

Manipulating Pig Production XV

Proceedings of the Fifteenth Biennial Conference of the
Australasian Pig Science Association (APSA)

Melbourne, Australia

22–25 November 2015

Edited by Professor John Pluske and Dr Jo Pluske
AUSTRALASIAN PIG SCIENCE ASSOCIATION (INC.)
Werribee, Victoria, Australia

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Preface

The global pork industry has and will continue to face many factors that contribute to the volatility surrounding pork supply and demand. Over recent years these factors have included feed costs, disease outbreaks, animal welfare, product quality and consumer preference. The Australian industry has not been sheltered from these issues and can take many lessons from experiences internationally. The imminent phase out of piglet castration in the EU by 1 January 2018 is an example of how key stakeholders can influence production methods. With the 2018 deadline approaching, the A. C. Dunkin Memorial lecture at this year's conference will provide participants with an overview as to how the European pork industry has responded to the phase out and how the consumer is influencing the adoption of alternative technologies. While the issues may be different, the impact of consumer expectation on current and future production methods is as relevant locally as it is to pork producers in other parts of the world.

The Australian industry has had the fortune of considerable investment in research and development over the past decade with support through the Cooperative Research Centre (CRC) for an Internationally Competitive Pork Industry and the CRC for High Integrity Australian Pork in addition to the ongoing investment from Australian Pork Limited. This support into local R&D provides the industry with innovation that is integral in addressing drivers of profitable pork production in a global market. The 2015 conference presents recent developments across a diverse range of disciplines impacting on production efficiency, sustainability and profitability of pork production. I encourage all delegates to fully value the contributions across such a diverse range of topics. I particularly thank the contributions of all our invited speakers in stimulating discussion and new ideas for our industry.

From its inception, APSA was established to provide a forum for excellence in science related to all aspects of the pig industry and to promote interaction between scientists from different disciplines and from different countries. APSA continues to uphold these aims, with a particular emphasis on fostering the development of young scientists into our industry. It is once again very pleasing to see such a large group of students and early career scientists attend and contribute to APSA.

It has been a pleasure to preside over APSA for the past two years and to have contributed to facilitating the networking of those involved in pork production. Thank you for your support of the conference and I hope you will continue to be part of the future success of the association.

Dr Cherie Collins
President

APSA Awards

The APSA Fellow Award

The APSA Fellow Award was first presented in 2007. This prestigious award is offered in recognition of past and present members who have made an outstanding contribution to APSA as well as their contribution and commitment to pig science.

Previous recipients:

Dr Ray King (2007)
Dr David Hennessy (2007)
Dr Michael Taverner (2009)
Dr Ian Williams (2011)
Professor Frank Dunshea (2013)
Dr Bruce Mullan (2013)

The Batterham Memorial Award

The Batterham Memorial Award is a prestigious award conferred by APSA in memory of the late Dr Ted Batterham. Ted Batterham's love of pigs began at the NSW Agriculture, Wollongbar Research Station in the mid-1960s when he began work with Dr John Holder to solve the problem of variability in the growth of pig fed meat meals. At that time abattoirs in NSW produced meat meals that were very variable because there was little control on either the raw materials used or cooking times and temperatures. Ted soon realised that part of the variability was explained by the content of bone but, something much more fundamental that would keep Ted focussed and fascinated for the rest of his professional life, was the variability of available lysine in these meals. Ted knew that if proteins were heated in the presence of carbohydrates and fats, lysine would become unavailable to the pigs own enzymes.

Ted went to The University of Melbourne to commence a PhD with Tony Dunkin to develop an *in vivo* assay in rats and pigs to quantify the available lysine not just on meat meals but in a range of other protein sources and cereals. He returned to Wollongbar and became a world leader in the availability of amino acids in feedstuffs for pigs and poultry. Not content just to solve a problem, Ted wanted to find solutions and reasoned that, if the availability of lysine was known, any shortfall could be remedied by supplementation with synthetic lysine. That idea stimulated research that delved into ways that the biological value of proteins could be enhanced by supplementation with synthetic amino acids.

Ted's research career was always focussed on industry issues and driven by a desire to find suitable solutions. He knew that progress was best made by teams of people stimulating and supporting each other, and that investment in young people was essential.

Therefore, the Batterham Memorial Award is made to a young scientist, a person within 10 years of graduation. Its aim is to 'stimulate and develop innovation in the pig industry'. It is anticipated that the cash award will enable the recipient to broaden his or her exposure to national or international pig science.

Previous winners of the Batterham Memorial Award:

| | |
|-----------------------------|-------------------------|
| Robert van Barneveld (1995) | John Pluske (1997) |
| Kaye Coates (1999) | Darryl D'Souza (2001) |
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Acknowledgements

The Australasian Pig Science Association (APSA) biennial conference continues to go from strength to strength and is now widely recognised as one of the premier international pig science forums. The hard work and dedication of many people over the years has seen APSA grow from humble beginnings in Albury in 1987 to the international conference that it is today attracting delegates from around the world. The growth and success of APSA has come about from the hard work and dedication of many people over almost 30 years and is set to continue for many more.

The 2015 conference would not have been possible without the considerable time and effort contributed by many individuals. The continued support of members and colleagues within the pig science community in the submission of high quality papers is gratefully acknowledged. The APSA committee would also like to thank all those that have attended the 2015 conference, particularly those that have travelled considerable distances to participate.

The APSA conference proceedings are internationally recognised for their scientific and editorial standard. There are very few conferences now held where such a high quality proceedings are produced prior to the conference. The effort and dedication of Professor John Pluske and Dr Jo Pluske as editors for the 2015 proceedings, *Manipulating Pig Production XV* is gratefully acknowledged. The 2015 proceedings was a milestone for APSA, with the proceedings published in full as a Special Issue of *Animal Production Science*. This move to publication in a journal provides greater exposure for APSA and ensures our authors are more widely recognised for their outstanding scientific contributions. The APSA committee would like to thank all that have made this transition a success, in particular the assistance of Dr Chris Anderson, CSIRO Publishing for his willingness to take on the APSA proceedings and his guidance and support during this process. The committee would also like to thank all of the referees that reviewed the scientific content of the papers, your contribution is gratefully acknowledged.

The contribution of sponsors is critical for the success of the APSA biennial conference. I would like to acknowledge Australian Pork Limited and the Pork CRC for High Integrity Australian Pork for their generous support of APSA once again as Principle Sponsors. I would also like to thank all of our sponsors of the 2015 conference (listed on the Sponsors page), we truly appreciate your support.

A conference of this size does not come together without the hard work and dedication of a number of people. I would like to sincerely thank the 2015 committee for all of their efforts, it was a wonderful experience to be part of the team. Accordingly, thank you to Dr Alison Collins (Vice President), Dr Dave Cadogan (Immediate Past President), Amy Lealiifano (Secretary), Emalyn Loudon (Treasurer), Professor John Pluske, Professor Frank Dunshea, Dr Jae Cheol Kim and Dr Pat Mitchell. My personal gratitude in particular goes to Amy Lealiifano for her efforts above and beyond the role of secretary in keeping the committee on track. I would also like to extend my sincere thanks to the team at YRD for their assistance in the 2015 conference as secretariat. It was a pleasure to work alongside Kate Murphy, Phoebe White and the YRD team.

Dr Cherie Collins
President

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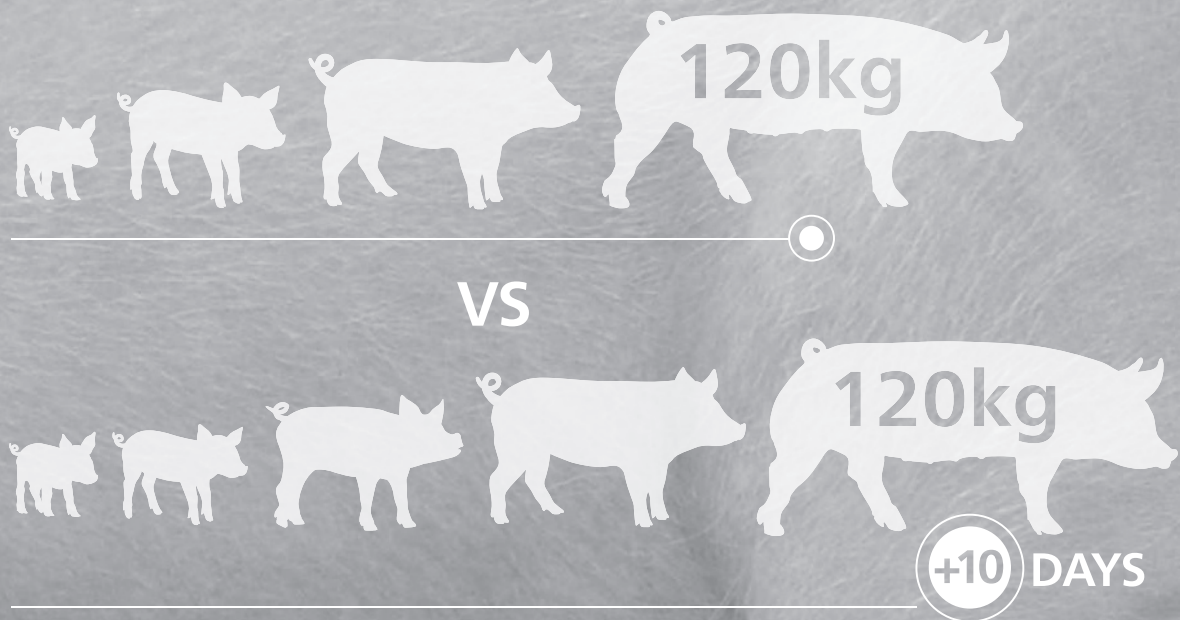
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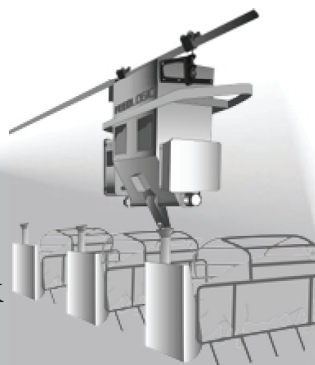
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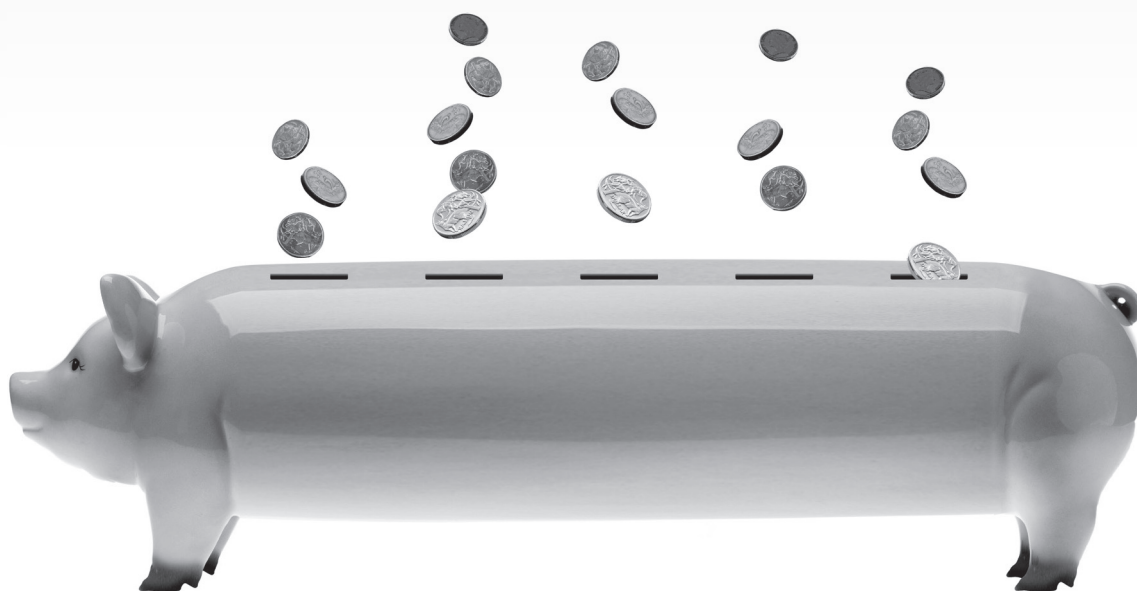
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Jemma Lumby, 2015 Agricultural Graduate

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