# A newsletter for **pork producers**

# **PigBytes – Special Edition**

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### Japanese encephalitis in pigs

#### Nicole Schembri

Japanese encephalitis is a 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.

Japanese encephalitis was detected in pigs from late February 2022, in regions of Queensland, New South Wales, Victoria and South Australia.

### What to look for in pigs

In pigs, clinical signs include:

- Abortion, mummified foetuses, stillborn or weak piglets, some with neurological signs (Figures 1-3).
- 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, oedematous (swollen), and congested testicles.

### **Remember:**

If you observe unusual signs of disease, behaviour or death consistent with JEV, contact your private veterinarian, regional government veterinarian or the **Emergency Animal Disease Watch Hotline on 1800 675 888** for assistance or advice.



 Figure 1 (above) and 2 (below). Clinical signs of JE

 piglets. Source: Bernie Gleeson, SunPork Farms

 Large misshapen head



Ongoing management of JE risks Japanese encephalitis remains a notifiable disease in Australia. This means all owners or managers of pigs, whether they are kept for production or companionship, have a responsibility to manage the risk of an animal disease introduction and spread on their property. Owners or managers of one or more pigs must continue to report all suspicion of Japanese encephalitis if they are seeing signs of the disease in their pigs.

All suspect cases of Japanese encephalitis must continue to be immediately reported to the **Emergency Animal Disease Watch Hotline on 1800 675 888.** 

#### For more information

Check with your Department of Primary Industries of Agriculture for more information on JE in your state:

- Department of Agriculture, Water and the Environment <u>https://www.outbreak.gov.au/current-</u> <u>responses-to-outbreaks/japanese-</u> <u>encephalitis</u>
- Biosecurity Queensland <u>https://www.business.qld.gov.au/industries/f</u> <u>arms-fishing-</u> <u>forestry/agriculture/livestock/animal-</u> <u>welfare/pests-diseases-disorders/japanese-</u> <u>encephalitis</u>
- NSW DPI <u>https://www.dpi.nsw.gov.au/biosecurity/anim</u> <u>al/info-vets/japanese-encephalitis</u>
- Agriculture Victoria <u>https://agriculture.vic.gov.au/biosecurity/ani</u> <u>mal-diseases/general-livestock-</u> <u>diseases/japanese-encephalitis</u>
- PIR SA <u>https://www.pir.sa.gov.au/emergency\_manag</u> <u>ement/mosquito\_virus\_in\_pigs\_and\_horses\_j</u> <u>apanese\_encephalitis\_virus</u>

# Managing mosquito risks around piggeries

### Nicole Schembri

The best way to protect your pigs is by developing and implementing an integrated mosquito management plan. This requires targeting all stages of the mosquito life cycle (Fig 3) to break the breeding cycle and can be incorporated into your farm biosecurity management plan.

The best time to start preparing your mosquito management plan is during the cooler months while the mosquito burden is at its lowest and you can make provisions for the upcoming season. All pig owners or managers are responsible for developing and actioning a mosquito management plan, based on environmental and operational factors to control mosquitoes and manage the risk of JE for, pigs and/or horses and public health management.



Figure 3. Mosquito life cycle, mosquito control and timing for maximum impact Adapted from Mosquito Life Cycle, CDC, 2020

Effective mosquito management on-farm includes:

- Monitoring larval and adult mosquito numbers to know when to take action
  - Inspect water bodies and water-filled containers for wrigglers and check facilities for resting adult mosquitoes (e.g. ceilings, walls). If mosquitoes remain abundant, consider additional mosquito control.

- Environmental management to reduce the number of breeding and resting sites
  - For example, fill potholes, remove standing water from containers, and ensure drains are free flowing
- Applying larvicide control in large bodies of water OUTSIDE OF SHEDS
- Applying adulticide control, such as residual spraying and fogging OUTSIDE OF SHEDS
- Maintaining chemical and mosquito control records

For more information on mosquito management around piggeries, refer to the following resources on the Farm Biosecurity website:

- Integrated mosquito management principles
   for piggeries and
- <u>Controlling mosquitoes around</u>
   <u>piggeries</u> guide

For organic operations, mosquito management will include monitoring and environmental controls.

#### NOTE:

- ALWAYS use chemicals STRICTLY as per the product label
- SEEK PROFESSIONAL ADVICE if you are unsure about how to use a chemical
- CHEMICAL RESIDUES IN PORK ARE A TRADE AND FOOD QUALITY RISK
- MISUSE OF CHEMICALS CAN CREATE ENVIRONMENTAL RISKS TO BEES, WILDLIFE, AQUATIC LIFE AND PEOPLE

## Foot and mouth disease detection in the Pacific

Regina Fogarty

In May 2022, an outbreak of foot-and-mouth disease (FMD) was reported in in Indonesia. Cases were first detected in April, and in July 2022 the disease was reported in Bali.

Foot-and-mouth disease (FMD) is a serious and highly contagious animal disease that affects all

cloven-hoofed animals including pigs as well as cattle, sheep, goats, camelids, and deer.

An outbreak of FMD in Australia is most likely to be caused by:

- The illegal importation of products contaminated with FMD virus
- The feeding of food contaminated with FMD virus to pigs.

Preventing these illegal activities is the best way to prevent an outbreak of FMD in Australia.

Australia's quarantine laws and border surveillance restrict the importation of FMDsusceptible animals and products, including salted and cured meats.

To help keep Australia FMD-free, travellers entering Australia must declare:

- All food, plant material and animal products to ensure they are free from pests and diseases
- If they have visited a farm while overseas.

You can help keep FMD out of Australia by sharing this information with any international travellers you know and ensuring family and friends know not to send parcels containing items that may pose a biosecurity risk to Australia.

All Australian states and territories have laws against supplying and feeding prohibited feed to pigs. This applies to all pigs, including pet pigs and pigs owned by hobby farmers. Significant penalties apply for supplying or feeding prohibited feed to pigs.

You can help prevent FMD by informing any pig owners you know about the risks of feeding prohibited feed to pigs.

### **FMD transmission**

FMD spreads rapidly between animals and virus is excreted in breath and all excretions and secretions including saliva, mucus, milk, faeces, urine and semen. Infected animals can excrete the virus for up to four days before clinical signs appear.

Animals can become infected through:

- 1. Ingestion of contaminated matter, or
- 2. Inhalation (aerosol spread), or
- 3. Direct contact with other infected animals.

Pigs could "ingest" the FMD virus through intentional or accidental feeding of Prohibited Pig Feed (PPF), also known as swill feeding. PPF or swill feeding, is the feeding of food products that contain or have had contact with meat or meat products to pigs. If the meat and meat products were to be contaminated with the FMD virus, this could result in this disease being introduced into Australia.

FMD virus can also be spread:

- On hair, grass, or straw
- By the wind
- By fomites mud or manure sticking to footwear, clothing, equipment or vehicle tyres.

Pigs are 'amplifying hosts' of FMD because they can excrete very large quantities of the virus in their exhaled breath.

Human Health and Food Safety

- FMD does not pose a food safety concern, it is not transmitted to humans by eating affected meat.
- FMD is not the same disease as hand, foot and mouth disease which is common in young children

### Important biosecurity practices to protect your property

- Apply biosecurity controls to ensure that people with access to livestock and equipment cannot accidently spread disease
- Regular cleaning and disinfection of livestock pens, buildings, vehicles and equipment (check the disinfectant instructions to ensure exposure time is correct)
- Monitor and report any illness in your herd
- Only buy animals from properties which have good biosecurity and disease control practices
- Isolate (quarantine) new animals before introducing them into existing herds
- Dispose of manure and animals which have died from disease appropriately

For more information about FMD in your state, please refer to:

• Department of Agriculture, Water and the Environment https://www.awe.gov.au/biosecuritytrade/pests-diseases-weeds/animal/fmd

- Biosecurity Queensland https://www.business.qld.gov.au/industries/fa rms-fishingforestry/agriculture/livestock/animalwelfare/pests-diseases-disorders/foot-mouth
- NSW DPI https://www.dpi.nsw.gov.au/animals-andlivestock/beef-cattle/health-and-disease/viraldiseases/fmd
- Agriculture Victoria https://agriculture.vic.gov.au/biosecurity/anim al-diseases/general-livestock-diseases/footand-mouth-disease
- PIRSA Foot and mouth disease PIRSA or https://www.pir.sa.gov.au/biosecurity/animal\_ health/pigs/foot\_and\_mouth\_disease

# African swine fever – the threat remains

Eliz Braddon

A check of the Asia Pacific region map indicates that African Swine Fever (ASF) is still active to Australia's north (Figure 4).



Figure 4. New global African swine fever outbreaks as of August 4, 2022 <u>https://www.fao.org/animalhealth/situation-updates/asf-in-asia-pacific/en</u>

The Philippines has reported that by July 2022, 53 out of its 81 provinces (and 704 cities and municipalities) have been infected with ASF. The most recent update (04 August 2022) indicates new ASF confirmed localities and affected Province (Camiguin) became infected despite zoning measures currently in place. Malaysia has reported ASF infection in both wild boars and domestic pigs in Borneo in February 2021. ASF was also confirmed in domestic pigs and wild boar since October 2021 in the Malay Peninsula.

Since December 2021, Indonesia has officially confirmed that 10 out of 34 provinces have been affected by ASF.

All of these countries have implemented movement controls, increased biosecurity measures and awareness campaigns. However, the practice of swill feeding and the presence of free roaming pigs that have access to rubbish is relatively common and complicates management of the disease.

The most likely pathway of ASF introduction into Australia is through the illegal importation of pork or pork products that are then fed to pigs in Australia; or international travellers from ASF affected countries bringing contaminated equipment, boots or clothing onto a property with pigs.

The fundamental management practices a pig producer can implement are:

- Ensure pigs do not have access to prohibited pig feed (Swill)
  - a. ASF can survive for many months in pork and pork products
  - Although Australia does not import pork and pork products from ASF infected countries, illegal products could be imported through mail or passenger luggage
  - c. Feeding of prohibited pig feed is illegal in all states and territories of Australia.
- 2. Manage the risk of visitors accessing your pigs unnecessarily.
  - Overseas visitors should be restricted access until they have had a stand down period
  - b. Visitors in general should be risk assessed to ensure they have not had recent contact with other pigs (domestic or feral)

Keep Australia's pigs safe by surrounding them in a 'biosecurity blanket'!

For more information about ASF in your state, please refer to:

- Department of Agriculture, Water and the Environment https://www.agriculture.gov.au/biosecuritytrade/pests-diseases-weeds/animal/asf
- Biosecurity Queensland https://www.business.qld.gov.au/industries/fa rms-fishingforestry/agriculture/livestock/animalwelfare/pests-diseases-disorders/africanswine-fever
- NSW DPI https://www.dpi.nsw.gov.au/biosecurity/anim al/info-vets/african-swine-fever Agriculture Victoria https://agriculture.vic.gov.au/biosecurity/anim al-diseases/pig-diseases/african-swine-fever
- PIRSA African Swine Fever PIRSA or https://www.pir.sa.gov.au/biosecurity/animal\_ health/pigs/african\_swine\_fever

### New African swine fever eLearning resources

Kym Johnson



The presence of African swine fever (ASF) in neighbouring countries with which we have close cultural ties, poses a serious threat to the Australian pork industry and to owners of companion pigs.

Highly virulent forms of ASF can result in death rates of up to 100 percent of infected pigs and if ASF reaches Australian shores, it is likely that many more pigs would need to be euthanised to halt the spread and eradicate the disease. Early detection will be critical to minimise the scale of the impacts faced by Australian pig producers and keepers.

With this in mind, it is critical that everyone who has contact with domestic and feral pigs has good awareness of the potential impacts of ASF, can recognise the disease signs, and understands the importance of reporting anything suspicious.

To support this, the Queensland Department of Agriculture and Fisheries has developed an eLearning course titled 'African swine fever prevention and early detection', with input from industry experts.

This free course will be available in September 2022 on the Animal Health Australia eLearning hub, and includes a series of three modules:

- Preventing the introduction of ASF into Australia
- Preventing pigs from becoming infected with ASF
- Recognising and reporting clinical signs of ASF in pigs.

The course has been designed for a broad audience and is applicable to anyone with ties to the industry, who keeps pigs, or who is involved in feral pig control or hunting.

If you own, work with, interact with or observe domestic or feral pigs as part of your work or recreational activities, make sure you visit the Animal Health Australia training site to complete this free training.

By making sure you are ASF-aware you can help protect Australia from the potential impacts of this serious disease!

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 http://www.dpi.nsw.gov.au/newsletters/pigbytes

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