reproductive tract conditions

Five abortions occurred in a herd of 150 beef cows over a three-day period. The cattle were housed in a cubicle shed with access to an outdoor feeding area where silage, straw and fodder beet were provided. Two foetuses were examined and crown rump length measurements suggested that they were six-to-seven-months gestation. A pure growth of *Trueperella pyogenes* was isolated from the foetal stomach contents of calf one and histopathology findings of suppurative placentitis and pneumonia with intralesional bacteria, supported a diagnosis of abortion due to *T. pyogenes*. Examination of fixed tissues from calf two identified multifocal hepatic necrosis suggestive of infection with bovine herpesvirus-1. PCR testing of liver tissue proved positive confirming intrauterine infection with IBR as the cause of abortion. The possibility of multiple pathogens being present should not be discounted and examination of more than one carcass is often valuable.

A 120-head spring calving beef herd reported an abortion in a purchased Salers cross cow that was described as leaner than ideal. The crown rump length equated to approximately seven-months gestation. Routine testing was unrewarding and histopathology was scheduled.

This identified marked hepatic lipidosis which is an unusual finding in a foetus. Hepatic lipodystrophy with a suspected genetic basis is recognised in Galloway cattle¹ and toxic, infectious and metabolic aetiologies were also considered. With no other losses it was suggested that the current case was most likely a one-off.

SMALL RUMINANTS

Generalised and systemic conditions

A flock lambing 1500 ewes lost around 100 lambs between the ages of three days and two weeks. Hypothermia was suspected to be responsible for the neonatal deaths. Ewes received a multivalent clostridia/pasteurella booster vaccination prior to lambing and navels were treated with iodine. A ten-day old Texel cross lamb was found dead and submitted for investigation, with the presence of a good abomasal milk clot confirming it to be a true sudden death. A low volume pericardial effusion and a slightly enlarged spleen were noted. There were no significant findings on culture, but histopathology detected evidence of septicaemia which was considered the cause of death. Additional lesions consistent with systemic necrotising vasculitis (polyarteritis nodosa) were also found which is unusual in a lamb of this age. A viral cause was suspected but no evidence of border disease or ovine herpesvirus-2 was detected on PCR testing of spleen. It was postulated that tick borne fever (TBF) may have been contributing to the high mortality however the spleen was also PCR negative for *Anaplasma phagocytophilum*. It was suggested that the submitted lamb may not be representative of the losses and that further carcasses should be examined if deaths continued.

A three-year-old easycare ewe was found dead two weeks after lambing. It was the only loss

from a group of 110 ewes which had lambed inside before being turned out within 48-hours. The left side of the udder was swollen and firm with a 1cm deep layer of subcutaneous oedema and milk clots visible within the parenchyma. Multiple haemorrhages were noted on the pleura and spleen. Mixed growths of *E coli* and *Listeria monocytogenes* were cultured from the lung and liver with *L monocytogenes* also detected in mixed growth from the udder. Histopathology indicated that *L monocytogenes* was the cause of the mastitis with secondary septicaemia resulting in death of the ewe. This is an unusual presentation as mastitis due to *L monocytogenes* is typically reported to be subclinical and of most relevance to dairy sheep and cheese making.

Alimentary tract disorders

Two, one-month-old mule lambs were found dead within 24 hours and the second was submitted to investigate the cause. A single tick was noted on the carcase which was well grown with a good abomasal milk clot. The serosa of the distal jejunum had a patchy yellow appearance (Fig 1) and the corresponding mucosa was necrotic with enlargement of the adjacent lymph node. Further evidence of inflammation was found in the proximal and mid colon with occasional small blood clots and mucosal shreds within the large intestinal contents. A bacterial enteritis secondary to tick borne fever was suspected and PCR testing of spleen was positive for *A phagocytophilum*. Bacteriology was unrewarding but histopathology confirmed a severe necrotising enteritis suggestive of salmonellosis. Diffuse depletion of the Peyer's patches indicated a degree of immunosuppression which would be consistent with TBF.



Figure 1 – Bacterial enteritis secondary to tick borne fever in a one-month-old lamb

A four-day old single, mule lamb was treated with penicillin after it became slightly bloated and wet around the mouth. It died overnight and was submitted for postmortem examination. This was the third similar case in ten days in a flock that had lambed 80 of 100 ewes at grass. A short length of the proximal jejunum was found to be emphysematous with mucosal inflammation consistent with lamb dysentery. There were haemorrhages on the serosa of both the small and large intestine (Figure 2), and the faeces were loose and pink tinged. Beta, but not epsilon toxin was detected in small intestinal contents and together with the pathology suggested a diagnosis of lamb dysentery. Histopathology was carried out as the ewes had been clostridial vaccinated, there was no evidence of hypogammaglobulinaemia (ZST 36 units; reference range > 14 units) and the appearance of the intestines was unusual. This revealed an extensive bacterial enteritis in addition to lamb dysentery. Infection with *E coli*, *Salmonella* sp or possibly *Yersinia* sp were potential aetiologies but were not cultured. It was proposed that a change in the gut biota and/or motility due to bacterial infection could have

predisposed to multiplication of *Clostridium perfringens* and toxin production. Nonetheless, the ewes had been vaccinated and a review of vaccine storage and administration was advised.



Figure 2 – Haemorrhages on the intestinal serosa in a neonatal lamb with clostridial enterotoxaemia type B

Respiratory tract diseases

A large Romney flock reported the death of 12 animals within 24 hours of handling and submitted the carcasses of three, four-week-old lambs. Two had died within 15 minutes and the third overnight. Frothing at the nose/mouth was seen prior to death in some cases. All three lambs were in good body condition. Froth was present in the airways, and the lungs had a mottled appearance with areas of haemorrhage also noted (Figure 3). Mineral drench inhalation was suspected and confirmed on histopathology. The lambs had been held on their back and received a mineral drench and an anthelmintic drench followed by clostridia/pasteurella and orf vaccination, tailing with a hot iron and ringing if male. Cases of mineral drench inhalation are diagnosed annually at this time of year.



Figure 3 – Mottled appearance of the lungs as a result of mineral drench inhalation in a lamb

A five-year-old Clun Forest cull ewe was euthanased to investigate an outbreak of respiratory disease within the flock. Coughing affecting around 10 per cent of the flock had been heard during the previous three to four months. There was no apparent response to treatment with oxytetracycline, and some sheep had deteriorated and died after becoming recumbent. Postmortem examination found the left cranial lung lobe to be diffusely red and firm, with some pleural emphysema and a fibrinous pleuritis. *Mannheimia haemolytica* was isolated from the lung and *Mycoplasma ovipneumoniae* was detected by DGGE (denatured gradient gel electrophoresis)/PCR. Histopathology confirmed mild chronic airway changes consistent with mycoplasmal infection plus secondary acute bacterial pneumonia. Multiple parasitic granulomas, consistent with concurrent *Muellerius sp* infection were also described. Confirmation of *M ovipneumoniae* infection was considered the most significant finding in relation to the flock history.

Circulatory system disorders

The carcase of a Mule ewe was submitted for investigation following ten deaths in the past month from a group of 50 ewes. A mineral bolus and a clostridia/pasteurella vaccine had been given pre-lambing, and the group was at grass with access to magnesium licks and salt. Postmortem examination found a large vegetative lesion on the right atrioventricular valve, and multiple smaller lesions on the left atrioventricular valve (Figure 4). The liver was moderately enlarged and there were moderate pleural and pericardial effusions consistent with secondary cardiac failure. Bacteriology produced a pure growth of *Erysipelothrix rhusiopathiae* from the endocarditis lesion. Endocarditis can be a chronic complication of erysipelas and the flock had experienced an outbreak of post dipping lameness last summer.



Figure 4 – Vegetative endocarditis lesions due to infection with *Erysipelas rhusiopathiae*

PIGS

Alimentary tract disorders

A three-month-old sandy and black female pig was submitted after it died within an hour of being found recumbent and bloated with a

subnormal temperature. It was the only animal affected from a group of 40 that was managed outdoors and fed a pelleted ration. Postmortem examination found that the stomach was bloated due to accumulation of liquid content. The duodenum was dark red/black as a result of ischaemic necrosis caused by a piece of tissue forming a stricture around it (Figure 5). This tissue originated from the liver adjacent to the gall bladder and was suspected to be a remnant of the umbilical artery. *Ascaris suum* worms were an incidental finding but relevant to the rest of the group.

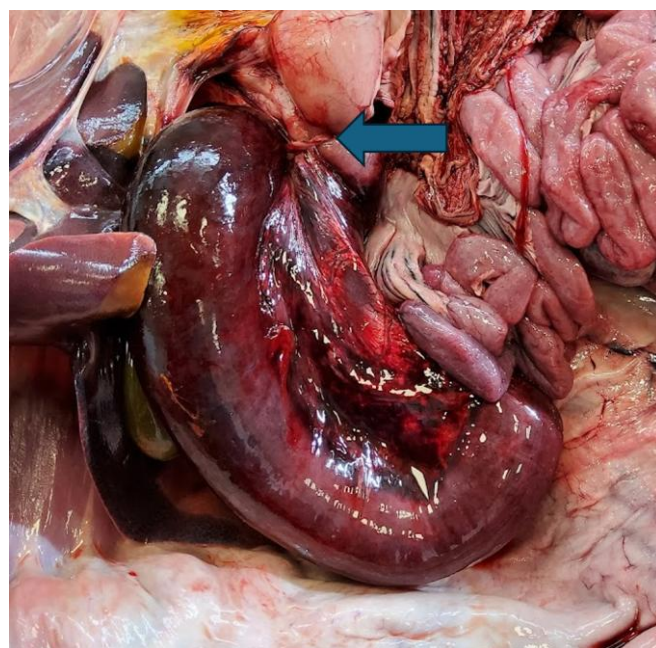


Figure 5 – Ischaemic necrosis of the duodenum in a weaned pig. Arrow indicating the stricture.

References:

1 Wieland M, Mann S, Metzner M. Hepatic lipodystrophy in Galloway calves. *Vet Path*; 2017: 54(3), 467–474