A newsletter for
pork producers

PigBytes

Issue 50 January 2022

In this issue

Warm wet weather – the perfect environment for biting insects

Leah Starick

The Bureau of Meteorology has predicted that this summer is likely to see above average rainfall across eastern Australia with warmer than average days and nights across most of the country. A combination of these factors provides the perfect environment for biting insects such as flies, mosquitoes, and midges or sand flies.

Problematic biting insects can cause irritation, skin lesions, or allergic-type reactions in pigs as seen in the image. This can cause major economic loss, financial penalty, and additional downgrades, with some pigs requiring skinning at slaughter.

Treatment and control

The control of biting insects requires an integrated pest management approach using a combination of chemical and physical methods.

Flies, midges, and mosquitoes are attracted to moist environments, rotting vegetation, feed or manure piles, hence good hygiene in and around pig housing is essential. When practicing good hygiene, be sure to regularly clean water and feed troughs, remove manure and waste feed where possible, slash long grass and weeds, and keep pigs in dry, well-draining pens or paddocks.

Figure 1: Photograph of Skin damage on a pig carcase due to biting insects.

Source: Leah Starick

There are several products available registered for the direct application to pigs which contain

repellent and insecticide properties. Some examples of these include Inca Ban Fly insecticidal spray for animals, Musca Ban insecticidal spray, Value Plus fly spray, and Flygon insecticidal and repellent spray. Various accounts have suggested the use of portable mist blowers as an effective application tool for these products.

Baits, larvicides and residual insecticides applied on walls where insects rest may be used for pigs housed indoors. Knock-down sprays almost always require sheds to be free of pigs.

If you would prefer to avoid chemicals sticky paper traps in fly resting areas may be effective whilst bait stations with homemade remedies can work is some situations with various recipes available online. Dung beetles and parasitic wasps may also assist in biting insect control; however, the use of chemicals will limit their effectiveness.

Whatever management practice you adopt, always read the label before using chemicals, wear the appropriate PPE (gloves, overalls, boots), practice safe strategies, and consult your farm vet if you have any concerns.

For more information visit Control of biting insects on pigs

Watch temperature/humidity interactions for pig comfort, production, and transport

Regina Fogarty

Pigs suffering heat stress experience increasing body temperatures. They have a range of strategies to cool themselves – but due to lacking functional sweat glands, they are unable to sweat through their skin and generate significant levels of evaporative cooling.

Pigs will spread out over floors if the floors are cooler, seek wallows if they have access. They also drink and use water points to cool themselves, often covering themselves in a mix of dung, urine, water and saliva.

As their core reaches their upper critical temperature pigs start to pant at 50 to 60 beats per minute. Normal pig respiration rate is around 20 per minute but it can reach 200 per minute when combating with extreme heat stress. Panting by pigs is nowhere as efficient as it is in dogs. Appetite is lost and the pig has no other way to cool itself.

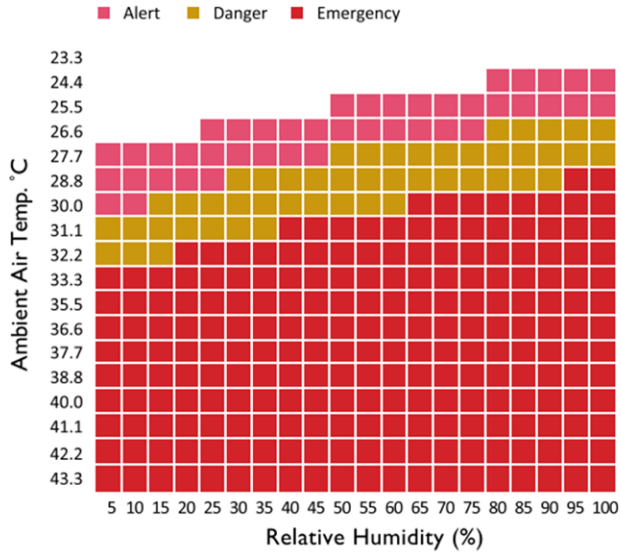
As pigs cannot generate sweat, evaporative cooling relies on a short intermittent spray or drip cooling, which wets the skin and then allows a drying phase that lets the water evaporate and effect heat loss through the skin.

Constant sprays do not allow for optimal evaporation and cooling. During still conditions, fans will be needed to generate the required air flow to optimise evaporation.

Heat stress can occur at relatively and surprisingly low temperatures if in combination with high humidity. This occurs naturally in most tropical/subtropical climates, but even in normally dryer climatic areas, it can be experienced during wetter climatic conditions, for example during *La Nina* years, which includes this summer. So, it is important to look at both temperature and humidity when planning not only pig transport, but more generally in pig management.

The following graphic demonstrates how temperature and humidity act together in generating heat stress in pigs.

Figure 2: Heat stress index for growing/finishing pigs from APL's Is it Fit for the Intended Journey Guide. The index was developed by the Iowa State University.



Source: https://australianpork.com.au/sites/default/files/2021-06/2016_APL_Is_it_fit_for_the_intended_journey.pdf

Many producers routinely plan to transport pigs in the cooler parts of the day in summer. It is important to provide shade for the pigs and cooling with water sprays may also be needed. It is recommended that pigs are not transported in the emergency zone – indicated in red in the graphic.

This can occur at 30 C or lower when relative humidity is over 60%. Lower temperature in the mid-20s, may still represent a danger and actions may be needed and cooling infrastructure planned, installed and checked to ensure it is fully operational.

There are a range of automated water based evaporative systems available to the industry for cooling both the air in sheds and for cooling the skin of individual sows and growing pigs ranging from evaporative cooling pad systems in tunnel ventilated sheds, spray systems for growing pigs and drip systems for farrowing sows. Other technologies are based on underfloor water cooling and high velocity air flow. There are a number of specialist suppliers of cooling technology operating in the industry.

Of critical importance for pig comfort and to ensure feed intake is to provide cool drinking water.

The pig industry has developed an excellent guidance document covering transport heat stress - **Is it fit for the Intended Journey? – a Guide**. It includes broad guidance principles for assessing if pigs are fit to load and strategies for managing transport risk. The guide is available online from Australian Pork Limited at:

Pig health and welfare | Australian Pork

New Climate Predictor Tool from BOM

Regina Fogarty

The Bureau of Meteorology (BOM) has released a new tool under its Forewarned is Forearmed climate project that provides predictions not only in rainfall, but also maximum and minimum temperatures. These new temperature predictions are important for the pig industry as heat build-up causes production problems including increased mortalities.

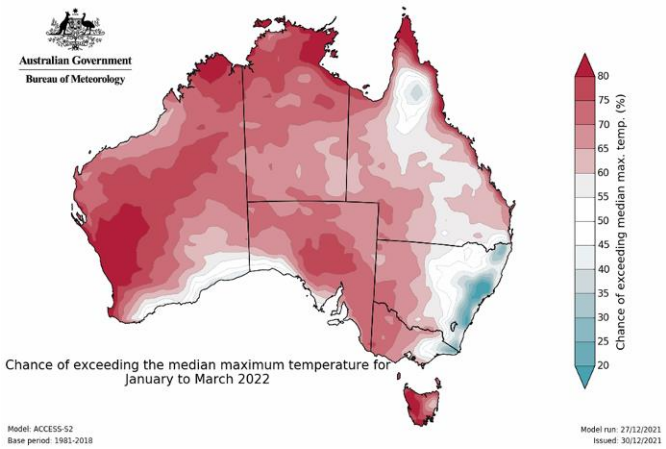
The tool is available on-line at http://www.bom.gov.au/climate/outlooks/#/temperature/minimum/anomaly/weekly/0

The site allows you to drill down on locations as well as look at national predictions.

A key message for the pig industry is warmer nights are very likely for most of Australia over the peak summer months (Figure 4). Meanwhile the messages for maximum temperatures are more mixed, with predictions of cooler weather for the east and elevated temperatures throughout SA and south-west WA (Figure3).

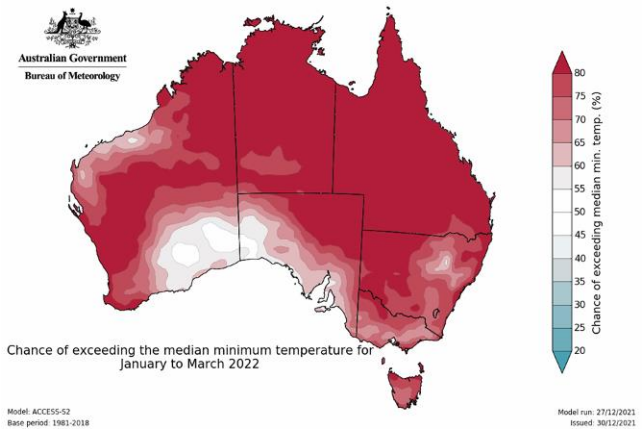
Hotter days will cause significant issues in terms of keeping pigs cool, but the predictions for hotter nights mean that in many areas that usually rely on cooler night-time temperatures to drop the heat load in sheds will require more active management to get shed temperatures down at night.

Figure 3: Predicted chance of exceeding long term daily maximum temperatures in January to March 2022.



Source:
http://www.bom.gov.au/climate/outlooks/#/temperature/maximum/median/seasonal/0

Figure 4: Predicted chance of exceeding long term daily minimum temperatures in January to March 2022



Source:
http://www.bom.gov.au/climate/outlooks/#/temperature/maximum/median/seasonal/0

NSW Draft Animal Welfare Bill 2022

This NSW Draft Animal Welfare Bill 2022 has just been published and is available on the NSW DPI website along with other supporting documents. A Parliamentary Committee will now review the Draft Animal Welfare Bill 2022 as part of the Inquiry into Animal Welfare Policy in NSW. The Community is invited to review and provide feedback as part of the Inquiry process. Submissions Close 13th February 2022 and can be made through the Parliament of NSW website.

Save the Date

Sara Willis

Queensland Pig Consultancy Group meeting is scheduled for Wednesday 23rd February. More information to come. If interested contact Sara Willis - Sara.Willis@daf.qld.gov.au

Figure 5: Graphic for the Queensland Pig Consultancy Group

Pig Biosecurity Management Planning

Nicole Schembri

The single biggest threat to the Australian pork industry's sustainability is an emergency animal disease outbreak, such as African swine fever (ASF) or foot and mouth disease (FMD).

While ASF continues to spread globally and in neighbouring countries we have always been in a unique position globally, protected as an island nation with stringent border biosecurity. As we slowly re-open to the rest of the world, these protections will continue to be tested at the national, state, local and farm level.

A biosecurity management plan is the simplest way to document what practices you have in place to minimise, and where possible, eliminate the risk of pest and disease introduction and spread. A biosecurity plan can be used to manage and control the movements of people in production areas.

Developing and implementing a biosecurity plan on your farm requires:

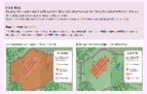
(1) Review the risk areas that may be present on a farm – a risk assessment helps to determine the areas or factors are most likely to lead to the introduction or spread of infectious agents.

(2) Manage the risk - a preventive plan is developed and implemented.

(3) Communicate the risk - all members of the farm management team, suppliers, and service personnel need to be informed of the plan to ensure cooperation and implementation.

(4) A pig specific biosecurity management planning toolkit has been developed in collaboration with producers, state jurisdictions and industry and can be found on Animal Health Australia's FarmBiosecurity website. There is a biosecurity planning resource to suit all levels of pig keeping and production across Australia. For those that are APIQ accredited, the plan template meets the updated APIQ standards with a worked example provided to guide accredited producers in developing their plans

Table 1: Guide to biosecurity planning resources.

Industry segment[1]	Planning resources					Support resources			Additional resources
	Plan template[2],[3]	Plan checklist	Pig EAD contingencies	Site plan template	Vet and EAD contacts poster	Plan / Checklist information guide	Producing a plan video	Plan worked example	Pig health and biosecurity record keeping templates
									
Large and small commercial producers	X				X	X	X	X	
Small commercial producers, hobby producer, home consumer, farm stay, high schools		X	X	X	X	X			X
Hobby farmers, home consumer, farm stay, rescue pig owner, pet pig owner[4]				X	X				X

Refers to Table 1 –

[1] Industry segments and associated resources are provided as a guide only. Those with high level of biosecurity are encouraged to complete the (detailed) plan template, while those with smaller enterprises or new to the industry are best to start with the checklist and build up to developing and implementing a detailed biosecurity management plan in time.
[2] The Plan template (Pig biosecurity management plan: Template) includes pig EAD contingencies and a Site plan template. There is no need to add these as separate and additional resources.
[3] A completed and implemented Plan template (Pig biosecurity management plan: Template) meets APIQ Biosecurity Planning accreditation requirements
[4] Additional planning resources for smaller and pet pig keepers includes:

- Pig pest and disease entry pathways graphic with key veterinary contacts post card
- 8-point biosecurity checklist with key veterinary contacts post card

New Biosecurity Officer, Chelsea Dossett supporting the pig industry supply chain in South Australia

Regina Fogarty

Improving biosecurity practices and preparing for the potential incursion of an emergency animal disease is the focus of a new biosecurity officer role, supported by the South Australian pork industry.

University of Adelaide animal science graduate Chelsea Dossett has been appointed to the position. Ms Dossett was the recipient of the Ronald J Lienert Memorial Scholarship, graduating with honours in pig production and has broad experience working on a 500-sow farm.

A key focus of her role is to develop protocols for best practice biosecurity and disease management that ensures SA is well placed to meet and implement national requirements.

The new position – jointly funded by the State Government and the Pork SA Pig Industry Fund – will be well supported by industry representatives to ensure the project is delivered in partnership.

Chelsea took up the position late last year and has hit the ground running. She is involved in a number of SA based projects and is working with interstate colleagues to maximise the return on this investment in the future of the industry.

South Australian Chief Veterinary Officer Dr Mary Carr said the appointment of a pig industry biosecurity officer will further develop capabilities that help to assure the movement of pigs in the event of an emergency animal disease outbreak.

"This applies to all facets of the supply chain, from shipment to slaughter movements to property-to-property pig movements," she said.

SA pig veterinarian Dr Barry Lloyd said the new role will help pig producers customise pig movement as well as destruction, disposal and decontamination contingencies within their farm biosecurity plans.

The work will ensure they meet all state and local government regulatory requirements. The position will also assist to identify information management requirements to underpin efficient permit approvals in a response.

"The introduction of a biosecurity officer for the industry will not only help with overall preparedness for an emergency animal disease outbreak but producers will also benefit from a reduced risk of endemic production-limiting diseases into their herds, providing ongoing and long-term benefits to their business," Dr Lloyd said.

"The support will be appropriate for commercial herds of all sizes across SA and will work to educate farm teams and support their specialist animal health advisers."

Chelsea can be contacted at chelsea.dossett@sa.gov.au or by phone at 08 8429 4313.

Farewell

Jayce Morgan

This will be the last PigBytes that I edit as I am retiring this year. I will be on leave until the end of June and retire from July 1st, 2022.

In the interim Nicole Schembri will take over the reins of PigBytes. There are a couple of South

Australians looking to join the team so hopefully there will be articles from them next edition

I have been working with the pork industry since the end of 2005 – so about 15 years. When I started, I didn't know much about pigs – some of you probably still think I don't – but it has been a steep and constant learning curve, and a mostly enjoyable experience.

The best parts of a job such as mine are the people you meet – there are some truly amazingly talented people among you, and most of you are pretty good sorts. The lows have been the terrible droughts and industry downturns which sadly seem to coincide, and the result of farmers leaving the industry.

As an industry you are very proactive, and I salute you for your innovative and progressive approach.

2021 was a challenging year and it looks like 2022 will be similar with the influences of COVID19 on workforces and supply chains, and the weather with la Nina.

I pray on your behalf that Australia's commitment to biosecurity remains strong and diseases such as ASF are kept out of the country.

May the challenges of 2022 be manageable – best wishes.

My favourite photograph

Jayce Morgan

Over the years working with industry, I have been fortunate to take a few photographs of pigs and their people. There is one photograph that calls to me every time I see it.

I think it reminds me that pork production is really a partnership between pigs and people.

Pigs do their best work when their human carers make sure their pigs' welfare is a priority.

In this photo the pig is looking at the farmer almost as if to ask if everything is ok

Figure 6: Pig production is a partnership.

Source: Jayce Morgan

We are part of the ecosystem around us – our actions affect others – people, domestic animals and the rest of nature – be considerate and caring.

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