SRUC Veterinary Services Monthly Report for November 2025

OVERVIEW

- **Alimentary and skin presentations of malignant catarrhal fever in cattle**
- **Dairy cattle deaths following administration of routine treatments**
- **Losses due to autumn nematodirosis in lambs**
- **Lead poisoning in a runner duck**

DISEASE ALERTS

The following conditions were reported by SRUC VS disease surveillance centres in February 2024/25. Given similar climatic and production conditions, they could also be important this year.

Rickets in hoggs

Rickets is most commonly diagnosed in hill lambs away wintered on good dairy grazing. Improved nutrition triggers fast growth at a time when cutaneous production of vitamin D from sunlight is lacking, and animals are reliant on dietary vitamin D. Vitamin D deficiency results in impaired calcification of new bone and widening of growth plates. Affected hoggs appear stiff and reluctant to move, with recumbency in some cases. Carpal valgus may be seen. History and response to treatment with vitamin D are key to establishing a diagnosis with histopathology of long bone metaphyses required for absolute confirmation.

Lungworm in deer

Dictyocaulus spp are the most important parasite of farmed deer with calves in their first autumn/winter particularly at risk. Animals may lose condition and cough when handled but this is not always the case. High burdens can prove fatal. Diagnosis is based on detection of lungworm larvae in faeces or postmortem examination. Adult deer that are well fed and not stressed are less likely to be affected.

GENERAL INTRODUCTION

Meteorological Office data for November was fairly typical for the month with rainfall totalling 109 per cent and sunshine hours of 93 per cent when compared to figures for the 1991 to 2020 period. The mean temperature of 5.4˚C was 0.2˚C above the thirty-year average.

CATTLE

Nutritional and metabolic disorders

Two Simmental cross cows from a group of 90 were found dead two weeks after being housed for weaning. Both carcases were in good body condition, and the rumens contained a large amount of fibre consistent with their straw-only diet. The omasa and abomasa were impacted, and the latter had ruptured resulting in peritonitis. Nine per cent crude protein is the advised dietary minimum for dry suckler cows, with average quality straw containing less than half this amount. Low levels of crude protein have a negative impact on the rumen microbes leading to impaired rumen function.

Toxic conditions

The carcase of a six-month-old Limousin cross heifer was submitted for postmortem examination after it became the second calf to be found dead in a group of 50 at grass. Leaves found within the rumen content were identified as yew (*Taxus baccata*) and laurel (*Prunus* sp) (Fig 1) both of which can cause sudden death following ingestion. Yew contains taxine and is most toxic in winter while cyanogenic glycosides are the toxins in laurel. Further history revealed that garden waste had recently been dumped in the field and that yew and laurel trees were present around the boundaries. The cattle were moved and no further deaths were reported.

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Figure 1 – Yew and laurel leaves recovered from the rumen of a six month old heifer that had been found dead

Generalised and systemic conditions

A seven-month-old Aberdeen Angus cross experienced haemorrhage following castration and string was tied around the scrotum to control the bleeding. It was removed six days later, and the calf died the following morning. Postmortem examination found an obvious indent where the string had been applied, and the distal tissues were necrotic. A 6 cm diameter blood clot was present proximally and a small amount of pus was noted within the spermatic cord. Histopathology of scrotum described a severe necrosuppurative dermatitis with vascular thrombosis. Fibrinous oedema was identified in the lungs and considered consistent with acute endotoxaemia associated with re-perfusion following removal of the string.

A yearling Charolais cross bullock presented with pyrexia, tachypnoea, ocular discharge and dark diarrhoea. It deteriorated and died despite treatment and was submitted for postmortem examination. There was little forage within the rumen and the contents of the gastrointestinal tract were generally watery. The jejunum (Fig 2) was thickened and the lumen contained blood and sloughed mucosa. *Salmonella* spp were not detected on culture however PCR testing of spleen proved positive for ovine herpesvirus-2 (OHV-2). Histopathology described a severe necrotising enteritis with frequent vascular thrombosis. The sections lacked the typical vasculitis lesion that is pathognomonic for malignant catarrhal fever (MCF) but this may have been obscured by the severe pathology.

Figure 2 – Small intestinal lesions in the alimentary form of malignant catarrhal fever

A severe exudative dermatitis (Fig 3) was reported affecting the whole body of an 18-month-old Aberdeen Angus bull on a second holding. It was mainly recumbent but still eating at the time of blood sampling but went on to die. PCR testing detected OHV-2 confirming a diagnosis of cutaneous MCF. The risk of exposure to OHV-2 was high as the cattle shared the air space with a sheep breeding unit where animals were processed on a regular basis. Three cohorts had died of MCF in the spring.

Figure 3 – Extensive dermatitis in a case of cutaneous malignant catarrhal fever

Mammary diseases
A Holstein Friesian cow was found dead after being dried off with bismuth subnitrate earlier that day. The left fore quarter was firm and swollen and a mixture of watery, haemorrhagic fluid and teat sealant could be expressed from the teat. *Escherichia coli* was isolated from the milk, udder and liver but was present in mixed growths likely as a result of autolysis. Histopathology confirmed a severe mastitis with acute fibrinosuppurative changes associated with intralesional Gram-negative bacilli consistent with *E. coli* or *Bacteroides* sp. It was established that the cow had been challenging to handle making it difficult to adhere to aseptic technique during insertion of the teat sealant. Endotoxaemia as a result of peracute *E coli* mastitis was considered the most likely cause of death.

Musculo-Skeletal conditions
A five-year-old Jersey cow presented with milk drop and tachycardia and was treated with NSAIDs. It improved slightly but then deteriorated and was euthanased after becoming recumbent. Swelling was noted around the injection site and postmortem examination detected oedema and haemorrhage with areas of dark, dry tissue in the quadriceps, semimembranosus and semitendinosus muscles. The findings were indicative of blackleg but *Clostridium chauvoei* was not detected on anaerobic culture or fluorescent antibody test. However, histopathology confirmed multifocal to coalescing myocyte necrosis with interstitial haemorrhage and emphysema with occasional perivascular colonies of clostridial-type bacteria confirming the suspected diagnosis.

SMALL RUMINANTS

Nutritional and metabolic disorders
Parasitic gastroenteritis in combination with trace element deficiency was a frequent diagnosis during November. A typical case involved a mob of 400 mixed mule and Scottish blackface (SBF) lambs split into two equal groups and moved to a dairy farm for wintering. Rapid condition loss was noted towards the end of the first month with more mules than SBF lambs affected. A mule lamb became recumbent and died 48-hours later. The carcase weighed 16 kg and was emaciated with faecal soiling of the fleece. Faeces were soft rather than diarrhoeic and the egg count of 10,500 strongyle eggs per gram (epg) plus 550 *Nematodirus battus* epg confirmed parasitic gastroenteritis. Liver selenium and cobalt results were very low at 0.175 mg/kg dry matter (DM) (reference range 0.9 – 3.5 mg/kg DM) and 0.039 mg/kg DM (reference range 0.08 – 0.35 mg/kg DM) respectively. Anthelmintic treatment and trace element supplementation was advised. The lambs had been treated with levamisole prior to being moved but the exact date was unknown. An efficacy check was recommended.

Parasitic diseases
A farmer reported very watery diarrhoea and poor body condition in a batch of six-month-old ewe lambs. The group had been treated with a triclabendazole/ivermectin product two weeks earlier and a post-treatment worm egg count had

not detected any evidence of patent nematode infection. Two animals died and one carcase was examined on farm with no diagnosis reached. Tissues were submitted for histopathology and examination of small intestine found numerous parasite cross sections consistent with rumen fluke. It was concluded that the presence of immature *Calicophoron daubneyi* in the upper small intestine explained the clinical signs. It is common for rumen fluke eggs to be detected in faecal samples, but acute disease remains rare in Scotland.

A homebred, seven-month-old Lleyn ram lamb running with eight other sheep was found dead without prior clinical signs. Postmortem examination revealed liquid small and large intestinal contents with *Nematodirus* sp worms visible in the former. Total worm counts were very high with 188,000 *Trichostrongylus* sp. and 136,000 *Nematodirus* battus recovered from the small intestine, plus 13,500 *Trichostrongylus* sp. and 850 *Teladorsagia* sp. from the abomasum. Egg counts were relatively low when compared to the worm burden with 950 strongyle epg and 750 *Nematodirus* battus epg detected. A second flock submitted a lamb after 8 per cent of a group of 326 had been found dead over the course of the previous two weeks. The lambs were grazing stubble undersown with grass and large numbers of cereal grains were present in the rumen. A pH of 5 indicated a degree of acidosis. Worm egg counts of 800 strongyle and 3050 *Nematodirus battus* epg suggested significant parasitic gastroenteritis, and 44,600 *Nematodirus* battus were recovered from the small intestine. Nematodirosis (as part of a mixed nematode burden) was considered the primary cause of death in both cases. The findings suggest that there had been insufficient exposure to *N battus* earlier in the year to allow immunity to develop. *Nematodirus battus* larvae are relatively short lived and the high burdens detected in these cases most likely resulted from an autumn hatch.

Generalised and systemic conditions

Systemic pasteurellosis due to *Bibersteinia trehalosi* was a frequent diagnosis across Scotland during November consistent with the expected seasonal pattern. Seven deaths occurred in one week from a group of 150 six-month-old Scottish blackface lambs that had been at wintering for three weeks. They were fully vaccinated with a clostridial/pasteurella vaccine. A dyspnoeic lamb was euthanased and submitted along with a carcase for postmortem examination. This detected small ulcers in the distal oesophagus and linear areas of lung consolidation in lamb one. Three hundred *Haemonchus contortus* worms were recovered accounting for around 10 per cent of the abomasal worm burden. Lamb two had areas of pharyngeal necrosis (Fig 4) plus large numbers of petechial haemorrhages within the tissues of the neck and on the pleura. Systemic pasteurellosis was suspected and confirmed on bacteriology. Lamb one had a packed cell volume (PCV) of 0.24 l/l (reference range 0.3-0.45 l/l) confirming anaemia due to haemonchosis. Leukopaenia was also apparent (1.3 x 10^9 l/l; reference range 5 – 14 x 10^9 l/l) and has been described in association with haemonchosis. This could have predisposed to pasteurellosis in fully vaccinated lambs, but could also have been a consequence of acute systemic infection.

Figure 4 – Pharyngeal necrosis in a case of systemic pasteurellosis

Three carcases were submitted following four sudden deaths from a group of 280 store lambs originating from around 15 holdings. Postmortem examination findings were typical of systemic pasteurellosis and included multiple miliary foci on the liver of two. Both *B trehalosi and Listeria ivanovii were* isolated from the liver of one case and Gram staining revealed bacteria typical of *B trelahosi* in the lung and liver. In addition, large colonies of Gram-positive bacilli were observed associated with the areas of hepatic necrosis consistent with listerial hepatitis. Concurrent infection with *B trehalosi and L ivanovii* has been previously reported.[1] As both bacteria can produce similar liver pathology, bacteriology is required to confirm the causative agent. However, in cases of systemic pasteurellosis additional lesions are often evident.

PIGS

Alimentary tract disorders

A large finishing unit reported an increased mortality rate in 13 to 16-week-old pigs presenting mainly as sudden deaths. A 13-week-old pig from a group of 63 became dyspnoeic with epistaxis and died shortly after administration of NSAIDs. Postmortem examination identified focal perforation of the distal colon/rectum with adjacent jejunal serosal damage, extensive intra-abdominal haemorrhage, fibrinous peritonitis, and a large, organised blood clot extending cranially into the abdomen. The findings were consistent with fatal intra-abdominal haemorrhage secondary to rectal perforation, most likely resulting from traumatic boar-to-boar mounting. Consumptive coagulopathy was proposed as the cause for the epistaxis and jejunal haemorrhage.

BIRDS

Toxic conditions

A six-month-old free range female runner duck from a flock of three was found dead without prior clinical signs. Postmortem examination identified marked hydropericardium which is a feature of H5N1 infection in ducks. However, investigation by APHA found no evidence of avian influenza. Numerous metallic objects were found in the gizzard including wire, metal fragments and a nail. There was no evidence of ingesta in the crop, proventriculus or small intestine indicating anorexia prior to death. Histopathology revealed severe hepatic haemosiderosis, and the liver iron content was considered high at 13,702 mg/kg DM (no reference range available). Toxic levels of lead (4.187 mg/kg fresh tissue (FT)), were also detected and Food Standards Scotland was informed. The final diagnosis was lead poisoning with concurrent hepatic iron accumulation secondary to ingestion of metallic objects.

References:

1 Dunnett E, Florea L, Thurston L *et al* Deaths of weaned lambs with visceral *Listeria ivanovii i*nfections. Vet Rec Case Rep; 2020: 8. e001254. https://doi.org/10.1136/vetreccr-2020-001254