

# Pigbytes Newsletter

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## Sow Group Housing – What did we learn?

Jayce Morgan

In October last year there was a Sow Group Housing seminar at Forbes. It was a well attended day and the speakers who were mostly farmers are to be commended for their “warts and all” sharing of their experiences.

The 4 farmer speakers were – Brigitte Dunn of Victoria, Edwina Beveridge Young NSW, Matt Collier Parkes NSW, Kenton Shaw Rivalea Corowa NSW.

Retrofitting existing buildings to accommodate group housing, is not straight forward and modifications to existing infrastructure must suit the management system, workers and sows.

The following is a summary of points raised by the speakers when sharing their experiences on their own farms. Following in *italics* are some comments by Trish Holyoake.

### Space

- Space allowance per sow ranged from 1.4m<sup>2</sup> to 2.5m<sup>2</sup>. The general consensus was the more space the better but if you are trying to maintain the same sow herd within the existing building footprint there needs to be some smart management and clever modification. Some farmers have tried utilising the back aisle and reducing stalls to shoulder stalls on either side of the aisle and having 6-8 per group. This gave the sows an area of 1.4m<sup>2</sup> and is only marginally more space than a stall. It needs careful management and is not really recommended.
- *Trish’s comment: A small space allowance such as 1.4m<sup>2</sup> needs careful management to*

*ensure all sows have equal access to feed. Any poor doing sows should be placed in a hospital pen and treated appropriately.*

- For larger sow groups the recommendation was to keep sleeping areas and activity areas (for feeding, dunging, and drinking) separate. Use of short internal walls for sows to lie against worked well and sows formed sleeping groups.

#### Feeding sows in groups:

- Electronic sow feeders (ESF) allow individual sows to eat in peace but training is essential and it can be difficult (but not impossible) to train older sows so the comment was made to bring in new systems with the gilts and train them before joining.
- Multiple feeding or split feeds were discussed in relation to liquid feeding systems and floor feeding. The principal involved is to deliver the feed ration to the group in a couple of feeds but do this within a short period of time eg one hour. This gives dominant sows the chance to eat their fill and the arrival of more feed shortly after gives the other sows the chance to get a full ration. Obviously automated feeding systems are necessary for this to work.
- Use of feeding stalls is efficient and it was noted that many sows slept in their stalls. One speaker commented that sows in groups tended to be in better condition especially in winter when sows can overcome the cold by sleeping together and there may be feed efficiencies possible.
- *Trish's comment: Feeding stalls are a good low technology system to allow individual feeding of sows. The down side is that these systems require more space than ESFs (electronic sow feeders) or floor feeding systems. Ideally each sow is locked in her stall during feeding time; otherwise other sows can come into the feeding stall and potentially injure sows that are slow-eaters.*
- One farmer mentioned that they were trialling an increase in the sows' feed in the last trimester of pregnancy to see if there was an increase in birth-weight but there are no definitive results yet and the trial continues.
- *Trish's comment: Increasing feed in the last 3 weeks of gestation (to approximately 3 kg of dry sow diet per day) won't increase piglet birthweight. However it will place sows in a positive energy balance. This is needed to*

*allow the sow to start producing hormones (especially luteinizing hormone LH) to optimise subsequent farrowing rate and litter size.*

#### Mixing sows

- *Trish's comment: Avoid mixing groups of sows.*
- Never add a single sow to a group.
- If you have to mix sows try to mix sub-groups such as mix 2 groups of 5 or a group of 4 and 2 groups of 3.
- For large groups Rivalea practice the 20% rule – add no less than 20% to an existing group in 1 day – so for a group of 40 add no less than 8 new sows.
- Opinion was mixed over the keeping of separate parity groups which was suggested as one solution. The mixing of gilts in with sows could assist with developing the gilts immunity to endemic diseases on your farm but should not be continued if there is a high casualty rate among the gilts. Do what suits your management. Mixing of age groups was successfully utilised on one farm.
- *Trish's comment: Mixing gilts with sows will do little to stimulate gilts' immunity as sows shed very few bugs to the environment. It would be better to expose gilts to weaner dung or mix then with weaners (supervise the weaners to ensure they are not bullied).*

#### Hospital pens

- It is essential that hospital pens are cement floor covered with good bed of straw.
- *Trish's comment: It is essential that hospital pens have at least enough solid floors for all animals to comfortably lie. As sick pigs have a higher temperature requirement, a soft warm lying surface such as straw is ideal.*

#### Eco-shelters

- Comment was made by several speakers that eco-shelters were good for photos but did not give good pig performance. No real explanation was offered for this viewpoint but there were examples of sows creating and digging wet areas in dirt floored shelters suggesting that the problems are structure and management related.
- *Trish's comment: Ensure that ecoshelters have a concrete base. Compacted clay and dirt floors in ecoshelters are cheap but they don't last long and are impossible to disinfect.*

Talks on the day were recorded and will be available on the NSW DPI website in the near future. If you want more information there is an excellent Primefact on the NSW DPI website written by Trish Holyoake on Group Housing.

[http://www.dpi.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0005/353759/Guidelines-for-group-housing-pregnant-sows.pdf](http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0005/353759/Guidelines-for-group-housing-pregnant-sows.pdf)

Earlier in the year there was also a sow housing workshop in Toowoomba in Queensland. The talks from that day were recorded and have now been placed on the web. Links to these talks are listed here. Thanks to Queensland DEEDI especially Alison Spencer and Sara Willis.

Learning from our international competitors by Steve Chick  
<http://www.screencast.com/t/Pv8Tu8IZ>

Two systems in action – the Tong Park experience by James Hurley  
<http://www.screencast.com/t/vUjGDMd1n7E>

Making the decision to retrofit by Laurie Brosnan  
<http://www.screencast.com/t/pVy3hhLYru>

Life without dry sow stalls by Graeme Pope  
<http://www.screencast.com/t/nmjSUYQseD>

Accepting the decision by John Riley  
<http://www.screencast.com/t/J0GRF8Bj4isO>

Note I found the sound on these talks a bit faint and needed to use headphones to hear the speakers.

## New nutrient calculator for outdoor piggeries

*Ian Kruger*

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A simple spreadsheet calculator for outdoor piggeries that measures nutrient loads in pig manure has been developed by NSW Department of Primary Industries (NSW DPI).

The spreadsheet can assist managers of outdoor piggeries to estimate the nitrogen, phosphorus and potassium loads excreted in manure by their herd and simulate the follow-up crop rotations needed to balance nutrient loads.

NSW DPI environmental engineer, Ian Kruger, said improving land management and nutrient reuse are major issues for outdoor and free range piggeries.

“The calculator can help both larger and small piggeries remain environmentally sustainable,” he said.

“To use the calculator, information is needed on pig numbers and classes, range areas and stocking periods for each pig group.

“The calculator presents choices for piggery location, general soil types, nutrient losses and location-specific cropping or pasture, and yield options to follow the pig stocking phase.

“Crop choices are added until all deposited manure nutrients are taken up by the crops. A table and chart show clearly when this has occurred.

“Analysis reports may be viewed, printed and saved.”

The calculator is based on the National Environmental Guidelines for Piggeries, Second Edition, 2010.

It is written in Microsoft Excel 2003 ® and it is free to download from NSW DPI at:  
[www.dpi.nsw.gov.au/info/calculator-outdoor-pigs](http://www.dpi.nsw.gov.au/info/calculator-outdoor-pigs)

For more information, contact Ian Kruger on (02) 6763 1272, or Greg Mills on (02) 6750 6312.

## Questions from the field

*Dr Amanda Lee, Pig Health Coordinator NSW*

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One enquiry received recently from a small scale pig farmer was in relation to Congenital Tremors – the farmer had a sow with a litter of piglets and about 3 piglets were shaking when awake.

This is a sporadic disease seen in newborn piglets characterized by muscle tremors, shaking of the head and body, in-coordination, and increased piglet mortality.

Affected piglets show signs at birth. The tremors produce rhythmic twitching that abates when the piglet lies down and ceases when it is asleep (“intentional tremor”).

Piglets mildly affected are usually able to walk about and feed, but more severely affected piglets are not able to feed and may starve or get crushed by the sow. Piglets with congenital tremors may also be affected by splay leg.

The cause(s) of congenital tremors in Australia has yet to be determined but in the majority of cases it is thought to be infectious.

There is no specific treatment for congenital tremors. Mildly affected piglets usually recover spontaneously in a few days to several weeks.

Affected pigs require supplementary milk feeding and warmth to survive if they cannot access the udder and suckle. Severely affected piglets with compromised welfare should be humanely destroyed.

Most congenital tremors occur in gilt litters. As a number of other infectious agents can be confused with this disease, it is best to contact your local or state veterinarian if you suspect this condition is affecting your herd.

## Questions from the field

Trish Holyoake, Pig Health and Research Unit, Bendigo

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A veterinarian phoned as he had a client whose pigs were observed to have lung adhesions at slaughter. He was wondering what might cause this and what impact it would have on farm profit.

Results from abattoir monitoring conducted by Patrick Daniel at the Pig Health and Research Unit this year show that 60% of herds had pigs with pleurisy, with an average of 10% of pigs with lesions within affected herds.

Pleurisy is often seen in conjunction with lung lesions, including bronchopneumonia (initiated by *Mycoplasma hyopneumoniae*) and pleuropneumonia, which is caused by *Actinobacillus pleuropneumoniae* (APP) bacteria.

Pigs with pleurisy grow on average about 5% slower than pigs without respiratory disease (Skirrow *et al.*, 1995).

This equates to about 7 extra days to slaughter or a 3.5 kg difference in carcase weight when selling at 100 kg liveweight.

Assuming a margin of 0.80c/kg DWt, this equates to approximately \$56/sow/year for a 100-sow piggery.

High stocking density and poor air quality (particularly high concentrations of airborne dust and bacteria) are risk factors for pleurisy.

Rearing pigs in all in/all out systems with cleaning and disinfection between batches greatly improves air quality and reduces respiratory disease, relative to pigs reared in continuous flow facilities.

There are commercial vaccines to prevent both *M. hyopneumoniae* and APP. Talk with a veterinarian about a respiratory disease control program best suited to your farm. Abattoir health checks in Victoria can be arranged by contacting Patrick Daniel at the PHRU.

## A one-night downtime is enough!

Trish Holyoake, Pig Health and Research Unit, Bendigo

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A recent article (Pitkin *et al.*, 2011) demonstrates how difficult it is for humans to transmit *M.*

*hyopneumoniae* from infected to non-infected groups of pigs.

Over a 1438-day study period, a total of 25 people moved on a daily basis between infected and non-infected groups of pigs. Infected pigs were visited from 2-4 pm each day, after which personnel changed out of farm clothing and had a shower.

The non-infected pigs were visited the next day at 6 am, after personnel had showered and changed into farm-specific clothing. Swabs were taken from the skin of personnel (7174 samples) and clothing (4833 samples) after the morning shower and change of clothes and tested for *M. hyopneumoniae*.

All naïve pigs on Farm B remained free from *M. hyo* infection over the 4-year study period. In addition, all swabs tested for *M. hyo* by PCR were negative.

The results of this study demonstrate that a downtime period of one night prevents the spread of *M. hyo* by personnel and clothing between infected and susceptible pig populations.

All farms will have visitors, whether it be for veterinary advice, QA auditing or on-farm training. Extended, unnecessary downtimes make life difficult for those servicing piggery clients on a regular basis.

Non-productive downtime is a business cost which may be ultimately borne by the producer. It may be timely to re-think your downtime protocol as part of your on-farm biosecurity plan.

[Trish.Holyoake@dpi.vic.gov.au](mailto:Trish.Holyoake@dpi.vic.gov.au)

## Pest Animal Deterrents

Jayce Morgan

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Pest animals can cause problems in any production systems, whether they are indoor or outdoor. As the numbers of pigs outdoors increases I have been receiving reports of problems with predation of piglets by feral cats, foxes, and crows.

There have also been reports of rodent problems in particular rats and one grower complained of a snake problem. The piglets were so inquisitive that they chased the snakes and got bitten and died.

There is a company listed on the internet called BirdGard which produces a range of ultrasonic devices which they claim have proven effective against feral cats, crows and rats. They even have one for snakes. The devices are pest animal specific and it is claimed that they do not harm humans or non-target animals.



There is also the Fox light invented by Ian Whalan and entered in the New Inventors program 2009 on the ABC. This product has been used by some pig producers successfully but the results have not been documented.

In this age of heightened concerns by the general public over chemical use and animal welfare, products that scare off pest animals will be preferable for some producers. They would also be potentially safer from the OHS and environmental perspectives.

I am wondering if there are any producers who have already used some of these devices who would be willing to share their experiences.

Or is there anyone who would like to trial one of these devices as a producer demonstration trial?

We would have to apply to APL for funding to buy and test the product over a period of time. We would then be required to report back to industry on the success or otherwise of the product tested.

I would help with the funding application and the final reporting. If you think this is of interest please contact Jayce Morgan on 02 6763 1257.

## Collection of manure from scouring pigs for laboratory testing

*Tony Fahy; Pig Health and Research Unit, Bendigo*

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Tony.Fahy@dpi.vic.gov.au

Scouring can occur in pigs of any age. To determine the cause of the scouring, it is best to send scour material collected into 50mL plastic containers. This allows for culture, PCR and testing for worms.

Scour samples should be collected from animals before, or at treatment time and stored in the fridge until dispatched to your laboratory. Ideally samples should be dispatched on a Wednesday at the latest, using Australia Post express delivery bags and addressed to the street address of the laboratory, not a PO Box.

Be sure to pack the scour samples well to ensure spillage does not occur; this can be done by wrapping the sample jars in two zip lock sandwich bags, before placing in a container with a freezer pack. Most laboratories or your veterinarian will supply you with the sample jars, submission form and freezer pack on request.

For samples to be sent to the Victorian Pig Health and Research Unit e-mail your request for sample containers to:

[Diagnosticlab.Bendigo@dpi.vic.gov.au](mailto:Diagnosticlab.Bendigo@dpi.vic.gov.au).

Once the testing is done, the results will be sent back to your veterinarian along with any recommendations to control the problem.

NSW farmers should consult their veterinarian to discuss any scour problems in pigs.

Samples to be submitted to the NSW State Veterinary Diagnostic Laboratory at the Elizabeth Macarthur Agricultural Institute should be sent by your veterinarian.

The laboratory can be contacted by email at [vet.lab@industry.nsw.gov.au](mailto:vet.lab@industry.nsw.gov.au).

## Paralysis ticks on pigs

*Jayce Morgan*

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Ticks are not generally a huge issue for pigs but there was a case recently where a pet pig was thought to be affected by a paralysis tick. With the increasing numbers of pigs outdoors the sight of ticks on pigs could become more common.

The paralysis tick (*Ixodes Holocycclus*) occurs in the more humid coastal areas. The area where humans, dogs, cats and possibly pigs are most vulnerable to paralysis tick problems stretches almost the full length of the eastern Australian coastline and about 30 km inland along this distance.

Ticks are not very mobile and rely on passing animals for transport and feed. The ticks climb up grass and other vegetation and drop onto passing animals. All stages of the paralysis tick produce paralysis toxin but only adult females which have fed for 4 days or more produce enough toxin to cause paralysis.

If you do suspect ticks are causing illnesses in your pigs talk to your vet to map out a treatment plan.

## Save the date “Survivability – the key to success”

*Trish Holyoake, Pig Health and Research Unit, Bendigo*

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Survivability is a key factor influencing farm productivity and profitability.

Come and hear tips from the experts on how to maximise pig health and welfare at a Survivability Seminar to be held on March 27<sup>th</sup> and repeated on March 28<sup>th</sup> 2012 at the Bendigo Harness Racing Club.

Overseas speakers John Carr and John Deen will provide advice on controlling Porcine Circovirus

Associated Disease, calculating and benchmarking herd performance and preventing lameness in sows.

Local speakers Trish Holyoake and Tony Fahy will address strategies for improving piglet and weaner survival, including inducing/supervising farrowing and preventing post-weaning scours.

The event is sponsored by the Department of Primary Industries, Australian Pork Ltd, Pfizer Animal Health and Boehringer Ingelheim Vetmedica.

Registration costs \$30 which includes lunch and an afternoon networking session. For registration and further details contact Trish Holyoake pH (03) 54304412, mobile 0419231534.

## The Cost of not having backup ventilation in mechanically controlled sheds

*Trish Holyoake, Pig Health and Research Unit, Bendigo*

A farm manager recently received a corrective action when their APIQ auditor discovered the grower facility had no backup ventilation system.

Backup ventilation systems are a requirement of the Australian Pig Industry Quality Program (APIQ✓®)

The farm manager overcame her initial inertia to rectify the situation after it was pointed out that the cost is \$24,000 for every 100 finisher pigs that perish during an overnight power failure.

Under welfare legislation, sheds with automatically controlled forced-ventilation environmental systems (for example: shutters or fans controlled by temperature sensors) must have a backup power system and equipment that may be relied on to ventilate the housing in the event of a power failure or equipment malfunction.

With summer now upon us, it behoves us to ensure that all mechanically-ventilated facilities:

- (1) have facilities to alert piggery managers when a power failure occurs,
- (2) ensure there is backup ventilation,
- (3) the backup system is checked on a weekly basis to ensure it is functional.

Backup ventilation systems include alternative power sources (backup generators) and/or sufficient emergency air inlets that are triggered to open in the event of a power failure (eg. through magnetically-operated systems linked to the power supply).

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*Pigbytes* is a newsletter from the pig industry team at NSW and Victorian DPI.

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