2017/18 MLA ANNUAL CALL | 12 PROPOSALS FUNDED

PROJECT TITLE	PROJECT SUMMARY	PRINCIPAL INVESTIGATOR	MLA 2020 STRATEGIC PILLAR
New approaches to increase the weaning rate of the national sheep-flock	This proposal aims to test the efficacy of a range of dietary additives fed to ewes during late pregnancy to enhance perinatal brain oxygenation and thence improve lamb survival.	South Australian Research and Development Institute	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Improving beef production through management of plant toxins	This project proposes to produce a rumen inoculum with microbes able to detoxify the Pimelea toxin, simplexin, and investigate absorbent/slow-release systems for the rumen that would have broad utility across a range of plant toxins.	University of Queensland (QAAFI)	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Feeding Leucaena to manage the rumen for maximum beef profit	This proposal seeks to evaluate the psyllid-resistant Leucaena cultivar, Redlands, in terms of the efficacy of the current *S. jonesii* inoculum for denaturing Leucaena toxin, as well as cattle growth performance and methane emissions. Establishment of the range and extent of land suitable for growing Leucaena cultivars also is proposed.	CSIRO Agriculture and Food University of Queensland The State of Queensland acting through the Department of Agriculture and Fisheries	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Grazing strategies and tools to improve profitability and land condition	This proposal seeks to extend outcomes of the long-term Wambiana Grazing Trial by evaluating adaptive, flexible stocking rates and wet season spelling at Wambiana and four additional commercial property demonstration sites.	The State of Queensland acting through the Department of Agriculture and Fisheries	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Development of a single shot immunocontraceptive vaccine for cattle	This proposal aims to develop a single shot vaccine based on immunisation against proteins or peptides in the zona pellucida of the ovary that will cause infertility in heifers and cows for at least 12 months. If successful, this could be a welfare-friendly alternative to surgical ovariectomy (spaying).	University of Queensland	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Maximising the value of existing technology for sheep producers	This proposal aims to model various management systems available to sheepmeat producers and conduct cost benefit analyses of the implementation of eID technology to inform management decisions under these different scenarios.	AgriPartner Consulting	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability

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Reducing foetal and lamb losses in young ewes	This proposal aims to use participatory research on multiple sites across southern Australia to determine the extent and timing of reproductive wastage between pregnancy diagnosis and marking in young ewes, and the contribution of maternal infections during late pregnancy to these losses.	Murdoch University	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Managing fecund flocks to improve survival of triplet dams and their lambs	This proposal aims to define the scale of triplet-bearing ewe and lamb mortalities in Australia and conduct participatory research to develop and demonstrate best management practices on commercial farms to reduce these mortalities, including evaluation of the potential benefits of scanning for triplets.	Murdoch University	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Boosting lamb survival by supplementing ewes with vitamins and minerals	This project proposes to evaluate the effects of supplementation of late-pregnant ewes with vitamin E plus selenium and vitamin D on lamb survival to marking on a range of commercial properties across southern Australia.	Murdoch University	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
The gateway to selecting for nutrient efficient livestock – "Better Doers"	This proposal represents an amalgamation of two independent preproposals focussing on (a) identification of rumen epithelial genes and their products and (b) muscle mitochondrial density as possible tissue markers for efficiency of nutrient utilisation in sheep and cattle.	NSW Department of Primary Industries	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
"The Sweet Spot": Improving breeder herd performance through optimal pasture utilisation	This proposal seeks to use existing datasets on pasture utilisation by breeding herds in northern Australia to develop modelling tools to predict the effect of stocking rate on reproductive efficiency and optimise pasture use to increase weaning rates and reduce breeder mortality, while maintaining the feedbase.	The Northern Territory of Australia, represented by the Department of Primary Industry and Resources	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability
Grazing with Self Herding to improve breeder nutrition and reproduction	This proposal seeks to evaluate the implementation of Rangeland Self Herding (RSH) methods (e.g. rangelot flushing, managed movements) to improve grazing management and thus, nutrition and productivity of extensively managed breeder herds. Benefits to environmental management and land condition are associated objectives.	Rangelands NRM	Pillar 1 Consumer and community support Pillar 4 Productivity and profitability