

Research projects & grants

Agribusiness systems and value chain development

Understanding farm-household management decision making for increased productivity in the Eastern Gangetic Plains. Team leader Fay Rola-Rubzen, The University of Western Australia. Role to assist with management and research in the project to investigate whether behavioural economics can explain adoption/adaptation decisions better than conventional adoption models, and if so, how can it be used to “nudge” farmers to adopt/adapt conservation agriculture for sustainable intensification. ACIAR - CSE-2012-108, 2018-2021.

Sustainable & resilient farming systems intensification in the Eastern Gangetic Plains. Researcher for Curtin University to assist with their part of the project managed by CIMMYT. Role is to assist with: evaluating farmer appreciation of costs, benefits, risks and resilience of technology options; and assessing and document farmer decision processes for investing in key climate-resilient technologies, including the role of risk and perceptions, ACIAR - CSE/2011/077, 2014-18.

Short term consultant for IFC – International Finance Corporation. Assist with agribusiness projects in the Asia/Pacific area. Design, analyse and report on baseline survey for IFC Agribusiness PNG: Fresh produce farmer mapping survey. Assist with Baseline survey for IFC-Bayer CropScience Philippines project. 2015 to present.

Improving food security in the Northern Uplands of Lao PDR: Identifying drivers & overcoming barriers. Researcher for James Cook University to assist project managed by Monash University. Role is to assist with: characterisation of key agricultural markets; identify opportunities & threats to food security at household level; implement; and evaluate the impact of pilot interventions, ACIAR ASEM/2012/073, 2014-19.

How can mining and agriculture work together to provide equitable economic opportunities? (Nigeria). Team leader Professor John Howieson, Murdoch University. Role was to lead activities associated with mapping value chains; mapping key policies and institutions; establishing the key drivers, trends and issues; exploring scenarios and their implications; and identifying options for inclusions of smallholder producers, particularly through cluster marketing arrangements. 2013-2015. AUSAID Development Research Award Scheme 66400.

Scoping constraints & opportunities to improve agribusiness market engagement by rural women in Laos. Consulting scientist to Monash University. Role is to assist with scoping study to identify constraints to & opportunities for agribusiness/market engagement by rural women in Laos and the factors that will facilitate increased engagement by women. ASEM/2014/010, 2014-15.

Improving the efficiency of the agribusiness supply chain & quality management for small agricultural producers in Mindanao. Initial Project manager – Roy Murray-Prior. Combined a range of technological, marketing, sociological & economic theories in a pluralistic soft systems framework to develop solutions at all levels of the supply chain including regional & national policy. 2001, ACIAR ASEM/2000/101 - \$357,000 (3 years).

Factors inhibiting & encouraging collaborative marketing by agricultural producers. Project manager – Roy Murray-Prior. Investigated the major factors inhibiting & encouraging individual farmers & companies to work together with others in the same industry in a collaborative approach to agricultural marketing. 1995, RIRDC - \$30,950 (18 months).

Improving goat production in integrated estate cropping systems in South Sulawesi. Project Manager – Peter Murray, University of Queensland. Working in collaboration with Hasanuddin University, Makassar & Assessment Institute for Agricultural Technology, South Sulawesi, to develop understanding & insight of the goat supply chain, in South Sulawesi & identify possible interventions that would improve smallholder & chain profitability. Role as co-investigator. 2008, ACIAR SMAR/2007/201 - \$170,100 (18 months). Invited by ACIAR to be involved & to revise initial project proposal to enhance the supply chain component.

Enhanced profitability of selected vegetable value chains in the Southern Philippines. Project Manager – Peter Batt, Curtin. My role as senior researcher & helped develop initial proposal. Working in collaboration with the University of the Philippines in Mindanao & Catholic Relief services to assist smallholder vegetable producers in Mindanao to adopt effective market linkage mechanisms via collaborative marketing arrangements & clusters, & to identify & propose potential interventions at the farmer & market intermediary level to improve the performance of value chains in the southern Philippines vegetable industry. 2008, ACIAR HORT/2007/066 - \$799,877 (4 years).

Assessing & extending schemes to enhance the profitability of the PNG coffee industry via price premiums for quality. Project manager – Peter Batt (Curtin). Co-investigator & helped develop proposal. Working in collaboration with the Coffee Industry Corporation of PNG to expand understanding of the factors influencing the adoption & on-going success of collaborative collection, pricing & processing schemes & of strategies for successful expansion of these schemes. 2005, ACIAR ASEM/2004/042 - \$391,571 (2 years).

Assessing & extending schemes to enhance the profitability of the PNG coffee industry via price premiums for quality (Developed extension proposal & completed project). 2007, ACIAR ASEM/2004/042 extension - \$153,605 (1 year).

Linking smallholder vegetable producers in the Philippines to institutional markets in metro Manila – a scoping study’. Project manager – Peter Batt (Curtin). Co-investigator & helped develop proposal. Working in collaboration with University of Philippines (Diliman) & University of Philippines (Mindanao). 2006, ACIAR ASEM/2003/053 - \$92,535 (9 months).

Tracking & tracing systems for small business biosecurity. Project Manager – Christine Storer, Curtin. Minor role in assisting with project & instrument design. Working in collaboration with consultants from Eastern Australia the aim of the research is to set-up & evaluate the use of technology in tracking & tracing systems to address biosecurity issues for several small & medium sized business based chains. 2007, RIRDC - \$103,150 (2 years).

Agricultural extension

Regional Extension Plan for Cape York and the Wet Tropics NRM. Consultancy to assist Cape York and Wet Tropics NRM to develop a regional extension plan to provide a strategic view of on-ground delivery of extension services consistent with regional water quality priorities. 2018.

Assessment of the extension and education activity aligned to the Great Barrier Reef catchments in Queensland. This review was to inform an Implementation Strategy for the Queensland Government to guide funding for the Great Barrier Reef Water Quality Taskforce. Assisted team leader Jeff Coutts and with Peter Long were responsible for the review and reporting. 2016-17.

Evaluation of Innovation projects delivered by Terrain NRM Reef Rescue. Conducted review of 23 Innovation projects and reported to Terrain NRM on improvements in selection of projects, design, assessment, management, support and reporting of results. 2016.

Using ICTs to enhance adoption of new agricultural technologies and innovations. Researcher for Curtin University to assist with their part of the project managed by Sydney University. Role is to assist with design, implementation, analysis and write up of qualitative research to: Determine the extent of use of ICT-based extension tools; Determine needs of farm advisers & farmers for ICT tools (production decision making, climate, price, market); How ICTs can help adopt new technologies. ACIAR - CSE/2015/012, 2015-16.

Design & evaluation of farmer-to-farmer learning pilot projects in Indonesia. Consultant to ACIAR East Indonesia Agribusiness Development Opportunities Project to formulate guidelines & recommendations for designing and implementing effective, affordable, appropriate & sustainable F2F learning & adoption programs including 2 pilot F2F activities, 2014.

Agribusiness PNG: Monpi Cocoa Exports baseline study. Team leader – Roy Murray-Prior. Objective was to gain background information of current condition of target project beneficiaries including participating farmers. 2014, IFC Agribusiness PNG Program.

Agribusiness PNG: Monpi Coffee Exports baseline study. Team leader – Roy Murray-Prior. Objective was to gain background information of current condition of target project beneficiaries including participating farmers. 2013, IFC Agribusiness PNG Program.

CARE PNG Baseline Coffee Survey Analysis for CISP. Prepare and analysis baseline survey for CARE PNG Coffee Industry Support Project with PNG Coffee Exports. 2014.

Evaluation of the structure and performance of the PNG Coffee Industry Corporation extension service. Team leader of consultancy project for World Bank and PNG Government, 2013.

Review delivery of the reef rescue program in the Wet Tropics of Australia. Consultancy project managed by Coutts J&R to review Terrain Natural Resource Managements implementation of the Australian Government’s Reef Rescue Program 2009 – 2013. Role was to conduct interviews, facilitate workshops with staff, stakeholders and informed persons in contract the Coutts J&R.

Improved stubble & soil management practices for sustainable farming systems in the Liebe area, \$756,000 (3 years). Role is to: provide feedback & technical advice to Liebe staff about project direction, operation,

- publications & progress reports when required, & to be an active member on the GRDC project management committee. 2010, GRDC, \$19,800 (3 years), Assist Project Managers, The Liebe Group with the project.
- Benchmarking strategic preparedness & resilience of WA farmers**, Team leader: John Noonan, Member of research team evaluating the performance of this national DAFF pilot program. 2010, Department of Agriculture & Food, Western Australia, \$2,185,000 (1 year).
- Technology assessment & knowledge exchange processes**. Based in Bogor during Academic Study Leave with Balai Besar Penkajian Teknologi Pertanian & attached to project from March to June 2008. Project Manager: Elske van der Fliert, University of Queensland. My role was to contribute to developing a concept & implementation process for a pilot roll-out of agricultural technology options for farmers in South Sulawesi, South-east Sulawesi, West Nusa Tenggara & East Nusa Tenggara provinces of Indonesia. 2008, ACIAR SADI/Subprogram 3: Support for market-driven adaptive research.
- Adoption & impact of high yield packages for wheat production in WA**. Joint project manager with Lionel Martin. Assessed the impact of research findings in agronomy of the wheat crop since about 1990 in three major parts of the wheat belt. 2003, Department of Agriculture WA - \$17,600 (1 year).
- Why do farmer & “expert” perceptions of training needs differ?**. Project Manager – Sue Kilpatrick (University of Tasmania). Collaborative project with University of Tasmania where I managed the WA component. Project aimed to determine how male & female farmer learning for management & marketing can be improved & understand attitudes toward farm business management training. 1998, RIRDC - \$88,296 (2 years).
- Increasing effectiveness of business management training for rural businesses in SW WA**. Project manager – Roy Murray-Prior. Investigated the factors that would increase the effectiveness of business management training for farmers. 1997, Rural Adjustment & Finance Corporation (WA) - \$11,500 & ARC Small Research Grant - \$8,300 (1 year).
- Woolproducers attitudes & beliefs about chemical residues in wool due to chemical control of flies & lice**. Project manager: John Karlsson (AWA). Collaborative project funded by AWA to conduct a preliminary investigation of WA woolproducers attitudes & beliefs of farmers towards chemical use in their sheep flocks & the residues of chemicals in their wool clip. 1998, Department of Agriculture WA (6 months).
- SGS National Experiment**. Collaborated with the WA Department of Agriculture & other state Departments of Agriculture. Minor role as advisor on initial stages of farm management & agricultural extension components of the project. 1997, Meat Research Corporation Sustainable grazing systems key program (1 year).
- Student projects supervised in agricultural extension**
- PhD projects supervised*
- Improving the fit of new annual pasture legumes in Western Australian farming systems: Experience from Cadiz & Casbah**. K. Salam. This study was undertaken aiming to improving the fit of new annual pasture legumes in Western Australian farming systems. It found important shortfalls in the present state of development (breeding and/or selection) and release of annual pasture legumes and their subsequent adoption in Western Australian farming systems and provided suggestions for improvement. Furthermore, it designed a system - a common platform - where breeders, farmers, extension specialists and policy makers could work as a team towards improving the fit of an annual pasture legume in Western Australian farming systems.
- Masters projects supervised*
- The role of agricultural extension workers in horticultural agribusiness in Nusa Tenggara Timur Province – Indonesia**. R. Leta. The objectives of this research were to investigate: 1) what roles were expected of agricultural extension workers by farmers, government officers and agricultural extension workers, 2) the perceptions of these groups about the effectiveness of agricultural extension workers in performing their roles, and 3) factors that impede agricultural extension workers’ ability to perform their roles effectively. This study supports the hypothesis that agricultural extension workers were not performing their roles effectively, but a key reason appeared to be system failure. While the NTT province was supposedly following the Training and Visit model, very little effective training appears to be taking place and agricultural extension workers lack transport and other facilities to conduct effective visits and demonstrations. Another key deficiency was locally relevant research findings.
- Exploratory study on small holders’ perceptions of farm records in the Embu District of Kenya: A repertory grid technique**. C. Mariene. Adoption of farm recording practices by smallholders in Kenya was studied based on the belief that adoption of the practice is a product of an individual’s perception of farm records. Key findings

of this research were that: the main dimensions used by smallholders in deciding whether or not to adopt formal record-keeping were: its perceived importance and the ease of its practical application in diversified farms; to promote farm record use by smallholders, extension agents need to see farm records the way the farmers see them; and consequently to ensure practicability, records need be developed in consultation with farmers.

Impact assessment: Smallholder coffee agronomy and postharvest trainings in the highlands of Papua New Guinea. Leo Aroga Kepa. This study is evaluating the entire agronomy and postharvest training program supervised and funded by the CIC under three assessment categories: needs, processes, and outcomes.

Learning styles and extension training experiences of smallholder farmers of the Eastern Highlands Province of Papua New Guinea. Gordon Winkula Wallangas. The objectives of the study are to identify (i) major social, economic and infrastructure factors that affect extension training; (ii) the agencies that farmers learn most from about agricultural technologies, knowledge and skills; (iii) the learning styles of farmers; and (iv) develop an appropriate extension-training approach for smallholder farmers in Papua New Guinea.

Evaluating a pilot project of drought policy measures on farmer management of natural resources. Rebecca Heath. This project aims to assess the effectiveness of a pilot of drought policy measures in achieving behaviour change and improvements in natural resource outcomes.

Honours projects supervised

An evaluation of the Protein Plu\$ Extension Program. Peta Richards – The aim of the project was to determine what improvement could be learnt from the extension process, and what impact the Protein Plu\$ extension program had on dairy farmers in Western Australia. A key finding was that the Protein Plu\$ extension program was successful in increasing awareness of factors affecting milk protein levels, and had a valid place in the industry to report relevant information such as the results of the Monitor Farms and the Vasse Milk Farmlets.

Differences in expectations and perceptions between the groups involved in TopCrop West? N. Selesnew. - The aim of this project was to determine the current image of the program. It found the impediments to the organisation's image were the interaction of the group providers with groups, methods of communication and feedback channels in the organisation.

Involving agribusiness in Topcrop West. Leanne Schulz. - The objective of this research was to determine the characteristics of agribusiness providers to TOPCROP West and the factors affecting their involvement. It found that rapid expansion was the important factor in the lack of involvement of agribusiness in the program when combined with outsourcing of service provision. Initial informal management systems had been outgrown and were not working effectively for all stakeholders. More formalised management systems were needed to ensure all stakeholders were communicating on a regular basis to enable expectations to be understood and met. In addition, systems were needed to provide feedback to quickly identify and address problems and opportunities.

Evaluation of dairy farm performance program as an extension activity. Chantelle Frearson.

Farmer participation in grower groups. Renaye Horne. - The aim of this project was to determine factors affecting farmer involvement in group activities in the WA grains industry. On average, growers surveyed were members of at least one group and only 10% of the sample had never been involved in a group. Limited time, having other sources of information and the group not being applicable were the top reasons for non-involvement in groups.

Evaluation of adoption of LAMBPLAN as a Tool in Flock Ram Selection. Berin Gibbons. The aim of this project was to investigate the limitations to the adoption of LAMBPLAN as a tool in terminal sire selection by commercial prime lamb producers in the Central Wheat-belt region of Western Australia. A key finding of the project was the relatively high level of usage of LAMBPLAN's colour grading system indicates that the perceived complexity of EBV's and SI's compared with the colour grading system, is possibly one of the contributing factors to the low level of usage of LAMBPLAN.

Agricultural economics and farm management

Socio-economic factors affecting the development of climate change resilient cropping & mixed cropping/grazing businesses in WA Part of WA node managed by Michael Robertson, CSIRO - \$366,206 (3 years). Title: 'Developing climate change resilient cropping & mixed cropping / grazing businesses in Australia'. Role is to: Review socio-economic outcomes of options selected by the team; Develop & deliver appropriate communication activities with the team. 2009 DAFF Climate Change Research Program – \$46,500 (3 years).

Development of an Outback “Atlas”: What is different & important about the communities, economies & resources of Outback Australia? Project manager – Tom Measham (CSIRO). A combined project of the Desert Knowledge CRC & the Tropical Savannas CRC which scoped the issues involved with defining & linking key social & economic issues affecting the viability of Outback regions. 2003, Desert Knowledge CRC Profiling Outback Livelihoods - \$134,504 (1 year).

Evaluation of beneficial end uses of mine lakes. Project manager – Roy Murray-Prior (Curtin). The project developed a bio-socioeconomic analysis methodology to determine the best possible end-uses for mine voids, to assess community participation processes & to establish a policy framework for the mine closure process. 2003, Centre for Sustainable Mine Lakes Project Component 3.6 - \$82,500 (3 years).

Bio-economic analysis of the incorporation of lucerne leys in cropping rotations for the Jimbour Plains of Southern Queensland. Collaborative project with APSRU conducted from February to June 2001 while on Academic Study Leave. 2001, Agricultural Production Systems Research Unit (APSRU), CSIRO Sustainable Ecosystems.