A newsletter for
pork producers

PigBytes

Issue 43 February 2020

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Queensland ASF forum a huge success with industry

Sara Willis

The 'African swine fever – response and biosecurity considerations' forum held in Kingaroy at the end of January was a great success. Over 90 people attended, including producers, industry goods and service providers, and government and industry organisations.

All aspects of African swine fever were presented including disease identification, response measures, border controls, trade implications, on-farm biosecurity, emergency preparedness activities and feral pig management. Comprehensive, practical presentations were given by Biosecurity Queensland (BQ) staff, the Department of Agriculture, Australian Pork Limited, SunPork Farms, Seilers Transport, and the Australian Pig Doggers and Hunting Assoc. Inc. The day was organised by Sara Willis, ASQ Principal Extension Officer.

Feedback from participants was extremely positive—56% of survey respondents found the workshop 'extremely useful', and 24% found it 'very useful'.

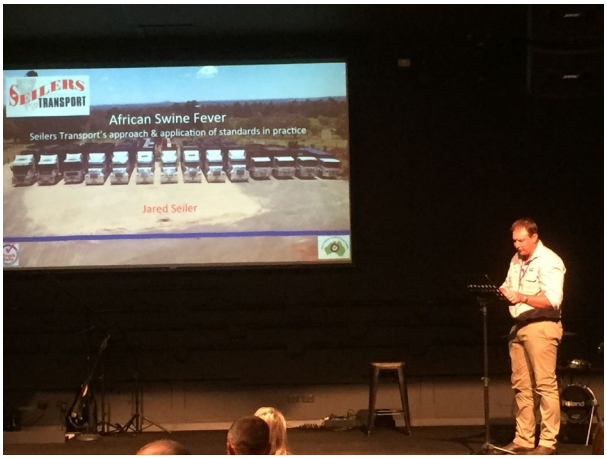
Sixty-four per cent reported that they would make a change or try something new as a result.

These changes included:

- Reviewing, updating and/or improving their biosecurity plans
- improving their biosecurity protocols
- installing new or extra fencing
- reducing the number of non-essential movements
- installing biosecurity signs at entry points
- auditing their supply chain.

Dr Kirsty Richards, veterinarian with SunPork Solutions presented her top 30 biosecurity requirements. These are shared in the following article.

Figure 1: Jared Seilers discussing livestock transport protocols.



Source: Sara Willis

Biosecurity Top 30

Dr Kirsty Richards, SunPork Solutions

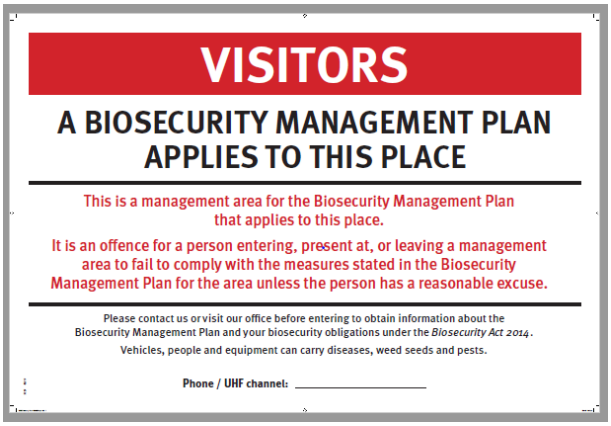
Controlled entry – Physical Barriers

1. Signage as per Queensland Biosecurity Act 2014
2. Gates – closed and locked
3. Fencing – ideally double fenced with outer fence barrier fencing against feral pigs – double electric wires and mesh

4. Single controlled entry points to the piggery (one for people; one for vehicles)
5. Piggery shed doors kept closed
6. Controlled entry protocols – Personnel such as employees, contractors or visitors
    a. no uncooked meat
    b. no pork products of any type (including cooked and processed pork)
    c. no pet food
    d. no pets, other livestock or animals
    e. no food outside smoko or lunchrooms
    f. no touching pigs without permission
    g. no feed to be given to pigs other than proprietary pig feed
7. Controlled entry – Personnel Health/Hygiene
    a. No entry if suffering foodborne illness (gastro)
    b. If cough/cold/sneezing/flu symptoms – must discuss with a farm manager before entering piggery
    c. Flu vaccination program made available to staff and encouraged for contractors and visitors
    d. Mandatory handwashing with soap before and after all work breaks
8. Controlled entry Personnel Clothing/Equipment
    a. Shower and full change of clothing including footwear OR
    b. Full change of clothing including footwear (where site does not have showers commissioned).
    c. No footwear that has been overseas allowed on any part of property (including beyond piggery production area to tenure of property)
    d. No entry of equipment or personal items without approval of farm manager
9. Controlled entry – Personnel Approved Entry
    a. A 7-night international downtime (7sleeps in Australia) for all staff returning from holiday or family business
    b. A 4-night domestic downtime (4sleeps away from pig contact) for all staff returning from holiday or family business
    c. Internal movements within and between farms in the same ownership must follow pig flow and health status
    d. Risk assess all entries, focussing on high risk personnel – e.g. visitors, people from pig industry, people with recent overseas travel history including returning staff
    e. Biosecurity declaration required for all personnel entering property
    f. Protocols are top-down – system applies to everyone including management and owners
10. Controlled entry point for personal items e.g. lunch, mobile phones etc through a viewing window where they are subject to management oversight
11. Controlled entry point for personnel – single entry point through controlled change area which has clearly demarcated dirty area, change/shower area and clean area
12. Hand and boot washing facilities readily available, kept functional and easy to use
13. Controlled entry – feed ingredients from Asia – 70day hold time comprising shipping time plus 30 days hold in feed mill in Australia.
14. Controlled entry – feed delivery from outside piggery fence through externalised blower pipes.
15. Sealed feed stores
16. Feed truck drivers provided with boots or boot covers, overalls or disposable overalls, and disposable foot wells.
17. Controlled entry – offsite semen delivery by semen provider, then internal transfer to piggery fridges.
18. Clean/dirty demarcation at the loadout area. Clearly identify where piggery staff go (clean area) and where transport staff can go (dirty area). Ideally consider a transfer station away from the main piggery where pigs can be moved to for transporter to pick up.
19. Covers and protector cases for equipment coming into the piggery such as mobile phones to bio-exclude any contamination on them from the piggery.
20. Controlled entry – pest vermin control. Cats, rats, mice, birds, insects, feral pigs, other animals – ideally keep them out but if they are breaching the piggery perimeter, implement a control program to manage them.

21. Monitor pig health – quarantine incoming stock away from your main herd for at least 30 days prior to entry (30 days=2 incubation periods for African swine fever). Check the health status of the source herd before you release any animals from quarantine.
22. Understand your own herd's health status and monitor for any changes. Note that changes may be subtle.
23. Notify your supervisor or vet ASAP if you have any concerns about the health of your pigs or anything else that is unusual in the herd.
24. Only load animals that are fit to load.
25. Ensure pigs are accurately identified so that if there are problems they can be traced.
26. Cleaning and disinfection – use a disinfectant registered against African swine fever for example Virkon S, Terminator. Make sure you and your staff are trained to use it properly and safely.
27. Use a detergent to clean yards and equipment before you apply disinfectant. Detergents remove organic matter which water alone will not fully remove (feed, faeces, dirt). Disinfectants do not work well in the presence of organic matter.
28. Remember to apply cleaning and disinfection standards to trucks and transport coming to/from your piggery. Help your transporters so they don't bring disease to your piggery, and they don't take disease away from your piggery and spread it to others.
29. Record keeping – maintain accessible and preferably digital records of all:
    a. Movements – pigs, employees/contractors/visitors, vehicles, equipment, other pig products, waste and effluent
    b. Deliveries – feed, semen, other commodities
    c. Pig health, production/performance and inventory
    d. Vermin/ pest control
    e. Site maps and infrastructure
30. Contingency planning – create a biosecurity management plan for preparedness. Practice good biosecurity and outline how you would recognise, report, respond to and recover from an emergency disease incursion.

Figure 2: All properties should have a biosecurity sign affixed to their boundary entrance.



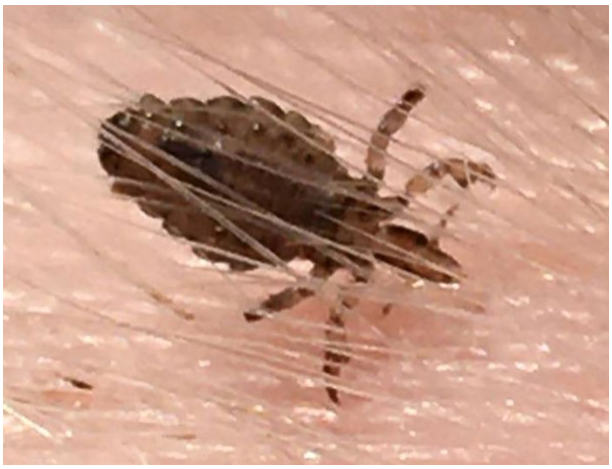
Source: Sara Willis

Haematopinus suis - the pig louse

Jayce Morgan

A farmer recently shared a picture of some insects infesting his newly weaned sows and piglets, wondering if they could be ticks. The insects were identified from the photograph as the pig louse – a blood sucking insect and a cause of some irritation for the pig.

Figure 3: Pig louse on the pig among the pig hairs.



Source: Provided to Jayce Morgan from the farmer

The pig louse is described as "host specific and cannot live for more than 2-3 days away from the host." The pig louse is distributed worldwide. "Herds treated routinely to effectively control mange seldom carry significant lice populations,

and are probably free of lice" (Cargill and Davies 1999)

Eggs hatch in 12-20 days – they are attached to the hair. The nymphs develop through 3 instars, and all feed on blood. The third instar nymphs develop into adults and the whole cycle takes 23-30 days.

Heavy infestations may cause anaemia in young pigs and may affect growth rate and efficiency of food conversion with one study reporting reduced growth of 50 g/day.

Lice tend to be found around the neck, jowl, flanks and inner surfaces of the leg. They will shelter inside the ears. Spread is by direct contact of one pig with another but pigs entering a yard recently vacated by infested pigs can become infested as well.

The pig louse is a blood sucking insect and does get mentioned in documents as a possible vector for spread of ASF. "ASFV (the virus) has been detected in *Haematopinus suis,* swine lice prevalent in temperate regions, collected from experimentally infected domestic pigs" (Guinat et al 2016).

Soft ticks of the genus *Ornithodoros* are recognised as a vector of spread for ASFV in southern and eastern Africa in a disease transmission cycle involving warthogs and the ticks. It is uncertain if other ticks of the *Ornithodoros* species (such as the kangaroo tick) can act as a transmission vector.

More recently Stomoxys flies have been shown to be experimentally competent for mechanically transmitting ASFV to domestic pigs for a limited time. However, flies collected on ASF-affected farms in Lithuania tested negative for ASFV. (Guinat et al 2016).

Out of curiosity I posed a question to the team at AAHL – why were all blood sucking insects not considered a risk for transmission of ASFV and received the following response?

"Interesting question-

For some of the blood-sucking critters, they can get infected but are unable to transmit the virus to new animal. For them to transmit it, the virus has to go through a cycle within that tick/insect and present it back to their mouthparts (salivary gland). There is a chance that they may be able to transmit it mechanically, if they bite infected animal and within short duration bite another animal- but that is very rare given their biting habits. Some soft ticks, on the other hand are able to multiply the virus within their bodies and transmit to the next animal during next feeding" (Pers comms)

So be cautious and ensure your pigs are treated regularly for external parasites. If you do think you have found ticks on your pigs, scientists would be interested to get an accurate identification of the species. Contact your local vet, LLS or Department of Agriculture to organise collection and submission of the insects **before** treating the pigs to control the insects.

References:

Claire Guinat et al "Review: Transmission routes of African swine fever virus to domestic pigs: current knowledge and future research directions" Veterinary Record (March 12, 2016) 178,262-267.

Cargill and Davies "Chapter 47 External Parasites" Diseases of Swine 8th Edition 1999, pp676-677.

Further reading:

Factsheet 1148 External parasites of pigs Published 2017.

Evidence of freedom from Classical swine fever (CSF) in Victorian pigs

Dr Jaimie Hunnam, Principal Veterinary Officer Epidemiology, Agriculture Victoria

Classical swine fever (CSF) is a highly contagious disease of pigs that occurs in many countries overseas but not in Australia. Although the disease is clinically indistinguishable from African swine fever, which is also an exotic disease, CSF is a different disease.

Australia is currently free of CSF, but animal health authorities remain vigilant. The Victorian CSF surveillance program relies on the legal obligation of herd managers and veterinarians to notify authorities of suspicion of the disease, as well as industry-funded on-farm disease investigation programs.

Through these programs, Agriculture Victoria provides subsidised disease investigations to pig owners for detections of unusual or suspect emergency animal diseases on a property.

Subsidies are available for the initial field investigation, including clinical and post-mortem evaluation, laboratory testing and a follow-up investigation of significant disease events in pigs (and other livestock).

To provide further evidence of our freedom from CSF, a one-off targeted surveillance project of domestic pigs in Victoria was developed. Three hundred and ninety-one Victorian pigs, from 23

holdings, were blood sampled at a commercial abattoir between March 2016 and October 2017. All were negative to the CSF antibody ELISA test.

CSF is caused by a pestivirus and typical clinical signs of acute CSF include fever, redness or blueness of the extremities, loss of appetite, vomiting, abortions, convulsions and/or a stiff gait. Clinical signs of chronic CSF are milder and persist for 3 to 4 weeks.

The incubation period of pigs infected after they are born is 2 to 14 days (up to 3 months in chronic cases) while some pigs are exposed in-utero and these may be persistently infected throughout their lives. In infected herds, up to 43% of pregnant sows may become carriers.

Infection can result in high within-herd death rates and substantial economic losses due to reductions in productivity and increased feed costs.

CSF virus could enter Australia through illegally imported infected pig meat that is fed to commercial or feral pigs ('swill' feeding), or from illegally imported genetic material. CSF also has the potential to become established in Australian feral pig populations.

CSF establishment in Australia could result initially in significant within-holding mortalities leading to a rapid structural change within the local pig industry, with likely social and economic dislocation.

Although sampling at the point of slaughter is relatively easy and low cost, this method is inherently biased as only animals that are healthy enough for slaughter will be sampled. As CSF typically manifests with high morbidity and mortality, the current disease on-farm investigation program will continue to underpin Victoria's claim to CSF freedom.

This study did not include testing of feral pigs for CSF virus and it is noted that sampling of this population would provide further confidence in Victoria's CSF disease freedom status. Actively training Victorian pig hunters to collect samples and provide animal demographic and details of the location of feral pigs at the time of slaughter would assist this process.

REMEMBER - Anyone who suspect classical swine fever **or** African swine fever in pigs must report it immediately. The easiest ways to do this are to

- contact your local Agriculture Victoria or LLS District Veterinary Officer,
- ring the all-hours **Emergency Animal Disease Watch Hotline on 1800 675 888**

For more information on the on-farm disease investigation programs please go to: http://agriculture.vic.gov.au/agriculture/pests-diseases-and-weeds/animal-diseases/disease-surveillance-programs/significant-disease-investigation-sdi-program

NOTE: this work was published in the Australian Veterinary Journal (2019) 97(11): 447-451

NSW Animal Welfare Reform – Issues Paper

NSW DPI Animal welfare unit

Protecting the welfare of animals now and into the future is a priority of the NSW Government. In May 2018, the Department of Primary Industries (NSW DPI) released the NSW Animal Welfare Action Plan (the Action Plan).

This plan outlines a range of policy and legislative activities to be undertaken over the next three years aimed at ensuring NSW has a robust animal welfare framework and the capacity and capability to effectively administer it.

Animal welfare is currently regulated in NSW under four different Acts:

- The *Prevention of Cruelty to Animals Act 1979* (POCTA)
- The *Exhibited Animals Protection Act 1986*
- The *Animal Research Act 1985*
- The *Crimes Act 1900* (the Crimes Act)

Following on from the public release of the Action Plan and the introduction of the *Companion Animals and Other Legislation Amendment Bill 2018,* the NSW Animal Welfare Reform Issues Paper, is the next step towards improving the current animal welfare policy and legislative framework in NSW.

The NSW Government is seeking community and stakeholder feedback to this discussion paper to guide improvements to existing animal welfare legislation and as a foundation for further animal welfare policy reform.

Comments received on issues outside of the scope of this discussion paper, such as game hunting or live exports will not be considered in the review.

In this discussion paper we are seeking your feedback on:

1) Whether current penalties for offences in POCTA are appropriate

2) Proposed amendments to POCTA that aim to protect animal welfare during critical and emerging incidents.

You can provide your comments online by completing our survey.

We will continue to consult with you as the new policy and legislative changes outlined in the Action Plan take shape over the coming months and years.

Animal welfare reform – Issues paper

Written submissions may be forwarded via Email: animalwelfare.submissions@dpi.nsw.gov.au

Submissions close 21st June 2020 11.55pm

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