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# Australian Pork

## NEWSPAPER

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Vol 18. No. 7 July 2014 Australian Pork Newspaper PO Box 387 Cleveland 4163 Phone (07) 3286 1833 Fax (07) 3821 2637 Email [ben@porknews.com.au](mailto:ben@porknews.com.au)



Darryl D'Souza, Australian Pork Limited; Angela Colliver, Angela Colliver Consulting Services; and Ben Stockwin, CEO Primary Industries Education Foundation launched the Australian Pork Industry Education Resources kit at the recent Pan Pacific Pork Expo.

## Australian pork hits the books in school curriculum

AUSTRALIAN schools are embracing agriculture with education around where food comes from and the role farmers play in producing the good, wholesome, nourishing and nutritious Australian food that appears on our plates.

Australian pork is one of the industries involved in supplying such food products.

At the recent Pan Pacific Pork Expo the Australian pork industry launched the Australian Pork Industry Education Resources kit.

In launching the kit, Australian Pork Limited general manager Research and Innovation Dr Darryl D'Souza said, "This educational resource is designed to improve student knowledge of where their

food comes from, how it is produced and ultimately the important role primary industries play in everyday lives."

"It combines the latest science with sustainability education to help school communities understand climate change and take positive steps to foster environmental sustainability."

Initiated by APL and supported by the Primary Industries Education Foundation, the Australian Pork Industry Education Resources recognises and promotes the fundamental role Australian pork farmers play in producing quality pork, tackling climate change and protecting the environment into the future.

"The Australian pork industry is committed in its efforts to educate stu-

dents about the many aspects of pork production, and projects such as the Australian Pork Industry Education Resources are yielding some very positive results," Dr D'Souza said.

"So far, participating schools that have piloted the educational resources are very excited about the results and the knowledge base left with the school and the children about agriculture."

"It is also very exciting and rewarding to see the way the students are engaging their families, friends and the broader community when sharing their learning experiences."

The resources are now freely available on the APL website at [australia.pork.com.au/library-resources/education-toolkit](http://australia.pork.com.au/library-resources/education-toolkit)

## Strategic pig planning, now for implementation

AS we transitioned from one financial year to another on July 1, Australian Pork Limited moved to a new Annual Operating Plan, and this one has some significant changes from the last.

The new AOP for 2014/15 is the first under our new APL Strategic Plan 2015-2020.

I presented some of the details behind our latest Strategic Plan at the recent Pan Pacific Pork Expo and have outlined below more information behind it.

We spent a lot of time consulting with producers about what they believed was important to improve our industry in developing the Strategic Plan.

These consultations lead us to three basic "truths" that underpin the content of the new Plan.

The first of these truths is that for many reasons Australian pig production is unlikely, in the foreseeable future, to ever be world's lowest cost.

This doesn't mean that we are bad at pig production; it does mean the business environment that we are operating in is not suited to low cost production on a global comparison.

This has much to do with our labour environment, reinvestment levels, a closed genetic pool and retailer preferred carcass size.

The consequence for us strategically is that we need to be able to differentiate our Australian pork from cheap pork produced in other parts of the world – not on the basis of price but on other attributes of our

pork represented through our Australian PorkMark brand.

These include our world's best product integrity systems built around the APIQ✓ quality assurance program, our superior animal welfare standards through the Shaping Our Future initiative and our significant progress towards low emissions production through our bioenergy systems on-farm.

The second truth is that despite more consistent and higher pig pricing over recent years, with higher grain prices, our industry profitability is not yet high enough to motivate enough reinvestment into the industry for sufficient increases in productivity levels and increased production levels.

For this reason, we envisage that industry sow numbers are unlikely to increase sharply over the next five years.

Pig production will however increase, but it will be more driven by some higher productivity levels on-farm (particularly pigs sold per sow per year) and very slow growth in carcass sizes.

With population increases over this time, pork available per capita is likely to be close to constant, meaning that any increase in demand (which our marketing programs are targeting) will result in a shift upwards in price, increasing the returns on assets required for motivating industry reinvestment.

The third truth is that with about 90 percent of our domestic production consumed in Australia,



### Point of View

by ANDREW SPENCER CEO



we are overly vulnerable to local market shifts and volatilities.

In parallel, we can see substantial opportunity in markets to our north, where pork is the preferred protein and where Australia is seen as a safe, healthy and natural producer of food.

This has in our new Strategic Plan led to a renewed focus on international market development – a combination of gaining access to likely future markets for Australian pork, as well as increasing our market understanding to give us the right positioning for our products into the future.

This will be targeting markets like China (or cities in China) as well as other parts of Asia where our differentiated Australian pork can support a higher premium demand.

These truths represent the key themes of the new Strategic Plan and many of the differences it contains in comparison to our old plan.

Many of the things we have been doing over the past five years have been very successful, and we don't plan to stop doing

them either, including our domestic promotional campaigns.

The Strategic Plan will be launched at a function in Canberra – Parliament House – in late August and we're hoping to have Agriculture Minister Barnaby Joyce perform this for us.

This will correspond with the availability of the Plan as an electronic document through the APL website.

Next month, I'll be able to detail more around the specific strategies contained within the Plan.

On a more sombre note, animal rights extremists, especially in Victoria, New South Wales and Queensland are ramping up activities around illegal farm break and enters.

Please be vigilant in keeping an eye open for anything unusual around your property and for that matter in the local district.

Do not engage with these people but instead call 000 in the case of a break-in, or contact your local police and report any unusual behaviour.

Until then, Happy New Financial Year...🐷

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## Pig Industry Calendar of Events

### 2014

**AUG 8 - 10** – The 9th Biennial Conference of AAA, Newcastle NSW E: androfest@newcastle.edu.au

**AUG 10 - 14** – The 12th International Symposium on Spermatology, Newcastle NSW E: androfest@newcastle.edu.au

**AUG 26 - 28** – Farm Progress Show, Boone, Iowa, US www.farmprogressshow.com

**SEP 8 - 12** – Joint ISNH/ISRP International Conference 'Harnessing the Ecology and Physiology of Herbivores', Canberra www.herbivores2014.com

**SEP 13 - 16** – Allen D. Leman Swine Conference, Minnesota, US www.cvm.umn.edu/vetmedce/events/adl/

**SEP 16 - 19** – SPACE, Reenes, France http://uk.space.fr/

**SEP 23 - 25** – VIV China, Beijing, China www.vivchina.nl

**OCT 15 - 17** – Vietstock 2014, Ho Chi Minh City, Vietnam www.vietstock.org

**OCT 16 - 17** – Biomin's World Nutrition Forum, Munich, Germany www.worldnutritionforum.info/wnf/index.html

**NOV 11 - 14** – EuroTier 2014, Hanover, Germany www.eurotier.com/

### 2015

**JAN 27 - 29** – International Production & Processing Expo, Atlanta, Georgia, US www.ippexpo.org

**MAR 11 - 13** – VIV Asia, Bangkok, Thailand www.vivasia.nl

**APR 14 - 15** – Victorian Pig Fair Inc, Bendigo, VIC E: aileen@acelabservices.com.au

**APR 22 - 24** – European Symposium of Porcine Health Management (ESPHM), Nantes, France www.esphm2015.org

**APR 23 - 25** – VIV India, Bangalore, India www.vivindia.nl

**MAY 7 - 9** – 6th European Symposium of Porcine Health Management, Sorrento, Italy www.esphm2014.org

**MAY 17 - 20** – Alltech Symposium, Lexington, US www.alltech.com

**MAY 19 - 21** – VIV Russia, Moscow, Russia www.vivrussia.nl

**JUN 3 - 5** – World Pork Expo, Des Moines, Iowa, US www.worldpork.org

**JUN 24 - 25** – International Symposium on Emerging and Re-emerging Pig Diseases, Kyoto, Japan www.emerging2015.com/

**SEP 16 - 19** – Space 2014, Rennes, France www.space.fr

**SEP 23 - 25** – VIV China, New China International Exhibition Center, Beijing, China www.vivchina.nl

### 2016

**APR 18 - 20** – Global Feed & Food Congress (GFFC), Antalya, Turkey www.ifif.org

**How to supply event details:** Send all details to Australian Pork Newspaper, PO Box 387, Cleveland, Qld 4163, fax: 07 3821 2637, email: ben@porknews.com.au

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# Measuring effectiveness of APL Capability Building Activities

IT'S that time of the year and the Australian Pork Limited Research & Innovation team is busily getting all 2013/14 milestones finalised and reviewing the 50-plus research proposals submitted for 2014/15.

#### Call for research

I would like to thank all the researchers who have submitted their proposals in response to our R&D priorities for 2014/15.

My apologies also to those who had a few technical glitches with our online submission system PigNet, but all were able to get through and submit.

The cause for the PigNet gremlins was a new software version upgrade.

We also changed things a bit for 2014/15, with instructions from the R&D Advisory Committee instructing APL to undertake a higher proportion of 'transformational research'.

The RDAC suggested each SG provide at least one transformational idea within their business plans and the researchers have stepped up and submitted a number of proposals to address these transformational priorities.

The review process is well and truly under way, and my thanks to all researchers and producers who have been called on to assist with these proposal reviews.

We hope to have the review done by the end of July 2014 and decision letters sent out soon after.

#### APL Industry Capability Activities

Getting back to research reports, APL has been



by **DARRYL D'SOUZA PhD**  
Research and Innovation  
General Manager



The RDAC suggested each SG provide at least one transformational idea within their business plans and the researchers have stepped up and submitted a number of proposals to address these transformational priorities. The review process is well and truly under way, and my thanks to all researchers and producers who have been called on to assist with these proposal reviews.

sending out R&D snapshots fortnightly and these can be found on our website.

With the end of the 2013/14 financial year, my thanks to all the researchers for their prompt delivery of research reports.

The completed research reports (reformatted) can be found via our APL website <https://australianpork.infoservices.com.au/>.

In this issue, I would like to focus on one research report "Measuring Effectiveness of APL Capability Building Activities" conducted by Greg Mills, GoAhead Business Solutions.

Historically APL has provided financial support to assist students to

undertake studies and on-farm work placements.

This project aimed to re-establish contact with the students and gain an insight into their experiences and views on pursuing a career in the Australian pork industry.

Of the 34 participants on the APL database, 22 participants for which current contact details could be obtained were contacted and indicated they would be willing to participate.

Of the 22 participants sent a survey, 20 completed or partially completed the survey.

A summary of the findings were as follows:

- About 74 percent of respondents were involved in pork programs in their undergraduate program, 21 percent in their graduate program, with 5 percent involved through another program

- About 20 percent of the respondents were employed by the pork industry, and 42 percent of those not employed by the pork industry indicated they were keen to get into it

- The respondent employment areas in the pork industry were nutrition, veterinary, sales and on-farm

- Of those respondents who have left the pork industry, about 45 percent were involved in the industry for over a year but less than five years

- About 40 percent did not feel that the career paths, wages and benefits will allow them to continue working in the industry throughout their career

- Most students had

good working relationship with the pork industry and felt well supported, with average scores of over eight (out of 10)

Conducting a study such as this has a number of shortfalls that seem to be synonymous with conducting surveys.

While a 59 percent survey completion is better than most, in this case given the small sample size, the impacts on the results can be quite telling and perhaps may not reflect the true result, so hanging one's hat on a number is fraught with danger.

Nevertheless, the information does provide good food for thought.

In reviewing the results from this survey, it is difficult to get a handle on what a good benchmark retention rate for the pork industry should be.

But my feeling is that these results are far from doom and gloom.

The fact that 20 percent are still employed by pork industry and 45 percent who left stayed with the pork industry for more than one year suggests that the pork industry has much to offer.

Also pleasing is that the pork industry is now attracting capability from other livestock industries (this had not been the case previously).

Equally, a number of APL and Pork CRC students are currently employed by other livestock industries in Australia and overseas.

In terms of recommendations, the report has suggested that APL needs to address a number of issues:

1. Increase contact with and networks between the pork industry and teachers and students;

2. Increase knowledge of the types and range of career opportunities within and supporting the industry; and

3. Develop strategies to increase retention of those who pursue a career within the industry.

So what are the next steps?

We will be revisiting the survey and contacting those who did not respond to the survey to encourage their participation.

In addition, our database has expanded significantly post-2012 and we will endeavor to contact these students.

Post-this survey update, APL will look into some of the recommendations made by Greg.

Equally, if you have any ideas I would really like to hear from you.

For further information on any of the topics discussed in this column, please do not hesitate to contact me on 02 6270 8804 or [darryl.dsouza@australianpork.com.au](mailto:darryl.dsouza@australianpork.com.au)

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# Grinding our way to greater grain gains

AS simple as it might seem, processing or grinding grain to a particle size that supports and encourages maximum pig performance, particularly feed efficiency, remains challenging.

A couple of surveys of producers and mills a few years ago by Peter Sopade, Sara Willis and Tony Edwards showed there wasn't really an average particle size across the industry, but a wide range, with the majority on the high to very high side (1.2mm and above).

This is caused by the mill used, condition of the mill and its rollers, screens and hammers and settings used, and nature of the grain being milled.

Until recently, I also think little attention was paid to processing grain and getting particle size somewhere near the level needed to enhance the efficiency with which the grain is used by the pig.

### Digesting data

Research by University of Queensland clearly showed that in the lab the digestion of starch in barley and sorghum fell from 100 percent to nearly 10 percent as particle size increased and the rate of decline with increasing particle size was greater for sorghum than barley.

When tested with pigs, we found that reducing the average particle size of sorghum from .83 to .53mm and barley from 1.03 to 0.7mm improved feed efficiency by up to 20 percent in weaners and up to 11 percent in growers.

In this case, the grains were milled through a hammer mill fitted with a 4mm screen and the larger particles were reground to give the lower average particles sizes.

The diets, containing 72 percent barley or sorghum, were fed as a mash or pellet.

### Timely Tony

Tony Edwards of Ace Livestock Services very recently looked at grain particle size under more practical circumstances and, for the Pork CRC for



## Initiatives

by **DR ROGER CAMPBELL**  
CEO



the first time, in finisher pigs.

He conducted three trials, each involving 1000 female pigs offered wheat /barley based diets from approximately 30kg live-weight to sale at approximately 100kg.

The whole diet was ground with a disc mill either at a coarse or fine setting.

A third treatment (medium) was created by blending the fine and coarse ground diets.

The grower diet contained 40 percent wheat and 25 percent barley, while the finisher diet contained 25 percent wheat and 35 percent barley.

Results of the three trials are summarised in Table 1.

Average particle size for the coarse and fine ground diets was 1.03mm and 0.55mm, respectively.

Except in one study where the fine ground grower diet was very finely ground (0.44mm average particle size), growth rate was not affected by grind size.

Pigs offered the finer ground diets ate less and had better feed efficiency than those offered the coarse ground diets.

The improvement in feed efficiency of 2.5 percent in growers ranged from a negative 0.3 (very fine ground diet) to plus 4.6 percent.

For finishers, average feed efficiency was improved by 5.6 percent and ranged from 2.6 to 7.9 percent.

The bigger response to finer particle size in finishers, also reported by others, may reflect a dif-

ferent rate of passage of digesta between growers and finishers and/or in this case, the higher level of barley in the finisher diet.

Previous research shows that barley responds well to finer grinding, or more correctly, the pig responds well to finer ground barley.

### Money making

Certainly some money is there to be made by getting it right, or at least getting average particle size closer to 0.6-0.7mm than to 1mm or above.

At the same time, the results suggest grinding too fine can adversely affect animal performance, so don't go overboard.

Tony also found that setting the mill at what you want doesn't always produce the desired grind size and you really need to measure particle size after milling.

I believe sieves for measuring particle size can be obtained (purchased) through David Rue at Vaucluse Livestock Equipment & Animal Production Services in SA on 08 8380 5672 and elsewhere I imagine.

With a disc mill and certainly in this case, the whole diet is ground, but we know that it is grinding the grain rather than the other ingredients and, in particular, the protein meals and byproducts that has the major effect on animal performance.

The exception is lupins, where the digestibility of energy and amino acids is markedly influenced (improved) by finer grinding.

### Sow story

I'd have thought grain particle size would have

little effect on energy utilisation by sows, but then again I thought the same thing about finisher pigs.

Results of a trial with lactating gilts fed a corn/soy diet, however, suggests otherwise.

Researchers used 100 gilts to investigate the effects on performance and apparent nutrient digestibility over 21 day lactation of grinding the corn to average particle sizes of 1.2, 0.9, 0.6 and 0.4mm.

The diets were all fed as a mash.

The largest particle size was created with a roller mill.

The three smaller size particles were achieved using a hammer mill, with different size screens.

Results (Table 2) showed feed intake and litter weight gain improved with decreasing particle size.

Most interesting, was the marked improvements in dry matter, gross energy and N digestibility with reducing particle size.

The digestibility of GE, for example, improved from 84 to 90 percent as average particle size declined from 1.2 to 0.4mm.

The latter was equivalent to increasing diet DE by 1.1 MJ/kg and the DE of the grain by 1.4 MJ/kg. The corresponding in-

continued P4



Sara Willis, DAFF Queensland has done surveys on grain particle size. She was at a Toowoomba sow housing workshop in April with Errol Hardwick, CT & MJ Davis, Chinchilla; Lester Handford, DHA Rural, Toowoomba; and Brenden McClelland, Belmont Pastoral Co, Bell.



Tony Edwards, Ace Livestock Services has recently been looking closely at the effects of grain particle size on finisher pigs, but at PPPE 2014 he was keeping a close eye on Pork CRC students as they presented their research before him and Pork CRC CEO Roger Campbell.

Grind	Coarse	Medium	Fine	P value
Average particle size(mm)	(1.06)	(0.81)	(0.55)	
<b>Growers</b>				
Daily gain (g)	840	840	810	0.228
Feed: gain	1.81	1.77	1.70	0.154
<b>Finishers</b>				
Daily gain (g)	960	951	960	0.709
Feed: gain	2.67	2.64	2.50	0.001

Table 1: Effects on the performance of grower and finisher pigs of coarse and fine grinding wheat/barley diets using a disc mill (results are averages of three studies)

Particle size (mm)	1.2	0.9	0.6	0.4	Significance
Sow feed intake (kg/d)	4.19	4.24	4.40	4.43	Linear 0.05
Litter weight gain (kg/d)	34.9	36.7	38.2	38.6	Linear 0.05
<b>Apparent digestibility (%)</b>					
GE	83.8	85.3	87.1	90.0	Linear 0.001
N	83.2	85.3	86.9	89.1	Linear 0.001
DE Intake (MJ/d)	57.3	59.0	62.3	65.3	Linear 0.001
Ulcer score*	1.3	1.4	2.7	1.9	Significant
*Ulcer score – 1=normal, 2=erosion, 3=ulcer and 4=severe ulcer					

Table 2: Effects on the performance and apparent nutrient digestibility of first litter sows offered corn soy diets over a 21 day lactation of average particle size of corn  
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The author's dad's helping hand was sadly too little too late for this little 'fella'.



The author's love of birds is inherited. Here his dad Ray, struggling for breath himself, looked on as a silvereye struggled as it took its last breath.

# Free ranging thoughts

A THOUGHTFUL colleague recently raised the issue of the impact that feral pigs might have on an expanding outdoor/free range pork industry, especially in WA's South West and

Great Southern.

Said colleague has a great grasp of all matters animal and a particularly practical perspective backed by his scientific training of how domestic animals, in this case pigs, might be impacted by ferals.

It's in that southern neck of the woods that Craig Mostyn Group (Linley Valley Pork) and Milne Agri-Group are cranking up their outdoor presence to satisfy identified increased demand from consumers and clear supply messages from super-market majors.

Indeed, it has been said by some commentators and industry players that WA's southern corner could be the outdoor/free range pork platter that serves the whole of Australia.

As a proud sandroper, I hope that eventuates because food marketing today is all about product differentiation and if we can get an edge, albeit by virtue of our geography and climate alone, so be it.

But I must admit to being a little disturbed when I heard one industry insider interviewed recently on radio suggesting that eagles (he'd have been referring to wedge-tailed eagles) posed a threat to the viability of outdoor/free range piggeries in WA's southern corner.

While the catch and kill capacity of these magnificent raptors has long been the subject of considerable angst and debate among sheep farmers, let's hope they don't become a target



**Cant Comment  
by  
BRENDON CANT**

for our pig farmers, who in my view should focus their eradication energies on feral dogs, foxes and pigs, which are more likely to wreak serious havoc on free roaming pigs, especially piglets.

Wedge-tailed eagles are often blamed for killing lambs and other young domestic animals and are therefore regarded as a pest by some pastoralists and sheep farmers.

In WA, bounties paid on

wedge-tailed eagles between 1928 and 1968 were abandoned when studies showed the numbers of lambs taken by eagles in the arid zone made up only a small proportion of the total lambs lost each year.

In fact, according to WA's Department of Environment and Conservation, these eagles play an important role in disposing of dead animals and controlling rabbits.

DEC recommends post-mortem examination of carcasses to establish if wedge-tailed eagles are killing healthy animals and it believes it's important to establish the cause of death of healthy animals because the actual cause of death may be overlooked if eagles are falsely thought to be responsible.

I understand wedge-tailed eagles are a declared pest of agriculture under provisions of the Agriculture and Related Resources Protection Act 1976 administered by DAFWA.

This declaration allows for the approval and implementation of a management program in various areas of the state.

As a native species,

the wedge-tailed eagle is protected under the provisions of the Wildlife Conservation Act 1950 administered by DEC.

While shooting wedge-tailed eagles is not permitted, damage licences may be issued by DEC to shoot to scare the eagles away from livestock.

The same applies to WA's unique white-tailed black cockatoos, but I know hundreds are shot by orchardists every year, leading to a dramatic decline in their population.

This, coupled with reduced nesting and feeding sites due mainly to clearing and land development, means these beautiful birds are moving methodically towards extinction at worst, or at best, numbers so low that viability will become problematic.

Agricultural production and the farmers who oversee it need to live responsibly alongside our native wildlife, especially those under threat (often due to agricultural development in the first place), realising that the land and its native inhabitants need to be valued and respected, even if that means their protection and survival is a cost of doing business. ☺

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## Drought does not hinder pork consumption

PORK and chicken meat consumption is on the rise as Australian shoppers buy less beef.

Lower import competition from the US and better prices are positives for pork.

Last financial year domestic pork production was at 357,000 tonnes, while year-to-date production is 2 percent higher than the same period last year.

Pork imports this year are tipped to fall 10 percent to 137,000

tonnes due to lower imports from the US, where drought and high feed costs have brought record pig prices.

NAB Agribusiness general manager Khan Horne said domestic pork consumption was expected to increase from 25.7kg a person in 2013-14 to about 27kg in 2018-19.

Mr Horne said chicken consumption had experienced a decade of uninterrupted growth.

He said relative to cattle and sheep, the pork and poultry industries

have been less adversely impacted by the ongoing drought conditions.

Chicken meat remains the most consumed protein in Australia, according to the latest National Australia Bank commodities report.

This stated that in 2013-14 Australians consumed 44.7kg of chicken a person, 1 percent higher than last financial year, to exceed total red meat (beef, veal, lamb and mutton) consumption of 41.9kg. ☺

## Grinding our way to greater grain gains

from P3

creased DE intake was 8 MJ per day.

DM and N excretion was reduced by 21 and 31 percent respectively.

The results confirmed with parity two sows show there is still much to be learnt and potentially gained on grain processing and maybe we've been concentrating too much on younger animals which consume the least amount of feed.

In the sow study, however, the incidence of ulceration of the oesophageal region of the stomach increased as particle size was reduced, so it is a balancing act.

Tony saw no evidence of ulcers (based on perform-

ance and general health) in his studies, which ran over 60-62 days.

Given the magnitude of the effects reported for sows, it seems worthwhile looking to see if similar improvements might occur with diets based on Australian grains and what might be added to more finely ground diets to reduce ulceration.

For further reading on grain particle size and milling, visit this link at our website, which discusses Giang Nguyen's Pork CRC PhD topic 'Influence of particle size and size distribution of cereals and pulses on digestibility and growth performance of pigs' [gram-4-student-profiles/  
\*\*Tech topic\*\*](http://porkcrc.com.au/research/program_4/pro-</a></p>
</div>
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I did send out a technical alert and report on Tony's study.

If you're not on my technical alert list and want to be, send your email details to [roger.campbell@porkcrc.com.au](mailto:roger.campbell@porkcrc.com.au).

We only send alerts when we think the information is meaningful, that is, might make you more money or have welfare and production implications.

It comes with a summary and what we think the implications might be.

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# Australian bacon at sunrise

IT'S not normal for me to describe activities rather than outcomes, so here's the exception that proves the rule.

Hungry men and women in Sydney's Martin Place were faced with two bustling barbecue stations offering rolls.

One side was offering bacon made from 100 percent Australian pork, while the other offered bacon made from imported pork.

The bacon and egg roll cook-off asked commuters to decide if they wanted to buy a roll with Australian bacon for \$2.50 or cheaper imported bacon for \$2.10.

Andrew Spencer was quoted as saying: "The result was resounding sup-



## Marketing Matters

by **PETER HAYDON**  
General Manager Marketing



port for our pork farmers and bacon makers.

"This shouldn't be a surprise, as they are hard working people, passionate about what they do in relation to environmental stewardship, animal welfare, biosecurity, food safety and integrity.

"Australian consumers prefer to know where their

food comes from and the high standards our farmers need to meet in an effort to place good quality fresh Australian produce on consumers' plates."

Demand for the Aussie bacon was constant and the results were clear: 1162 rolls with Aussie bacon were sold while 119 with bacon made from

imported pork.

An APL team including Liam Silk, Mitch Edwards, Eunbi Lee and Katana Smith worked together to maximise publicity.

This ended up with Mitch Edwards talking on Channel 7's *Sunrise* program.

Australian Bacon Week ran through until Saturday, June 28, 2014, with people encouraged to get involved by buying Australian bacon, which can be identified in store by the pink PorkMark, the words Product of Australia or the Australian Grown logo.

To view the Channel 7 *Sunrise* coverage, go to <http://youtu.be/ukNyrn-PqGYo>

# Is your farm a target?

IF you are a pork farmer you should expect that you and your farm will be on the animal activists' hit list.

There have recently been a number of reports of suspicious activities around southeast Queensland involving the sighting of drones flying over a number of intensive farming operations and people camping out in the back of a four-wheel-drive vehicle, with the suspected intent of gaining access to properties.

The people involved in these illegal farm raids have no real interest in animal welfare and just want to stop you from farming animals for food.

Their raids cause extensive damage to property and your animals' health, as well as the emotional impact on you and your families' lives.

Pork Qld Inc. worked closely with Australian Pork Ltd in this last incident to quickly advise farmers with emails and phone messages of the suspicious activities identified by a number of Queensland producers, which proved successful in raising producers' attention.

While no invasions of properties have been uncovered in this last incident, it is often months after that we see footage being posted on activ-



## President's Perspective

by **JOHN COWARD**



ists' websites.

PQI encourages all producers and their employees to report any suspicious activities in their region and the information can then be passed on to pork producers and other intensive livestock farmers.

The more on alert you are the greater the chance of limiting their illegal activities.

You can report any activity to me on 0407 622 166 or Emily Macintosh at APL on 0418 697 595.

If you identify any invasion or trespass activity occurring on your farm, first contact police (call 000) and state to the operator: "There are trespassers on my farm now and I require police to attend now".

It is a good idea to make prior contact with your local police and structure a response and support plan in the event you have need in the future.

If you pay a slaughter levy you are eligible to become a member of APL by signing a statutory declaration.

You will then have access to a copy of the Toolkit, among a number of other positive services available to APL members.

Producers who are members of APL should hold a copy of the APL Farm Invasion Toolkit, which has been designed to assist APL members better prepare for the impact of activist invasions on-farm.

To view the Toolkit, go to [pigpass.australianpork.com.au](http://pigpass.australianpork.com.au).

Please use your APL member number or alternatively your PigPass Portal login details to access the Toolkit within the APL member section of the website.

As a result of increased activities by activists, many producers have now installed cameras and alarm systems to alert them of any after-hour activity.

This is a timely reminder to all pork producers to ensure they proactively meet their animal welfare obligations and ensure the security of their farms is on high alert.



## PROUD TO BE A PIG PRODUCER

Chris Richards and Associates are extremely proud to congratulate Western Plains Pork and RPC Glengallan for their winning entries in the inaugural Proud to be a Pig Producer competition. Their exceptional efforts were recognised in front of 230 industry representatives at the Trotters and Trifectas racing extravaganza held at the Crowne Plaza, Gold Coast, in May.

The first ever Proud to be a Pig Producer competition attracted an outstanding field of entrants showcasing industry innovation, excellence, diversity and pride. Entrants were presented at the Chris Richards and Associates Partnership Program Conference in the lead-up to the gala event. All are to be congratulated for their excellence.

Winning entrant Western Plains Pork shows excellence in innovation, with their world-first adaptation of an automated indoor feed delivery system to meet the unique requirements of their outdoor, bred free range operation. Solar power and RFID tag technology complement the system, creating a product that optimises health, welfare and energy efficiencies.

RPC Glengallan Piggery raises the bar for human resource management, with a combined 150 years of service within their dedicated team. Friendship and support dating back to the 1980s, a strong commitment to training and advancement, and a bit of fun on the side via their active social club, underpin a strong, stable human resource base, with negligible staff turnover.

Chris Richards and Associates Partnership Program members, along with special guests from APL, enjoyed an exciting evening of racing hosted by MC Gerry Gannon, in the Grand Ballroom of the Crowne Plaza Hotel on May 20th.

Supported by Chris Richards & Associates





## Higher mortality of low birth weight pigs

NEW results from the Danish Pig Research Centre show 60 percent of pre-weaning piglet deaths occur in the first four days, with crushing by the sow and general small size and weakness the main reasons for mortality.

Recent work in Denmark looked at the cause of death in 1465 pre-weaned piglets.

Denmark, which has highly prolific sows, has a pre-weaning mortality rate of about 13 percent as a percentage of live-born piglets.

And according to 2013 data, if stillborn piglets are included the rate climbs to 21.8 percent.

In the latest study, researchers divided the pre-weaning period into three segments:

- Days 1-4 (about 850 casualties, 59 percent of total);
- Days 5-11 (about 300 casualties, 21 percent of total); and
- Day 12-weaning (just under 300 casualties, 20 percent of total).

Much of the pre-

weaning mortality was caused by crushing, and in the first four days after farrowing it amounted to about half the deaths.

Another causal category was non-viable pigs, or piglets born weak, immature or with a birth weight below 700g.

The study suggested a 700g birth weight is critical because at this size 60 percent of piglets will not live, whereas at 800g mortality is just under 40 percent.

At a birth weight of 300-400g, none of the piglets survived.

Average birth weight in the study was 1.32kg, with 1.37kg being the average birth weight of those piglets that survived all the way through to weaning.

Other categories named by researchers were sepsis, hernia, trauma, arthritis, starvation and enteric disease.

Sepsis proved to be one of the major causes of pre-weaning mortality in the later phases of farrowing.



# Verdon verdict on sow aggression

AFTER a brief stint as an industrial chemist, Megan Verdon returned to University of Melbourne to complete a Post Graduate Diploma in Animal Science with the Animal Welfare Science Centre.

Following this, she commenced her Pork CRC/APL funded PhD supervised by Prof Paul Hemsworth and Dr Rebecca Morrison, examining the relationship between individual variations in sow aggression and sow welfare.

Specifically, she was interested in the identification and protection of vulnerable sows in group-house systems.

Megan has now been studying sow aggression for almost five years and earlier this year submitted her thesis on this topic.

This year she was awarded the Department of Agriculture, Fisheries and Forestry 2014 Science and Innovation Award, supported by APL.

The funded project examined the effects of pre-weaning socialisation on aggression and injuries when young pigs are mixed post-weaning.

### Sow welfare

Confinement housing of gestating sows is subject to increasing community concern and has led to legislative, consumer and retailer pressure to increase the use of group housing of gestating sows.

International industry experience, however, indicates that the opportunity for group housing to improve sow welfare may be limited by high levels of

**'Sow aggression in groups: predicting and implications for sow welfare'**



Megan Verdon: Pork CRC PhD candidate, University of Melbourne

Supervisors: Prof Paul Hemsworth, Animal Welfare Science Centre and Dr Rebecca Morrison, Rivalea Australia

aggression that are commonly observed when unfamiliar sows are mixed, or if sows are required to compete for resources such as space and food.

High and prolonged levels of aggression may negatively affect sow welfare and reproduction by increasing the occurrence of injury and stress.

Consequently, reducing aggression between commercial group-housed sows has become one of the main challenges facing animal welfare scientists and pork producers alike.

### Individual sow

While group housing of sows allows all more freedom of movement, exploration and socialisation, a few sows may suffer from excessive aggression, injuries and stress.

These few animals that have the most severely compromised welfare and reproduction may remain undetected in groups.

If sows at risk of underperforming, in terms of reproduction, removal and welfare, can be identified, there may be opportunity to develop strategies that better protect such vulnerable sows.

There is limited evidence in young pigs that group composition, in terms of aggressiveness, affects overall welfare

and performance of the group.

For instance, a particularly aggressive sow may have a disproportionately large effect on the welfare and behaviour of other sows in the group.

However, we're yet to understand the effects of group composition on aggression and welfare in the sow.

### CRC project

The first study of this Pork CRC project categorised sows, in both their first and second parities, as submissive, subordinate and dominant, based on their aggressive behaviour and examined the relationships between sow classification, aggression and welfare.

It was found that individual sows vary consistently in their aggressive characteristics, both during and between gestations.

Further, the aggression delivered by dominant sows and the aggression received by all sows reduced with multiple feed drops.

Once a hierarchy is established after mixing, dominant sows had a reduced risk of receiving aggression and hence reduced injuries.

They were also more likely to gain greater weight and experience less stress.

While subordinate and submissive sows were comparable in terms of aggression received, live weight gain and reproduction, subordinate females were more likely to experience greater stress, but submissive females had more injuries later in gestation.

These results suggest that variation exists between individual group-housed sow in terms of their aggression and consequently welfare and productivity.

Submissive sows are likely to benefit from increased access to resources such as space, food and water.

Megan next examined predictive tests of individual sow aggression in mixed parity groups using the best of test to manipulate group composition, forming groups of sows predicted to be high or mixed aggression.

However, there were no effects of group composition on aggression delivered or received, injuries, cortisol concentrations, reproductive performance, or non-reproductive removals in the group as a whole.

The lack of effect of group composition on the behaviour, welfare or productivity of the group suggests older, more experienced sows are more aware of their own fighting abilities and effective in assessing the fighting ability of others.

Consequently, the aggressive behaviour of sows is flexible, changing with social experience and group composition.

This particularly emphasises the role of social experience in the development and regulation of aggression in the sow.

### Community concern

Although community concern is currently focused on confinement systems, with the corresponding move towards group-housing sows, community concerns regarding high levels of aggression may become prominent.

It is important for the pork industry to remain proactive in addressing such developing community concerns.

This research highlights to the industry the importance of recognising the individual when considering sow welfare and management, particularly if the welfare of the most



Megan Verdon

vulnerable sows is going to be protected.

Such implications for the individual may also apply to other industry welfare issues, for example, transportation and slaughter, fear of humans and stockmanship and resilience following painful husbandry procedures (for example, tail docking).

These results also raise an important question – can the welfare of the most vulnerable sows practically be improved through an increased provision of resources (that is, food, straw, space, barriers, kennel areas and similar)?

In such cases, some 'threshold' may need to be reached at which extra provisions stop being monopolised by dominant sows and are increasingly available to subordinate sows.

Understanding the development of sow aggression is imperative to reducing aggression, injuries and stress.

Socially experienced sows will assess the likelihood of winning an aggressive interaction based on their own genetic predisposition, the physical and aggressive characteristics of their competitor, and their success in prior aggressive encounters.

Interactions with older sows throughout adolescence may be integral to the development of social skills in sows, but there may be less potential for group manipulation to be used as a strategy to reduce aggression and improve sow welfare.

To contact Megan Verdon, email [meganjverdon@gmail.com](mailto:meganjverdon@gmail.com)



Megan Verdon (right) at PPPE 2014 with fellow students (L to R) Lauren Roberts, Anthony Martyniuk and Taya Clarke.

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# Misleading claims by Barossa Farm Produce

THE Australian Competition and Consumer Commission has accepted a court-enforceable undertaking from Barossa Farm Produce Pty Ltd for false or misleading representations and misleading or deceptive conduct in contravention of the Australian Consumer Law.

Barossa Farm Produce has acknowledged that representations made on its product labelling, websites, social media and at a particular cooking class were likely to have contravened sections 18 and 29(1)(a) of the ACL.

Between about December 9, 2010 and May 28, 2013, Barossa Farm Produce made various false representations that the pork used in its The Black Pig smallgoods was from heritage Berkshire pigs, other heritage black pig breeds and/or free range pigs.

Black pig breeds, which include Berkshire pigs, are heritage breeds.

Berkshire pork is known for its texture and flavour due to a higher fat-to-meat ratio than white pig breeds, qualities that make Berkshire pork a premium meat product.

Barossa Farm Produce's sole director Saskia Beer also made representations at an Autumnal

Cooking Class held at the Maggie Beer Farm Shop in April 2013 that the pork used in The Black Pig smallgoods was from Berkshire or other black pig breeds, when that was not the case.

A statement made on the websites [www.saskiabeer.com](http://www.saskiabeer.com) and [www.barossafarmproduce.com](http://www.barossafarmproduce.com) that "we know the origin of every animal that makes its way onto the plate" in relation to The Black Pig smallgoods was also misleading, as Barossa Farm Produce did not in fact know the origin of every animal used in those products.

Barossa Farm Produce has provided the ACCC with a court-enforceable undertaking that it will not make any representations:

- about the breed or type of pigs used in Black Pig labelled smallgoods, in circumstances where it does not know the breed or type of pigs used; and
- that it knows the origin of every animal used in the production of Black Pig labelled smallgoods, in circumstances where it does not know the origin of every animal used.

ACCC chairman Rod Sims said a business must not make claims about the characteristics of its products when it has no reasonable basis

for doing so.

"False credence claims in respect of food products are a priority area for the ACCC," he said.

"Barossa Farm Produce made false or misleading claims that Berkshire, black or free range pork was used in its Black Pig products, when this was not the case.

"This had the potential to give Barossa Farm Produce an unfair advantage in the market, as consumers are likely to seek out and pay more for products containing specialised gourmet ingredients."

As part of the court-enforceable undertaking, Barossa Farm Produce has also:

- acknowledged that it did not have adequate systems in place to verify the breed or type of pig used in The Black Pig smallgoods;
- undertaken to review its compliance systems to ensure such conduct does not reoccur; and
- undertaken to publish a corrective notice on its website and ensure that its current directors attend trade practices compliance training.

A copy of the undertaking is available on the ACCC's public register at [registers.accc.gov.au/content/index.phtml/itemId/1179205](http://registers.accc.gov.au/content/index.phtml/itemId/1179205)

# The Ron Collins Memorial Travel Scholarship winner

AUSTRALIAN Pork Limited and the Pan Pacific Pork Expo Committee are proud to announce Emalyn Loudon as winner of the Ron Collins Memorial Travel Award for 2014.

Emalyn is the technical services manager for Westpork Pty Ltd – a 10,000 sow operation in Western Australia.

Her role involves managing quality assurance, welfare benchmarking, research and development, and staff training across Westpork's 12 farms.

The Ron Collins Memorial Travel Award has been designed to assist a person involved in any aspect of the Australian pork industry to travel overseas and further investigate a topic that must be innovative and of benefit to the industry.

The total award is valued at up to \$10,000.

Welfare benchmarking in Australia has been identified by industry as being important to the continual improvement of animal welfare on-farm.

Emalyn developed the Westpork-specific assessment protocol and recording system that benchmarks on a monthly basis across 10 farms.

This work is seen as being progressive in demonstrating the industry's ongoing commitment to welfare.

The UK pork industry is currently the only industry implementing welfare benchmarking on a broad scale.

Emalyn will use the grant to travel to the UK to meet with industry bodies and producers to see how benchmarking works for the British pork industry, gain an understanding of the drivers for welfare benchmarking in their industry, and gain insight

into how producers share benchmarking data.

While in the UK and Europe, she will also meet with researchers to gain a better understanding of the range of indices available and how they reflect welfare status, as well as attend the 6th International Conference on the Assessment of Animal Welfare at Farm and Group Level taking place in France in September 2014.

The insights gained by Emalyn on this trip will ensure Australia remains at the forefront of welfare assessment and the ongoing positive changes that can be adopted by the Australian pork industry.

Emalyn has been involved with the Australian pork industry since 1997.

Having worked in both production and industry positions (state and national), she has gained a solid understanding of issues facing the pork industry and has made, and will continue to make, a significant contribution to individual businesses and the industry as a whole.



Wayne Bradshaw, Jefe Australia; Emalyn Loudon, 2014 Ron Collins Memorial Travel Award winner; John Coward, PPPE chairman; and Ben Collins, Australian Pork Newspaper.



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Figure 1

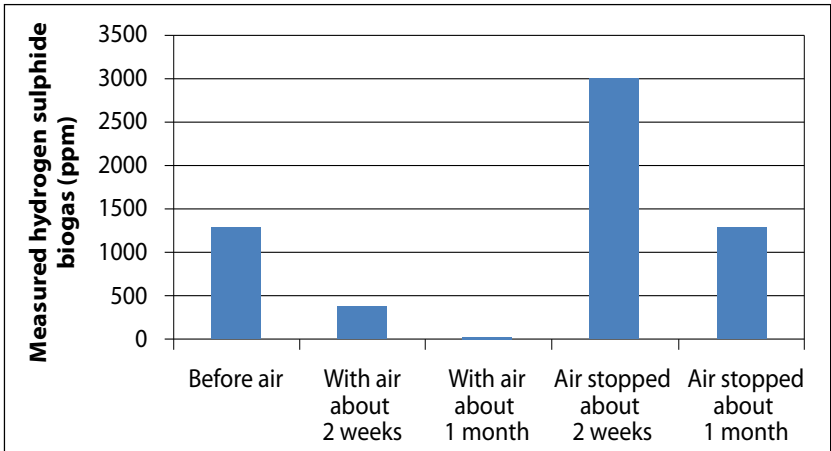


Figure 2

# Cleaning up biogas

THIS month we consider different ways piggery biogas is cleaned of corrosive hydrogen sulphide, with reference to a literature review by Alan Skerman, Agri-Science Queensland, Department of Agriculture, Fisheries and Forestry for his Pork CRC supported Masters research at University of Queensland.

Piggery biogas is collected from a pond or a digester and before it is sent to a boiler or generator to recover useful energy it is often cleaned of hydrogen sulphide, which otherwise affects engine oil and corrodes metal components.

This cleaning of biogas can lengthen the life of a boiler and/or generator fuelled with the biogas.

Obviously, the cost-savings of delayed maintenance and replacement of a generator/boiler has to justify any additional cost/expense associated with cleaning the biogas.

Available data suggests piggery biogas has 800-3000ppm of hydrogen sulphide (0.08-0.3 percent by volume), which seems low, but is most often higher than a typical recommended maximum hydrogen sulphide level for boilers (<1000ppm) and engine generators (100ppm).

Hydrogen sulphide is also highly toxic above 300ppm and can harm human health above 10ppm.

There are many ways piggery biogas can be cleaned of hydrogen sulphide.

The bar graph is an overview.

The balance of this column will discuss two of these methods in more detail.

## Iron scrubbing

The most common technique for hydrogen sulphide removal at piggeries in Australia and New Zealand is where biogas is contacted with a solid medium containing iron oxide, which then reacts with the hydrogen sulphide to form a black



by **DR STEPHAN TAIT**  
Pork CRC Research Fellow  
Bioenergy Support Program



deposit on the solid medium, removing it from the biogas.

This medium is contained in a vessel commonly known as a 'scrubbing vessel', through which the biogas is passed (see Figure 1).

The chemical reaction that occurs is: iron oxide (brown orange) + hydrogen sulphide → iron sulphide (black deposit).

Because the reaction with hydrogen sulphide turns the iron from a brown orange reactive form to a black non-reactive form, the medium eventually is no longer effective and can be taken from the vessel and spread in an open paddock to contact with air, which turns the unreactive iron back into reactive iron.

This regenerated medium can then be added back to the scrubbing vessel to do more biogas cleaning.

Unfortunately, contact with air also makes yellow sulphur powder, which eventually blocks the pores of the medium so that it becomes ineffective and does not have indefinite use.

Eventually the spent medium has to be replaced with new purchased medium and the maintenance and cost of the new medium is a consideration. Commercial providers of the scrubbing medium include SulfaTreat, Sulfa-Bind (see Figures 3 and 4), Sulfur-Rite, Media G2, SulfaMaster and others.

Commercial media are commonly imported from China and can attract a

significant cost (\$6312-\$43,200/year excluding labour) for a 700-1500 sow installation, which consumes a large proportion of the financial incentive of delayed maintenance/increased equipment life.

Consequently, Pork CRC funded research has looked for cheaper media alternatives, including slags and by-products of steel and paper industries, specific fractions of aggregate, earths, sands and others, some of which are being trialled for performance in Alan Skerman's Masters project.

## Biological scrubbing

It is very common for digesters abroad to have small quantities of air added into the biogas headspace inside the digester.

Natural microbes present on the inside roof surface and on the liquid level of the digester, then scavenge the oxygen in the added air and consume the hydrogen sulphide in the biogas headspace.

This can reduce the hydrogen sulphide in the biogas from 3000ppm to 50-100ppm.

The quantity of added air has to be kept small, at around 4-6 percent of the biogas flow that is being extracted from the digester.

This is extremely important because adding too much air to the biogas makes a dangerously explosive mixture.

Also, the added air dilutes the biogas methane content.

Recently, there has been a trial adding air into the headspace biogas of a covered lagoon.

A very small amount of air was added (similar to proportions given above) with a small aquarium air-pump (negligible cost) and it was attempted to distribute the air evenly via multiple inlet points

across the large cover area.

The bar graph (Figure 2) gives some performance data for this trial and shows that the hydrogen sulphide was removed very effectively to very low levels of about 2.5ppm (detection limit of the instrument).

In fact, the producer who did the test was so surprised at the performance he immediately repeated the test and measured the same value again!

Unfortunately, as the data in the figure also shows, when the air supply was switched off the hydrogen sulphide concentration climbed to a higher level of 3000ppm than what was typical previously.

This might be because sulphur had been accumulating under the cover and this sulphur then became hydrogen sulphide again when the air supply was switched off, creating extra sulphur load, which increased the concentration of hydrogen sulphide.

Consequently, the producer is now considering adding air to the biogas after it leaves the covered lagoon and then allowing it to react with biology in a vessel containing an inert packing media.

Unlike iron oxide media, an inert media does not become spent, although it may require a clean-off very infrequently to get rid of a slime layer and sulphur from its surface.

The maintenance cost is likely to be substantially lower than iron oxide based scrubbing.

Several firms are trading this concept in the form of somewhat costly proven proprietary technology packages, namely BIOREM, THIOPAQ and others.

For more information, contact Stephan Tait on 0466 699 817 or email [s.tait@uq.edu.au](mailto:s.tait@uq.edu.au)

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Figure 3

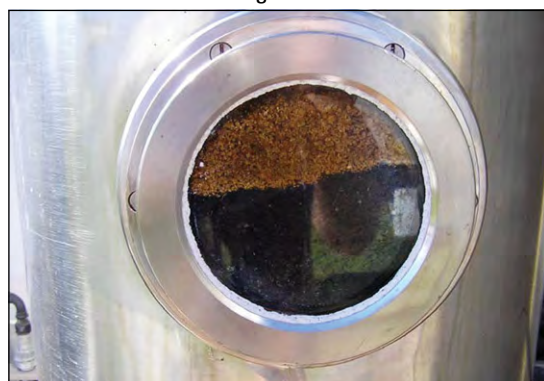


Figure 4

[www.porknews.com.au](http://www.porknews.com.au)



# Pork CRC project leader profile

- Pork CRC Project 1C-108: ‘The sensitivity of sows to stressors throughout gestation’
- Pork CRC Project 1C-111: ‘Effects of group housing after weaning on sow welfare and sexual behaviour’

JEAN-LOUP Rault from the Animal Welfare Science Centre, University of Melbourne, leads two Pork CRC Innovation projects, as well as doing research for Australian Pork Limited.

Jean-Loup started at the Animal Welfare Science Centre in 2012 after completing his PhD from Purdue University, USA and two Masters of Science from France, one in Animal Science and the other in Animal Behaviour.

His PhD studies concentrated on aspects of the social behaviour of growing pigs.

His current position at AWSC covers pig and poultry welfare research, which is supported by the respective industry funding bodies.

Jean-Loup’s pig research program focuses on two components: social behaviour and humane methods of euthanasia.

**Social behaviour**

According to Jean-Loup, pigs are truly social animals, as evidenced by how much they interact.

This social nature can assist and hinder the way they are managed.

Most of us are well aware of the advantages and disadvantages of housing gestating sows in group, including lower feed requirements on one hand, but competition and possible injuries on the other.

The ultimate goal is to maximise the benefits, while reducing unwanted aspects such as aggression, competition for feed and space, or tail biting.

**Mixing sows**

Jean-Loup’s most recent Pork CRC project looked at mixing sows in groups at weaning, or within two days after insemination.

The ongoing pressure against the use of gestation stalls and the more recent push from some retailers to prevent the use of mating stalls between weaning and mating makes it a pressing topic.

While there is now considerable scientific knowledge about grouping sows after mating, there is very little research on mixing sows right after weaning.

The US and the EU still allow gestation stalls for four to six weeks post-mating.

This Pork CRC project, on a commercial farm, showed that sows weaned into groups may be able to perform quite well.

Nevertheless, there was more variability in the performance of group-weaned pens than sows housed in stalls immediately after weaning: some groups did extremely well with nine of 10 sows mated, but in other pens only five or six sows out of 10 were mated within five days of weaning.

The results suggested this may be linked to the higher aggression and stress levels in group-housed sows between weaning and mating.

Oestrus behaviour was also less obvious, emphasising that efficient heat detection protocols may be the key to managing sows weaned into groups; a phenomenon that has also been observed on farms converted to group weaning.

This project was conducted using industry best practices for sows weaned into groups, that is, 4.4sq m per sow, full length body stalls for feeding and 8kg of feed per sow daily.

Results could vary in other management systems.

**Timely space**

Another Pork CRC project led by Jean-Loup looks at the sensitivity of sows to stressors throughout gestation.

The best time and the best way to mix sows are still controversial.

A previous large Pork CRC project led by Prof Paul Hemsworth showed that increasing space allowance from 1.4 to 3sq m per sow reduced aggression.

However, these differences in aggression and cortisol disappeared by day nine after mixing.

There may be two reasons: sows may adapt

to smaller space allowance by changing their social strategies, or the stress response of sows is modified during early pregnancy, a phenomenon reported in rodents.

This project’s first experiment looked at the adaptive ability of sows, with results showing that they change their social behaviours according to the space available: social interactions at 1.45sq m per sow were more aggressive than at 2sq m and 2.9sq m.

Interestingly, interactions were also less frequent as space reduced: sows avoided interacting with other sows in small spaces because this more often resulted in bites, knocks and pushes, whereas large spaces allowed for nose to nose contact and other less aggressive means of getting to know each other.

If you can’t increase the space available, adding visual partitions or spreading resources may reduce aggression soon after mixing.

This is what scientists call the ‘quality of space’.

The second experiment, which investigates the possible changing stress response in early pregnancy, finishes soon.

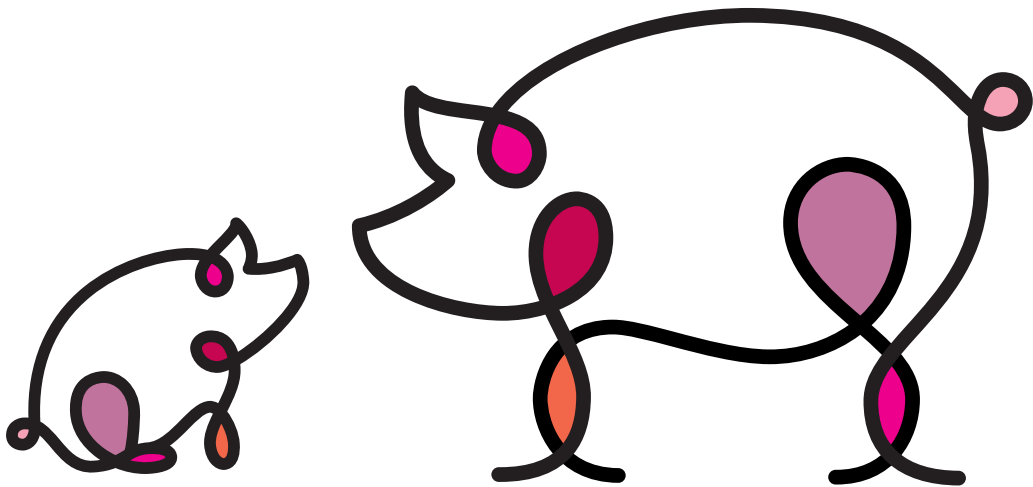
This highly innovative study investigates the role of a newly studied brain hormone, allopregnanolone, which comes from progesterone produced in early pregnancy.

It may explain why sows become less responsive to stressors as gestation progresses, since this hormone is recognised for its sedative effect in other species.

continued P10



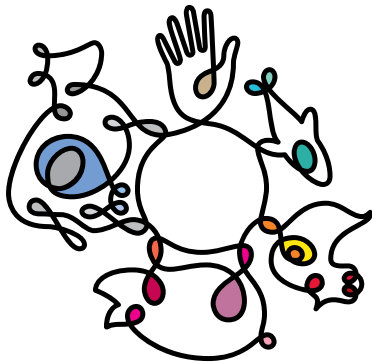
Dr Jean-Loup Rault from the Animal Welfare Science Centre, University of Melbourne leads two Pork CRC Innovation projects.



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Dr Jean-Loup Rault addressed the Pork CRC/APL Successful Group Housing Systems for Dry Sows workshop in Toowoomba where he recommended that in order to limit unwelcome aggression between sows mixed at weaning, producers should consider using feeding stalls, distinct mating stalls and make efforts to limit sexual interaction by dominant sows over submissive sows.

[www.porknews.com.au](http://www.porknews.com.au)



# Tassie forces join to promote pig industry

THE Tasmanian Farmers and Graziers Association and Tasmanian Island Pork Alliance recently joined forces to promote the pig industry during Bacon Week.

The week celebrates the much-loved meat and draws attention to the competition that local bacon faces from imported products.

TFGA chief executive Jan Davis said that while bacon remained a key ingredient for lazy Sunday breakfasts and menu favourites like carbonara and BLTs, more than two-thirds of the bacon sold in Australia was made from imported, subsidised pork.

“Bacon, ham and other smallgoods made with Australian pork can be identified by looking for the pink PorkMark or the words Product of Australia,” she said.

TIPA chairman Geoff Terry said top-quality locally produced pork was



available across the state.

“It’s also now in Woolworths, which has made a commitment to stock certain cuts of Tasmanian pork - just look out for the pink sticker Fresh from Tasmania,” he said.

“On an international scale, Australians are lagging behind in their consumption of pig meat products.

“The challenge we face has been set by the Austrians, where they each con-

sume an average 65.6kg of pig meat every year.

“On average, we eat only one-third of that - 21.7kg.”

Mr Terry urged shoppers to make sure they included meals featuring pork and bacon and remembered to buy local, eat local, and support their local farmers and butchers.

Tasmania has about 50 pig farms raising about 13,000 pigs and producing 2150 tonnes of pork a year.

## Pork CRC project leader profile

from P9

If this hormone does explain why gestating sows react less intensively to social stress, tracing the naturally increasing secretion of this hormone in early gestation could help determine the best time to mix sows with minimal stress for sows and producers.

On side

Jean-Loup also pursues other research projects of interest to the Australian pork industry, studying alternative methods for piglet euthanasia for the US National Pork Board, as

blunt force trauma is losing social acceptability in the US, the use of oxytocin to alleviate some of the stress of weaning in piglets for APL, and understanding the fundamental basis of social behaviour for University of Melbourne, still using the pig as a research model.

Jean-Loup invites discussion with anyone involved in the pig industry and believes on-farm observations are the basis of good and useful research.

Pig welfare today is an opportunity for Australian producers to dif-

ferentiate in the market.

It can also enhance connections between producers and their animals, or at least put the best skills and knowledge on paper to teach the neophyte.

Jean-Loup sees his exciting future as becoming even busier, as he continues to research and bring innovative solutions in implementing new husbandry and housing systems that support high integrity Australian pork.

To contact Dr Jean-Loup Rault, email [raultj@unimelb.edu.au](mailto:raultj@unimelb.edu.au)

# The sizzle celebrated with Australian Bacon Week

TASTEBUDS were tempted as the aroma of sizzling bacon filled the air when households and restaurants across the nation got behind Australian Bacon Week.

The week ran from June 22-28 and is an initiative to celebrate the much-loved meat but also draw attention to the competition that local bacon faces from imported product.

While bacon remains a key ingredient for lazy Sunday breakfasts and menu favourites such as carbonara and BLTs, more than two-thirds of the bacon sold in Australia is made from imported, subsidised pork.

A range of innovative products were created for Bacon Week as top chefs, craft brewers, favoured dessert bars and local restaurants got behind the initiative.

Products including a bacon creation from Adriano Zumbo Patisserie and Gelato Messina's Bacon Gelato, the Rocks Brewing Company's Bacon Beer and Eau De Vie's Bacon Bourbon were served throughout the week, alongside favourites such as bacon and egg rolls.

Bacon, ham and other smallgoods made with Australian pork can be identified by looking for the pink PorkMark or the words Product of Australia.

Australia's bacon has also been

put to the test, with this year's Australian Bacon Awards attracting 125 entries.

These were independently judged over two days by fleischmeister Horst Schurger, who has a master's degree in butchering and smallgoods, and top chefs Paul McDonald and Simon Bestly, who have broad international experience.

Pialligo Farm Smokehouse, ACT took out top honours, with its Full Rasher Smoked and Dry Cured Bacon named Australia's Best Artisan Bacon.

The judges said it had a very nice appearance, a subtle sea salt flavour

with a hint of brown sugar and a delicious, slightly smoky aftertaste.

In addition to the Full Rasher and Shortcut competitions, a new Nationally Available category was introduced to recognise the top Australian bacon available right across the country.

The new category attracted positive interest from bacon producers, with Bertocchi Smallgoods taking the inaugural title for its Australian Hickory Smoked Pan Size Bacon, which is currently only available in Coles supermarket delis.

Judges said it was a well-presented bacon with excellent texture and balanced taste.



Mitch Edwards from Australian Pork Limited (centre) with Charlie Costelloe and Peter Curry from Pialligo Farm Smokehouse, officially Australia's Best Bacon.

### Australian Bacon Week Winners

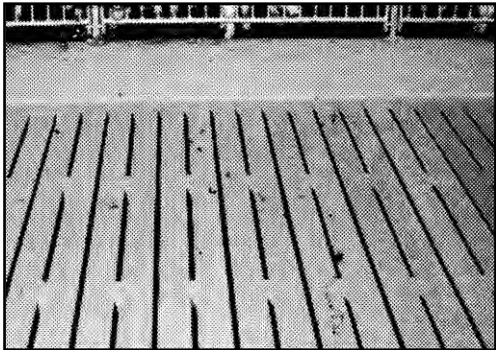
Category	Place	Name	Location	Contact
Australia's Best Artisan Bacon	First	Pialligo Farm Smokehouse	ACT	Charlie Costelloe, 0406 690 369
Nationally Available	First	Bertocchi Smallgoods	VIC	Tony Rappone, 0408 241 989
Full Rasher	First	Charlie Costelloe, Pialligo Farm Smokehouse	Pialligo, ACT	0406 690 369
	Second	Barnie Nolan, Circle T Meats	Raceview, QLD	07 3288 6788
	Third	Peter Schulte, Schulte's Meat Tavern	Plainland, QLD	07 5465 6592
Short Cut	First	Rob McInnes, Kanmantoo Bacon	Kanmantoo, SA	08 8538 5097
	Second	Marc Edwards, Edwards Family Butchery	Woy Woy, NSW	02 4342 2372
	Third	Steve Chapman, Slade Point Meat Specialists	Mackay, QLD	07 4955 1009

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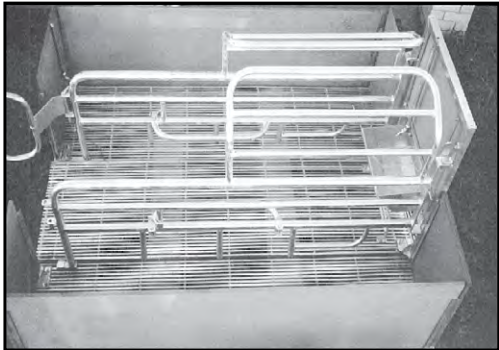
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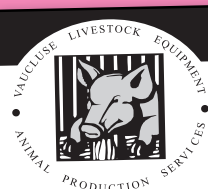
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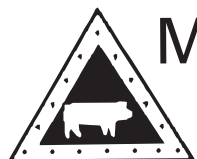
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# Pig slaughter levy increase

ALL Australian pork producers should be aware that the second tranche increase to the Pig Slaughter Levy, collected by processors at the point of slaughter, took effect on July 1. Australian Pork Limited CEO Andrew Spencer said the history of the levy increase goes back to the APL annual general meeting held in November 2011.

"This is when Australian pig farmers endorsed a proposal to increase the marketing portion of the Pig Slaughter Levy by a total of 90c per slaughter pig," he said.

"At the same time the decision was made that to alleviate the impact of a 90c rise in one go,

the increase would take place over three tranches.

"The first rise of 30c came into effect on July 1, 2012.

"The second tranche of a further 30c took effect on July 1, 2014, with the third and final tranche of 30c to come into effect from July 1, 2016."

Prior to 2012 the Pig Slaughter Levy was increased in 1994 to mainly cover APL's Marketing, Research and Development and Policy expenses.

When the announcement was made in November 2011 it had been nearly 18 years since an increase in the R&D or Marketing levy had occurred.

Mr Spencer said inflation has erased an enormous amount

of its value over this time and APL's productivity improvements were having difficulty keeping up.

With slaughter figures forecast to be around 4.8 million pigs for 2014/15, this latest increase will lift APL's producer contribution to the budget from about \$12.7 million to just over \$14 million.

For ease of interpretation and levy break down, the table articulates the current levy structure and future milestones.

It does not take into consideration dollar-for-dollar research contributions from the Federal Government or additional state-based levies that may also apply.

Date and Milestone	Amount of Increase	Total
First tranche 1 July 2012	30 cents	Marketing portion from \$1.35 + 30 cents = \$1.65 APL portion of the levy \$1.65 + \$1.00 (R&D) = \$2.65 * Total levy includes the National Residue Survey which is \$0.175 <b>TOTAL: \$2.65 + \$0.175 = \$2.825</b>
Second tranche 1 July 2014	30 cents	\$1.65 + 30 cents = \$1.95 APL portion of the levy \$1.95 + \$1.00 (R&D) = \$2.95 <b>TOTAL: \$2.95 + \$0.175 = \$3.125</b>
Third and final tranche 1 July 2016	30 cents	\$1.95 + 30 cents = \$2.25 APL portion of the levy \$2.25 + \$1.00 (R&D) = \$3.25 <b>TOTAL: \$3.25 + \$0.175 = \$3.425</b>

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# Tomorrow's traceability system

WHICH little piggy went to market, and which little piggy stayed home?

Nursery rhymes aside, our ability to quickly answer these questions may one day save us from the worst effects of a major disease outbreak.

While we currently rely on our venerable PigPass system to provide the answer, changes are on the way.

## The tracing challenge

PigPass was established in 2007 as a national system for the identification and tracing of pigs.

In most cases, when groups of pigs are moved from one place to another, the movement is accompanied with a paper copy

of a PigPass NVD.

We rely on senders and receivers of these PigPasses to keep copies, making them available to auditors and regulators where needed.

As it happens, traceability systems such as PigPass are required to meet their own standards.

For instance, the system needs to be able to tell you where a pig has been over the past 30 days.

It also needs to tell you where every other pig that it has come into contact with has been over the past 30 days.

And it needs to be able to do this within 24 hours. Plainly, with paper records located across potentially dozens of farms, this cannot currently be done.

To overcome this problem, new requirements are coming into effect which will require recipients of PigPasses to enter the information on the document into a central system.

This will involve logging into the PigPass website, as you would do to order a book or generate an electronic PigPass, and then entering the necessary information.

As all PigPasses have a serial number and are already linked to the source property, entering this information will close the loop and provide a full picture of all pig journeys in the country.

At the same time, regulators will be tightening the rules to ensure that all movements of pigs, whether to another property, a saleyard, a slaughterhouse or anywhere else, must be accompanied with a PigPass document.

APIQ certified producers moving their own pigs from one listed site to another will still have to report the movement,

but they won't be required to fill out a PigPass document.

APL will be building new systems and methods to allow producers to do this quickly and easily, and possibly automatically.

## Why does it matter?

Accurate information on the movement of animals is critically important to the control of emergency animal diseases such as foot and mouth.

In Australia, the livestock industries and state and commonwealth governments have an agreement in place where upon discovery of one of these diseases, a pre-agreed plan will be activated to deal with the disease outbreak and its repercussions.

Having traceability information at hand will allow disease responders to more quickly establish quarantine zones, and hopefully on fewer properties, ultimately causing less stock to be culled, and less anguish for those caught up in the outbreak.

During disease outbreaks, governments can use their powers to order a livestock standstill, destroy infected or suspect stock and implement other biosecurity-related measures – so containing the disease early is very important as fewer farms will be affected.

Furthermore, when disease responses are managed this way, then they are cost shared.

This means that funding from governments and levy reserves is made available immediately,



enabling the urgent response tasks to be quickly fulfilled.

However, governments have only agreed to participate in these cost shared disease responses if industry traceability systems like PigPass meet the standards outlined earlier.

## Is it worth it?

Given the immense damage that would be caused by an exotic disease outbreak, APL believes that that these measures are worthwhile.

In the past year, PED virus has killed more piglets in the US than there are pigs in Australia, and we believe that this problem has been exacerbated by a lack of adequate biosecurity and poor pig traceability systems.

For instance, it took the USDA over a year to mandate reporting of PEDv outbreaks.

Try to imagine how much damage would have been avoided if they had confined the problem in the early days.

Similarly, modelling suggests that if FMD was discovered today on an Australian farm, then

chances are that it would have already infected at least 40 other farms.

This is because FMD can be transmitted by an infected pig that is not yet showing signs of the infection.

Producers could be moving infected animals around, or buying them at saleyards, without knowing that those animals are infected with the FMD virus.

As signs of the disease haven't yet surfaced, they would have no reasonable chance of knowing.

These situations are the stuff of nightmares for producers operating in a disease free environment, and traceability systems provide an excellent insurance policy.

Please keep an eye out for more specific information on these changes to PigPass which will be coming soon.

If you have pigs, then these rules will affect you.

And if you have any questions or comments, then please get in touch – james.battams@australianpork.com.au.

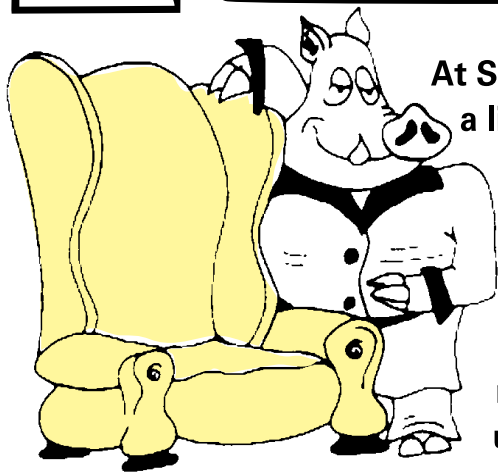
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## Safety boots with soul

AUSTRALIAN Pump has expanded its range of Aussie Safe Operator personal protection equipment with a range of well-priced boots for use with high-pressure blasters up to 500 bar (7300psi).

Called Aussie Jet-Stop, the boots are professionally designed for hard work in harsh environments.

Until now there has been a gap in the market for comfortable, practical footwear capable of withstanding accidental jetting from pressure cleaners up to 500 bar.

Aussie Pumps high-pressure safety trainer Hamish Lorenz said operators have been using steel toecap gumboots until now.

"Toes are protected however the high-pressure water jets can slice open a rubber boot," Lorenz said.

"Water sprayed under pressure penetrates flesh and can carry dangerous bacteria or poisons deep into the issue."

"This can result in horrible infections leading to amputation or even death."

Ultra high-pressure protective footwear has been available for a number of years, however it can be cumbersome and difficult to walk in.

So it is impractical for operators of lower pressure machines that

need mobility.

New Aussie Jet-Stop boots are made from vulcanised rubber.

The boots provide safe, waterproof comfort for the operator.

For maximum user protection, the boots come with steel toecaps and steel inserts in the sole to prevent puncturing by sharp objects.

Jet-Stop boots are colour coded to identify the areas of protection.

The black regions, covering the talus, the lower shin as well as the toes and heel are CE certified to be suitable for use with rotating water jet nozzle or flat angle nozzle sprays of up to 500 bar.

The soles of the boots are designed for excellent grip to reduce any risk of slipping.

In particularly icy conditions, where there is real potential of extreme danger of slipping, the boots can even

be fitted with spikes.

These new boots are the result of years of research to design a product that will protect operators and improve comfort and safety.

With an adjustable strap at upper calf level, Aussie Pump says they are easy to put on or take off.

They are designed to suit European sizes 42 through to 48, the equivalent of Australian sizes 8 through to 13½.

Aussie Pumps offers a full range of personal safety equipment including jackets, trousers, overalls, aprons and gloves.

All are rated for use with machines up to 500 bar and, like the boots, designed for maximum operator comfort.

Further information can be found in the Aussie High Pressure catalogue, available to download from [www.aussiepumps.com.au](http://www.aussiepumps.com.au).



The new safety boot specifically designed for use with high pressure cleaners up to 500 bar (7300 psi).





David Lock, CMG chief executive officer; Jim Kennedy, CMG chairman; Ken Baston, WA Minister Agriculture and Food; and Jim Chown, Member for Agricultural Region.



Rowena Tolentino, a Mogumber farm employee.

# Craig Mostyn Group opens its \$10 million sheds at Mogumber

WEST Australian Agriculture and Food Minister Ken Baston has officially opened the new \$10 million tunnel-ventilated sheds at Craig Mostyn Group's Mogumber pork farm.

In an Australian first, the new temperature-controlled sheds at Mogumber, 30km northeast of Gingin will trial a farrow-free pen environment, which enhances animal welfare by replacing traditional farrowing crates with a 360-degree farrowing pen designed in the

United Kingdom.

Apart from enhancing animal welfare, the new sheds will reduce operating costs, create at least five new industry jobs for experienced piggery stockpeople and double the pork farm's production from 500 to 1000 pigs a week.

The first 400 sows entered the new sheds in early April and will convert to a total of 20,000 growers by November 2014.

The investment in Mogumber underlines Craig

Mostyn Group's commitment to creating a sustainable pork industry in WA.

It ensures product is produced in a more animal welfare-friendly way, in line with growing expectations of consumers and retailers.

Craig Mostyn Group CEO David Lock said, "We have a responsibility to produce animals in a more welfare-friendly way and are committed to achieving this by continuing to explore innovative farming methods."

"The introduction of

tunnel-ventilated, temperature-controlled, farrow-free crate sheds at Mogumber improves the comfort and conditions for our pigs," he said.

"Better comfort and conditions, particularly for our breeding sows, leads to increased production and an even higher quality product."

"This is important for the business because it provides us with greater capacity to meet projected increases in domestic and export market demand, creating a sustainable industry."

in winter.

Group executive director Andrew Mostyn said, "In the grower area we can now control the environment for the pigs to keep them within their thermal neutral zone."

"This reduces stress, which can have a negative effect on the health of the pigs and their feed conversion," he said.

"In the breeder area, temperature control of the farrowing houses will maximise the feed intake of the sows, increasing milk production, which in turn boosts the piglet weaning weight and breeding performance of sows."

Craig Mostyn Group, operating under the Linley Valley Pork brand holds a 95 percent market share in Western Australia.

It currently exports 30 percent of pork it produces and is the major supplier of Australian pork to Singapore.

The company owns and operates pig farms at Gingin, Albany, Narrogin and Nambeelup, with the investment at Mogumber making it the largest pork producer in the state.



Mogumber Farm



Happy pigs at Mogumber Farm.



Jorge Chorre, farm manager.

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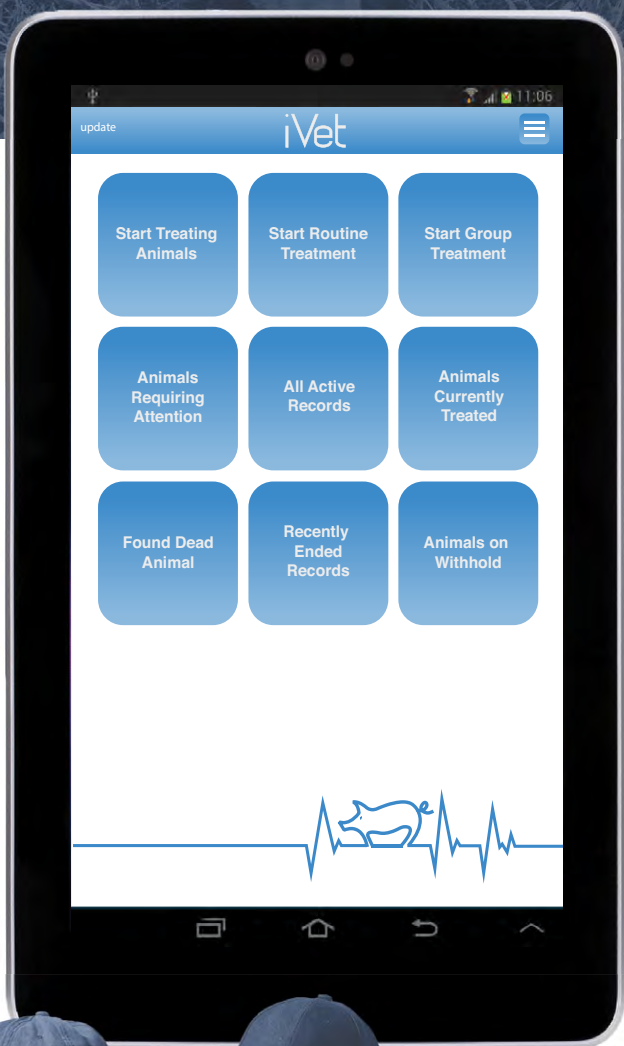
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