African horse sickness:
Maximising Equine Housing Vector Protection

Throughout this document, the term 'horse' will be used to refer to horse, pony, donkey, mule, zebra or hybrid. When the term 'equine' is used it refers to all horses, ponies, donkeys, mules, zebras or hybrids.

Housing horses in accommodation protected in the following way at times of peak midge activity will reduce the likelihood of midge attack but it is unlikely to fully protect your horse against African horse sickness (AHS). A combination of protection measures is recommended to ensure the highest possible degree of protection is achieved.

An equine housing unit which is able to provide maximum protection from insect vectors should be a building, ideally a compartment within a building, which should have no gaps in the construction greater than 1 mm in width. It should be sufficiently robust that the horses to be protected are not able to cause damage which would create a breach of vector protection. The facility must provide enough space, light, ventilation and other features necessary to safeguard the welfare of the horses and handlers throughout the period they are in the facility.

- Openings for light and ventilation must be provided including fan ventilation if necessary. Forced ventilation that provides a positive pressure compared to the exterior of the building or compartment significantly increases protection. All openings should be protected by filters or mesh with a maximum mesh size of 1.6mm². Mesh should be soaked or sprayed with insecticide before the facility is put into use and at intervals recommended in the manufacturer's instructions. See below for information on which insecticide would be appropriate to use.

- The facility should have a double door entry system. Each door should be fitted so that there is a gap around it of no more than 1mm or otherwise constructed to prevent midges getting through (e.g. draught proofing foam strips impregnated with insecticide). The space between the doors (the foyer) must be large enough to accommodate any person, horse or object likely to enter or leave the facility during the protection from vector attack period. The inner or the outer door should be closed at all times.

- In order to minimise traffic through the entrance, piped drinking water should be provided and enough feed and bedding should be stored within the unit to supply the horses throughout the complete period that protection from vector attack is required. If possible, storage for manure should also be provided within the facility.

- At least one ultraviolet insect trap should be positioned in the space between the two entry doors (i.e. in the foyer). At least one further trap should be positioned in the animal holding room but must be outside the reach of the animals. Both traps should be operational at all times during the protection from vector attack period and should be checked regularly for dead insects to ensure they are working. It is good practice to keep records of trap inspections. A period of darkness is required for effective trap operation. Ultraviolet insect traps should be turned on in the closed facility for several hours prior to the animals entering the foyer and the animal holding room.

- If possible locate the facility away from other animal housing and yards that are likely midge breeding sites. You should keep the area surrounding the animal accommodation as free of manure as possible and dispose of manure from the animal holding room well away from the building in order to minimize the likelihood of midges accidentally entering the building by being trapped on a person or in feed etc. It is recommended muck heaps are located more than 50 metres away from the facility.

- Before animals are placed in a vector protected facility, it should be cleaned and disinfected and treated with insecticide (see below), paying particular attention to cracks or joints in the construction where midges may enter or hide. The facility should be checked carefully to ensure that it is sealed and that any apertures are covered with mesh which is in a good state of repair and treated with insecticide. The UV insect traps should then be turned on.

- The animals should be treated with insecticide before they are introduced to the facility. Please see Defra guidance 'African horse sickness: Guidance on protection from vector attack' for information on appropriate use of insecticides (available at: http://www.defra.gov.uk/animalh/diseases/notifiable/africanhorse/index.htm).

- The animals must be checked regularly for signs of disease. Any signs of AHS or other notifiable disease must be reported immediately to the duty vet at your local Animal Health office. Information about your local Animal Health office is available at: http://www.defra.gov.uk/animalhealth.

- Movement of people and objects into and out of the facility should be kept to a minimum. When entering the facility, the outer door should be closed, clothing and exposed skin and hair should be brushed down, and the person should wait for at least 1 minute, standing near to the ultraviolet trap before opening the inner door. On leaving the facility, it is sufficient to ensure that the inner door is closed before opening the outer one. Both doors should remain securely closed at all other times. The outer door should be protected against access by unauthorised persons. The need to evacuate people and animals in the event of an emergency should also be considered. In addition to vector protection measures, a normal standard of biosecurity should be practised.

- If a horse is removed from the unit it should be taken through the double door system if possible. If this is not possible then precautions should be taken to avoid the entry of midges, for example through the spraying of insecticide and minimising the time that the door is open or through moving the animal when the temperature is below 5°C or during the middle of the day when vector activity is low.

- Every occasion when insecticide or any other veterinary treatment is undertaken should be recorded.

Guidance on insecticide treatment of buildings

- As described above, the inside of the vector-protected facility and the mesh used to cover openings in the facility (i.e. windows) should be treated with an insecticide spray. Insecticide products used should contain a synthetic pyrethroid and should be licensed by the Health and Safety Executive for use against flying insects. You must ensure the product is safe for use in animal housing.

- Insecticide treatment should not be performed more frequently than recommended by the manufacturer. More frequent use (or using at excessive levels) could lead to adverse health effects in horses and handlers and can cause serious environmental damage (i.e. increased risk of groundwater and surface water pollution) with no increased benefit.

***This document has been produced by Defra in conjunction with the Government/Horse Industry Working Group on African horse sickness*.**