

Equine Infectious Disease Surveillance update

BHC meeting - 8 December 2023

Richard Newton

Equine Infectious Disease Surveillance
<https://equinesurveillance.org/>



UNIVERSITY OF
CAMBRIDGE

Department of Veterinary
Medicine



EIDS

**Equine Infectious
Disease Surveillance**

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BHA BRITISH
HORSERACING
AUTHORITY



ITBF

EIDS Equine Infectious Disease Surveillance



SURVEILLANCE REPORTS

Quarterly equine disease surveillance reports going back through 2004

[Reports »](#)



International
Collating Centre

INTERNATIONAL COLLATING CENTRE

Track international equine infectious disease reports

[ICC »](#)



EQUIFLUNET

EQUIFLUNET

Statistics of Equine Influenza outbreaks globally

[Equiflunet »](#)



TELL-TAIL ALERT SERVICE

Outbreak reports for vets, by text message, supported by Boehringer Ingelheim

[Sign up here »](#)



Equine Flu Scheme

HBLB FLU SCHEME

Horserace Betting Levy Board (HBLB) funded equine influenza surveillance scheme

[Flu Scheme »](#)



SURVEILLANCE OF EQUINE STRANGLES

UK diagnostic laboratory based surveillance network of positive diagnoses of strangles

[Go to website »](#)

EIDS – new team member



**ABIGAIL
MCGLENNON
BSC (HONS)**



Safeguarding equine
health with industry
collaboration and data
driven surveillance



EIDS – new team member



INTERNATIONAL COLLATING CENTRE
INTERIM NOTIFICATION

International
Collating Centre

Report date: 20 Nov 2023 **Reported by:** Axiom

United Kingdom - **Northumberland**

Influenza - **Respiratory**


Location of event



Leaflet | Tiles © Esri — Source: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2012

Description

On 20th November 2023, Axiom Veterinary Laboratories reported an outbreak of equine influenza with a co-infection of *Streptococcus zooepidemicus* in two animals: an unvaccinated 10-year-old Highland gelding and an unvaccinated three-year-old Irish Draught Cross gelding, the three-year-old had recently arrived on the premises in Northumberland. Clinical signs included: pyrexia, productive cough and mucopurulent nasal discharge. Positive diagnoses were confirmed on 15th November 2023, by PCR on nasopharyngeal swabs. There are two further animals on the premises, which are kept separately from this group.




Equine Infectious Disease Surveillance

UK Equine Herpes Virus Update
November 2023

UK Equine Herpes Virus Update - November 2023

FOUR CASES
of EHV-4 Respiratory

VACCINATION STATUS



● unvaccinated ● unknown

CLINICAL SIGNS*

- » Cough
- » Pyrexia
- » Lethargy
- » Lymphadenopathy
- » Nasal and/or ocular discharge


*Reported in one or more animal

HORSE INFORMATION

- » Two cases with *Streptococcus zooepidemicus* co-infection

BREED TYPE:
non-thoroughbreds

AGE RANGE:
6 months to 10 years
(median 2 years)



UK Equine Herpes Virus Update - November 2023

REGIONS AFFECTED


- » Gloucestershire
- » Lincolnshire
- » Stirling
- » Cheshire

PREMISES INFORMATION

FOUR PREMISES AFFECTED




HORSE MOVEMENTS REPORTED

- » new arrival to premises
- » horse movements on and off premises



EIDS
Equine Infectious Disease Surveillance

GENEROUSLY SUPPORTED BY:



R(O)A

CONTACT US:

- 01223 766496
- www.equinesurveillance.org
- equinesurveillance@vet.cam.ac.uk



Equine influenza in 2023

- 19 outbreaks reported
 - BUT 7 others not reported
- Florida clade 1 H₃N8

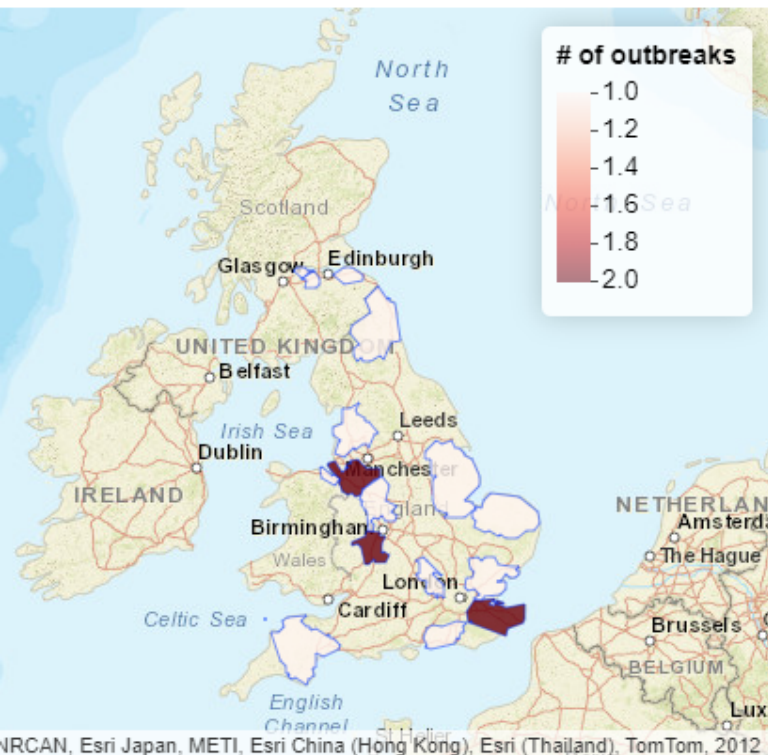
Run analysis



Select date range of interest

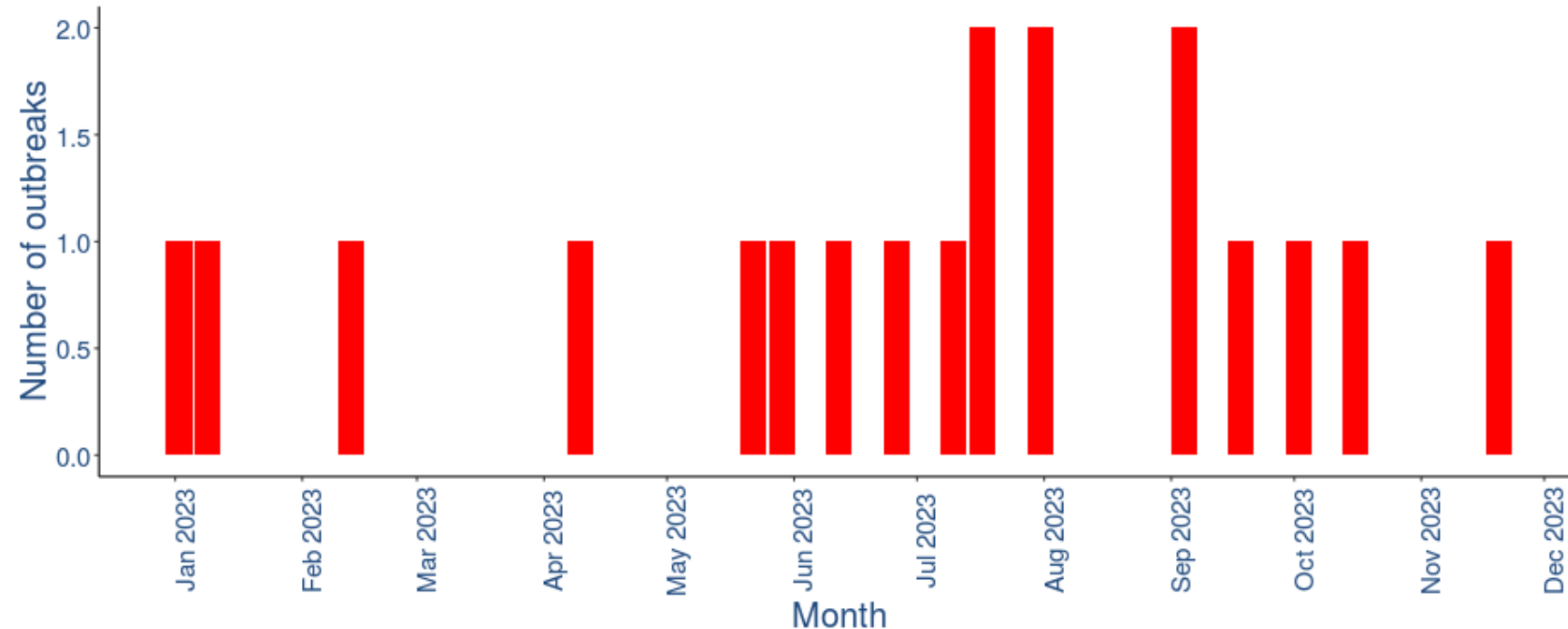
1 Jan 2023 to 20 Nov 2023

ports from that area



Outbreaks occur between 03 Jan 2023 and 20 Nov 2023 in selected period

UK Outbreak Curve





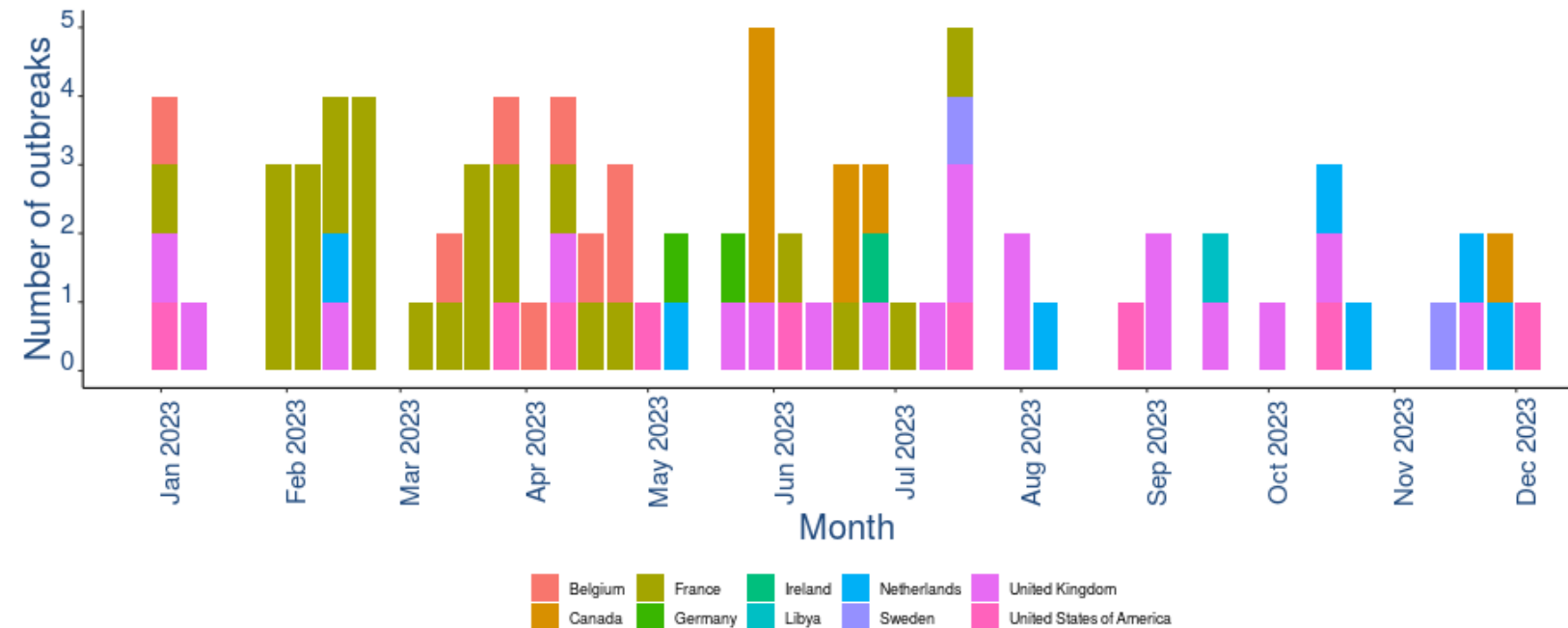
Equine influenza in 2023



Country	Total outbreaks
Belgium	8
Canada	8
France	27
Germany	2
Ireland	1
Libya	1
Netherlands	7
Sweden	2
United Kingdom	19
United States of America	9

Outbreaks occur between 02 Jan 2023 and 05 Dec 2023 in selected period

Global outbreak curve



EHV-1 neurological disease in 2023

equinesurveillance.org/iccview/ Relaunch to update



International Collating Centre



[Overview](#) [Period Report Tables - all diseases per country](#) [Disease analysis - Country-level](#) [Disease analysis - Region-level](#) [Country Level Reports - all diseases](#) [Resources and Archive](#)

Country and period based spatial depiction of outbreaks reported with detailed information per outbreak

Select Condition

- EHV-1 : Neurological
- EHV-1 : Reproductive
- EHV-1/4 : Respiratory
- EHV-1/Influenza : Respiratory
- EHV-1 : Neurological
- EHV-1 : Reproductive
- EHV-1 : Respiratory
- EHV-2 & 5 : Miscellaneous

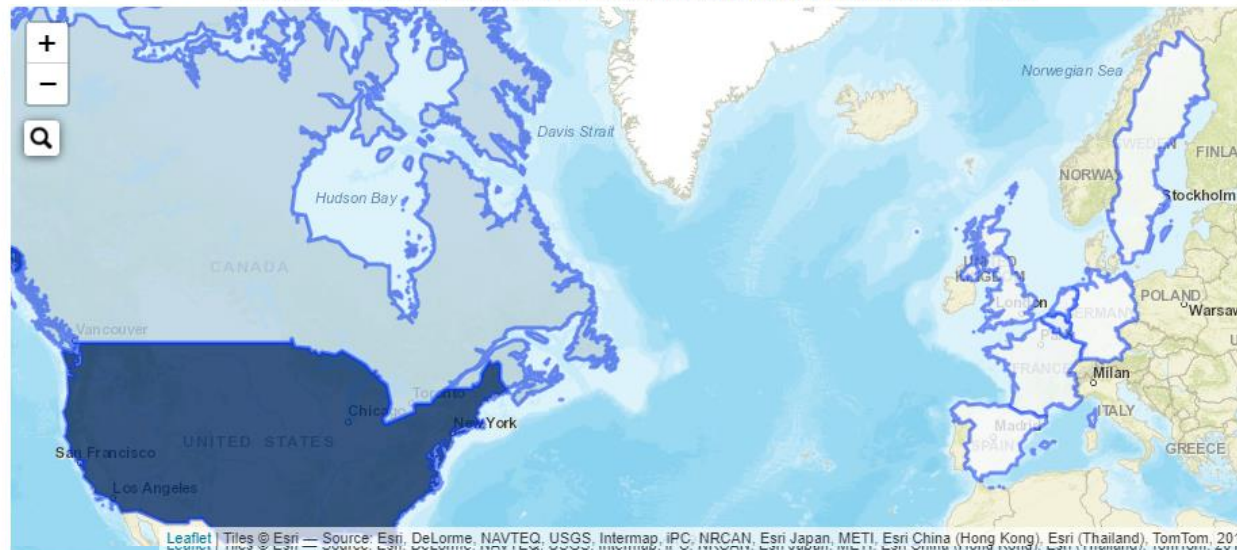
Select report date range of interest

1 Jan 2023 to 6 Dec 2023

Run Analysis



Click on an affected area for total outbreak count and outbreak information



Canada n=11

USA n=35

Belgium n=4 
France n=2
Germany n=1
Netherlands n=2
Spain n=1 
Sweden n=1

Strangles in 2023



Surveillance of
Equine Strangles



01 Jan 23 to 27 Nov 23

Chosen date range (data available from 05 Jan 15)



83

Total number of vet practices submitting samples

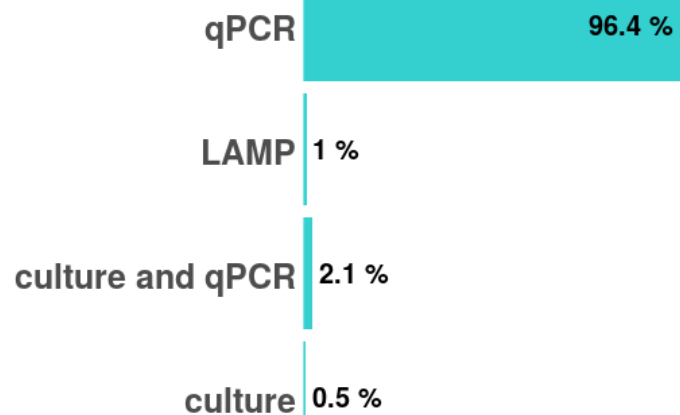


194

Total number of Strangles diagnoses reported

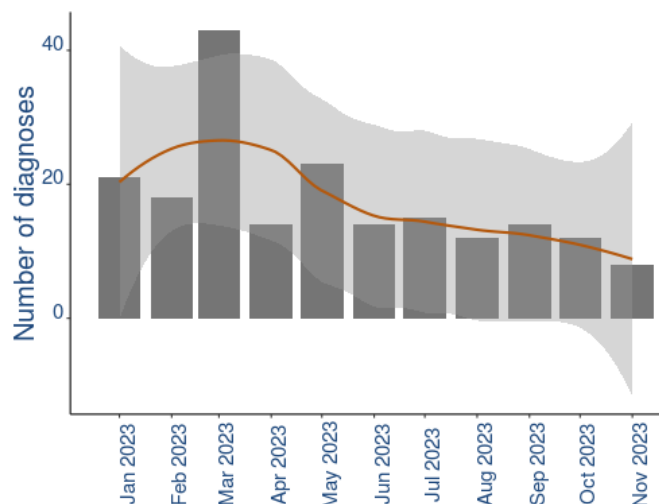


Type of diagnostics performed



Signalment

Diagnoses date curve



Most common samples taken

guttural pouch
wash- 58 %
Most common sample type

swab- 33 %
2nd most common sample type

guttural pouch gen- 54 %
Most common sample location

Breeds affected



Strangles in 2023

Home

Inputs

Select date range of interest

1 Jan 2023 to 27 Nov 2023

Update analysis

General

Locations

Clinical Signs



Surveillance of Equine Strangles



01 Jan 23 to 27 Nov 23
Chosen date range (data available from 05 Jan 15)

47
Total number of areas affected

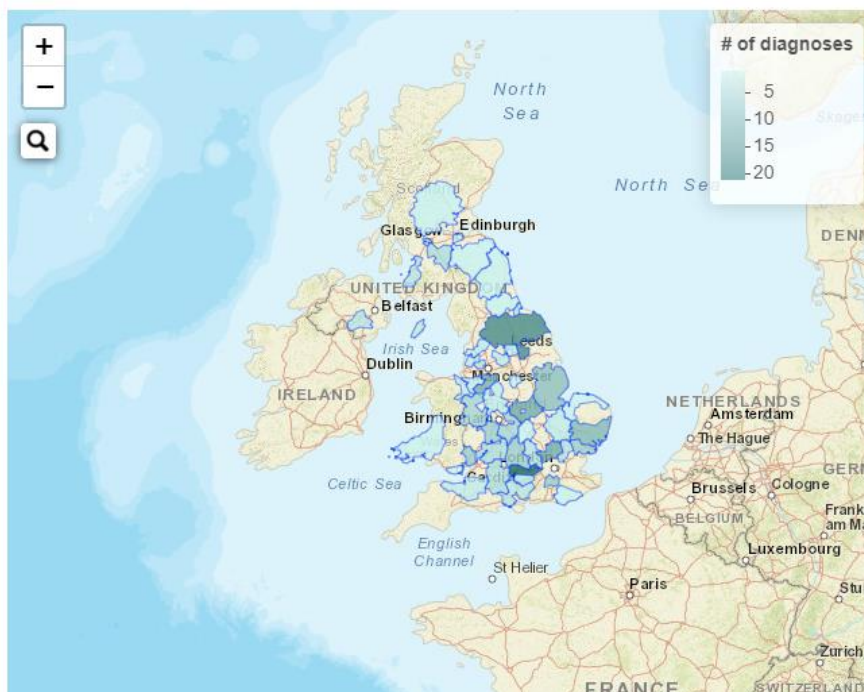
Berkshire- 11 %
Area with most reported diagnoses

21
Number of diagnoses reported from Berkshire

Most affected regions

Region	Diagnoses
Berkshire	21
North Yorkshire	16
Leicestershire and Rutland	11
Hertfordshire	11
Cheshire East	10
Suffolk	9
Lincolnshire	8
Worcestershire	6
Monmouthshire and Newport	6
Oxfordshire	6

Locations map



Affected region list

Show 10 entries Search:

Region	Total diagnoses	Vets reporting
Berkshire	21	3
North Yorkshire	16	2
Hertfordshire	11	3
Leicestershire and Rutland	11	4
Cheshire East	10	2
Suffolk	9	5
Lincolnshire	8	4
East Surrey	6	3
Essex Haven Gateway	6	1
Monmouthshire and Newport	6	1

Showing 1 to 10 of 47 entries Previous 1 2 3 4 5 Next

Strangles in 2023



01 Jan 23 to 27 Nov 23
Chosen date range (data available from 05 Jan 15)

420

Total diagnoses with clinical signs represented

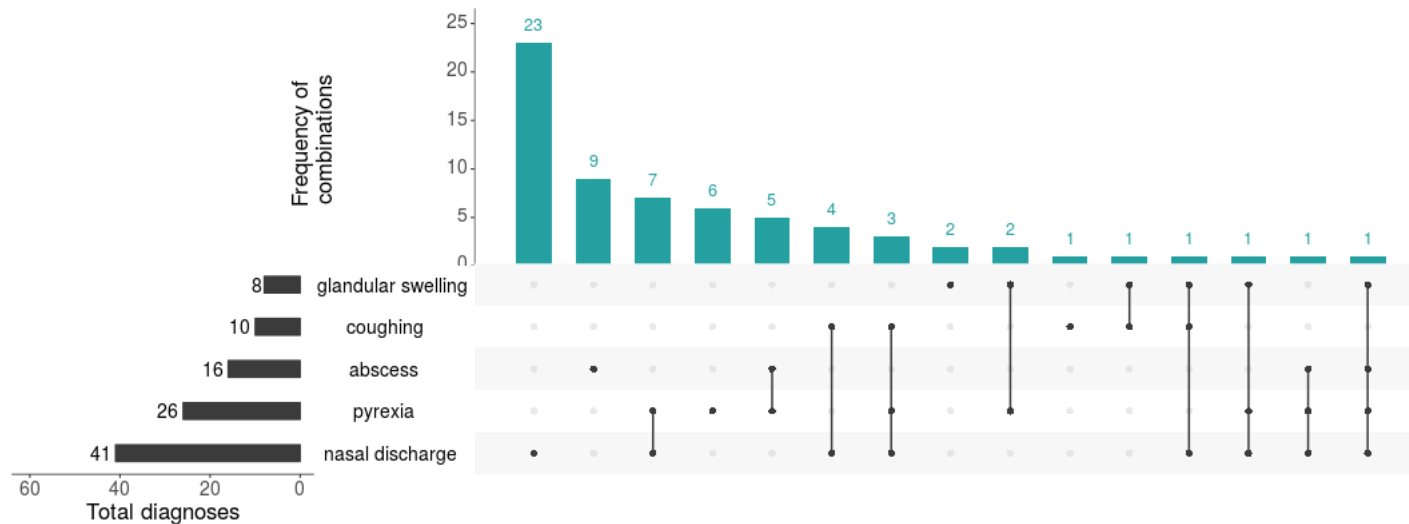
31 %

Percentage of diagnoses with clinical signs reported

nasal discharge- 10 %

Most commonly reported clinical sign

Clinical signs reported- alone and in combination



Evaluating this graphic

- This graph shows the clinical signs that have been reported for Strangles diagnoses
- Clinical signs are collated from all sampling events that each diagnosis is associated with (see home screen)
- The graph at the left shows the 5 clinical signs that are most frequently associated with diagnoses
- The graph on top shows the clinical signs that are reported together most often, with the linked dots below the graph indicating the associated combination
- Note that when one clinical sign is indicated in the top graph alone (i.e. no linking lines) this means that this clinical sign was reported alone and not in combination with any others for the diagnoses made
- For mobile users this graph is best viewed in landscape orientation

EIDS SES PhD research outputs on the way!



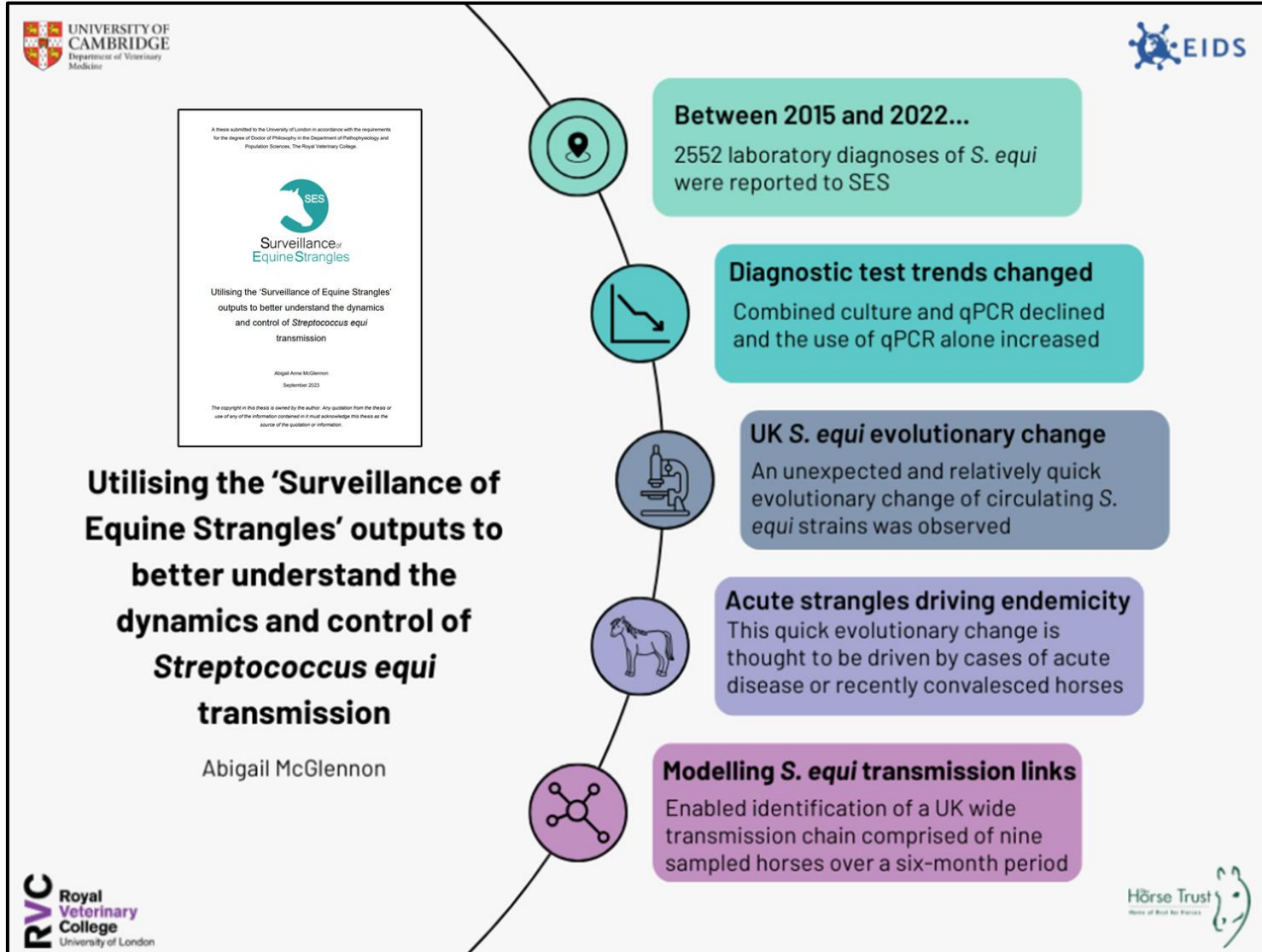
MEET THE TEAM

ABIGAIL
MCGLENNON



Meet our newest
Veterinary
Epidemiologist
joining EIDS

Find out more
www.equinesurveillance.org





Now for something more exotic!

Country and period based spatial depiction of outbreaks reported with detailed information per outbreak

WNV : Neurological

Select report date range of interest

1 Jan 2023

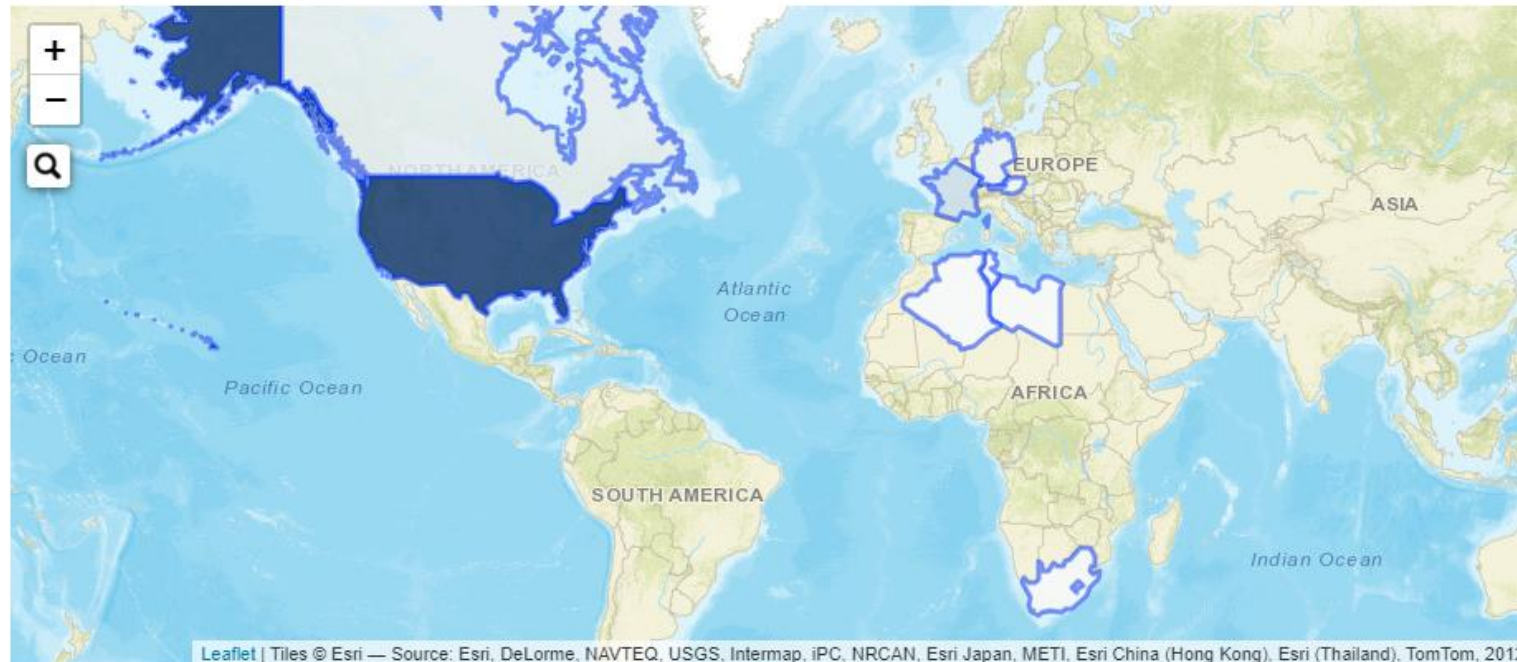
to

6 Dec 2023

Run Analysis



Click on an affected area for total outbreak count and outbreak information

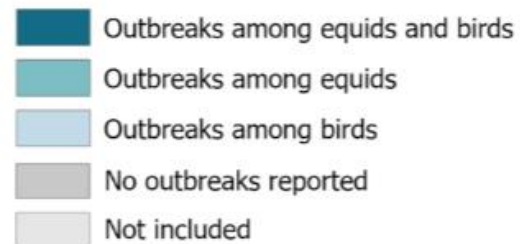


Leaflet | Tiles © Esri — Source: Esri, DeLorme, NAVTEQ, USGS, Intermap, IPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2012



WNV in Europe 2023

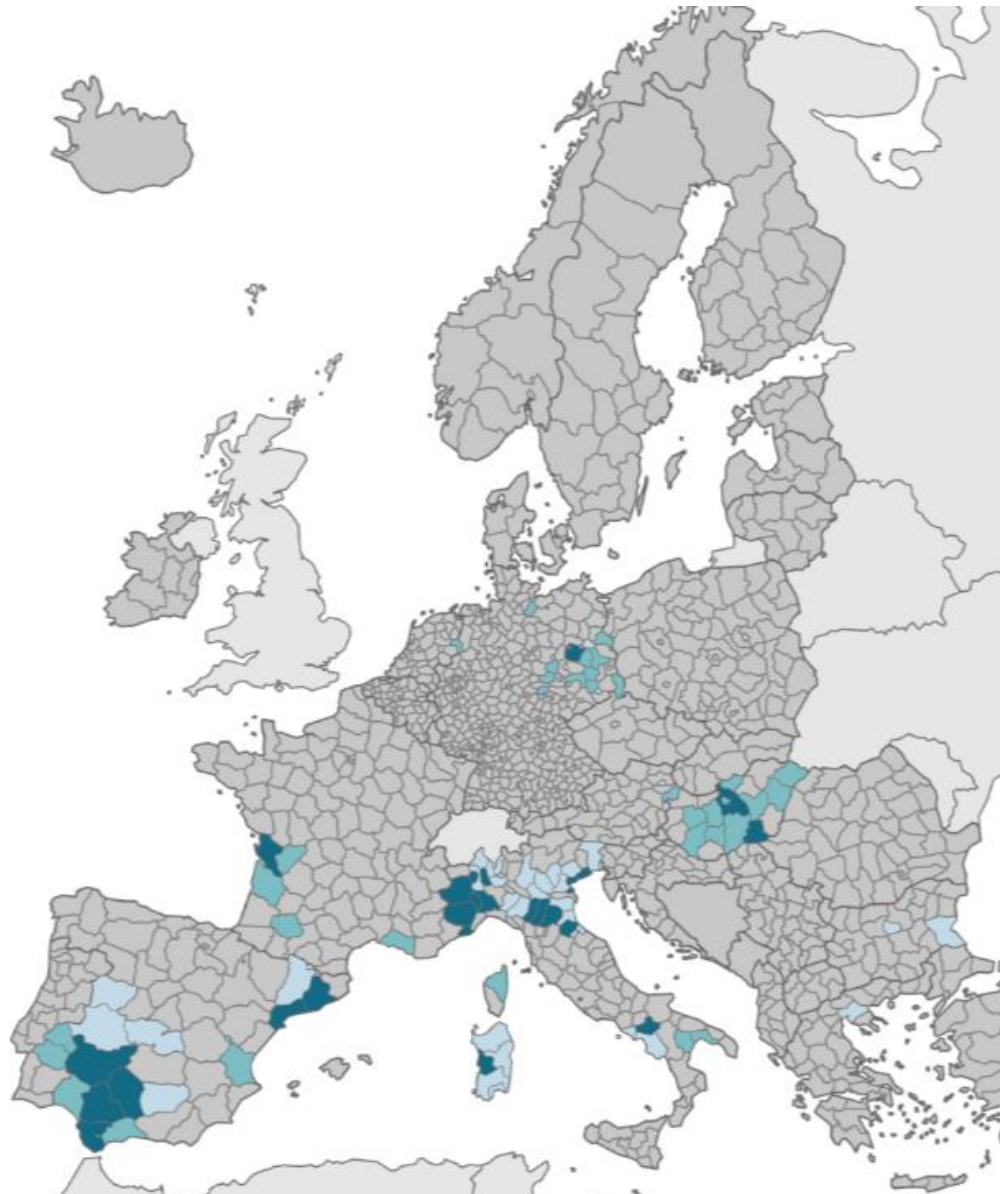
Distribution of animal West Nile virus infections in NUTS 3 or GAUL 1 regions of the EU/EEA and neighbouring countries during the 2023 season, as of 29 of November 2023



Countries not visible in the main map extent

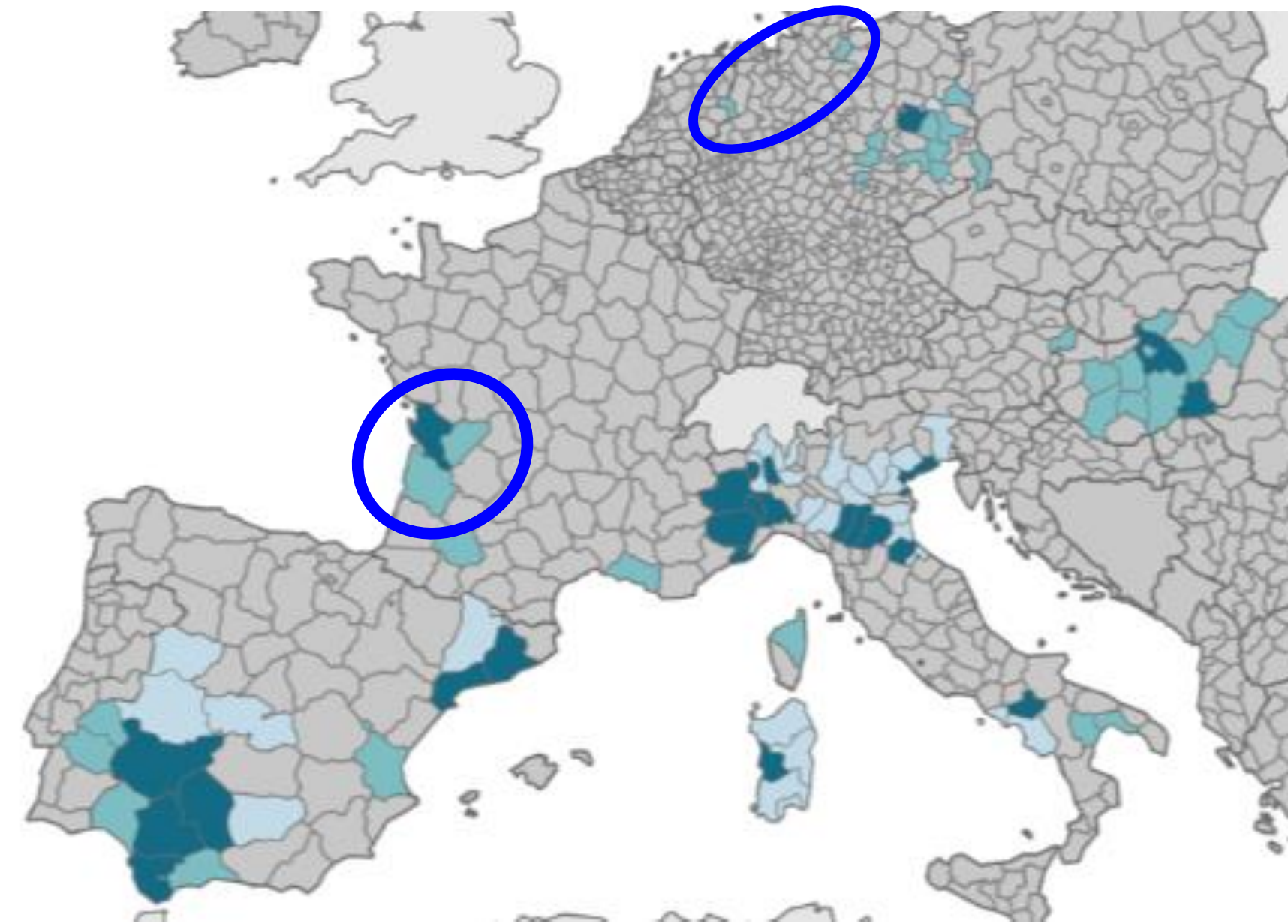


Map from
ECDC for WNV
in EU in 2023





WNV in Europe 2023





Equip Artervac – EVA vaccine

- Batch expired 29 March 2023
- Received from Zoetis - 31 Oct 2023

Zoetis UK Limited,
First floor,
Birchwood Building,
Springfield Drive,
Leatherhead
KT22 7LP

Telephone: 0345 300 8034

31st October 2023

zoetis

IMPORTANT INFORMATION REGARDING EQUIP® ARTERVAC

Supply of Equip® ARTERVAC

Supply of Equip® ARTERVAC

Unfortunately, we must inform you that there has been a further delay in the supply of Equip Artervac with availability now anticipated in October 2024.

We are working hard to resolve this situation and we are seeking advice from key industry organisations. We will communicate further in the coming weeks.

If you require further information, please speak to your Zoetis account manager or call Head Office on 0345 300 8034.

Yours sincerely,

Industry response

- Two online meetings organised by Zoetis – including Defra & Irish equivalent
- Looking at alternative products – VMD involved
- TBA member advisory
- Wider industry proposal
 - Decision tree drafted by EIDS



Preparation for the 2024 Breeding Season without Artervac Vaccines

We have been informed by Zoetis that production of Equip Artervac has been further delayed, until at least October 2024. Supplies of a Japanese inactivated vaccine are being explored, but it is recommended that plans for the 2024 Northern Hemisphere covering season are made on the basis that it will most likely not be available for use in Britain.

SCENARIOS

Two potential problems arise:

- 1 Seropositive stallions with a lapsed vaccination status need to demonstrate absence of EVA in their semen under the EVA Order 1995.
- 2 In the absence of a renewed EVA vaccination status, stallions will be more vulnerable, so enhanced measures to reduce the risk of infection may be required.

ACTIONS

- 1 Some less frequently vaccinated stallions may prove to be negative on their pre-breeding season blood test for EVA and will require no action.
- 2 Well vaccinated stallions should still be positive on blood test, and if they were blood sampled 14 – 47 days after their last Artervac was administered, as per previous advice, they should be able to demonstrate stable or declining titres when compared to their January 2024 blood sample, and will therefore meet Defra conditions.
- 3 Some vaccinated stallions were not blood tested as per previous guidance (i.e. they were not blood sampled 14 – 47 days after their last Artervac was administered) and will have to prove freedom from infection. One suggestion is for their first three mares covered next year to be blood tested for EVA to prove absence of infection.
- 4 Extra protective measures such as another EVA blood test for mares closer to covering may be necessary. The costs and consequences of such additional testing need to be considered, and dialogue with Zoetis on this matter is on-going.
- 5 The HBLB International Codes of Practice recommendations for EVA must be strictly adhered to, particularly in respect of imported mares and stallions.

All stallion owners and managers should review the vaccination history and status of each stallion and discuss plans for next season with their veterinary surgeon.

Obviously, standardisation of protocols for covering mares amongst the stallion studs would simplify the walking in process and associated communications to breeders across Britain. We would welcome any feedback or questions.

James Crowhurst and Richard Newton
November 2023



Wider industry proposal

Navigating the 2024 equine breeding season without Artervac EVA vaccine: proposal for a revised approach

IMPORTANT NOTE: This proposal only applies where stallions have been previously vaccinated with Equip Artervac (Zoetis) in full accordance with the datasheet, prior to lapsing due to non-availability of the product since 29 March 2023

While equine viral arteritis (EVA) is not currently believed to be present in the UK, it is endemic in several European countries and can be transmitted through respiratory, venereal, or indirect means. The Horserace Betting Levy Board (HBLB) International Codes of Practice (CoP) provide a useful overview on EVA (<https://codes.hblb.org.uk/index.php/page/30>) and outline the standards to which the breeding industry should operate to prevent, diagnose and control EVA, including the adoption of vaccination of stallions and teasers.

This document aims to explore a revised course of action for the equine breeding industry in light of the latest non-availability of Artervac EVA vaccine for use in stallions for the upcoming 2024 breeding season. In summary, there are two issues that need to be addressed:

- Seropositive stallions with lapsed vaccination records that under the EVA Order 1995 would require investigation to confirm that they are not positive for EAV in their semen, will need to be cleared as safe to breed.
- In the absence of Artervac, vaccine induced protection among stallions reduces over time resulting in increased vulnerability if exposed to the virus and so enhanced measures to reduce the risk of them contracting EVA should be adopted where feasible.

1. Providing clearance for seropositive lapsed vaccinated stallions

Figure 1 outlines a proposed decision tree to determine the appropriate course of action and associated laboratory tests to be applied to lapsed vaccinated stallions and teasers. The rationale behind these decisions is discussed below.

Some less frequently vaccinated stallions may have reverted to a seronegative status when tested serologically after 1st January 2024 and as such will be considered free from EAV and will require no further action.

Some well vaccinated stallions will be expected to remain seropositive for a prolonged period after the last Artervac vaccine dose and as such will need to demonstrate freedom from EAV exposure and/or viral shedding.

Some, mainly Thoroughbred stallions have serum samples stored that were taken several weeks after the last dose of Artervac was administered as per previous advice (see table).

These samples would have coincided with likely peak vaccination antibody levels, which in the absence of infectious challenge with EAV during the intervening period would be expected to decline or remain stable with time since vaccination (i.e. no seroconversion is evident). Absence of seroconversion on virus neutralisation (VN) antibody testing of these samples paired with routine pre-breeding samples taken in early 2024 would provide evidence for non-exposure to

EAV. The Department for Environment, Food and Rural Affairs (Defra) continues to be happy to endorse this approach as previously proposed.

Sampling status of stallions	No. of stallions
Sample taken between 14-47 days after the last dose of Artervac before its expiry date was reached, corresponding to a peak antibody response and so are eligible for paired testing to clear them when next blood sampled	74
Sample taken at least 150 days after the last dose of Artervac before its expiry date BUT for which there is no peak antibody response sample available	18
Sample taken at time of the last dose of Artervac before its expiry date BUT for which there is no peak antibody response sample available	1
No post-vaccination sampling conducted after last Artervac vaccination	Not known

Some vaccinated stallions have serum samples stored but these do not comply with the recommended peak antibody response sampling interval after last vaccination and so will **not** provide adequate assurance if subject to paired antibody testing. In addition, there are an unknown number of vaccinated stallions that do **not** have serum samples stored with which to show an absence of seroconversion. Therefore, alternative clearance criteria will need to be applied to stallions in these two groups if they test seropositive on pre-breeding samples taken in early 2024.

For stallions that are used for artificial insemination, there is the option to have their semen collected and tested by PCR to demonstrate freedom from EAV. However, this option is not so readily applicable for Thoroughbred stallions and others that are similarly not trained for semen collection.

As an alternative it is proposed that the first three seronegative mares covered by vaccinated seropositive stallions that have not been serologically cleared as above, be serologically tested several weeks after mating. Seronegative results in all three mares would confirm that there was no EAV semen shedding, which would be considered equivalent to a negative PCR test applied to semen.

2. Reducing EVA risks in the UK equine population

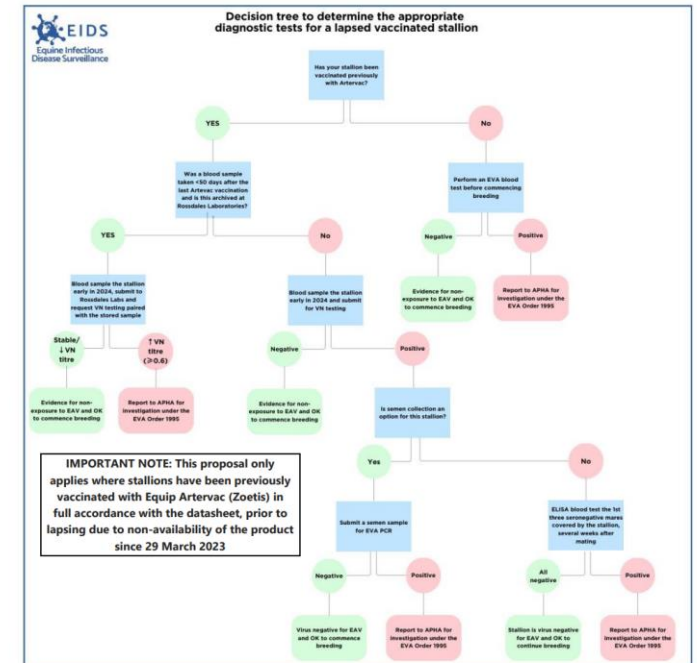
Availability of an alternative inactivated EVA vaccine is being investigated with the Japan Racing Association, which stockpiles around 5000 doses of a Japanese manufactured product for emergency use only. The vaccine is not otherwise commercially available and would require safety and efficacy assessment by the Veterinary Medicines Directorate before being available through a special import certificate.

The recommendations for prevention outlined in the HBLB International Code of Practice for EVA should be strictly adhered to, with particular caution with regard to imported mares and stallions, including Sports horse stallions and their use in artificial breeding practices.

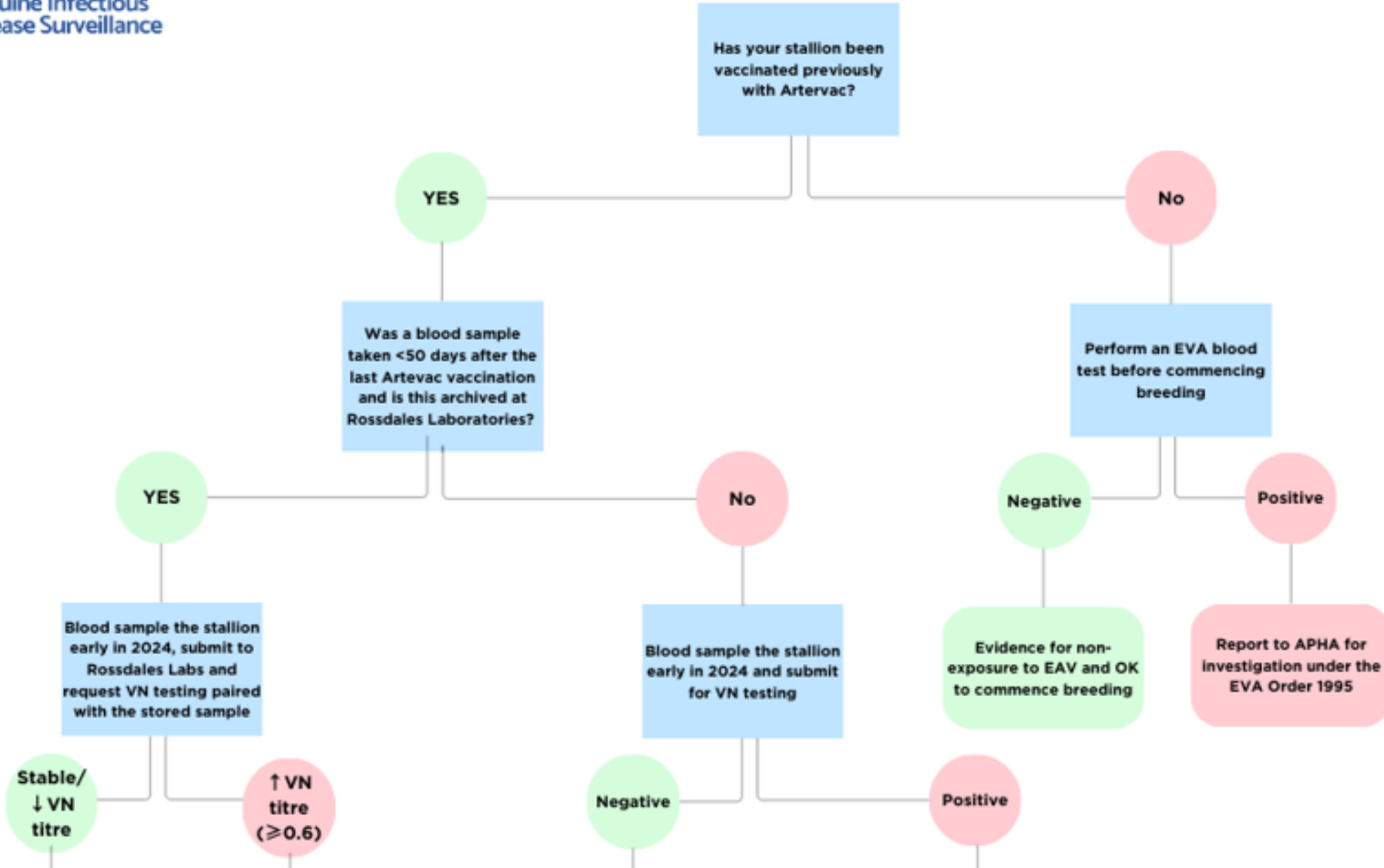
Consider introducing additional EVA pre-breeding serological testing of mares within a shorter interval before covering rather than on a single occasion soon after 1st January 2024 - the closer this further sampling is to covering provides the best (but not 100%) assurance that a stallion may not be exposed to a recently infected mare. Retaining the earlier serological testing of mares provides assurance at the population level that there was no EVA activity the previous breeding season. An alternative to an additional test closer to covering is to delay the post-January test to a pre-breeding serological test within a shorter interval before covering.

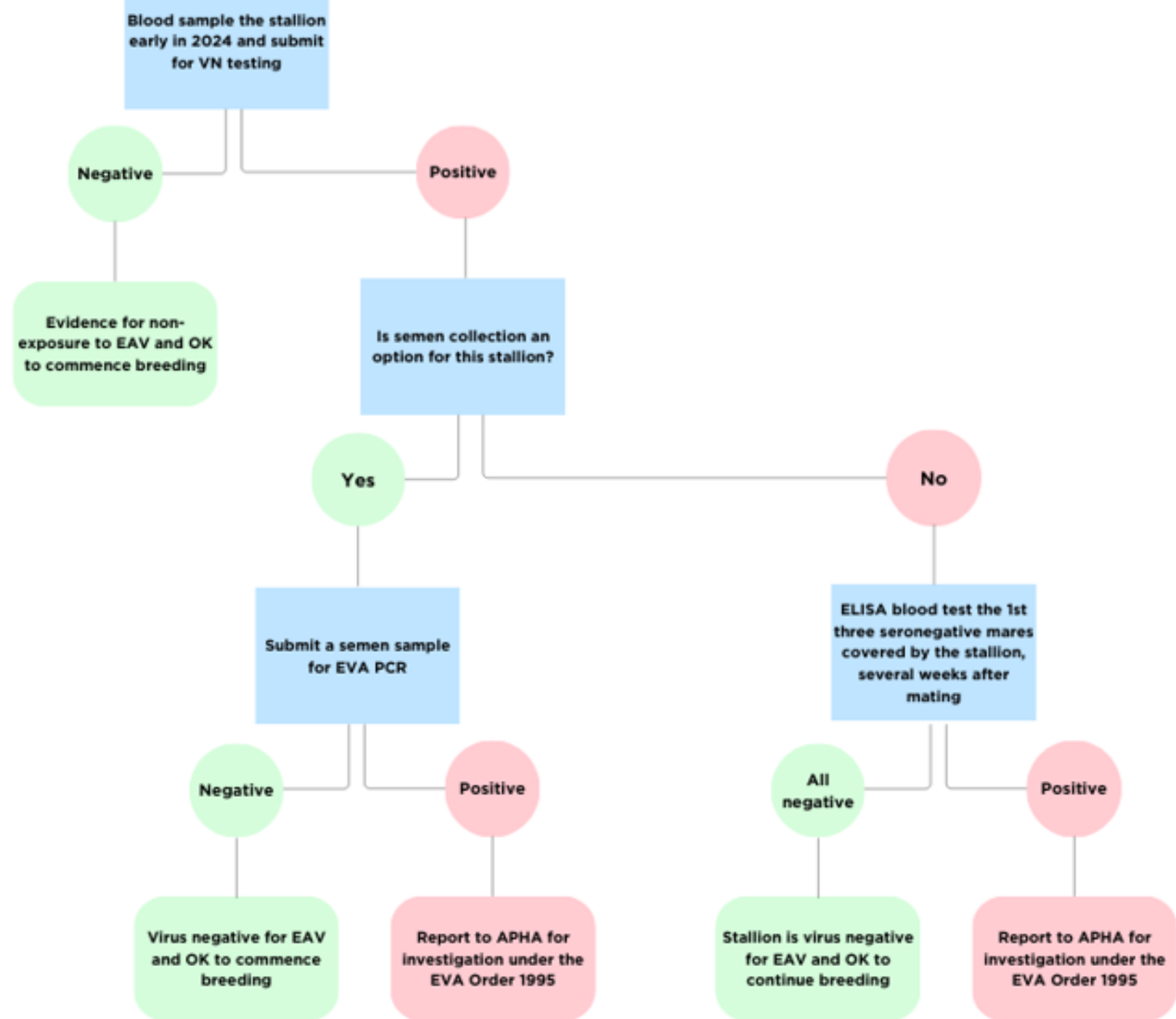
Consider introducing additional EVA post-breeding season testing of stallions, with samples paired with those collected pre-breeding after 1st January 2024 to confirm that there have been no seroconversions in the absence of Artervac vaccination.

Figure 1: Proposed decision tree to determine the appropriate course of action and associated diagnostic laboratory tests to be applied to lapsed vaccinated stallions and teaser



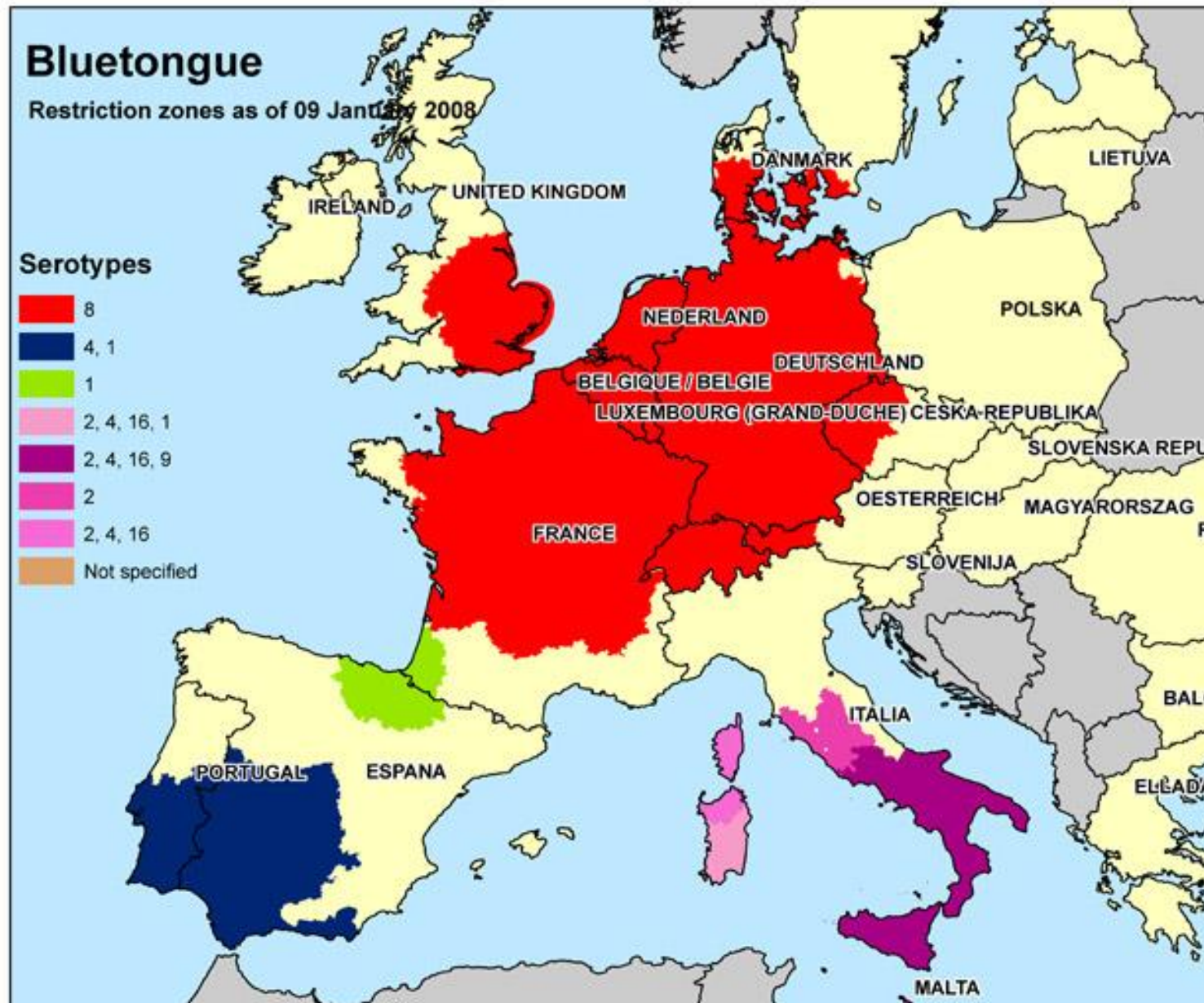
Decision tree to determine the appropriate diagnostic tests for a lapsed vaccinated stallion







And finally – remember this?





Department
for Environment
Food & Rural Affairs

www.defra.gov.uk

African Horse Sickness Control Strategy for Great Britain

December 2012

STATUTORY INSTRUMENTS

2012 No. 2629

ANIMALS, ENGLAND

ANIMAL HEALTH

The African Horse Sickness (England) Regulations 2012



CREATOR: RADAR Team, Defra

Date Created: 13 February 2008



EIDS BTV-3 detected in UK on 11 Nov 2023

Department for Environment, Food and Rural Affairs

Declaration of a (Bluetongue Virus) Temporary Control Zone near Canterbury, Canterbury, Kent (BTD 2023/01)

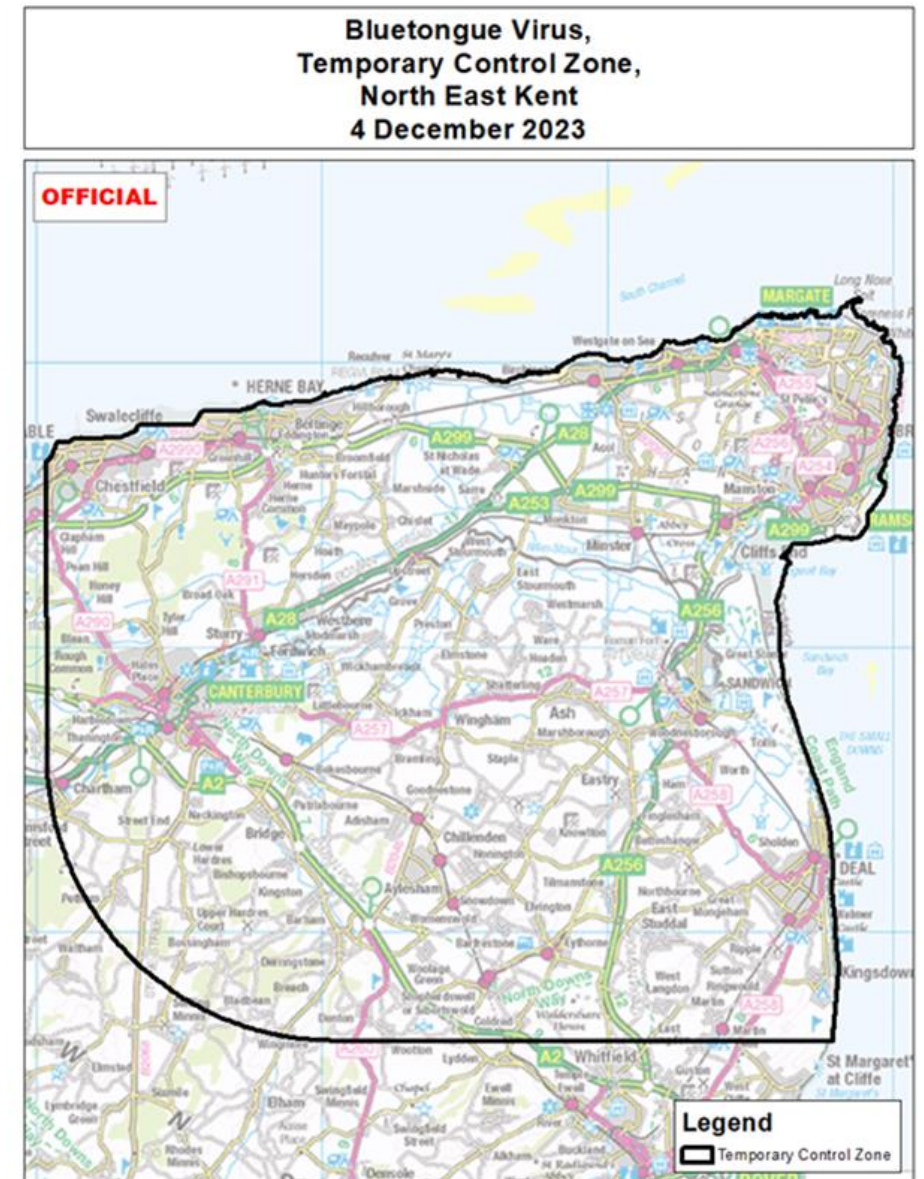
The Bluetongue Regulations 2008¹

- 1) Pursuant to Regulation 10 (1) of the Bluetongue Regulations 2008 the Secretary of State declares the area described in Annex 1 to be a Temporary Control Zone.
- 2) The measures set out in Annex 1 apply.
- 2) The Temporary Control Zone is marked on the map in Annex 2.
- 3) These measures apply from 12.00 on 11 November 2023 until this Declaration is withdrawn or amended by further written declaration.

Signed

Gordon Hickman

12.00 on 11 November 2023





Department for Environment, Food and Rural Affairs

Updated Outbreak Assessment #6

Bluetongue Virus Europe

29 September 2023

Disease report

On 5 September 2023, an immediate notification was made to WOA of BTV infections on 4 sheep farms in the Netherlands. This marks the first time since 2009 that the Netherlands has reported an outbreak of BTV. The serotype responsible for these outbreaks has since been confirmed as BTV-3 (WOAH 2023). The route of BTV-3 incursion into the Netherlands is currently unknown. By 29 September, a total of 416 outbreaks of BTV-3 have been reported by the Dutch Ministry of Agriculture, Nature and Food Quality (NVWA) (Figure 1).

On 21 September, the National Reference Laboratory for France reported more than [300 outbreaks of BTV-8](#) in Aveyron with at least one clinical case in the neighbouring departments of Lot, Lozère, Cantal and Tarn-et-Garonne. This virus appears to be an incursion of a new exotic strain of BTV-8, rather than a reassortment of existing endemic serotypes. Find further updates and changes to restriction zones for [Bluetongue across the European union](#) (European Commission 2023).





Department for Environment, Food and Rural Affairs

Updated Outbreak Assessment #6

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Latest situation



Update 7 December 2023

Following active surveillance in the temporary control zone (TCZ), a ninth case of bluetongue serotype 3 has been confirmed in a single sheep, on a mixed cattle and sheep farm in the existing TCZ. There is currently no evidence that there is circulating virus. Surveillance is ongoing.

Update 6 December 2023

Following active surveillance in the temporary control zone (TCZ), an eighth case of bluetongue serotype 3 in a cow has been confirmed. This animal is on a new premises located within the TCZ.

Update 5 December 2023

Following active surveillance, a seventh case of bluetongue serotype 3 has been confirmed. This animal was on the same premises as the sixth case announced on the 4 December and was, until recently, grazing on land outside the original temporary control zone (TCZ).

The animal will be humanely culled to reduce the risk of onward transmission.

Update 4 December 2023

Following active surveillance of premises linked to cases within the 10km temporary control zone (TCZ), a further case of bluetongue serotype 3 in cattle has been identified. This animal was, until recently, grazing on a premises outside the TCZ. This brings the total number of cases to 6. As a result, the [TCZ has been extended](#).

The animal will be humanely culled to reduce the risk of onward transmission.

The possibility for the windborne incursion of midges from affected areas currently represents the greatest risk to Great Britain and is monitored frequently, with a collaborative



Acknowledgements

THANKS TO ALL OUR SPONSORS AND SUPPORTERS



Llywodraeth Cymru
Welsh Government