



# SRUC

## The Scottish Government's Veterinary Services Programme



2022/23

Supporting Animal Health and Welfare in Scotland



Scottish Government  
Riaghaltas na h-Alba  
gov.scot



## Programme Overview

The Scottish Government funded the Veterinary Services Programme to provide livestock disease surveillance, animal health planning and farm animal welfare support across Scotland during 2022/23. Animal disease surveillance is a statutory requirement and is provided by SRUC Veterinary Services (SRUC VS) through the collection of data from diagnostic samples and carcasses submitted to SRUC's Disease Surveillance Centres (DSCs) and through the collection of intelligence from a wide network of contacts within Scotland and beyond. This programme monitors the current health and disease status of Scottish farmed livestock and enables changes in animal disease status to be detected quickly and information disseminated effectively to a range of stakeholders using multiple media platforms from websites and social media to scientific reports and newsletters.

Veterinary practitioners and livestock farmers use this information to support the implementation of disease prevention measures across Scotland. Thus, a proactive approach to managing biosecurity, health and welfare in Scottish livestock is achieved; and all producers, irrespective of size of enterprise or geographical location continue to have access to the relevant advice and information. Improving animal health and welfare increases the efficiency and resilience of Scotland's agricultural sector, which is vital not only for financial success, but also in relation to the drive to reduce greenhouse gas emissions.

The programme of development for outreach and knowledge exchange focused more on in-person events and contacts post pandemic. The valuable channels and networks developed out of necessity during Covid 19, continued to be used to support and develop contact with veterinary practitioners.



## Farm Animal Disease Surveillance Output

In this publication the work that has been undertaken is outlined along with some of the conditions that have been recognised in the past year.

SRUC Vets consider the importance of any diagnosis made or condition encountered for the entire country, which requires the following questions to be considered:

- Is this a new or unusual outbreak of disease?
- Is the disease notifiable?
- Does the disease outbreak require further investigation?
- Is there a risk to public health or the food chain?

The information on disease and disease trends in Scotland is also provided for addition to that collected by APHA laboratories and approved contractors in England and Wales to provide the picture for Great Britain. This can be accessed through the disease surveillance dashboards at <http://apha.defra.gov.uk/vet-gateway/surveillance/scanning/disease-dashboards.htm>. Monthly reports on SRUC Veterinary Services surveillance activities are available on the SRUC website: <https://www.sruc.ac.uk/business-services/veterinary-laboratory-services/scottish-government-veterinary-services-programme/>

---

## Novel Strain of *E. coli* Causing Disease in Calves

SRUC VS has recently identified a novel strain of *E. coli* causing disease in dairy calves aged 3–6 months.

*E. coli* is a bacterium found extensively in the environment and present in almost all faecal samples. Usually, the immune system stops this bacterium from causing disease. In very young calves, that have not received enough colostrum to support the developing immune system, *E. coli* can cause septicaemia, meningitis and deaths.

This type of disease has not previously been seen in older calves but in recent years SRUC VS has identified four farms where *E. coli* has caused disease in calves aged 3–6 months. Affected calves have had high temperatures, meningitis and joint infections. These herds have all been very well managed units with high standards of calf health and no other causes of immunosuppression. Whole genome sequencing has been performed on the *E. coli* isolates and it has been found that the same strain of *E. coli* has been involved in all the outbreaks even though there is no known link between these farms. Interestingly this strain of *E. coli* appears very closely related to strains that cause disease in birds. SRUC VS is collaborating with colleagues working in surveillance across Great Britain. Other potentially similar outbreaks are being investigated and the associated strains of *E. coli* are being analysed. SRUC VS is also working to see if an in-house test could be used to identify this novel strain.



# Review of causes of Mortality in Preweaning Suckler Calves



SRUC VS has recently reviewed the causes of death in preweaning suckler calves between 2016 and 2020. Over this period, 1662 postmortem examinations of beef calves up to six months of age were carried out in our postmortem rooms. A quarter of these losses occurred in the first week of life and half of them in the first month of life.

Where possible, a blood test was carried out on samples from calves aged less than ten days, to determine if calves had received adequate colostrum. Eighty-seven percent of calves tested had relative failure of colostrum absorption and 46% had absolute failure. For calves with postmortem evidence of a difficult calving, these figures rose to 91% and 64%, respectively.

When calves fail to receive sufficient colostrum, this predisposes them to infections such as colisepticaemia, navel ill and pneumonia. Across Scotland the ten conditions diagnosed most often (in order of frequency) were: colisepticaemia, navel ill, *Mannheimia haemolytica* pneumonia, cryptosporidiosis, *Pasteurella multocida* pneumonia, coccidiosis, abomasal ulceration, dystocia, joint ill and *Mycoplasma bovis* pneumonia. Regional variations occur as noted below regarding Salmonella Dublin in south-west Scotland. SRUC VS is advising that addressing the major factors that contribute to calf mortality could result in fewer losses. This study shows that attention should be focussed on minimising difficult calvings and ensuring calves receive good quality colostrum in a timely manner. Farmers are urged to discuss these areas of risk management with their vet as part of their dynamic herd health planning review.

---

## Pilot Study to determine if Postmortem Examinations are a Useful Tool to Assure Freedom of OPA at a Flock Level



SRUC VS is undertaking a project to determine if postmortem examinations are a useful way to determine flock status of Ovine Pulmonary Adenocarcinoma (OPA). OPA is a fatal disease of sheep that is caused by a virus that results in tumour lesions in the lungs. Affected animals become ill thriven or can apparently die suddenly from secondary lung infections.

The virus that causes the disease is easily spread between sheep, therefore buying in infected animals is a common way for infection to get into a flock for the first time. The pilot study aims to determine if performing postmortem examinations

on sheep that have died outwith lambing time would be a useful tool to give assurance of whether or not a flock is infected with OPA. Flocks with a known history of OPA and flocks with no history of this condition have been enrolled for the study. Participants have been encouraged to submit up to six carcasses of adult sheep for postmortem examination throughout the year. In addition, flocks are being asked to perform postmortem examinations on ewes that are particularly thin to allow screening for OPA and other iceberg disease e.g. Johne's disease or Maedi Visna. If this pilot study is found to have successful results, training could be given to private veterinary practitioners to allow these postmortem examinations to be carried out on-farm.

# Salmonella Dublin in Beef Herds

While *Salmonella* Dublin associated disease is more common in dairy herds than suckler herds, problems can still occur, particularly around calving time.

The presence of clinical *Salmonella* Dublin infection in the beef herd appears to correlate with the prevalence of *Salmonella* Dublin in the dairy herd, with 70% of diagnoses in beef cattle made in south-west Scotland, the area of highest clinical and serological prevalence in Scotland. However, in addition 15% of diagnoses were made in the north region of Scotland and 15% in the central and south-east Scotland, and so it should be considered as a differential in these areas as well.

The severity of the clinical disease in beef herds varies and is thought to depend on stress factors and concurrent disease. It is of note that the peak of diagnoses in Scotland came in the spring of 2018 following the 'beast from the east' when many cattle were housed for longer and cattle were often reported to be in poorer condition than usual. The bacterium can be identified as an incidental finding in some cases, while in the worst affected outbreaks, calf mortality reached 13% in addition to abortions and mortality in adult cattle.

The clinical signs identified in adult cattle were diarrhoea, pyrexia and abortion, while clinical signs in calves were more variable, and differed from those made in dairy calves. This is shown below, which highlights that diarrhoea was not the most common clinical presentation made in suckler calves.

*In Scotland thirteen percent of all Salmonella Dublin diagnoses are made in beef herds, and often cause clinical signs and mortality in both calves and adult cows. A review of pre-weaning beef calf mortality in Scotland between 2016 and 2020 identified Salmonella Dublin as the third most common cause of mortality in pre-weaned calves in south-west Scotland (Dumfries & Galloway and Ayrshire), highlighting the impact of the bacteria in this region.*

## Control and Management

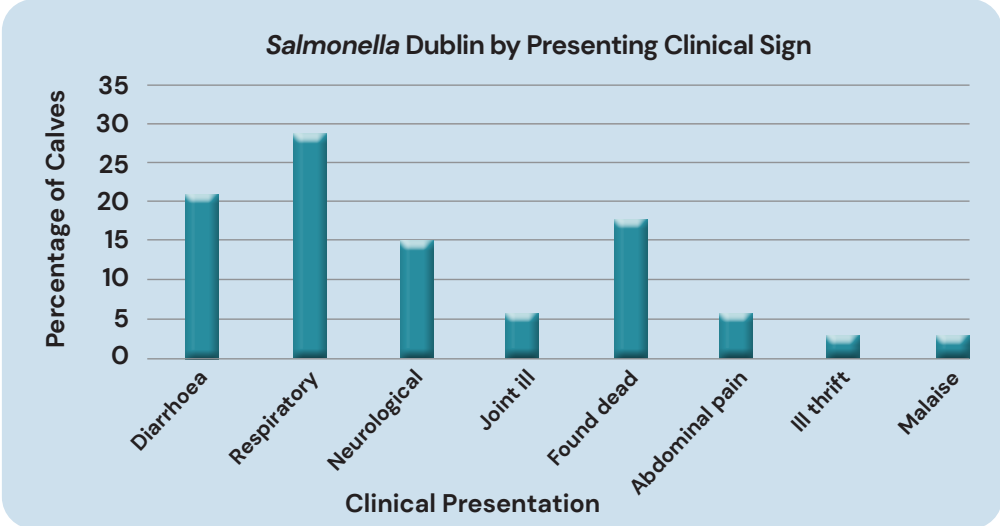
Control of *Salmonella* Dublin is much less well evidenced in beef herds than in dairy herds and the ongoing close contact of cow and calf in the neonatal period can make control more challenging. Additionally, weather patterns are likely to have more of an impact on beef herds than dairy herds.

Cows around calving will increase their faecal shedding of *Salmonella*, due to a reduction in dry matter intake, volatile fatty acid production and periparturient dip in immunity. This, combined with the fact that neonatal calves are most susceptible, means that control measures need to be focused around the periparturient period.

Factors to address would be:

- Cleanliness and bedding of calving environment
- Length of housing after calving
- Stocking density in housing and at grass
- Grazing history of fields used for calving
- Age spread of calves within groups
- Concurrent disease
- Nutrition and dry matter intake in late pregnancy and around calving
- Biosecurity and purchasing decisions, particularly when purchasing from dairy herds

Depending on the spread of calving, vaccination may prove useful during an outbreak for later calving cows, although there will be a delay for administration of the primary course and onset of immunity. For herds with tight calving patterns, it may be something to consider for the following calving season.



# Antimicrobial Resistance in Healthy Livestock

The food chain from farm to fork is recognised as an important contributor to the global threat of antimicrobial resistance. Monitoring of antimicrobial resistance in the bacteria that inhabit the intestinal tract of healthy farm animals at slaughter, provides a means to assess the potential risk posed generally to humans and animals.

During 2022, for the sixth successive year, SRUC VS has worked with Food Standards Scotland to monitor antimicrobial resistance in *Escherichia coli* (*E. coli*) from the faeces of cattle, sheep, pigs, and poultry collected at the abattoir. One *E. coli* isolate per animal sampled was tested for antimicrobial sensitivity against 12 antibiotics that include compounds deemed critically important to human health (CIA) as categorised by the European Medicines Agency:



[https://www.ema.europa.eu/en/documents/report/categorisation-antibiotics-european-union-answer-request-european-commission-updating-scientific\\_en.pdf](https://www.ema.europa.eu/en/documents/report/categorisation-antibiotics-european-union-answer-request-european-commission-updating-scientific_en.pdf)

During 2021, levels of non-sensitivity to the antibiotics tested, remained generally low for cattle and sheep, with percentages in single figures or absent altogether for each antibiotic tested. In contrast, the annual levels of non-sensitivity to several antibiotics in each of the six years, for pigs and poultry have been consistently higher than have been seen in ruminants. Results for pigs and poultry over the six years of study are provided in the table.

**Table 1 Levels of non-sensitivity in pigs 2017–2022**

Antibiotic	2017	2018	2019	2020	2021	2022
Cefotaxime	2.3	0.4	1.3	0.4	0	0
Ertapenem	0	0	0	0	0	0
Gentamicin	0	0	0.3	0.3	0.4	1.7
Piperacillin/tazobactam	0	0.4	0.3	0.4	0	0.2
Ciprofloxacin	1.1	0	0.6	0.4	0.8	0
Ceftazidime	2.3	0.4	0.6	0.4	0	0
Ampicillin	17.2	19.3	22.0	18.4	20.3	18.5
Trimethoprim	25.3	38.9	32.6	24.3	21.3	17.7
Tetracycline	37.9	50.4	46.6	39.5	34.5	30.5
Amoxicillin/clavulanic acid	9.2	13.2	9.6	2.9	1.7	0.4
Sulphamethoxazole/trimethoprim	24.1	36.4	30.4	21.8	19.0	16.8
Chloramphenicol	17.2	23.9	16.0	15.5	7.9	8.6

**Table 2 Levels of non-sensitivity in poultry 2017–2022**

Antibiotic	2017	2018	2019	2020	2021	2022
Cefotaxime	0	0	0	1.3	0.9	0.05
Ertapenem	0	0	0	0	0	0
Gentamicin	18.7	16.1	9.2	5.5	1.2	1.6
Piperacillin/tazobactam	0.9	0	0.4	0	0	0
Ciprofloxacin	0	5.7	2.0	15.5	6.2	12.4
Ceftazidime	0	0	0	1.3	0.9	0.05
Ampicillin	59.8	58.0	50.2	74.8	50.1	69.4
Trimethoprim	38.3	40.9	42.2	56.3	42.3	51.0
Tetracycline	41.6	44.0	34.1	51.7	37.5	31.5
Amoxicillin/clavulanic acid	17.8	34.2	20.1	17.6	3.2	7.8
Sulphamethoxazole/trimethoprim	37.4	40.4	41.8	55.0	41.4	46.2
Chloramphenicol	2.3	2.1	1.6	5.9	4.6	2.3

Pigs continued to provide the highest levels of non-sensitivity to chloramphenicol, most likely influenced by the use of the phenicol drug, florfenicol. In 2021, the percentage of non-sensitive *E. coli* to chloramphenicol from pigs was in single figures for the first time and was maintained in 2022. Four antibiotics continued to exhibit non-sensitivity in double figures from pigs, however, three of these had their lowest results in 2022: tetracycline, trimethoprim and sulphamethoxazole, with a gradual year-on-year reduction since 2018 for all three.

The highest levels of non-sensitivity to gentamicin have been detected in poultry over the previous five years, but demonstrated a steady reduction in each successive year from 18.7% in the first year of testing to 1.2% in 2021. The figure for 2022 showed a marginal non-statistically significant rise to 1.6%, suggesting that significant progress has been maintained. The project high of 15.5% non-sensitive to the CIA, ciprofloxacin, obtained in 2020 reduced back to 6.2% in 2021, however, 2022 saw a rise once again to 12.4%. Amongst the three other livestock hosts, ciprofloxacin non-sensitivity was only recorded for 0.2% of sheep sampled. As with pigs, the same four antibiotics provided non-sensitivity in double figures

but a demonstrable reduction in numbers is not apparent over the period of study.

The only non-sensitivity detected to other CIA antibiotics was to 3rd generation cephalosporins from a single poultry animal.

All of the *E. coli* isolates have been cryo-preserved and are available for further study. More detailed results are available in the Scottish One Health and Antimicrobial Resistance (SONAAR) report.

This project exemplifies 'One Health' with SRUC VS working alongside Food Standards Scotland and professionals at ARHAI and Health Protection Scotland in design and execution.

## 1HEALTH



## Protecting the Welfare of Farmed Livestock and Wildlife

Protecting the welfare of farmed livestock and wildlife is a priority for the Scottish Government and it is recognised as a public good. Through funded provision of SRUC Veterinary Services specialist laboratory investigation services, the Scottish Government supports statutory enforcement agencies in investigating suspected crime involving both livestock and wildlife. Agencies such as Police Scotland, Local Authorities, Food Standards Scotland, APHA, Scottish SPCA and RSPB regularly use these services as part of their investigation of suspected cruelty or crime involving livestock or wildlife.

### Police Wildlife Crime Liaison Officer Training

Police Scotland Wildlife Crime Liaison Officers (WCLO) investigate suspected wildlife crime and are supported by a larger network of officers with a special interest in wildlife crime across Scotland. Investigation of wildlife crime requires a range of expertise, and for a number of years a pathologist from SRUC VS has delivered part of the training for WCLO. This involvement recognises the expertise and independence of SRUC VS as a supplier of wildlife forensic pathology services for all statutory organisations working in Scotland.

The training provided by SRUC VS covers the identification of relevant material and information to be collected from the site where the carcass is found, collection of the carcass, the background information to be supplied with the carcass and samples, and the testing available, and not available. Emphasis is placed on the importance of knowing the specific question the postmortem examination needs to address. This is not always the cause of death. This integrated team approach has strengthened SRUC VS ability to provide effective support to Police Scotland in the investigation of wildlife crime.



# Support for Scottish Smallholders

Many of the activities supporting Scottish smallholders have, this year, reverted to in-person events, although material in a written or online format has also been available. Two articles were produced for the Anglo-Nubian Breed Society to support goat keepers – one on goat welfare and another on mastitis. A foot health and welfare day was held with the Ryeland Sheep Society in autumn 2022. This topic proved very popular, with a further well-attended farmer event held in Stirlingshire in conjunction with a local vet practice, and a farmer discussion group held in conjunction with SAC Consulting in January 2023.



SRUC VS also supported the Scottish Smallholder Festival in October 2022, providing advice, and several talks and practical demonstrations. One presentation covered awareness and prevention of notifiable diseases such as African Swine Fever and Avian Influenza. There were also practical livestock demonstrations on Healthy Sheep, Goat and Pig “MOTs” providing a hands-on experience for new keepers.

Support was provided to smallholders attending the Rare Breed Survival Trust’s March conference – ‘Farm to Fork – a new, sustainable perspective’. This event discussed biodiversity, health, national herd/flock welfare and issues critical to a sustainable future for the industry. SRUC VS provided advice and also contributed to several of the lively and informative discussion panels.





# Health Planning

During 2022 the health planning team has been working on the development of a new health planning web-app that aims to make effective livestock health management easier for farmers and their vets, nutritionists, and other advisers. Effective livestock health management is defined as an auditable, team driven process of continuous safeguarding and improvement of animal health, welfare, and production efficiency.

The web-app will allow farmers to create their farm team, including their farm staff, vet, nutritionist, and other advisers and work together on beef/sheep health planning. The web-app is designed to fulfil the requirements of assurance schemes (QMS, red tractor etc) and also to encourage dynamic health planning on the farm, with the farm team responding to new risks throughout the production year. The farm team will be able to add data enabling them to monitor herd/flock performance.

A series of webinars was produced for vets. These webinars feature three farm animal practitioners who are trialling the dynamic health planning approach throughout 2022/23. A range of courses and meetings discussing the dynamic health planning concept was also provided to over 150 Scottish vets/farmers.



There are currently two free health planning services for farmers, vets, and advisers in Scotland. For registration or further information visit [SAHPS: The Scottish Animal Health Planning System](https://www.sahps.co.uk/) (<https://www.sahps.co.uk/>).



# Continual Professional Development (CPD) for Scottish Vets



SRUC VS recognises the importance of providing up to date information on disease prevention / control and disease investigation. In response a number of CPD activities have

been delivered throughout the year. These have included in-person courses and bitesize events, live webinars and recorded talks.



Six, two-day, courses were held focusing on infectious diseases of cattle/sheep, respiratory disease management, parasitology and beef health planning. Twelve live webinars on a range of topics were also delivered including the beef, sheep, pig and poultry sector, pre-lambing/pre-calving nutrition, tick-borne diseases, and updates on various disease prevention/control with guidance on biosecurity.

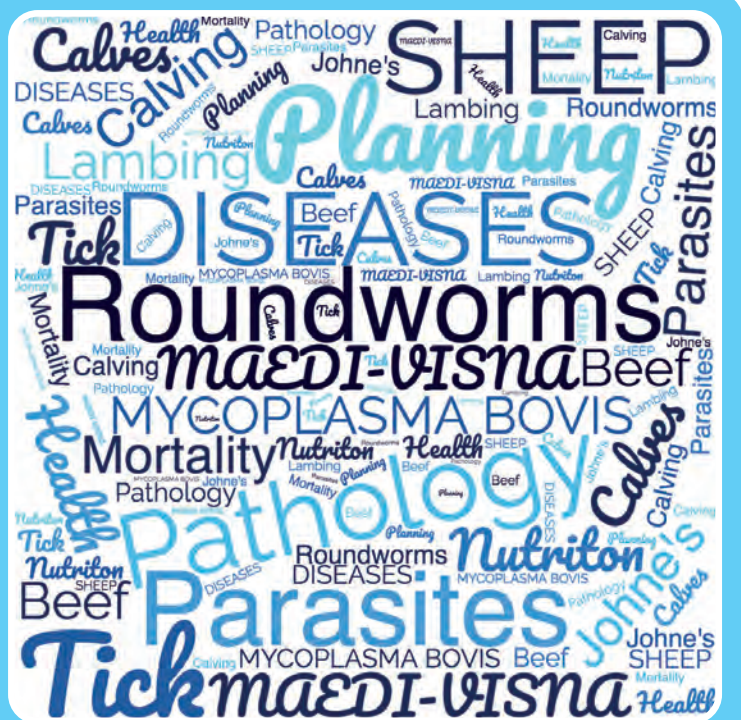
Autumn 2022 saw the first two post covid-19 in-person bitesize events held in Dumfries and Galloway. At these events vets had the opportunity to discuss the fertility management of suckler cows and receive an update on bovine-Tuberculosis.

All the CPD events were well received and attended by over 800 Scottish vets. The live and recorded webinar offering, utilising the [SRUC elearning platform](#), has increased outreach and improved knowledge transfer – especially to practitioners working in remote areas of Scotland.



The range of topics covered by CPD activities is outlined below.

- Tick-borne diseases
- Johne's
- Beef/sheep health planning
- Pre-lambing /pre-calving nutrition
- Maedi-visna
- Mycolpasma bovis
- Roundworms/parasites
- Pathology of the pet pig
- Mortality in calves





# Honey Bee Health

Honey bees are important to the environment as they contribute to pollination of essential food, crops, plants, and trees. Mostly due to a parasite, *Varroa destructor*, Honey bees are now not able to survive without human intervention. It is therefore, only through the practice of beekeeping that honey bees can survive, and beekeepers are responsible for their health.

SRUC VS supports individual hobbyist beekeepers, local associations, groups, and commercial beekeepers by advising on pests and diseases, and promoting good standards of husbandry. SRUC VS is part of the Scottish Government Honey Bee Health Team and the Bee Health Improvement Partnership. As such SRUC has a key role in training and mentoring bee inspectors and has advised on the 10-year Honey Bee Health Strategy to the Scottish Government Honey Bee Health policy team.

Recently SRUC worked in partnership with the Scottish Beekeepers Association, the Scottish Government bee health policy team, the bee inspectors and SASA to provide education on the Isle of Mull where the *Varroa* mite was recently discovered after a period of being free from this pest. This parasitic mite is found in hives across most of the UK however there are some small remote isolated pockets where it has not yet taken up home. It is important beekeepers and those who sell bees are aware, so bees with *varroa* are not inadvertently taken to these places.



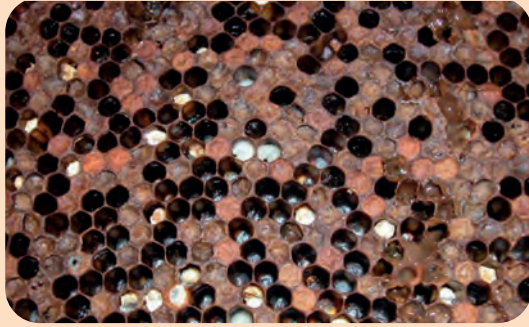
## Bee with varroa mite



The *varroa* mite weakens honey bees leaving colonies susceptible to the development of other diseases such as deformed wing virus and parasitic mite syndrome, this happens through the transmission of viruses and other pathogens. The Scottish Government Honey Bee Health Team has established a Scottish *Varroa* Working Group which aims to provide Scottish Beekeepers with clear guidance on the control strategies of this pest. The SRUC bee advisor is a key member of this group and is currently, amongst other educational activities, creating a Scottish specific learning package on *Varroa* controls for beekeepers in Scotland.

The SRUC bee advisor is also involved with the Scottish Government on the control strategy of the two notifiable diseases of honey bees: American Foulbrood and European Foulbrood, providing direct advice to local beekeepers and support to the bee inspectors during inspections. Suspicion of notifiable diseases such as American Foul Brood (AFB) and European Foul Brood (EFB) should be reported to the Scottish Government bee inspectors via [bees@mailbox.gov.scot](mailto:bees@mailbox.gov.scot) Notifiable disease such as AFB will kill a hive, and destruction is recommended. Inspectors will recommend a shook swarm or destruction for EFB depending on the situation. EFB is also fatal if not dealt with.

Frame infected with American Foul Brood

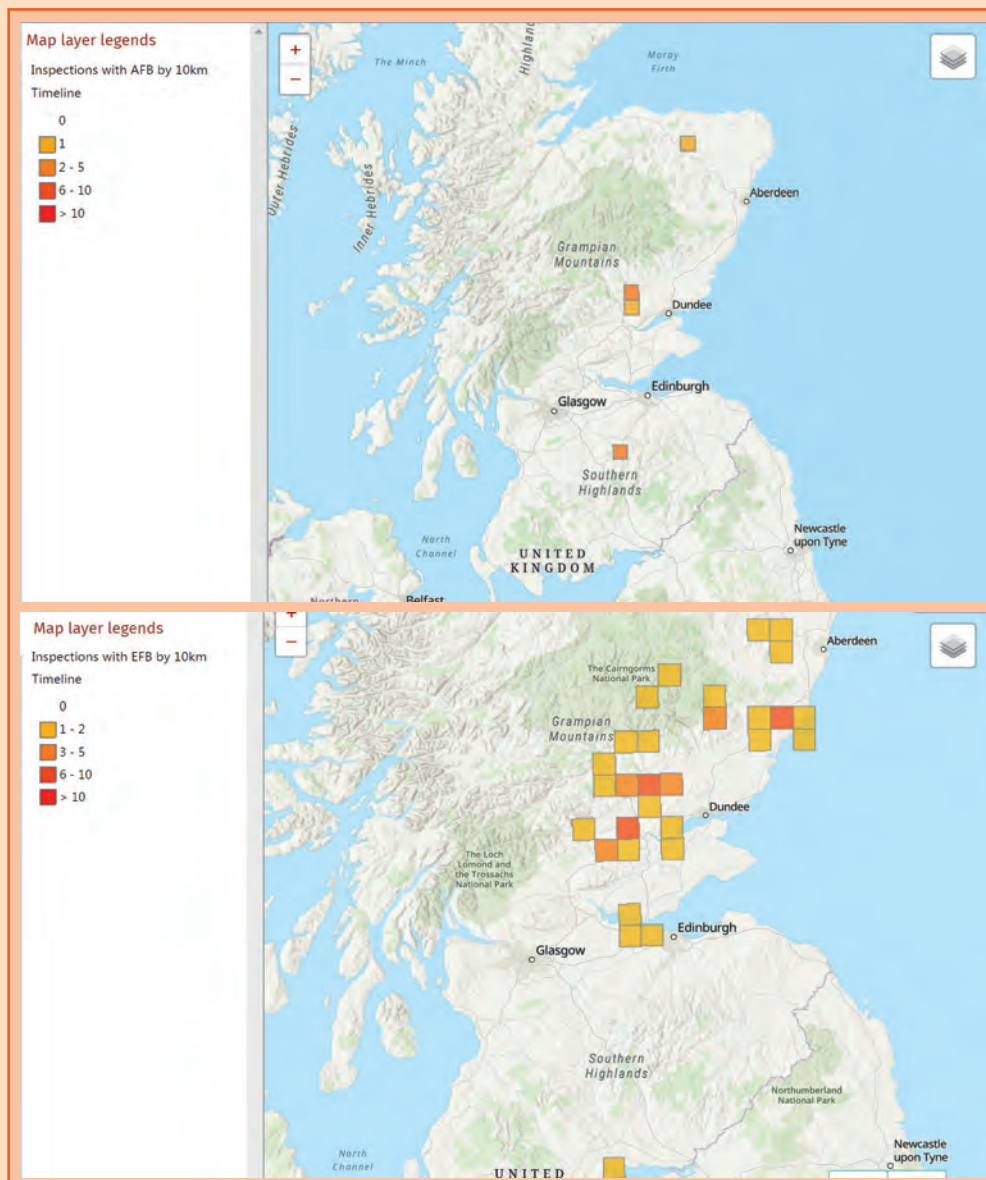


Frame infected with European Foul Brood



SRUC was involved in helping Scottish Government bee inspectors in the Biggar area deal with an outbreak of AFB in July 2022. This involved accompanying bee inspectors at surveillance inspections of beekeepers within 3km of the outbreak to support beekeepers, as well as co-ordinating and delivering presentations to the local beekeeping associations around the outbreak in conjunction with the bee inspectorate to provide advice on notifiable disease recognition and biosecurity.

The maps show the incidence of AFB and EFB across Scotland



*This information is available on BeeBase*

Some useful links:

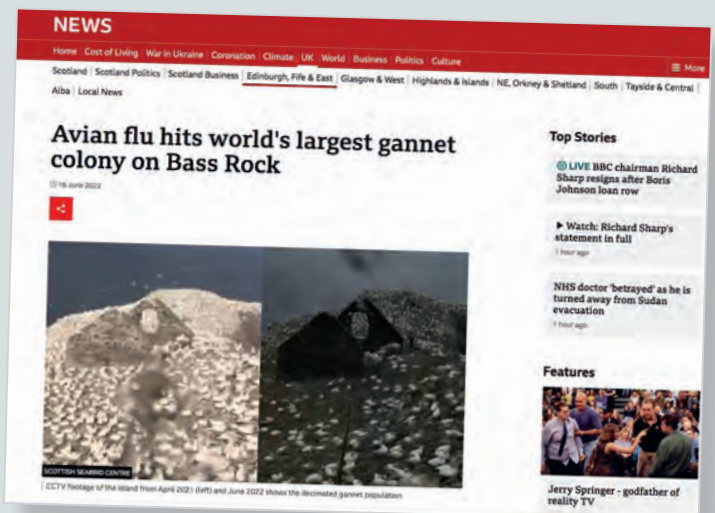
- <https://www.gov.scot/publications/honey-bee-health-strategy-2022-2032/>
- <https://www.gov.scot/publications/scotlands-honey-bee-health-strategy-implementation-plan/>
- <https://www.nationalbeeunit.com/>
- [Bees\\_mailbox@gov.scot](mailto:Bees_mailbox@gov.scot)
- <https://www.sasa.gov.uk/>
- <https://scottishbeekeepers.org.uk/>

# Disease Surveillance in Wild Birds

SRUC VS carries out a significant number of postmortem examinations of wild birds each year providing both disease surveillance information and supporting investigations into crime. This includes pesticide poisoning cases where deliberate poisoning of raptors is suspected.



Since the winter of 2021-22 with domestic poultry at continuing risk of infection with avian influenza from wild birds, sampling of target species of wild birds has formed an increasingly large part of the wild bird investigations carried out by SRUC VS. The high mortality in wild bird populations first seen in geese along the Solway, particularly barnacle geese (*Branta leucopsis*), in autumn and winter 2021-22 and was followed by a highly publicised mass die off event in seabirds on the east coast in the spring and summer of 2022. The gannet population on Bass Rock was particularly badly affected with concentration of infected birds in a small area thought to be significant in increasing levels of infection and mortality among the nesting birds. This represented a further shift away from the previous pattern where infection returned with migratory birds in the autumn and detections of virus in the wild bird population decreased over the summer months.

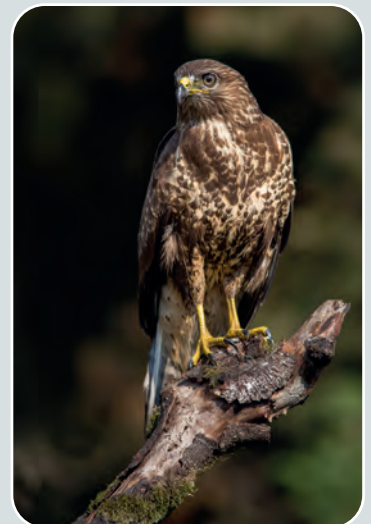


H5N1 was detected in samples submitted by SRUC to the testing laboratory at APHA Weybridge from over 370 birds since April 2022 with samples coming from a wide range of species. As noted above geese and seabirds were significantly affected with raptor species also yielding a number of positive samples.



As well as potential H5N1 infection samples can be tested for West Nile Virus (WNV). WNV has not been seen in the United Kingdom but surveillance is important as disease occurs in humans and horses as well as birds. Wild birds act as a reservoir of infection and the mosquito which transmits the virus to other animals has an increasing range which now includes the parts of south of England.

Examination of wild birds also allows potential emerging diseases or changes in disease patterns to be identified and SRUC VS contributes to worldwide wildlife disease surveillance through the World Organisation for Animal Health.



## Wild Bird Crime

Postmortem examinations are an essential element of the investigation of suspected crime including poisoning involving wild birds and a significant number of wild birds examined are submitted because crime is suspected. SRUC VS can identify other causes of death or evidence consistent with poisoning. If poisoning is suspected tissue samples are taken for analysis. Where deliberate poisoning is suspected evidence from these examinations and analyses are used by Police Scotland to support their investigations and potential prosecutions. Tissues taken from birds dying from other causes are also used to check background levels of pesticides in the population and to monitor unintended effects of legal pesticide use. Submissions for investigation of suspected crime continued at levels seen in previous years however in some cases investigations have been limited due to risks associated with HPAI, <sup>toxic tissues</sup> limiting further testing that can be carried out.



For further information on the  
Scottish Government's Veterinary Services Programme  
contact:

Ms Anne Seaton, Programme Manager

T: 0131 535 3130

E: [anne.seaton@sruc.ac.uk](mailto:anne.seaton@sruc.ac.uk) or

Mrs Ceri A Ritchie, Project Manager

T: 01224 711049

E: [ceri.ritchie@sac.co.uk](mailto:ceri.ritchie@sac.co.uk)

*Images: Adobe Stock, Expressions of Scotland, SRUC, Pixabay  
Design: ADdesign*



