Fact sheet for horse owners

Japanese encephalitis virus

Japanese encephalitis virus (JEV) is a mosquito-borne virus that mainly affects pigs, horses, and waterbirds. JEV is considered to be established on the Australian mainland, although the risks in any given area are likely to vary seasonally and between years depending on weather and other local factors.

About the virus

JEV is an arbovirus which means it is transmitted via bites from infected mosquitoes. There is no specific treatment for Japanese encephalitis (JE) in horses.

Mosquito bites spread the virus

The natural lifecycle of JEV is between waterbirds and mosquitoes, which may on occasion spill over to other animals. Waterbirds and pigs act as amplifying hosts, which means that they develop a level of virus in their blood that is high enough to infect more mosquitoes when they feed on infected animals.

Humans, horses, and other animals can also become infected through mosquito bites. Horses are known to be a ‘dead end host’ meaning that the level of virus circulating in infected horses’ blood is too low to reinfect mosquitoes.

Clinical signs to look for in horses

Many horses infected with the virus do not show any signs of illness. Most cases that do have clinical signs are mild and will recover within a short period of time, however some horses may develop severe encephalitis that can cause death.

Common clinical signs in horses include:

- elevated temperature (> 38.5°C)
- dullness or lethargy
- reduced appetite
- neurological signs such as incoordination, difficulty swallowing, impaired vision, wobbliness or hyperexcitability.

Horses infected with other arboviruses may also show similar clinical signs to infection with JEV. These include West Nile virus – Kunjin strain (WNV-KUN), Murray Valley encephalitis virus (MVEV) and Ross River virus (RRV) which are endemic to Australia. It is also important to be aware of the risk of Hendra virus, which may also present with similar clinical signs.

How you can minimise the risk of JE to your horses

Control mosquitoes on your property

Monitoring for mosquitoes at the various stages of their lifecycle helps to determine the most effective control methods. Key measures that will help reduce mosquito numbers on your property include:

- Inspecting bodies of water and containers for wrigglers, as well as areas where adult mosquitoes will rest, like ceilings and walls.
- Removing anything in the open that is filled with water or has the potential to hold water.
- Filling in potholes or other areas that collect water.
- Clearing debris from gutters, downpipes, and drains around buildings so that water doesn't pool.
- Trimming overhanging tree branches where mosquitoes may rest.
- Ensuring effluent drainage is free flowing, flushed regularly and does not pool.
- Sealing tanks, wells or other large water containers, or screening with 1mm mesh.

Horse owners should refer to the detailed guidelines provided at **www.farmbiosecurity.com.au**

Minimise horse exposure to mosquitoes

- use mosquito repellent or netting
- put a light summer or cotton rug on horses, a fly mask, and if the horse allows, apply a safe insect repellent (do not spray repellent around or above their eyes)
- use rugging and hooding with lightweight permethrin fabric to help protect horses not stabled overnight
- house horses during peak periods of mosquito activity (between dusk and dawn).

Reporting an animal suspected to have JE

JE is a notifiable disease in South Australia.

If you suspect JE (or any other notifiable disease) in your horses, please call your private veterinarian or the **Emergency Animal Disease Hotline on 1800 675 888.**

Your veterinarian can discuss subsidised testing with PIRSA. Laboratory testing to confirm JEV and other flavivirus in horses does take time, with results taking several weeks.

JE in people

Humans can also be infected with JEV. Most infections in people cause no symptoms. Some people experience a fever and headache, but severe cases may result in convulsions, disorientation, and coma. If you experience any symptoms, you should seek medical advice immediately.

People in contact with sick horses should also be aware of the risk of Hendra virus and other zoonotic infections. It is good practice to use protective equipment, including gloves and masks, while handling sick horses. Visit: **pir.sa.gov.au/hendra-virus**