

## **From the Top Shelf Pork CRC Initiatives December 2016**

### **Year done and another to come: bring it on**

Although 2017 is fast approaching, it seems like 2016 will never end.

While it's been a long, busy and productive year for us at Pork CRC and for you too, no doubt, I think we all have good reason to anticipate next year with a positive mindset.

We have just spent a week or so in Melbourne where we held our final board meeting for the calendar year and our Stakeholders' day. Both went well.

Not too many issues from the board meeting and the Stakeholders' meeting was very successful, with great feedback from all participants and excellent presentations from Program Leaders, Subprogram Leaders, our 'commercialisation custodian' Dr Charles Rikard-Bell, 'student advocate' Dr Alice Weaver and 'end user' Dr Brian Luxford.

### **APRIL up**

The first AGM for Australasian Pork Research Institute Ltd (APRIL) was also held during our time in Melbourne and the board has now been established. The new company will hold its first board meeting on February 27, 2017, so a big week and year for Pork CRC and APRIL.

### **APRIL board**

Dennis Mutton – Chair and independent

Mr Andrew Spencer (One of two APL directors. Second APL director yet to be decided)

Dr Mel Bridges (Member director) – Anantara Life Sciences

Mr Kenton Shaw (Member director) – Rivalea Australia

Professor Robert van Barneveld (Member director) – CHM Alliance

Professor John Pluske (Member director) – Murdoch University

Independent director – yet to be decided.

Thirteen members have signed up and we're waiting on University of Melbourne and SARDI, both of whom are close.

This is an excellent outcome and APRIL will help ensure the additional R&D and training activity generated by Pork CRC will continue to benefit the Australian pork industry once this Pork CRC concludes in June 2019

### **Roseworthy course**

The 2017 '**Pig Science into Practice**' course will run at Roseworthy, SA, from January 30 to February 10. The course has been career changing for many and covers the basics plus the latest developments in pork production, from reproduction to marketing, with visits to mills and abattoirs. If you want to understand the industry and learn the latest from the best, then register now.

Pork CRC covers travel and other costs for the first 15-20 production based personnel to register for the course, so discuss it with those you need to in your organisation and get your registration in. This year's course will include a few more social events and is filling fast – so don't miss out.

Details and the registration form are on our website ([www.porkcrc.com.au](http://www.porkcrc.com.au)) or can be obtained from Rebecca Smith ([rebecca.smith@porkcrc.com.au](mailto:rebecca.smith@porkcrc.com.au)) or Dr William van Wettere ([william.vanwettere@adelaide.edu.au](mailto:william.vanwettere@adelaide.edu.au)). Dr van Wettere will be run the course again this year.

### China challenge

At the APL delegates meeting several producers asked for a little more information on the Chinese pork industry. We know it is big and very profitable at the moment, but there are some myths around its competitiveness. China is currently a high cost producer of pork, largely because of its poor productivity, high disease loads and somewhat artificially high corn prices set by government, but that's about to change. It faces considerable challenges and while there is a desire to become a force in the export arena, this would seem a long way off, largely because foot and mouth disease exists in the country and it can't compete with most other pork producing countries on cost of production (COP) – but never say never.

China imported some three million tonnes of pork in 2016 (5-6% of consumption) and potentially has a gap of some 10 mt of pork over the next 10 years. As you might imagine, there are many countries wanting to tap what they see as a great opportunity. The total imports will be determined by the Chinese government, which likes to maintain at least 95% self-sufficiency for pork muscle meat and the demand is for white offal and items such as feet and ears. The industry is currently highly supported, with duties on imported pork of 14% to 20%. They also charge a VAT of 13% on imported product, which is waived for domestic product. Pork producers are also exempt from enterprise tax and receive direct payments from government.

Taken together and including shipping costs, the duties and other imposts bring the difference in the price of Chinese and US imported pork, which differs in COP by 58%, to next to zero. This is a well thought out strategy, but there is potential for things to change in the future, especially as Chinese consumers have little confidence in domestically produced food and prefer imported pork to their own domestically produced product.

The statistics have to be taken with a 'grain of salt', as what is reported is what is deemed good for the country and a classic example is the per capita consumption of pork. The 'official' figure is above 40 kg, but the real figure is probably closer to 27.5 kg, which is good news for China as it means it has tremendous upside consumption potential.

So, it's an area to keep an eye on, but remember that a win-win in negotiations with the Chinese generally means they win twice.

### Average productivity and costs of the Chinese pork industry 2015 and 2016

Business Indicator	2015	2016
Sows (million)	41.0	41.5
Pigs weaned/sow/year	16.3	15.7
Pre weaning mortality (%)	15.2	16.2
Carcass weight (kg)	77.5	79.3
Carcass weight/sow/y	1259	1244
COP (\$AUS/kg carcass weight)*	3.42	3.50?
Feed cost (\$AUD/tonne)	450-500	466
HFC	4.0-4.6	4.0-4.6

\*In 2015 COP for the larger production companies in China was around \$2.70 AUD/kg carcass weight and this is the direction the industry is being taken.

## Highlights 2016

Pork CRC research outcomes with the greatest potential impact on industry in 2016 were:

**1C-105: *Effects of floor space on the welfare of group housed sows*** – Paul Hemsworth, University of Melbourne – definitive information on effects of space on sow welfare and reproduction and will play a major role in the upcoming standards and guidelines review of pork production.

**1C-103: *Optimising the management of group-housed gestating sows*** – Paul Hughes and Kate Plush, SARDI – potentially profound outcomes on means of reducing aggression in group housed sows, a simple means of enriching the environment of group housed sows and results showing that grouping lactating sows and litters in last week of lactation with daily boar contact markedly improved subsequent litter size, especially in sows mated after weaning.

**1C-115: *Nutritional management strategies to reduce aggression at mixing of unfamiliar sows*** – Tracy Muller, CHM Alliance – led to the development of the Ridley Sow Enrichment Block. Now available through Ridley.

There are many reports on the behaviour and welfare of group housed sows and the science generated is first class. The adaptive behaviour of sows over time and between parities is quite fascinating and I am not sure we still fully understand the implications. Nevertheless, our researchers continue to explore the area.

**2A-114: *Identifying, tracking and controlling swine dysentery in Australian pig herds*** – Dave Hampson, Murdoch University – showed apparently healthy herds can be and are infected with swine dysentery and new isolates discovered in this and a previous project shown to be pathogenic. There is a need for testing and constant surveillance.

**2C-115: *Establishing the underlying causes of pleurisy*** – Conny Turni, University of Queensland – established the major pathogens associated with pleurisy, their antimicrobial resistance and suggested vaccination procedures against Mycoplasma and PCV2. May need to be revisited.

**2C-116: *Live attenuated Actinobacillus pleuropneumoniae vaccine strains*** – Conny Turni, University of Queensland – excellent progress made in the attenuation of all Australian strains/serovars and efficacy tests about to start.

**2C-118: *Using microencapsulated ingredients to enhance efficacy and improve production efficiency within an integrated health strategy*** – Rob Hewitt, CHM – microencapsulated ZnO and essential oils and organic acids with potential to reduce level of ZnO in first stage weaner diets by 70% and to improve feed efficiency in second and late stage weaners and maybe older pigs by 6-8% respectively.

**3B-112: *Nutritional composition of pork*** – Ken Ng, University of Melbourne – demonstrated that the iron content of pork has increased markedly between 2006 and 2016.

**4B-112: *Optimising particle size distribution for grains and protein sources*** – Peter Sopade, University of Queensland – showed that for sorghum and peas included in weaner pig diets at 50% and 30% respectively, optimum particle size (for growth rate and feed efficiency) is between 0.4 and 0.8 mm and independent of the mill used to process the grain. Also showed average particle size at end of the ileum was 0.16 mm, irrespective of the average particle size of the diet of milled grain.

**4C 104 and 4C 110 Bioenergy support program** – Dr Stephan Tait, (University of Queensland and Alan Skerman, Department of Agriculture & Fisheries, Queensland, – highly successful projects

leading to the uptake and more efficient utilisation of methane capture from effluent streams and use for power.

**4C-117: Benchmarking the performance of Australian pork with life cycle assessment** – Stephen Wiedemann, Feedlot Services Australia – a comprehensive and fascinating report on greenhouse gas emissions across the pork supply chain. Averaging around 3 kg of GHG emissions (CO<sub>2</sub> equivalents) per kg of pork produced. Greatest emissions from effluent systems which can be reduced by 34-64% by covering effluent ponds and capturing and using the methane generated. GHG emissions 38% lower from deep litter systems and very much related to herd feed efficiency.

All reports are available on Pork CRC's website and most have been discussed on numerous previous occasions, but I'm always happy to discuss further, or you may contact the researchers involved.

The good news is we have 51 active projects and I expect many will deliver genuine system changing outcomes.

### **International front**

**The sow caliper** – a simple and objective means of assessing and better managing sow body condition. Invented in USA and now widely used to manage sow body condition, cost effectively manage gestation feeding programs and improve reproduction. Quite a few Australian operations using it now. Contact me if you want further detail.

**Set Time AI** – appears that Elanco Ovugel product will be available next year and one certainly worth trying – potential to reduce the labour associated with oestrus detection and to use one dose of semen. Pork CRC research suggested the technology might help reduce summer infertility.

**Post cervical AI** – been pushing this for a while. Now used with more than 40% of sows in USA and increasing uptake in Australia. Takes some training, but markedly reduces time to AI sows and staff seem to like the system once they adapt/adjust.

**Higher omega 6 fatty acids and ratio to omega 3 in lactation diets** on summer fertility – hopefully a commercial study will be conducted this summer. Watch this space.

Please don't hesitate to make contact for any additional information on any subject.

Finally, I wish you all a safe and happy Christmas and hope that 2017 is even better for the industry and your businesses than 2016. It's shaping up that way, but best if we take it quarter by quarter.

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