

OVERVIEW

- **Ameloblastic fibroma in a thirteen-month-old shorthorn heifer**
- **Infectious bovine rhinotracheitis (IBR) in adult dairy cows**
- **Spinal listeriosis in a beltex tup**
- **Inclusion body hepatitis due to adenovirus infection in 10-day-old broiler chicks**

DISEASE ALERTS

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

- **Coccidiosis in suckled calves**
The incidence of coccidiosis in suckled calves peaks at one to two months of age and risk reduction strategies should be targeted towards this period. The number of diagnoses in the youngest calves increases in years where prolonged, cold spring weather and poor grass growth delays turn out.
- **Louping ill**
In endemic areas lambs born to immune ewes will be protected by colostral antibodies for approximately three months. Lambs and yearlings infected after passive immunity wanes, and naïve animals introduced to an enzootic area, are at greatest risk of louping ill. Immunosuppression due to concurrent tick borne fever will predispose to clinical disease.

GENERAL INTRODUCTION

February was a very dull month with sunshine figures only 67 per cent of the thirty-year average. The mean temperature was 3.7°C which is 0.6°C higher than the 1991 to 2020 average. The Highlands and islands were drier than average, but it was very wet along the east coast. The Scotland wide rainfall figure was 83 per cent of average.

CATTLE

Generalised and systemic conditions

A three-year-old Luining cow lost weight over a two-week period before being found dead. Postmortem examination identified submandibular oedema which extended along the ventral neck. A purulent tract approximately 8cm long and 3mm wide formed a communication from the reticulum through the diaphragm and an 8cm wire (considered likely to be tyre wire) was located within the reticulum. The pericardium was thickened and adhered to adjacent lung lobes and the apex of the heart. Several litres of purulent fluid were contained within the pericardial sac. There was some evidence of cardiac failure with a nutmeg appearance to the liver. A diagnosis of traumatic reticulo-pericarditis was recorded, and the administration of magnets was advised to prevent further losses.

Alimentary tract disorders

A 13-month-old shorthorn heifer was presented with a slow-growing mass on the gingiva ventral to the incisor teeth (Fig 1). It had first been noted two weeks before. Two punch biopsies were collected and histopathology described a spinaloid population of cells resembling dental pulp. An ameloblastic fibroma was suspected and the whole mandible was submitted following euthanasia of the affected animal. The mass was composed of fibrous to gelatinous tissue with frequent foci of hard white tissue and structures with the appearance of

developing teeth. Further histopathology showed that it was composed of odontoblastic epithelium separated by fibrous tissue with frequent areas of enamel formation. These findings confirmed the diagnosis of ameloblastic fibroma. This is a rare odontogenic tumour considered most likely to occur in the anterior mandible of young cattle¹ as in this case. They are benign but may be invasive, making surgical removal challenging.



Figure 1 – Ameloblastic fibroma in a shorthorn heifer. Formalin-fixed rostral mandible, dorsal view

A spring calving dairy herd that had been under new management since September 2025 reported good calf health until one third of the way through calving 220 cows. At this point half of 60 calves were treated with NSAIDs and antibiotics within a 48-hour period. Two calves died, one was euthanased and all three carcasses were submitted for postmortem examination. The first calf had a perforated abomasal ulcer with emphysema in the adjacent mucosa and secondary peritonitis. The other two had dilated abomasa with an emphysematous mucosa. Only calf three had evidence of diarrhoea. Faeces tested positive for rotavirus in all cases, but the cows were vaccinated and monitoring showed no issues

with transfer of maternal colostral antibodies. Histopathology identified large numbers of *Sarcina* sp bacteria within the abomasa of all three calves. Proliferation of *Sarcina* sp leads to excess production of carbon dioxide which together with bacterial toxins triggers a cycle of mucosal inflammation, reduced abomasal emptying and bloat. No lesions to suggest a role for rotavirus were detected. A review of feeding and hygiene protocols was recommended.

Respiratory tract diseases

A five-year-old Holstein cow with a week-long history of pyrexia was euthanased for postmortem examination when it became weak after failing to respond to treatment with NSAIDs and antibiotics. Clinical examination had not identified evidence of pneumonia, and a similarly affected cow had recovered. Postmortem examination found superficial erosions of the vocal folds and marked emphysema in the lungs. Several more cows developed pyrexia and two were euthanased after they became dyspnoeic. A second carcass was examined and more severe laryngeal lesions were detected (Fig 2). This case had areas of consolidation in the cranial lung lobes in addition to significant emphysema. PCR testing of larynx and lung proved positive for bovine herpesvirus 1 and histopathology confirmed a subacute, multifocal laryngitis consistent with infectious bovine rhinotracheitis (IBR) in both. The herd did not vaccinate for IBR and only occasionally purchased animals with a bull introduced three months before. It was not clear if this was the source of the outbreak. The absence of a significant tracheitis was considered unusual in these cases.

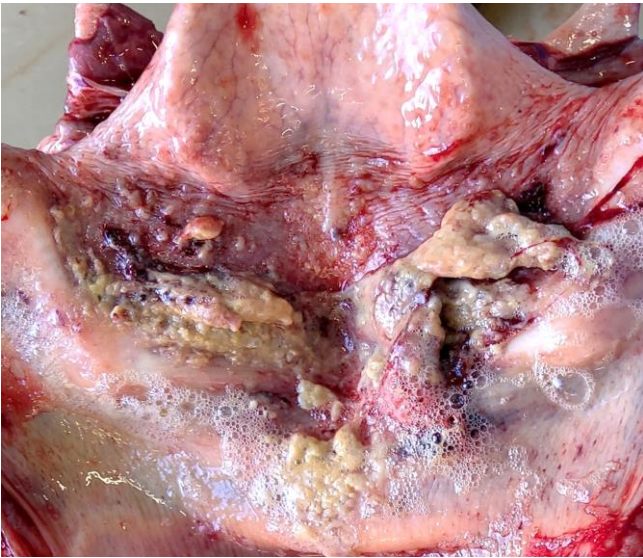


Figure 2 – Laryngeal lesions in a Holstein cow with IBR

SMALL RUMINANTS

Nutritional and metabolic disorders

A group of 200 ewe hogs that had been grazing kale with a bruised barley/concentrate mix available in hoppers was housed with access to the same feed plus ad lib straw. Three days later 16 lambs died over a 48-hour period. Affected lambs were either found dead or showed signs of bloat and diarrhoea before death. Two carcasses were submitted for postmortem examination and the rumens found to contain a mix of short fibre and plentiful grain. Rumen acidosis was suspected and pH results of 3.87 and 3.91 confirmed the diagnosis. Temporarily reducing access to the barley mix to encourage more long fibre intake was suggested in order to allow the rumen to adapt to the diet change.

Toxic conditions

A four-year-old Dutch spotted ewe was found dead one week before the group of 90 were due to start lambing. There had been one other death and four ewes had aborted. They had been fed concentrates while at grass but only good quality silage since housing one week earlier. Postmortem examination found that the

ewe was in good condition with a generalised brown tinge to the tissues. The liver was orange, the kidneys appeared black and there was splenomegaly. A trace of dark brown urine was present in the bladder. Chronic copper toxicity was suspected and was confirmed on analysis of liver and kidney with results of 41368 $\mu\text{mol/kg}$ dry matter (DM) (reference range 314–7850 $\mu\text{mol/kg}$ DM) and 7769 $\mu\text{mol/kg}$ DM (reference range <787 $\mu\text{mol/kg}$ DM) respectively. The foetal liver copper result was within the reference range at 4180 $\mu\text{mol/kg}$ DM. Further history established that the ewes had been fed cattle cake and this was the source of the excess copper. Food Standards Scotland were informed. Examination of aborted twins from a second ewe failed to detect any evidence of infectious disease and it was suggested that this was also related to liver copper loading.

Alimentary tract disorders

Diarrhoea and anorexia were reported in a group of 111 ewes at grass. The supply of hay had been exhausted, and the farmer had sourced a bale of silage from a neighbouring farm. Parts of the bale were noted to be mouldy, however the sheep were happy to eat it. The group was gathered for scanning four days later and around 30 per cent of the ewes appeared unwell. Two carcasses were examined on farm the following day with the only significant finding being liquid large intestinal contents in one. Histopathology identified foci of suppurative inflammation in the intestine consistent with a bacterial aetiology however neither *Salmonella* nor *Yersinia* spp were isolated. A number of ewes aborted and further ewe deaths occurred allowing submission of further samples. *Listeria monocytogenes* was isolated in mixed growth from lung and histopathology found a necrosuppurative typhlocolitis consistent with enteric listeriosis. No foetal samples were collected, but it was

suggested that haematogenous spread of *Listeria monocytogenes* could be the cause. The suspect bale was removed and abortions ceased after two weeks had passed. This is consistent with the reported incubation period of five to 12 days post ingestion of *L. monocytogenes*. In contrast, diarrhoea can develop within 48-hours.

Reproductive tract conditions

Six abortions occurred in a group of 120 ewes which were due to start lambing in one week. The flock was vaccinated against both EAE and toxoplasmosis. Two foetuses and a placenta were submitted and the latter exhibited irregular thickening of the intercotyledonary tissue with brown exudate on all areas. One of the foetuses showed epicardial and pulmonary haemorrhage which are non-specific findings. Gram negative bacilli were observed within foetal stomach contents and *Salmonella enterica* serovar Montevideo was isolated. This bacterium has the potential to cause significant abortion storms without other signs of ill health in the ewes.

Nervous system disorders

Two tups from a group of 28 that had been housed for two weeks developed neurological signs including veering to one side and trying to eat obsessively when moved. A four-year-old beltex tup was submitted after becoming recumbent. It was able to move its limbs but was hyperaesthetic. The brain and spinal cord were removed but no abnormalities were observed. Bacterial cultures were unproductive and there was no evidence of seroconversion to louping ill. Brain histopathology was unremarkable however examination of the spinal cord found a focal inflammatory and necrotising lesion at the level of the third cervical vertebrae. This comprised occasional microabscesses and intralésional Gram positive bacteria consistent with a

diagnosis of listerial myelitis.

Immunohistochemistry was carried out and confirmed infection with *Listeria monocytogenes*. This is an unusual presentation of listeriosis and should be included as a differential in cases of suspected spinal pathology in sheep. Clinically, this case had similarities to cervical myelopathy (wobbler syndrome) which has previously been described in Texel/beltex sheep.

PIGS

A recently established herd with 30 sows of various breeds reported high levels of neonatal mortality. Two live Hampshire piglets were submitted from a litter of 10, four of which had died. The first weighed 2.4kg and was non-weight bearing on its left hind leg, with areas of ulceration dorsal to the carpal and metacarpal-phalangeal joints and lateral to the right hock. There was crusting on the face and a small number of *Haematopinus* sp lice were identified. Postmortem examination found three small abscesses cranial to the left hip from which *Streptococcus dysgalactiae* was cultured. The second piglet weighed 1kg was dull, unresponsive, and hypothermic. It appeared dehydrated and an antemortem urea result of 54.8 mmol/l (reference range 4–8 mmol/l) was consistent with this. Postmortem examination revealed stomatitis and gastric ulceration suspected to be secondary to uraemia. The gastrointestinal tract was generally empty suggesting that this piglet had failed to feed. Despite that there was no evidence of hypogammaglobulinaemia in either case. It was advised that other piglets were checked for lice and that the pens were inspected in case unsuitable floors or bedding was the cause of the limb ulcerations in piglet one.



BIRDS

A farm purchasing 40, day-old broiler chicks every four weeks had consistently lost around 12 per cent in each of the previous few months. Affected chicks were reported to fade and die over a few hours. A spike in losses to 33 per cent prompted further investigation and three, ten-day-old chicks were examined on-farm with a pericardial effusion reported in one. Histopathology identified pericarditis in all three with other lesions supporting a diagnosis of bacterial septicaemia. Suspect viral inclusion bodies were found within hepatocytes in one case suggesting that concurrent infection with fowl adenovirus (inclusion body hepatitis) was contributing to the mortality. The age of the affected chicks made vertical rather than horizontal transmission more likely.

References:

1 Beron MM, Cestari FK, Cavasin J, Favaretto L. Ameloblastic Fibro-Odontoma in a Bovine. *Acta Sci Vet* 2019; 47(S1); 404 -7