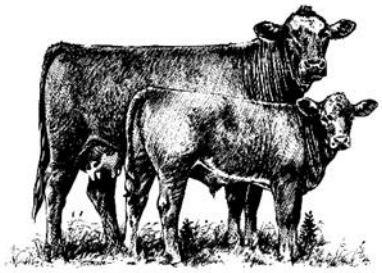
Animal & Plant Health Agency



SRUC

# Great Britain cattle quarterly report, disease surveillance and emerging threats

## Volume 29: Quarter 2 (April to June) 2025

## Highlights

- **The 10 most frequent diagnoses from carcase submissions – page 4**
- **Digestive system diseases update – page 6**
- **Outbreaks of actinobacillosis – page 14**
- **The 10 most frequent diagnoses from abortion and stillbirth submissions – page 18**

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# Introduction and overview

This quarterly report reviews disease trends and threats for the second quarter of 2025 (Q2), April to June. It is compiled using data available at the time of writing. It contains interesting cases, and analyses carried out on disease data gathered from APHA, SRUC Veterinary Services division of Scotland's Rural College (SRUC) and Surveillance Pathology Partners; and intelligence gathered through the Cattle Expert Group networks. We are aware that there were SRUC data missing from the database at the time of writing. This could not be rectified in time, and analysis and trends based on later updated data may therefore differ from this report. The focus will therefore be on trends detected in APHA data from England and Wales, plus interesting and unusual cases from the GB Surveillance Network. In addition, links to other sources of information, including reports from other parts of the APHA and Defra agencies, are included. A full explanation of how data is analysed is provided in the annexe available on GOV.UK.

# Dairy sector update

**Prices:** Following a few months of farmgate milk price increases, farmgate milk prices have stabilised. The UK average milk price for June 2025 was announced by Defra as being 43.55ppl, up 0.36 pence (0.8%) on the previous month. Currently pricing is significantly up year on year (+4.5p 12%).

Overall price movements on UK wholesale markets were surprisingly stable in Q2, despite increasing supplies of milk. Prices remain at historically high levels. Bulk cream and butter markets carried bullish sentiment through June, with weaker supplies on the continent and strong seasonal cream demand supporting prices.

**Production:** GB milk deliveries through Q2 accelerated away with the arrival of the spring flush, up 5.0% on the same quarter in 2024. April increased by 6.0%, May 5.7% and June by 6.0%. We are now annualising versus 2024's underwhelming and damp summer which brought subdued milk volumes. For 2025 so far, higher farmgate prices and lower feed costs are creating a very favourable milk-to-feed-price ratio, encouraging producers to push for marginal litres. However, a historically dry spring and summer are concerns for forage later in the year.

**Trade:** Total dairy import volumes in Q2 increased by 11,800t (3.5%) at 349,400t in Q2 2025 compared to previous year. The increase was reported from EU nations (12,700t), who are our major providers. Major EU nations contributing to UK's increase in imports are Greece (+6,600t), Ireland (+4,600t), France (+1,900t), Poland (+1,800t), Austria (+900t) and Spain (+700t). Increase in imports was capped by decline from Germany and Netherlands.

Meanwhile, Total export volumes of dairy products from the UK for Q2 2025 were also up year-on-year. The value of dairy exports has been growing for the last two years. Exports

of dairy products to the EU increased by 21,100t and to non-EU nations increased by 12,000t.

This was largely driven by an increase in exports of milk and cream, which edged up 20,200t (9.4%), followed by increase in exports of powders and whey and whey products by 10,000t (31.1%) and 3,800t (26.5%) respectively.

**Demand:** Overall, during the 52 weeks ending 12 July 2025, volumes of cows' dairy declined by 1.2% year-on-year (NIQ Homescan POD, Total GB). Spend on cows' dairy increased by 4.0% year-on-year, driven by a growth in average prices of 5.3%. There was however, some variance between products with cows milk experiencing reductions, seeing a 2.6% year-on-year decline (NIQ, 52 w/e 12 July 2025) although whole milk has been in growth, whilst butter volumes dipped slightly and Cows' cheese remained in volume growth, up 2.1% year-on-year, with spend during the period increasing by 2.9% (NIQ, 52 w/e 12 July 2025).

## Beef sector update

**Prices:** Following months of price inflation, GB deadweight prime cattle prices seemingly hit a ceiling in the week ending 3 May this year after the all-prime price reached 702p/kg. The all-prime average price then fell steadily to stand at 631p/kg in the week ending 28 June, representing a 155p/kg increase in price from the same week last year. Since this point, prices have once again turned a corner and have started to rise, albeit at a more gradual rate, with the all-prime measure reaching 640p/kg in the week ending 9 August. Cull cow prices have followed a similar trajectory, with the overall GB average price rising to 541p/kg in the week ending 10 May, before falling to 501p/kg in the week ending 28 June. Cow prices have since levelled, standing at 507p/kg in the week ending 9 August.

**Production:** Beef production in the first half of 2025 has totalled 514,000 tonnes (carcase weight), down nearly 5% on the year. This fall in production has been driven by a 4% decrease in prime cattle slaughter and a 5% decrease in cow slaughter compared to the same period in 2024. While prime cattle slaughter has been below 2024, numbers have been slightly above expectations, likely incentivised by record high farmgate prices.

**Trade:** International beef trade has presented a mixed picture in the first half of 2025, characterised by muted export volumes and slightly reduced imports. Total beef imports (including fresh/frozen, processed and offal) for the first half of 2025 totalled 149,400 tonnes (product weight), down 3% from the same period last year. However, import volumes have been in growth on a monthly basis. Meanwhile, total beef export volumes have fallen by 9% on the year to 65,700 tonnes. However, the value of UK beef exports has risen by 16% on the year: reflecting our high domestic prices.

**Demand:** Consumer demand has also been impacted by these high prices. In the second quarter, the average price of beef at retail rose dramatically, as supply-driven inflation started to be passed through to the shelf. In the 12-week period ending 13 July, primary beef volumes saw a -12.5% annual decrease. Mince and steak volumes were both in

decline (-7.5% and -12.7%), driven by steep increases in average price (+22.0% and +23.2%). A year-on-year volume decline of -30.0% was also seen for beef roasting joints, driven by a +11.6% increase in average spend. These declines resulted from a combination of loss of shoppers, a decrease in frequency of purchase and a decrease in volumes purchased per trip.

Acknowledgment for the dairy and beef updates: Hannah Clarke, Lead Analyst (Red Meat), Agriculture and Horticulture Development Board (AHDB)

## Bluetongue serotype 3 (BTV-3) update

The first case of the 2024 to 2025 vector season was confirmed in a ram in Norfolk on 26 August 2024. Overall, the total number of BTV report cases in GB for the 2024 to 2025 vector season was over 600 investigations, with 262 Confirmed with BTV-3 (260 in England and 2 in Wales). One confirmed case had an animal infected with serotype 12 in addition to animals infected with serotype 3. A total of over 360 report cases were negated. The new 2025 to 2026 vector season started on the 1st of July 2025.

Images of the clinical signs can be found here: Clinical signs of bluetongue | AHDB

Bluetongue virus is a notifiable disease. Suspicion of bluetongue virus in animals must be reported to the Animal and Plant Health Agency on 03000 200 301 in England, on 03003 038 268 in Wales, and to the local Field Services Office in Scotland. Further guidance and information are available on the Ruminant Health & Welfare site, Bluetongue: information and guidance for livestock keepers (GOV.UK) and on Bluetongue: how to spot and report it (GOV.UK).

## Cattle disease surveillance dashboard outputs

The most frequent diagnoses from carcase submissions made in Q2 of 2025, compared to Q2 in 2024, and Q2 for 2015 to 2024 inclusive, through the Great Britain (England, Wales, and Scotland) scanning surveillance network, are illustrated in Table 1. These can be interrogated further using the interactive cattle disease surveillance dashboard which was launched in October 2017. Please see the note in the introduction on Page 2 regarding SRUC data.

Despite a high level of awareness of the importance of navel treatment in newborn calves, navel ill remained the most common diagnosis for this quarter. Another neonatal calf disease with perinatal management related risk factors, colisepticaemia, was the third most common carcase diagnosis. Congenital abnormalities were in the Top 10 diagnoses, and examples of these are discussed on Pages 11-20.

**Table 1: Great Britain scanning surveillance 10 most frequent carcase submission diagnoses in Q2 of 2025, Q2 of 2024, and Q2 for 2015-2025**

| 10 most frequent carcase diagnoses Q2 2025 | 10 most frequent carcase diagnoses Q2 2024 | 10 most frequent carcase diagnoses Q2 2015-2025 |
|---|---|---|
| 1. **Navel ill +/- joint ill** | 1. Navel ill +/- joint ill | 1. Navel ill +/- joint ill |
| 2. **Pneumonia due to *Pasteurella multocida*** | 2. Pneumonia due to *Pasteurella multocida* | 2. Hypogammaglobulinaemia |
| 3. **Colisepticaemia** | 3. Pneumonia due to *Mycoplasma bovis* | 3. Pneumonia due to *Mannheimia haemolytica* |
| 4. **Coccidiosis** | 4. Pneumonia due to *Mannheimia haemolytica* | 4. Pneumonia – not otherwise specified |
| 5. **Pneumonia due to *Mannheimia haemolytica*** | 5. Colisepticaemia | 5. Colisepticaemia |
| 6. **Cryptosporidiosis** | 6. Pneumonia – not otherwise specified | 6. Cryptosporidiosis |
| 7. **Pneumonia – not otherwise specified** | 7. Abomasal ulceration | 7. Digestive disease due to other causes (not listed) |
| 8. **Pneumonia due to *Mycoplasma bovis*** | 8. Coccidiosis | 8. Pneumonia due to *Pasteurella multocida* |
| 9. **Abomasal ulceration** | 9. Hypogammaglobulinaemia | 9. Pneumonia due to *Mycoplasma bovis* |
| 10. **Congenital abnormality** | 10. Intestinal torsion (red gut) | 10. Coccidiosis |

# New and re-emerging diseases and threats

## Changes in disease patterns and unusual diagnoses

### Systemic disease

Reports of salmonella in livestock, dogs, birds and wildlife in Great Britain can be found on GOV.UK. There was an increase in incidents of *Salmonella* Dublin in May 2025, compared to May for the five previous years.

# Digestive system disease

## Liver fluke bulk milk serology

Figure 1 shows the proportion of National Milk Records (NMR) bulk milk samples testing positive liver fluke antibody, by ELISA, by country, from Q1 2020 to Q2 2025 inclusive. In some cases, samples are not geo-referenced. They are included in the GB total only and as such the percentage positive by country may not equate to the GB percentage positive.

This data is kindly provided under agreement from National Milk Records (NMR) to support the collection of disease surveillance information across GB. NMR provide milk testing for endemic disease in cattle. Most of the bulk milk samples tested will be routine quarterly surveillance ('monitoring') and a few may be part of a clinical disease investigation ('diagnostic') but these are not differentiated in Figure 1. In line with agreed APHA reporting, the number of samples tested is not shown. For further information on this data please contact vetenquiries@nmrp.com.

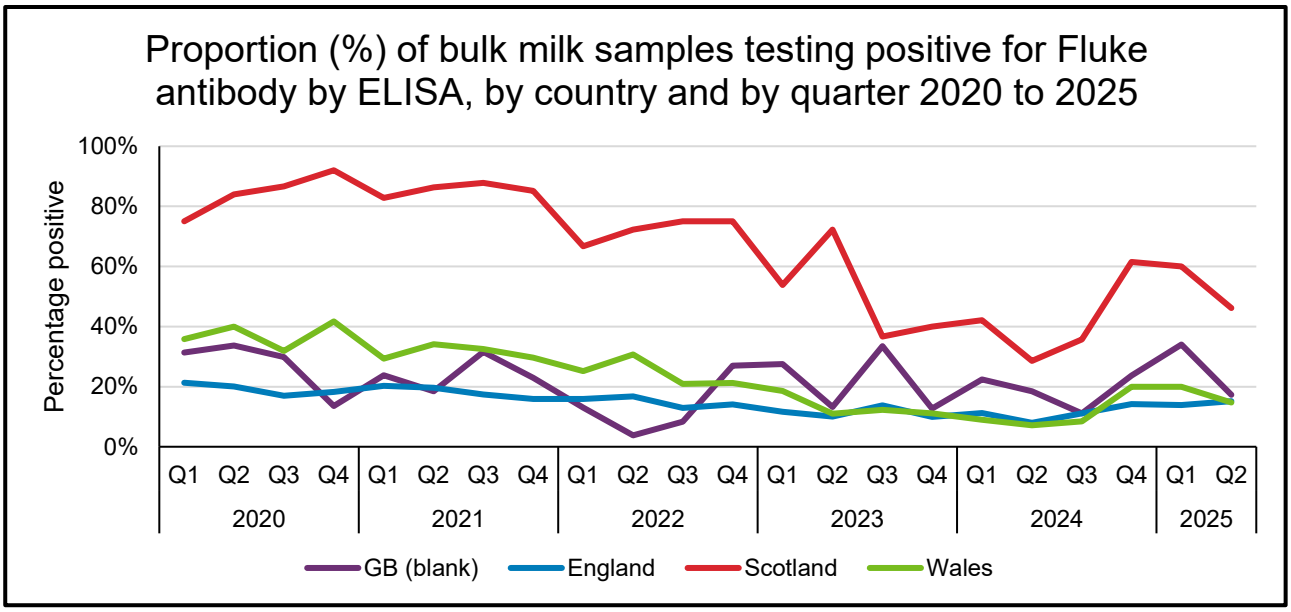


**Figure 1: Proportion (%) of bulk milk samples testing positive for liver fluke antibody by ELISA, by country, and by quarter Q1 2020 to Q2 2025* (*to date)**

Acknowledgements for the liver fluke data: Eamon Watson MRCVS, NMR Product Manager and Karen Bond MRCVS, NMR Veterinary Team Lead

## Ruminal acidosis and sequelae

Ruminal acidosis, and disease presentations associated with prior acidosis, were detected several times across the surveillance network in Q2 of 2025.

### Acute ruminal acidosis in a fattening heifer

A 20-month-old beef heifer, intended for fattening, was found moribund in lateral recumbency, and was euthanised, six days after the purchase of 25 animals from a mart.

Two others were unwell, with grain noted in faeces. The group were reportedly fed haylage with only a small amount of grain. Postmortem examination findings indicated acute ruminal acidosis, including sunken eyes (dehydration), dry rumen contents of fibre and multiple grains, reddened ruminal submucosa, and a ruminal pH of 3.7. There were multiple grains throughout the alimentary tract, with copious liquid content in the small and large intestines. A normal rumen pH is between 5.5 and 7.5 depending on the diet fed. It was advised to review feeding and to ensure animals could not access more grain than intended.

### Caudal vena cava thrombosis in dairy cows

A dairy cow was submitted for postmortem examination to investigate several cases of malaise and pyrexia in a 380-cow dairy herd. Most affected cows had responded to treatment with anti-inflammatories and/or antibiotics, but some had later relapsed and been culled, with several reported to have had liver abscesses. The submitted cow was noted to be coughing two weeks after treatment and was later found dead, with copious blood around the nose and on the floor. At postmortem examination, there was clotted blood in the oesophagus and more than 11 litres of clotted blood in the rumen, which had a pH of 4.9. Multiple adhesions were present between the diaphragm, liver and caudal lung lobes with large areas of foul-smelling, greenish necrosis in the lungs. There was an approximately 10cm-diameter liver abscess adjacent to the caudal vena cava and a friable approximately 10cm-long thrombus attached to the wall of the caudal vena cava in the region of the liver. These findings confirmed death due to portocaval thrombosis, with secondary necrotising lesions in lung and fatal haemorrhage.

Thrombosis of the caudal vena cava and its tributaries is most often a sequel to rumenitis caused by acidic rumen contents and there was a low rumen pH at the time of examination. A review of the diet and management was advised.

## Consumption of non-feed materials in cattle

Ingestion of non-feed material resulting in the death of adult cows was detected several times across the Veterinary Investigation Centre (VIC) network during the second quarter of 2025.

- In one case, a heavily pregnant suckler cow died after a short period of thrashing in lateral recumbency, preceded by a period of loss of body condition. Postmortem examination detected a 40cm by 50cm accumulation of tangled plastic and rope (Figure 2) at the margin of rumen and reticulum, that was suspected to have resulted in episodic obstruction of outflow, contributing to loss of body condition. The cow had been grazing marshland where close monitoring of access to foreign materials could be more challenging

- Two unrelated cases of traumatic reticulo-peritonitis were detected in housed dairy cows, secondary to consumption of wires. One case presented as sudden death, while in the other a three-week period of pyrexia, milk-drop and respiratory signs was reported. Postmortem examination found extensive peritonitis with 6.5cm and

8cm-long wires found within fibrinous/fibrous adhesions between the liver, reticulum and diaphragm. In the second case, there was also bilateral abscessation of the cranial lung lobes, likely secondary to embolic spread.

**Figure 2: Tangled rope and plastic found in the reticulum of a heavily pregnant beef suckler cow with significant condition loss and hypoproteinaemia**

These cases highlight the non-discriminating feeding behaviours of cattle of all types, in both intensive and extensive systems. Care must be taken to remove all waste plastic, rope and other materials from the feeding environment, and to prevent inclusion of metal such as wires in rations by avoidance of, for example, old tyres for weighting silage clamps and by addition of magnets to feeder wagons.

## Mesenteric torsion in calves

Mesenteric volvulus was the cause of death in multiple calves examined by Carmarthen and Starcross VICs this quarter. The age of affected calves ranged from neonates to seven-month-old and clinical signs constituted of sudden death in two cases, with bloat, abdominal distension and reluctance to feed noted in another two. Gross pathological signs in all cases included dehydration and a torsion involving the root of mesentery (Figure 3). This had resulted in obstruction and ischemia of the small intestines which were dilated and contained haemorrhagic content. In one case, a subsequent ileal rupture was also present. Intestinal torsion is a sporadic event in cattle and is thought to occur secondary to fermentation of ingesta in the intestinal tract, leading to dilation and subsequent instability of the intestines. Overfeeding and overflow of milk into the intestinal tract can be a predisposing factor in pre-weaned calves, for example where ad lib milk replacer is fed via machines. Other potential contributory factors include “lively” calves that frolic before and after milk feeding, and hypermotility of the gut secondary to irritation from

inflammation. In one case, affecting a seven-month-old Wagyu cross calf at grass, faecal analysis detected a coccidial oocyst burden of 15,400 oocysts per gram (opg). Speciation identified 99% of oocysts as pathogenic *Eimeria bovis* and *zuernii* species, confirming a diagnosis of concurrent coccidiosis.

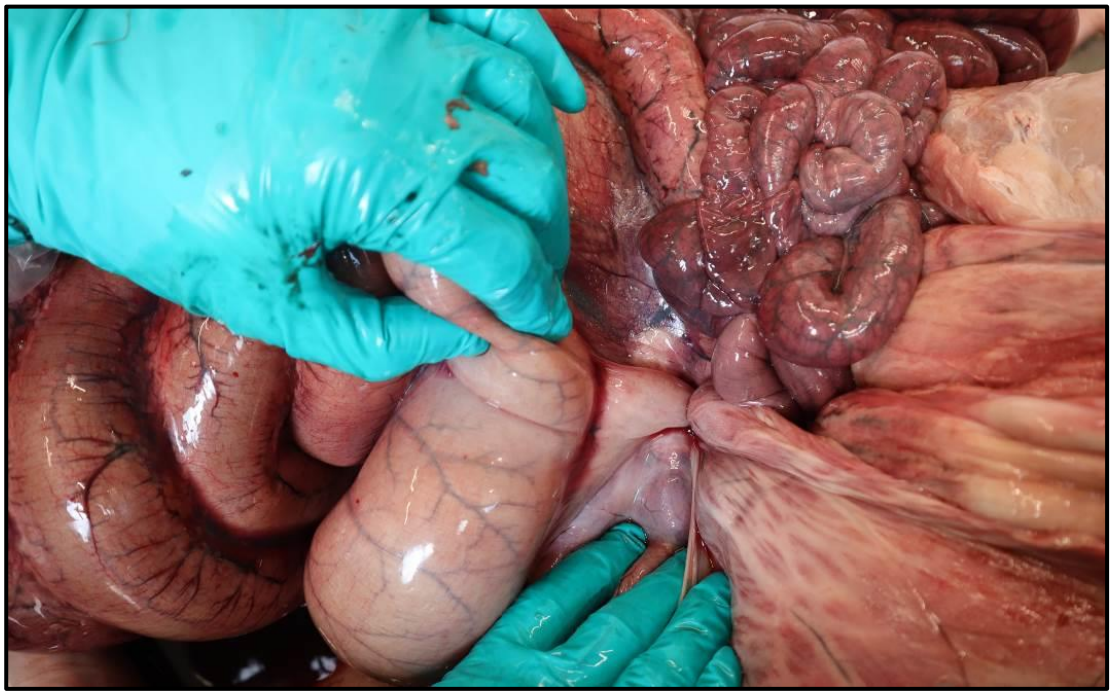

**Figure 3: Mesenteric torsion in a six-week-old calf**

## Respiratory system

The graph in Figure 4 shows the number of monthly diagnoses made in cattle with respiratory disease (all ages) submitted as carcasses from holdings in the Southwest of England during the period 2015-2024.

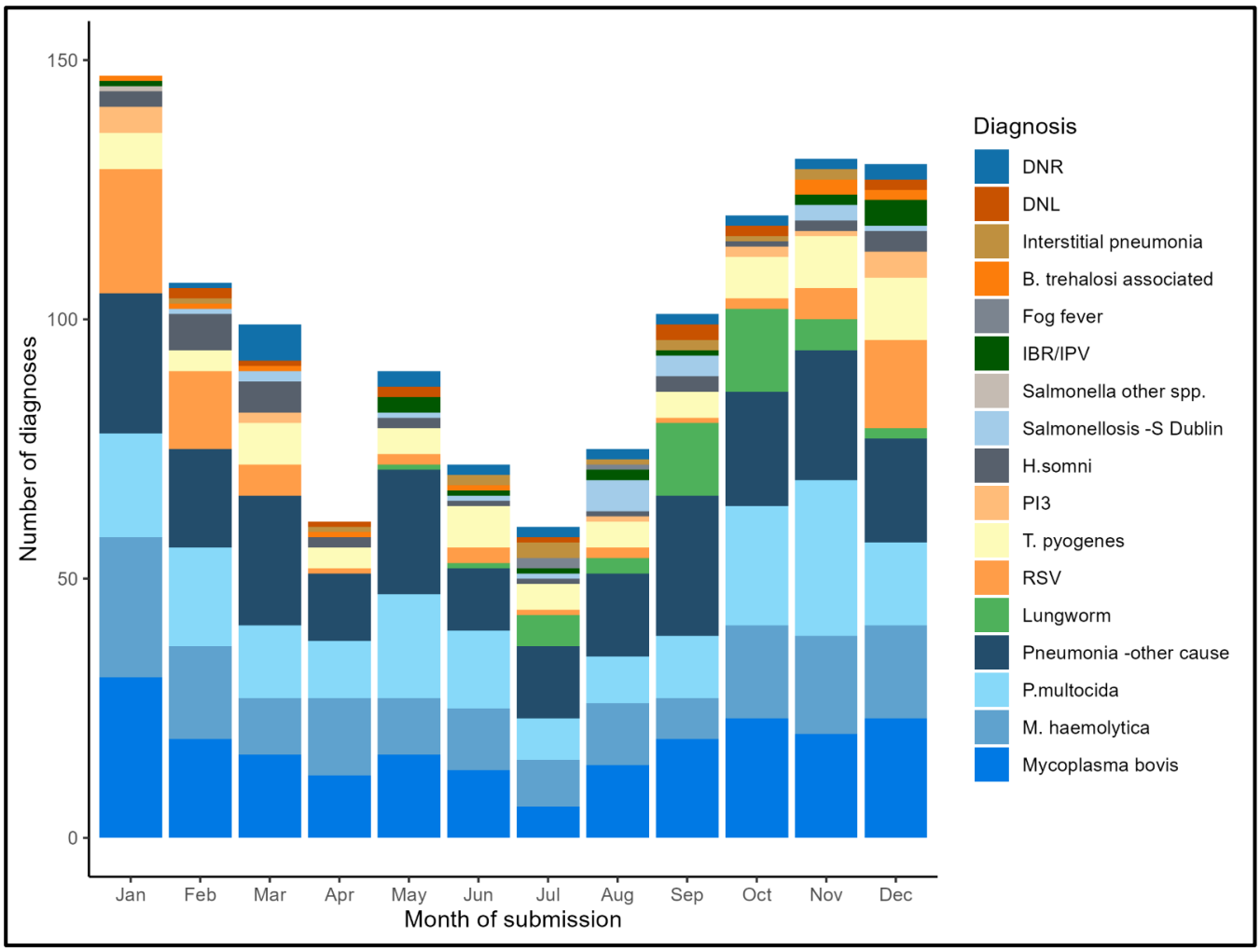


**Figure 4: Number of monthly diagnoses made in cattle with respiratory disease (all ages) submitted as carcasses from holdings in the Southwest of England during the period 2015-2024. 'Pneumonia – other cause' is applied to other potential infectious respiratory pathogens that are not listed individually. DNR = diagnosis not reached. DNL = diagnosis not listed.**

## Infectious bovine rhinotracheitis (IBR) gE bulk milk serology

Figure 5 shows the proportion of National Milk Records (NMR) bulk milk samples testing positive for IBR gE antibody (used for herds vaccinating with a gE deleted IBR vaccine), by ELISA, by country, from Q1 2020 to Q2 2025 inclusive. In some cases, samples are not geo-referenced. They are included in the GB total only and as such the percentage positive by country may not equate to the GB percentage positive.

This data is kindly provided under agreement from National Milk Records (NMR) to support the collection of disease surveillance information across GB. NMR provide milk testing for endemic disease in cattle. Most of the bulk milk samples tested will be routine quarterly surveillance ('monitoring') and a few may be part of a clinical disease investigation ('diagnostic') but these are not differentiated in Figure 5. The values indicate a high level of, and widespread, IBR exposure in England, Scotland, and Wales. In line

with agreed APHA reporting, the number of samples tested is not shown. For further information on this data please contact vetenquiries@nmrp.com.

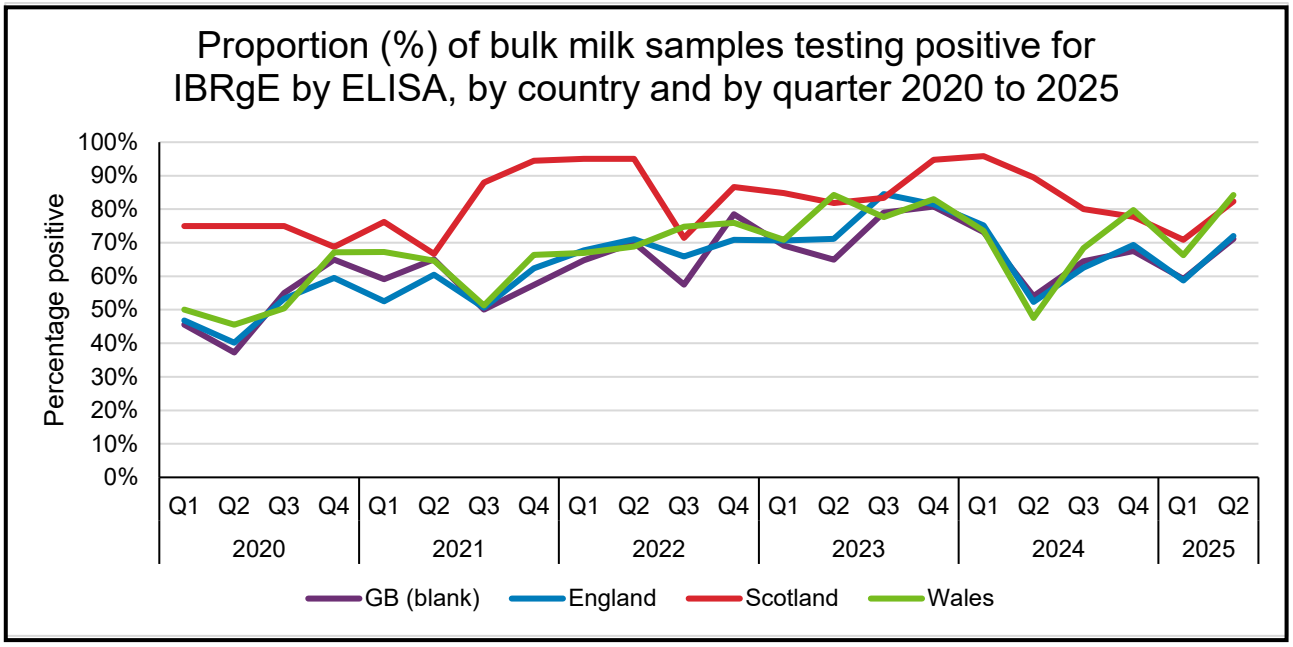


**Figure 5: Proportion (%) of bulk milk samples testing positive for IBRgE antibody by ELISA by country and by quarter Q1 2020 to Q2 2025* (*to date)**

Acknowledgements for the IBR data: Eamon Watson MRCVS, NMR Product Manager and Karen Bond MRCVS, NMR Veterinary Team Lead

### *Pasteurella multocida* and *Streptococcus ruminantium* infection in beef suckler calves

Pneumonia and deaths, despite treatment, were reported in housed mixed-age suckler calves. A severe anteroventral fibrinosuppurative bronchointerstitial pneumonia was present and the distal portion of the trachea was filled with thick cloudy mucopurulent material. *Pasteurella multocida* and *Streptococcus ruminantium* were isolated and *Mycoplasma dispar* was detected by DGGE/PCR. *Streptococcus ruminantium* has only relatively recently been described in ruminants as a potential cause of pneumonia, endocarditis, abscesses and arthritis in ruminants. Like many of the pathogens this organism also occurs in the tonsils of clinically healthy cattle.

## Musculoskeletal system

No significant trends this quarter.

### Congenital chondrodystrophy in a Limousin-cross suckler calf

A six-day old calf was submitted for postmortem examination to investigate the cause of difficulty standing, circling, star-gazing, and small stature since birth. This was the first affected calf in a 30-cow commercial suckler herd of mixed cross-bred cows,

approximately 12 of which had so far calved. The dam of the calf was a homebred Jersey-cross heifer with the sire a Limousin bull which had been used by the farm for several years. The pathological findings were suggestive of defective long bone growth, leading to enlarged elbow and stifle joints, shortening of the humerus bones, resulting in a smaller stature of this calf. The cranium was domed, and opening the skull revealed a cranial cavity that was relatively flattened, the cerebrum of the brain was broadened and relatively flattened. One kidney was markedly affected with cystic structures, and the other kidney was relatively small and firm. Bone histopathology was consistent with chondrodysplasia/chondrodystrophy and did not identify any alternative brain pathology. The 'dummy' calf signs were likely due to the deformation of the cerebrum secondary to the change in shape of the skull due to the chondrodysplasia. Trace element testing confirmed very low liver manganese concentration, these equated to 0.215 mg/kg DM, where a suggested normal liver value in a newborn calf would be 8 mg/kg DM. It was considered that Manganese deficiency may may have played a significant role in this case, however proof of manganese deficiency causing chondrodysplasia is lacking. Whatever the cause of chondrodystrophy in suckler calves, the impact is likely in early to mid-gestation, at about 4-5 months before birth, although prolonged deficiency during gestation could also be involved in some cases. Other clinical signs that may be associated with manganese deficiency in cattle includes cow infertility and weak or slowed oestrus.

# Urinary system

No significant trends this quarter.

### White-spotted kidney in a calf

Two calves aged 25-days-old (Calf 1) and 10-days-old (Calf 2) were submitted to investigate the cause of scouring affecting pre-weaned calves in this large dairy herd. At the time of submission there were 5-10 calves born daily, with approximately 400 pre-weaned calves penned in groups of 20. Around 3-5 pens had been affected with scours, however not every calf in affected pens developed diarrhoea. The problem started in calves around 3-weeks-old but was starting to affect younger calves. There had been 6 calves die over 3 days.

Calf 1 had enteritis, joint ill, mild lung pathology, striking kidney pathology (see Figure 6) and likely anaemia. Bacteriology isolated a light pure growth of *Streptococcus ruminantium* from lung. However, on histopathology, the lung showed no sign of inflammation, and areas of dark discolouration were due to atelectasis only. Testing for respiratory viruses and mycoplasmas was negative. *Staphylococcus* spp. (not *S.* aureus) was isolated from two joints, as in mixed growth this may have been a contaminant.

Histopathology confirmed that the lesions in the kidneys are the result of embolic bacterial infection (i.e. White Spotted Kidney). Whilst visually striking, WSK is usually of no clinical significance, as the kidney has a large functional reserve, and the infection resolves over time. In this calf it appears to have been part of a wider systemic bacterial infection.

Histopathology demonstrated mild atrophy of the intestinal villi for the age of calf, but the cause of this was not apparent. Villus atrophy might be seen with infections like cryptosporidiosis and rotavirus or coronavirus, but the enteric villi are a dynamic structure that are influenced by a number of factors, including colostrum intake, the diet and dietary changes, changes in the microbiome etc. Testing for Salmonella was negative, and no coccidia were identified in faeces.

Calf 2 had enteritis and evidence of dehydration, as well as navel ill and joint ill. Both *Cryptosporidium* spp. and rotavirus were detected in the faeces. Bacteriology was unrewarding. Both calves had some degree of rumen drinking, possibly secondary to concurrent disease. A review of colostrum management, hygiene around calving, and treatment of navels was advised.

**Figure 6: White Spotted Kidney in a pre-weaned calf, the result of embolic bacterial infection.**

# Nervous system and organs of special sense

## Congenital bilateral cataracts in Holstein-Friesian calves

A six-day-old calf was submitted to investigate congenital cataracts affecting eight from 100 Holstein-Friesian calves between January to April 2025. Affected animals are blind with no other clinical signs. All animals were to homebred dams. Clinical examination found the calf to be bright, alert, and responsive but it moved tentatively and bumped into objects. Neurological examination found bilaterally absent menace response, bilaterally intact palpebral reflex, direct pupillary light reflect present bilaterally and bilateral cataract.

Testing for BVD was negative. Vitamin A testing was marginally low. Histopathology confirmed bilateral cataracts, but no causative aetiology was noted from eye, optic nerve nor brain tissue. Zinc sulphate turbidity (ZST) testing confirmed a degree of failure of

passive transfer in this calf, which could potentially account for the marginally low vitamin A. The cause remains undetermined, and a review of dam management and diet was recommended.

### Bilateral hypopyon and suppurative meningitis in dairy calves associated with failure of passive transfer

Two 5-day-old Friesian heifer calves (from separate farms and relating to separate submissions) were submitted for PME to investigate progressive neurological signs and hypopyon affecting several calves from each farm within a few weeks.

Significant examination/PME findings of both calves:

- bilateral hypopyon (with severe corneal oedema in one)
- swollen brain with cerebella coning (more pronounced in one)
- suppurative meningitis
- an almost complete failure of passive transfer (FPT) indicated on ZST (7 and 5.2 turbidity units respectively)

Bacterial cultures in one yielded a very heavy pure growth of *Streptococcus gallolyticus* ssp *pasteurianus,* which has been demonstrated to be associated with the presenting clinical signs previously. The other calf had received antimicrobial treatment and bacteriology was unrewarding. In both cases, hypogammaglobulinemia due to FPT was implicated in predisposing these calves to a bacterial meningitis. Both calves tested negative for BVD. One also had diarrhoea associated with *Cryptosporidium*.

## Skin disease

**Actinobacillosis outbreaks**

Three outbreaks of cutaneous actinobacillosis, involving several animals, were investigated at Carmarthen and Shrewsbury Veterinary Investigation Centres during this quarter. The first was in a herd of 133 fatteners where 30 of a group of 90 aged 22 to 27 months developed skin lumps of various sizes (Figure 7). APHA field services were contacted, and the possibility of tuberculosis (TB) was ruled out first. Bacteriology and biopsy samples were collected by the practitioner, and although culture for *Actinobacillus lignieresii* was unrewarding, histopathology identified a pyogranulomatous, plasmacytic dermatitis with Splendore-Hoeppli material indicative of actinobacillosis (Figure 8). On the second farm of around 200 animals, three heifers had masses in the region of the submandibular lymph nodes. After TB was again excluded, one animal was euthanased and submitted. Sampling at postmortem examination confirmed *A. lignieresii* infection and histopathology identified typical lesions. In the third case, the disease was diagnosed postmortem in a 20-month-old fattening steer from a unit with around 500 homebred and purchased animals, including 70 suckler cows. In this herd, at least 30 animals which were more than a year of age were affected over the last few years, whereas no disease occurred in the younger age groups.

In addition to causing skin lesions, infection by *Actinobacillus lignieresii* can affect the oral cavity (often referred to a ‘wooden tongue’) and other areas of upper gastrointestinal tract. The causative bacteria are environmental organisms and can be identified in the oral flora of cattle. Cutaneous disease is considered to arise through trauma, such as rubbing, scratching or excessive grooming, though biting flies could be contributory. In the third outbreak reported here, BVD type 1 infection was identified by PCR suggesting also that a reduced immune response could have increased susceptibility. Outbreaks have previously been reported by APHA and elsewhere; 20 of 130 housed animals on a beef fattening unit in Ireland developed extensive skin lesions on the distal limbs causing severe lameness (Cahalan and others 2012). Crowded accommodation, feeding dry fibrous forage, and feed and environmental contamination due to discharging lesions and/or saliva were considered risk factors.

When investigating skin lesions in cattle, notifiable diseases such as lymphoma (possibly due to enzootic bovine leucosis) and lumpy skin disease should also be considered, and if they cannot be ruled out, discussed with the APHA Veterinary Field Service by calling 0300 020 0301 in England or 0300 303 8268 in Wales and via the local APHA Field Office in Scotland.

**Reference**

Cahalan, S. D., Sheridan, L., Akers, C. R., Lorenz, I., & Cassidy, J. (2012) ‘Atypical cutaneous actinobacillosis in young beef cattle’ Veterinary Record **171**, 375 doi:10.1136/vr.100906

**Figure 7: Affected animal showing skin lump associated with Actinobacillus lignieresii (image courtesy of the private practitioner)**

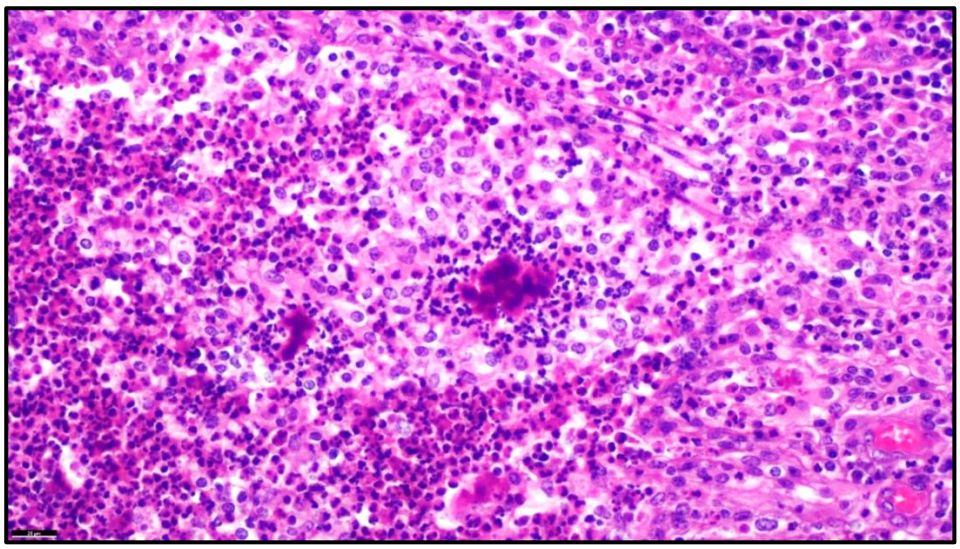

**Figure 8: Pyogranulomatous focus containing Splendore-Hoeppli material X20obj**

# Circulatory disease

### Congenital heart defects in calves

Ventricular septal defects were diagnosed in three separate submissions this quarter. In one case, a three-month-old Limousin embryo transfer calf was submitted for investigation, one of three animals to be found dead following ill-thrift since birth. All three animals shared the same sire and dam combination and were the only three to be affected. At postmortem examination, the calf was found to have a ventricular septal defect (Figure 9) and bronchopneumonia. The submitted calf also had bilateral cataracts as well as hepatopathy which was histologically proven to be secondary to the cardiac abnormality. In another submission, a three-month-old Holstein Friesian calf was submitted after respiratory disease was reported in young pre-weaned calves. Again, in addition to a VSD, a severe pneumonia was present. Genetic testing was being explored in both cases. Congenital cardiac disease in calves is uncommon, however VSD is the most frequently reported type of cardiovascular defect. The exact aetiology of this condition is unknown however genetic links have been suspected in Herefords, Limousins and Jerseys. In a retrospective review of 25 VSD cases carried out in Canada, pneumonia was the most common associated condition, likely due to secondary impairment of mucociliary clearance and pulmonary hypertension.

**Reference:**

Buczinski S, Fecteau G, DiFruscia R. Ventricular septal defects in cattle: a retrospective study of 25 cases. Can Vet J. 2006 Mar;47(3):246-52. https://pmc.ncbi.nlm.nih.gov/articles/PMC1371053/

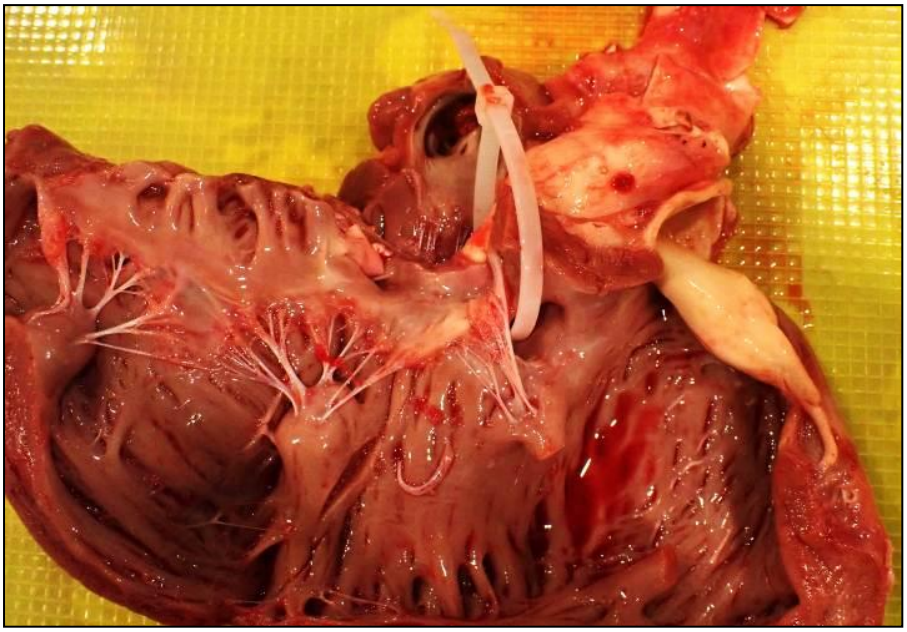

**Figure 9: 'zip-tie' demonstrating the position of a ventricular septal defect in a calf**

In another case, a one-month-old suckler calf was submitted for investigation into sudden death two days after turnout. The animal was born indoors and was turned out but died with no premonitory clinical signs. Gross findings were suggestive of congestive heart failure with a large serous pleural effusion noted. The lungs were enlarged, firm to touch and there was expansion of the interlobular septae with oedema. The lungs oozed clear fluid when incised and had a moist appearance on cut surfaces. The heart was enlarged with a tentative double apex appearance. Arising dorsally and transposed over a cusp of the aortic valve was the right coronary artery. The artery took a sharp, almost 90° ventral course tracking through the wall of the aorta before taking a further 90° turn and passing cranially between the right auricle and pulmonary trunk towards the coronary groove (Figure 10). This "high take-off" right coronary artery is subject to pressure changes during systole and as such can cause myocardial ischaemia and congestive heart failure.

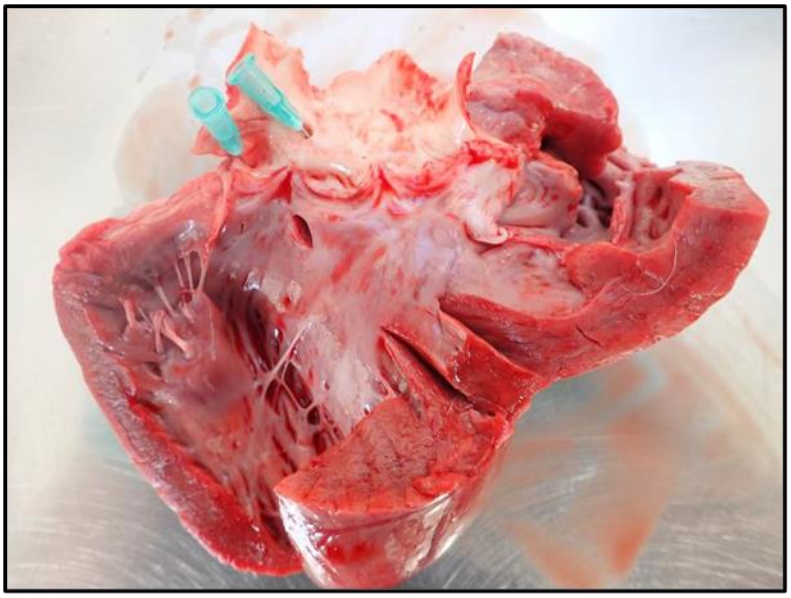

**Figure 10: "high take-off" right coronary artery (as shown at the right needle hub) in a calf**

## Reproductive system – abortion, stillbirth, and congenital deformities

The most frequent diagnoses from abortion and stillbirth submissions made in the second quarter (Q2) of 2025, compared to Q2 in 2024, and Q2 for 2015 to 2025 inclusive, through the Great Britain (England, Wales, and Scotland) scanning surveillance network, are illustrated in Table 2. These can be interrogated further using the interactive cattle disease surveillance dashboard which was launched in October 2017.

**Table 2: Great Britain scanning surveillance 10 most frequent abortion and stillbirth submission diagnoses in Q2 of 2025, Q2 of 2024, and Q2 for 2015-2025**

| 10 most frequent abortion diagnoses Q2 2025 | 10 most frequent abortion diagnoses Q2 2024 | 10 most frequent abortion diagnoses Q2 2015-2025 |
|---|---|---|
| **1. Fetopathy diagnosis not listed** | 1. Fetopathy or stillbirth due to congenital abnormality | 1. Fetopathy diagnosis not listed |
| **2. Fetopathy or stillbirth due to Schmallenberg virus** | 2. Fetopathy due to *Salmonella* Dublin | 2. Fetopathy due to *Neospora* infection |
| **3. Fetopathy due to *Trueperella pyogenes*** | 3. Fetopathy due to *Bacillus licheniformis* | 3. Fetopathy due to *Bacillus licheniformis* |
| **4. Fetopathy due to *Salmonella* Dublin** | 4. Fetopathy or stillbirth due to Schmallenberg virus | 4. Fetopathy due to *Trueperella pyogenes* |

| | | |
|---|---|---|
| **5. Fetopathy due to *Bacillus licheniformis*** | 5. Fetopathy due to *Trueperella pyogenes* | 5. Fetopathy or stillbirth due to congenital abnormality |
| **6. Fetopathy due to *Neospora* infection** | 6. Fetopathy diagnosis not listed | 6. Stillbirth due to dystocia |
| **7. Fetopathy or stillbirth due to congenital abnormality** | 7. Fetopathy due to *Neospora* infection | 7. Fetopathy due to *Salmonella* Dublin |
| **8. Fetopathy due to fungi** | 8. Stillbirth due to anoxia (otherwise unexplained) | 8. Fetopathy due to *Listeria* |
| **9. Thyroid hyperplasia (stillbirth due to goitre)** | 9. Stillbirth due to bradytocia | 9. Fetopathy or stillbirth due to Schmallenberg virus |
| **10. Fetopathy due to *E. coli*** | 10. Fetopathy due to fungi | 10. Fetopathy with BVD detected in the fetus |

## Schmallenberg virus cases

In this quarter, Schmallenberg virus (SBV) was the second most common cause of abortion or stillbirth. The geographic distribution of SBV has changed over the last three lambing and calving seasons. The maps below (Figure 11), for sheep cases, illustrate the changing distribution.

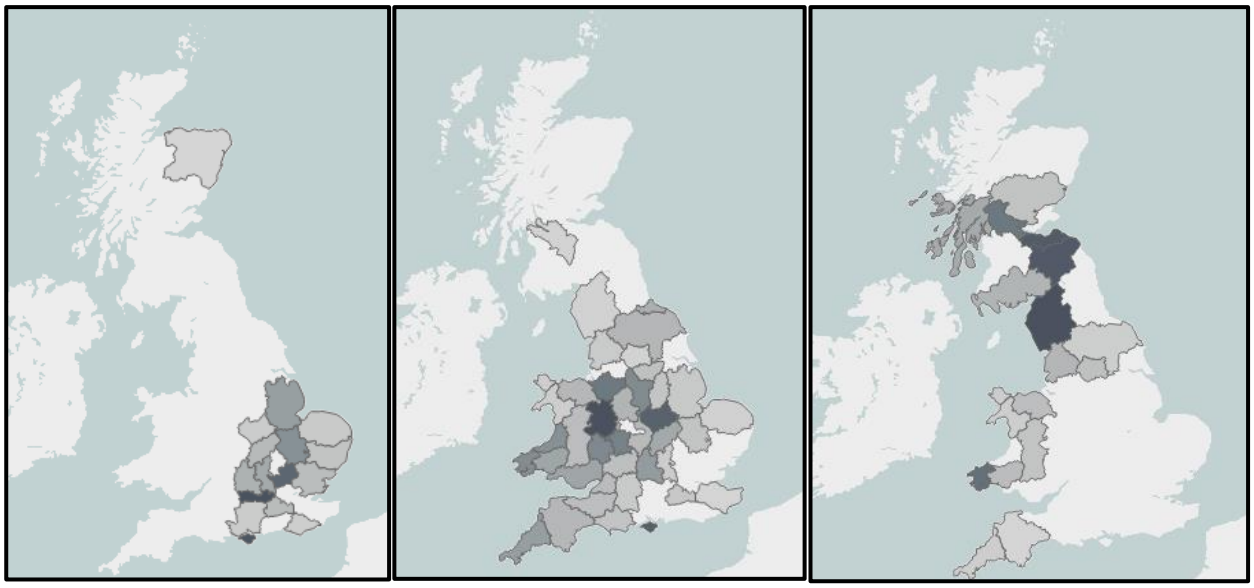

**Figure 11: Geographic distribution of Schmallenberg fetopathy cases in sheep for the 2021-22 (left), 2023-24 (middle), and 2024-25 (right) lambing seasons, showing a change from cases in the southeast of England to further west and north**

## Schmallenberg virus serology

Figure 12 shows the proportion of National Milk Records (NMR) bulk milk samples testing positive for Schmallenberg virus(SBV) antibody, by ELISA, by country, from Q1 2020 to Q2 2025 inclusive. This data is kindly provided under agreement from National Milk Records (NMR) to support the collection of disease surveillance information across GB. NMR provide milk testing for endemic disease in cattle. Most of the bulk milk samples tested will be routine quarterly surveillance ('monitoring') and a few may be part of a clinical disease investigation ('diagnostic') but these are not differentiated in Figure 12. In line with agreed APHA reporting, the number of samples tested is not shown. For further information on this data please contact vetenquiries@nmrp.com.

**Notes about Figure 12:**

1. Where no samples were tested for SBV in a quarter, this is labelled as NT on the graph (not tested).

2. Where samples were tested, but with no positive results, these are shown as blank columns on the graph.

3. In some cases, samples are not geo-referenced. They are included in the GB total only and as such the percentage positive by country may not equate to the GB percentage positive.

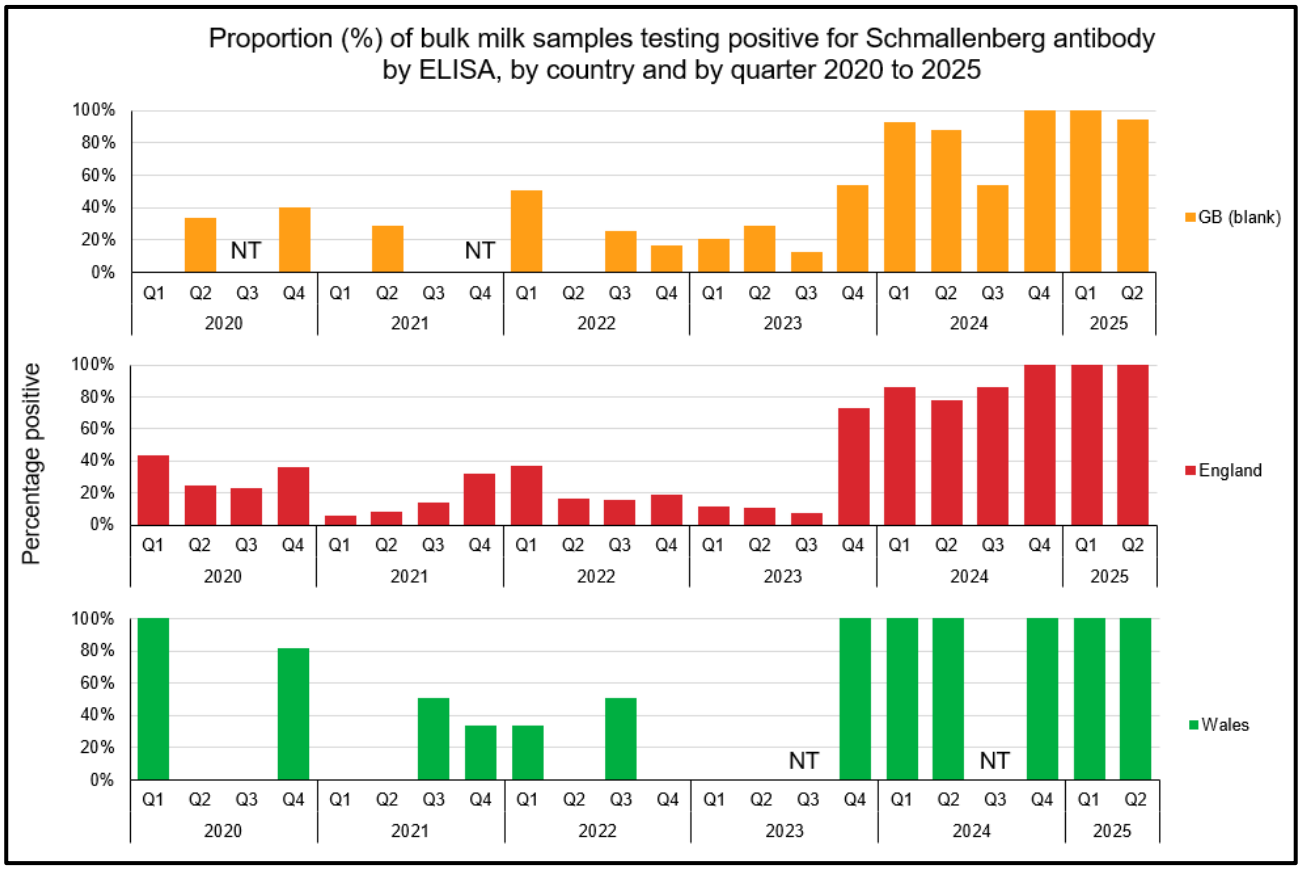


**Figure 12: Proportion (%) of bulk milk samples testing positive for SBV antibody by ELISA, by country, and by quarter Q1 2020 to Q2 2025* (*to date)**

Acknowledgements for the liver fluke data: Eamon Watson MRCVS, NMR Product Manager and Karen Bond MRCVS, NMR Veterinary Team Lead

## Hydranencephaly in a stillborn calf due to BTV-3

Three stillborn calves, from two dams, were submitted to investigate the cause of stillbirth. The calves were from a 400-milking cow dairy herd that was due to start block calving from 3rd June onwards. At the time of submission, four animals had calved prematurely, all resulting in non-viable calves. The herd did not buy replacement breeding cows in, and service was predominantly by artificial insemination. The herd had previously had issues with stillbirths, which were thought to have been due to iodine deficiency. The submitting vet mentioned that one of the neighbouring farms had recently been experiencing an increased number of calves born with neurological signs, which he had discussed with APHA's Field Services.

Gross findings of Fetus A were suggestive of hypoxia/anoxia as the cause of stillbirth (although many factors, including historical infection, could have resulted in this presentation). Ancillary testing did not identify any significant infectious causes of fetopathy. Fetus B2 had gross evidence of hydranencephaly (Figure 13), and this was also identified in Fetus B1 on sectioning of the fixed brain. Fetus B2 was positive for BTV-3 on PCR testing of the spleen and brain, which was indicative of intra-uterine infection.

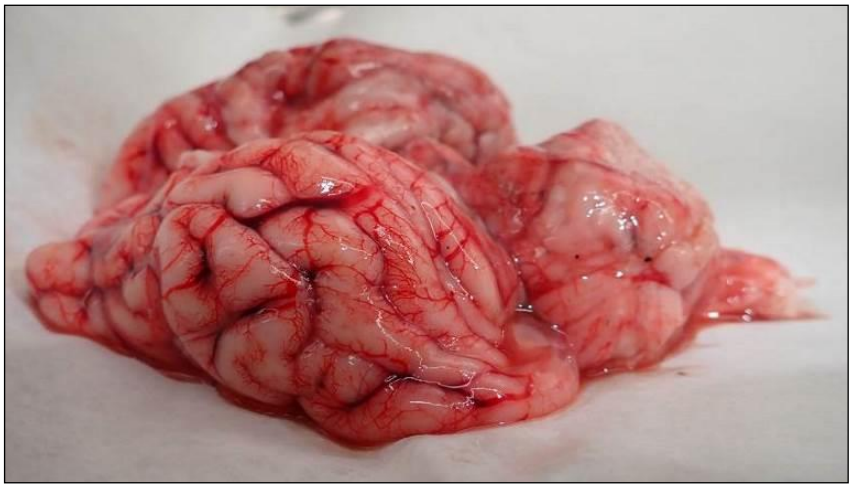

**Figure 13: Hydranencephaly in the brain of a BTV-3 positive fetus. The left occipital lobe, once pierced, leaked fluid and can be seen to be sagging**

### Bovine herpesvirus-1 (BHV-1)

An aborted fetus was submitted to investigate three recent abortions in a group of 65 housed dairy cows, from a 320-milking cow unit. No other illness was reported in the affected cows, and they were vaccinated against BVD and leptospirosis. Recent nasal swabs from calves with pneumonia on the farm had identified BHV-1 (the cause of IBR). Gross postmortem examination and standard tests for other causes of abortion did not identify significant pathogens or opportunists. Histopathology on fetal tissues was initiated and identified multifocal necrotic lesions in the liver, consistent with BHV-1 infection; IHC

was carried out and confirmed positive labelling, concluding that BHV-1 was the cause of abortion.

### Congenital contractural arachnodactyly

Calf sera from an Aberdeen Angus herd experiencing a bout of calves with signs suggestive of ‘contracted tendons’ were submitted for Schmallenberg virus testing, eligible under the free testing scheme. Of six serum samples, five were positive for SBV antibodies. On discussion of the case with a veterinary investigation officer, other differential diagnoses were considered. Angus and Angus-cross breeds are known to be affected by congenital contractual arachnodactyly, also known as ‘fawn calf syndrome’. It was first described in Australia (Contractural arachnodactyly (CA) - Angus Australia). Calves are typically born alive, and the autosomal recessive condition causes reduced elasticity in the connective tissues, leading to a hunched stance (Figure 14). In this case, all calves had the same sire, which had bred for four consecutive years with the issue occurring almost every year. It was unclear whether the positive SBV results were significant in this case. Investigation of other affected calves, with SBV PCR testing of the calf (which was unable to be run on the calf described above as an appropriate sample was not available), and histological examination of the central nervous system would help to determine this. The results of would help to determine the significance. The results of genetic testing are pending.

**Figure 14: Typical stance of calves affected by congenital contractual arachnodactyly, also known as ‘fawn calf syndrome’. Image taken from the Angus Australia website.**

### Blind-ending (type 3) atresia jejuni in Stabiliser calves

A three-day old male stabiliser calf was submitted to investigate abdominal distention over 36-48hrs, with a lack of faeces produced, followed by death. There were four similarly affected from 250 calves born to the 420-cow herd. Two bulls were used to serve the herd. Profuse quantities of orange-yellow fibrinous fluid were present within the abdomen. The abomasum was markedly distended with yellow fluid and milk clots. The duodenum and

proximal jejunum were also markedly distended with orange liquid contents and terminated with a blind-ending pouch 40 cm from the join of the ileum with the caecum. The distal jejunum, ileum, caecum and spiral colon below this blind-ending pouch were present, but very small, and had no contents. A review of cases in Ireland concluded that this was likely to be a complex multigenic disorder.

## Mastitis

There were no significant trends for this quarter.

## Centre of Expertise for Extensively Managed Livestock

The COEEML was developed by APHA to address potential surveillance gaps for extensively managed animals. Extensive management of livestock potentially makes regular or close inspection for disease detection more challenging. The Centre is based at the APHA Veterinary Investigation Centre in Carmarthen; however, it is a Great Britain - wide resource and forms part of the wider veterinary surveillance system operated by APHA. For more details, please see the COEEML pages on the Vet Gateway.

## Antimicrobial use and resistance

The Veterinary Antibiotic Resistance Sales and Surveillance (UK-VARRS) Report 2023 has recently been published by the Veterinary Medicines Directorate (VMD): Veterinary Antimicrobial Resistance and Sales Surveillance 2023

This latest UK-VARSS report continues to document downward trends in sales of veterinary antibiotics in the UK. In addition, the latest RUMA Targets Task Force report can be found at: RUMA-TTF-Report-FINAL-published-November-19-2024.pdf

The Medicine Hub, a voluntary industry initiative, developed and managed by AHDB, was launched in 2021 and provides a central location for the collection of medicine data, including antibiotic use: Medicine Hub for dairy, beef and sheep farmers | AHDB

## Chemical food safety

The latest Chemical Food Safety Reports can be found at: APHA chemical food safety reports (livestock) - GOV.UK

## Toxic conditions

### Copper toxicity in a dairy cow

Copper toxicity was diagnosed in a four-year-old Holstein Friesian dairy cow with a history of over two weeks of malaise and melaena developing prior to death. Two other cows on

farm were presenting similarly. On postmortem examination, the liver was a striking pale orange and was friable. There were chronic adhesions between the liver, diaphragm and reticulum wall. The abomasal content was liquid and markedly bloody, with liquid bloody content in the upper small intestine, progressing to liquid black content throughout the lower small intestine, large intestine, caecum and rectum.

## Horizon scanning

International Disease Monitoring (IDM) horizon-scanning activities monitor for major, notifiable, or new and re-emerging animal disease outbreaks worldwide. This is done to provide an early warning and to assess the risks they may pose to the United Kingdom (UK), particularly for those diseases which impact on animal health and welfare, international trade, public health, or wider society. IDM also assess the risk that animal diseases might come into the UK through the trade in animals or animal products (legal or illegal), through movements of wildlife, or through the movement of fomites and vectors such as insects which may carry infectious disease. These outbreak assessments are used to guide decisions how to manage or reduce the risks and are published on the web: Animal diseases: international and UK monitoring. Shown below are some of the outbreak assessment information and horizon scanning outputs from Q1 2025 and Q2 2025.

**Bluetongue virus (BTV) in Europe:** Further information can be found at: Bluetongue virus in Europe. Figure 15 shows the WOAH data for Europe for April to September 2025 (please note that this does not show all the incidents of BTV in Europe as some are not required to be reported to WOAH).

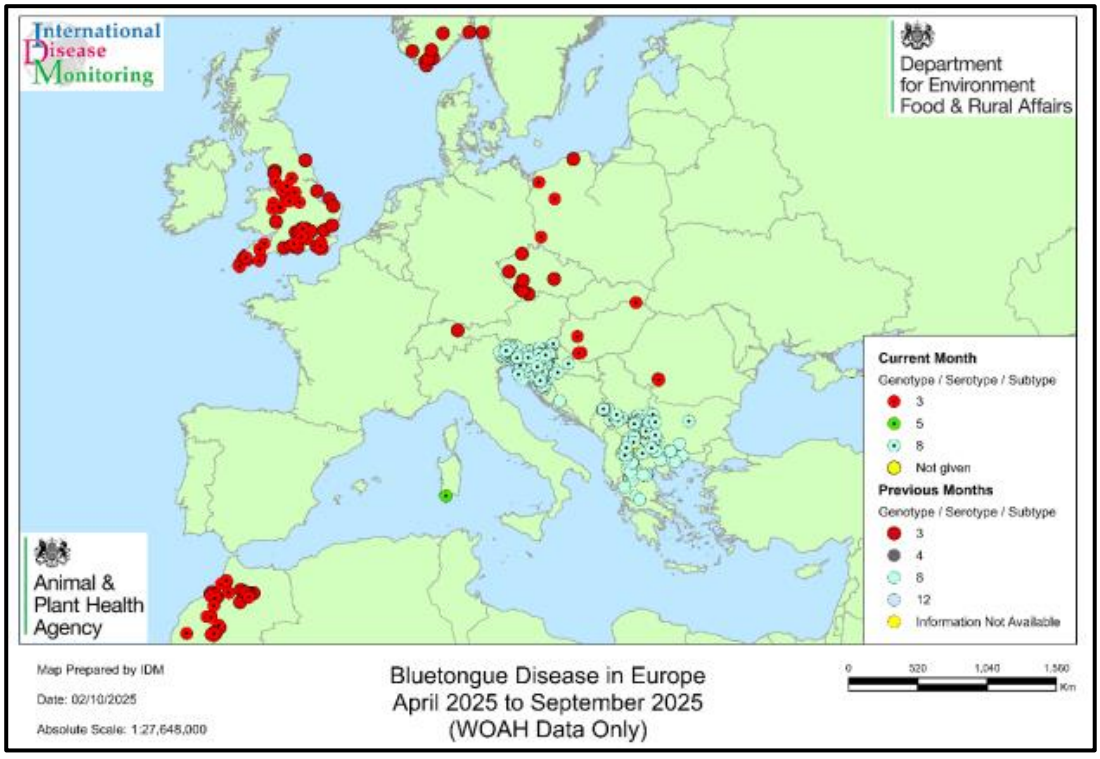


**Figure 15: WOAH data for Bluetongue Disease in Europe from April to December 2025**

**Epizootic Haemorrhagic Disease (EHD)**: Epizootic haemorrhagic disease in Europe

**Foot and Mouth Disease (FMD):**
Links to information on differential diagnoses can be found here:
Differential diagnosis of diseases causing oral lesions in cattle - Holliman - 2005 - In Practice - Wiley Online Library
Differential diagnosis of oral lesions and FMD in sheep

**Influenza A (H5N1) of avian origin in domestic livestock in the USA**

On 25 March 2024, the United States of America (USA) made an immediate notification to the World Organisation for Animal Health (WOAH) of an outbreak of influenza A of avian origin (H5N1) affecting dairy cattle in Texas. The outbreak strain, a high pathogenicity avian influenza (HPAI) virus strain, belonged to clade 2.3.4.4b, genotype B3.13. This genotype has never been detected outside of the Americas. Further information can be found here: Influenza A (H5N1) of avian origin in domestic livestock in the USA - GOV.UK

# APHA publications of interest

Monthly APHA disease surveillance reports can be found at this link: APHA disease surveillance monthly reports - GOV.UK (www.gov.uk)

APHA focus articles in the Veterinary Record can be found at: APHA focus articles in the Veterinary Record - GOV.UK (www.gov.uk) including a recently published surveillance focus article on Nodular skin disease in cattle (wiley.com)

The 2023 edition of the *Salmonella* in animals and feed in Great Britain (previously called *Salmonella* in Livestock Production in GB) has been published and is now available here: Salmonella in animals and feed in Great Britain 2023

SWINSON V; REICHEL R; PITTALIS L; BIDEWELL C; WIGHTON H (2025)
Brain lesions in BTV-3-positive calves in England (letter).
Veterinary Record 196 (5) 192-193 https://doi.org/10.1002/vetr.5293

MASTIN A; Gubbins S; Ashby M; PAPADOPOULOU C; WADE C; Batten C (2023) BTV and EHDV – what's new and what do I need to know? Veterinary Practice: InFocus 4th October 2023. BTV and EHDV – what's new and what do I need to know? - Veterinary Practice (veterinary-practice.com)

JEWELL N; SWINSON V; HAYMAN C; MARTINDALE L; BRZOZOWSKA A; Mitchell S (2023) Laboratory diagnosis of gastrointestinal nematodes in first-grazing season cattle. Veterinary Record 192 (9) 364-36 Laboratory diagnosis of gastrointestinal nematodes in first-grazing-season cattle - Jewell - 2023 - Veterinary Record - Wiley Online Library

**Statement regarding use of this material**



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