

## **SRUC VS Surveillance Activities – Quarterly Report**

### **October to December 2021**

SRUC Veterinary Services (VS) carries out animal disease surveillance activities on behalf of Scottish Government. These include regular communications to veterinary practices on a range of animal health matters and responding to requests for expert advice and support in relation to disease investigations as well as provision of a necropsy and clinical pathology service.

#### **Stakeholder contact and outreach**

From 1<sup>st</sup> October to 31<sup>st</sup> December 2021 SRUC VS recorded a total of 220 contacts, 187 of which were with 59 Scottish vet practices. We recorded a further 33 calls and emails from a range of national bodies and vet practices in England. Over 85% of queries (191) related to the main livestock species cattle and sheep; around 3% each (8 or 7 calls, respectively) concerned poultry, camelids and goats and the remainder was split between pigs, other farmed species, and native wildlife. Just over 90 percent (199) of recorded contacts were by phone.

Most requests (187 of 220) involved support with disease investigations. Of the 110 clinical issues in cattle discussed with practitioners, respiratory disease, diarrhoea and sudden death were the most common topics. For the 54 sheep cases, wasting, sudden death and diarrhoea were the most commonly discussed clinical finding.

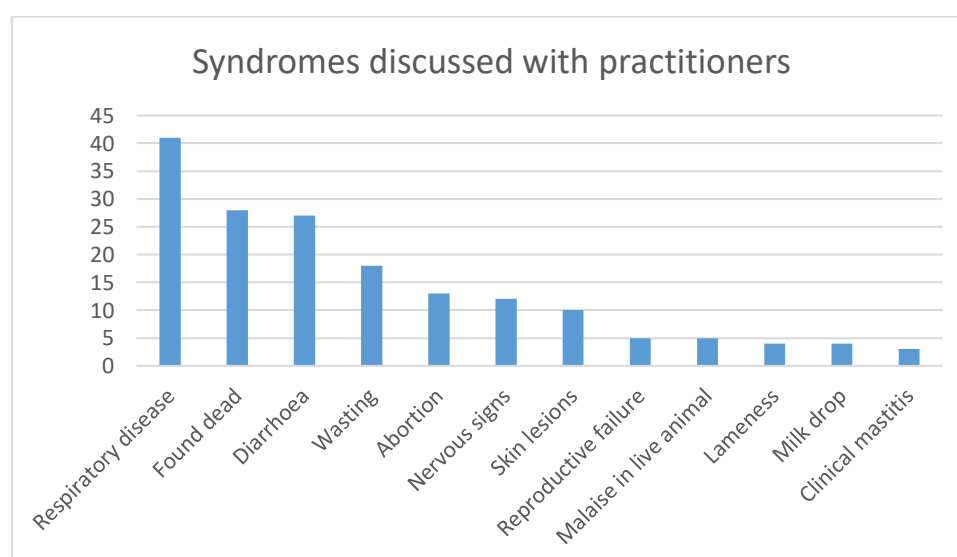


Figure 1: The 12 most common presenting signs discussed during 187 contacts with practicing vets from 1<sup>st</sup> October to 31<sup>st</sup> December 2021.

## Submissions and diagnostic rates

Abortion and postmortem (PM) material are handled by our network of PM centres throughout Scotland, while clinical pathology samples and material arising from carcase examinations by private veterinary surgeons (PVS) are submitted to our veterinary and analytical laboratory near Edinburgh.

2,705 laboratory submissions were received from 105 vet practices in the SRUC VS catchment area. In the last quarter this included 89 practices based in Scotland and 16 practices in Cumbria and Northumberland, which carry out work on both sides of the border. Further diagnostic samples were submitted from universities, law enforcement bodies such as Police Scotland and SSPCA as well as organisations such as RSPB and the International Otter Survival Fund. Sixty four percent of samples were submitted from cattle and 31 percent from small ruminants, respectively. We further received samples from birds, pigs, camelids, and native wildlife. 1,814 submissions were for diagnostic (disease investigation) and 891 for monitoring (screening of healthy animals) purposes.

The most common clinical presentations for diagnostic submissions across all main livestock species are shown below. The three most common presenting signs for cattle in this quarter were diarrhoea, wasting and respiratory disease. For sheep it was wasting, sudden death and diarrhoea.

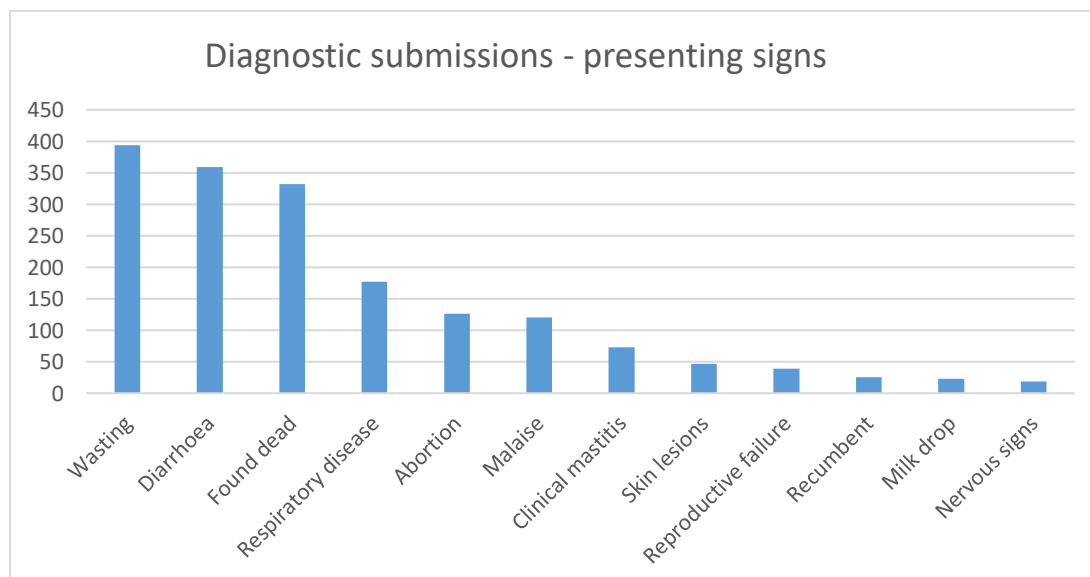


Figure 2: The 12 most common presenting signs of 1,814 diagnostic submissions received from 1<sup>st</sup> October to 31<sup>st</sup> December 2021.

The clinical syndromes discussed with PVS (Fig 2) and those investigated by diagnostic submissions (Fig 3) included a similar set of presenting signs. There were however noticeable differences in the relative frequency the conditions featured in the two groups. The most common reported clinical signs of diagnostic submissions were wasting, diarrhoea and sudden death, whereas the topic discussed most frequently was respiratory disease. PVS also investigate skin conditions or nervous signs more often than would be expected from analysing diagnostic submissions alone. A possible explanation for this is that PVS commonly investigate conditions like enteritis and ill thrift by using standard diagnostic packages which require less advice regarding available diagnostic investigations or interpretation of results.

### Submissions by species groups

VS receive submissions from livestock species, mainly cattle and sheep, poultry, pigs, and camelids as well as native wildlife and companion animals, though the last group is not covered in this report. Clinical pathology submissions, e.g., blood and faeces make up the bulk of submissions. In the report period, VS received 1,504 cattle and 636 small ruminant samples from Scottish holdings. Carcase submissions came mainly from small ruminants, typically sheep (133) and cattle (101).

	Birds	Camelids	Cattle	Native wildlife	Pigs	Small ruminants
No. of submissions	32	22	1733	41	30	842

Table 1: Submission count by species groups received in quarter Oct to Dec 2021. The total of 2,700 includes monitoring (healthy animals) and diagnostic submissions. Please note, submissions under wild bird surveillance for avian influenza are not included.

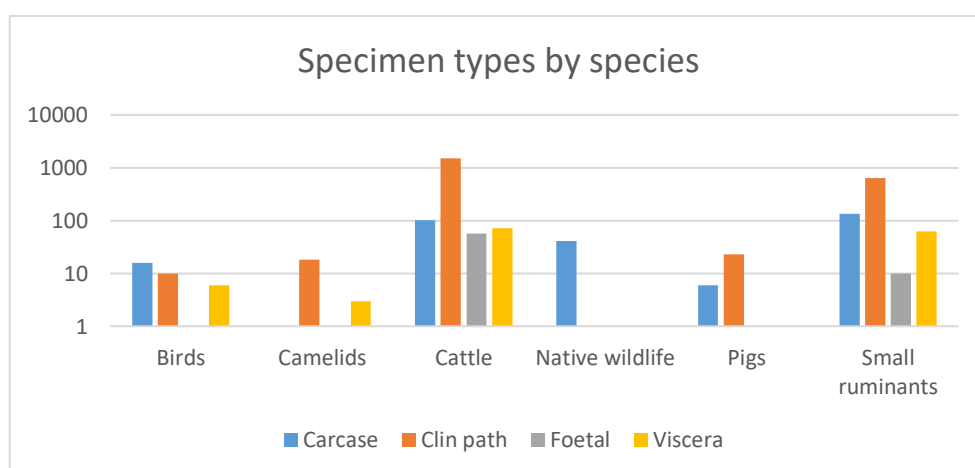


Figure 3: Submissions received in from Oct to Dec 2021 by species groups and specimen, please note the logarithmic scale for the submission count.

### Diagnostic rates

Diagnostic rates in last quarter are shown below for carcasses examined by SRUC VIOs (carcase); clinical pathology submissions i.e. mainly blood and faeces (clin path); abortion investigations by SRUC VIOs (foetal); submissions of viscera from PM and abortion examinations by vets in practice (viscera).

	<b>Diagnosis reached</b>	<b>Diagnosis not reached</b>	<b>Total</b>	<b>Percentage</b>
<b>Carcase</b>	261	37	298	<b>88%</b>
<b>Clin path</b>	491	818	1309	<b>38%</b>
<b>Foetal</b>	33	34	67	<b>49%</b>
<b>Viscera</b>	80	60	140	<b>57%</b>

Table 2: Comparison of 1,814 diagnostic submissions by specimen type for which a diagnosis was reached (DR) and no diagnosis was reached (DNR), respectively.

Most diagnoses were reached on clin path submission, whilst PM examination (PME) offered the highest chance to reach a diagnosis. PMEs and clinical pathology investigation don't necessarily aim for the same goal. Samples taken from live animals are not always tested simply to reach a diagnosis but to exclude specific differential diagnoses, explore previous exposure to certain pathogens or to determine the severity of the clinical state to inform prognosis. On the other hand, PMEs offer more ways of diagnostic investigation and are conducted with the clear goal to reach a diagnosis, this gives the added benefit of screening for exotic and re-emerging diseases. The diagnostic rate consequently is lower in clin path submissions. To take full advantage of the diagnostic possibilities PMEs are subsidised.