

REGIONAL VETERINARY LABORATORIES REPORT

September 2025

Regional Veterinary Laboratories (RVLs) carried out necropsy examinations on 535 carcasses and 45 fetuses during September 2025. Additionally, 1,595 diagnostic samples were tested to assist private veterinary practitioners with the diagnosis and control of disease in food producing animals. This report describes a selection of cases investigated by the Department of Agriculture, Food and the Marine's (DAFM) veterinary laboratories in September 2025. The objective of this report is to provide feedback to veterinary practitioners on the pattern of disease syndromes at this time of the year by describing common and highlighting unusual cases. Moreover, we aim to assist with future diagnoses, encourage thorough investigations of clinical cases, highlight available laboratory diagnostic tools, and provide a better context for practitioners when interpreting laboratory reports.

Cattle

Pneumonia and blackleg were the most common diagnoses at necropsy of cattle in the RVLs during September 2025.

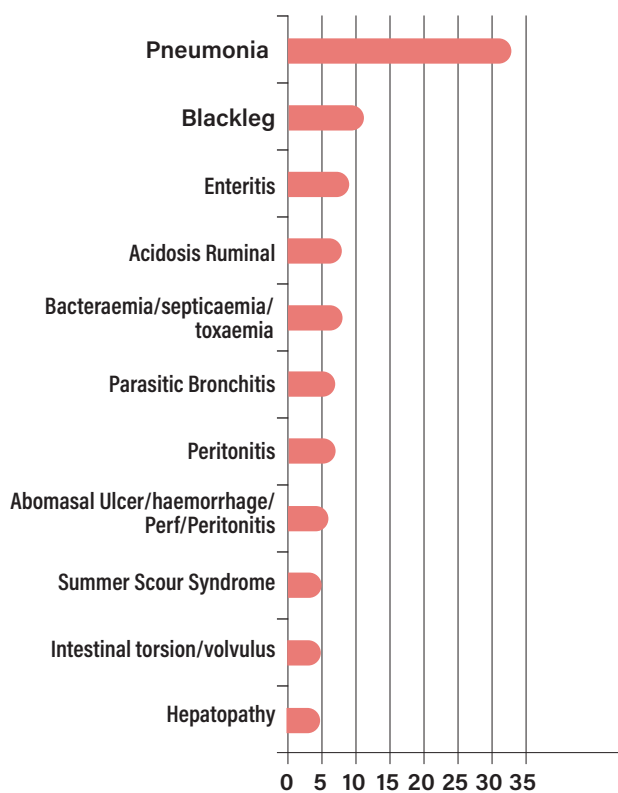


Table 1: The most common diagnoses in cattle submitted for necropsy in September 2025.

Gastrointestinal Tract

Parasitic gastroenteritis

A yearling was found dead and submitted to Kilkenny RVL. The owner was suspicious of poisoning; on examination, however, the abomasum had a 'Morocco leather' appearance, and the intestinal contents were liquid. Biochemistry results were within normal limits. McMaster results identified 2,650 strongyle eggs per gram (EPG), so parasitic gastroenteritis was diagnosed, and a review of parasite control was recommended.



Figure 1: 'Morocco leather' due to parasitic gastroenteritis in a weanling. Photo: Aideen Kennedy.

A four-month-old Hereford cross calf from a calf-to-beef system was submitted to Limerick RVL with a history of ill-thrift and inappetence. The main findings on post-mortem were heavy faecal staining of the tail and hindquarters, a marked 'cobblestone appearance' of the abomasum and watery green contents in the intestines. Laboratory findings detected a strongyle egg count of 600EPG, which is categorised as a medium burden, but animals with watery diarrhoea may have a reduced egg count as a result of the dilution effect from the increased faecal volume. A diagnosis of parasitic gastroenteritis was made. The cobblestone appearance results from larval invasion of abomasal glands and the emergence of abomasal encysted nematode parasites, with the proliferative reaction in the mucosa causing it to become nodular and thickened.



Figure 2: Parasitic gastroenteritis in a calf causing a 'cobblestone appearance' Photo: Brian Toland.

Haemorrhagic abomasal ulcer

Athlone RVL examined a six-year-old dairy cow with a history of sudden onset of recumbency and weakness, with a large amount of bloody, black faeces behind her, and death within three hours. On post-mortem examination, her mucous membranes were very pale. The abomasum was distended with blood clots and dark brown/black fluid and ingesta. There were three non-perforated abomasal ulcers. The largest ulcer had eroded the wall of the gastroepiploic artery causing haemorrhage. There were very black, tarry intestinal contents and faeces. The liver, kidneys, and lungs were pale. Histopathology of the abomasum showed a fibrinosuppurative, necrotic, ulcerative abomasitis and fungal hyphae were not seen. A diagnosis of haemorrhage due to a bleeding abomasal ulcer was made.

While **abomasal ulcers** are more common in early lactation, they can occur anytime, and late lactation cows are still at risk. Many possible causes of abomasal ulcers have been suggested and investigated but their aetiology is still not definitively known. Risk factors that have been suggested include: stress (e.g., mixing of groups, negative energy balance in early lactation, and concurrent disease), feeding high concentrate diets, and the use of non-steroidal anti-inflammatory drugs (NSAIDs). Infectious agents including fungi and *Helicobacter pylori* have been isolated from the abomasum of cows with ulcers, but it's not known if they are a direct cause of abomasal ulcers in cattle.

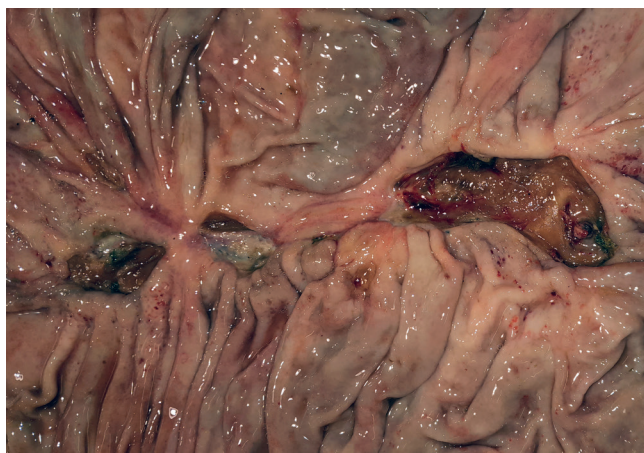


Figure 3: Haemorrhagic abomasal ulcer in a dairy cow. Photo: Denise Murphy.

Perforated abomasal ulcer

Athlone RVL examined a six-year-old dairy cow with a history of recumbency three days earlier, repeated treatment by the vet with no response, and eventually death. There was a diffuse, fibrinosuppurative peritonitis with ingesta free in the abdominal cavity and a very large volume of red-tinged peritoneal fluid. There was a 4cm to 5cm diameter perforated abomasal ulcer with other shallow ulcers on the abomasal mucosa. A diagnosis of peritonitis secondary to a perforated abomasal ulcer was made.



Figure 4: Peritonitis secondary to a perforated abomasal ulcer in a dairy cow. Photo: Denise Murphy.

Jejunal haemorrhage syndrome

Athlone RVL examined a three-year-old dairy cow with a history of recumbency and anorexia, which had been treated but didn't respond, and which subsequently died. At post-mortem examination, the carcass and mucous membranes were moderately pale. The abdomen was distended due to distension of the proximal small intestines with loose ingesta, and there was a large intraluminal blood clot for approximately 20cm of the jejunum causing a complete obstruction with empty small intestines distal to this and scant dark brown tarry faeces. Testing for *Clostridium perfringens* toxin proved negative and *Escherichia coli* was isolated from faeces. A diagnosis of jejunal haemorrhage syndrome (JHS) was made.



Figure 5: Jejunal haemorrhage syndrome in a dairy cow. Photo: Denise Murphy.

Jejunal haemorrhage syndrome is a sporadic condition reported in both beef and dairy cows in the US, Europe, and the Middle East. Mortality rates are generally high at 85 per cent to 100 per cent. Animals are often found dead or have a history of decreased milk production, anorexia, abdominal discomfort, depression, abdominal distension, melena, and distended loops of intestine palpable on rectal examination. Typical gross pathology findings reported consist of a variable length of dark purple-red distended jejunum with an intraluminal blood clot, intra mural haematoma or ulceration. The mucosa is necrotic and sloughed and usually attached to the blood clot that obstructs the lumen of the intestine.

The aetiology of the condition is unknown but possible aetiologies include:

1. *Clostridium* spp: *C. perfringens* type A has been suggested as the cause of JHS, and it has been isolated from the intestines of clinical cases. However, as it is part

of the bacterial flora of the alimentary tract in many normal animals, its role in JHS has always been uncertain.

2. Mycotoxins and Shiga toxin producing *E. coli* (STEC): mycotoxins and STEC have been suggested to play a role in the disease complex for JHS in beef cattle. *Aspergillus fumigatus* has been suggested as having a role in JHS in dairy cattle through the deposition of mycotoxins in the blood contributing to the development of JHS.

3. Intestinal ischaemia of unknown aetiology: obstruction of blood vessels and reduced blood flow to the jejunum results in hypoxic damage to the intestine with subsequent mucosal necrosis resulting in the flow of fluid and blood into the lumen. Proliferation of toxin-producing anaerobes (e.g., clostridia) occurs, leading to a distended, purple/black section of intestine.

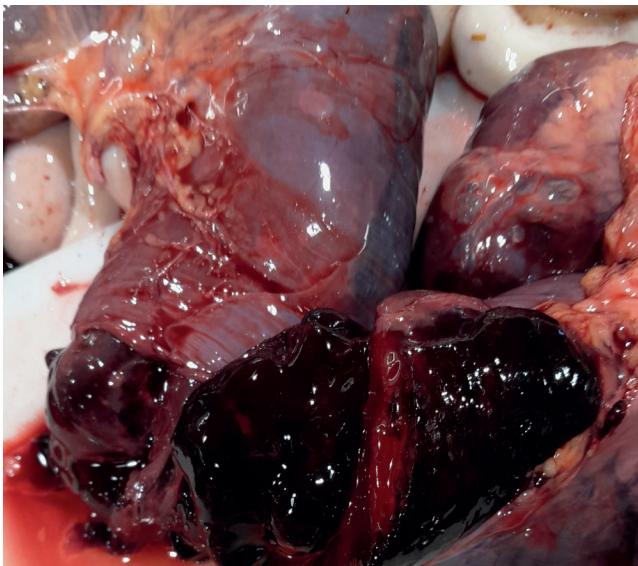


Figure 6: Jejunal haemorrhage syndrome, intraluminal blood clot. Photo: Denise Murphy.

Respiratory Tract

Parasitic bronchitis

Limerick RVL examined a six-month-old Friesian bullock with a history of ill thrift and no response to treatment for pneumonia; cohorts were similarly affected. On external examination, there was heavy faecal staining of the tail and hindquarters. Necropsy revealed a heavy burden of patent lungworm in trachea, bronchi, and bronchioles with congestion of approximately twenty percent of lungs, with a cranioventral distribution. The abomasal mucosa had a 'cobblestone appearance' suggestive of parasitism. Laboratory findings included a strongyle count over 4,000EPG; *Histophilus somni* and *Pasteurella multocida* were detected by polymerase chain reaction (PCR). The primary cause of death was parasitism, predisposing the animal to secondary bacterial infection. A review of parasite control was advised.

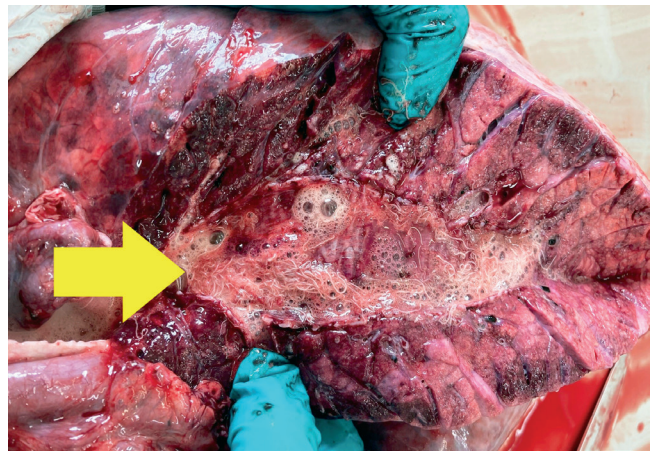


Figure 7: Heavy burden of patent lungworm in trachea, bronchi, and bronchioles. Photo: Brian Toland.

A five-month-old weanling was submitted to Kilkenny RVL, with a history of coughing. On post-mortem, there was diffuse interstitial pneumonia with 'ground glass' emphysema. There were large numbers of lungworms visible in the airways, and a review of parasite control was advised.



Figure 8: Interstitial pneumonia with 'ground glass' emphysema in a weanling. Photo: Aideen Kennedy.

Pneumonia

A four-month-old weanling, with a history of respiratory signs that had failed to respond to treatment, died and was submitted to Kilkenny RVL. Approximately 60 per cent of the pulmonary tissue was consolidated and there was microabscessation within the consolidated region. On laboratory tests, *H. somni*, *Trueperella pyogenes*, *Mannheimia haemolytica*, and *P. multocida* were all identified. A review of respiratory disease control was recommended as others in the herd were coughing.



Figure 9: Pneumonia with microabscessation within the consolidated region. Photo: Aideen Kennedy.

The carcase of a five-month-old calf which had died suddenly was submitted to Sligo RVL. On post-mortem examination, there was diffuse, chronic-active suppurative pneumonia with emphysema. *T. pyogenes*, *Mycoplasma bovis*, and *P. multocida* were all detected in the lesions. Deoxyribonucleic acid (DNA) specific to bovine herpesvirus 4 (BHV4) was detected also by PCR technique.

Urinary/Reproductive Tract

Foetal hypoxia

A stillborn/perinatal suckler calf was submitted to Limerick RVL. On external examination, the head, tongue, and neck were markedly swollen with meconium staining of the coat. Post-mortem revealed a significant quantity of meconium-stained fluid, most likely aspirated amniotic fluid, in the trachea, bronchi, and bronchioles with uninflated, congested lungs. Culture and PCR tests returned negative results for infectious agents. Meconium staining of the coat and amniotic fluid filling the airways indicated respiratory distress likely due to foetal hypoxia, and could reflect slow parturition, dystocia, subclinical hypocalcaemia, placentitis, or placental insufficiency.

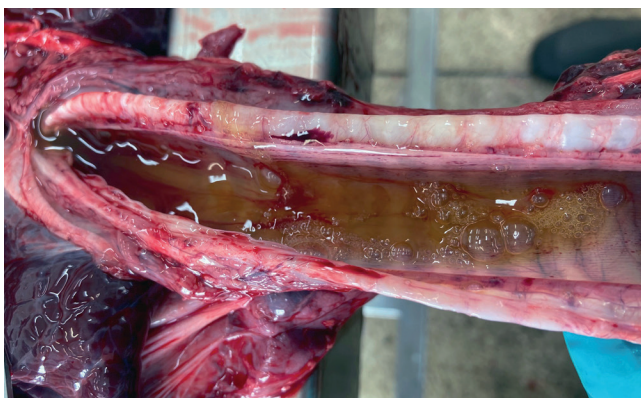


Figure 10: Meconium-stained amniotic fluid in the trachea of a stillborn calf. Photo: Brian Toland.

Cardiovascular System

Vegetative endocarditis

Athlone RVL examined a nine-year-old cow. There was a severe vegetative endocarditis of the right atrioventricular (AV) valve. A marked, diffuse, 'nutmeg pattern' was seen

across the liver, which was firm on palpation, indicative of passive venous congestion. There was a severe, fibrinous pericarditis with pericardial effusion, thoracic effusion, and ascites. Brisket oedema was noted. There were multifocal septic emboli throughout the lungs bilaterally. *T. pyogenes* was isolated from cardiac cultures. A diagnosis of vegetative endocarditis, pericarditis, and embolic pneumonia was made.

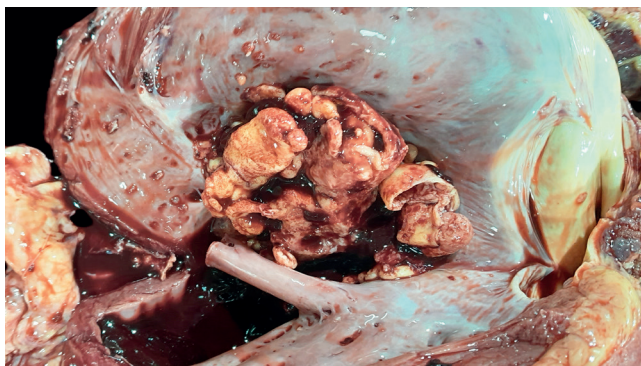


Figure 11: Vegetative endocarditis in a cow. Photo: Aoife Coleman.

Musculoskeletal

Blackleg

A six-month-old weanling was found dead and submitted to Kilkenny RVL. Some cohort animals were lame and pyrexia. There was no previous history of blackleg on farm. On necropsy, there were multifocal areas of black emphysematous muscle, mainly affecting the gluteal muscles and the diaphragm. The heart was congested and there was a fibrinous pleuritis. Fluorescent antibody technique (FAT) results were positive for *Clostridium chauvoei*, and a review of vaccination protocols was advised.

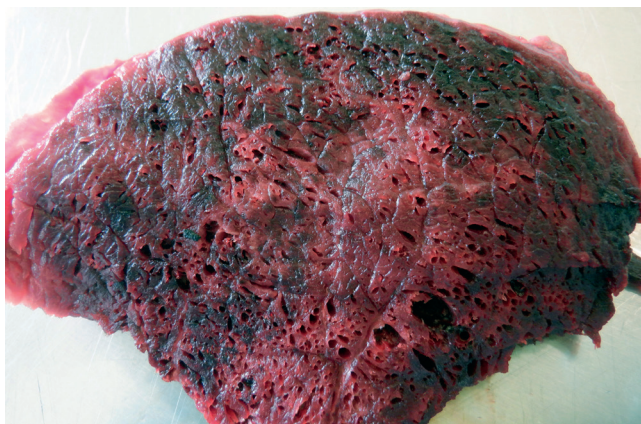


Figure 12: Blackleg. Photo: Aideen Kennedy.

Sligo RVL also diagnosed blackleg in a five-month-old calf which had died suddenly.

Poisonings

Hepatopathy/cirrhosis

Athlone RVL examined an 18-month-old heifer with a history of sudden death. The carcase was slightly jaundiced. The liver was very enlarged with a nodular surface; it was pale and very tough to cut. On cross section, bridging interlobular fibrosis was evident grossly. No liver flukes were seen. Hepatic lymph nodes were enlarged. There were petechial haemorrhages on the epicardial surface and moderate pulmonary congestion and mediastinal oedema with enlarged mediastinal lymph nodes.



Figure 13: Liver cirrhosis. Photo: Denise Murphy.

Histopathology of the liver showed a chronic/active, severe, diffuse hepatopathy and fibrosis with regenerative nodules (end-stage cirrhosis). Megalocytosis could not be confirmed in the sections that were examined. Excess pigment was not identified as a feature, and the vasculature was unremarkable. The histopathology findings indicated a long-term degenerative process in the liver. The liver was at end stage and ongoing hepatopathy, and further damage was being caused by the severe, existing reactive changes to liver architecture. Liver function is likely to have been severely impaired and was likely the cause of death. The cause of the hepatopathy could not be identified at the late stage in the disease process; however, a toxic insult is considered likely, based on the active processes and the severity observed. Pyrrolizidine alkaloid poisoning, e.g., ragwort, remained a differential but it could not be confirmed in these sections.

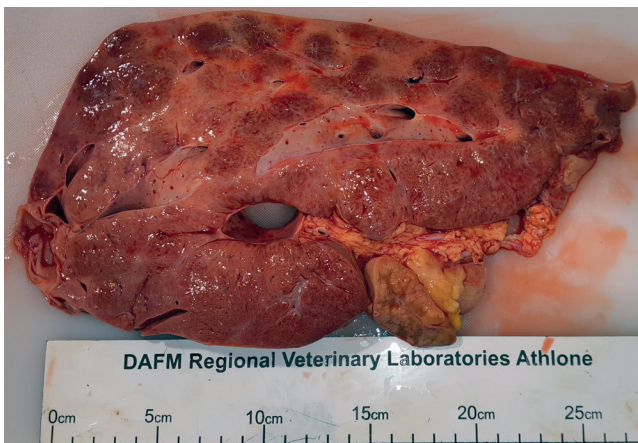


Figure 14: Cross section of cirrhotic liver from a heifer. Photo: Denise Murphy.

Miscellaneous

Peritonitis, pericarditis, and pleurisy

Athlone RVL examined a one-month-old calf with a history of having presented with respiratory signs, it had been treated by the farm's vet but had not responded and had died. The navel was enlarged and there was a small focus of pus on cross section. There was a diffuse, fibrinous peritonitis with fibrinous adhesions between loops of intestines, and a sheet of fibrin on the liver surface. There was golden-coloured thoracic fluid and a diffuse, fibrinous pericarditis and pleurisy. Intestinal

contents and faeces were scant, and joints were unremarkable. *E. coli* was isolated from several tissues. A diagnosis of peritonitis, pericarditis, and pleurisy, likely secondary to navel ill, was made. A review of neonatal calf management practices, including colostrum management and hygiene, was recommended.



Figure 15: Peritonitis, pericarditis, and pleurisy in a calf. Photo: Denise Murphy.

Sporadic lymphosarcoma

A five-month-old calf was submitted to Kilkenny RVL with a history of diarrhoea and submandibular oedema. There was generalised lymph node enlargement. On histopathology, sheets of round cells distorted the normal architecture of a number of organs. Lymphoma was diagnosed. Enzootic bovine leukosis (EBL) virus tests were negative. Sporadic lymphosarcoma manifests in three main forms: juvenile, thymic, and cutaneous. Juvenile lymphosarcoma occurs most often in animals less than six months old.



Figure 16: Lymph node enlargement due to a round cell tumour in a calf. Photo: Aideen Kennedy.

Chondrosarcoma

Athlone RVL examined an 18-month-old bullock with a history of pinning for six weeks. The animal was well-preserved and in good condition, weighing in at 460kg. A large (over 120kg), very firm mass was occupying the abdominal cavity and had a haemorrhagic/cavitated core. There was miliary varying-sized masses along the mesentery, omentum, and fascia, and along the curvature of the forestomachs. There was severe and firm organised adhesions throughout the mass, encompassing viscera. The histopathology revealed an expansile, unencapsulated mass comprised of bundles and whorls of cells with large, variably-sized, round-to-elongated nuclei, with pale stippled chromatin and with two to three variably distinct nucleoli. The cell borders were indistinct

with moderate amounts of cytoplasm. There was moderate anisocytosis and anisokaryosis; in some areas, the cells were well-differentiated and formed cartilaginous islands. There was a moderate fibrovascular stroma. Mitotic index was 2-3 per high powered field. There were areas of necrosis and inflammation. This was a suspected extra-skeletal chondrosarcoma. Additional immunochemistry would be required to confirm the diagnosis.



Figure 17: Chondrosarcoma in a bullock. Photo: Aoife Coleman.

Septicaemia

A one-month-old Aberdeen Angus suckler calf was submitted to Limerick RVL with a history of sudden death. The necropsy revealed a generalised peritonitis and congested lungs. *M. haemolytica* was cultured from lungs and spleen, and a diagnosis of *M. haemolytica* septicaemia was made. This appears to occur most often in animals that have undergone recent stress, immunosuppression, and concurrent viral infections leading to systemic infections.

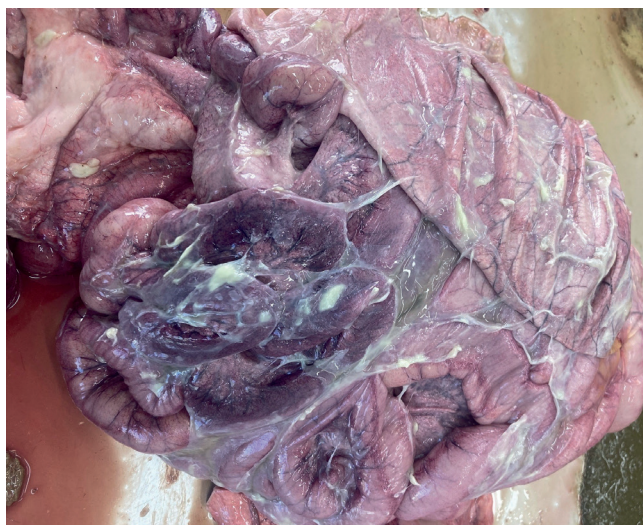


Figure 18: *M. Haemolytica* septicaemia in a suckler calf. Photo: Brian Toland.

Sheep

Bacteraemia/septicaemia and parasitic gastroenteritis were the most common diagnoses at necropsy in sheep in the RVLs during September 2025.

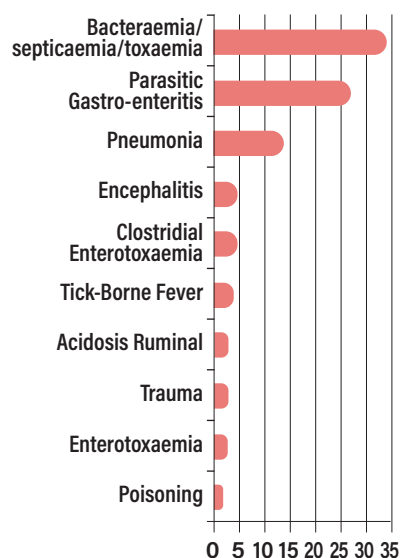


Table 2: The most common diagnoses in sheep submitted for necropsy in September 2025.

Respiratory Tract

Pneumonia

A five-month-old lamb was submitted to Kilkenny RVL. On necropsy, there was marked pneumonia with approximately 60 per cent of the pulmonary tissue consolidated. The intestinal contents were very fluid. *M. haemolytica* and *Mycoplasma ovipneumoniae* were identified. Strongyle egg counts from faecal samples were 2,600EPG.



Figure 19: Pneumonia in a lamb. Photo: Aideen Kennedy.

Systemic pasteurellosis

Athlone RVL examined three seven-month-old lambs submitted with a history of sudden death at pasture. The lesions were very similar across the three carcasses. There were multifocal pleural haemorrhages, myriad pinpoint yellow-to-white foci on liver, and severe ecchymoses of the pericardium and the costal pleurae, with fibrin deposition on the oesophageal mucosa. *Bibersteinia trehalosi* was isolated from multiple organs across the three carcasses. On histopathology, there was a severe, multifocal, acute, necrotising hepatitis with neutrophilic infiltrate, bacterial emboli, thrombosis, and myriad intralesional bacterial colonies. In pulmonary sections, there was multifocal interstitial pneumonia with myriad intralesional colonies, thrombosis, and occasional bacterial emboli. These findings were consistent with

systemic pasteurellosis caused by *B. trehalosi*. This can cause a septicaemia in sheep, typically in weaned lambs. Risk factors can include exposure to stresses, such as poor weather, change of pasture or feed, movements, shearing etc. Sudden death can occur with no clinical signs. Systemic pasteurellosis can present with a septicaemic or pneumonic outbreak in sheep. Control is based on vaccination and control of exigent stressors, such as diet change, poor weather, parasitism, acidosis etc.



Figure 20: Systemic pasteurellosis, multifocal pulmonary haemorrhages. Photo: Aoife Coleman.

Nervous System

Cerebral abscessation

Sligo RVL examined the carcass of a six-month-old lamb which had to be euthanised due to neurological symptoms. On post-mortem examination, body fat reserves were depleted. In the brain, there was a locally extensive subdural abscess at the brain stem. A causative agent could not be identified.

Louping ill

The carcass of a four-month-old ewe which had been found recumbent was submitted to Sligo RVL. On post-mortem, the spleen was enlarged. Numerous ticks were present on the carcass. On histopathology, there was mild polioencephalomyelitis. Louping ill virus was detected in the brain by PCR. There was concurrent tick-borne fever.

Miscellaneous

Tick pyaemia

Sligo RVL diagnosed chronic tick pyaemia in a five-month-old lamb. On necropsy, there were multifocal abscesses in the myocardium and there was vegetative endocarditis. Numerous ticks were present on the carcass. Intestinal contents were watery. *Staphylococcus aureus* was cultured from the cardiac lesions. There were very high strongyle egg counts detected in intestinal contents. Tick pyaemia and parasitic gastroenteritis were diagnosed as the combined cause of death.