



Animal &
Plant Health
Agency



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

Volume 27: Quarter 4 – October to December 2024

Highlights

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Introduction and overview

This quarterly report reviews disease trends and disease threats in Great Britain (England, Scotland and Wales) for the fourth quarter of 2024, October to December. 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.

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:** For the week ending 28 December, [the GB deadweight new season lamb standard quality quotation SQQ](#) averaged 691 pence per kilogram (p/kg) (increased by 92 pence year on year (YOY)). Prices have stood well above 2023 levels throughout 2024. We saw a seasonal uplift in price during November, driven by Christmas procurement, follow by almost flat prices throughout December, albeit at an elevated level.

- **Production:** United Kingdom (UK) clean sheep slaughter in December sat at 1.09 million head, down 5% on the same month of the previous year. [Sheep meat production](#) in the UK totalled 266,000 tonnes in for the full year of 2024, down 7% on the previous year. This was influenced by both difficult growing conditions this year and a smaller lamb crop in 2024.
- **Trade:** [Year to date \(Jan-Nov 2024\)](#) imports of total fresh and frozen sheep meat totalled 64,000 tonnes, up 41% on the same period of 2023. We saw increased volumes of sheep meat imported from Australia and New Zealand. Imports from New Zealand were impacted by wet weather in 2023, reducing their export capacity, resulting in a low base for comparison. Export volumes totalled 71,000 tonnes for the year to date (Jan-Nov 2024), down 6% on the same period of 2023. These exports totalled at a value of £517 million.
- **Demand:** In the 12 weeks to the 29 December, [spend on lamb in retail](#) increased by 3.3% year-on-year as prices paid rose by 5.4% on average across all lamb cuts and products. Volumes declined by 2.2%, the first decline for the lamb category in 2024. Primary lamb saw a 6.1% decrease in volumes purchased this period, impacted by a reduction in promotional support, particularly for roasting joints, as Christmas fell within this period. Processed lamb saw a 7.7% decline in volumes purchased, with burgers and grills driving the decline (-9.4%) mainly due to a reduced frequency of purchase, despite an increase in shopper numbers.

Acknowledgment for this update: Annabel Twinberrow, AHDB.

Bluetongue serotype 3 (BTV-3)

The first case of the season was confirmed in a ram in Norfolk on 26 August 2024. The affected animal presented with inappetence, ulcers in the mouth, mild crusting around the nostrils, and lameness in one leg. The total number of confirmed cases in GB by the end of December for the season, was 188.

[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 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 \(GOV.UK\)](#).

Unusual diagnoses

Rhodococcus hoagii (formerly *Rhodococcus equi*) infection in goats

An eight-month-old goat was submitted for postmortem examination (PME) to Penrith Veterinary Investigation Centre, to investigate ill health and mortality. This was the fourth

animal to be lost (two died, two were euthanised), from a group of 200. They showed weight loss over a couple of weeks, progressing to inappetence and dehydration without signs of diarrhoea, followed by death.

The submitted animal had not received any treatment and was euthanised on farm. The goats that had died previously had been treated with antibiotics and anti-inflammatories, with no response. Multivalent *Clostridia* and *Pasteurella* vaccines had been used in the group. On-farm PME by the private veterinarian revealed multifocal abscessation of the liver, lung, and mesenteric lymph nodes.

PME of the submitted goat revealed multiple firm, pale nodules, approximately five millimetres in diameter, throughout the spleen. The nodules consisted of a firm capsule with caseous material at the centre. Similar multiple diffuse nodules, of five to 15 millimetres in diameter extended throughout the liver parenchyma (Figure 1) and a few scattered nodules of similar size were present in both lungs (Figure 2).

Rhodococcus hoagii was isolated from the liver lesions.



Figure 1. Multiple diffuse nodules, five to 15 millimetres in diameter, in the liver of a goat with *Rhodococcus hoagii* infection

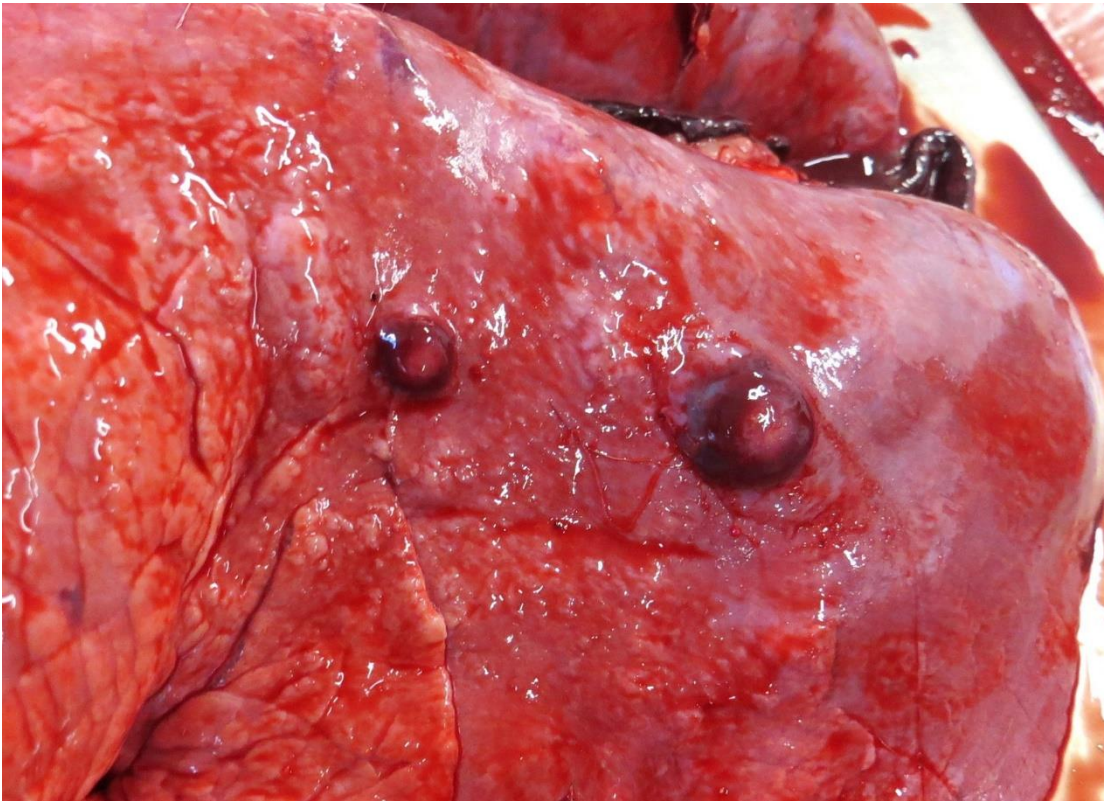


Figure 2. Isolated raised firm nodules in the lung of a goat infected with *Rhodococcus hoagii*

Two previous cases in goats in the UK had been diagnosed and reported by Jeckel and others, 2011. One was a 10-month-old meat goat with multiple abscess in the liver, lungs and spleen, and focal areas of abscessation and osteomyelitis in two ribs, the atlas and a lumbar vertebra, resulting in hind limb paresis. The second was a yearling goat from a dairy unit, with similar multiple abscessation of the liver and lung.

Rhodococcus hoagii is a ubiquitous soilborne bacterium that can cause opportunistic infections, with pyogranulomatous lesions in lungs and lymph nodes, and abscesses in other organs. It has a worldwide distribution, can infect a range of wild and domestic species, including humans, and is a significant pathogen in the horse industry. The route of infection can be inhalation of contaminated dust or consumption of contaminated food and water. Pneumonia and organ abscesses are the most common clinical findings in goats. Cases are rarely reported in goats, suggesting the pathogen is opportunistic and infection likely secondary to immunosuppressive conditions ([Rhodococcus Infection in Animals - Generalized Conditions - MSD Veterinary Manual](#), Stranahan and others, 2017).

Jeckel, S., Holmes, P., King, S., Whatmore, A.M. and Kirkwood, I. (2011), Disseminated *Rhodococcus equi* infection in goats in the UK. Veterinary Record, 169: 56-56. <https://doi.org/10.1136/vr.d4267>

Stranahan LW, Plumlee QD, Lawhon SD, Cohen ND, Bryan LK. (2018), *Rhodococcus equi* Infections in Goats: Characterization of Virulence Plasmids. Veterinary Pathology, 55(2):273-276. doi:10.1177/0300985817747327

Goat disease surveillance dashboard outputs

Table 1: Great Britain scanning surveillance five most frequent goat submission diagnoses in quarter 4 (Q4) of 2024, Q4 of 2023, and Q4 for 2015 to 2024

	5 most frequent diagnoses Q4 2024	5 most frequent diagnoses Q4 2023	5 most frequent diagnoses Q3 2015 to 2024
1	Parasitic gastroenteritis	Parasitic gastroenteritis	Parasitic gastroenteritis
2	Johne's disease	<i>Clostridium perfringens</i> type D infection	Johne's disease
3	PGE due to Haemonchosis	Hypocupraemia and, or hypocuprosis	<i>Clostridium perfringens</i> type D infection
4	<i>Clostridium perfringens</i> type D infection	Urolithiasis	Coccidiosis
5	Coccidiosis	Coccidiosis	PGE due to Haemonchosis

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

Sheep disease surveillance dashboard outputs

Table 2: Great Britain scanning surveillance 10 most frequent sheep submission diagnoses in Q4 of 2024, Q4 of 2023, and Q4 for 2015 to 2024

	10 most frequent diagnoses Q4 2024	10 most frequent diagnoses Q4 2023	10 most frequent diagnoses Q4 2015 to 2024
1	Parasitic gastroenteritis (PGE)	Parasitic gastroenteritis	Parasitic gastroenteritis
2	Hyposelenaemia	Hyposelenaemia	Hyposelenaemia
3	Systemic pasteurellosis	Pine or Cobalt deficiency	Systemic pasteurellosis

4	Pneumonia due to M. haemolytica	Pneumonia due to other causes	Pine or Cobalt deficiency
5	PGE due to Haemonchosis	Johne's disease	Pneumonia due to M. haemolytica
6	Chronic fascioliasis	Pneumonia due to M. haemolytica	Chronic fascioliasis
7	Pneumonia due to other causes	Chronic fascioliasis	Pneumonia due to other causes
8	Ovine pulmonary adenocarcinoma (OPA)	Systemic pasteurellosis	Johne's disease
9	Pine or Cobalt deficiency	PGE due to Haemonchosis	Sheep scab
10	Pneumonia due to mycoplasma	OPA	OPA

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

Pneumonia due to other causes includes conditions such as lung abscessation.

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 Great Britain, for the following diseases.

Increases:

- Septicaemia due to *Bibersteinia trehalosi*
- Parasitic gastroenteritis (PGE) due to Haemonchus

Parasitology

PGE Haemonchosis

The levels of diagnosed cases of haemonchosis (as a percentage of diagnosable submissions) remained at a high level for the year 2024 (Figure 3) and Q4, 2024. Subsidised testing and increased awareness over the past few years will have raised the numbers artificially, but anecdotal reports from private veterinarians and parasitology experts support a genuine high level of cases.

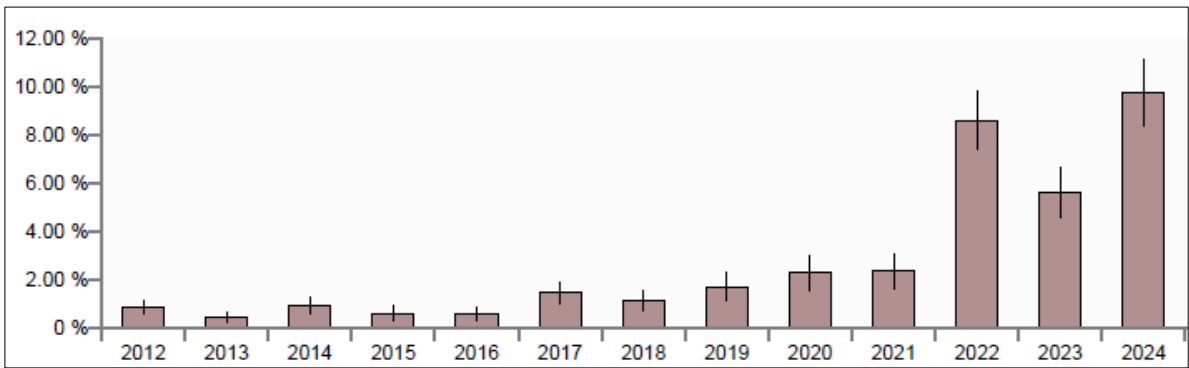


Figure 3: Annual GB incidents of PGE Haemonchosis in sheep as percentage of diagnosable submissions; a high level is evident over the past 3 years.

The monthly distribution of incidents during 2024 indicates some cases during every month of the year, with a peak from July to October and the highest number during August (Figure 4). The geographic distribution of incidents during 2024 shows widespread distribution in GB (Figure 5). The breakdown of the age categories for this diagnosis is shown in Table 3. The most common reported clinical sign was “found dead”, followed by “wasting” and “malaise”.

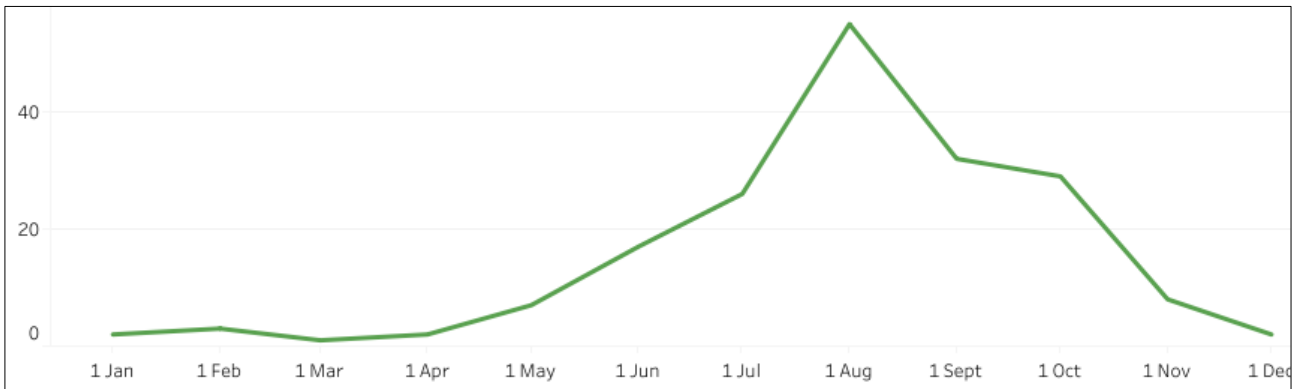


Figure 4: Monthly GB incidents of PGE Haemonchosis in sheep during 2024, showing a peak from July to October with the highest monthly figures during August.

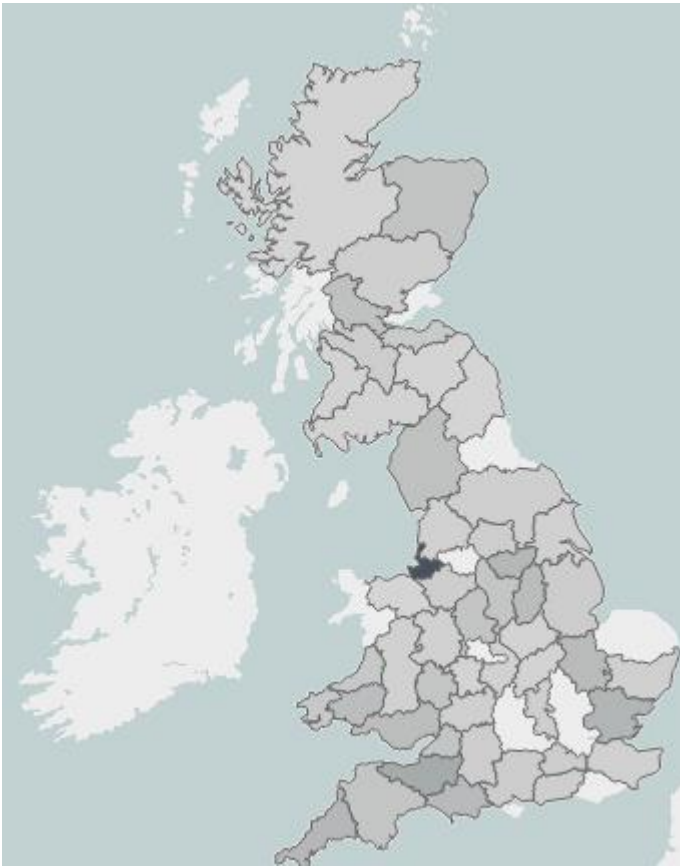


Figure 5: Widespread geographic distribution of PGE Haemonchus cases in GB in 2024. Darker shading is equivalent to a relevant higher number of cases in that county

Table 3: The age categories of confirmed PGE Haemonchus cases in GB in 2024

Age category	Number of recorded incidents
Adult	64
Mixed	5
Post weaned	78
Pre weaned	13
Unknown	24

Systemic disease

Bibersteinia septicaemia

There was a notable increase in *Bibersteinia trehalosi* septicaemia cases recorded by APHA and SRUC during 2024, which followed five years of relatively low numbers of cases (Figure 6). Seventy-six diagnoses were made in 2024, where there had been between 28 and 51 annual diagnoses during the preceding five years. Sixty percent of the 2024 diagnoses were made in quarter 4, and 30% of the diagnoses were in quarter 3. Late summer and autumn are the usual periods when outbreaks of *Bibersteinia* septicaemia are seen.

Post weaned lambs are typically affected, with multiple factors potentially driving the occurrence of disease, such as a lack of immunity in growing lambs, concurrent disease such as worms, trace element deficiencies and Tick-borne fever, and stress and elevated transmission/infection following handling/interventions, transport, and weather changes or diet changes. Vaccination can provide some protection but unfortunately does not entirely prevent losses, particularly if potential risk factors overwhelmingly encourage infection.

The increase during 2024 was largely seen in post weaned lambs (89% of the cases) occurring in lowland, hill/upland and finisher lamb systems, in the south-west, West and North of England, in Wales and Scotland. Only eight cases were in adults, and only two of these were in sheep older than two years of age, and these had concurrent liver fluke and Tick-borne fever infection as potential immunosuppressors. In 29 cases there was no recorded concurrent disease issue. Where concurrent diseases were identified these were: PGE, which included in some *Haemonchus* or *Nematodirus* (21 cases), hyposelenosis (9 cases) and Tick-borne fever (8 cases). There were single or low numbers of cases with concurrent pneumonia (Figure 7) and bolus injury.

Altered concurrent disease challenges, changeable weather conditions, and some reduced availability of the vaccine could all have influenced the increase in the number of cases encountered during 2024.

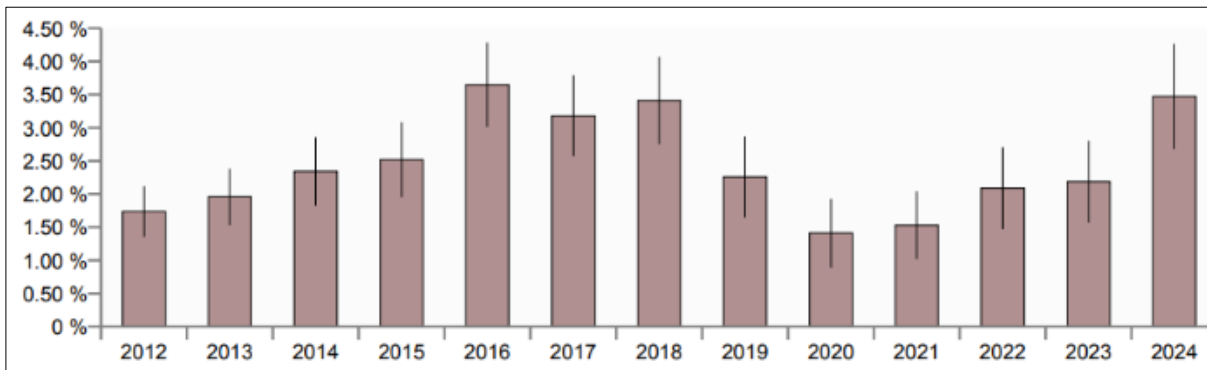


Figure 6: Annual GB incidents of *Bibersteinia trehalosi* (formerly *Pasteurella trehalosi*) septicaemia as percentage of diagnosable submissions; an increase relative to the previous five years can be seen.



Figure 7: Extensive oesophageal ulceration and lung consolidation in a lamb with *Bibersteinia* septicaemia and mixed pathogen pneumonia.

A case of *Bibersteinia trehalosi* septicaemia in a 3-year-old ewe represented a more unusual presentation of this infection. *Bibersteinia* septicaemia infrequently occurs in ewes of more than two years of age (approximately 5% of all cases will be in this age group) and is more likely when there are concurrent immunosuppressant disease issues. *Bibersteinia trehalosi* infection, when it occurs in older sheep, more often presents as a necrotising pneumonia rather than the septicaemic form.

The ewe was submitted for postmortem examination after seven ewes had been found dead within a week, in a flock of 70 breeding sheep. Postmortem examination found

subcutaneous oedema in the neck, brown-green abomasal contents and several abomasal ulcers (up to 1.5cm diameter). The lungs were dark red and there was a discrete 1cm diameter lung abscess. Significant pure growths of *Bibersteinia trehalosi* were isolated from the lungs. Histopathology confirmed a coccobacillary bacterial overgrowth within sections of lung and liver, as well as thrombosis, suggesting that a peracute septicaemic insult had been the cause of death, consistent with *Bibersteinia* septicaemia.

Pasteurellosis/Mannheimiosis

An increasing trend of systemic Pasteurellosis/Mannheimiosis diagnoses were recorded during 2024, and particularly in quarter 4, compared to previous years (Figure 8). There were 56 diagnoses during 2024, which represented 2.44% of diagnosable submissions, compared to prior annual ranges of between 0.88% and 2.38%, recorded in the previous 12 years. During 2024 a relatively high number of diagnoses were made in post-weaned lambs (24 diagnoses) compared to 30 diagnoses in preweaned lambs, where in a typical year a greater proportion of the diagnoses would be in preweaned lambs. In 57% of the cases, a concurrent disease or diseases were identified, which were: endoparasitism (PGE or Coccidiosis), Tick-borne fever, Border disease, pneumonia, or hyposelenosis.

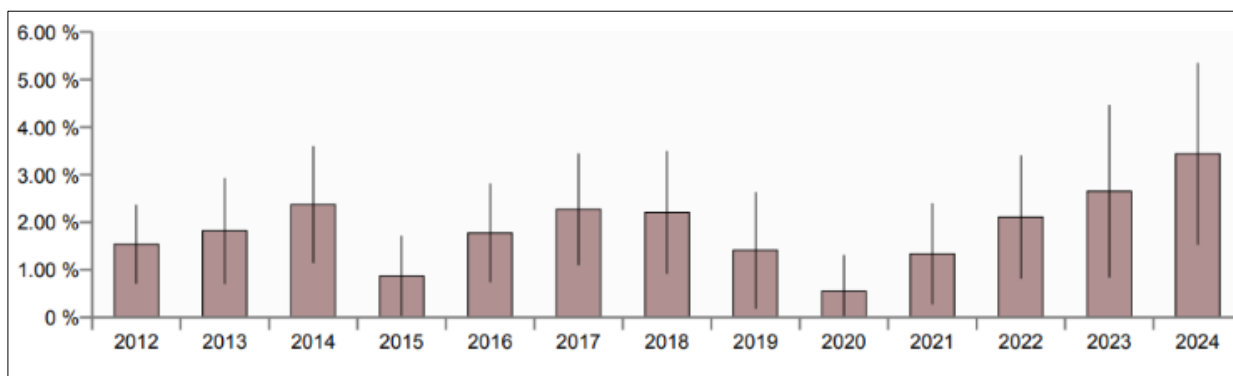


Figure 8: GB incidents of Pasteurellosis/Mannheimiosis as percentage of diagnosable submissions for Q4; an upwards trend can be seen over the last 5 years.

Pine/ cobalt deficiency

There was a decrease in the incidents of pine/ cobalt deficiency diagnosed this quarter, as a percentage of diagnosable submissions, compared to the same quarter over the previous five years (Figure 9).

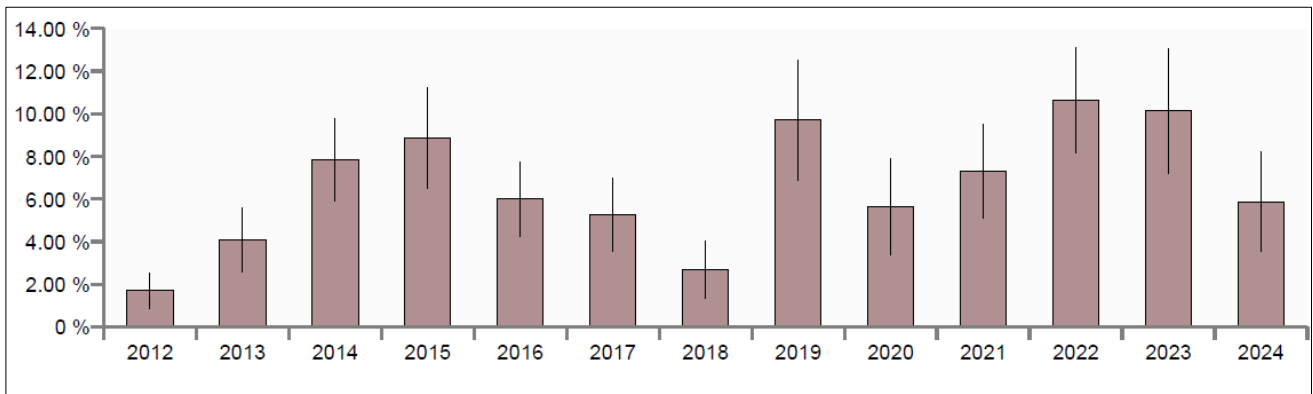


Figure 9: GB incidents of Pine or cobalt deficiency for quarter 4, as a percentage of diagnosable submissions: a decrease can be seen on Q4 compared to the equivalent 3 quarters.

Cobalt deficiency-induced neurological signs and PGE contributed to by extreme hyposelenosis in spring-born lambs

Two live lambs were submitted for postmortem examination to investigate the cause of poor body condition, diarrhoea, and five deaths in a three-week period. There were 150 lambs left on farm, approximately 300 had been finished and sold, and these remaining lambs were generally in poor condition and were lethargic. Fifty of the group were particularly poor. The submitted lambs had not grown well and were in poor body condition. One had marked faecal soiling of the hindquarters, the other was showing neurological signs, consisting of recumbency, depression, refluxing of rumen contents, twitching and falling to the left side. Postmortem examination found abomasal mucosal thickening in both lambs and one had diarrhoeic intestinal contents. Interestingly, adhesions were found between the cerebral hemispheres of the lamb showing neurological signs. No current worm burden was found in the lambs, as anthelmintic treatment had been given 10 days before submission, histopathology, however, identified chronic inflammatory changes in the abomasum and in the small intestines of both lambs, consistent with chronic endoparasitism or PGE. Extremely low blood cobalt levels were confirmed in both animals, and histopathological examination of the brain of the lamb with neurological signs identified changes consistent with those seen in more extreme cases of cobalt deficiency. Both lambs also had markedly low liver selenium results. Sheep with chronic worm damage can have acquired trace element deficiencies due to malabsorption, therefore for a true status it is usually advisable to blood sample less severely affected cases in the group. The extremely low levels in this case, however, were more supportive of true selenium and cobalt deficiency, suggesting trace element deficiency had likely contributed to ongoing severe worm issues in these lambs.

Drenching gun injuries

There was an increase in the number of incidents of drenching gun injuries as a percentage of diagnosable submissions in quarter 4 of 2024 (12 incidents equating to

approximately 4% of diagnosable submissions) compared to the same quarter for the preceding 12 years, as demonstrated in Figure 10.

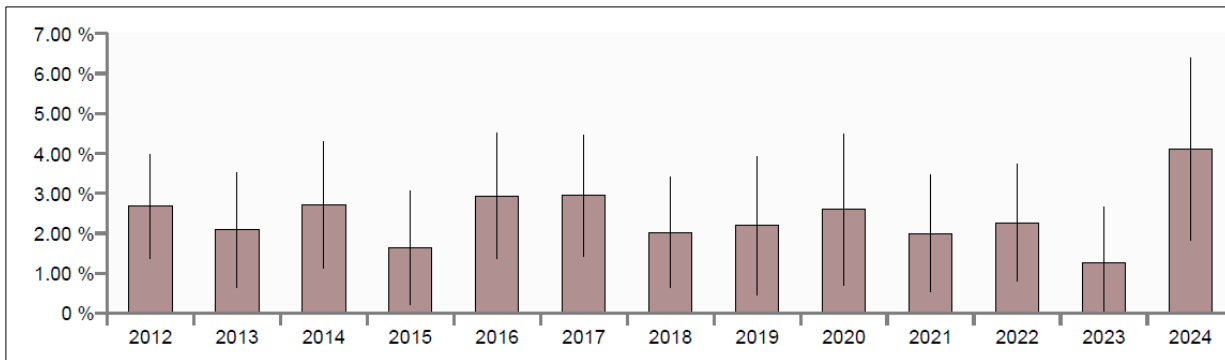


Figure 10: GB incidents of Drenching gun injuries for quarter 4, as a percentage of diagnosable submissions; an increase for Q4 as compared to the same quarter for previous years

Drenching gun injuries are a significant welfare issue, often involving multiple animals in a flock, with death often occurring sometime after the initial injury. This was demonstrated by a case report from the SRUC. Six hundred Scottish blackface lambs received a combination worm and fluke drench, and a trace element bolus over the course of a week. Twenty-three were found dead over a 72-hour period one week later and five on-farm, postmortem examinations identified dosing gun injuries in three. A further four died three weeks later and the carcasses were submitted for further investigation. Dosing gun injuries were identified in two. Systemic pasteurellosis due to *Bibersteinia trehalosi* was identified in the third. The fourth proved too autolysed to establish the cause of death.

Malignant catarrhal fever (MCF)-like systemic necrotising vasculitis

Histopathology samples were submitted from a ewe lamb which had presented with persistent pyrexia which failed to respond to treatment. At PME, white lesions were observed on the liver and the dorsal margin of the liver had a mottled appearance. The kidneys were pale yellow in appearance and had white lesions in the cortex.

Histopathology identified a granulomatous pneumonia, hepatic infarcts and evidence of vasculitis. The unusual appearance raised the suspicion of possible ovine herpes virus type 2 (OvHV-2) infection, and the samples were submitted for in-situ hybridisation (ISH) testing which identified strong intra-nuclear labelling of lymphocytes in the perivascular cuffs (positive for OvHV-2). Although sheep are the natural reservoir for OHV-2, and infection is usually subclinical, occasionally clinical cases do occur. Malignant catarrhal fever (MCF)-like systemic necrotising vasculitis is a rare, sporadic disease; recognised in individuals or clusters of sheep, and recently associated with OvHV-2 (lesions bear similarities to those seen in MCF in cattle).

A further case was confirmed in an adult ewe submitted to investigate loss of condition, scour and deaths in a group of in-lamb ewes. A moderate worm burden was detected (worm egg count 1050 epg) but it was not deemed to be the cause of the gross pathology, or clinical signs seen in this case. PCR testing did confirm the presence of OvHV-2.

***Erysipelothrix rhusiopathiae* septicaemia in a lamb post-dipping**

A recently purchased lamb was submitted to investigate two deaths from a group of 250, with a further 40 lambs unwell. Lambs were purchased from various sources a week previously and were dipped in diazinon soon after arrival. Some lambs were looking unwell with purulent nasal discharge five days later and were treated with oxytetracycline; lambs from several flocks of origin were affected. Gross pathological findings were suggestive of a systemic disease process and *Erysipelothrix rhusiopathiae* was isolated in systemic distribution. Infection with *E. rhusiopathiae*, a soil organism, can follow any minor skin wound. It is also associated with dipping if contamination of the dipping solution has occurred. Lameness due to polyarthritis is mostly seen following *E. rhusiopathiae* infection but septicaemia can also occur. A review of sheep dip maintenance and avoidance of contamination/changing of dip solution, when required, was advised.

Clostridial myositis in ewe lambs

Clostridia, pasteurella, toxoplasma, EAE, and salmonella vaccines were administered to a group of 80 purchased ewe lambs, which were also wormed at the same handling. Two lambs were found dead three days later and one carcass was submitted for postmortem examination. This detected marked haemorrhage and oedema of the right hindleg from the mid femur distally. Multiple muscle bodies in the affected limb were dark red to black with a dry appearance in some cases. The lungs were oedematous, and haemorrhages were found on the parietal pleura, diaphragm, and within the tissues of the neck, suggesting septicaemia/toxaemia. *Clostridium chauvoei* and *Clostridium septicum* were detected in the affected muscle by fluorescent antibody test (FAT), consistent with a diagnosis of blackleg/malignant oedema. The farmer confirmed that the vaccinations had been done in wet weather, which could have predisposed to the clostridial myositis.

Black disease in a sheep

A Scottish Blackface gimmer was euthanased after being found recumbent with evidence of jaundice. Four others from the group of 50 had been found dead during the previous 48 hours. An on-farm postmortem examination identified a swollen liver with pale patches on the surface, and 3-8 mm sized *Fasciola hepatica* flukes within the bile ducts. *Clostridium novyi* was not detected on FAT, but histopathology confirmed severe necrosuppurative hepatitis with intralesional clostridial organisms, confirming a diagnosis of black disease. Treatment for liver fluke had been given around two months earlier when an adulticide-only product had been given, which was not appropriate for the time of year.

Respiratory disease

Maedi visna

Maedi visna (MV) diagnoses increased in 2024, continuing a gradually increasing trend that has been occurring since 2020. The total number of cases recorded was 28

(compared to between 4 and 19 diagnosed during previous years), and this figure represents a progressive increase in flocks with recognisable disease, with an undetermined number of other flocks that are likely infected but where the disease has not yet been identified. Typically, issues are first recognised in a flock when at least half of the flock are seropositive, the virus having gradually spreading within that flock over several years before detection. As MV is an immunosuppressive disease, concurrent disease issues can confuse the clinical picture in infected flocks, delaying diagnosis. More than 80% of the cases in 2024 were diagnosed in England and Wales, with the remaining 20% of cases diagnosed in Scotland.

Ovine Pulmonary Adenocarcinoma (OPA), Maedi Visna, Haemonchosis, and poor dentition in ewes

OPA, MV, haemonchosis and poor dentition were identified in two ewes, submitted for PME to investigate chronic ill thrift, and continued deterioration despite additional feeding. Replacement ewes had been purchased annually in this flock of 150 ewes up until two years previously. Examination of a 2-year-old ewe found evidence of live *Haemonchus* sp. worms in the abomasum, chronic intestinal changes likely from ongoing endoparasitic challenge, and OPA lesions were confirmed in the lung tissues. A 5-year-old ewe had several loose molar teeth, and diffuse grey-pink, rubbery changes in the lungs, which histology identified were as a result of MV infection. Although multiple diseases and problems were identified as potential causes of poor body condition in this case, both ewes tested seropositive for Maedi-Visna. As one of the ewes had MV induced lung lesions, this disease was likely to have been significantly contributing to ill thrift and various other disease issues in this flock.

Circulatory disease

Unusual case of a likely thymoma diagnosed in a post-weaned lamb

The carcase of a post-weaned Wiltshire Horn lamb was submitted to investigate unilateral swelling of the throat area, that had failed to respond to surgical draining and continued to enlarge despite antibiotic and anti-inflammatory treatments. The lamb was euthanased due to compression of the surrounding pharyngeal structures and the development of respiratory distress. Postmortem examination identified a large, encapsulated fluid filled mass on the right of the neck, that contained a large volume of serosanguineous fluid, mucoid fibrin strands and small blood clots (Figure 11). Numerous, small, round, dark-coloured, ball-like structures were attached to the internal surface of the mass. The histopathological findings confirmed that the mass was neoplastic in nature, with a thymoma being the most likely diagnosis. It was considered likely to be an isolated incident in the flock. There have been two previous diagnoses of this type of tumour in sheep since 2009, these were recorded in England and Wales. These previous diagnoses were both in adult sheep, one of which was 12 years old.



Figure 11: Incised, fluid filled mass on the neck of Wiltshire Horn lamb, diagnosed as a likely thymoma

Fatal haemothorax and laryngeal chondritis in a 7-month-old Texel ram lamb

Fatal haemothorax associated with upper respiratory tract pathology has been described previously in Texel sheep in the literature (Waine et Al, 2019), although cases have usually been associated with tearing of the diaphragm. Three litres of blood was found in the thorax and mediastinum of a Texel ram lamb, which had originated from a two cm long tear in the caudal vena cava at the level of the diaphragm. Histopathology revealed there was haemorrhage dissecting the vena cava wall, fibrin, low numbers of inflammatory cells, and an early fibrovascular response, suggesting bleeding may have started dissecting the wall from a few hours to two days before vessel rupture occurred. The affected Texel ram lamb was one of a group of eight at grass and was the second animal to die in the group, having been treated with antimicrobials and anti-inflammatories for upper respiratory tract issues. The lamb was found at postmortem to have laryngeal chondritis, presenting as swelling of the laryngeal folds with marked stenosis of the lumen, and there was a 10 mm abscess within the left laryngeal wall. The potential for a collagen defect as a cause of major vessel and diaphragm weakness has been speculated as a potential underlying cause in some of these cases but has not yet been conclusively proven.

Waine, K., Strugnell, B.W., Howie, F., Swinson, V. and Millar, M. (2019), Diaphragmatic lesions and fatal haemorrhage in Texel sheep. Vet Rec Case Rep, 7: e000745. <https://doi.org/10.1136/vetreccr-2018-000745>

Urinary disease

There was a decrease in percentage of incidents of nephrosis diagnosed in sheep across APHA and SRUC in 2024 compared with 2023 (Figure 12).

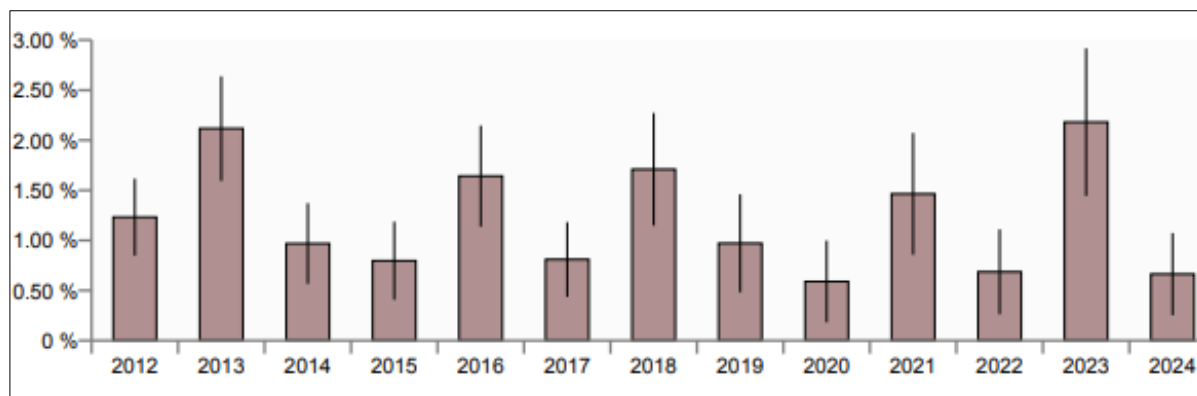


Figure 12: Percentage of incidents of nephrosis diagnosed in sheep across GB in Q4, 2025; a decrease in Q4 compared to the same quarter in 2023.

Lowland sheep are the group with the most urinary disease diagnoses; this is a consistent finding across all quarters. This is possibly due to differences in diet, with lowland flocks more likely to be on diets consisting of concentrates and grain, which are higher in minerals, and which can predispose to urolith formation causing urinary obstruction. Pet sheep are often lowland grazers and can be more prone to urinary diseases due to dietary factors; this may also influence percentage of diagnosis in lowland sheep compared with other groups.

Urolithiasis in a Store Lamb

Thirteen ram lambs out of 2000 bought-in store lambs had shown signs of urolithiasis over a one-month period. A lamb showing typical signs was submitted live for euthanasia and PME to investigate. The lamb had a four-day history of anorexia, lying down and straining to pass urine, eventually stopping straining and became red and swollen ventrally. Some of the affected animals were on pasture and some were housed. All were on ad lib concentrate. Just before the first case, the composition of the lamb finisher concentrate was changed without the farmer's knowledge, with the level of ammonium chloride lowered from 3000mg/kg to 1500mg/kg by the feed company.

Postmortem examination confirmed urolithiasis. Rupture of the urethra had occurred slightly distal to the sigmoid flexure due to the obstruction (Figure 13), with extensive cellulitis and accumulation of urine in the ventral abdomen, scrotum and right hind leg. The end of the penis was necrotic, likely due to obstruction. The bladder wall was also necrotic.

The concentrate ration was already being changed to one with a higher level of ammonium chloride at the time of submission. In the meantime, provision of roughage to promote saliva production and water intake was advised, and to ensure that all animals had

unlimited access to clean fresh water. It was advised that the rest of the group should be closely examined for signs of illness and treated promptly as required.



Figure 13: Ruptured urethra with necrotic debris in urethra, distal to rupture, in a lamb with urolithiasis.

Nervous Disease

Louping Ill

There were no significant changes to the Q4 data for louping ill, compared to previous years.

As discussed in previous reports the interpretation of the trend for diagnoses of louping ill remains a constant challenge due to the small number of cases reported each year. As in 2023 the annual data for 2024 again shows a slight decrease in case numbers with 18 cases reported in 2024 compared to 21 in 2023.

It is not unusual to see yearly fluctuations in Louping ill cases due to the strong correlation between the ecology of *Ixodes ricinus* and environmental conditions. The cases reported above would indicate that, like 2022 and 2023, the climatic conditions seen in 2024 were again suited to tick survival and activity. It will be interesting to see if this continues into 2025.

SKIN

Eosinophilic dermatitis

Eosinophilic dermatitis was determined to be the cause of pruritic, scabby lesions on the pastern areas of a two-year-old Dorset cross Dutch Spotted ewe. No improvements were noted after treatments for ectoparasites and bacterial skin infections. Histopathology identified a hyperplastic and eosinophilic dermatitis. A hypersensitivity to fly bites was considered a possibility given the eosinophilic component. On a second farm, skin crusting and itchiness was observed around the ear pinnae and peri-orbitally in an adult Norfolk

ewe and eosinophilic dermatitis was observed on histopathology. It was noted that only the dark faced sheep in the flock were affected which often seems to be the case with fly bite hypersensitivity.

Periorbital eczema, Orf, and insect bite reaction causing ulcerative skin lesions in a group of ewes

Charcoal and plain swabs, scabs/exudate, and fixed and fresh biopsy material were submitted from two sheep, to investigate the cause of severe and persisting ulcerative and crusted head skin lesions, affecting a few ewes in a group of 30 Welsh Mules and six fat lambs. There were ulcerative lesions around the eyes, on the ears, and on the muzzle and nose of the affected sheep (Figure 14). The lesions looked clinically like a peri-orbital dermatitis, which is typically caused by *Staphylococcus aureus* infection and is spread amongst groups by close contact. The lesions however had responded poorly to a long course of antibiotics, failing to resolve even after four weeks of treatment. Bacterial cultures confirmed *Staphylococcus aureus* bacterial infection, and electron microscopy also identified parapoxvirus (orf) in one of the two sheep. The histopathological changes were consistent with periorbital dermatitis, however an eosinophilic response was also identified, and an underlying biting insect reaction, such as from *Culicoides* sp. midges, was considered a possible initiating factor, with continuing irritation slowing healing and facilitating secondary bacterial infection. The sheep had been grazing pastures next to a river where high midge exposure could have occurred. The orf infection identified in one of the ewes appeared a likely opportunist affecting the already ulcerated skin, as histopathology found no evidence to suggest there were active orf lesions in this case.



Figure 14: Persisting skin lesions, despite treatment, in a commercial flock diagnosed as *Staphylococcus aureus* infection and a suspected biting insect or midge bite reaction. Thanks to Lucy Tubbs, Cain Farm Vets, for providing the picture.

Ovine herpesvirus-2 (OHV-2) infection in a pygmy goat

A young pygmy goat appeared healthy for the first month after being introduced to a holding. Over the course of the next month crusting, pruritic skin lesions with hair loss appeared on the neck and head with extension to the ventrum (Figure 15). Histological examination of a skin biopsy revealed lesions of granulomatous mural folliculitis similar to those described in association with ovine herpesvirus-2 (OHV-2) infection (Westerman et Al). Skin samples tested PCR positive for OHV-2 and the goat was euthanased following continued weight loss and the development of hindlimb paresis. A range of tissues were fixed and further histopathology identified lymphohistiocytic arteritis consistent with OHV-2 infection in the skin, kidney, small intestine and lumbar spinal cord, confirming a diagnosis of malignant catarrhal fever (MCF). Cases of MCF are very uncommon in goats, with the combination of granulomatous folliculitis and visceral lesions not yet reported in the literature. Given the rarity of infection in goats this is likely an isolated case. While other goats on the holding will have been exposed to the virus, development of clinical signs would be very unlikely. [Published as: Rare case of malignant catarrhal fever in a goat - 2024 - Veterinary Record](#)



Figure 15: Crusting, pruritic skin lesions and hair loss in a young pygmy goat infected with ovine herpesvirus-2 (OHV-2)

Westermann T, Demeter EA, Diel DG, Renshaw RW, Laverack MA, Gerdes RS, Peters-Kennedy J. Granulomatous mural folliculitis in 16 domestic goats: Infection with malignant catarrhal fever viruses and colocalization with ovine herpesvirus-2 using in situ hybridization. *Vet Pathol.* 2023;60(6):876-887

SALMONELLOSIS

Salmonellosis due to *Salmonella* Dublin (non-fetopathy)

Diagnosis of *Salmonella* Dublin infection in sheep in 2024 remained low. Two cases were recorded, both from Northern England. The first case involved a two-month-old lamb with a history of scour and weight loss before death. Twelve lambs from the group of 37 had died since turnout one month previously. Faecal culture isolated *Salmonella* Dublin.

Salmonella Dublin was also isolated from the caecal content of a nine-month-old Leicester Longwool lamb, that had died following a period of lethargy, anorexia and condition loss. Infection in this case was considered opportunistic and secondary to severe parasitic gastroenteritis.

Cattle are deemed the most likely source of infection for sheep, and a review of on-farm risk factors and potential sources is recommended in these cases.

Salmonellosis not otherwise specified (NOS), (non-fetopathy)

Annual diagnoses of Salmonellosis NOS were slightly decreased this year with 25 cases (1.20%) recorded in 2024, compared to 34 (1.56%) in 2023. As in previous years, the most commonly reported serovar was *Salmonella enterica* subspecies *diarizonae* 61:k:1,5,(7). It was isolated from neonatal lambs, pre-weaned and post-weaned lambs, and adult sheep. As often seen in these cases it was typically detected in association with other disease processes. Concurrent diseases recorded in 2024 included parasitic gastroenteritis, Johne's disease, clostridial enterotoxaemia, and pneumonia. Clinical signs reported in the submissions included "found dead", malaise, and diarrhoea.

Salmonellosis due to *Salmonella* Typhimurium (non-fetopathy)

Incidents of *Salmonella* Typhimurium were slightly decreased in 2024, with seven cases (0.33%) recorded, compared to 10 cases (0.46%) in 2023. As with the other *Salmonella* serotypes, the *Salmonella* Typhimurium infection was deemed opportunistic in these cases and, was typically diagnosed in already debilitated animals with concurrent disease processes including pasteurellosis and parasitic gastroenteritis.

A six-month-old lamb was submitted for postmortem examination to investigate several recent deaths in a group of 250. Pasteurellosis was initially suspected, and a *Pasteurella* and *Clostridia* vaccine booster was administered to the group. They were moved onto a field of oilseed rape, and deaths continued, with neurological signs reported in some of the affected lambs before dying. Grossly there were extensive areas of haemorrhage on the abomasal mucosa and intestinal content was liquid throughout. Bacterial cultures confirmed a diagnosis of systemic salmonellosis with *Salmonella* Typhimurium, Phage Type 75, Sequence type 19 isolated in purity from the liver and lungs. This was deemed the likely cause of death. A concurrent parasitic gastroenteritis was also diagnosed with many *Trichostrongyle* spp. worms identified within a gut wash. It was thought that the

mucosal disruption caused by the worm burden allowed translocation of the *Salmonella* into the portal circulation and subsequent septicaemic spread. Underlying immunosuppressive factors were investigated, but Border Disease and Tick-Borne Fever were ruled out on PCR testing, and liver copper and selenium levels were within normal limits.

Chemical food safety

Chemical Food Safety Reports can be found at: [APHA chemical food safety reports \(livestock\) - GOV.UK \(www.gov.uk\)](#)

Antimicrobial use and resistance

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

This latest UK-VARRS 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: [Reports – RUMA](#)

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: [Medicine Hub for dairy, beef and sheep farmers | AHDB](#)

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, please see the [Animal disease scanning surveillance at APHA - GOV.UK](#) pages on the 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

Updated TSE statistics are available at: [Active disease surveillance: TSE statistics - GOV.UK](#)

Horizon scanning

Publications of interest

APHA Surveillance Reports

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 \(www.gov.uk\)](#)

SRUC-VS Surveillance Reports

October: [Ovine haemonchosis deaths trigger parasite alert in north-east Scotland](#)

November: [Parasitic gastroenteritis a common finding in Scottish lambs in September](#)

December: [Rare case of malignant catarrhal fever in a goat](#)

Salmonella

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 - GOV.UK \(www.gov.uk\)](#)



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Any enquiries regarding this publication should be sent to us at

[Rudolf.reichel@apha.gov.uk]

www.gov.uk/apha

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