Australian Pork Limited (APL), the national body representing the Australian pig industry, is proud to be the principal sponsor of the 16th Biennial Conference of the Australian Pig Science Association Inc. (APSA) in 2017.

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Our ongoing support of APSA and its Biennial Conference is an integral component of our science and adoption strategies. APSA provides a vital forum to highlight research outcomes and highlight future generation scientists. APSA fits perfectly with Pork CRC’s remit.

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Preface

With this Conference the Australasian Pig Science Association (APSA) celebrates 30 years of providing ground breaking and innovative science which has aided both the Australian and international pig industries. From very humble beginnings in Albury, the APSA Conference has become a significant pig science conference attracting papers and participants from around Australia and the globe. The Conference is unique in that it covers many disciplines, in fact any discipline associated with pork production, and while there are keynote speakers, each session is truly a plenary session with none of the sessions held concurrently.

In the past 30 years, Australian pork production has also experienced significant changes to the technologies and management used on-farms. Many changes were made possible because of the outcomes of significant research and development, quite a few of which were shared and communicated at past APSA Conferences. Some issues have been solved but others continue to plague both the Australian and global pig industry. Seasonal Infertility was one of the first major production syndromes that had research outcomes presented at APSA. The summer can be one of the most challenging times of the year for maintaining reproductive performance as the combination of heat and increased day-length create environmental conditions that can be difficult to cope with and manage. Over time, the international pig industry has spent considerable resources in addressing the issues that affect pig production during the summer. Seasonal Infertility is a perfect example of how even with the best intentions and substantial robust research, some issues continue to cause production losses. The A.C. Dunkin Memorial lecture will provide collated information from international and Australian projects including those commissioned over time by Pig Research and Development Corporation (PRDC), Australian Pork Limited (APL) and the Cooperative Research Centre for High Integrity Australian Pork Limited (Pork CRC), especially those that were presented at APSA, to assist industry to alleviate the problem of seasonal infertility. In addition, potential knowledge gaps and recommendations for future research will be identified. I can think of no better candidate for this presentation than Dr Ray King. Dr King is not only an internationally respected Australian pig industry researcher and consultant, he also was the first APSA President and one of the very few that have taken on that role twice; it is very fitting that he will provide the A.C. Dunkin Memorial lecture on this significant milestone in APSA’s history.

While the Australian industry is small by world standards, it is well served by a robust and well-structured research program, provided for by the peak industry body, APL as well as the Pork CRC. This current Pork CRC is due to wind-up mid-2019, and its work will continue through a successor organisation, already formed, in the Australasian Pork Research Institute Limited (APRIL). APRIL is a cooperative research entity which will build on the Australian pork industry’s current collaborative approach to research and development. The formation of APRIL, heralds an exciting new change for our industry, with its focus of delivering research outcomes as well as commercial technology, which will generate financial returns to APRIL and support ongoing R,D&E. All this will be carried out in conjunction with APL and other R&D programs which support industry activity. The Australian pork industry R&D programs will not compete with each other, rather they will complement each other, providing research outcomes that will undoubtedly be presented at future APSA Conferences, while also proving outcomes that will aid the sustainability of the pork industry.

This last year has been a particularly difficult one for our Australian pork industry; unexpected and devastating events have unremittingly impacted on the well-being and profitability of the entire production chain, affecting the livelihood of many pork industry stakeholders and the well-being and stability of numerous regional communities. This severe downturn only emphasises that the production system is still looking for answers to problems and issues that may not have been considered previously, or are still not sorted out. Research outcomes can aid industry, through cost reduction, production improvements, risk reduction/management and provision of innovation.

From its humble beginnings, the APSA Conference has always provided a valuable source of knowledge to aid industry, but it also provided excellent networking and collaborative opportunities especially for our younger scientists. All segments of the pig industry chain are represented at the APSA Conference from pig industry research providers as well as every part of the pork value and supply chain. The APSA Conference provides a unique opportunity to discover new ideas and innovations, whilst also taking advantage of the extensive pig industry network that is the APSA community. ‘I’d like to urge all delegates to take advantage of the opportunities at this Conference, and to borrow an Australian sporting term, ‘Go Hard!!!!’

Thanks to all for your valued contributions that have made APSA such an excellent pig science body, and I hope that you will continue your support of APSA and its biennial Conference.

Dr Pat Mitchell
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. Nominations for the APSA Fellow Award are received from the current APSA Committee and the initial nominations are supported by a verbal statement addressing the selection criteria which are weighted to assist the committee in its deliberations. The selection criteria for the deliberation of APSA Fellow nominations cover contributions to:

- The APSA Committee (President, Vice-President, Secretary, Treasurer, ordinary committee member)
- Technical content contribution (editor, referee, scientific authors, etc.)
- Membership development (students, national and overseas)
- Contribution and commitment to Pig Science (research, involvement in post-graduate training)

All past APSA fellows were significant contributors to APSA and pig science, and given both their professional and personal commitments at the time, their substantial contributions are more utterly astonishing and valued.

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)
Professor John Pluske (2015)

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 focused 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)  
Patricia Mitchell (2003)  
Eva Ostrowska (2005)  
David Cadogan (2007)  
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Acknowledgements

From the modest beginnings of the inaugural conference in Albury, the APSA Biennial Conference has become one of the most important international pig science conferences. But such conferences don’t just happen; the growth and success of APSA has only occurred because of the hard work and dedication of many people since the very first conference was held in 1987. The Oxford living dictionaries define the term ‘Acknowledgement’ as ‘…an expression of appreciation; a thing done or given in appreciation or gratitude’. This term falls far short of what is required to thank the various people whose contributions, hard work and dedication over the past 30 years have ensured the success of the biennial APSA Conferences. The proceedings have grown from just over 60 papers (including reviews and symposia) in the 1987 Conference, to over 110 papers (including reviews and symposia) for the current Conference.

The 2017 Conference would not have been possible without the contributions of a great many people. Foremost are the APSA members as without your continued support, including the submission of papers, these proceedings would be nothing more than a well bound and presented blank note book. I would also like to thank all those who have attended the 2017 Conference, especially those that have travelled considerable distances to become part of the extended APSA Community; your contributions to the interactions and discussions during the Conference are very much valued.

The APSA Committee typically invites a number of international speakers to each Conference, whose expertise and knowledge adds greatly to the information presented. This year the international speakers invited by the Committee were John O’Doherty, Dorian Garrick and Matt Culbertson, and their contributions are greatly appreciated. Furthermore, I acknowledge the following Australian researchers who also contributed to the success of the symposia and reviews: Darren Trott, Heather Channon, Darryl D’Souza, Evan Bittner, Heather Brae, Kim Bunter and Alan Tilbrook. The A. C. Dunkin Memorial Lecture is an important part of any APSA conference, and the Committee thanks Ray King for accepting the honour of presenting the 2017 Lecture. The APSA Committee also thanks this year’s chairpersons and judges.

There are very few conferences now held where the proceedings are produced prior to the conference and to such a high standard. The contribution and dedication of the Editors, Lucy Waldron and Shay Hill are acknowledged. Also, the Editors’ job would be much harder without a band of very dedicated and obliging referees; many of whom were provided with very short time limits to complete their reviews, but as always, rose to the occasion with little fuss, much skill and no complaints. The contributions of these referees (named elsewhere in the proceedings) are gratefully acknowledged.

Since 2015, the proceedings have been 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 Claire Gibson, Alice Hall and Helen Pavlatos from CSIRO Publishing, for their patience, support and all their hard work during this process.

The 16th Biennial Conference would not have been possible without the generous support of our many sponsors. Once again, Australian Pork Limited (APL) and the Cooperative Research Centre for High Integrity Australian Pork Limited (Pork CRC) are the joint Principal sponsors for the APSA Conference. Many of our sponsors have increased their sponsorship for this Conference, to ensure that increases in registration fees for delegates were minimised, while also ensuring that the quality of networking events are not diminished. All of the Sponsors are listed on the Sponsors page, and their contribution to the success of the 2017 APSA conference is gratefully acknowledged.

I believe that one of the most important functions of an association such as APSA is to foster and support the development of young scientists. The APSA Conference provides a mechanism for students to be able to meet, gather information and network not only within the student group but also the pig industry research community in general. Each student meeting held at an APSA Conference has always been a resounding success, an outcome due largely due to the support of APL and the Pork CRC, as well as the hard work of a number of people. I would like to thank APL and the HIAP CRC for making the APSA student meeting a premier event for the pig student group and I would also like to thank Lechelle van Breda and Ashley Norval from APL for their considerable efforts in making the student meeting at the 2017 APSA Conference such a great event.

The organising committee works hard for two years to organise each conference, and the current Committee has been no exception; stepping up to the plate whenever demanded, whatever needed doing, all to ensure the success of the APSA Conference. Accordingly thanks go to Cherie Collins (Past President), Stuart Wilkinson (Vice President), Frank Dunshea (Treasurer), Cameron Ralph (Secretary), Robert Hewitt, John Pluske, Charlie Rikard Bell and Robyn Terry. Thanks are also due to Jo Healy from The University of Melbourne for her assistance in APSA financial matters. I would also like to provide
a heartfelt thanks on behalf of the entire Committee to Amy Lealiifano (APSA Committee Secretary for the 2013 and 2015 Conferences), who continued to assist the current Committee in so many ways, and was always there to help when we needed her. She streamlined many processes, and saved the Committee considerable time and effort for which we are truly grateful and forever in your debt.

The 2017 Conference was organised once again in conjunction with YRD who acted as the secretariat for this Conference. YRD proved themselves equal to any challenge that was given them; working with Kate Murphy and her team has truly been a wonderful experience.

It has been a pleasure to be the President of APSA for the past two years and to have been part of the organisation of such a premier pig science conference that provides a great networking opportunity for all those involved in pork production. Thank you for your support of the conference and please continue to support the new Committee so that the future success of APSA can be assured.

Dr Pat Mitchell
President
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Rowena Davis, 2017 Graduate

“Relocating from Central West NSW to Corowa has definitely been a rewarding journey. I chose the Agricultural Graduate program to kick start my working career as it is such a versatile company and has numerous pathways to venture into. The program has allowed me to start at the base level of the business in production, learning the everyday basics of pig farming and continues to push me in many ways to lead on to future roles. It has provided many opportunities to work on production projects and contribute to discussions on current and future ideas for pig farming operations. Being a company with so many locations and business sectors, it proves to be an encouraging environment that will suit any person looking to find their mark within Rivalea.”

Georgia Cluff, 2017 Graduate

“The Agricultural Graduate Program at Rivalea has been a great introduction into the industry. I completed my degree in Animal Science in South Australia, and made the move to Corowa to accept the position. Rivalea is a highly integrated company, giving you access to a wide variety of areas within the business. The Graduate program allows you to experience a range of roles that are of interest to you, and enables you to get a sound understanding of how such a large company operates. I have met a lot of great contacts throughout the program, and benefited greatly from having access to mentors along the way. I have thoroughly enjoyed a wide variety of work across my 18 months in the program and am confident that it has given me a great start to my career.”

Megan Quinn, 2016 Graduate
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* During the fattening period. Refer to registered product label for full claim details. Refer to Technical brochure for details of trial data.

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