



Australian Government
Department of Agriculture



Travel Award - Travel Assistance for Visiting US Meat Science Post Graduate (Justin Johnston)

Final Report
APL Project 2011/2305

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Acknowledgements

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Executive Summary

This project was supported by APL and Rivalea Australia to attract a graduate student in Meat Science from overseas to share experience and knowledge with the Australian Pig Industry. The student appointed, Mr Justin Johnston, is a graduate from The University of Minnesota and is now studying a PhD in Meat Science. The student worked within the R&I – Meats group at Rivalea and participated in industry discussions and meetings at Wagga Wagga, Linley Valley, Ag WA and DVP, Laverton over his work experience of 11 weeks. Through the project, there is now a strong relationship between the University of Minnesota Meat Science group and Rivalea. A greater knowledge of US style pork products and cutting lines has developed as a result of the project. Through Rivalea's involvement within the Eating Quality programs of the Pork CRC and APL, this knowledge has become a valuable contribution to the industry being globally competitive.

Project Objectives

1. Provide international experience in meat science and product development
2. Contribute to the development of research into meat quality and product development
3. Development international relationships within the field of meat science

Project Background

Compared to other countries, Australia has a very low number of specialized meat scientists. There are no specialized Meat Science courses offered in Australian Universities as bachelor degrees, and the pig science community has long recognized that it is difficult to attract young scientists to specialize in meat science, yet alone pork meat science. Fortunately for the pork industry, a number of very accomplished scientists have studied projects in meat science as post-graduates. Also, societies such as the Australasian Pig Science Association (APSA) and APL Travel Awards such as this current project have also allowed overseas meat scientists and tissue physiologists to interact with local pig scientists.

For several years, Rivalea Australia has been able to attract graduates in Meat Science or Food Technology from the US and in one case France. This has been largely through the contacts of Mr Ryan Person, himself a graduate in Animal Science from Texas A&M University, who was employed by Rivalea during 2007-2010 until he returned to the US. Ryan was a keen participant in industry discussion in processing technology and contributed greatly to the commercial implementation of moisture-infused pork in Australian pork products, as well as contributing to a better understanding of carcass quality and meat judging in Australia through his contribution to the Intercollegiate Meat Judging Competition (ICMJ). With his departure, we identified that it is important to maintain relationships with overseas universities who have an integral knowledge of carcass quality and processing technology.

The aim of this project was to establish links with a US university with a meat science research and study program and then to develop a long term relationship with meat science staff to allow students to interact with Australian producers, processors and students.

Travel Outcomes

Justin Johnston is an Animal Science graduate from the University of Minnesota, graduating in March 2012. He is currently enrolled in a PhD in Meat Science at UM. Earlier contact had been made in April 2012 with the University of Minnesota through Prof. Lee Johnston (Prof. of Animal Science, Morris Outreach Centre), and Dr Ryan Cox (Professor of Meat Science at the University of Minnesota, St Paul campus) to discuss the opportunity for a work experience program for meat science students within Rivalea. Justin Johnston has a lifelong involvement in the US pig industry and carcass judging at a state level whilst he has competed at a national level in agricultural Quiz Bowl Championships (a junior competition for general knowledge in livestock). In previous work experience, Justin has spent time at Cargill's pork processing facility in Illinois; Hormel in Austin, Minnesota; and a value-add processing factory in Foley, Minnesota producing pulled pork. Justin was employed at Rivalea, Corowa, for 11 weeks between May to August 2012 as a Project Officer within the Research and Innovation – Meat Processing division under the supervision of Dr Rob Smits.

During his time, Justin was an enthusiastic worker and keen learner. He spent a considerable amount of time with Mr Doug Buckley, Boning Room Manager at Rivalea and between them exchanged numerous ideas and evaluations of different cutting lines, product development and processing and packaging solutions with the Rivalea Processing and R&I division. Justin brought a number of different experiences to us including the US style cutting lines, pork recipes and carcass quality. Justin developed friendships with many of us at Rivalea and stays in contact assisting with questions on product development and meat quality measures through his professor, Dr Ryan Cox. During his stay, Justin helped students from The University of Melbourne participate in the Intercollegiate Meat Judging Competition held at Charles Sturt University in Wagga Wagga 4-8th July with Rivalea as a sponsor of the event. Justin travelled to Diamond Valley Abattoir on two occasions in July and August to help coordinate shoulder boning and chemical lean testing procedures. He also visited Linley Valley Pork and the Department of Agriculture WA on 24th July. After a tour of the plant at Linley Valley with Mr Ron Penn and Lui Rinaldi, a meeting with Dr Bruce Mullan, Dr Cameron Jose and Dr Megan Trezona-Murray was held discussing various meat quality projects and concerns.

During his time at Rivalea, Justin assisted in data collection for several projects including APL 2010-2321.05 "GDA – measurement of primal cut weights using the Pork Scan technology".

Use of APL Travel Funds

The travel award for \$3500 was used to support travel expenses to Perth, Melbourne and Wagga Wagga as well as support for international airfares:

Purpose	Date	Meals & Accommodation	Travel	Total
US return airfare	May 2012	\$128	\$1630	\$1758
ICMJ Wagga Wagga	July 2012	\$159	\$234	\$393
Linley Valley/Ag WA	Aug 2012	\$630	\$739	\$1369
DVP abattoir Melb	Jul-Aug 2012		\$814	\$814
		\$917	\$3417	\$4334

Amounts inclusive of GST

Travel to Wagga and Melbourne were based on 65c/km using Rivalea cars.

Rivalea supported the wages of Justin for 11 weeks for the amount of \$10,450 and provided a vehicle for his stay.

Extended Outcome

The APL Travel Award successfully provided an ongoing relationship with the University of Minnesota's Meat Science laboratory. Contacts have been made and relationships established between the Australian Pig Industry and Dr Ryan Cox and his students in Meat Science. It is planned for Rivalea and The University of Minnesota to continue to build on its ties and promote future student exchanges, possibly with interested postgraduates from Australia being exchanged for UM students. A number of advances have been made towards better understanding the differences in carcass and meat quality between the US and Australia and which products drive the growth of the US pork business. This has important implications as the Eating Quality Program of the Pork CRC investigates differences in US style pork compared to Australian Pork.

APL Travel Award Budget

	APL funds*	Rivalea funds	Total
2011/12	\$2500	\$7400	\$9900
2012/13	\$1000 ¹	\$7400	\$8400
Totals	\$3500	\$14800	\$18300

*Funding exclusive GST

¹Payment pending on acceptance of Final Report