

2016-17 MLA ANNUAL CALL | 18 PROPOSALS FUNDED

PROJECT TITLE	PROJECT SUMMARY	PRINCIPAL INVESTIGATOR	MLA 2020 STRATEGIC PILLAR
Designing farm specific nematode control programs for sheep	The project will develop and validate a mathematical model which will allow input of site-specific climatic, management, husbandry and chemical use data, to predict the productivity, parasitological, and cost consequences of intended sheep IPM interventions. The model will have a user-friendly interface to ensure its utility as a decision-making tool to improve integrated worm control by producers, advisors, researchers and students.	University of New England	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Advancing the agronomy package for tederas to fill feed-gaps	This project will advance the Tederas agronomy package, which is essential for successful farmer adoption. It is proposed to establish a series of trials to evaluate regional adaptation (soils and rainfall), establishment techniques, fertilization requirements, herbicide tolerance, defoliation management to maximize green leaf production in the out-of-season period, plant population dynamics (old plants and seedling recruits) and to investigate the hard-seed breakdown profile in several environments across southern Australia.	DAFWA	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Piloting an automated endemic disease investigation service for sheep producers	Producers who receive notice of disease diagnoses in sheep they send for slaughter mostly have access to information on the causes, prevention and treatments for the diseases in question. What they don't have, is a tool to help them decide which strategy is bound to be most efficient for their circumstances. This project will provide a benefit-cost calculator to help producers make an informed decision on their best course of action to mitigate the impact of the disease on their enterprise's profitability.	Herd Health P/L	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
New option for monitoring drench resistance and movement of Barber's Pole Worm	Drench resistance is the biggest problem in internal parasite management. The mechanisms by which gastro-intestinal parasites spread between livestock enterprises are not understood, which makes it difficult to devise better systems to interrupt the movement of parasites displaying greater drug resistance, virulence or environmental persistence. There is no current methodology which can distinguish between parasites arriving from elsewhere and those already present. This project will develop such a method using DNA-based markers	CSIRO University of Queensland	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability

Testing and verification of a single-dose cattle tick vaccine	Cattle tick management in the northern beef herd is totally dependent on the use of chemicals and the indicine host genotype. A vaccine will reduce dependence on chemicals, removing the blights of resistance and tissue residues, and allow re-introduction of taurine beef eating quality advantages. This project will demonstrate the efficacy and duration of protection against tick infestation provided by a novel one-injection-per-season vaccine formulation.	The University of Queensland, QAAFI	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Addressing feed supply and demand through total grazing pressure management	Total grazing pressure (TGP) is defined as the demand for forage by all grazing animals (both domestic and non-domestic), relative to supply. Successful rangeland management relies on managing grazing pressure from non-domestic herbivores; adjusting livestock numbers in response to available feed; and strategically resting pastures. This project, a partnership between four states (QLD, NSW, SA and WA) will deliver a RD&A Investment Plan and Prospect Statement and Review. A cross-jurisdictional and cross-sector approach, involving pastoralists, researchers, extension agencies, policy developers and NRM bodies will inform this project.	NSW DPI	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Social acceptability of pest animal management in meeting TGP targets	Total grazing pressure (TGP) is a key driver of productivity in extensive livestock production systems and sustainable grazing management requires the management of grazing pressure from feral animals and native herbivores. Although there are practices to manage the different pest animals, these practices must be socially acceptable if the extensive livestock industry is to maintain its social license to operate (SLO). This project will investigate the attitudes of influential stakeholders to the control of feral species and native herbivores in extensive production systems of the rangelands. Advice will be provided as to how the extensive livestock industry can engage with stakeholders and communicate with the public around this topic.	NSW DPI	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Developing a mixed farming systems RDA program	This project addresses the need to develop a program of work to address issues impacting the integration of livestock and cropping to improve farm financial performance and ensure consistent supply of meat from regions predominated by mixed farming systems. This project will deliver an investment plan for future RD&A.	Charles Sturt University	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
The profitable integration of cropping and livestock in Southern Australia	This project will define and extend the unique capabilities and profit drivers in mixed farming systems that optimise available synergies between cropping and livestock enterprises.	Rural Directions P/L	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability

ParaBoss for cattle parasites	This project will align parasite management resources for grassfed beef producers into an existing successful framework used by sheepmeat producers. While still offering regionalised IPM strategies, ParaBoss for cattle parasites will consolidate Australia's available cattle parasite management resources into one centralised national database. ParaBoss for cattle parasites will be the key platform for the development and extension of national best practice management for cattle exposed to mixed parasite infections which will ultimately reduce its economic impact and improve animal welfare	DAF QLD	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Progressing superior tropical grasses and legumes in seasonally-dry Queensland	This project extends MLA/DAF project B.NBP0766 targeting independent small-plot assessments of a wide range of promising, but previously untested, new tropical pasture legumes and grasses in north and central Queensland and comparing with older types (where present). The new project is to test combinations of the better-performing legumes and grasses in larger, replicated field plots using grazing management more typical of 'weaner' or 'grower' paddocks. Measurements target understanding of productivity: plant population dynamics, productivity and quality and animal utilisation. Profitability at individual enterprise and regional (land-type) levels will be assessed and the sites used as focal points for MLA/DAF extension.	DAF QLD	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Legume best management practice in the Brigalow belt bio-region	This project aims to increase the productivity of grass pastures in the Brigalow Belt bio-region (primarily in southern and central Queensland but also extending into north Queensland) through more reliable and successful adoption of legumes. A coordinated extension program will support landholders to assess and implement on-farm options to successfully adopt legumes; and a coordinated R&D program will develop management practices to improve establishment reliability and long term (20+yrs) performance of legumes in grass pastures. Stage 1 of this project was initiated as a risk management approach to underpin the timely completion of preliminary activities, prior to contracting the larger project in stage 2.	DAF QLD	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Area-wide control of buffalo fly and prevention of southward spread using Wolbachia	Buffalo Flies (BF) are invasive, and have increased their range southward by 1000km in the last 40 years. This project will investigate a novel approach using Wolbachia, an insect-infecting bacterium, in area-wide approaches targeting overwintering foci of BF to reduce the effects of BF in already infested areas and to arrest the southerly spread of BF.	The University of QLD	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Exploring profitability and resilience through novel livestock and	This project will identify adaptation options that will raise profitability of farm systems under a range of climate challenges. This will include options to increase profitability, resilience, minimise greenhouse gas emissions and reduce the risk of pests and	The University of Melbourne	Pillar 1 Consumer and community support

pasture adaptation to future climates	diseases. The project will be conducted across case-study transects in southern Queensland, New South Wales, Victoria, South Australia and Western Australia, by a project team made up of staff from The University of Melbourne, CSIRO and the University of Southern Queensland and using a representative MLA regional reference group made up of farmers, consultants and other experts		Pillar 4 Productivity and profitability
A Leg Up	A Leg Up will provide mentor support for new red meat RD&A entrants in the work force by pairing them with an experienced industry professional. It will facilitate effective communication, enable skill transfer, and build a professional network to assist RD&A entrants to set goals and achieve them. It will assist in developing a 'succession plan' for both the new entrants and others in the sector, to improve the replacement rates of exiting/retiring professionals	Meridian Agriculture	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Supplementation to reduce the impact of mycotoxins and insufficient magnesium	Dark cutting beef is the major cause of MSA non-compliance. In S Australia the incidence of dark cutting increases during late summer to early winter with recent research indicating that mycotoxins from perennial pastures and low magnesium are partially responsible for this rise in dark cutting during this period. This project will increase industry knowledge and identify control measures to reduce the impact of mycotoxins and sub-clinical grass tetany on animal growth, performance and increase compliance to Meat Standards Australia (MSA) grading. The mitigation strategies identified in this project are envisaged to be economically favourable and easy to implement which will enhance their uptake by industry.	Murdoch University	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
RAD Meat – Developing the talent of Red Meat RD&A professionals	<p>This project aims to develop an enticing RD&A career platform for Australia's red meat and livestock industry which attracts new entrants to the industry and supports, nurtures and encourages the retention of its skilled professionals. This project will review the challenges and develop strategies for attracting and retaining RD&A professionals in the red meat industry though:</p> <ul style="list-style-type: none"> • a review of the current career landscape • survey and focus group work with established partner networks to identify specific attributes which attract and retain, or deter them from a career in red meat RD&A • the design of a professional development program which includes a range of activities that support, nurture and build the skills of early career professionals such as a mentoring program. 	AgSTAR Projects	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability

Early life supplements to enhance rumen efficiency	New innovative approaches are required to enhance the efficiency of rumen digestion. Several studies have shown that in young ruminants and during rumen development, ingested microbes colonise and establish in a defined and progressive sequence. Emerging data also suggest that the application of rumen additives during late pregnancy or during the first few weeks of an animal's life changes the composition of the rumen microbiota in the new-born and potentially influences animal productivity and product quality much later in life. This proposal seeks to explore new options for manipulating the rumen of the new-born animal in tropical adapted cattle in N Australia to improve the efficiency of dietary energy and nitrogen use by the animal. The project will focus on manipulating the rumen microbial populations.	CSIRO Agriculture	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
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