

Pork CRC Initiatives February 2017

Pork CRC scoring heavily in first quarter

At Pork CRC, we try to plan our activities and prioritise workloads on a quarterly basis and the January-March quarter is looking hectic.

The Roseworthy course ('Science and Practice of Pig Production') runs from January 30 to February 10 and I want to thank Rebecca Smith for organising the event with University of Adelaide staff, Will van Wettere for putting the program together and all those who have agreed to teach the course. And, of course, the course attendees (20+) and their employers who have shown the commendable initiative to register and participate from as far afield as Queensland, WA, Victoria and the ACT.

Having completed the eighth and final investment round for Pork CRC on January 27, we spent the last days of January and the first couple of February discussing the reviews of all proposals received and preparing recommendations for the R&D Committee meeting on February 7.

We received 38 proposals across the four programs, with the majority split equally between Program 1 ('Reduced confinement of sows and piglets') and Program 2 ('Herd Health Management').

I was very impressed with the quality of the proposals received and I think there might be a couple of gems in the mix, but let's wait and see what our program and subprogram leaders and reviewers think. I will let you know the outcomes after the board meeting on February 28 when the final decision of where we will invest will occur.

Pig day

We have the SA Pig Industry Day on February 24 at The Barossa Weintal, Tanunda, SA. It is always a good meeting and this year I have helped Andy Pointon and his team put together a session on grower-finisher pigs, which is where all the money sits and hence is always worth reviewing. I will address the meeting in the first session, along with Karen Moore, Pork Innovation WA and Tony Edwards, ACE Livestock Consulting. I will talk about our global position, which in 2015 looked poor (more on this next month) and what technologies we have to reduce costs in the growing herd. Tony will discuss recent changes in grain costs and what this will mean to the bottom line and, as usual, he will drop a few handy hints on how to improve efficiency and profit.

Karen will discuss two interesting research topics. The first is the use of a single diet from 25-30 kg to sale. The second is some of her recent research using salts and Albus lupins to control intake in finisher pigs. The single diet has been around for a while and every time it is tested, it makes more money than phase feeding. It's probably time someone tried it commercially. Her work on salts and Albus lupins shows both can reduce feed intake. More interesting, the salts had no adverse effect on growth rate and substantially improved feed efficiency.

CRC commercial

We also have Commercialisation and Adoption Committee meeting in February where our very own Charles Rikard-Bell will go through Pork CRC's impressive line-up of commercial projects and we will hear from BEC Feed Solutions on Piglet Buddy and Professor David Hampson on swine dysentery.

AusScan returns

As an aside – revenue from our AusScan business with Aunir exceeded \$100,000 British pounds (\$182,000 AUD) in the quarter ending December 2016. The number of scans has increased exponentially since the business started, with soybean meal being the most in demand, with numbers reaching 2799 in the December quarter.

APRIL active

I promised you in December 2016 that the APRIL board would hold its first meeting on February 2017 – well that will occur.

The other good news on APRIL is that University of Melbourne signed and SARDI is likely to have signed by the time you read this.

APRIL will then have 15 inaugural members, including APL and will have a substantial revenue stream in 2019-20 when it takes over from Pork CRC.

We will all be glad to get through to the end of February, although I'm not sure it being a short month really helps us.

March on

March will start with informing all applicants of the outcomes of investment round eight and requesting changes to proposals and budgets. The job of drawing up project agreements will follow, after which comes the wait for results. This is the most exciting part of the process and my job and we will have new information and technologies for you in late 2017 and early 2018.

I will spend a week in Omaha Nebraska in the third week of March, attending the American Society of Animal Science Mid-West scientific meetings. This is where you learn what is happening in the US industry, what the issues are and the latest research outcomes on pigs and pork. I always summarise these for you and will do so again – probably in May or June.

I have covered one of the papers from the meetings in this column ('Sow diet and colostrum'). This is for your information only at this point.

March will finish with an Aunir board meeting in Singapore.

The quarter is also the period where summer infertility is likely to occur and I direct you to our publication with APL, "Preparing for the summer months: seasonal infertility and beyond". This is available on our website under news & events/publications tab

A hectic but exciting March quarter and next month we will get into our global competitiveness.

Colostrum counts

We all know that colostrum intake is crucial for the survival and performance of piglets. How to increase colostrum production and intake is another matter. Well, researchers in the US suggest the diet fed sows in the last 10 days of gestation might just be the answer.

The North Carolina State University researchers suggest that feeding sows (second parity) a lactation diet during the last 10 days of gestation increased colostrum production and intake by piglets by 24% and 32% respectively.

They reported this was associated with a significant increase in weaning weight (6%), a numerical improvement in pre weaning survival (87.4% vs 84.2%) and a significant reduction in variation in weight at weaning.

The differences are in comparison with sows fed a gestation diet during the last 10 days of gestation.

In the same experiment, they compared three feeding levels in the same period. These were 1.5, 3.0 and 4.5 kg/sow/day.

Increasing feeding level increased birth weight (level not reported) and sow weight gain, but had no effect on piglet quality (survival or performance). They did notice that piglet survival was lower in sows fed 4.5 kg/day before farrowing.

The gestation and lactation diets contained 0.58% and 0.99% SID lysine respectively – the lactation diet also contained 2.5% added fat.

Table talk

The results (Table 1) tend to confirm those reported previously by researchers at KSU and Texas Tech that higher lysine (amino acids) intake in late gestation has greater impact on piglet performance than higher energy intake per se.

To put it in context, average litter sizes at birth, 24 hours after birth and at weaning were 13.11, 12.49 and 11.05, respectively.

The authors did not report any interactions between the gestation and lactation diets and feeding level on colostrum intake or weaning weight, which seems strange as there was crossover between treatments in SID lysine intake. The latter was 8.7, 17.4 and 26.1 g/d for sows fed the gestation diet and 15.0, 29.7 and 44.6 g/d for sows fed the lactation diets on the low, medium and high feeding levels respectively.

So was it the lactation diet per se, the added fat or is a SID lysine intake above 26 g/d required to achieve the effects? It is probably amino acids.

Table 1 - Effect of feeding sows a gestation or lactation diet in last 10 days of gestation on colostrum intake and piglet quality

Diet and outcome	Lactation	Gestation	P-value
Av piglet birth weight (kg)	1.14	1.18	0.24
Total sow colostrum yield (kg)	1.42	1.14	0.04
Av piglet colostrum intake (g)	127	95.9	<0.01
Av piglet weight at 21 days (kg)	5.81	5.48	<0.01
Coefficient of variation in piglet weaning weight (%)	14.7	17.9	0.02
Piglet survival (%)	87.3	84.2	0.29

I assume most producers feed sows a lactation diet from entry into farrowing accommodation, so may already be achieving the effects reported and may be logistically difficult to increase the time the lactation diet is fed before farrowing. Nevertheless, it's interesting and I will watch the outcomes of larger studies planned in the US with interest and report back.

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