

**Rural and Regional Affairs and Transport Legislation Committee**

**ANSWERS TO QUESTIONS ON NOTICE**

Additional Estimates February 2017

**Agriculture and Water Resources**

**Question Number:** 116

**Division/Agency:** Rural Industries Research and Development Corporation

**Topic:** Kangaroo related projects

**Proof Hansard Page:** Written

**Senator RHIANNON asked:**

May I please have an updated list of all kangaroo-related research projects since 2015 involving the RIRDC either as a funder, a major contributor or partner or supporter: including the authors, cost of each project, dates, aims and Objectives Summary.

**Answer:**

Since Rural Industries Research and Development Corporation's (RIRDC) response to Question on notice 112 from Budget Estimates in May 2015, regarding kangaroo-related research projects, RIRDC has not funded or been a major contributor or partner or supporter of any kangaroo-related research projects.

**Rural and Regional Affairs and Transport Legislation Committee**

**ANSWERS TO QUESTIONS ON NOTICE**

Additional Estimates February 2017

**Agriculture and Water Resources**

**Question Number:** 117

**Division/Agency:** Rural Industries Research and Development Corporation

**Topic:** RIRDC funded project or research

**Proof Hansard Page:** Written

**Senator RHIANNON asked:**

Please provide an updated list of all RIRDC funded or supported kangaroo research or projects including:

- a. The project funded, its aims and outcomes, recipient of the grant, source of the grant.

**Answer:**

The attached spreadsheet is an updated version of the list provided to the Senator in response to question on notice 112 from Budget Estimates in May 2015.

ID	Project	Principal Investigator (researcher)	Project Total
PRJ-000089	<a href="#">Kangaroo meat awareness marketing research for foodservice and consumer</a>	Nathan, Mel	\$84,900.00
PRJ-000303	<a href="#">Kangaroo and the China Free Trade Agreement</a>	Kelly, John	\$32,100.00
PRJ-000315	<a href="#">Obtain perceptions of consumers &amp; foodservice operators regarding Kangaroo meat</a>	Ellis, Mark	\$32,000.00
PRJ-000681	<a href="#">Choosing kangaroo: product and industry attributes and consumer choice beha</a>	Ampt, Peter	\$81,000.00
PRJ-000693	<a href="#">Kangaroo Meat Marketing Support</a>	Nathan, Mel	\$5,000.00
PRJ-000694	<a href="#">Extending the sustainable management of kangaroo</a>	Kelly, John	\$46,440.00
PRJ-000695	<a href="#">Maintaining the kangaroo industries freedom to operate</a>	Kelly, John	\$71,609.00
PRJ-000854	<a href="#">Nutritional Composition of Kangaroo Meat</a>	Tume, Ron	\$48,514.00
PRJ-000855	<a href="#">Research and Development for the US Market for Kangaroo meat and skins</a>	Topper, Brian	\$34,481.00
PRJ-002302	<a href="#">Taking the Kangaroo Industry to the internet community</a>	Kelly, John	\$110,000.00
PRJ-002352	<a href="#">Comparative carbon footprint for kangaroo products</a>	Begley, Richard	\$40,180.00
PRJ-003120	<a href="#">Research to assist market development for kangaroo products in California &amp; NY</a>	Kelly, John	\$236,664.00
PRJ-003129	<a href="#">Kangaroo survey in south east South Australia</a>	Stokes, Peter	\$6,305.00

PRJ-004103	<a href="#">Improving the welfare and humaneness of commercially harvested kangaroos.</a>	McLeod, Steven	\$240,068.00
PRJ-004385	<a href="#">Advanced Meat Hygiene Training for Kangaroo Harvesters</a>	Kelly, John	\$89,105.00
PRJ-005198	<a href="#">Exploring new products, technologies and markets for kangaroo leather</a>	Bois, Michael	\$20,000.00
PRJ-005549	<a href="#">Kangaroo wildgame industry training initiative</a>	Mawson, Amanda	\$420,000.00
PRJ-007258	<a href="#">The effect of Sulphur Dioxide on the Thiamine content of fresh kangaroo meat</a>	Hall, Duncan	\$52,000.00

PRJ-008154	<a href="#">Kangaroo Meat Sulphite and Thiamine</a>	Hall, Duncan	\$49,924.00
PRJ-008402	<a href="#">Kangaroo sulphur dioxide and thiamine relationship study (supplement)</a>	Hall, Duncan	\$24,400.00
PRJ-008460	<a href="#">Kangaroo sulphur dioxide and thiamine relationship study Supplemental study # 2</a>	Hall, Duncan	\$30,000.00
PRJ-008557	<a href="#">Building confidence in kangaroo meat for pet nutrition</a>	Hall, Duncan	\$17,860.00
PRJ-008967	<a href="#">Characterising the Australian public and communicating about kangaroo management</a>	Sharp, Trudy	\$60,000.00
PRJ-010037	<a href="#">Kangaroo meat export market access analysis</a>	Barnard, Agnes	\$39,400.00
PRJ-010505	<a href="#">Development of a Kangaroo Industry RD&amp;E Plan</a>	Pattinson, Russell	\$17,345.00
None	<a href="#">Roocipes</a>	Mel Nathan	

UA-59A	<a href="#">People and the Kangaroo Harvest in the South Australian Rangelands</a>	Dana Thompson	
LEC-4A	Kangaroo Industry Strategic Plan	Kelly, John	
US-94A	Meat quality of kangaroos	Wynn, Peter	
LEC-1A	Kangaroo Industry-Its image & market	John Kelly	
PAC-2A	Kangaroo pet meat survey	Trevor Cook	
CWT-1A	Enhancing the Unique Properties of Kangaroo Leather	Mark Looney	
None	Kangaroo Specifications and Selected Meat Cuts	Peter Evans	
None	Improving Consumer Perceptions of Kangaroo Products	Des Purtell	

None	Kangaroo industry Commercial Practices	Macarthur Consulting Pty Ltd	
None	Profitable Marketing of Kangaroo Products	Macarthur Consulting Pty Ltd	

Research Organisation (name of the recipient)
Food Companion International
Lenah Consulting
Sensory Solutions Pty Ltd
University of New South Wales
Food Companion International
Lenah Consulting
Lenah Consulting
CSIRO Food and Nutritional Sciences
AI Topper & Co
Lenah Consulting
ACIL Tasman Pty Ltd
Lenah Consulting
Department for Environment and Heritage, SA government



The Department of Primary Industries, an office of the Department of Trade and Investment, Regional Infrastructure and Services, NSW
Lenah Consulting
Swarvie Saint
Safe Food Production Queensland
BIOLOGIC PTY LTD

BIOLOGIC PTY LTD
BIOLOGIC PTY LTD
BIOLOGIC PTY LTD
BIOLOGIC PTY LTD
Animal Welfare Science Consultants
Oliver & Doam
Miracle Dog Pty Ltd
Food Companion International

The University of Adelaide
Lenah Consulting
University of Sydney
Lenah Consulting
PacALLIANCE (Australia) Pty Ltd
CSIRO Textile and Fibre Technology
AUS-MEAT
Des Purtell & Associates

Macarthur Consulting Pty Ltd
Macarthur Consulting Pty Ltd

Project Aims/Objectives Summary
Would see kangaroo meat editorial and marketing research and analysis into a cross section of various foodservice and cooking magazines, newsletters, chefs association newsletters and chef focus groups.
Creating the most favourable possible regulatory environment in China for the sale of kangaroo products.
To research Foodservice decision makers in the mainstream restaurant trade to establish barriers/opportunities to be addressed in marketing to this important market sector. To provide insights to two objectives as outlined in the Kangaroo Industry Strategic Plan 2005-2010: 1) Informing Chefs about the Industry and its products 2) Develop improved product image via increased communication within various industry publications.
1. Identify key attitudes and issues concerning the use of kangaroo meat by smallgoods and other meat manufacturers. 2. Ascertain which attributes of meat and smallgoods in general are important for consumer choice and determine how kangaroo is perceived on these attributes. 3. Investigate choice behaviour and potential demand among meat consumer segments to identify the triggers for increased consumption of kangaroo based on the attributes identified in objective 2. 4. Determine the change in the choice behaviour of smallgoods manufacturers based on the previous findings.
Support domestic kangaroo meat market development To raise awareness with chefs and epicureans in the Australian meat. Campaign will include launch of Spring edition of Food Companion international + front cover feature on kangaroo including full summary on 'culinary name for Kangaroo giveaway' competition recipes interviews and nutritional advice.
The project will seek to extend the sustainable management of kangaroo populations into regions not currently covered by Federally approved Management Plans such as Victoria the Northern Territory and parts of NSW and SA.
Ongoing dissemination of positive media and factual information on the kangaroo industry to improve its public image and enable further growth in market size and value. In particular the project will ensure key personnel and decision makers in government and major industry clients (such as Adidas) are regularly updated with factual information on industry developments in order to maintain a positive impression of the kangaroo industry. This project addresses an Objective in the current Kangaroo Industry Strategic Plan given a highest priority ranking.
Determining the nutrient composition of specific fat components in four muscle cuts of two different species of kangaroo from two geographic locations. The work will provide the industry with information they require regarding specific nutrients in their products.
Assist the researching and development of effective material dealing with the history and lack of need for this legislation
The new wave of threat to the kangaroo industry comes from unchallenged material on contributor generated internet sites such as Youtube, Myspace, photobucket, Wikipedia and others. Or is this in fact an opportunity? This project will enable the kangaroo industry to ensure these types of sites are loaded with positive messages about the kangaroo industry and its products. It will also ensure ongoing resources are available to counter anti-industry campaigns and spread positive industry messages in more traditional media.
To assess the greenhouse gas emissions of kangaroo products – focusing on table meat and leather production. To compare these to more traditional sources of red meat and leather.
California is the largest single economy in the US. Sale of kangaroo products has been legalized in California via a short term amendment to their laws. This expires at the end of 2009, at which time the legislation will revert to its previous prohibition. This project aims to research mechanisms and provide supportive documentation to enable continuing sale of kangaroo products past 2000.
To determine kangaroo density in the south east To use this density information to support a trial extension of the commercial harvest zone

To provide scientific knowledge and other information on the animal welfare impact of kangaroo harvesting methods with the aim of determining the most appropriate euthanasia methods for young kangaroos which reduce, as much as possible, unnecessary pain, distress and suffering. This will be achieved by: • Reviewing the literature, with an emphasis on current understanding of acceptable methods of euthanasia. The review will aim to address issues that were not covered adequately by the 2006 Hopwood report and will include current information on the development of conscious perception of pain and the implications for humane killing; • Determining the humaneness of current methods used to euthanase pouch young and young-at-foot including decapitation and a heavy blow to head; • Comparing currently used methods of stunning with a spring-operated captive bolt gun that has the potential for use in the field by kangaroo harvesters; • Determining the fate of orphaned young-at-foot that escape capture. Note that although this objective is essential if we are to provide practical strategies to reduce the welfare impact on orphaned young-at-foot, because of the experimental methods used RSPCA Australia cannot endorse it, in its present form. Therefore completion of this component is dependent upon securing additional funding from DEWHA and the Australian Animal Welfare Strategy (AAWS). We have included it here for completeness; • Evaluating the attitudes of commercial kangaroo harvesters as well as the general public and other relevant stakeholders (e.g. hunters, animal protection groups) toward animal welfare and humane killing; • Making recommendations to the kangaroo industry and Government management agencies to improve the welfare of euthanased pouch young and orphaned young-at-foot; and • Provide information for education of the general public.

Maximising kangaroo meat hygiene standards.

To increase the trade of kangaroo skins to these manufacturers for use in their existing product offering To develop the world's first completely kangaroo leather shoe sole

The funding would be used to extend the Rural Industries Research and Development Corporation's current kangaroo harvester training program. The additional funds will be used to accelerate training delivery, update and enhance training materials, develop a competency-based qualification and on-the-job assessment framework to facilitate ongoing training, and retrain and assess skills and knowledge of harvesters This training will ensure that kangaroo harvesters have the skills to meet international requirements and changing market conditions. All kangaroo harvesters receive training before they are first licensed—this program builds on that training to upgrade their skills on an on-going basis. A key part of the training will be the inclusion of a practical skills assessment where harvesters will need to demonstrate their competency through one of a number of assessment methods, such as an on-the-job demonstration. The project objectives include: 1. To provide extension training for wild game field harvesters and field depot operators on hygienic dressing and storage and handling of carcasses that links into a competency based framework for demonstration of skills and knowledge; 2. To develop and implement an on-the-job assessment framework for assessment and verification of wild game field harvester skills and knowledge; and 3. To identify national wild game field harvester and field depot operator competencies / identified Industry Skill Sets to be used as the basis for future training programs and industry development.

1. To provide guidance regarding the concentration of SO<sub>2</sub> required to achieve an acceptable shelf life for fresh kangaroo meat. 2. To measure the impact of various concentrations of SO<sub>2</sub> on thiamine in kangaroo meat over the normal product shelf life. 3. To indicate the degree of thiamine supplementation necessary to counter the inactivation of thiamine in kangaroo meats preserved with SO<sub>2</sub>, to ensure that the minimum nutrient level for thiamine in pet meat is met, as specified by the globally accepted nutrient guidelines for dogs and cats (AAFCO 2009b; AAFCO 2009a). 4. To provide the Kangaroo Industry Association of Australia (KIAA) with a selection of communication resources to allow efficient and widespread communication of the research findings within the industry.

1. To assess the relationship between various concentrations of SO<sub>2</sub> and thiamine concentrations in kangaroo meat over the normal product shelf life (deemed 28 days). 2. To explore the the degree of thiamine supplementation necessary to counter the inactivation of thiamine in kangaroo meats preserved with SO<sub>2</sub>, to ensure that the minimum nutrient level for thiamine in pet meat is met at levels consistent with current industry practice.

To elucidate the relationship of sulphur dioxide and thiamine in chilled kangaroo meat for pet consumption, building upon the previous RIRDC funded study (RIRDC project: PRJ-007258), completed in August 2011.

To elucidate the relationship of sulphur dioxide and thiamine in chilled kangaroo meat for pet consumption, building upon the previous RIRDC funded studies (RIRDC project: PRJ-007258 and PRJ-008420)

•Widespread awareness throughout the kangaroo industry about the importance of adequate dietary thiamine in pet meat being fed to dogs and cats to support pet wellbeing. •Awareness across the industry of recognized nutritional guidelines for the (minimum) levels of thiamine in dog and cat foods (AAFCO nutrient guidelines), and the importance of thiamine as a key nutrient consideration for cats and dogs. •Enhanced pet health status, through reduced incidence of clinical thiamine deficiency in pets fed kangaroo meat as industry members include levels of thiamine supplementation and sulphite inclusion that have been shown in studies to result in levels that meet AAFCO nutrient guideline recommendation for inclusion of thiamine in foods for dogs and cats throughout the expected shelf life of chilled pet food products. •Presentation of the KIAA (and RIRDC) as a proactive industry organisation, attuned to consumer concerns and interest in regards to the issue of thiamine sufficiency and pet health when feeding uncooked kangaroo meat to companion animals. •Provide empirical, research-based data regarding thiamine and sulphites inclusion in kangaroo meat to key influencers including: veterinarians, pet owners, organisations within the kangaroo industry supply chain and regulators to enable more informed discussion and agreement regarding appropriate meat processing to achieve adequate thiamine levels in kangaroo meat for pet nutrition for the duration of the shelf life of kangaroo meat products. •Enhanced confidence in the thiamine status of (thiamine supplemented) uncooked kangaroo meat as pet food.

The objective of this study is to provide two essential pieces of information that are required for effective communication of the issues surrounding kangaroo management. These are: i) an awareness of different 'kangaroo management mindsets' within the community, and ii) an understanding of specific characteristics of kangaroo management messages that are likely to influence these different mindsets.

The Kangaroo industry is seeking to not only open new export markets but to expand trade into markets where there is agreed certification but little to no trade, they are also looking to improve trade to current markets. The project objectives are: 1. Data Scoping

2. Consultation

3. Industry Export Market Access Analysis - Draft

\* Export trade environment analysis,

\* Industry situation analysis and

\* Export Market Analysis

4. Presentation and Workshop

5. Submission of the final Kangaroo Meat Export Market Access Analysis Report.

This project will develop a 5 year strategy that reflects the kangaroo industry's research, development and extension activity priorities.

The purpose of this research was to develop understanding of the social, institutional and cultural factors that influence the use of commercial kangaroo harvesting as a strategy for promoting sustainable rangeland landscapes. In-depth information gathered through interviews with industry stakeholders in South Australia has highlighted issues which are important to designing effective institutions for management of commercial harvest which are not revealed in any other research on kangaroo management or industry development.

To develop strategies and R&D priorities to overcome key industry issues.

The aims of this research were:

1. To develop relationships between genotype, sex and age of kangaroo at slaughter with the key meat quality parameters of tenderness, flavour and juiciness.
2. To establish an understanding of the effect of harvesting and post-slaughter carcass storage methods on the rate of change of muscle pH, the ultimate pH, muscle shortening, losses due to drip from meat, cooking losses and ultimately consumer evaluation of the product.
3. To develop a series of recommendations will be developed in close collaboration with the industry partners to establish the major factors controlling kangaroo meat quality for human consumption.

This project focused on:

- 1) Generating positive media coverage on the kangaroo industry
- 2) Informing the Australian government and environmental academic community of the responsible and ethical nature of the kangaroo industry.
- 3) Facilitating incorporation of kangaroo industry information into environmental management curricula in Australian tertiary training.

The objective of this study, flowing from an earlier industry workshop (RIRDC Report PACNo1), is to examine opportunities to increase consumer acceptance of Kangaroo meat as a valuable addition to a pet's diet: In particular the opportunity to gain endorsement from vets and breeders to such a proposition.

This collaborative project funded by CSIRO Textile and Fibre Technology, Packer Tanning and RIRDC aimed to determine the factors during the various stages of the processing of raw skins through to the final leather which have a significant effect on the strength. This report identifies components related to preservation and the chemical and mechanical operations that influence the strength of the finished leather.

To review, research, and communicate with the Kangaroo Industry operators to revise and develop the next edition of the Kangaroo Specifications for Selected Meat Cuts publication.

Prepare a proposal for RIRDC to consider funding the development and printing of the next edition of the meat manual.

Communicate with a selected group of the Australian Kangaroo Industry organisation (KIAA) to evaluate the extent of the review.

Produce draft version of the next edition for review by the evaluation group.

Print hard copy for stocks and prepare web-site files for the Industry to use on their web-site.

To analyse and assess perceptions of the kangaroo industry and its products and formulate strategies to exploit market opportunities.



<p>To provide a review of all State and Federal Government policy initiatives, rules and regulations that have both a positive and negative impact on industry development. To identify the level of policy inconsistency and/or consistency across states in light of mutual recognition legislation.</p>
<p>Examine the marketing research and development priorities for the kangaroo industry across the prime product groupings of game meat, pet meat, skins and leather.</p>

|