



Virological Diagnoses for the Third Quarter of 2007

EHV-1 Abortion

Eight EHV associated abortions were identified in this quarter. Three of the abortions occurred in Thoroughbreds; the breeds of the other mares are unknown. EHV-1 was identified using PCR on foetal tissue in 4 of these cases. Virus isolation was also positive in 3 of the cases. EHV-4 was identified using PCR from the placenta in one case.

EHV-1 Neurological Disease

No cases of EHV associated neurological disease were reported in this quarter.

EHV-1 Respiratory Disease

Two cases of respiratory disease associated with EHV were identified this quarter. EHV-4 was isolated from a nasopharyngeal swab from a pony with pyrexia and signs of respiratory disease. Several in contact horses also had signs of respiratory disease but did not test positive by virus isolation. EHV-4 was isolated from a horse on a second yard. This animal was pyrexia. No other animals on the yard were affected.

EHV-3 Coital Exanthema

No cases of EHV-3 coital exanthema were identified in this quarter.

Equine Influenza

No cases of influenza were identified in this quarter.

Planning for African horse sickness in Europe: a workshop in South Africa

**Dr. James Wood BVetMed, BSc, MSc, DLSHTM, DipECVPH, MRCVS
Director, Cambridge Infectious Disease Consortium**

The dramatic and still unexplained arrival of Bluetongue serotype 8 in northern Europe in 2006 and its dramatic spread in 2007, including to the UK, raised the spectre of the virus' close relation, African horse sickness (AHS), both arriving and then being able to spread in the same region. The Horse Trust has been active in trying to increase awareness of AHS and has coordinated a working party in the UK to help establish contingency plans for the event of AHS arriving in the UK. Three members of The Horse Trust's AHS working party attended a workshop at the annual South African Equine Veterinary Association's congress that was dedicated to the discussion of the challenges that this virus poses. The workshop took place in February of this year. Speakers included workshop organiser, Professor Alan Guthrie, international AHS expert (University of Pretoria, Onderstepoort), Professor Jim MacLachlan (Washington State University), Dr Alf Fuessel (European Commission), Dr James Gilkerson (University of Melbourne), Professor Uli Wernery (Central Veterinary Research Laboratory, Dubai) and Dr Jules Minke (Merial). Attendees also included Tony Kettle (Dubai), Mauricio Lopez (defra), Lynn Hillyer (British Horseracing Authority), Dr Richard Newton (Animal Health Trust) and Dr James Wood (Cambridge University and BEVA). There were many other South African delegates, several of whom are also acknowledged experts in the field of AHS and who made significant contributions to the workshop.



Sessions at the workshop covered details of AHS control, vaccination and laboratory diagnosis. The discussions were far ranging, but the workshop was carefully organised and produced many useful conclusions. Some of the findings from the workshop are outlined below.

The control session identified that movement restrictions and vaccination are critically important in AHS control. Surveillance and animal movement restrictions imposed as part of control measures require sensitive and specific, validated diagnostic tests, along with detailed information of horse location and movement in each area. Detailed information about the distribution and movement of the equine population is currently unavailable for nearly all areas of the world, including the UK. There was a consensus at the workshop that depopulation of domestic horses is contraindicated in the face of AHS, especially during outbreaks when animal movement restrictions are imposed.

The vaccination session heard how modified live vaccines are used in many countries where AHS is endemic. Such vaccines are, however, unlikely to be used in Europe due to the reluctance of the international community to use products containing live virus. Most vaccines used in endemic regions are polyvalent as they need to protect against all the different serotypes of AHS present in these areas. Inactivated vaccines have been used effectively and safely, e.g. in Spain in 1990-1991, but they are unlikely to be used in endemic regions because of their greater cost. These vaccines also need to be produced in Biosafety Level 3 production facilities, such as at Pirbright.

Vaccination requires safe and efficacious vaccines. In particular there is a need for cheap, safe products that allow discrimination between vaccinated and infected animals; no suitable products are currently available. The ability to discriminate between vaccinated and unvaccinated animals would be of critical importance if AHS was ever to be eliminated from currently free regions that become affected. There is considerable interest in what new vaccine technologies, such as pox virus vectored vaccines, have to offer for AHS. It was agreed at the workshop that international collaboration would be essential if international vaccine banks or vaccine seed banks were ever to be established; the availability of such banks would hugely add to the control of the disease.

In the laboratory diagnosis session, it was agreed that there was an urgent need for the establishment and validation of an internationally accepted group specific RT-PCR that reacts with all currently conceivable AHS viruses. There was also consensus that there was a need for an international accepted group specific ELISA for surveillance and trade purposes with published validation data. It is essential that when such tests become available the reagents needed to conduct the tests are available internationally. It is also essential that a test strategy to allow surveillance in the presence of a vaccinated population is determined.

This workshop provided an invaluable resource for the members of the Horst Trust AHS working party and it has served to focus the subsequent discussions held by the group.