



Japanese encephalitis virus

Information for Industry

Background

Japanese encephalitis virus (JEV) has been detected and confirmed in numerous piggeries in New South Wales, Victoria, Queensland and South Australia. Human cases of Japanese encephalitis have also been confirmed across these states. Sadly, a small number of cases have been fatal. For up-to-date information on the national JEV response and access to online resources for pig owners, please visit the [outbreak website](#).

Current situation in WA

Whilst JEV has not been detected in WA at this stage, it is important to demonstrate evidence of its absence, to maintain industry confidence and ensure business can continue as usual.

In the unlikely scenario that JEV is present in WA, it is critical to confirm its presence and define its distribution as quickly as possible. This will ensure appropriate measures can be put in place to minimise spread, reduce the potential for broader impacts on industry, and importantly, protect the health and safety of Western Australians, particularly those individuals with an occupational exposure to pigs and/or mosquitoes.

The Department of Health (WA Health) is currently working with the Department of Primary Industries and Regional Development (DPIRD) and an Industry Liaison Officer to undertake enhanced surveillance in WA. Industry support is now sought to assist in this process.

JEV transmission

The transmission cycle of JEV involves mosquitoes and animal hosts. Water birds and pigs are the most important animals as they grow (amplify) the virus to a high level. Humans and horses are considered dead-end hosts, which means they can be infected and develop clinical signs but cannot pass the virus back to a mosquito.

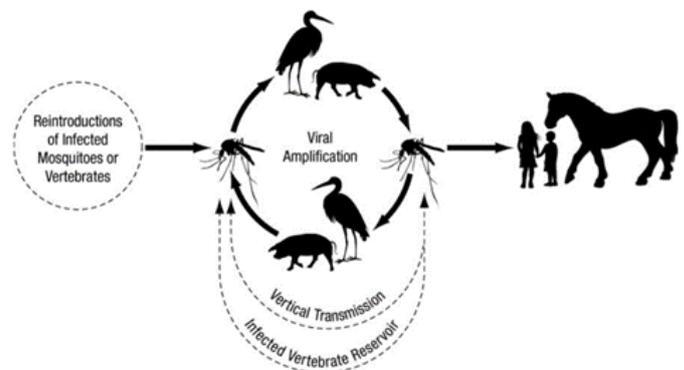
Once a mosquito bites an infected host animal, such as a pig or water bird, it becomes infected with the virus. After an incubation period of three to ten days within the mosquito, it can then pass the virus on to humans or other animals when it feeds next.

Transmission of JEV can also occur from pig to pig, through the transfer of semen from an infected animal or in some rarer cases, through oronasal secretions.

Visit [DPIRD's website](#) for more information on clinical signs in pigs and horses, and what to do if you suspect JEV infection in your animals.

Enhanced mosquito surveillance

Enhanced mosquito surveillance will improve the ability to detect JEV in WA, should it be introduced from another state/territory, or if it is already present at undetected levels. Surveillance efforts will focus on environments in and around piggeries, and at wetlands where waterbirds are located, given the involvement of both animals in JEV transmission.



How can industry help?

Piggery operators are advised of the need for field officers from WA Health and local government to set mosquito traps in close proximity to piggeries for the purposes of enhanced surveillance. It is WA Health's preference to advise piggery operators (by phone) when we will be trapping mosquitoes near their premises. This will also provide an opportunity for piggery operators to ask specific questions about surveillance activities or seek advice about mosquito management.

To maximise the effectiveness of surveillance efforts, industry support is also being requested to allow on-property mosquito trapping. In consultation with piggery operators, field officers can set the mosquito traps at a time that is appropriate to the operational needs of the piggery. Alternatively, piggery workers can be trained in the simple operation of mosquito traps, to maintain biosecurity controls.

Working with industry, enhanced mosquito surveillance will play a key role in:

- Demonstrating evidence of absence of JEV, instilling confidence within industry.
- Identifying the species and numbers of mosquitoes on/around a piggery. This will help to determine the potential risk of JEV transmission associated with a piggery.
- Determining whether mosquito management activities on/around the piggery are required to minimise the likelihood of JEV transmission being established.
- Facilitating the detection of JEV in WA at the earliest possible time, ensuring appropriate management and controls measures are in place to minimise the overall impact on industry and human health.

To ensure you are advised prior to mosquito trapping being undertaken in proximity to your piggery, or to express interest in on-property mosquito trapping, please provide your contact details to:

Jan Cooper (WAPPA) | DPIRD Industry Liaison Officer
Email: admin@wappa.com.au | Ph: (08) 9208 0330 | Mobile: 0417 963 153

Preparing your piggery

The most effective way to prepare for the possibility that JEV may be introduced into WA, and to reduce the likelihood that pigs and industry workers will be infected, will be to minimise mosquitoes on a property. It is important that an assessment of on-site mosquito breeding and mosquito management is undertaken now, rather than waiting for JEV to be detected within the State.

If JEV is already present at undetected levels, the need to undertake mosquito management is even more critical, as it will prevent the cycle of JEV transmission being established. The following resources provide useful information on mosquito management, specific to piggeries:

- [Controlling Mosquitoes Around Piggeries](#)
- [Integrated Mosquito Management Principles for Piggeries](#)

Non-chemical control methods are often very effective and can be undertaken by piggery operators immediately. There are a range of chemical larvicide products that are also safe and effective to use, from a chemical residue and environmental perspective. However, it is recommended that you seek professional advice from a licensed pest control operator or a local government environmental health officer before undertaking chemical control.

Protecting your workers

Protecting individuals working in and around piggeries will also be an important occupational health and safety consideration. While symptoms of infection are rare, they include sudden onset of headache, high fever, vomiting and confusion. Severe disease can result in permanent neurological complications or death.

[Preventing mosquito bites](#) will be an important measure to avoid JEV infection. Piggery managers are encouraged to promote individual practices to ensure workers can avoid mosquito bites.

WA Health is currently sourcing additional JEV vaccine supplies and planning the timing of a vaccine roll out to priority groups in WA. Further information on vaccination will be provided in the near future.