EQUINE DISEASE SURVEILLANCE

2024 Q2 QUARTERLY REPORT

Produced by:

EIDS
Equine Infectious Disease Surveillance

UNIVERSITY OF CAMBRIDGE
Department of Veterinary Medicine

EQUINE DISEASE SURVEILLANCE

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INTRODUCTION

Welcome to the equine disease surveillance report for the second quarter of 2024; produced by Equine Infectious Disease Surveillance (EIDS), based in the Department of Veterinary Medicine at the University of Cambridge.

National disease data are collated through multiple diagnostic laboratories and veterinary practices throughout the United Kingdom, providing a more focused insight into the occurrence of equine infectious disease. Due to the global mixing of the equine population through international trade and travel, collaboration on infectious disease surveillance between countries occurs on a frequent basis to inform and alert. Both national and international information will be summarised within this report.

Any comments and feedback on the report are welcomed and we encourage contributions on focus articles. To view previous reports, see www.equinesurveillance.org and to receive reports free of charge, via email on a quarterly basis, please contact equinesurveillance@vet.cam.ac.uk.

HIGHLIGHTS IN THIS ISSUE

NEWS ARTICLES:

- West Nile Virus – do you advise vaccinating horses going to endemic regions in vector season?
- An update of the current unavailability of Artervac
- An update on equine influenza in the UK from the virologists at the University of Cambridge monitoring the virus

FOCUS ARTICLE:

- *Hyalomma marginatum* - An emerging tick-borne disease vector for the UK?

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NOTE:

The data presented in this report must be interpreted with caution, as there is likely to be some bias in the way that samples are submitted for laboratory testing. For example, they are influenced by factors such as owner attitude or financial constraints, or are being conducted for routine screening as well as clinical investigation purposes. Consequently, these data do not necessarily reflect true disease frequency within the equine population of UK.

WITH THANKS TO THE FOLLOWING SUPPPORTERS

Department for Environment Food & Rural Affairs

BEVA

Llywodraeth Cymru Welsh Government

Department of Agriculture, Environment and Rural Affairs

Scottish Government Riaghaltas na h-Alba gov.scot

NEWS ARTICLES

WEST NILE VIRUS – DO YOU ADVISE VACCINATING HORSES GOING TO ENDEMIC REGIONS IN VECTOR SEASON?

Horses are considered incidental or 'dead-end' hosts for WNV, meaning they do not contribute to the onward transmission of the virus, with the primary transmission cycle being between birds and mosquitoes. However, equine WNV infections can range from subclinical to severe and fatal. Vigilance and proactive measures are essential to mitigate the risk of WNV in horses when it is recognised as a threat to health. Notably, two cases of WNV have previously been confirmed in the UK in horses that had recently travelled from Europe, the most recent being in November 2022 involving a horse returning from competition in southern Spain.

During 2023, the European Centre for Disease Prevention and Control (ECDC) reported that seven EU countries confirmed equine WNV cases, with 153 cases reported in total. Of note are the equine and bird WNV cases that have been confirmed more northerly in Germany, demonstrating the concerning geographical shift of the disease in the past few years (Figure 1). The presence of mosquito species capable of transmitting WNV in the UK, combined with the virus's northward spread in Europe and warming climates, raises the possibility of WNV becoming endemic in the UK.

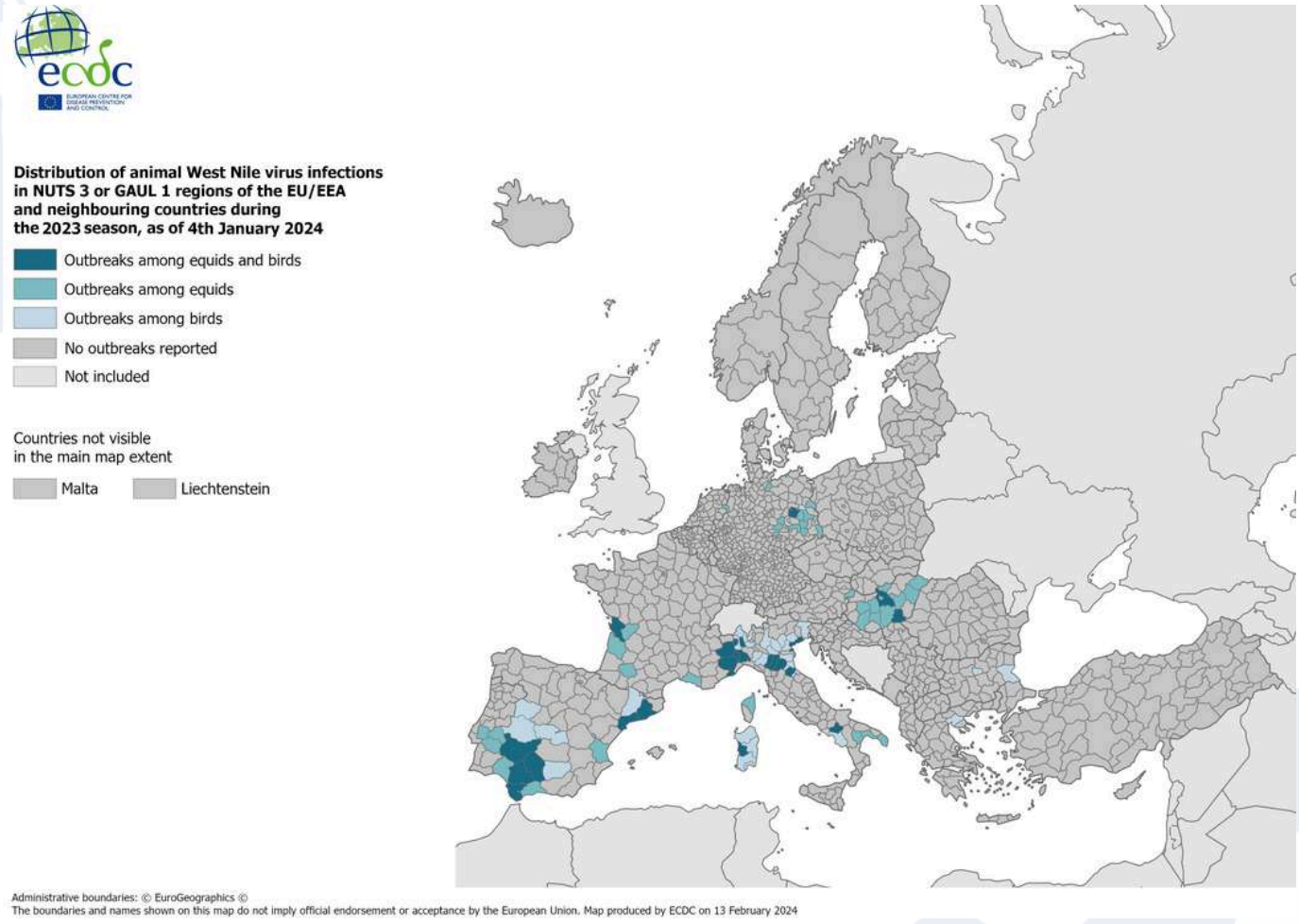

Figure 1: A map produced by the European Centre for Disease Prevention and Control (ECDC) showing the distribution in EU countries of WNV cases reported in equids and birds in 2023

Vets are encouraged to discuss any relevant risks with their horse owning clients and where appropriate recommend that horses be vaccinated if travelling to WNV-endemic regions, particularly if this is during vector season (summer and autumn). Currently, there are three WNV vaccines licensed for use in horses in the UK, although the extent of their availability would need to be checked with the individual manufacturers. Extensive experience with these vaccines in North America has shown them to be safe and highly effective in preventing clinical disease and mortality when used correctly.

Further information on the epidemiology of equine WNV is available in the International HBLB Codes of Practice (https://codes.hblb.org.uk/index.php/page/174)

AN UPDATE OF THE CURRENT UNAVAILABILITY OF ARTERVAC

Artervac, the only currently licensed vaccine in the UK for equine viral arteritis (EVA), has been unavailable since late March 2023. The manufacturer, Zoetis, has communicated that the timeline for when new stocks will be available remains uncertain.

This unavailability poses significant challenges for horse owners, breeders, and veterinary surgeons due to the critical role EVA vaccination plays in preventing equine arteritis virus (EAV) infection, particularly for UK stallions and teasers. Exposure to the virus can occur through contact with any infected bodily fluid, through direct or indirect means. Given the concern for the long-term carrier status following infection in stallions, with castration being the safest management option in the UK under the EVA Order, vaccination plays an essential role in reducing the risk that this disease could pose. Although not thought to be transmitting in the UK, the virus is endemic in much of mainland Europe and the UK is at risk from importation of subclinically infected stallions, such as was confirmed in Scotland in April 2024.

A proactive approach to monitor stallions is advised. Although the likelihood of exposure is deemed low, the potential consequences of infection are considerable. EVA has been confirmed in UK resident horses, including this year, with the vast majority of reported confirmations being in unvaccinated, subclinically infected non-Thoroughbred stallions that harbour the virus in their reproductive systems and are able to shed the virus in their semen. There is usually a previous history of these stallions having resided in European countries where EVA is endemic and not controlled by a code of practice.

EIDS would encourage stallion owners to apply a high level of biosecurity to their stallion premises, including total avoidance of direct or indirect contact with high risk animals, as per the HBLB International Code of Practice for EVA. These may be mares or stallions that have recently or previously resided in an endemic country or had contact with a horse that has, and their current infectious status has not been confirmed through testing.

To maintain effective surveillance, additional testing of the UK breeding population is advisable. As vaccination does not have DIVA capability (i.e. differentiate infected from vaccinated animals), serological testing of a blood sample from a lapsed vaccinated stallion may be positive and it will not be possible to readily distinguish vaccine induced antibodies from those following infection. Sequential serum samples, taken prior to last booster vaccination and at specific time points thereafter (stored in a laboratory), can be used to demonstrate stable or declining titres, thereby confirming that there has been no subsequent infectious exposure to virus and seropositivity is consistent with the history of vaccination. In the absence of stored samples, the only testing option for a seropositive stallion is to collect semen for EVA PCR to confirm that there is no virus being shed in semen i.e. the stallion is not infected with EAV and an infectious risk during breeding. Recently covered mares provide a unique opportunity to demonstrate freedom from infection in a lapsed-vaccinated stallion that they were covered by, through sampling prior to (as required by the International Codes of Practice) and at least two weeks after covering, with negative EAV titres demonstrated on both samples.

AN UPDATE ON EQUINE INFLUENZA IN THE UK FROM THE VIROLOGISTS AT THE UNIVERSITY OF CAMBRIDGE MONITORING THE VIRUS

After the large H_3N_8 Florida sublineage clade 1 (FC1) equine influenza (EI) outbreak in 2019 in the UK, the virus has continued to circulate and evolve in the UK, Europe and North America. In January 2024, we detected a novel variant of the FC1 EI virus, with two amino acid changes identified in the haemagglutinin glycoprotein (HA1) in a horse imported from Denmark (https://equinesurveillance.org/jdata/icc/iccnotification/?refid=6251). In early June 2024, several veterinary diagnostics laboratories reported clusters of clinically typical respiratory disease in unvaccinated equines, some of which were epidemiologically linked to an equine event in Cumbria and whole genome sequencing of the viruses isolated from respiratory samples has shown they are closely related to the virus first observed in the imported horse in January 2024, and some have another amino acid change in HA1. There is evidence to suggest that this FC1 EI variant is now circulating in the UK.

Laboratory work is currently underway to determine the significance of the antigenic drift associated with these amino acid changes observed in HA1 and whether this might reduce the effectiveness of current EI vaccines against them. To date there is no evidence of infection in vaccinated animals. We typically use the haemagglutination inhibition (HI) assays to determine if any antigenic drift has occurred, where we measure the ability of specific antibodies (in serum from ferrets raised against specific viruses) to prevent the binding of virus to red blood cells. These data allow us to keep vaccine recommendations up to date to mitigate the impacts of novel virus variants.

There has been renewed interest in the highly pathogenic avian influenza (HPAI) H5N1 2.3.4.4b viruses since their detection in cows in the USA. These viruses are reassortant viruses containing gene segments from both a low pathogenicity North American virus and a high pathogenicity European virus. It is thought there was one crossover event between birds and cows, possibly in Texas, that established the virus in the cattle and resulted subsequently in cattle to cattle transmission. Researchers have identified several possible adaptive substitutions within the polymerase B (PB2_ protein), part of the RNA replication complex that allow the viruses to infect mammals. Moreover, mammary gland tissues co-stained with sialic acids (SA, receptors which allow flu viruses to bind to cells) and influenza A virus nucleoprotein showed predominant co-localization with the virus and SA α2,3-gal, the same receptor type commonly found in equines. The H5N1 viruses have been detected in several mammalian species in the USA and Europe, including cats, ferrets, mice, goats, seals and a recent cluster of three people in Colorado in July 2024. There is currently no evidence that these viruses have infected equines. However, there is historical evidence of similar H5N1 viruses infecting donkeys in Egypt. Recent laboratory studies have shown the virus from cows is shed in large quantities in milk and it can cause disease after ingestion or intranasal infection. However, transmission among ferrets, a commonly used animal model for influenza, is currently inefficient. Based on the information available to date, there seems to be a theoretical risk that these H5N1 HPAI viruses may be able to infect equines. Continued surveillance will be important going forward to monitor and mitigate the risk to both equines and humans.

HYALOMMA MARGINATUM - AN EMERGING TICK-BORNE DISEASE VECTOR FOR THE UK?

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Introduction

Hyalomma marginatum (*H. marginatum*) also known as the Mediterranean *Hyalomma* tick (Marchiondo *et al.*, 2019), and the Bont-legged tick (ESCCAP, 2024) is a hard-bodied, ditropic tick and is a potentially serious disease vector (Figure 1).

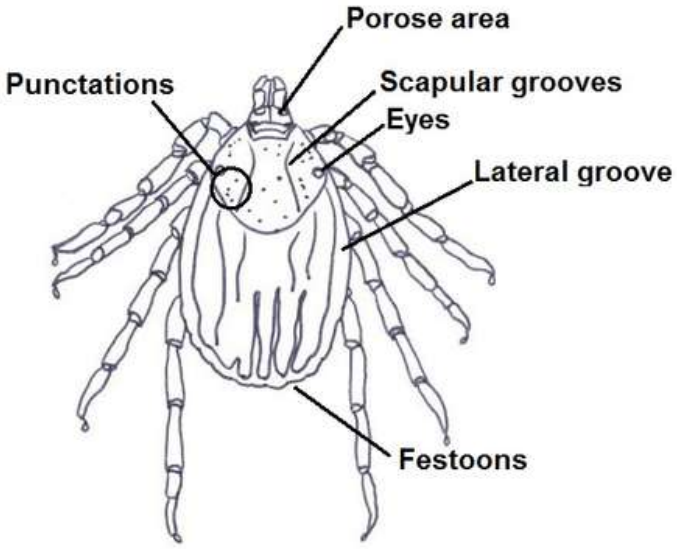

Figure 1: *H. marginatum structure*

In Europe their distribution includes most of the Mediterranean and the Balkan countries, Ukraine, and southern Russia (Selina *et al*, 2023) (Figure 2). Outside of Europe it is commonly found in North Africa, India, Iran, and Pakistan (Gillingham *et al.*, 2023).

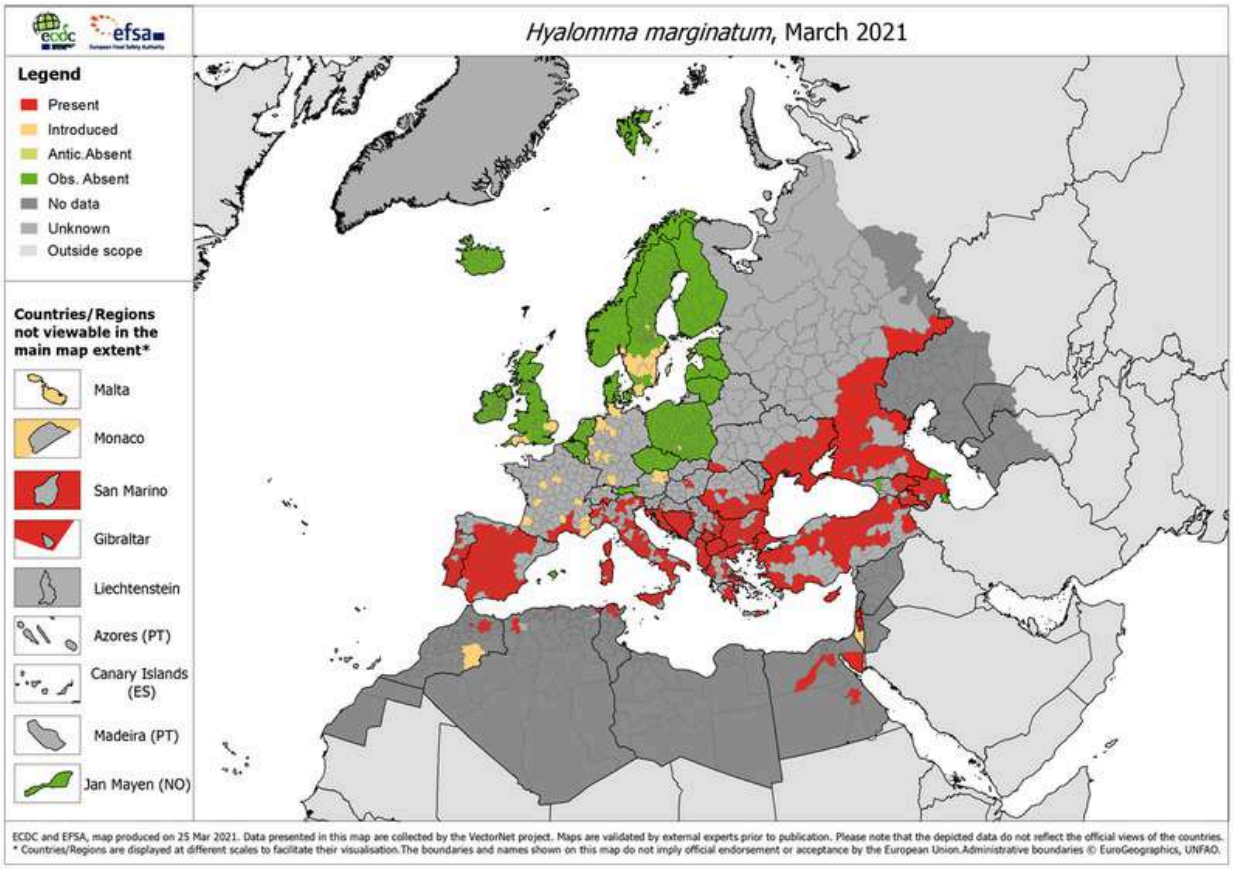

Figure 2: *H. marginatum* distribution (ECDC, 2021)

H. marginatum actively seek a range of hosts. They are "two-host" ticks that feed on hares, rodents, ground-feeding birds, and other small animals (Gholizadeh *et al.*, 2022). As an adult, it can feed on sheep, cattle, horses, and other large mammals, *H. marginatum* also has an affinity for humans (Valcárcel *et al.*, 2020), and due to this range of host selection, *H. marginatum* is a key and important vector of animal and human diseases.

H. marginatum can enter into the UK in multiple ways including via migratory birds. It is an ectoparasite of passerine birds, with immature ticks remaining attached for a period of up to 26 days, this enables a passive transport across continents, further spreading the distribution of the *Hyalomma* (Jameson *et al.*, 2012). The importation of livestock into the country is also of significant high risk, as livestock can support particularly large infestations of up to 100 ticks per animal (Estrada-Pena *et al.*, 2012).

An important vector of infectious diseases of humans and animals

Ticks have a worldwide distribution, occupy a wide variety of biotopes, and comprise about 900 species, some of them being capable of transmitting viruses, bacteria, and/or parasites (Grey, 2009). In the northern hemisphere, they are primary vectors of both human and animal pathogens, in the Southern Hemisphere, they are of key vectors impacting animal health (Díaz-Sánchez, 2023).

H. marginatum ticks have a profound negative impact, both direct and indirectly as a key vector for many diseases, both bacterial diseases and viral diseases (Bonnet *et al.*, 2022) which can have severe health and economic impacts (Figure 3).

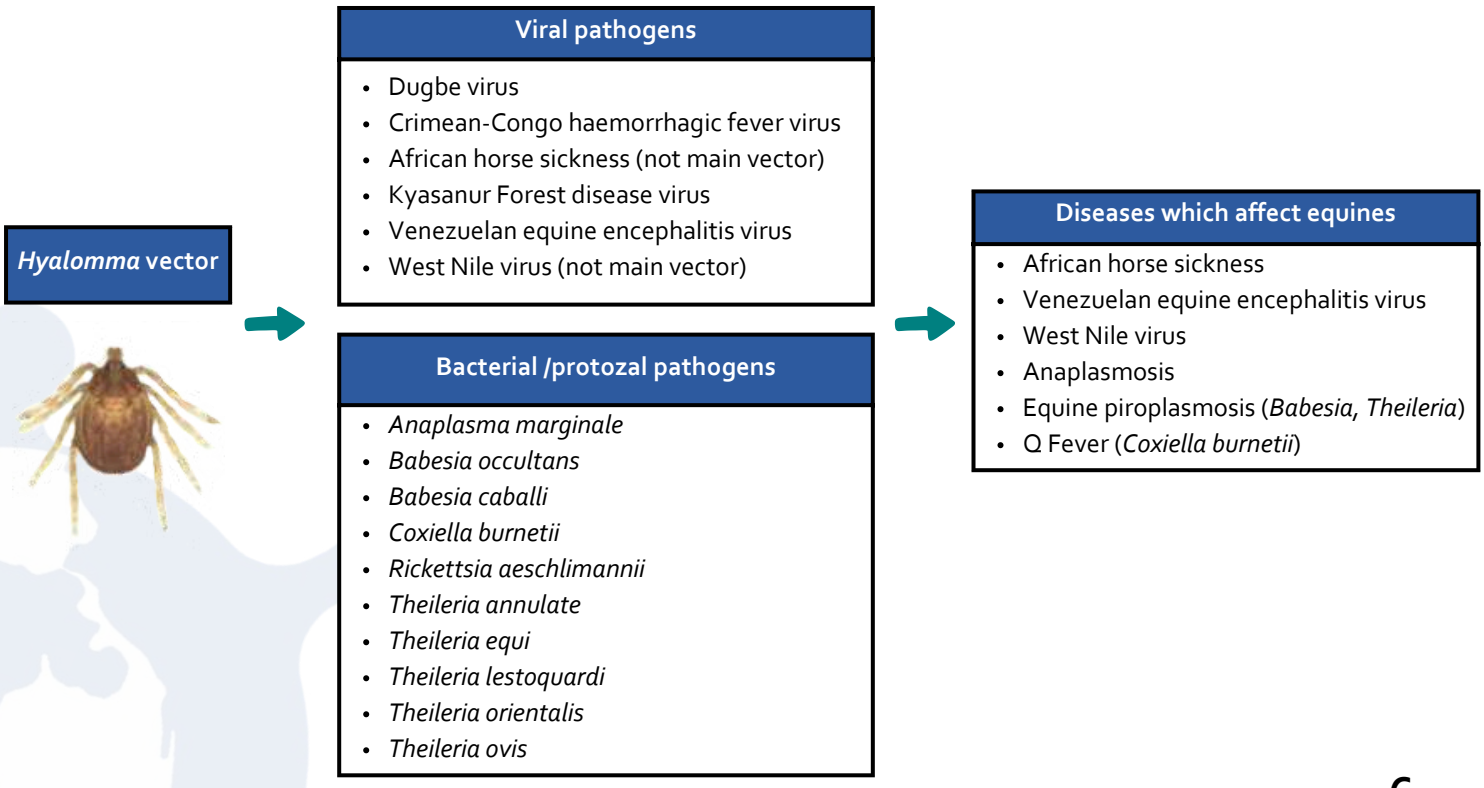

Figure 3: Diseases in which *H. marginatum* acts as a potential vector

The worldwide distribution of such vectors, coupled with the 2024 Olympics and the traveling or mixing of horses from all over the world, emphasises how important testing and knowledge is. A case study of a horse contracting piroplasmosis at the Tokyo 2020 Olympic games shows the potential safety risks in equine travel, but also how safety procedures along with swift testing and monitoring can diminish potential risk (Aida *et al.*, 2023). These pathogens can not only affect horses and the equine industry, but also be potentially zoonotic, and a concern for human health (Please see end of article for guidance on Tick Testing/Surveillance). Regarding human health; *H. marginatum* is considered to be the most important vector of Crimean-Congo haemorrhagic fever virus (CCHF), an emerging pathogen in Eurasia (Hoogstraal, 1979), CCHF is a severe illness, with fatality rates of 30% or higher being reported in humans (Hawman, 2023). Humans are normally infected through either the bite of an infected tick or the direct contact with a host, or host tissues infected with CCHFV during the acute phase of infection (Estrada-Pena , 2015). Cases have been reported throughout Africa, the Middle East, Asia, and southern and eastern Europe, with the expanding range of the *Hyalomma* placing new populations at risk. No licensed vaccines or specific antivirals exist to treat CCHF infection (Hawman, 2023).

Clinical signs of equine piroplasmosis (EP)
Mild case of EP: • Reduced appetite or lack of appetite • Weakness or exercise intolerance ***More severe cases may have:*** • Fever • Anemia • Jaundice (yellow discolouration of mucous membranes) • Weight loss • Laboured breathing • Swollen abdomen • Colic • Sudden death

Figure 4: Clinical signs of equine piroplasmosis

Focusing on equine diseases in which *H. marginatum* is the main vector, equine piroplasmosis is of major consideration. Affecting horses, donkeys, mules, and zebras, equine piroplasmosis, is an economically significant blood-borne disease caused by the protozoa *Babesia caballi* and *Theileria equi* (Figure 4). Mortality rates for infected horses can reach 50% and can have serious consequences for horse owners (USDA, 2024). The pathogen is spread during tick feeding but may also be transmitted via infected blood and contaminated equipment (WOAH, 2024).

The disease is widespread and although the UK is currently considered free from disease, cases do occur in a range of other countries. The parasites occur in Europe, countries of Central and Eastern Asia, Africa, Cuba, South and Central America, and certain parts of the southern United States of America (WOAH, 2024).

Hyalomma ticks in the UK - a changing dynamic?

As covered in Bonnet *et al*. (2022) we are currently in a time of major global, societal, and environmental change. Due to these factors, we are witnessing a shifting distribution of pathogen vectors, this represents a significant concern, potentially generating opportunities for infection and transmission in new global areas. Climate change is one of several causes of disease emergence (Baylis, 2017) and there is growing evidence that an increase of tick-borne diseases in Europe is linked to climate change (Bah *et al.*, 2022), and there is a widening geographical distribution of *Hyalomma* (Bonnet *et al.*, 2022). Regarding tick vectors and geographical spread, we also need to consider the long duration of host attachment. This allows the passive transport of the ticks by migrating birds over long distances (Hoogstraal et al, 1961). This coupled with climate change, causes specific concerns about the possibility of introducing ticks under suitable climatic conditions, allowing for the establishment of tick communities (Estrada-Pena *et al.*, 2015).

When considering the potential for tick survival in the UK, Gillingham *et al.* (2023) modelled the current and future temperature suitability of the UK for *H. marginatum* and found that as seasonal temperature averages rise, there is an increased risk of *H. marginatum* moulting and its survival in the UK during the warmer months. However, annual temperatures are likely to remain below the threshold required for *H. marginatum* populations to become fully established in the UK overwinter (Gillingham *et al.*, 2023). With this increased risk of transport and moulting survival of *H. marginatum*, surveillance and control needs to be of priority to prevent the emergence of tick based equine disease within the UK.

The emergence of *Hyalomma* ticks in the UK is a prevalent issue, with Hansford *et al*. (2019) marking the first major evidence of successful *Hyalomma* moulting in the UK, taken from a horse in Dorset with no history of overseas travel. The tick was collected and sent to Public Health England's tick Surveillance Scheme, where it could be successfully identified. It was determined that the tick was imported into the UK via a migratory bird as an engorged nymph, and then was able to complete its moult to the adult stage and find a host (Hansford *et al.*, 2019). This scenario highlights the importance of tick surveillance as an important method for the detection, mapping, and control of ticks in the UK.

Tick surveillance and test testing in the United Kingdom

The UK Health Security Agency (UKHSA) encourages everyone to 'be tick aware'. To combat tick spread in the UK, the "Tick Surveillance Scheme" was set up in 2005 and is the only scheme that records tick distributions on a national scale (Gov UK, 2024).

All records are available on the National Biodiversity Network gateway for research and public use. Ticks found during routine horse monitoring can be sent to the Tick Surveillance Scheme for identification, a crucial and key aspect of preventing tick spread diseases within the UK, and ultimately preventing potentially serious economic and health impacts on the UK's equine industry.

For further information on how to submit a tick for testing see www.gov.uk/guidance/tick-surveillance-scheme

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The views expressed in this focus article are those of the author and independent of the Equine Quarterly Disease Surveillance Report.

UK Infectious Disease Reports

This section summarises **laboratory confirmed infectious disease outbreaks reported in the United Kingdom** during the second quarter of 2024. Each reported outbreak may involve more than one animal. To view current outbreak reports, see www.equinesurveillance.org/iccview.

No reported outbreak(s) in a region does not necessarily mean the area is free from the disease. When a particular disease is reported as 'endemic', disease outbreaks are common and at an expected level.

NOTIFIABLE DISEASES

The APHA Veterinary Exotic Notifiable Disease Unit (VENDU) co-ordinates the investigation of suspected exotic notifiable disease in Great Britain on behalf of Defra, Welsh Government and Scottish Government. Further information about notifiable diseases is available on https://www.gov.uk/government/collections/notifiable-diseases-in-animals.

It should be noted that all information relating to equine notifiable disease investigations (including suspect cases that are subsequently negated) will appear in this section and are not broken down by system. APHA non-negative test results that are referred to below do not equate to confirmed positive cases and are therefore not included in quarterly laboratory results tables. Confirmed positive results are based on APHA investigations and follow confirmation on official samples. Non-notifiable diseases will appear in their relevant system section.

EQUINE VIRAL ARTERITIS

Three non-negative serology results were reported. Two horses were confirmed to be mares that had not been served in the 14 days preceding blood sampling, therefore no further action was taken. The third case is a stallion and further investigation is under way and the stallion will remain under breeding and movement restrictions while these are conducted.

WEST NILE VIRUS

There have been no 'test to exclude' (TTE) cases for WNV.

NON-NOTIFIABLE DISEASES

EHV-1 NEUROLOGICAL INFECTION

JUNE

In June 2024, Axiom Veterinary Laboratories reported a case of EHV-1 neurological disease on a premises in Leicestershire. The affected horse was a non-vaccinated, eight-year-old, Thoroughbred mare presenting with clinical signs of ataxia, hindlimb paresis and urinary retention on 30 May 2024 and was subsequently euthanised when becoming recumbent the following day. Positive diagnosis was confirmed by PCR on 3 June 2024 on a nasopharyngeal swab sample. There were approximately 20 horses on the premises, of which two were in contact with the case; both were tested and negative by PCR on nasopharyngeal swabs. Movement restrictions and biosecurity measures were in place and further diagnostic testing was conducted.

EHV-1 REPRODUCTIVE INFECTION

APRIL

In April 2024, Rossdales Laboratories reported a case of EHV-1 abortion in a vaccinated four-year-old Warmblood maiden mare on a premises in Central Scotland. The mare aborted at approximately 10 months of gestation and the positive diagnosis was confirmed by PCR on fetal tissues. There were around 30 animals on the affected premises, including five other pregnant mares, although the affected mare was kept separately from the other mares.

MAY

In May 2024, Rossdales Laboratories reported a case of EHV-1 neonatal death in a two-day-old Thoroughbred foal on a premises in Lincolnshire. Clinical signs included increased respiratory rate and effort at 18h old, quickly progressing to respiratory distress and death at 30h old. The dam was not vaccinated against EHV. There were 40 animals on site including other pregnant mares and new arrivals. There were possibly further affected cases and additional testing was conducted. Positive diagnosis was confirmed on 29 April 2024, by PCR on foal and placental tissue.

EHV-1 RESPIRATORY INFECTION

APRIL

In April 2024, Rossdales Laboratories reported a case of EHV-1 respiratory infection in a yearling Cob cross filly, with no vaccination history, on a premises in Clackmannanshire. Clinical signs included: lymphadenopathy and mucoid nasal discharge. Positive diagnosis was confirmed by PCR on a swab. There were a further 19 in-contacts on the premises none of which had presented with clinical signs.

EHV-1 RESPIRATORY INFECTION

MAY

In May 2024, Rossdales Laboratories reported an outbreak of EHV-1 respiratory infection in four unvaccinated animals: a 10-year-old Warmblood mare, a 16-year-old Irish Sports Horse gelding, a two-year-old Welsh Section B filly and a 48 hour old Warmblood foal (the dam was also tested but was negative) on a premises in Hertfordshire. Clinical signs included: pyrexia, inappetence, lethargy and serous nasal discharge. Positive diagnoses were confirmed PCR on nasopharyngeal swabs. There had been recent movement on/off site. There were 30 other animals on site of which 15 to 20 were direct in-contacts and some of these were pregnant mares.

EHV-4 RESPIRATORY INFECTION

APRIL

In April 2024, Rossdales Laboratories reported two cases of EHV-4 respiratory infection.

One case was an unvaccinated 12-year-old gelding on a premises in Warwickshire. Clinical signs included dry/harsh cough and slight mucopurulent nasal discharge. Positive diagnosis was confirmed by PCR on a nasopharyngeal swab. It was noted there had been recent new arrivals to the premises, however, no other animals on-site were affected at the time of reporting.

The second case was an unvaccinated six-year-old Irish Draught mare on a premises in Lincolnshire. Clinical signs included: pyrexia, lethargy, dry/harsh cough and serous nasal discharge. Positive diagnosis was confirmed by PCR on a nasopharyngeal swab. There were two further animals on-site, none of which were affected at the time of reporting.

MAY

In May 2024, Rainbow Equine Laboratories reported a case of EHV-4 respiratory infection in an unvaccinated two-year-old Fell gelding on a premises in North Yorkshire. Clinical signs included pyrexia and unilateral serous nasal discharge. It was noted the animal had been hospitalised for the previous five days for a separate condition when it developed a fever. Positive diagnosis was confirmed by PCR on a nasal swab. The affected animal was isolated.

JUNE

In June 2024, Rossdales Laboratories reported a subclinical case of EHV-4 infection in a vaccinated Thoroughbred mare on a premises in Wiltshire. The mare was tested as part of routine pre-covering procedures and had not exhibited any clinical signs. Positive diagnosis was confirmed by PCR on a nasopharyngeal swab.

Equine Influenza

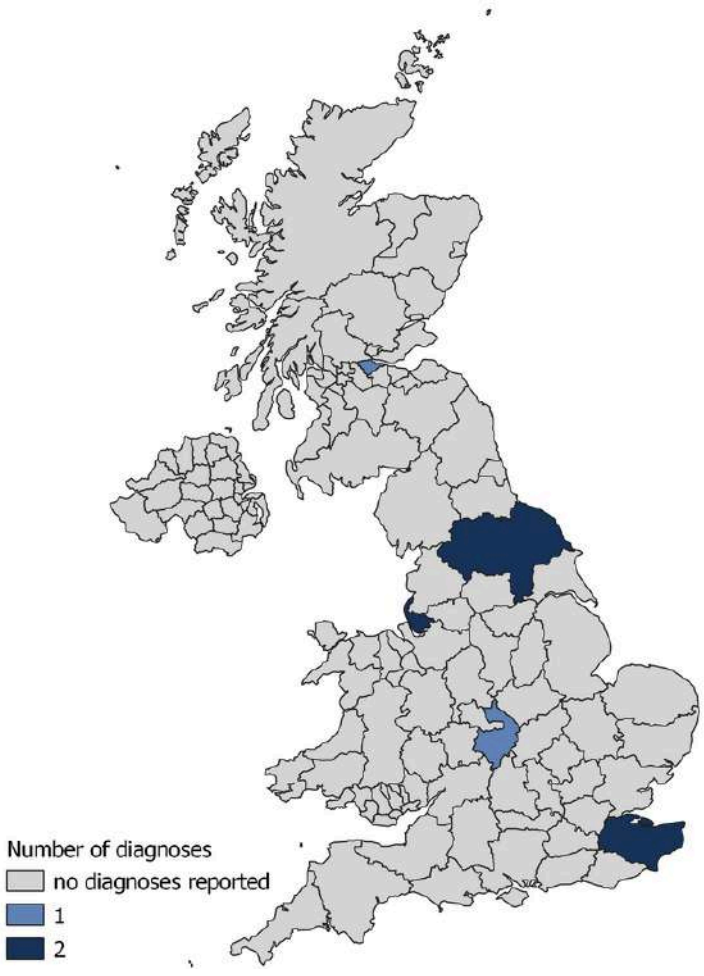
MAY

In May 2024, Rossdales Laboratories and Axiom Veterinary Laboratories both reported one outbreak of equine influenza (EI) each.

JUNE

In June 2024, Rainbow Equine Hospital reported four outbreaks and Axiom Veterinary Laboratories reported one outbreak.

Information regarding these seven reported outbreaks is summarised in Table 1.



Frequency of reported laboratory diagnoses of EI across the UK during 2024 Q2.

Table 1: Equine influenza outbreaks reported 1 Apr to 30 Jun 2024.

Total outbreaks reported	7	
	n	%
Total horses sampled	8	100%
Sample type		
Swab	8	100%
Nasopharyngeal	7	88%
Nasal	1	12%
Signalment		
Sex of horse indicated	8	100%
Female	3	37%
Male	5	63%
Breed of horse	6	75%
Native UK pony	2	33%
Native UK horse	3	50%
Crossbreed	1	17%
Age of horse	6	75%
Range	3 - 15 years	
IQR	4 - 6 years	
Median	5 years	
Clinical signs reported*	37	
Coughing	7	19%
Lethargy	7	19%
Nasal discharge	7	19%
Pyrexia	6	16%
Inappetence	4	11%
Lymphadenopathy	3	8%
Ocular discharge	3	8%
Vaccination status	8	100
Unvaccinated	7	88%
Unknown	1	12%
Premises type	6	75%
Livery	4	66%
Private	1	17%
Competition	1	17%

**From 8 diagnoses*

HBLB SURVEILLANCE SCHEME

Veterinary surgeons suspecting EI can submit samples for PCR testing with the scheme covering the cost of the laboratory testing. Veterinary surgeons wishing to use this scheme can sign up here: www.equinesurveillance.org

Surveillance of Equine Strangles

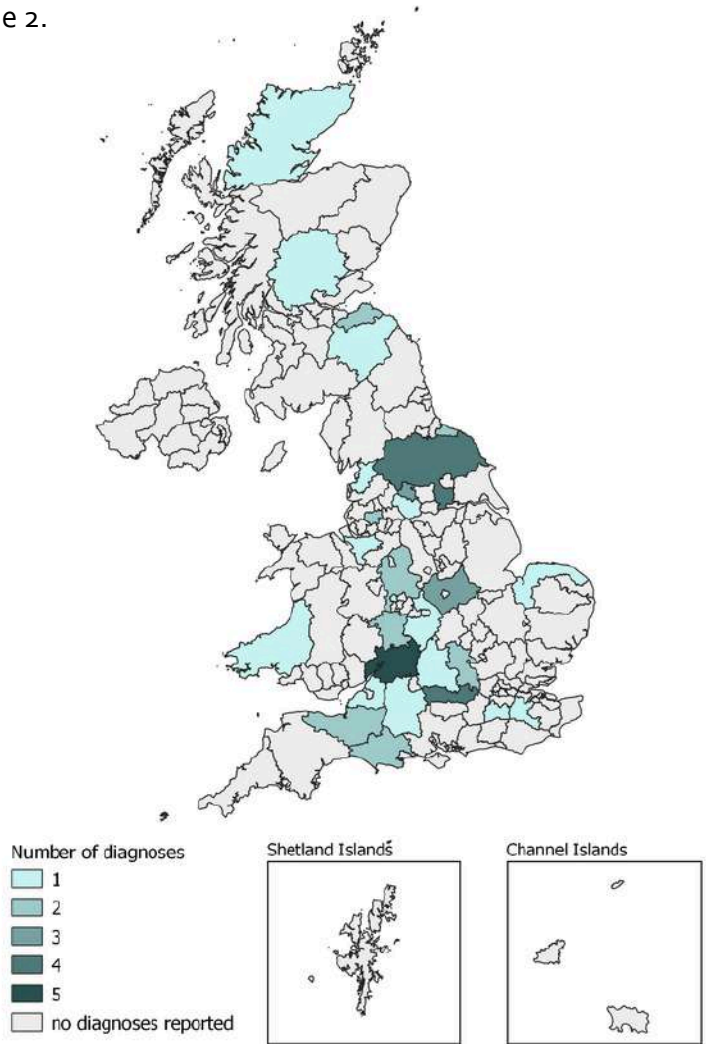
Table 2: *S. equi* samples reported 1 Apr to 30 Jun 2024.

	n	%
Total horses sampled	50	100%
Sample type*	54	
Swab	20	37%
Nasopharyngeal	16	80%
Abscess material	2	10%
Nasal	2	10%
Guttural pouch lavage	27	50%
Other	7	13%
Diagnostic tests		
PCR only requested	45	90%
PCR and culture requested	3	6%
Culture only requested	0	0%
LAMP	1	2%
LAMP and qPCR	1	2%
Signalment		
Sex of horse indicated	35	70%
Female	14	40%
Male	21	60%
Breed of horse	28	56%
Native UK pony	9	32%
Native UK horse	6	21%
Sports horse	11	39%
Crossbreed	2	7%
Age of horse	27	54%
Range	2 months - 22 yrs	
IQR	3 - 13 yrs	
Median	7 yrs	
Clinical signs reported**	50	
Nasal discharge	12	24%
Pyrexia	11	22%
Abscess	7	14%
Coughing	4	8%
Glandular swelling	4	8%
Lethargy	3	6%
Other	5	10%
Guttural pouch empyema	2	4%
Inappetence	2	4%
Reason for sampling reported	39	78%
Total reasons*	42	
Post infection screening	12	29%
Clinically ill horse	11	26%
Post seropositive ELISA	5	13%
Strangles suspected	11	26%
Pre/post movement screening	2	5%
In contact with infectious horse i	1	2%

**can include multiple entries per submission*
***From 24 diagnoses*

The Surveillance of Equine Strangles network enables the ongoing assessment of the disease's true welfare impact, highlighting trends over time and different geographical areas across the UK. The SES network is comprised of ten diagnostic laboratories based across the UK.

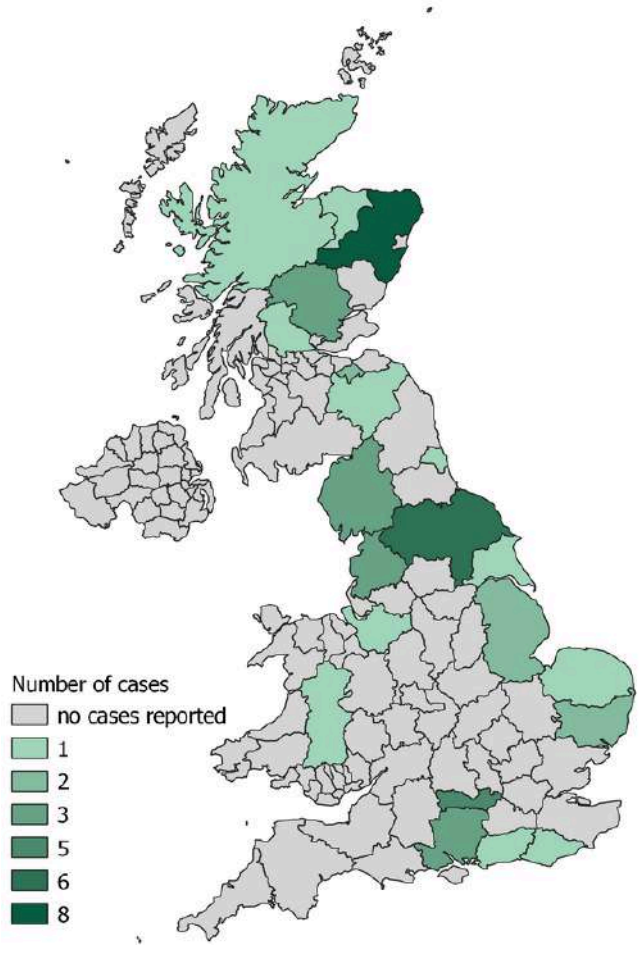
A total of 50 cases with positive diagnoses of *S. equi* were reported by SES Laboratory during Q2 2024 from samples submitted by 37 veterinary practices in the UK. Information regarding reported samples is summarised in Table 2.



Frequency of reported laboratory diagnoses of *S. equi* across the UK from SES during 2024 Q2. Diagnoses are mapped by submitting vet practice location.

Equine Grass Sickness

An equine grass sickness (EGS) surveillance scheme was established in spring 2008 facilitating the investigation of changes in geographical distribution and incidence of EGS in Great Britain. Having up to date anonymised reports from across the country provide accurate representation of EGS cases nationwide and is vital to help continue epidemiological research into the disease. Reporting cases of EGS to the Equine Grass Sickness Fund (EGSF) can be done by either the attending veterinary surgeon or the owner, at http://tinyurl.com/EGSquestionnaire.



In Q2 2024 48 cases of EGS were reported to EGSF. Cases were reported across England (n= 29, 60%), Scotland (n= 18, 38%) and Wales (n= 1, 2%). Information regarding reported cases is summarised in Table 3. Where premises history was known (n= 21/48), 13 premises had a history of EGS (62%).

Table 3: Equine Grass Sickness cases reported to the EGSF 1 Apr to 30 Jun 2024.

	n	%
Total horses sampled	48	100%
EGS presentation	48	
Acute	27	56%
Subacute	12	25%
Chronic	9	19%
EGS outcome	46	96%
Survivor	5	11%
Non-survivor	41	89%
EGS diagnoses	44	92%
Clinical signs alone	32	73%
Histological confirmation	12	27%
Month of diagnosis	48	100%
April	21	44%
May	16	33%
June	11	23%
Signalment		
Sex of horse indicated	42	88%
Female	23	55%
Male	19	45%
Breed of horse	48	100%
Native UK pony	23	48%
Native UK horse	10	21%
Crossbreed	2	4%
Sports horse	11	23%
Non-UK native horse or pony	2	4%
Age of horse	39	81%
Range	1 - 21 years	
IQR	2 - 8 years	
Median	4.5 years	

Please note that figures for EGS contained in the laboratory report may differ to the number of cases reported here, which are reported by both owners and veterinary surgeons.

VIROLOGY

The results of virological testing for April to June 2024 are summarised in Tables 4 to 7. Please note, APHA's sample population is different to the other contributing laboratories as their tests are principally in relation to international trade.

GASTROINTESTINAL DISEASE

Table 4: Results of virological testing for gastrointestinal diseases between 1 Apr to 30 Jun 2024. CLs = contributing laboratories

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
Adenovirus HI	Antibody	47	1	1
Coronavirus PCR	Agent	70	3	2
Rotavirus antigen ELISA/Strip test/LFT	Agent	74	10	6
Rotavirus ELISA	Antibody	1	0	1
Rotavirus-A PCR	Agent	177	37	2
Rotavirus-B PCR	Agent	177	0	3
Rotavirus PCR	Agent	0	0	1

LFT Lateral flow test

RESPIRATORY DISEASE

Table 5: Results of virological testing for respiratory diseases between 1 Apr to 30 Jun 2024. CLs = contributing laboratories

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
EHV-2 PCR	Agent	15	3	2
EHV-5 PCR	Agent	15	2	2
Influenza HI (APHA)	Antibody	0	0	1
Influenza HI	Antibody	47	0	1
Influenza IFAT	Agent	1	0	1
Influenza LAMP	Agent	11	0	2
Influenza PCR (APHA)	Agent	31	0	1
Influenza PCR	Agent	437	13*	10
ERV-A/B CFT	Antibody	25	0	1
ERV PCR	Agent	0	0	1

EHV Equine herpes virus, HI Haemagglutination inhibition, LAMP loop mediated isothermal amplification, ERV Equine rhinitis virus, CFT Complement fixation test, IFAT immunofluorescent antibody test *Figures reported here may differ to the non-endemic diseases section due to EIDS not receiving details from the submitting veterinary practice or the owner requesting details not to be circulated

MULTIPLE/MISCELLANEOUS/NEUROLOGICAL DISEASES

Table 6: Results of virological testing for multiple/miscellaneous/neurological Diseases between 1 Apr to 30 Jun 2024. CLs = contributing laboratories

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
EHV-1 LAMP	Agent	10	0	2
EHV-1 PCR (APHA)	Agent	0	0	1
EHV-1 PCR	Agent	859	19	10
EHV-1 VI	Agent	0	0	1
EHV-4 LAMP	Agent	10	0	2
EHV-4 PCR	Agent	857	21	10
EHV-4 VI	Agent	0	0	1
EHV-1/-4 CFT (APHA)	Antibody	1	0	1
EHV-1/-4 CFT	Antibody	363	3	1
EHV-1/-4 IFAT - Ag	Agent	1	0	1
EHV-1/-4 PCR (APHA)	Agent	0	0	1
EHV-1 IFAT - Ag	Agent	5	0	1
EHV-8 PCR	Agent	0	0	1
EIA Coggins (APHA)	Antibody	6407	0	1
EIA Coggins	Antibody	38	0	4
EIA ELISA	Antibody	1877	0	9
Hepacivirus & parvovirus PCR	Agent	0	0	1
Hepacivirus PCR	Agent	17	1	1
Papilloma virus PCR	Agent	2	1	1
Parvovirus PCR	Agent	17	2	1
WNV IgG ELISA (APHA)	Antibody	0	0	1
WNV IgM ELISA (APHA)	Antibody	0	0	1
WNV PCR (APHA)	Agent	0	0	1

EHV Equine herpes virus, LAMP loop mediated isothermal amplification, VI Virus isolation, CFT Complement fixation test, IFAT immunofluorescent antibody test, EIA Equine infectious anaemia, WNV West Nile Virus

REPRODUCTIVE DISEASE

Table 7: Results of virological testing for reproductive diseases between 1 Apr to 30 Jun 2024. CLs = contributing laboratories

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
EHV-3 PCR	Agent	4	0	1
EHV-3 VI	Agent	0	0	1
EHV-3 VN	Antibody	2	0	1
EVA ELISA*	Antibody	6102	39	8
EVA PCR (APHA)	Agent	1	1**	1
EVA PCR	Agent	9	0	1
EVA VN (APHA)*	Antibody	319	4	1
EVA VN*	Antibody	89	36	3

EHV Equine herpes virus, VI Virus isolation, VN Virus neutralisation, EVA Equine viral arteritis, *Seropositives include vaccinated stallions

*** Positive semen sample is from the EVA case reported in April 2024 in Edinburgh, Scotland (ICC report www.equinesurveillance.org/jdata/icc/iccnotification/?refid=6447). Appropriate restrictions have been put in place on the animal to limit the risk of the disease spreading*

BACTERIOLOGY

A summary of the diagnostic bacteriology testing undertaken by different contributing laboratories is presented in Tables 8 to 11. The BEVA laboratory registering scheme is for the testing of CEM (*Taylorella equigenitalis*), *Klebsiella pneumoniae* and *Pseudomonas aeruginosa*. Granting and maintenance of approval depends on a laboratory achieving correct results in quality assurance tests and reporting data to this report. BEVA publishes a list of approved laboratories annually. Fifteen BEVA approved laboratories in the UK contributed data.

REPRODUCTIVE DISEASE

Table 8: Results of bacteriological testing for reproductive diseases between 1 Apr to 30 Jun 2024. CLs = contributing laboratories

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
CEM *Taylorella equigenitalis* PCR (BEVA)	Agent	2506	0	9
CEM *Taylorella equigenitalis/asinigenitalis* culture^ (BEVA)	Agent	4295	0	16
CEM *Taylorella equigenitalis* PCR (APHA)	Agent	47	0	1
CEM *Taylorella equigenitalis* culture (APHA)	Agent	701	0	1
CEM *Taylorella asinigenitalis* PCR	Agent	0	0	1
CEM *Taylorella asinigenitalis* culture	Agent	306	0	3
CEM *Taylorella asinigenitalis* PCR (APHA)	Agent	47	0	1
CEM *Taylorella asinigenitalis* culture (APHA)	Agent	701	0	1
Klebsiella pneumoniae capsule types 1 PCR	Agent	27	0	1
Klebsiella pneumoniae capsule types 2 PCR	Agent	27	0	1
Klebsiella pneumoniae capsule types 5 PCR	Agent	27	0	1
Klebsiella pneumoniae PCR (BEVA)	Agent	2506	51	10
Klebsiella pneumoniae culture (APHA)	Agent	87	2	1
Klebsiella pneumoniae culture (BEVA)	Agent	4313	30	16
Pseudomonas aeruginosa PCR (BEVA)	Agent	2506	9	9
Pseudomonas aeruginosa culture (APHA)	Agent	87	0	1
Pseudomonas aeruginosa culture (BEVA)	Agent	4313	19	16

CEM contagious equine metritis (*Taylorella equigenitalis*), ^*Taylorella asinigenitalis* and *Taylorella equigenitalis* are morphologically indistinguishable by culture and therefore if a sample is positive by culture, it should be screened for both species by multiplex PCR, BEVA British Equine Veterinary Association approved laboratories

RESPIRATORY DISEASE

Table 9: Results of bacteriological testing for respiratory diseases between 1 Apr to 30 Jun 2024. CLs = contributing laboratories

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
Streptococcus equi ELISA Antigen A/C (ISL)†	Antibody	4151	612	5
Streptococcus equi ELISA M-protein (IDVET)	Antibody	614	132	1
Streptococcus equi PCR	Agent	2083	84	10
Streptococcus equi LAMP	Agent	14	1	2
Streptococcus equi culture	Agent	605	13	10
Rhodococcus equi ELISA#	Antibody	10	7	1
Rhodococcus equi PCR	Agent	47	12	4
Rhodococcus equi culture	Agent	637	13	7
Streptococcus zooepidemicus PCR	Agent	360	105	5
Streptococcus zooepidemicus culture	Agent	172	54	5

†seropositivity may be attributed to disease exposure, infection or carrier states, #seropositives include exposure to the virulent form of *R. equi* or the presence of maternally derived antibodies, LAMP loop mediated isothermal amplification | The *S. equi* agent detection tests presented here are for individual tests, not individual horses. Therefore, they differ from the SES data presented in Table 2, which represents individual cases

MISCELLANEOUS DISEASE

Table 10: Results of miscellaneous bacteriological testing for respiratory and gastrointestinal diseases between 1 Apr to 30 Jun 2024. CLs = contributing laboratories

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
MRSA culture	Agent	864	4	9
Borrelia burgdorferi ELISA	Antibody	58	12	3
Borrelia burgdorferi PCR	Agent	0	0	1
Borrelia burgdorferi LFT	Antibody	0	0	1
Burkholderia mallei (Glanders) CFT (APHA)	Antibody	225	0	1
Leptospira MAT	Antibody	0	0	1
Leptospira PCR	Agent	4	1	1
Anaplasma ELISA	Antibody	58	13	3
Anaplasma PCR	Agent	0	0	2

MRSA methicillin resistant *Staphylococcus aureus,* LFT Lateral flow test, CFT Complement fixation test, MAT microagglutination testing antibody

GASTROINTESTINAL DISEASE

Table 11: Results of bacteriological testing for gastrointestinal diseases between 1 Apr to 30 Jun 2024. CLs = contributing laboratories

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
Campylobacter culture	Agent	54	10	6
Clostridium perfringens ELISA	Toxin	295	7	4
Clostridium perfringens LFT	Toxin	69	22	3
Clostridium perfringens PCR	Agent	52	5	2
Clostridium perfringens culture	Agent	0	0	1
Clostridium difficile ELISA	Toxin	233	25	4
Clostridium difficile LFT	Toxin	122	3	4
Clostridium difficile PCR	Agent	54	0	2
Clostridium difficile culture	Agent	0	0	1
Lawsonia intracellularis IPMA	Antibody	29	14	1
*Lawsonia intracellularis*** PCR	Agent	45	1	5
Salmonella typhimurium PCR	Agent	51	0	3
Salmonella typhimurum (APHA)	Agent	0	0	1
Salmonella typhimurium culture	Agent	63	0	8
Salmonella Other *spp*‡ PCR	Agent	188	6	7
Salmonella Other *spp*‡ (APHA)	Agent	14	14	1
Salmonella Other *spp* culture	Agent	541	12	10
Enterobacter culture	Agent	2470	136	7
E. coli culture	Agent	2534	323	8

LFT Lateral flow test, **identified using PCR applied to faeces, IPMA immunoperoxidase monolayer assay, ‡Under the Zoonoses Order 1989, it is a statutory requirement to report and serotype positive cases for *Salmonella spp*. A positive case may have repeat samples taken.

APHA *SALMONELLA* RESULTS

Fourteen samples were submitted this quarter to the Animal and Plant Health Agency (APHA) and all were positive for *Salmonella*. From the incidents involving isolates typed by the APHA, the serovars/phagetypes reported were *S. Concord* (4 isolates from one premises), *S. Enteritidis* PT3 (3 isolates), *S. Newport* (3 isolates from 2 premises), *S. Oslo* (3 isolates from one premises) and a single incident of *S. Fulica*.

S. Concord and *S. Newport* are often found in wildlife including badgers while *S. Oslo* appears to be circulating in equines. *S. Enteritidis* is a serotype of public health importance and may be found in humans and associated with poultry. This wide range of associations highlights the zoonotic potential of *Salmonella* infections which is particularly important in companion animals such as horses.

For more information from APHA about *Salmonella* in Great Britain, please see the 2022 *Salmonella* in animals and feed surveillance report https://www.gov.uk/government/publications/salmonella-in-animals-and-feed-in-great-britain

PARASITOLOGY

A summary of parasitology testing undertaken by contributing laboratories is presented in Tables 12 and 13.

ECTOPARASITES AND OTHER SKIN PATHOGENS

Table 12: Results of ectoparasitology testing between 1 Apr to 30 Jun 2024.
CLs = contributing laboratories

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
Mange *Sarcoptes scabiei*	Agent	272	0	11
Mange *Chorioptes spp*	Agent	274	2	12
Mange *Trombicula spp*	Agent	253	0	9
Mange *Demodex equi*	Agent	237	0	10
Mange other	Agent	0	0	1
Lice *Damalinia equi*	Agent	387	10	9
Lice *Haematopinus asini*	Agent	229	1	8
Ringworm PCR	Agent	68	7	5
Ringworm culture	Agent	74	6	9
Ringworm microscopy	Agent	323	50	11
Dermatophilosis culture	Agent	36	0	6
Dermatophilosis microscopy	Agent	89	11	5
Candida culture	Agent	74	2	5
Candida microscopy	Agent	2	0	2

Table 13: Results of endoparasitology testing between 1 Apr to 30 Jun 2024.
CLs = contributing laboratories

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
Ascarids faecal exam	Agent	43235	204	15
Strongyles (large/small) faecal exam	Agent	44287	10010	16
Strongyles ELISA	Antibody	0	0	1
Strongyloides faecal exam	Agent	43357	199	12
Tapeworm ELISA saliva	Antibody	10088	3140	2
Tapeworm ELISA serum	Antibody	825	284	2
Tapeworm faecal exam	Agent	41256	138	10
*Oxyuris equi f*aecal exam	Agent	38328	5	7
Oxyuris equi tape strip	Agent	314	24	9
Dictyocaulus arnfieldi baermanns	Agent	46	4	6
Fasciola hepatica serology	Antibody	0	0	1
Fasciola hepatica faecal exam	Agent	118	5	6
Fasciola hepatica sedimentation	Agent	46	2	4
Cryptosporida mZn	Agent	4	0	2
Cryptosporidia PCR	Agent	4	1	3
Cryptosporidia snap test	Agent	179	8	6
Cryptosporidia faecal exam	Agent	4	0	2
Giardia smear test	Agent	4	0	1
Giardia snap test	Agent	131	19	3
Coccidia faecal exam	Agent	2619	6	5

TOXICOSIS

A summary of diagnostic toxicosis testing undertaken by contributing laboratories is presented in Table 14. Results for toxicosis are based on histopathology or clinical signs.

Table 14: Results of toxicosis testing between 1 Apr to 30 Jun 2024.
CLs = contributing laboratories

Test	Samples tested (n)	Positive (n)	CLs (n)
Grass Sickness	29	13	2
Atypical myopathy/Seasonal Pasture Associated Myopathy	0	0	1
Hepatic Toxicosis - Ragwort	75	14	2
Hepatic Lipidosis	3	0	1
Hepatic Encephalopathy	7	5	1
Tetanus	0	0	1
Botulism	0	0	1

*Figures for EGS contained in the EGSF Report may differ to the number of cases reported here, which are laboratory reported cases only.

MISCELLANEOUS

A summary of miscellaneous testing undertaken by contributing laboratories is presented in Table 15.

Table 15: Results of miscellaneous testing between 1 Apr to 30 Jun 2024.
CLs = contributing laboratories

Test	Detection	Samples tested (n)	Positive (n)	CLs (n)
Babesia caballi CFT (APHA)	Antibody	17	0	1
Babesia caballi cELISA (APHA)	Antibody	226	0	1
Babesia caballi IFAT (APHA)	Antibody	260	0	1
Babesia caballi cELISA	Antibody	49	0	2
Babesia caballi IFAT	Antibody	0	0	1
Theileria equi CFT (APHA)	Antibody	17	0	1
Theileria equi cELISA (APHA)	Antibody	226	3	1
Theileria equi IFAT (APHA)	Antibody	263	7	1
Theileria equi cELISA	Antibody	49	2	2
Theileria equi IFAT	Antibody	0	0	1
Dourine CFT* (APHA)	Antibody	214	0	1
Dourine IFAT (APHA)	Antibody	4	0	1

*CFT suspect/positive samples are then tested by IFAT, CFT Complement fixation test, IFAT Immunofluorescent antibody test

LABORATORY REPORT END

UK *Post-Mortem* Examination Reports

Details about *post-mortem* examinations (PME) were reported by three UK Veterinary Schools and two other contributing laboratories. Data from each laboratory is organised by the laboratories' regional locations. There may be more than one laboratory reporting information for each region.

EAST & SOUTH EAST OF ENGLAND

ABORTION

A total of eight cases were reported:

Diagnosis	No. of cases	Comments
Umbilical cord torsions	3	Two with a 'probable' diagnostic level of certainty
Placentitis	2	One case with mild neutrophilic amnionitis and funisitis. One case with cervical pole placentitis and beta-haemolytic *Streptococci* isolated (from placenta and fetal lung tissue)
Mineralisation of the cervical pole	1	Probable early ischaemic necrosis
EHV-1	1	Positive by PCR
Congenital malformations	1	Omphalocoele, scoliosis and carpal contracture

INTRAPARTUM STILL BIRTH

Two cases were reported:

- One case had very mild cervical pole placentitis
- One case had very mild amnionitis

NEONATAL DEATH

One case was reported:

- One case with necrotising typhlocolitis and septicaemia, with embolic nephritis, adrenalitis and pneumonia. *Salmonella enteritidis* (Sub Genus I - Serogroup D1) isolated from liver, lung, kidney and intestinal contents

CARDIOVASCULAR

Two cases were reported:

- Two exercise-associated sudden deaths, presumed cardiac. One case had mild to locally moderate pulmonary haemorrhage
- Post-anaesthetic death: Mild mitral lymphocytic and eosinophilic valvulitis and myocarditis of uncertain significance

HEPATIC

Two cases were reported:

- One case with no definitive diagnosis was reported, with ancillary test results pending. A three-week-old foal presented with pyrexia, tachypnoea and mucocutaneous lesions, with haematological evidence of hepatic injury and leucopenia. PME revealed an enlarged, discoloured liver. Additionally, the case had mild adrenocortical medullary reddening, linear red striations within the renal cortices and patchy multifocal myocardial and endocardial pallor
- One case with marked hepatic fibrosis and biliary hyperplasia with mild megalocytosis and hepatic encephalopathy

MUSCULOSKELETAL

One case was reported:

- A distal metacarpal fracture

NEUROLOGICAL

Three cases were reported:

- One case with cranial trauma and subdural haemorrhage
- One case with severe acute mid brain haemorrhage and necrosis/infarction, likely associated with intra-arterial injection
- One case with a cervical spinal cord malformation (*investigations ongoing*)

RENAL

One case was reported:

- Suspected renal failure (*investigations ongoing*)

RESPIRATORY

Two cases were reported:

- One case with guttural pouch mycosis
- One case with severe interstitial pneumonia, with Rhodococcal abscessation

SUDDEN DEATH

Four cases were reported:

- Three separate cases of sudden death with inconclusive diagnoses. One case had moderate-marked chronic hepatic fibrosis with megalocytosis
- One case of unexpected death with acute diarrhoea and possible anaesthetic associated death (*investigations ongoing*)

WELFARE

Three case was reported:

- One case with chronic steatitis, hepatic megalocytosis, typhlocolitis (cyathostominosis and *Clostridium difficile* positive)
- One case with typhlocolitis, cyathostomes and serous fat atrophy (emaciation)
- One case with serous fat atrophy (emaciation) and steatitis, moderate cyathostominosis and verminous arteritis, dysphagia and mild (presumed) aspiration pneumonia

GASTROINTESTINAL

A total of 18 cases were reported:

Location	Diagnosis	No. of cases	Comments inc. additional PME findings
Stomach	Gastric rupture	1	Suspected to be secondary to gastric impaction. Also had peritonitis with serositis
	Gastric perforation	1	Found dead, gastric ulceration and perforation with peritonitis
Small intestine	Gastrosplenic ligament entrapment of the jejunum	1	Acute clinical deterioration post-surgery due to recurrent entrapment
	Idiopathic jejunal perforation and peritonitis	1	None
	Enteritis	1	Rotavirus positive. Also had aspiration pneumonia
	Strangulating lipoma (jejunum)	1	None
Large intestine	Strangulating lipoma with distal small colon volvulus	1	None
	360°C colonic volvulus	1	At the ileocaecocolic junction with associated displacement of the caecum
	Large ventral colon perforation	1	Marked fibrinous septic peritonitis. Large mass of fibrous tissue associated with the rupture suggested chronicity
	Caeco-colic intussusception	1	*Anoplocephala* spp. identified
	Typhlocolitis	1	With septicaemia and embolic nephritis and pneumonia. GI contents were *Salmonella* PCR positive, lung/kidney cultured *Actinobacillus* spp.
	Small colon perforation and peritonitis	1	Idiopathic
	Marked right dorsal colitis and peritonitis	1	No definitive aetiology

Location	Diagnosis	No. of cases	Comments inc. additional PME findings
Misc.	Equine Grass Sickness	3	None
	Lymphoplasmacytic enterotyphlocolitis	1	None
	Presumed traumatic body wall rupture	1	Intestinal herniation and haemoabdomen

WEST AND SOUTH WEST OF ENGLAND

No reports this quarter

SCOTLAND

CARDIOVASCULAR

One case was reported:

- One case of mild cardiomyopathy, that also had a haematoma on its left hindlimb, was reported

GASTROINTESTINAL

One case was reported:

- One case of equine grass sickness was reported, confirmed by histopathology

NEOPLASIA

One case was reported:

- One case was reported to have a sarcoid

NORTH WEST OF ENGLAND

GASTROINTESTINAL

One case was reported:

- One case had severe fibrinous peritonitis due to iatrogenic rupture of the uterus from sampling to investigate cause of endometritis. The case also had septicaemia, disseminated intravascular coagulation and multi-organ haemorrhage

CARDIOVASCULAR

Two cases were reported:

- One case was reported to have massive haemorrhage around the thoracic aorta and a suspected thoracic aortic rupture. Histopathological confirmation was pending at the time of reporting
- One case was reported to have severe pulmonary oedema and mild pericarditis that were likely to be likely a post-surgical complication from a gastric and duodenal impaction

MUSCULOSKELETAL

Two cases were reported:

- Two separate cases with skull fractures and concurrent massive subdural haemorrhage were reported

OTHER

Two cases were reported:

- Two separate cases of sepsis were investigated and both had multiorgan haemorrhages. One case died during foaling and was confirmed to have a *Streptococcus zooepidimicus* bacteriaemia. The other cases had an *Actinobacillus equi* bacteriaemia

NORTHERN IRELAND

ABORTION

One case was reported:

- For the single abortion case reported, following *post-mortem* examination, histopathology and additional testing, there were no abnormalities detected and no diagnosis was reached

NEONATAL DEATH

Four cases were reported:

- One case had a bacterial pneumonia and pleurisy, with *E. coli* cultured in a septicaemic pattern
- One case had necrotic enteritis with Clostridial toxins identified
- One case had omphalitis and peritonitis
- One case was confirmed to have died due to hypothermia

International Collating Centre

ICC 2024 Q2 SHORT REPORT

The International Collating Centre (ICC) Q2 2024 report has been circulated to subscribers. A short summary is presented below with the full version available online (https://equinesurveillance.org/iccview/resources/202402summ.pdf), countries are coded according to ISO 3166 international standard. The ICC provides almost daily email updates on national and international equine disease outbreaks, contact equinesurveillance@vet.cam.ac.uk to subscribe. Current and previous outbreak reports can be found online in an interactive platform www.equinesurveillance.org/iccview/.

ICC 2024 Q2

356 reports issued
averaging 6 reports per working day

RESPIRATORY CONDITIONS (209 reports)

EHV-1
(n=15)

BE FR DE NL ZA SE UK

EHV-2
(n=2)

BE

EHV-5
(n=3)

BE

EHV-4
(n= 34)

FR NL ZA SE UK

STRANGLES
(n= 110)

BE CA FR DE NL SE CH USA

EQUINE INFLUENZA
(n=14)

CA NL UK USA

RHODOCOCCUS EQUI
(n= 30)

FR NL

STRANGLES/INFLUENZA
(n= 1)

USA

GASTROINTESTINAL CONDITIONS (16 reports)

SALMONELLOSIS
(n= 7)

CA NL

RHODOCOCCUS EQUI
(n= 6)

FR

CORONAVIRUS
(n= 2)

CH

CLOSTRIDIAL ENTEROCOLITIS
(n= 1)

FR

REPRODUCTIVE CONDITIONS (27 reports)

EHV-1
(n= 14)

BE FR JP

NL SE UK

EHV-1/4
(n= 1)

BE

EHV-3
(n= 3)

FR

EHV-4
(n= 3)

BE FR

CEM
(n= 5)

DE USA

S. ZOOEPIDEMICUS
(n= 1)

BE

NEUROLOGICAL CONDITIONS (39 reports)

EHV-1
(n= 21)

BE CA DE SE

CH UK USA

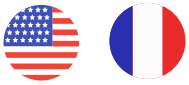
EEE
(n= 15)

USA EC

EEV
(n= 1)

ZA

WNV
(n= 2)



USA FR

MISCELLANEOUS CONDITIONS (65 reports)

ANAPLASMOSIS
(n= 2)

NL

EIA
(n= 7)

CA CL USA

EGS
(n= 48)

UK

CORONAVIRUS
(n= 3)

NL

AHS
(n= 1)

ZA

EVA
(n= 1)

UK

PIROPLASMOSIS
(n= 3)

NL ZA CH

International Collating Centre

The ICC continues to be a vital resource in the ongoing monitoring and management of equine health worldwide.

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- Agri-Food & Biosciences Institute of Northern Ireland
- Animal and Plant Health Agency
- Ashbrook Equine Hospital
- Austin Davis Biologics Ltd
- Axiom Veterinary Laboratories Ltd
- B&W Equine Group Ltd
- Biobest Laboratories Ltd
- BioTe
- The Donkey Sanctuary
- Donnington Grove Veterinary Group
- Hampden Veterinary Hospital
- The Horse Trust
- Idexx Laboratories
- Liphook Equine Hospital
- Nationwide Laboratories
- Newmarket Equine Hospital
- Rainbow Equine Hospital
- Rossdales Laboratories
- Royal Veterinary College
- Sussex Equine Hospital
- Three Counties Equine Hospital
- University of Bristol
- University of Cambridge
- University of Edinburgh
- University of Glasgow
- University of Liverpool
- Valley Equine Hospital
- VPG (Veterinary Pathology Group) Exeter
- VPG (Veterinary Pathology Group) Leeds
- Westgate Laboratories Ltd

All laboratories contributing to this report operate Quality Assurance schemes. These schemes differ between laboratories; however, all the contagious equine metritis testing reported was accredited by BEVA, with the exception of the APHA, which acts as the reference laboratory.

We are extremely grateful to the Horserace Betting Levy Board (HBLB), Racehorse Owners Association (ROA) and Thoroughbred Breeders' Association (TBA) for their continued combined contribution to Equine Infectious Disease Surveillance.

We welcome feedback including contributions on focus articles to the following address:

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