Animal & Plant Health Agency

SRUC

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

Volume 27: Quarter 3 – July to September 2024

Highlights

Contents

Introduction and overview

This quarterly report reviews disease trends and disease threats in Great Britain (England, Scotland and Wales) for the third quarter of 2024, July to September. 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 new 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

Further details to the monthly summaries below can be found at the Met Office climate summaries and the Met Office UK temperature, rainfall and sunshine anomaly graphs.

July: temperatures were consistently and persistently below average across the UK for the first two weeks. Low pressure across the UK led to unsettled weather, and several frontal systems brought bands of rain. However, the warm end to the month led to an overall mean temperature of 14.8°C, with an anomaly of just -0.5°C. July rainfall was average for the UK (82.4mm, or 100% of the long-term average July rainfall), but wetter than average for areas in southern England, which saw 129% of the average rainfall. Scotland, Wales and Northern Ireland were slightly drier than average.

August: overall, temperatures across the UK were slightly above average, with a provisional mean temperature of 15.4°C, 0.3°C above average. However, there was regional variation, with Scotland and Northern Ireland slightly below average (-0.1°C) and

England more above average (+0.6°C). Rainfall showed similar regional variation, with northwestern Scotland provisionally experiencing 162% of the average August rainfall, while southern England only recorded 50% of the average.

September: there was unsettled weather across the UK, with variable temperatures and persistent showers. Northern Ireland and Scotland experienced a relatively dry and sunny month, while central and southern parts of the UK were particularly wet and dull. Overall, September saw below average temperatures. Rainfall for the UK overall was slightly above average (provisional anomaly 125%), but there was strong regional variation, with southern England provisionally recording 233% of their average rainfall while Scotland recorded just 63%.

Industry

Agriculture and Horticulture Development Board (AHDB) lamb market updates

- **Prices**: for the week ending 28 September, the GB deadweight new season lamb standard quality quotation (SQQ) averaged 640 pence per kilogram (p/kg) (an increase of 90.3 pence year on year (YOY). Prices have stood well above 2023 levels throughout Q3 but have been steadily falling from the 893p/kg peak at the end of May.

- **Production**: UK clean sheep slaughter in September sat at 939,000 head, down 6% on the same month of the previous year. This is reflective of the reduced lamb supply so far this year, with lambs having been much slower to come forward. Sheep meat production in the UK totalled 21,900 tonnes in September. The average carcase weight was 19.6kg in September, flat on the same month a year ago.

- **Trade**: year to date (Jan-August 2024) imports of total fresh and frozen sheep meat totalled 47,200 tonnes, up 43% on the same period of 2023. There were 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 48,800 tonnes for the year to date (Jan-Aug 2024), down 7% on the same period of 2023. These exports totalled at a value of £371 million.

- **Demand**: in the 12 weeks to the 29 September, spend on lamb in retail increased by 10.6% YOY, and volumes grew by 5.5%. Prices paid, rose by 4.8% on average across all lamb cuts and products. Processed lamb drove this performance, with a 15.8% increase in volumes purchased. Burgers and grills (+21.1%) saw an increase in shoppers and the volumes they were purchasing in. Primary lamb saw a slight decline this period (-0.6%). However, lamb roasting joints (+6.0%), mince (+1.2%),

stewing (+6.0%) and diced/cubed (+9.7) all saw volume growth through existing shoppers buying more.

Acknowledgment for this update: Freya Shuttleworth, AHDB.

Bluetongue serotype 3 (BTV-3)

The first case of the 2024 BTV season was confirmed in a ram in Norfolk on 26 August 2024. The affected animal presented with inappetence, ulceration in the mouth, mild crusting around the nostrils, and lameness in one leg. The total number of confirmed cases by the end of September for the season, was 108 in England plus one in Wales. The most common clinical signs from confirmed cases, at the time of reporting and investigation, are listed in table 1. Images of BTV-3 clinical signs can be found at:

Pictures of clinical cases confirmed with bluetongue serotype 3 infection.

Table 1: Most common clinical signs in cattle and sheep, from confirmed bluetongue serotype 3 cases, in descending order.

	Cattle	Sheep
1 (most common)	malaise	nasal discharge
2	lameness	malaise
3	ulceration	swollen face
4	red membranes	crusting
5	conjunctivitis	hypersalivation
6	crusting	red membranes
7	coronitus	lameness
8	pyrexia	inappetence
9	nasal discharge	ulceration
10	hypersalivation	pyrexia
11 (least common)	reluctance to move	reluctance to move

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.

The government published their Bluetongue disease control framework set out on GOV.UK on 23 May 2024.

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

Suspected poor injection technique causing neurological disease in lambs

The carcase of a lamb was submitted to veterinary investigation centre (VIC) Starcross to investigate the cause of progressive forelimb paralysis and recumbency in eight lambs. Gross examination determined that the cause of the paralysis was abscessation and associated osteomyelitis of the thoracic vertebrae (T8 and T9). There was also abscessation between the external surface and muscle layer over the proximal aspect of ribs 8 and 9, and abscesses in the right thorax and right caudal lung. The locations of the abscesses were highly suggestive that infection had originated from a subcutaneous injection e.g. a vaccine dose. A review of injection technique and hygiene was recommended.

In a similar case reported by our Partner Postmortem Provider, the Wales Veterinary Science Centre, 10 lambs developed ataxia and incoordination of all four limbs following vaccination. The submitted lamb was euthanased prior to submission. Histopathology of the brain and spinal cord revealed locally extensive myelopathy, with Wallerian degeneration of the high cervical region cord and brainstem motor neuron chromatolysis, consistent with a compressive injury to the spinal cord at the level of the atlanto-occipital joint. The most likely cause was inadvertent injection of material and the resultant inflammation in the extradural space. In this case, further investigations revealed the vaccine had been injected into the fat pad at base of the ear. The farmer was immediately informed that this was an inappropriate location and advised of the correct procedure.

Scotland's Rural College (SRUC) reported an incident where footrot vaccine was administered to a group of 136 mules and gimmers. Over the following few days, 24 became lethargic and ataxic, and four went on to die. There was some response to treatment with antibiotics plus corticosteroids and a few ewes recovered. Two demonstrated a head tilt and a recumbent ewe was euthanased for investigation of the

problem. Postmortem examination identified seven abscesses 0.5 - 2.0 cm in diameter between the muscles of the right lateral neck approximately 10 to 15 cm caudal to the base of the ear, and purulent material was found in the atlanto-occipital joint. An excessively long needle had been used, resulting in the vaccine being injected intramuscularly rather than subcutaneously. Infection had then tracked into the atlanto-occipital joint. A review of injection technique and hygiene was recommended.

Vegetative endocarditis and a carotid vasculitis in a pedigree Texel ewe

A two-year-old Texel ewe had developed laboured breathing, a markedly swollen head, with swelling spreading to the ventral neck and sternum, and a stiff gait with a low head carriage. At a postmortem examination an irregular nodular valvular lesion was found on the aortic valve and a five centimetre long 'mass' was found closely associated with the branching carotid trunk at the thoracic inlet. This 'mass' contained clotted blood and was surrounded by pink-cream lamellae (Figure 1). In addition, there were multiple infarcts in the kidneys (Figure 2). Histopathological examination of the mass and associated vascular plexus revealed striking changes that indicated ongoing bacterial injury to the endothelium of the vessels, causing thrombosis. Gram staining identified multifocal, dense colonies of gram-negative coccobacilli within one of the thrombi. The swelling of the head was likely caused by impedance to the venous blood supply at the thoracic inlet, because of the carotid thrombus. It was unclear if the carotid vasculitis was the primary lesion or secondary to shedding embolic bacteria from the aortic valvular endocarditis lesion.

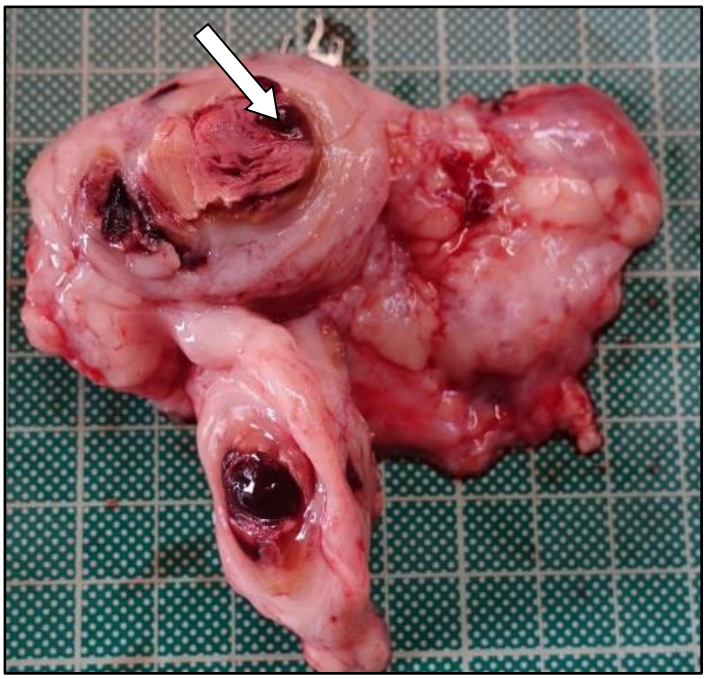

Figure 1: A lamellated thrombus (arrow) attached to the endothelium of the vascular plexus of the bi-carotid trunk.

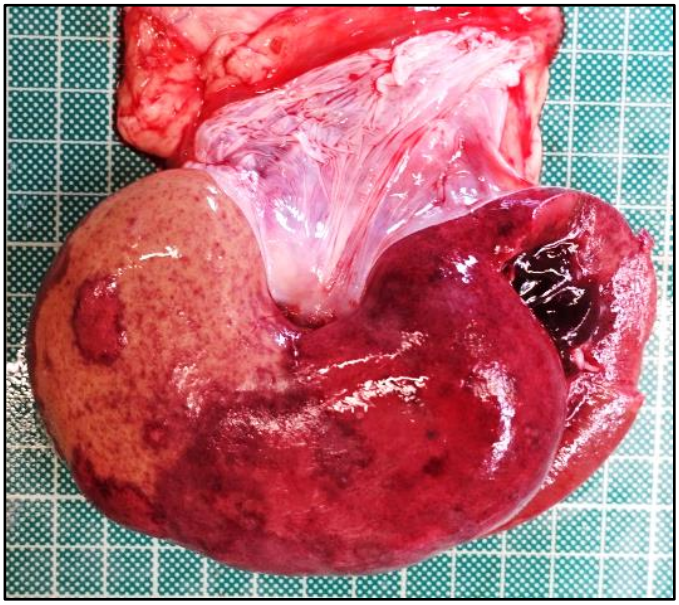

Figure 2: The right kidney of the ewe showing raised lesions with hyperaemic borders in the cortex, caused by infarcts from emboli spread from the vegetative endocarditis.

Goat disease surveillance dashboard outputs

The five most frequent submission diagnoses for goats in this quarter are shown in Table 2.

Table 2: Great Britain scanning surveillance, five most frequent goat submission diagnoses in quarter 3 (Q3) of 2024, Q3 of 2023, and Q3 for 2015 to 2024

	Q3 2024	Q3 2023	Q3 2015 to 2024
1	**Parasitic gastroenteritis (PGE) ***	Parasitic gastroenteritis*	Parasitic gastroenteritis*
2	***Clostridium perfringens* type D disease**	*Clostridium perfringens* type D disease	Johne's disease
3	**PGE due to Haemonchosis**	Johne's disease	*Clostridium perfringens* type D disease
4	**Johne's disease**	PGE due to Haemonchosis	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

The five most frequent submission diagnoses for sheep in this quarter are shown in Table 3.

Table 3: Great Britain scanning surveillance, 10 most frequent sheep submission diagnoses in Q3 of 2024, Q3 of 2023, and Q3 for 2015 to 2024

	Q3 2024	Q3 2023	Q3 2015 to 2024
1	**Parasitic gastroenteritis***	Parasitic gastroenteritis*	Parasitic gastroenteritis*
2	**PGE due to Haemonchosis**	PGE due to Haemonchosis	Pine or cobalt deficiency
3	**Pine or cobalt deficiency**	Pine or cobalt deficiency	PGE due to Haemonchosis
4	**Pneumonia due to other causes**	Pneumonia due to *Mannheimia haemolytica*	Pneumonia due to *Mannheimia haemolytica*
5	**Pneumonia due to *Mannheimia haemolytica***	Hyposelenaemia	Pneumonia due to other causes
6	**Hyposelenaemia**	Pneumonia due to other causes	PGE due to Nematodirus
7	**Coccidiosis**	PGE due to Nematodirus	Hyposelenaemia
8	**Pneumonia due to Mycoplasma**	*Clostridium perfringens* type D disease	Coccidiosis
9	**Tickborne fever**	Sheep scab	*Clostridium perfringens* type D disease

10	**Systemic pasteurellosis**	Tickborne fever	Johne's disease

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

Pneumonia due to other causes include 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*
- Hypocupraemia or hypocuprosis
- Maedi Visna
- PGE due to Haemonchus
- Tick borne fever

Decreases:

- PGE due to Nematodirus

Parasitology

Haemonchosis

The number of incidents diagnosed has remained at a very high level in Great Britain (GB) for Q3 over the last three years, and the percentage of diagnosable submissions was increased compared to Q3 the previous year (as shown in figure 3). A total of 105 incidents were diagnosed in Q3 2024, compared to 68 in 2023 and 114 in 2022 respectively. Most of the cases were in England and Wales as shown in figure 4.

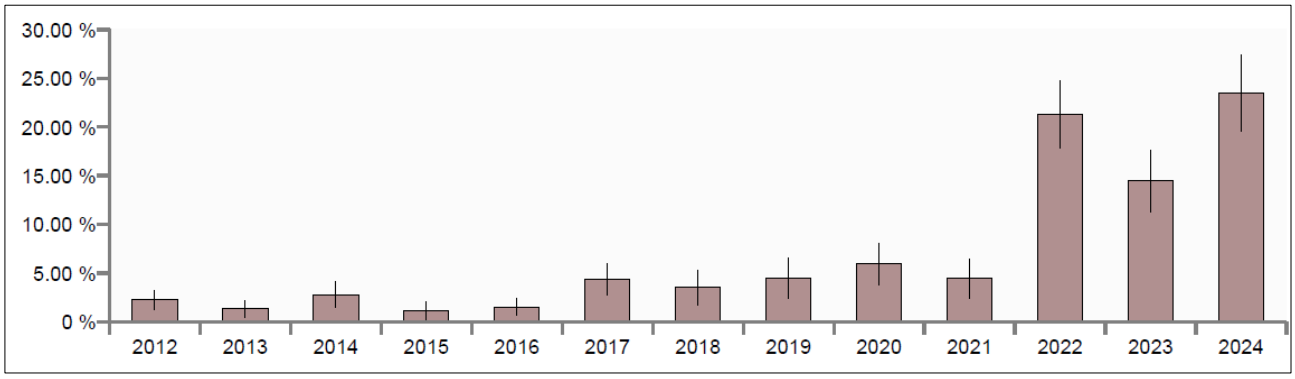

Figure 3: GB incidents of haemonchosis as percentage of diagnosable submissions for Q3; a high level over the past three years can be seen and a significant increase for 2024 compared to 2023.

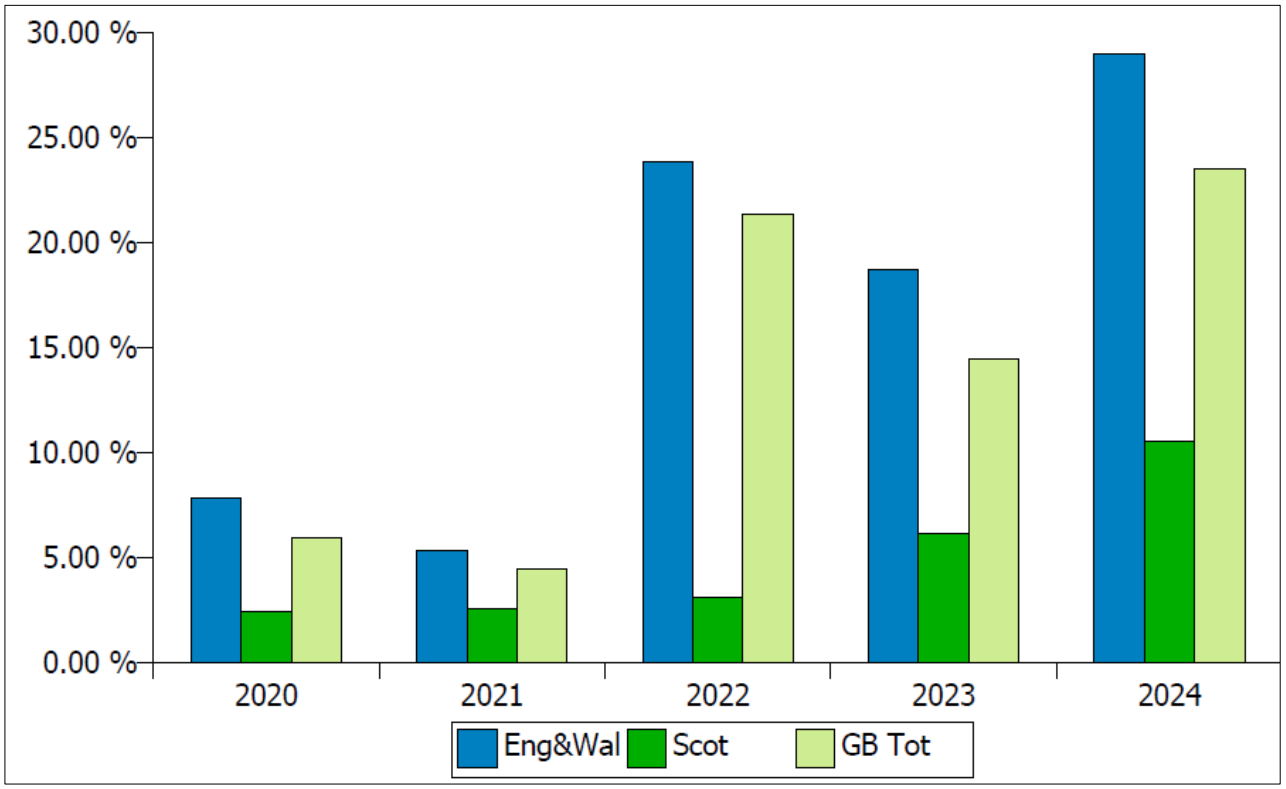

Figure 4: The majority of haemonchosis cases were in England and Wales

Haemonchosis and coccidiosis in goats

The carcasses of two Golden Guernsey goats were submitted to Starcross VIC following their sudden death. They had been grazed at pasture and supplemented with a mixture of clippings from a woodland clearing. There were four unaffected goat kids at foot. The herd vaccination status was unknown. On gross examination, there were haemorrhages of the tonsils, submandibular lymph nodes, thymus and small intestines. The rumens contained a large amount of chewed leaf material. A variety of plant species were present but, could not be definitively identified due to being fragmented.

Parasitological examinations found relatively high *Trichostrongylus* spp. and coccidial burdens in one of the goats, and a moderately high *Trichostrongylus* spp. burden in the other. Differential staining revealed that 49% of the eggs in goat 1 and 60% in goat 2 were *Haemonchus* spp. and in goat 1, 84% of the coccidial oocysts were identified as the pathogenic species *Eimeria arloingi* and *E. hirci*. Bacterial cultures were negative, ruling out acute septicaemia. There was evidence of mild tubular injury to the kidneys on histopathological examination. In summary, the cause of death in the goats was not fully identified, but acute haemonchosis was considered as a potential contributor, as was coccidiosis. In addition, ingestion of nephrotoxic plants could not be ruled out.

Systemic disease

Hypocupraemia or hypocuprosis

There was an increase in incidents of hypocupraemia or hypocuprosis in sheep as a percentage of diagnosable submissions in GB in Q3 of 2024, compared to Q3 in the last 2 years (Figure 5).

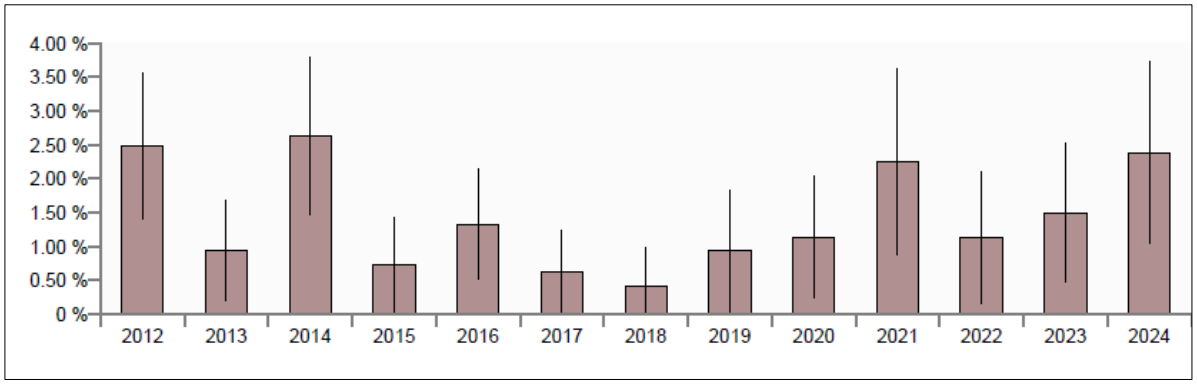

Figure 5. GB incidents of hypocupraemia or hypocuprosis as percentage of diagnosable submissions for Q3; an upwards trend can be seen over the last 3 years.

Bibersteinia septicaemia

There was a significant increase, with 14 *Bibersteinia* septicaemia incidents recorded by APHA and SRUC this quarter, compared to a mean of 9.4 per year for this quarter over the previous five years. No cases were recorded in the East of England, but increased numbers were recorded in Scotland, the North of England and the West of England, with 90% of cases in lambs, the remaining 10% were adult sheep. Both Lowland and Hill-or-Upland sheep were affected, although there was a marked increase in diagnoses for the latter.

Maedi visna

There was a significant increase in Maedi visna diagnoses for GB this quarter, with 12 incidents diagnosed, compared to a total of 19 over the previous 5 years, equalling a mean of 3.8 per year. Most of the diagnoses this quarter were from lowland flocks, located in England and Wales. This is the highest number of cases ever recorded for this quarter and could reflect increasing spread of this disease but, may also indicate an increased awareness which has encouraged more testing. The situation will be monitored going forward.

Salmonella Typhimurium

A single case of Salmonellosis due to *Salmonella* Typhimurium infection was diagnosed by APHA this quarter compared to five cases in 2023. Quarter three is typically the period during which most *Salmonella* Typhimurium cases are diagnosed, often as an opportunistic infection in animals with concurrent enteric disease, such as parasitic gastroenteritis or coccidiosis.

Two post weaned lambs were submitted for postmortem examination to investigate rising mortalities and poor growth rates. Systemic salmonellosis was confirmed with *Salmonella* Typhimurium, Sequence Type 19, Phage Type 193 recovered on lung culture. In addition, liver biochemistry identified both low copper and selenium levels, with the associated immunosuppression likely contributing to the disease presentation in this case.

Respiratory disease

Pneumonia NOS (not otherwise specified)

There was an increase in pneumonia NOS incidents for GB, with an increase in Scotland (SRUC) and relatively high diagnostic numbers recorded for England and Wales (APHA) for this quarter, as shown in figure 6. Half the diagnoses were chronic suppurative pneumonias, and half of the diagnoses in this category were diagnosed with concurrent disease issues. Also contributing to this rise was an increase in *Bibersteinia* pneumonia diagnoses, in line with the increase in *Bibersteinia* septicaemia diagnoses also identified this quarter.

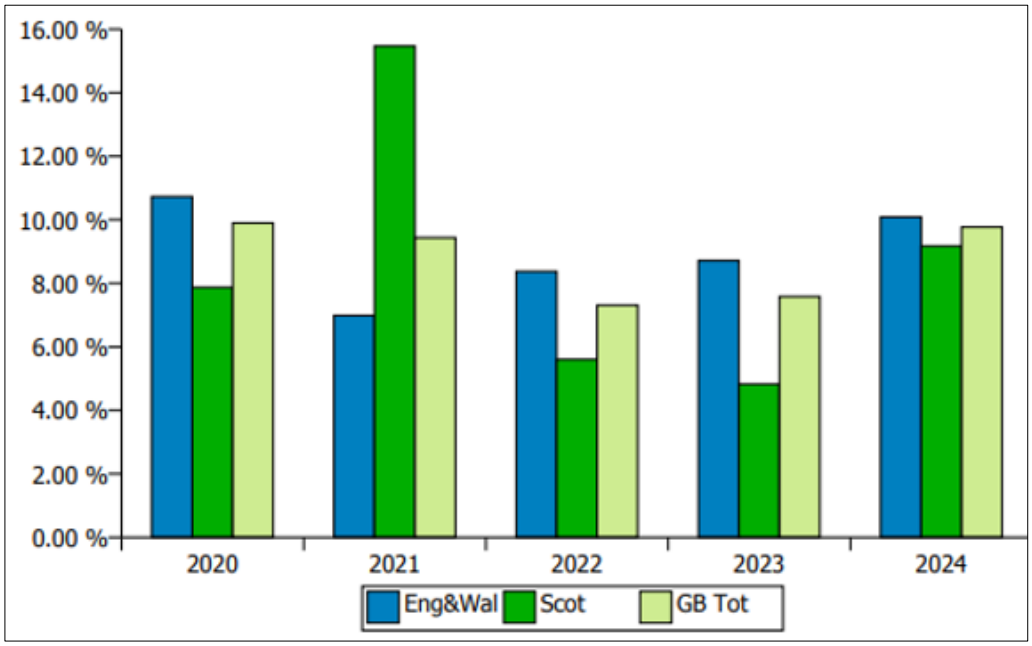

Figure 6: Incidents of pneumonia NOS in sheep as % of diagnosable submissions, for Q3 2024, showing high numbers for England and Wales, and a rise for Scotland and GB.

Death of a ewe lamb due to chronic non-progressive pneumonia and chronic endoparasitism

A ewe lamb was submitted for postmortem examination to investigate the cause of weight loss, anaemia, weakness and recumbency. The examination revealed severe lung pathology, with large areas of cranio-ventral consolidation with some pale grey, firm lesioned areas (Figure 7). *Bibersteinia trehalosi* was cultured from the lung, and *Pasteurella multocida* from lung and liver. *Mycoplasma ovipneumoniae* and *Mycoplasma arginini* were also detected in the lung tissue. Histopathology indicated the lung changes were due to ovine respiratory complex, with a chronic non-progressive pneumonia. This is a multifactorial condition and *Mycoplasma ovipneumoniae* is thought to be a significant predisposing or primary agent, and respiratory viruses and bacteria are often also involved. In this case *B. trehalosi* was likely representing a significant contributing infection. Histological changes in the gastrointestinal tract suggested there had been damage from chronic parasitic insults, from nematodes and/or coccidia.

Figure 7: Lung from a lamb with ovine respiratory complex. Mycoplasma ovipneumoniae and Mycoplasma arginini, Bibersteinia trehalosi and Pasteurella multocida were detected in the lung.

Laryngeal chondritis

Relatively low numbers of laryngeal chondritis diagnoses are recorded annually by VIDA, ranging between five and 15 cases per year, which likely under-represents the number of cases seen in the wider sheep population. Laryngeal chondritis cases are often not received for postmortem at the Veterinary Investigation Centres, as they are either sporadic cases or a diagnosis is made from suggestive clinical signs in the live animal. There is still some uncertainty over the complete aetiology of laryngeal chondritis, in some breeds genetics and conformation seem to play a role. Adult sheep are more typically diagnosed with this condition; however, our data indicates half of VIDA diagnoses are made in animals of less than a year of age, with the youngest cases recorded at about a month of age. In cases where commercial type growing lambs are affected, traumatic causes may be more likely, such as trauma occurring during drenching, or perhaps from stomach tubing when very young lambs are affected.

A range of different bacteria have been detected from laryngeal chondritis lesions; including environmental opportunists (such as *E. coli* and *Fusobacterium* sp.), bacteria that commonly occur in the throat (such as *Mannheimia* sp. and *Bibersteinia* sp.), and other potentially tissue damaging/necrotising bacteria such as *Streptococcus* sp., *Clostridia* sp. and *Trueperella pyogenes*.

PGE, pasteurellosis and laryngeal chondritis in a Texel-cross lamb

A six-month-old, crossbred lamb was diagnosed with PGE, a mixed pathogen enzootic pneumonia, and laryngeal chondritis (figure 8). *Mannheimia haemolytica* was cultured from the laryngeal lesions, *Mannheimia haemolytica*, *Trueperella pyogenes* and *Mycoplasma ovipneumoniae* were isolated from the lung tissue.

Figure 8: Raised necrotic laryngeal lesions in a texel cross lamb with laryngeal chondritis

Circulatory disease

Tick-borne fever (*Anaplasma phagocytophilum* infection)

There was an increase in tick-borne fever (TBF) diagnoses this quarter, with the majorities being in adult sheep, in lowland flocks, and in Scotland. Increased incidents were recorded for pre-weaned and adult age categories, lowland sheep and for Scotland (Tickborne disease contributing to lamb deaths across Scotland). The mean number of incidents diagnosed this quarter over the last five years was typically 11.2, but this quarter there were 18.

Over the last two years, some adult and post-weaned sheep TBF cases were diagnosed with concurrent colisepticaemia. Colisepticaemia is not commonly found in adult or post-weaned sheep but, can occur secondary to gastroenteric damage caused by a ruminal acidosis, or significant endoparasitism. Immunosuppression, caused by infections such as TBF, can also predispose.

Colisepticaemia, PGE and Tick-borne fever in adult ewes

Three out of a group of 20 periparturient ewes were submitted for postmortem examination (PME), to investigate acute onset malaise, recumbency and pyrexia, which had failed to respond to treatment. Gross postmortem findings were consistent with ongoing weight

loss, and parasitology confirmed a PGE in all three ewes. In addition, bacterial cultures indicated a colisepticaemia. All three ewes tested positive for *Anaplasma phagocytophilum,* the causative agent of Tick-borne Fever**,** and this was deemed the likely cause for the immunosuppression and secondary colisepticaemia.

Tick-borne fever and secondary tick pyaemia and *Bibersteinia trehalosi* septicaemia in lambs

Two 4-month-old lambs, from the same premises, were submitted three weeks apart. Seven strong lambs had died out of 170 over a fortnight, with three further deaths three weeks later, despite treatment of the whole group with long-acting amoxicillin. Lambs were pre-weaned and had received two doses of a clostridial/pasteurella vaccine. A white drench had been given three weeks prior to submission.

In both lambs PME revealed generalised lymphadenopathy and was suggestive of a septicaemic process, and *Anaplasma phagocytophilum* DNA was detected in spleen, confirming tick borne fever (TBF).

In the first, *Staphylococcus aureus* was cultured from lung and liver confirming tick pyaemia. A moderate worm egg count burden was also detected. Tick pyaemia due *S. aureus* septicaemia is the most common complication of TBF. *S. aureus* can reside on skin or be present on tick mouthparts, resulting in the introduction of the bacteria during feeding and a subsequent bacteraemia. *Bibersteinia trehalosi* septicaemia was diagnosed in the other lamb.

TBF is caused by *Anaplasma phagocytophilum,* transmitted by carrier *Ixodes ricinus* ticks. Ticks need to attach for 24-48 hours to transmit the disease. TBF causes immunosuppression, which can predispose to, or exacerbate, other diseases for example tick pyaemia, pasteurellosis, listeriosis, and other viral and bacterial infections. Carrier status occurs, even after treatment, for up to two years after recovering from primary TBF and relapses are possible. These animals are thought to serve as reservoirs of infection. TBF is also a potential zoonosis via tick biting incidents.

Although no ticks were identified on either lamb at the time of postmortem, a review of the control of ticks in this flock was advised, including treatment options and grazing management. The SCOPS website gives guidance about control of ticks in sheep Ticks | SCOPS.

Mycoplasma ovis infection

Mycoplasma ovis infections, causing anaemia and death, were diagnosed in three two-month-old cross lambs from a group of 25 ewes with lambs, in Scotland. The full details are described here: Mycoplasma ovis infection causing anaemia and death in Scottish lambs - 2024 - Veterinary Record - Wiley Online Library. *M ovis* can be spread by biting flies or iatrogenically via needles.

Urinary disease

Calcium Carbonate Uroliths in a Pet Sheep

A case investigated by Axiom Veterinary Laboratories Ltd detected uroliths in samples from on-farm postmortem examination of a pet castrated male sheep. The submitted animal was found collapsed with abdominal distension and, was reported to have not passed urine for over twelve hours. On-farm postmortem examination revealed a thickened bladder, and histopathological examination of bladder wall identified an acute inflammatory response, typical of what would be expected in a case of urolithiasis and urinary obstruction. Urolith analysis found the stones to be composed of 100% calcium carbonate.

In one study, calcium carbonate was found to be the second most common type of urolith in sheep and goats, with the most common being amorphous magnesium calcium phosphate in combination with struvite (magnesium ammonium phosphate) *(Mejia et al., 2022).* Calcium carbonate calculi tend to be more common in animals on pastures rich in clover or oxalate containing plants.

Mejia, S. *et al.* (2022) 'Small ruminant urinary obstruction: Decision trees for treatment', *Journal of the American Veterinary Medical Association*, 260(S2). doi:10.2460/javma.22.02.0071.

Nervous disease

Louping ill

In contrast to the second quarter of 2024, diagnoses of Louping ill in quarter three were less. Only one case was reported for GB compared to 12 cases for the equivalent quarter in 2023. This quarter has traditionally been the time of peak diagnoses, but as discussed in the previous report, 2024 appears to be following a similar pattern to 2019 where peak case numbers were seen in quarter two.

Pituitary abscess in an adult Golden Guernsey goat

An adult Golden Guernsey goat was submitted for postmortem examination to VIC Starcross. It developed retarded feeding activity and a drooping lip, four weeks after translocation. The goat was treated with penicillin for one week, but her appetite continued to decrease, and she developed nystagmus, opisthotonos and became recumbent. Gross examination of the nervous system identified an excessive volume of cerebrospinal fluid and thick, purulent material in the pituitary fossa (9). The nasal turbinates were haemorrhagic. *Fusobacterium necrophorum* was isolated from the abscess and no *Listeria* spp. Infection were detected.

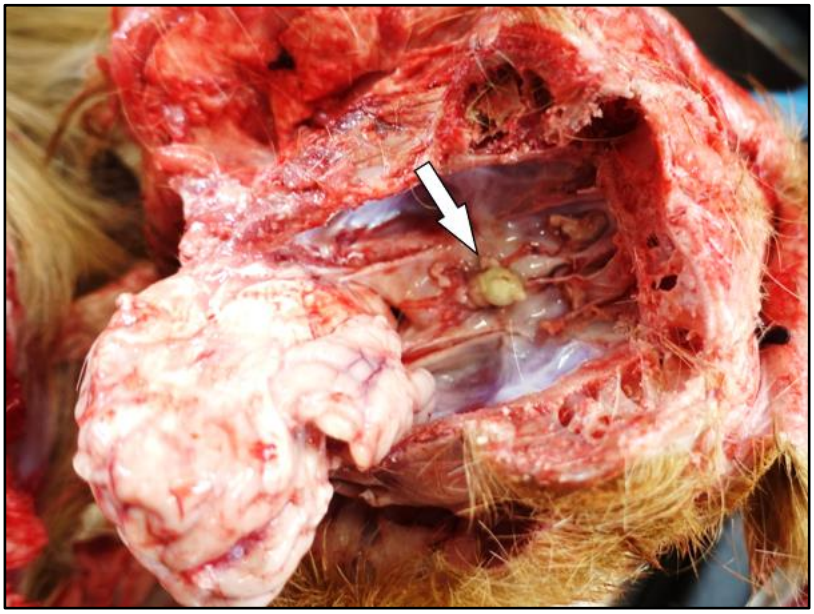

Figure 9: Reflected brain to reveal an abscess (arrow) in the pituitary fossa of an adult goat

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-VARSS report continues to document downward trends in sales of veterinary antibiotics in the UK. In addition, the latest RUMA Targets Task Force report can be found at: 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. In 2023, the Hub captured antibiotic use data from flocks representing 11% of UK finished lambs. 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 Gov.UK.

The CoEEML is holding a 'Ruminant Health Day' Conference in Devon in February 2025. For information and to reserve a ticket (free of charge) please use this link: Ruminant Health Day Tickets, Wed, Feb 12, 2025 at 10:00 AM | Eventbrite

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

International Disease Monitoring (IDM) horizon-scanning activities monitor for major, notifiable, or new and re-emerging animal disease outbreaks worldwide. This is done to provide an early warning and to assess the risks they may pose to the United Kingdom (UK), particularly for those diseases which impact on animal health and welfare, international trade, public health, or wider society. IDM also assess the risk that animal diseases might come into the UK through the trade in animals or animal products (legal or illegal), through movements of wildlife, or through the movement of fomites and vectors such as insects which may carry infectious disease. These outbreak assessments are used to guide decisions how to manage or reduce the risks. Information on disease outbreaks can be found at the links below. Figure 10 shows the WOAH map of outbreaks of bluetongue disease in Europe for September to December 2024.

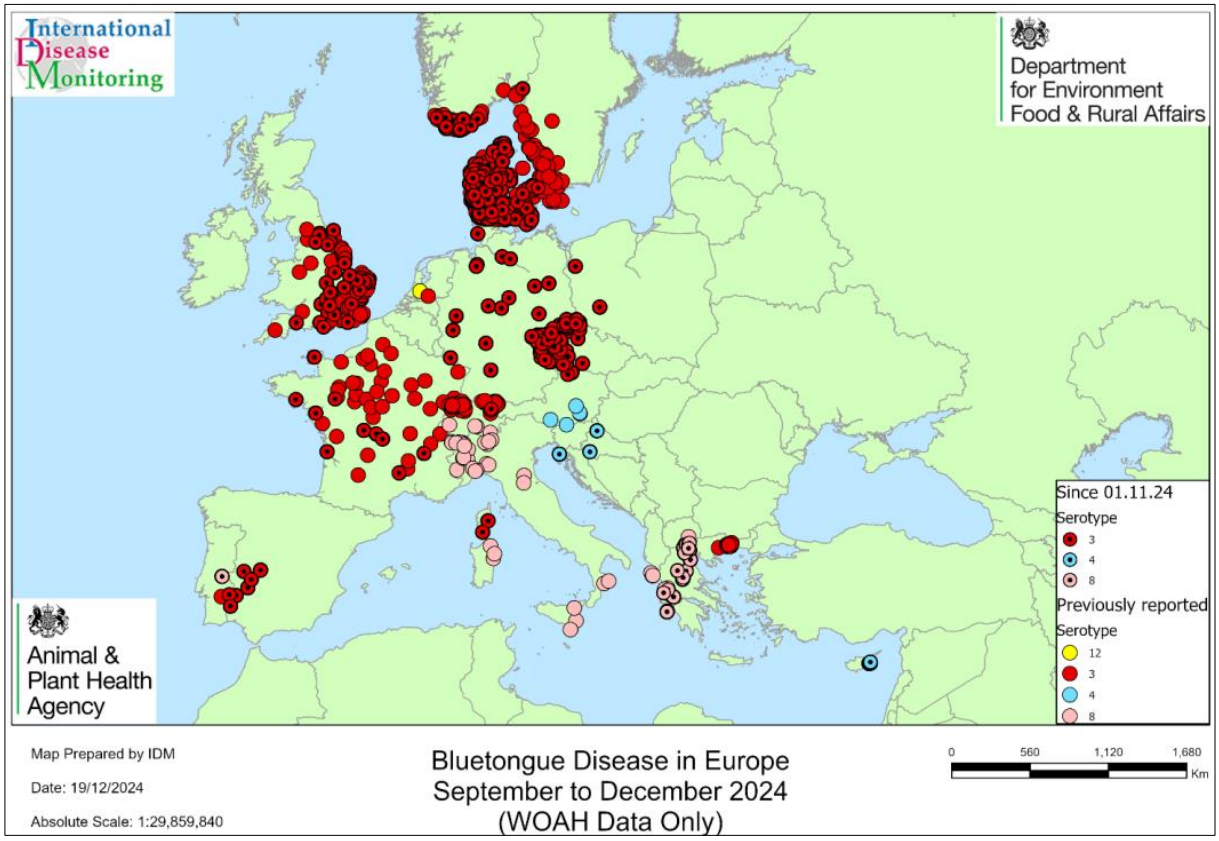

Figure 10: Map prepared by IDM showing all bluetongue virus reports, on the World Organisation for Animal Health (WOAH), in Europe since September 2024, including all new reports from 1 November until 17 December 2024

Bluetongue virus in Europe - GOV.UK

Peste des petits ruminants in Eastern Europe - GOV.UK

Sheep and goat pox in Europe - GOV.UK

Epizootic haemorrhagic disease in Europe - GOV.UK

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

July: Staphylococcus aureus causing respiratory disease and mastitis in sheep

August: Tickborne disease contributing to lamb deaths across Scotland

September: Mycoplasma ovis infection causing anaemia and death in Scottish lambs - 2024 - Veterinary Record - Wiley Online Library

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)

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

Any enquiries regarding this publication should be sent to us at

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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.