2018-19 MLA ANNUAL CALL | 13 PROPOSALS FUNDED

PROJECT TITLE	PROJECT SUMMARY	PRINCIPAL INVESTIGATOR	MLA 2020 STRATEGIC PILAR
No more gaps with superior shrub systems	This project will develop high-value shrub systems to improve utilisation of the summer/autumn/early winter feed base in Mediterranean and low rainfall mixed farming systems, with application to both sheep and cattle. Drought-tolerant shrubs provide nutrients to complement, and thereby improve the feed conversion ratio of crop and pasture residues during summer/autumn and reduce supplementation requirements.	CSIRO / Murdoch University / University of Western Australia	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
What is the nutritive value of modern crop stubbles?	New crop cultivars, alternate crop species, modern harvesters and a reduction in the density of volunteer pasture plants have affected the nutritional value of modern crop stubbles. A recent scoping study found that modern crop stubbles are notoriously variable in quality, with non-cereal crops even more variable. This project will provide farmers with up-to-date digital information on the feeding value of modern stubbles.	CSIRO	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Phasing out of mulesing: cost, benefits and opportunities	This project will examine the benefits and costs of ceasing Mulesing in prime lamb systems and will examine the key drivers for farmer behaviour and attitudes towards continuation of mulesing prime lambs' dams, and barriers for behavioural change towards mulesing-free systems. Outcomes will inform future extension programs and approaches to encourage phasing out of mulesing in prime lamb enterprises.	University of Melbourne	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
The potential for vaccines against gastrointestinal nematodes of small ruminants	Barbers pole worm (BPW) and scour worms cost Australian red meat industries at least $535M pa in lost production and treatment costs. BPW has recently had a vaccine launched, however, knowledge and treatment of scour worm needs improving. This project will review literature of gastrointestinal nematodes in small ruminants, highlighting different approaches and technologies to aid future research.	University Of Sydney	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Formulating a research pathway to provide new options for flystrike control	A large amount of research into flystrike control had been conducted over many years; however, flystrike remains a serious problem for the sheep industry. This project will review past research on flystrike control methods and identify if modern scientific advances can provide new motivation to past approaches. Recommendations for future research programmes into flystrike control will also be made.	CSIRO Agriculture and Food The University of Queensland	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability

Strategic and novel approaches to reducing flystrike in sheep	This project will conduct an extensive review of flystrike control and of new technological developments to produce a new strategy for the sheep industry that will provide the greatest future return on investigations This will be achieved through the review of literature, tools, chemicals and conventional and novel approaches for flystrike control and will result in the development of a strategy that identifies future pathways of investigation most likely to provide the greatest impact.	neXtgen Agri Ltd	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Evaluation of the Sterile Insect Technique for Sheep Blowfly Control	Sheep blowfly costs over $200M annually in treatment costs and lost wool and body growth. Sterile Insect Technique (SIT) involves the release of large numbers of sterile male insects, and has been successful in eradicating pest insects in the past. This project will review the concept of using SIT to control sheep blowfly in Australia including a literature review, benefit-cost analysis, research plan and plans for a production and release program.	Macquarie University	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
"Paddock Power": lifting reproductive performance through evidence-based paddock design	This project will assess the impact of paddock area and watered area (distance-to-water) on calf wastage and breeder herd performance in Northern Australia. It will quantify how much reducing paddock area and/or reducing distance-to-water could reduce calf wastage. The core research output will then be evidence-based recommendations on where to place new infrastructure to maximise return on investment.	NT DPIR	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
More lambs from ewe lambs through developing and extending best practice	Mating ewes to lamb at 12-15 months is an effective avenue to build ewe numbers and increase lamb supply. However, reproductive performance of ewe lambs is much lower than mature ewes and is highly variable. This project aims to significantly increase both the number of ewe lambs being mated and their reproductive performance by developing and validating best practices to deliver reproductive success.	J.T. Agri-Source Pty Ltd	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Optimising heifer development and management to increase whole herd profit	Achieving maximum lifetime reproductive performance requires that heifers conceive early, calve unassisted, raise a viable calf and re-breed early. Only 65% of heifers joined in temperate zones achieve this status. This project comprises of an integrated research and development extension effort that will achieve a 10% increase in reproductive efficiencies.	The University of Adelaide	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Unlocking the keys to ewe survival	Reducing ewe mortality during lambing is a high priority for the sheep industry. Currently, it is estimated that 80% of producers have non merino ewe mortality rates that do not meet the targets of industry best practice. This project is designed to	Livestock Logic	Pillar 1 Consumer and community support

	improve understanding of the causes of death of non-Merino ewes over the lambing period and ultimately to reduce ewe mortality by 30%.		Pillar 4 Productivity and profitability
Fit for purpose biochar to improve efficiency in ruminants	Ruminant production systems need strategies that will improve efficiency & reduce emissions to help achieve MLA's CN30 goal. The National Livestock Methane Program identified the inclusion of biochar into ruminants' diets as a high research priority. This project will demonstrate that the manufacture of biochar can be manipulated to yield a high quality, consistent product that can be readily incorporated into ruminant diets.	CSIRO Agriculture and Food	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Increased pasture intake and reduced supplement requirements of cattle	Feed intake is controlled by the hypothalamus in response to signals from the gastrointestinal tract, liver, muscle and fat. This project aims to determine the pathways that integrate signals from the diet and peripheral tissues to control feed intake in ruminants. The overall aim is to utilise novel, non-nutritional approaches to increase feed intake when grazing nutrient deficient pastures reducing supplement requirements.	The University of Queensland	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability