

2019-20 Investment Call 14 Funded Projects			
Proposal Title	Lead Investigator	Research Organisation	Project Summary
Refining body condition score for region, season, breed and responsiveness	Dr Gordon Refshauge	NSW Department of Primary Industries	This project will investigate the reliability of advice around body condition score targets for sheep reproduction, by examining data from different regions, breeds and mating seasons and to demonstrate the importance of understanding flock responsiveness to condition score.
A novel amino acid approach to lamb survival	Dr Mariana Caetano	The University of Adelaide	This project examines the impact of supplementation of pregnant ewes with specific amino acids on the survival and in utero growth/vigour of twin foetuses.
Increasing lambing percentages through better use of pregnancy scanning technology	Associate Professor Forbes Brien	The University of Adelaide	This project aims to increase the adoption of scanning and develop more customised management of twin- and multiple-bearing ewes to increase twin-lamb survival. The potential for identifying scanned indicators of foetal health, using remote diagnosis of scanned images, and better linking of scan data with EID tags, will also be examined.
Calf 48 hour – better detection of calving events for improved productivity	Dr Malcolm McPhee	NSW Department of Primary Industries and University of Technology, Sydney	This project will expand the use of 3-D camera technology across British breeds to develop a commercial-ready product to predict carcass traits (fat, muscle score, frame score and body condition score) at different stages of growth in real-time. The project will also validate and update predictions of lean meat yield, MSA marbling and MSA index on live cattle and will develop the existing Beefspecs calculator for smart phones.
Improved calf output utilising real-time monitoring of cow reproductive behaviours	Mark Trotter	CQUniversity Australia	Improving reproductive outcomes in Northern Beef enterprises is a key component of increasing productivity and profitability. Reaching puberty, post-partum resumption of oestrous, embryonic losses and premature births are some of the critical components essential in achieving this. This project aims to address these controlling factors by using the commercially available Heatime®Pro+ System which has the ability to provide precision information on key aspects of reproductive behaviour, in particular female oestrous activity. This will enable individual cyclicity of the entire breeder herd to be monitored continuously in real time.
Boosting natural regeneration of the nitrogen capital in grazing lands	Professor Susanne Schmidt	School of Agriculture and Food Science, The University of Queensland	This project will evaluate the potential of 'Biocrusts' of soil microbes to fix nitrogen in grazing lands, and will determine the impact of grazing management practices on nitrogen capture by biocrusts.
Quantifying spatial and temporal changes in feed supply and demand	Dr Sarah McDonald	NSW Department of Primary Industries (Climate Research)	This project will determine the feasibility of using remotely-sensed and on-ground monitoring data to develop a decision support tool (early warning signal) for graziers to manage total grazing pressure by managed and unmanaged herbivores.

Integrated management and development of additional agents for Parkinsonia	Michelle Rafter	CSIRO	This project will investigate potential biocontrol agents for the woody weed Parkinsonia. The project will investigate the release of additional leaf defoliating agents, develop new tools to monitor their establishment and determine the impact of a stem-galling fly on Parkinsonia.
A new hope for the biological control of blackberry	Dr Raelene Kwong	AgVic	This project will investigate a new potential biocontrol agent (the blackberry cane-boring sawfly) for control of blackberries and specifically the specificity of the sawfly to blackberries alone.
Not enough nodules - impacts of herbicides, pesticides and other farm management tactics	Dr Belinda Hackney	NSW Department of Primary Industries	This project will determine the impact of management practices (herbicides, pesticides and soil inputs) on rhizobia/legume interactions and options for optimising N-fixation and legume biomass production.
Quantifying neonatal mortality and reproductive performance in southern beef herds	Dr Kelly Stanger	The University of Melbourne	This project will quantify (by survey) the extent of neonatal calf losses in southern Australia and the relative importance of the dam, genetics, nutrition, maternal condition score, metabolic disturbances and infectious diseases, on the risk of calf death. Relationships between management practices and calf mortality will also be identified to provide benchmarks for industry.
Calf Loss Consortium	> 35 interested researchers involved	> 6 organisations involved	Calf loss is a major cause of lost productivity in Northern Australia. The causes are multifactorial and the solutions not well researched. Furthermore, the geographic spread and potential causes and solutions are likely to be varied. Expressions of interest were called from parties to form a partnership to perform RD&A to reduce the incidence and impact of calf loss.
A review of the impact of heat stress on reproductive performance in sheep	This project will see a closed competitive tender (2) put out for the conducting of a review of literature on heat stress (in sheep), identification of key knowledge gaps and a where appropriate development of a program strategy to investigate short, medium and long term methods of mitigating and managing the effects of heat stress on reproductive performance Completed – report can be found here		
Confinement feeding for sheep	The aim of this project is to prepare a literature review that identifies feeding and other practices that could be managed to optimise reproductive performance whilst ensuring ewe welfare. This review will include evaluation of feeding strategies during joining and of the pregnant ewe, with consideration of the optimal ewe body condition score.		