Animal & Plant Health Agency

SRUC

Great Britain small ruminant quarterly report, disease surveillance and emerging threats

Volume 28: Quarter 2 – April to June 2025

Highlights

Contents

Introduction and overview

This quarterly report reviews disease trends and disease threats in Great Britain (England, Scotland and Wales) for the second quarter of 2025, April to June. It contains analyses carried out on disease data gathered from the Animal and Plant Health Agency (APHA), the Veterinary Services division of Scotland's Rural College (SRUC) and partner postmortem providers; and intelligence gathered through the Small Ruminant Species Expert networks. In addition, links to other sources of information, including reports from other parts of the APHA and the Department of Environment, Food and Rural Affairs (Defra) agencies, are included. A full explanation of how data is analysed is provided in the annexe available on GOV.UK.

Important notice regarding the data used in this report

The analysis and reporting in this report are based on data available on 18 August. We are aware that there were SRUC data missing from the database at that date. 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.

APHA's Emerging and Endemic Disease Alert System (EEDAS)

This is a component of the communications from our scanning surveillance network and a system that the APHA uses to keep you up to date with significant disease alerts and information, projects, publication of reports and other items. This is independent of the notifiable disease alert system.

To receive these notifications please respond to siu@apha.gov.uk, providing your preferred:

- email address you would like us to use
- mobile telephone number if you wish to receive text alerts

We hope that you find this EEDAS messaging system to be beneficial, and any suggestions or feedback are welcome.

Issues and trends

Weather

Details can be found at the Met Office climate summaries and the Met Office UK temperature, rainfall and sunshine anomaly graphs.

Industry

Agriculture and Horticulture Development Board (AHDB) lamb market updates

Prices

GB deadweight lamb prices have bucked seasonal trends throughout the first six months of 2025. After starting the year at record highs, the GB deadweight lamb Standard Quality Quotation (SQQ) fell gradually from March to mid-May, bottoming out at 665 pence per kilogram (pence per kg) in the week ending 17 May. A glut of heavy old season lambs (OSLs) weighed on the market at this point. Prices for new season lambs (reported from week ending 24 May onwards) have since moved generally sideways, peaking at 756pence per kg in the week ending 2 August, representing a £1 per kilogram rise in price from the same week last year.

Production

Heavier clean sheep carcases from this seasonally higher proportion of OSLs have supported production levels in the first half of 2025. For the first half of the year, UK sheep meat production totalled 154,700 tonnes, up 3.8% year-on-year.

Trade

Both sheep meat imports and exports have been significantly elevated in the first half of 2025. Imports totalled 41,300 tonnes (product weight), up 8% from the same period last year. In terms of market share, the proportion of these imports that originated from Australia has risen to approximately 20% from 17% in 2024.

In terms of exports, total sheep meat (including fresh/frozen, offal and processed sheep meat) totalled 47,500 tonnes, up 18% on the year. Volumes exported to key European nations such as France, Belgium and the Netherlands have increased dramatically during the first half of 2025 as their domestic flocks suffer from disease pressures and ongoing structural decline.

Demand

Demand for sheep meat has followed similar trends to that seen in Q1 this year. In the 12-week ending period 13 July, lamb retail products saw a 9.7% decrease in spend accompanied by a 14.0% decrease in volumes year-on-year (Worldpanel by Numerator UK, 12 weeks ending 13 July 2025).

Total primary lamb cuts saw a 17.7% volume decrease in the 12-week period, driven by declines across most cuts. Lamb roasting joint volumes declined 19.2% year-on-year, driven by a decrease in frequency of purchase.

Report provided by Hannah Clarke, Lead Analyst (Red Meat), Agriculture and Horticulture Development Board.

Bluetongue serotype 3 (BTV-3)

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 Great Britain 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 1 July 2025.

Pictures of clinical cases confirmed with bluetongue serotype 3 infection.

Bluetongue virus is a notifiable disease.

Suspicion of bluetongue virus in animals must be reported to the Animal and Plant Health Agency:

- in England on telephone: 03000 200 301
- in Wales on telephone: 03003 038 268
- in Scotland at the local Field Services Office

Further guidance and information are available on the Ruminant Health & Welfare website and on GOV.UK for Bluetongue: information and guidance for livestock keepers and Bluetongue: how to spot and report it.

Unusual diagnoses

Swaledale Encephalopathy

A 10-day-old Swaledale lamb was submitted to APHA Penrith Veterinary Investigation Centre to investigate the cause of neurological signs, which had led to death of the lamb. Ten lambs had been affected at the time of submission, with some lambs showing signs from birth, and others developing signs within the first two weeks of life. Clinical signs reported included ataxia and generalised tremors. No improvements had been seen following antibiotic, steroid, and vitamin B1 injections.

Postmortem examination was grossly unremarkable. *Listeria* cultures of the brain were sterile and PCR testing for Border Disease gave negative results. Histopathology of the brain revealed degeneration and necrosis of the grey matter following a symmetrical distribution in the brainstem. The nature and distribution pattern of the observed lesions were consistent with what has been described previously in Swaledale lambs, as reported by Scholes and others, 2007. The cause of the condition is yet to be established, but a genetic basis is suspected and is currently under investigation. The pathology has been compared to Leigh Syndrome, a mitochondrial disorder, in humans. Interestingly, in this case a new tup had been used this year.

As the name suggests most cases occur in the Swaledale breed, but other breeds can occasionally be affected including Badger-faced Welsh Mountain, Scottish Blackface, and Lonk. Affected lambs typically develop neurological signs in the first 2-3 weeks of life, characterised by stiffness and head tremor, often following stimulation or exercise, and progressively worsening over several days.

Scholes SFE, Higgins RJ, Holliman A, Watson PJ, Hutchinson JP and Daniel R. 'Subacute symmetrical necrotising encephalopathy in young lambs.' Veterinary Record 2007; 160: 775-775. https://doi.org/10.1136/vr.160.22.775

Goat disease surveillance dashboard outputs

The most frequent diagnoses from goat submissions made in Q2 of 2025, compared to Q2 in 2024, and Q2 for 2016 to 2025 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 small ruminant disease surveillance dashboard which was launched in October 2017.

Table 1: Great Britain scanning surveillance five most frequent goat submission diagnoses in quarter 2 (Q2) of 2025, Q2 of 2024 and Q2 for 2016 to 2025

	5 most frequent diagnoses Q2 2025	5 most frequent diagnoses Q2 2024	5 most frequent diagnoses Q2 2016 to 2025
1	Parasitic gastroenteritis (PGE)	Parasitic gastroenteritis	Parasitic gastroenteritis
2	*Clostridium perfringens* type D disease	Coccidiosis	Johne's disease
3	PGE due to Haemonchus	PGE due to Haemonchus	*Clostridium perfringens* type D disease
4	Coccidiosis	Hypocupraemia or hypocuprosis	Coccidiosis
5	Johne's disease	Johne's disease	Listeriosis (encephalitis)

Parasitic gastroenteritis (PGE) excludes PGE due to Haemonchus and PGE due to Nematodirus.

Sheep disease surveillance dashboard outputs

The most frequent diagnoses from sheep submissions made in Q2 of 2025, compared to Q2 in 2024, and Q2 for 2016 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 small ruminant disease surveillance dashboard which was launched in October 2017.

Table 2: Great Britain scanning surveillance 10 most frequent sheep submission diagnoses in Q2 of 2025, Q2 of 2024, and Q2 for 2016 to 2025

	10 most frequent diagnoses Q2 2025	10 most frequent diagnoses Q2 2024	10 most frequent diagnoses Q2 2016 to 2025
1	Parasitic gastroenteritis (PGE)	Parasitic gastroenteritis	Parasitic gastroenteritis
2	Pneumonia due to M. haemolytica	Pneumonia due to M. haemolytica	Coccidiosis
3	Coccidiosis	Coccidiosis	Pneumonia due to M. haemolytica
4	Clostridium perfringens type D	Clostridium perfringens type D	Clostridium perfringens type D
5	PGE due to Haemonchus	Tickborne fever	PGE due to Nematodirus
6	PGE due to Nematodirus	Abortion due to toxoplasmosis	Abortion due to toxoplasmosis
7	Tickborne fever	Enzootic abortion	Enzootic abortion
8	Abortion due to toxoplasmosis	Intestinal torsion (red gut)	Pneumonia due to other causes
9	Enzootic abortion	PGE due to Haemonchus	Intestinal torsion (red gut)
10	Pneumonia due to other causes	PGE due to Nematodirus	Pasteurellosis (non-respiratory)

Parasitic gastroenteritis (PGE) excludes PGE due to Haemonchus and PGE due to Nematodirus.

Pneumonia due to other causes include abscessation and other bacteria not specifically described.

Changes in disease patterns and risk factors

Syndromic analysis for sheep

Syndromic alerts were raised this quarter, in comparison to the quarter average of the previous 5 years for England and Wales, for the following diseases:

Increases

- Parasitic gastroenteritis (PGE) due to Haemonchus
- Listeria encephalitis
- Colisepticaemia

Decreases

- *Clostridium perfringens* type D

Parasitology

Parasitic gastroenteritis due to Haemonchus

There has been a significant increase in confirmed cases of parasitic gastroenteritis (PGE) due to *Haemonchus* sp. for quarter 2 (Figure 1), with cases reported across the network of surveillance centres in England and Wales. Cases have mainly been identified in lowland flocks in adult sheep, though on a few occasions in lambs also.

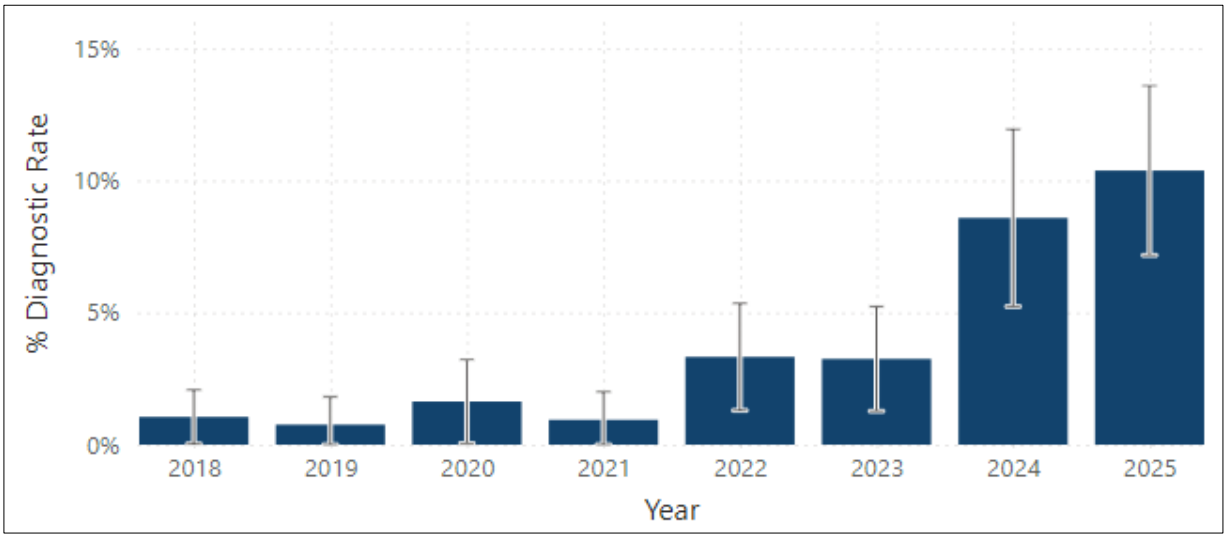


Figure 1: APHA diagnoses of Parasitic Gastroenteritis due to Haemonchus in quarter 2, 2018 to 2025, as percentage of diagnosable submissions, indicating an increase over the past three years; the error bars indicate a 95% confidence interval

The weather has been warmer and drier than usual in many parts of GB during this period, and cases of Haemonchosis have been seen earlier than in prior years. Cases have been diagnosed both at necropsy and from submission of faeces samples. Clinical signs described include weight loss, pallor of mucous membranes, submandibular oedema, and sometimes deaths, in the groups with typically high Trichostrongyle-type egg counts in faeces. When followed up with an additional test, differential fluorescence staining, the proportion of Trichostrongyle-type eggs that are *Haemonchus* sp. can be determined. Trichostrongyle-type egg counts have ranged from 1460 to 11 530 eggs per gram of faeces (epg), with the proportion of *Haemonchus* sp. varying but often greater than 70%.

Management of the disease may be different depending on the age of the sheep affected and, whether there are mixed gastrointestinal nematode (GIN) species present or predominantly *Haemonchus* sp. Therefore, it is valuable to undertake the additional testing. Confirmatory peanut agglutinin testing to confirm the presence and percentage of *Haemonchus* sp. eggs was provided at a reduced fee by APHA over this quarter.

A typical example of this was a 14-month-old ewe submitted from a flock where faecal egg counting had been carried out three weeks earlier and had shown no evidence of parasitic gastroenteritis. The ewe submitted was in poor body condition, with pale mucous membranes, submandibular oedema, and watery blood. A Trichostrongyle-type egg count of 9,500 epg on faeces, and total worm count of 10,500 adult *Haemonchus* spp., and 13,000 immature worms in the abomasum confirmed haemonchosis as the cause of death. A count of 3000 worms can be fatal based on their feeding habits as blood suckers, which can lead to significant anaemia.

Given that cases have been seen earlier this year, it is likely that this species has overwintered on the pasture in some areas due to milder weather, though previously *Haemonchus contortus* mainly persisted as arrested L4 in the sheep over winter. It is a species that produces large numbers of eggs per female worm, compared with many other GINs, meaning pasture contamination can build up rapidly. Veterinarians and sheep keepers should be aware of the need to monitor susceptible stock more frequently using faecal egg counts, and assessment of mucous membrane colour, given diarrhoea is not usually a feature of Haemonchosis (although it could be if there is a mixed infestation). Disease can be seen in lambs and adult sheep. Where deaths occur, postmortem examination of fresh carcases can be used to reach a diagnosis, as the worms can be seen with the naked eye in the abomasum, with the typical Barber's pole morphology.

Further information:

Carson A, Reichel R, Bell S, Collins R, Smith J and Bartley D (2023), '*Haemonchus contortus*: an overview.' Veterinary Record, 192: 26-28 https://doi.org/10.1002/vetr.2613

Scops Haemonchus contortus guidance

Causes of diarrhoea in pre-weaned lambs due to nematodirosis and coccidiosis

A complicating factor in some cases of diarrhoea in pre-weaned lambs, in terms of severity and diagnosis, can be that coccidiosis can be concurrent with nematodirosis, and both may cause disease in a similar age group. One such case was seen in a group of 3- to-4-week-old lambs, where 4 lambs had been described as 'never doing' before dying in a poor condition at around 3 to 4 weeks of age. One lamb was submitted in poor body condition, with heavy faecal soiling of the perineum and tail, and signs of dehydration. There were only dry green fibrous contents in the rumen and abomasum, with no evidence of milk. Among the green liquid contents of the small intestine, slender white worms were visible. A coccidial oocyst count of 2,410,000 oocysts per gram (opg) was confirmed within the large intestinal contents. Speciation revealed 60% were the pathogenic species *Eimeria ovinoidalis*, the remaining 40% were *Eimeria bakuensis*. The lamb also had a *Nematodirus battus* egg count of 400 epg in the large intestinal contents, and 1700 *Nematodirus* adult worms and a similar number of immature worm larvae in the small intestinal contents. A lack of milk (possibly due to mismothering, or poor milk supply or mastitis in the dam), and instead fibrous grass content in the stomachs of a lamb of this age, suggested premature grazing had likely increased the risk of exposure to coccidia and worms in this lamb.

High coccidial oocyst species counts are commonplace and can be seen in clinically normal sheep where only non-pathogenic Eimeria species may be present, highlighting the need to speciate and not to treat based on oocyst count alone.

Parasitic gastroenteritis in Goats

Several diagnostic goat submissions to APHA and SRUC centres identified disease associated with internal parasites. In one case, a 5-week-old pygmy goat kid was submitted to investigate sudden onset lethargy and death. Postmortem examination identified many 1-2mm diameter foci within the jejunum, which had coalesced in places to produce a cobblestone appearance to the mucosa, together with haemorrhagic large intestinal content. Parasitological examinations revealed an extremely high coccidial oocyst count, of which 95% were the pathogenic species *Eimeria arloingi* and *Eimeria ninakohlyakimovae,* confirming a diagnosis of coccidiosis. *Clostridium perfringens* toxin testing of small intestinal content was also positive for epsilon toxin suggesting concurrent *Clostridium perfringens* Type D enterotoxaemia, which likely contributed to the rapid decline and death. A disrupted intestinal microbiome associated with the coccidial infection may have favoured clostridium overgrowth. Vaccination of goats to protect against clostridial disease is good practice, though use of vaccines is off licence.

The significance of gastrointestinal nematodes in goats, and the importance of quarantine testing, including checking efficacy of anthelmintics used, was illustrated in the case of an adult billy goat. It was submitted after displaying acute scour and weight loss prior to death. This pet goat was the only one affected in the herd of 32 and had been the sole animal purchased four weeks previously. Despite worming two weeks previously, the Trichostrongyle-type egg count in faeces was 2300 epg, with significant numbers of adult worms noted in the abomasum of mixed species including *Teladorsagia circumcincta* and *Trichostrongylus axei* identified.

Systemic disease

Colisepticaemia

The number of diagnoses of colisepticaemia during quarter 2 of 2025 was significantly increased for England and Wales, compared to the same quarter for the preceding five years, with 15 diagnoses made compared to an annual mean of 7. The most common presenting sign for diagnoses of colisepticaemia was ‘found dead’, with most cases affecting pre-weaned followed by neonatal lambs. Systemic *E. coli* infection is a terminal bacteraemia, often predisposed by hypogammaglobulinaemia due to failure of passive transfer, in lambs less than 7 days old. It is occasionally diagnosed in older animals that are immunocompromised.

Systemic pasteurellosis

There was an increase in systemic pasteurellosis cases recorded this quarter for GB, although the biggest increase in diagnoses was in Scotland, with most recorded in pre-weaned lambs, in predominantly lowland flocks. The total number of GB cases was 25, with 15 of these diagnosed by SRUC. Various factors could have contributed to a rise in diagnoses including reduced use of Mannheimia and Pasteurella combination vaccination

(potentially due to reduced availability), poor colostrum intake or reduced colostrum quality preventing maternal protection of sucking lambs, extended housing periods, or poor ewe milk supply reducing lamb resilience to infection.

Streptococcus agalactiae bacteraemia in a 3-day-old lamb

A 3-day-old lamb was submitted for postmortem examination to APHA Shrewsbury to investigate the cause of sudden onset diarrhoea and rapid death, after 5 lambs had been found dead, in a small flock of 10 breeding ewes. The lamb had dark purple oedematous subcutaneous tissues around the umbilicus, a swollen liver, red oedematous lungs with dark red consolidation of around 5%, an excess of pale-yellow serofibrinous pericardial fluid and yellow liquid intestinal contents. *Streptococcus agalactiae* was isolated in significant pure growths from the lungs and pericardial fluid, consistent with this bacterium causing a bacteraemia and death. The oedematous changes around the umbilicus suggested the navel may have been the route of entry although gastrointestinal carriage of this bacterium has been identified in humans. Unfortunately, there was no blood to evaluate the adequacy of colostrum intake, as insufficient intake could have led to an opportunistic infection. *Streptococcus agalactiae* is a bacterium most associated with mastitis in ruminants, and an unusual isolate in a lamb. It has been recognised in humans as a potential cause of neonatal infections such as sepsis, pneumonia, and meningitis.

Hereditary and or Developmental abnormalities

Epidermolysis Bullosa in newborn Welsh Mountain lambs

Twin lambs were noted to have peeling skin and separation, or sloughing, of the hoof wall from birth. They were subsequently euthanased at 24-hours-old and submitted to Carmarthen VIC for further investigation. These were the only affected lambs out of 20 ewes which had lambed, in this small flock of 32. Both ewe and ram were white Welsh Mountain, the ewe was a second lamber and the ram had previously been used with no issues reported, however this mating combination was new.

Grossly both lambs had similar generalised skin lesions with areas of dark red to pink, alopecic skin distributed across the body and limbs. There was separation of the epidermis from the dermis evident at the margins of the alopecic areas, and wool could be plucked away easily from the skin. Hoof wall capsules were either absent or easily detached. The hard palate and buccal mucosa were sloughing, and there was ulceration of the tongue in one lamb. Both lambs had brachygnathia inferior (undershot jaw) as shown in Figure 2.

Histopathology demonstrated that the primary microscopic lesion was degeneration of the basal layer of the epidermis leading to epidermal separation, with minimal inflammation. The gross and microscopic pathology in these lambs was typical of Epidermolysis Bullosa (EB), a heterogenous groups of mechanobullous dermatoses with a genetic basis. In humans there are many different subtypes of EB based on the clinical presentation, lesion distribution, and mode of inheritance. In sheep, EB-like conditions have been described in

a number of sheep breeds, including Welsh breeds (Disease surveillance in England and Wales, April 2016), but the genetic basis has not been characterised.

Figure 2: Congenital skin lesions, with torn skin and loss of hooves, in a Welsh Mountain lamb due to Epidermolysis Bullosa

Presumed segmental spinal cord aplasia

A full-term ovine fetus was submitted to Starcross VIC to investigate musculoskeletal deformities suspicious of Schmallenberg virus infection. On gross examination there was kyphosis of the thoracic spine, with evidence of incomplete development of the vertebral column and spinal cord. Arthrogryposis of the forelimbs was also present. PCR testing for Schmallenberg and Border Disease gave negative results. A congenital defect was suspected, and histopathology confirmed this to be a rare case of presumed segmental spinal cord aplasia (also called segmental spinal dysgenesis).

This condition is thought to reflect failed normal development of the spinal cord and associated structures during gastrulation, neurulation, or somitogenesis. The cause is unknown, but trauma or vascular injury during early embryonic life is proposed. This condition has been described in a variety of species including cattle, humans, and felines. It is often found associated with vertebral body malformations, as also seen in this case, reflecting the close relationship between these structures during embryological development. These findings also explain the arthrogryposis identified grossly. This case was likely a ‘one off’, with no significant implications for the remaining flock.

Neural tube defect in a Vendéen lamb foetus

Twin fetuses were submitted to Carmarthen VIC to investigate high barren rates, abortions, and the birth of weak or deformed lambs, in a flock of 30 Vendéen breeding ewes. This problem has been ongoing since 2023. The flock was not lambed between 2020 and 2023. Toxoplasmosis had previously been diagnosed in the flock.

At postmortem examination, one of the twins had multiple cranio-facial abnormalities of:

- rostro-caudal shortening of skull
- secondary cleft palate with a central defect of both the hard and soft palate
- Brachygnathia superior due to underdevelopment of pre-maxillary bone
- abnormal atlas bone (C1)
- spina bifida with absence of skin in a circular area on dorsum, overlying the atlas bone, and protruding meningocele (Figure 3)
- anencephaly with absence of cavity within the skull and only a very small amount of brain tissue behind both eyes
- spinal cord ended at the level of the atlas bone

This fetus also had very mildly reduced flexion of both carpi and both hocks, s-shaped scoliosis of spine, and varus deformity of the fetlock joint of the left hindlimb. The other twin was unremarkable.

Testing for Schmallenberg virus and Border disease was negative.

The multiple deformities were likely due to a neural tube defect that will have affected the lamb early in gestation. The defect can be inherited in some breeds of sheep as an autosomal recessive trait, but in this case the genetic mutation was most likely to have arisen *de novo* in this foetus and therefore it may have been an isolated case.

Figure 3: Spina bifida with meningocele protruding through opening at atlanto-occipital joint, in a lamb with neural tube defect

Multiple congenital abnormalities in a stillborn lamb

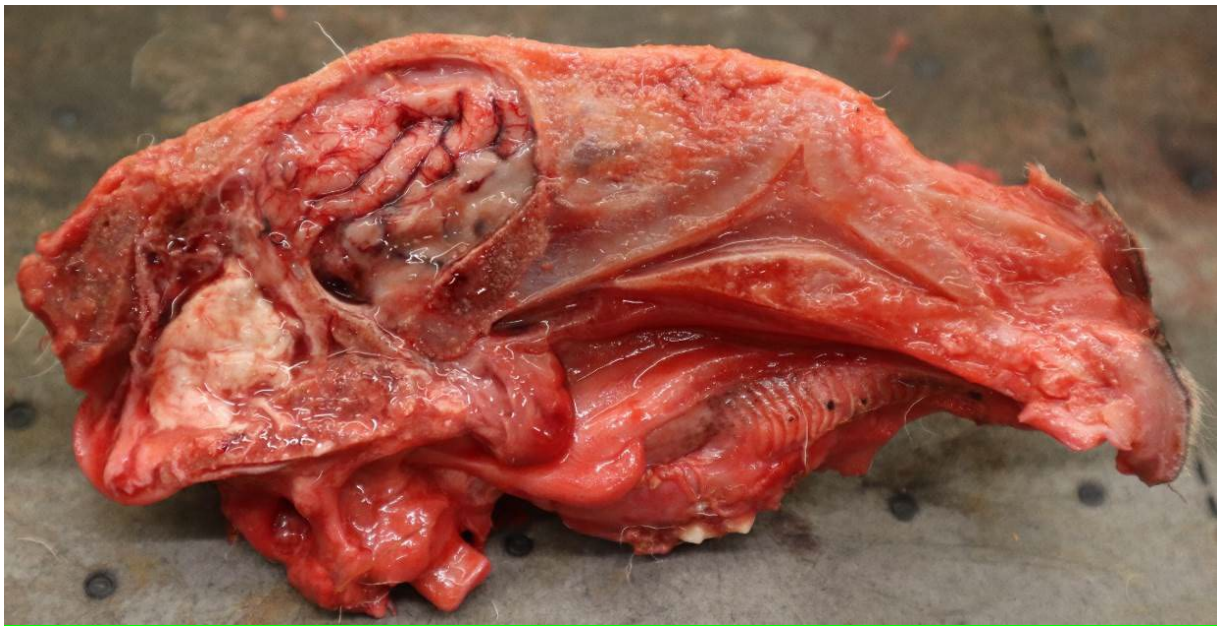
A stillborn Texel lamb was submitted to Carmarthen VIC for PME to investigate four abortions in a flock of 420 breeding ewes. Lambing was assisted and the farmer described this as a difficult delivery, as the lamb was very large and dry.

At PME, the lamb was large and based on crown-rump length, gestational age was beyond full term at approximately 161 days. The lamb also had multiple deformities of:

- arthrogryposis of both carpi
- secondary cleft palate, with a central defect of both the hard and soft palate
- bilateral clinical anophthalmos, with no visible eye tissue
- domed rostral skull (Figure 4)
- brachygnathia inferior

No infectious cause was found during testing, and histopathology found a complex and unusual developmental anomaly of the brain, which was probably the result of an intrinsic defect in cell signalling and neuronal migration. There was evidence that the optic vesicles had developed initially but that these had regressed, along with regression or degeneration of the brainstem. The pituitary gland was not evident in the skull (its absence was presumably linked to the brainstem changes), and this might have accounted for the prolonged gestation. It was considered most likely that this would be an isolated case.

Figure 4: Doming of rostral skull, cleft palate, and hindbrain abnormalities in a stillborn lamb with multiple congenital abnormalities



Primary microphthalmia

A neonatal lamb was euthanased and submitted to the SRUC to investigate issues with small eyes. The Texel-cross ewe and the Exlana sire had produced offspring with small eyes for three consecutive years. The palpebral opening measured 1 centimetre (cm) in length, compared to 1.8 cm in a normal lamb, and the eyeball weighed 1 gram compared to 3.5 grams. Histopathology revealed that the anterior chamber had been replaced with fibrous tissue and occasional developmental abnormalities were noted in the retina. The findings were consistent with primary microphthalmia, with lens agenesis and anterior segment dysgenesis. A sample of spleen was tested for the mutation that is known to cause microphthalmia in Texel sheep (Becker and others, 2010) however, this proved negative. It was advised that the tup should not be used again and that this may be a unique hereditary issue rather than a wider breed problem.

Becker D, Tetens J, Brunner A and others. (2010) ´Microphthalmia in Texel sheep is associated with a missense mutation in the paired-like homeodomain 3(PITX3) gene.` *PloSOne:* 5(1): e8689.doi:10.1371/journal.pone.0008689)

Respiratory disease

Respiratory complex disease affecting weaned dairy goat kids

A 2-month-old goat kid was submitted to investigate death in 3 out of 18 weaned dairy goat kids described as poor doers with respiratory signs.

Significant PME findings included poor body condition, and clearly demarcated lines of cranio-ventral consolidation affecting both lung lobes (Figure 5). Histopathological changes were severe and indicated previous historic viral insult. PCR testing for parainfluenza type 3 (PI3) was actioned, however, as expected, due to the chronic nature of the lesions this was unrewarding. Secondary bacterial infection was also indicated, with *Mannheimia haemolytica* being the most likely agent; bacteriology testing, however, was unrewarding, although prior antimicrobial treatment is likely to have affected culture results. *Mycoplasma ovipneumoniae* was also detected, with the associated gross pathology and histopathology having been detected.

There was no indication if immunosuppression by border disease nor caprine arthritis encephalitis (CAE), the latter is known to be present within the herd.

Figure 5: Cranio-ventral consolidation of the right lung lobes in a goat kid due to multiple pathogens, showing clear lines of demarcation

Circulatory disease

Visceral caseous lymphadenitis (CLA)

A case of visceral caseous lymphadenitis was reported by Thirsk VIC, an uncommon presentation of this sheep bacterial infection. It is not well understood why, in some sheep or flocks, the visceral presentation occurs rather than the more typical peripheral lymph node or cutaneous CLA lesions; and factors such as the primary route of exposure and concurrent disease issues, or concurrent immunosuppressant factors, may play a role. Infection through inhalation may increase the risk of visceral CLA lesions, with potential for further respiratory spread of infection from these cases to other sheep in the flock. The lesions seen with visceral CLA can be grossly indistinguishable from tuberculosis (TB) lesions, meaning these cases often require reporting and testing as a suspect tuberculosis case.

The CLA case was in a three-year-old ewe, submitted to investigate the cause of malaise and death of this one ewe, in a flock of 250 breeding ewes. The ewe had been housed after a 6-day period of inappetence, lethargy, and nasal discharge before dying. The ewe was in a group of 80, the others in the group appeared well. Postmortem examination identified a purulent mediastinal lymphadenitis, pulmonary abscessation, pleuritis and pyelonephritis (Figures 6, 7 and 8). Bacteriology did not yield any significant isolates, however histological examination of the lymph nodes and kidneys were typical of chronic caseous lymphadenitis, characterised by concentric laminae of collagen and exudate in the lymph node sections.

Figure 6: Respiratory tract of a ewe with mediastinal lymphadenitis (incised), due to CLA

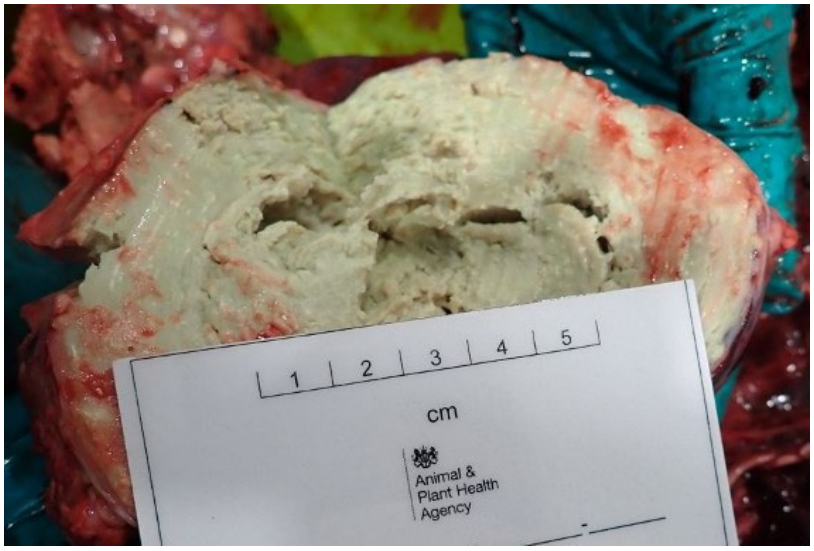


Figure 7: Incised mediastinal lymph node affected with CLA, showing lamellar appearance

Figure 8: Multinodular abscessations of the right kidney of a ewe affected with CLA

Tick-borne fever (*Anaplasma phagocytophilum)* infection

There were two unusual disease presentations recorded during this quarter, which had occurred in sheep with concurrent Tick-borne fever (*Anaplasma phagocytophilum*) infection. These are described below.

Acute suppurative meningitis and ventriculitis due to Bibersteinia trehalosi causing malaise, pyrexia, and ataxia in a tick-borne fever positive Swaledale yearling ewe

Penrith VIC reported a submission from a group of 220 yearling ewes that had been turned out onto fell grazing for the summer, after returning from over-wintering on lowland dairy grazing. Four of the group had been found dead over the preceding 10 days with no premonitory signs, and one that was found showing nervous signs was euthanased and submitted for postmortem examination. The ewe had dark purple lungs, an enlarged spleen, and small, white, miliary, pin-prick lesions scattered throughout the subcapsular surface of both kidneys. However, no significant bacteria were isolated from the lung or spleen. There was also an increased volume of cerebrospinal fluid (CSF), and pale-yellow fibrin deposits surrounding the spinal cord, and extensive fibrin deposition throughout the CSF and within the brain ventricles. Bacteriology identified a very heavy pure growth of

Bibersteinia trehalosi from a brain swab, and *Anaplasma phagocytophilum* was detected by PCR testing of the spleen.

Histopathology confirmed an acute suppurative meningitis and ventriculitis, and found no alternative cause for brain pathology, such as Louping Ill. It is likely that immunosuppression secondary to tick-borne fever increased susceptibility to *Bibersteinia* septicaemia in this ewe, however meningitis is an unusual finding in a case of *Bibersteiniosis*.

Sheep abortions due to multiple different bacterial infections and concurrent Tick-borne fever infection

This is described under the Reproductive Section (Page 21).

Lymph node aplasia in Scottish Blackface lambs

Scotland's Rural College (SRUC) has now diagnosed this condition in lambs from ten Scottish Blackface flocks. Affected lambs appear healthy until they develop severe orf between the ages of two and six months. They do not respond to treatment and if they are not euthanased will continue to lose weight and die.

Postmortem examinations have shown that these lambs have been born without any lymph nodes. Lymph nodes are a vital part of the immune system, explaining why these lambs are unable to cope with, and recover from, orf. Some are likely to die from other, less visible infections. The expectation is that many of these lambs will die before they are six months-of-age. However, we have diagnosed the condition in a 14-month-old ewe hogg, raising the possibility that some could survive to breeding age.

The only plausible explanation for a failure of the lymph nodes to develop is an inherited condition. Genetic typing of samples from several affected lambs, dams, and sires has been carried out in collaboration with researchers at the Roslin Institute in Edinburgh. Unfortunately, it has not yet been possible to identify the gene or genes responsible. Lymph node aplasia has so far only been found in Scottish Blackface sheep.

The Blackface Sheep Breeders' Association has written to their members to raise awareness of the condition, and to encourage flock owners, who think they have seen cases either this year, or in the past, to get in touch with their veterinarian or SRUC Veterinary Services. Any information provided will be treated with the strictest confidence. Further samples from affected lambs, plus their dams and their sires, are required to help find the cause and then to facilitate the development of a screening test for tups in the future.

Musculo-skeletal

No significant updates.

Urinary disease

No significant updates.

Nervous disease

Listeria encephalitis

There has been an increase in *Listeria* encephalitis cases for APHA data this quarter, with 15 incidents diagnosed this quarter compared to 13 and 9 for the equivalent quarter in 2024 and 2023 respectively. The age differentiation for this disease for Q2 over the past 3 years has included adults for 62% of the diagnoses.

A typical case was four ewes in a group of 25 that developed post-lambing nervous signs at grass. There were minimal gross findings and cultures were sterile, however brain histopathology confirmed listeriosis. In this case lambing occurred outside and risk factors may have included poaching around feeders and troughs, lack of grass, and feeding mouldy silage.

Meningitis in goat kids secondary to disbudding

Eleven, five-week-old goat kids, in a group of 380, developed nystagmus and pyrexia shortly after disbudding. Grossly there was an extensive fibrinopurulent meningitis and encephalitis, with fibrinous attachments between the brain and skull present directly beneath one of the disbudding rings (Figure 9). A very heavy mixed growth of *Trueperella pyogenes* was isolated from a brain swab, and disbudding was deemed the likely route of bacterial infection.

Horn buds in goat kids are proportionally larger than in calves and the skull is notably thin. Consequently, it is recommended disbudding takes place between 2 to 7 days of age in goat kids and may only be undertaken by a Veterinary surgeon. More information is available from The Goat Veterinary Society.

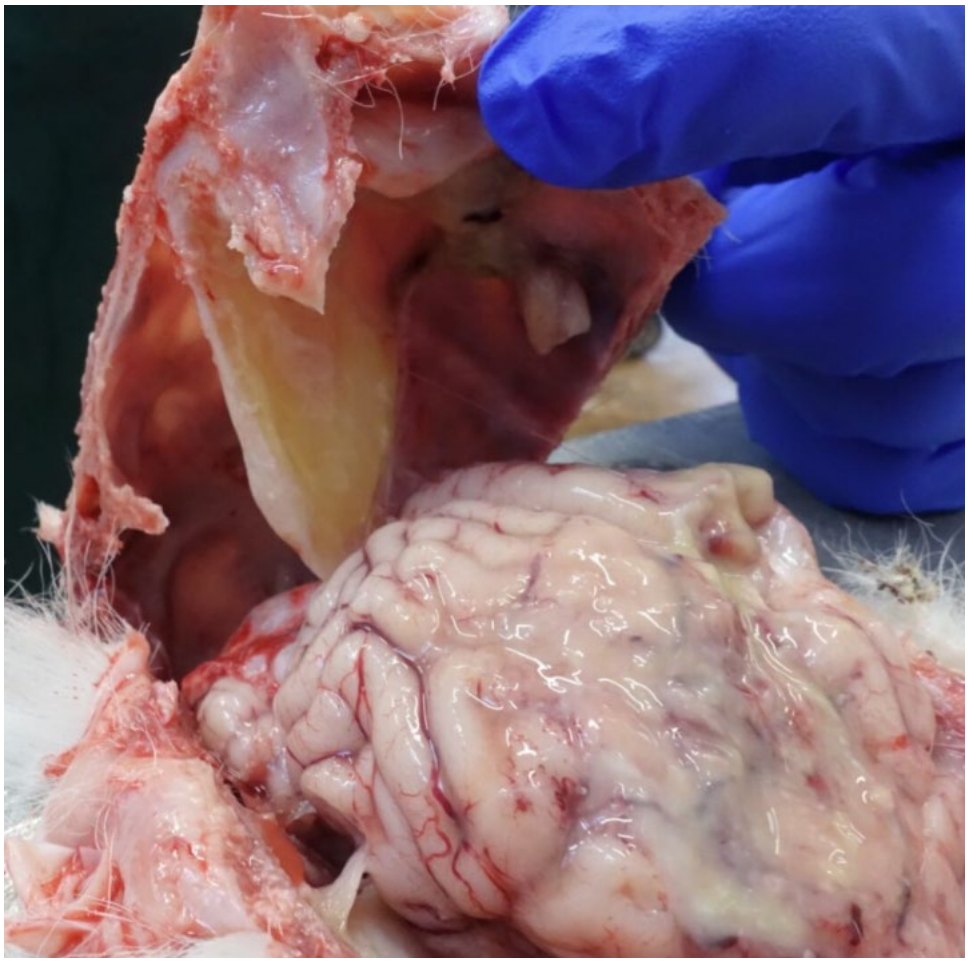


Figure 9: Post-disbudding meningoencephalitis in a goat kid

Reproductive

Fetopathy analysis for the 2025 lambing season

The most common fetopathy diagnoses for GB, in comparison to the same periods for the 2 previous years, are shown in Figure 10. This shows that fetopathy due to EAE was the most common diagnoses for the 2024 to 2025 lambing season, followed by Campylobacter and then Toxoplasma.

Schmallenberg fetopathy cases have declined significantly from the peak in 2024. Analysis of the geographic distribution show that the 2021 to 2022 lambing season peak of Schmallenberg fetopathy cases was limited to mainly the southeast of England (one case recorded in Scotland). Cases were then recorded further north and west during the peak in the 2023-2024 period.

During the recent lambing period in 2024 to 2025 there were no cases recorded in southeast England, with a few in the far southwest, Wales, and more in northern England and the south of Scotland (Figure 11).

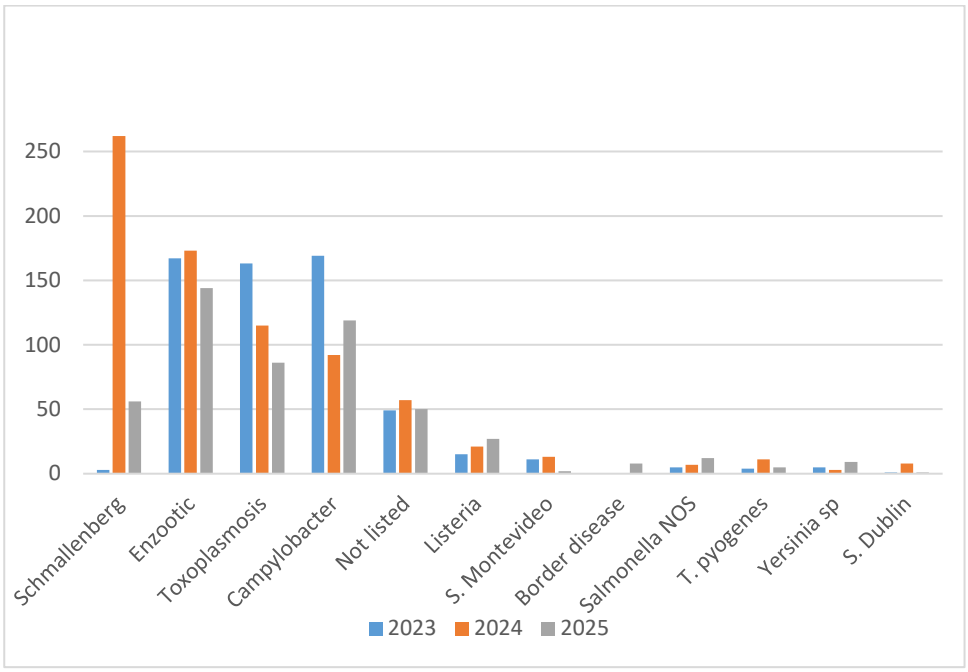


Figure 10: The number of annual VIDA diagnoses for common sheep abortion causes from 2023 to 2025

A specific code for Fetopathy due to Border disease was first introduced for the 2025 season, hence there are no recordings for this code for 2023 and 2024 in this graph.

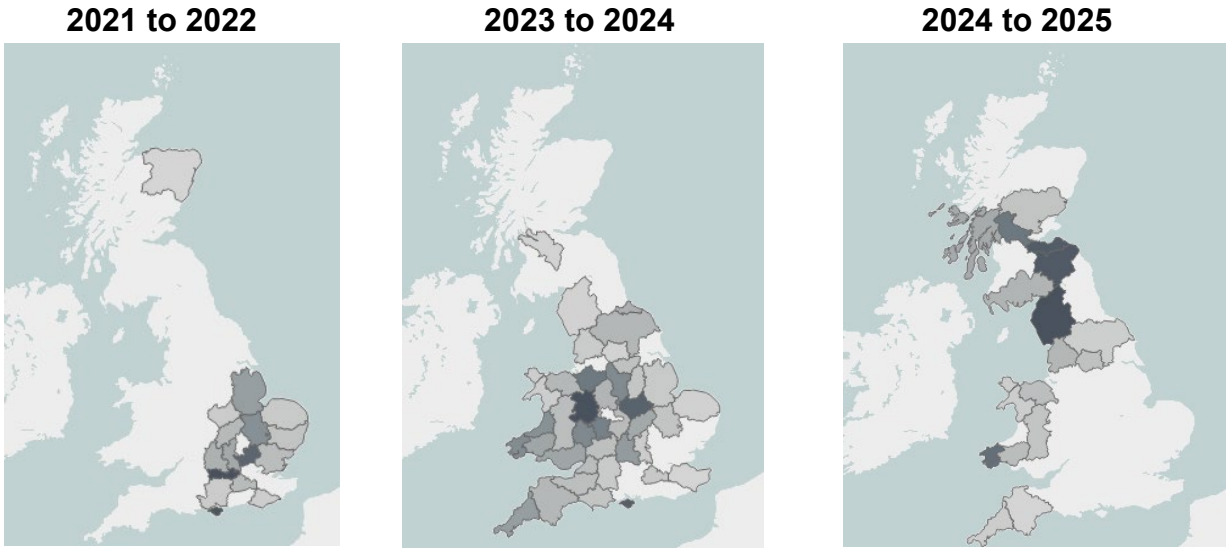


Figure 11: Geographic distribution of Schmallenberg fetopathy cases in sheep for the 2021 to 22, 2023 to 2024 and 2024 to 2025 lambing seasons, showing a change from cases in the southeast of England to further west and north

Multiple different bacterial infections and concurrent Tick-borne fever infection, in a flock experiencing an ‘abortion storm’

SRUC reported a range of different bacteria isolated from fetuses submitted to investigate the cause of 46 abortions in a group of 240 ewes, from a flock of 760. The ewes were enzootic abortion in ewes (EAE) vaccinated and were being kept on a stubble field, with access to a grass run back and they had received supplementary feed. Abortion testing found no evidence of EAE, toxoplasma, campylobacter, Q fever, Salmonella, Border Disease, or SBV. Pure growths of a range of bacteria were however isolated from fetal stomach contents, which included *Escherichia coli, Bibersteinia trehalosi* and *Streptococcus uberis*. Aborted ewes were retrospectively blood sampled and were found to be PCR positive for *Anaplasma phagocytophila,* the cause of tick-borne fever (TBF), and four foetal spleens also tested positive for *A phagocytophila.* Raw human sewage was found contaminating the stream that provided water for this group of sheep, and it was proposed that high bacterial challenge (in part from the sewage contamination), combined with TBF associated immunosuppression, was likely to have initiated the “abortion storm”.

Skin

Negated Bluetongue report case diagnosed with ovine parapoxvirus (orf) and a secondary bacterial infection

A ram presented with pyrexia, and severe crusting erosions and proliferative lesions around the lips, gums, and coronary bands of both hind limbs. Suspicion of Bluetongue virus was reported to the APHA field team and negated on blood testing. Treatment with non-steroidal anti-inflammatory drugs (NSAIDs), steroids, and antibiotics resulted in only a slight improvement, the weight loss continued, and the animal was euthanased. Gross examination at Starcross VIC revealed marked swelling of the lips, which were almost entirely affected with crusting, proliferative, and exudative lesions. Small wart-like lesions were noted protruding between the incisors, and two focal, large proliferative masses were present on the tongue and hard palate.

Wide areas of exudative lesions resembling granulation tissue were present around the coronary bands of both hind feet. Histopathology revealed the cause of lesions to be ovine parapoxvirus (orf) and a secondary bacterial infection, with electron microscopy further detecting parapoxvirus in fresh skin samples. Diagnostic testing ruled out the underlying immunosuppressive conditions tick-borne fever and cobalt deficiency. Advice was given on isolation of clinical cases, cleansing and disinfection of buildings, and the zoonotic potential of parapoxvirus.

Salmonellosis

Reports of salmonella in livestock, dogs, birds and wildlife in Great Britain on GOV.UK.

Salmonella Dublin

A single case of Salmonellosis due to *Salmonella* Dublin infection was diagnosed by SRUC this quarter. The case involved a 3-week-old lamb with a history of being found dead. Cattle are deemed the most probable source of infection for sheep, and a review of on-farm risk factors and potential sources of the Salmonella is recommended in these cases.

Salmonella Typhimurium

Two cases of Salmonellosis due to *Salmonella* Typhimurium infection were diagnosed by SRUC this quarter. The cases involved a 2-week-old and 5-day-old lamb respectively. Both were submitted with a history of being found dead.

Chemical food safety

Chemical Food Safety Reports can be found on GOV.UK.

Antimicrobial use and resistance

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

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 on the RUMA website.

The Medicine Hub, developed and resourced by AHDB, is a centralised national database for the collection and collation of antibiotic use data in UK sheep and cattle. It is a voluntary industry initiative which facilitates national reporting and builds evidence of the sector's responsible approach to antibiotic use. This data provides a useful indication of antibiotic use in the sheep sector. View the Medicine Hub for dairy, beef and sheep farmers on the AHDB website.

Centre of Expertise for Extensively Managed Livestock (COEEML)

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, see the Animal disease scanning surveillance pages on GOV.UK.

TSE

Surveillance for transmissible spongiform encephalopathies (TSEs) is carried out in the United Kingdom in animals susceptible to the disease. This includes cattle, sheep and goats. The main aim is to monitor trends in disease incidence and prevalence, to evaluate the effectiveness of TSE disease controls.

There are 2 categories of surveillance – passive and active.

Passive surveillance

This is when an animal with clinical signs suspicious of BSE or scrapie is reported to an APHA Office to be investigated. Such cases are slaughtered, and the examination of the brain determines whether the animal was affected by a TSE.

APHA has been recording and analysing data from reported cases in cattle since the start of the BSE epidemic in 1986, and for scrapie in sheep and goats since this disease became notifiable in 1993.

Active surveillance

The UK carries out active surveillance for TSEs.

The UK has:

- tested cattle since July 2001
- tested sheep and goats since January 2002
- conducted a survey in 2007 and 2008 of farmed and wild deer

View the updated TSE statistics on GOV.UK.

Horizon scanning

View the monitoring for major, notifiable or new and emerging animal disease outbreaks internationally and in the UK on GOV.UK.

Publications of interest

APHA Surveillance Reports on GOV.UK

Monthly APHA disease surveillance reports

APHA focus articles in the Veterinary Record

SRUC-VS Surveillance Reports

Scottish Government Veterinary Services Programme

SRUC Veterinary surveillance blogs

Veterinary surveillance blogs

Data Protection:
For information on how we handle personal data visit www.gov.uk and search Animal and Plant Health Agency Personal Information Charter.

This publication is available at www.gov.uk/government/publications

Any enquiries regarding this publication should be sent to us at

[Rudolf.reichel@apha.gov.uk]

www.gov.uk/apha

APHA is an Executive Agency of the Department for Environment, Food and Rural Affairs and also works on behalf of the Scottish Government, Welsh Government and Food Standards Agency to safeguard animal and plant health for the benefit of people, the environment and the economy.