2018-19 SHEEPMEAT & GRASSFED BEEF RD&A PRIORITIES

Breeder productivity for sheep and cattle

Research, development and adoption activities that lead to a better understanding of, and develop tools or practices to improve the productivity of sheep or grassfed beef cattle.

National priorities identified by regional consultation*	
Region	***Priority***
N	- Reproduction – calf loss - Develop whole systems for managing breeder productivity - Genetic selection for feed conversion efficiency, weight gain, meat quality and fertility *(all genetic priorities will be referred to the National Livestock Genetics Consortium, NLGC)*
S	- **Development** of precision management practices for sheep reproduction relating to joining (length), lambing groups and post-lambing management
W	- Reproductive efficiency of livestock - Feed conversion efficiency of ewes and lambs - Improved weaner survival and managing the 'tail' of flock - Understanding reproductive physiology of shedding vs non shedding sheep breeds

**RD&A priorities jointly identified by the Regional Councils (NABRC - N, SAMRC - S and WALRC - W)*

Key industry performance indicators by Industry Strategic Plan				
	MLA 2020[1]	**MISP 2020**[2]	**SISP 2020**[3]	**BISP 2020**[4]
	Productivity and profitability			
Priority / theme	Production efficiencies in farms and feedlots	Production efficiency in farms and feedlots	Increasing livestock productivity through new research	Production efficiency on farms
Imperative / activity / program		Increasing livestock productivity through new research	Increasing livestock productivity through new research	Increasing livestock productivity through new research
KPI	By 2020, improvement in total factor productivity of: 1.75% (southern beef); 0.5% (northern beef); 0.5% (sheep meat)	Increasing whole sector productivity growth above baseline through new research – Northern Beef: 0.5%, Southern Beef: 1.75%, Sheep 1.5%.	Reduction in the cost of on-farm sheep meat production ($/kg liveweight) by 1.5% by 2020, and 5% by 2030	Increasing productivity growth above the baseline: — Northern beef production of 0.5% by 2020 and 2.5% by 2030

[1] MLA Strategic Plan 2020
[2] Meat Industry Strategic Plan 2020
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[4] Beef Industry Strategic Plan 2020

Nutrition

Research, development and adoption activities that result in increased levels of animal productivity and enterprise profitability from improved rumen function and from targeted and strategic supplementation practices for both the sheepmeat and grassfed beef sectors.

National priorities identified by regional consultation*	
Region	***Priority***
N	- Rumen technologies to improve efficiency - Crush-side diagnostic kits to determine nutrient status of growing/breeding cattle and commercialisation of handheld NIRS device for analysing pasture quality - Methods to ameliorate weight loss over the dry season to enable targeting of different markets cost-effectively - Anti-nutritional factors in water quality, varying levels of chemical elements in bore water (still fit for stock), and their effect on production
S	- Rumen efficiency remains a priority area for the region

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Key industry performance indicators by Industry Strategic Plan				
	MLA 2020[1]	**MISP 2020**[2]	**SISP 2020**[3]	**BISP 2020**[4]
	Productivity and profitability			
Priority / theme	Production efficiencies in farms and feedlots	Production efficiency in farms and feedlots	Increasing livestock productivity through new research	Production efficiency on farms
Imperative / activity / program		Increasing livestock production through new research / Minimum whole-of-sector increases in productivity growth above baseline levels: northern beef production sector- 0.5% by 2020 and 2.5% by 2030; southern beef production sector- 1.75% by 2020 and 7% by 2030 and Sheep meat production sector - 1.5% by 2020 and 5% by 2030	Increasing livestock productivity through new research	Increasing livestock production through new research / Prioritise and invest in new research with highest potential for productivity gains that will improve profitability in northern and southern Australian production systems
KPI	By 2020, improvement in total factor productivity of: 1.75% (southern beef); 0.5% (northern beef); 0.5% (sheep	Increasing whole sector productivity growth above baseline through new research – Northern Beef: 0.5%, Southern Beef: 1.75%,	Reduction in the cost of on-farm sheep meat production ($/kg liveweight) by 1.5% by 2020, and 5% by 2030	Increasing productivity growth above the baseline: — Northern beef production of 0.5% by 2020 and 2.5% by

	meat)	Sheep 1.5%.		2030

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Future feedbase and mixed farming systems

Research, development and adoption (RD&A) activities to identify regionally specific approaches that will enable a sustained increase in carrying capacity from optimisation of the available forage sources to address feed gaps, and demonstrate and extend regional approaches known to sustainably increase carrying capacity.

National priorities identified by regional consultation*	
Region	***Priority***
N	- Feedbase remains a priority area for the region
S	- **Development and extension** of trigger points (grain prices, feed-on-offer, pasture forecasts, etc) containment feeding systems (of cattle and sheep) to help address autumn feed gaps in high-rainfall, temperate zones. **FEEDBASE ASSESSMENT / UTILISATION** - **Develop** (repackage) and extend previous feedbase RD&E, including info on varietal trials, Evergraze and Grain and Graze. - **Develop** technologies that provide greater automation and accuracy in pasture and feedbase assessment (quality and quantity)
W	- Filling relative feedgaps - innovations to fill and manage quality and quantity of biomass production in feed gaps under Mediterranean livestock production systems - Pasture production for marginal lands (including forage shrub, perennials and legumes) and to address constraints to production. Constraints may include salinity, low rainfall and soils issues such as shallow duplex, forest gravels, water repellancy and deep sands. - Development of new pasture cultivars/species through conventional and novel breeding techniques, focusing on drought tolerance, persistence and resilience. - Management strategies for pasture legumes including improved nodulation options, rhizobia strains and strategies for re-innoculation of legumes in the pasture. - Addressing and managing soil constraints o Non wetting soils and efficient water/rainfall utilisation o Especially constraints for forest gravels o General soil biology (e.g. Carbon, pH etc) Mixed farming - Rotations and synergies in mixed farming systems o Synergies between crop and stock o Crop pasture interface o Optimising crop-pasture rotations o Role of sheep in managing herbicide resistance weeds o Pasture Deferment - Pasture and crop species for mixed systems o Integrating new feedbase options o Impact of crop/pasture choice on animal productivity o Grazing grain legume crops for livestock production - Grazing Crops o Finishing lambs and yearling cattle on crops o What is the increased whole farm stocking rate from crop grazing o Broadleaf weed control for mixed farming

**RD&A priorities jointly identified by the Regional Councils (NABRC - N, SAMRC - S and WALRC - W)*

Key industry performance indicators by Industry Strategic Plan				
	MLA 2020[1]	**MISP 2020**[2]	**SISP 2020**[3]	**BISP 2020**[4]
	Productivity and profitability			
Priority / theme	Production efficiencies in farms and feedlots	Production efficiency in farms and feedlots	Production efficiency in farms and in intensive finishing systems	Production efficiency on farms
Imperative / activity / program		Increasing livestock Productivity through new research	Increasing livestock Productivity through new research	Increasing livestock productivity through new research
KPI	By 2020, improvement in total factor productivity of: 1.75% (southern beef); 0.5% (northern beef); 0.5% (sheep meat)	Minimum whole-of-sector increases in productivity growth above baseline levels: northern beef production sector- 0.5% by 2020 and 2.5% by 2030; southern beef production sector- 1.75% by 2020 and 7% by 2030 and Sheep meat production sector - 1.5% by 2020 and 5% by 2030	Reduction in the cost of on-farm sheep meat production ($/kg liveweight) by 1.5% by 2020, and 5% by 2030	Increasing productivity growth above baseline: southern beef production of 1.75% by 2020 and 7% by 2030 and northern beef production of 0.5% by 2020 and 2.5% by 2030

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Animal Health and Welfare

Research, development and adoption (RD&A) activities to address the priority issues and gaps identified by the consultation process in MLAs current RD&A portfolio. The focus is to improve the wellbeing of stock and secure community support for the red meat industry.

National priorities identified by regional consultation*	
Region	***Priority***
N	- Animal welfare remains a priority area for the region
S	- MULESING: o **Develop** data on the productivity benefits of no mulesing. o **Research and develop** management strategies and tactics to aid the selection of sheep that don't require mulesing, focussing on the management considerations and economics of traits correlated with flystrike (e.g. tail length/docking methods, fleece structure, breach attributes)
W	- Methods to preventing the need for mulesing by addressing the causes and prevention of scouring. - Innovative solutions and novel delivery methods for internal and external parasite management. - Define the problem of 'Albany Tick' and the impact potential of Theileria, cost to industry and management strategy. - .

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Key industry performance indicators by Industry Strategic Plan				
	MLA 2020[1]	**MISP 2020**[2]	**SISP 2020**[3]	**BISP 2020**[4]
	Consumer and Community Support			
Priority / theme	Continuous improvement of the welfare of animals in our care	Welfare of the animals within our care	Wellbeing of the animals within our care	Welfare of the animals within our care
Imperative / activity / program		Continuous improvement of animal welfare / Minimising the impact of endemic disease	Continuous improvement of animal welfare / Minimising the impact of endemic disease	Continuous improvement of animal welfare
KPI	Restrict % consumers limiting red meat consumption due to animal welfare concerns to 10%. Four new products including vaccines, diagnostic tests and tools to reduce the	Increase in community support for industry animal welfare practices on 2015 baseline	➢ Monitor and actively respond to community perceptions and concerns about sheep industry practices across the entire supply chain. ➢ Collaborate with state (industry and government) extension networks and the LBN or equivalent to promote better practices in animal	➢ Industry agreement reached on indicators of on-farm animal welfare for grassfed cattle production. ➢ Level of media, government and community engagement with industry on animal

	cost and welfare impact of endemic and emergency disease in Australia		health and wellbeing to producers. ➢ Achieve enhanced animal welfare outcomes through the adoption of consistent, science-based practices. ➢ Undertake RD&E to reduce the risk of compromised wellbeing of sheep and develop enhanced husbandry and management procedures. ➢ Have tools and procedures in place and train sheep industry stakeholders to reduce the risk and impact of emergency animal diseases (EADs). ➢ Undertake active programs of targeted surveillance to maintain assurance of the absence of key diseases. ➢ Deliver improved diagnostic methods, enhanced understanding of and/or improved control methods for EADs. ➢ Undertake an ongoing RD&E program to reduce the impacts of major endemic diseases in the national sheep flock and increase uptake of the Sheep Health Statement. ➢ Increase the flow of information from abattoirs to producers in relation to endemic disease issues to enhance decision making (refer also to Theme 7). ➢ Improve the implementation of on-farm biosecurity processes and other tools that minimise on-farm risks of endemic diseases. ➢ Increase the proportion of producers using recommended animal health management practices and tools such as Paraboss and Winning with Seeds.	welfare through multiple channels (e.g. Target 100 campaign). ➢ Community sentiment monitored and activities implemented to mitigate any shifts in perceptions and attitudes towards industry. ➢ EAD response strategy in place with timely and effective implementation as issues arise.

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