

Pork CRC Program 1 Leader Profile – Dr Will van Wettere

Pork CRC Program 1 Leader Dr Will van Wettere holds an honours degree in Agricultural Science (University of Edinburgh, Scotland) and a PhD focussing on reproduction of female pigs (University of Adelaide, SA).

After completing his PhD, Will was awarded a Pork CRC post-doctoral award focussing on reproduction and is now employed as a Senior Lecturer (Intensive Livestock, Pigs) at University of Adelaide's School of Animal Science. Throughout his career Will has been fortunate to receive extensive support from Pork CRC and be involved in a wide range of CRC activities, including the CRC's education program. Will succeeded Dr Ray King as Leader of Pork CRC Program 1 ('Reduced confinement of sows and piglets') on July 1 and earlier this year he replaced Professor Paul Hughes to run Pork CRC's annual summer course at Roseworthy, 'The Science and Practice of Pig Production'.

Transformational outcomes

Developing effective and commercially applicable strategies to mate a high proportion (85%+) of sows during lactation and produce high pregnancy rates and large litters from these sows continues to be a major objective of Program 1.

Commercial validation of a mix of existing strategies is currently being conducted at a major Australian facility and once completed the data will be made available. In addition to this, it is evident from recent Pork CRC work that strategies designed to enable mating during lactation may improve reproductive performance of those sows which remain anoestrus during lactation, but are mated post-weaning. For example, short periods of sow-piglet separation pre-weaning increased litter size of sows mated post-weaning, while group lactation in conjunction with daily boar exposure dramatically increased litter sizes of sows mated post-weaning. It is therefore possible that manipulating housing and suckling load and boar exposure pre-weaning (even if insufficient to induce a lactation mating) could improve sow reproductive output.

Grouping sows

A second major objective of Program 1 is ensuring successful grouping of sows during gestation and the Pork CRC continues to support a substantial body of work in this area, with research conducted at a number of Australian research institutes and commercial facilities.

Recent work by Pork CRC supported Emma Greenwood, as part of her PhD, indicates that increasing sow space allowance during the first four days post-mixing has the potential to reduce sow to sow aggression at mixing. Additionally, work from her PhD indicates that providing sows with enrichment during the mixing period promotes positive behaviours. In fact, there is a considerable body of work being conducted, in conjunction with commercial partners, focussing on enrichment for group housed sows.

Two major studies are investigating the impact of nutritional enrichment (enrichment blocks and straw in racks). Developing strategies to enrich the lives of sows (and indeed all pigs) which can be applied at a commercial level and achieve real benefits for the animals concerned is likely to be one of the biggest challenges facing the pig industry.

Lactation management

A third investment priority for Pork CRC has been pre-farrowing and lactation management to improve welfare of sows and piglets. To this end, Pork CRC has recently funded a collaborative project between University of Melbourne and SARDI, investigating whether spraying sows with oxytocin pre-farrowing can result in better behaved gilts during farrowing and improve piglet weaning weights. This project aligns well with ongoing similar research in this area. Specifically, there are two commercial studies investigating the impact of group lactation on piglet performance and welfare and fundamental studies are being conducted at SARDI, University of Adelaide and University of Melbourne to investigate strategies to quantify and reduce sow stress at farrowing and increase sow contentment during lactation.

The innovative research and training in Pork CRC Program 1 has been rewarding, according to Will, who reports that he is delighted to be, in his words, “right in the middle of it all”.

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