

## 2021-22 Investment Call – Producer identified RD&A priorities

Council: SALRC



**Table 1: Identify new research, development or adoption gaps, activities and strategies to achieve the desired outcome/s.**

MLA Program Area	Priority Rank	Outcome sought	Link to MLA Program of work and/or Red Meat 2030	To adequately achieve the outcome, identify R&D and/or adoption gaps or strategies? <ul style="list-style-type: none"> <li>For R&amp;D, clearly identify the research gap,</li> <li>For adoption detail a possible strategy that producers would engage with to achieve the intended outcome.</li> </ul>	Committee origin
Grassfed Beef	2	Develop, promote and deliver beef productivity extension services relevant to Southern Australia cattle production systems	Producer adoption/Enabling practice change	<ul style="list-style-type: none"> <li>Develop and promote delivery of a lifetime cow course, bred well fed well course, ramping up repro course.</li> <li>Develop and support beef extension services to deliver the above courses.</li> <li>Demonstrate improvements in cattle reproductive performance and mortality rates through adoption of selected management techniques aligned to agro-ecological zones.</li> </ul>	WV, SA, SEVT, SNSW
	7	Tools to assist producers avoid stock losses from bloat-including effective prevention treatments, warning systems to identify high risk, grazing management, non-bloating legume varieties	Animal Health and wellbeing/Adopting animal health, welfare, biosecurity and production best practice	<ul style="list-style-type: none"> <li>Develop an alternative to Monensin capsules to prevent and manage bloat in beef cattle.</li> <li>Identify potential new bloat management treatments that are acceptable in the supply chain.</li> <li>Tools to assist producers avoid stock losses from bloat-effective prevention; warning systems to identify high risk periods (eg sensors on animals).</li> <li>Select and evaluate new pasture legume cultivars with reduced bloat risk.</li> </ul>	WV, NNSW, CV, SNSW
Sheep Productivity	10	Develop mitigation strategies and management responses to minimise heat stress impacts on sheep production under extensive grazing and confinement feeding regimes	Sheep productivity/ Adopting animal health, welfare, biosecurity and production best practice	<ul style="list-style-type: none"> <li>Develop mitigation strategies and management responses to minimise heat stress impacts on sheep reproduction.</li> <li>Develop improved knowledge about microclimate variability and management in feedlots, confinement feeding and paddocks.</li> </ul>	SA, SNSW
	15	Develop and evaluate precision weaner management strategies for sheep-including containment feeding for weaners and breeding stock; early weaning	Sheep productivity/ Adopting animal health, welfare, biosecurity and production best practice	<ul style="list-style-type: none"> <li>Demonstrate the productivity and economic impacts of precision management techniques for weaners and breeding ewes.</li> </ul>	WV, SNSW
Sustainable Feedbase Resources	1	Pasture species selection, mixes and management practices that provide improved persistence, higher quality feed (ME/kg DM; crude protein; palatability) and adaptation for production in variable climates	Sustainable feedbase/Optimising animal production for the environment and market	<ul style="list-style-type: none"> <li>Further development of existing and new varieties of perennial grasses that combine early vigour, persistence, winter production and feed quality.</li> <li>Pasture species selection, mixes and management packages that provide adaptation for production in variable climates.</li> </ul>	NNSW, CV, SEVT, SNSW
Animal Wellbeing	13	Develop, promote and deliver practical, objective measures of livestock wellbeing that can be tested against livestock husbandry best practice	Animal health and wellbeing/Ensuring whole of industry animal health and welfare standards; adopting animal health, welfare, biosecurity and production best practice	<ul style="list-style-type: none"> <li>Develop objective measure of livestock wellbeing.</li> <li>Establish evidence of the benefits of, and guidelines for use of, registered pain relief products in cattle and sheep management.</li> </ul>	SA, WV, CV, NNSW, SEVT

				<ul style="list-style-type: none"> <li>Increase industry uptake of pain relief products and BMP animal husbandry (including breeding) to reduce the animal welfare impacts of mulesing, castration, spaying, tail docking and dehorning.</li> </ul>	
	16	Develop ovine pneumonia vaccine and animal health treatment/prevention guidelines	Animal health and wellbeing/Adopting animal health, welfare, biosecurity and production best practice	<ul style="list-style-type: none"> <li>Develop ovine pneumonia vaccine and animal health treatment/prevention guidelines</li> </ul>	WV, SEVT, SNSW
	17	Development, adoption and commercial evaluation of new treatments and management procedures to assist producers minimise pink eye in cattle (surveillance, causative agents, vaccine)	Animal Health and wellbeing/ Adopting animal health, welfare, biosecurity and production best practice	<ul style="list-style-type: none"> <li>Surveillance to determine the prevalence of novel strains of pink eye in southern beef herds.</li> <li>Research to establish causative agents (especially for Moraxella bovoculi).</li> <li>Vaccine development for Moraxella bovoculi.</li> </ul>	CV
<b>Sustainability and CN30</b>	19	Improved understanding of water volumes and water infrastructure requirements to support livestock businesses under increasing climate variability	On farm environment/Building our proactive approach to climate variability	<ul style="list-style-type: none"> <li>Under increasing climate variability, develop recommendations on optimum dam sizes; better understanding of the status of groundwater reserves and their accessibility; how do livestock water requirements change with higher average temperatures</li> </ul>	NNSW
	20	Encourage development, adoption and commercial evaluation of products to reduce methane emissions	On farm environment/ Building our proactive approach to climate variability	<ul style="list-style-type: none"> <li>Determine efficiency and efficacy of products to reduce methane emissions from livestock in a range of farming systems.</li> </ul>	NNSW, SEVT
<b>Other</b>	12	Accelerate herd/flock rebuilding after drought and other extreme events through development of extension/decision making tools and advisory support services	Sheep and grassfed beef productivity/Adopting animal health, welfare, biosecurity and production best practice	<ul style="list-style-type: none"> <li>Communicating and demonstrating regionally specific best practice in genetics, early joining strategies, biosecurity and other areas of management to enable rapid flock and herd rebuilding</li> </ul>	SA, NNSW, SEVT, CWNSW, SNSW

**Table 2: Identify ongoing research, development or adoption priorities that remain a priority from previous investment calls:**

MLA Program Area	Priority Rank	Outcome sought	Link to existing MLA projects, MLA Program of work and/or Red Meat 2030	To adequately achieve the outcome, is the gap in R&D or adoption? <i>For R&amp;D, clearly identify the research gap, for adoption detail a possible strategy that producers would engage with to achieve the intended outcome.</i>	Committee origin
<b>Grassfed Beef</b>					
<b>Sheep Productivity</b>	3	Develop and evaluate genetics and management tools (including joining length, lambing group size, post-lambing management, scanning) to reduce reproductive wastage in sheep flocks	Sheep productivity/Adopting animal health, welfare, biosecurity and production best practice	<ul style="list-style-type: none"> <li>• Measure lamb survival rates and identify opportunities for improvement including scientific understanding of physiological constraints.</li> <li>• Develop breeding values for lamb survival and maternal traits that will improve overall lamb survival.</li> <li>• Increased extension of current best practice- including taking into account feed costs in variable environments and predator control.</li> <li>• New strategies to improve ewe fertility and lamb survival to weaning.</li> <li>• Long term evaluation and extension of precision management of reproduction processes (joining length, lambing group size, post-lambing management, scanning) to decrease mortalities of ewes and lambs.</li> </ul>	SA, NNSW, SNSW, WV,
<b>Sustainable Feedbase Resources</b>	5	Assess current and alternative legumes and increase legume breeding/selection strategy focus on improved production, nodulation, persistence and low bloat traits	Sustainable feedbase/Optimising animal production for the environment and market	<ul style="list-style-type: none"> <li>• Develop improved legume cultivars and management guidelines to improve production, nodulation, persistence, low bloat.</li> </ul>	CV, SEVT, SNSW
	6	Develop feedbase species and grazing management systems specifically for low and medium (<450mm) mixed farming and grazing zones	Sustainable feedbase/ Optimising animal production for the environment and market	<ul style="list-style-type: none"> <li>• Select and evaluate under commercial conditions, new grass and legume cultivars for persistence, productivity and livestock nutrition impacts in lower rainfall grazing and mixed farming areas.</li> </ul>	WV
	11	Increase adoption of best management practices to better match stocking rate to carrying capacity. Develop new and improved support tools to actively match land capability and feed resources to stocking rate and stock nutrient requirements	Producer adoption/ Enabling practice change	<ul style="list-style-type: none"> <li>• Develop new and improved decision support tools to actively match land capability and feed resources to stocking rate and stock nutritional requirements.</li> <li>• Promote increased adoption of these tools for improved environmental and animal welfare outcomes.</li> </ul>	CWNSW, CV
	14	Undertake a comparative study of factors influencing winter production in grazing crops (forage and dual purpose) and permanent pastures to reveal insights into how to reduce winter feedgap in pasture systems. Evaluation of options to include livestock productivity, animal health and overall economic returns.	Sustainable feedbase/ Optimising animal production for the environment and market	<ul style="list-style-type: none"> <li>• Undertake a comparative study of factors influencing winter production in grazing crops and permanent pastures to reveal insights in to how to reduce winter feed gap in pasture systems.</li> <li>• Further development of existing and new varieties of perennial grasses that combine early vigour, persistence, winter production and feed quality.</li> </ul>	SNSW, CV
<b>Animal Wellbeing</b>	4	Improved, integrated techniques for prevention and treatment of internal parasites in sheep and cattle (grazing management, refuge animals, plant species, breeding for worm resistance)	Animal health and wellbeing/ Adopting animal health, welfare, biosecurity and production best practice	<ul style="list-style-type: none"> <li>• Increasing resistance issues being faced due to high reliance on drenches.</li> <li>• Increase capability to manage parasites and drench resistance-worm monitoring, drench testing, managing Barbers Pole in southern areas.</li> </ul>	SEVT, CV, NNSW, WV, SA, SNSW

	8	Quantify farm productivity, animal welfare and wildlife ecology impacts of control of abundant grazing competitor and predator species. Demonstrate regionally specific application of current best practice techniques to increase uptake	Animal health and wellbeing/Adopting animal health, welfare, biosecurity and production best practice	<ul style="list-style-type: none"> <li>• Refine tools and develop novel techniques for cost-effective and humane control and/or exclusion of grazing competitor and predator species.</li> <li>• Develop communication and advisory services and skills on the benefits to productivity and animal welfare of virtual fencing.</li> <li>• Innovative technologies to cost effectively reduce macropod grazing pressure while meeting animal welfare and native species obligations.</li> <li>• Objective quantification of the contribution of kangaroos to total grazing pressure.</li> <li>• Improved community awareness of wild dog impacts and options to address wild dog control at a regional scale.</li> </ul>	WV, NNSW, CWNSW, SEVT
	18	Fast track broader supply chain uptake of improved livestock identification, carcass tracking and feedback systems for product quality/biosecurity/animal health monitoring and reporting	Animal health and wellbeing/ Ensuring end-to-end integrity, traceability and provenance	<ul style="list-style-type: none"> <li>• Develop practices for collecting and managing animal identification, animal health and product quality/biosecurity throughout the supply chain and ensuring feedback reaches producers in useable and consistent formats.</li> <li>• Improved compliance with industry declaration and traceability systems, including development of alternative NLIS tag technologies.</li> <li>• Improve feedback to producers from feedlots, processors on animal health, carcass traits, meat yield and quality.</li> </ul>	WV, SA, NNSW,
<b>Sustainability and CN30</b>	9	Develop and promote cost effective, standardised and on-farm applicable methods for measuring trends in the natural capital of farms (carbon emissions, soil carbon, biodiversity) that can be related to sustainable best management practices.	On farm environment/ Positioning meat as a protein of choice; Advancing our sustainable frameworks and supporting their adoption; moving to carbon neutral industry by 2030	<ul style="list-style-type: none"> <li>• Management and demonstration of improvements in the natural capital of farms through the application of technology and new management practices that improve natural capital indicators including carbon balance, methane emissions, soil carbon and biodiversity.</li> <li>• Develop a simple, cost effective tool that captures the whole farm benefits of sustainability best practice (carbon neutrality, water supply/security, shelter belts, agroforestry, land management, grazing management).</li> <li>• Develop and promote practice changes that contribute to CN30-reducing methane emissions and increasing productivity.</li> <li>• Develop better spatial and temporal knowledge of C balances and trends on a regional scale.</li> <li>• Regenerative agriculture-what does it mean and what are the impacts on productivity, profitability and natural capital?</li> </ul>	NNSW, WV, SEVT, SA, CWNSW,
<b>Other</b>					

**SALRC REGIONAL COMMITTEES:**

Northern NSW - NNSW

Central/Western NSW - CWNSW

Southern NSW - SNSW

South East Victoria/Tasmania - SEVT

Central Victoria - CV

Western Victoria - WV

South Australia - SA