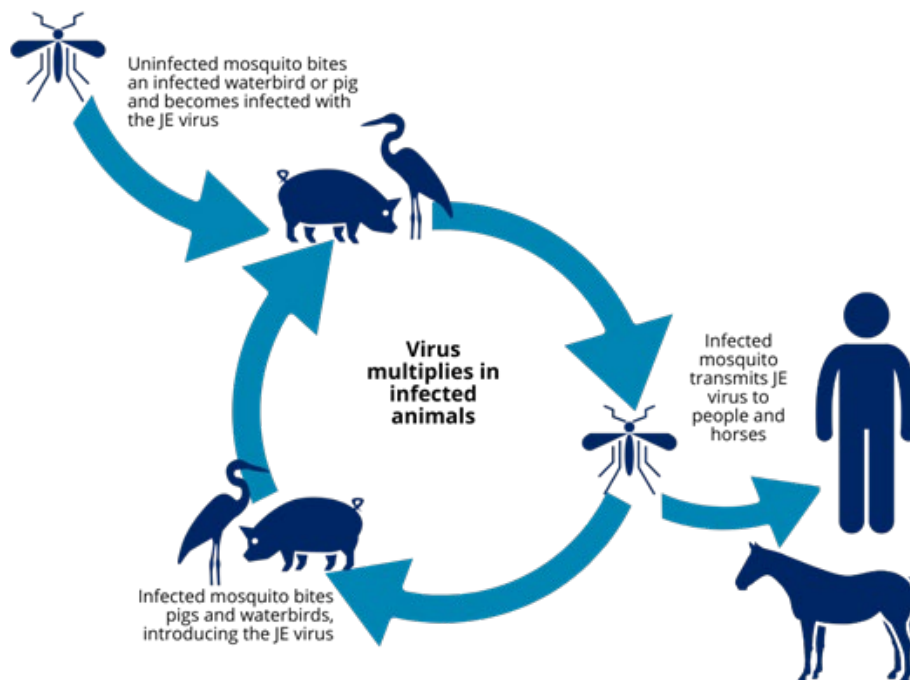


# Japanese encephalitis (JE) in pigs

Information for pig owners and producers

Japanese encephalitis is an acute mosquito-borne viral disease that can cause reproductive losses and encephalitis in susceptible species. The infection occurs in pigs and horses and can also rarely cause disease in other animals and people.

Animals and people become infected through the bite of infected mosquitoes. The disease is maintained and spreads between mosquitoes, some wild and domestic birds, and pigs (Figure 1).



**Figure 1. Japanese encephalitis disease virus transmission pathway**

## Japanese encephalitis (JE) in NSW

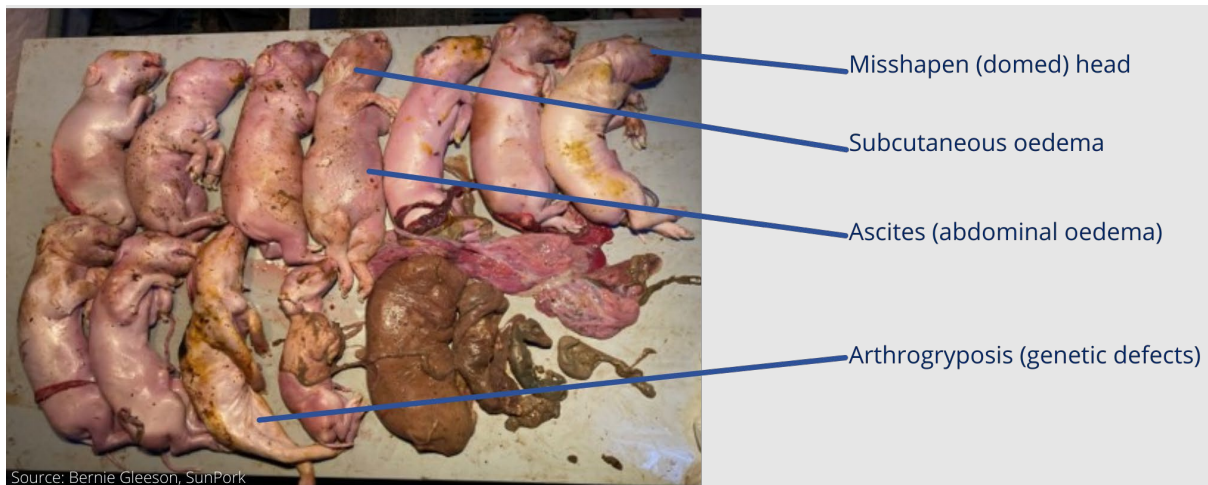
NSW Department of Primary Industries and the Australian Centre for Disease Preparedness (ACDP) have confirmed the presence of Japanese encephalitis virus in samples from several commercial pig properties. The detection of the virus was confirmed by PCR (polymerase chain reaction) on Saturday, 26 February after ruling out other likely viral causes. It has also been confirmed by whole genomic sequencing by ACDP on samples from one NSW property.

## What to look for in pigs

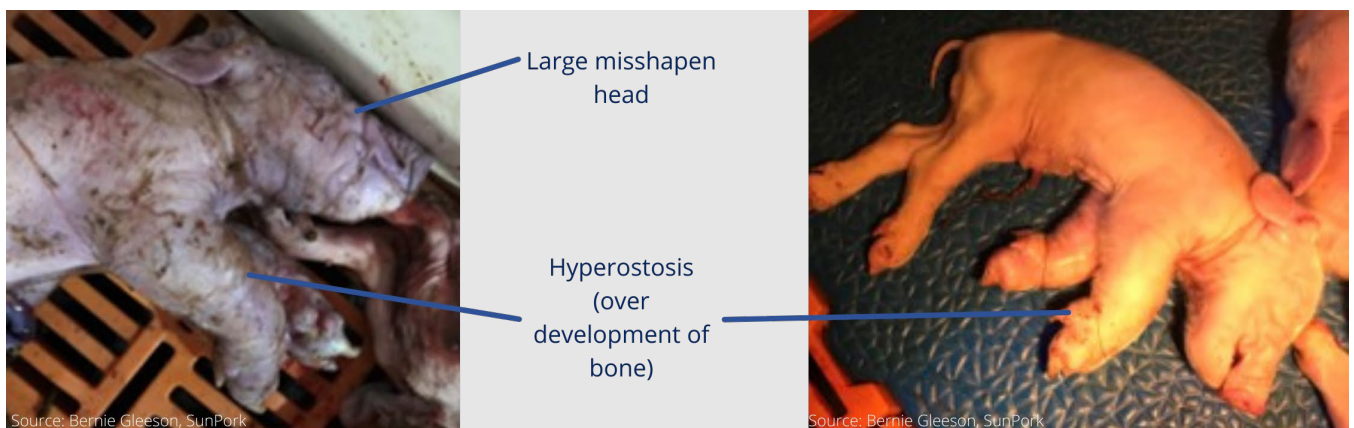
In pigs, clinical signs include:

- Mummified and stillborn or weak piglets, some with neurological signs (Figures 2-4).
- In a naïve population, litters from sows and gilts would be expected to be equally affected.
- Piglets infected after birth can develop:
  - Encephalitis which presents as paddling or other neurological signs in the first six months of life
  - Wasting, depression or hindlimb paralysis that may be seen in suckling piglets and weaners.

Adult sows do not typically show overt signs of disease. If boars are present on farm, they may experience infertility and oedematous, and congested testicles.



**Figure 2. Clinical signs of JE in a litter induced, 7 days over-term. Source: Bernie Gleeson, SunPork Farms**



**Figures 3 and 4. Clinical signs of JE in piglets. Source: Bernie Gleeson, SunPork Farms**

## Disease spread

- Vectors – Australia has a number of mosquito species that are capable of transmitting the virus. This is the main route by which people and other animals become infected.
- Pig-to-pig contact – pigs rarely transmit JE directly, through oral or nasal routes. There are no reported cases of humans being infected from direct contact with live pigs.
- Semen and embryos – there are reports of transmission of infection via artificial insemination or embryo transfer, but this is not an important route of transmission.
- JE virus does not survive for long in the environment and windborne spread of the virus is not reported.

## Who to call?

If you observe unusual signs of disease, behaviour or death consistent with JEV, contact your Local Land Services District Veterinarian (DV) or the **Emergency Animal Disease Watch Hotline on 1800 675 888** for assistance or advice.

## What to do while you're waiting for laboratory results

- Monitor the health of your pigs and report any unusual signs of disease, behaviour or death to the EAD Hotline, immediately.
- Undertake vector control where possible
- Manage human contact with mosquitos by limiting outdoor activities at prime feeding times (from dusk to dawn)
- Wear appropriate clothing and repellents, particularly when working in areas with increased mosquito burdens and around livestock. If you have any concerns about your health, seek immediate medical attention.

## Situational update

### Pig movements:

- Live pigs off infected premises (including direct to slaughter and property to property) – movements will be risk-assessed, based on the location of the receiving abattoir and the risk of spread and establishment of Japanese encephalitis virus into new areas, undertaken in conjunction with NSW Health. Refer to [NSW DPI](#) for updates on pig movement requirements.
- Semen movement - movements of semen onto infected premises may be allowed under the conditions of the individual biosecurity direction. Movements of semen off infected premises will be risk assessed and mitigations applied prior to approval.

## Managing mosquito risks

With significant mosquito populations across the state, it is essential to take additional precautions and protect yourself, your people and pigs from mosquitos.

### Protecting you and your people:

- Undertake vector control where possible and manage human contact with mosquitos by limiting outdoor activities at prime feeding times (from dusk to dawn)
- Wear appropriate clothing and repellents, particularly when working in areas with increased mosquito burdens and around livestock.
- For additional information, refer to [NSW Health](#)
  - [Japanese encephalitis factsheet](#)
  - [Mosquitoes are a health hazard – Communicable diseases factsheet](#)
  - [Mosquito bite avoidance factsheet](#)

## Protecting your pigs:

- Treat or remove potential mosquito breeding sites through spraying
  - Spray or fog your sheds regularly with a handheld or commercial spray unit with approved insecticide (further information for insecticides for use on livestock available via the [Australian Pesticides and Veterinary Medicines Authority](#))
  - Disperse approved mosquito larvicides over water bodies close to sheds, that cannot be drained
- Remove water lying around sheds and roads
- Remove weeds and mow long grass

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