



SALRC TOP TEN RD&E PRIORITIES – June 2019

Category: Farm Productivity

Sub Program: Ewe and Lamb Management

Description of Priority: 1A

Quantify the impact of 'lamb survival' RD&E investment to date - make recommendations for enhancing the future RD&E focus for investment.

Further Notes:

Over recent years, MLA and others have invested many millions of dollars in R,D &E to improve lamb and ewe survival and reproduction rates in the sheep industry. While there are many case studies to show dramatic improvement in reproduction rates and reduction in mortalities at the farm level, evidence to demonstrate a national improvement in the flock has not been collected or presented. Further investment in this area needs to be informed by a review (including validation) of achievements to date and an analysis of the investment required to transform the large investment in R&D into a significant change in industry. If this review has already been funded by MLA, then the priority is to provide SALRC Chairs with the information for review, comment and input into future planning.

This priority was considered “High” by all 7 SALRC regional committees.

Focus: Research: XXX Development: - Extension: -

Category: Farm Profitability

Sub Program: Business Enterprise and Structure

Description of Priority: 1B

Undertake physical and economic modelling to identify optimal enterprise mixes and risk management strategies - by region - under different climate change outlooks. Existing research needs to be reviewed and evaluated. Development into useable tools that are relevant at the regional level. Ensure adequate investment in extension and education of the findings to industry.

Further Notes

The current drought in eastern Australia has heightened concerns about the impact of increasing climate variability on business viability. There is a need to review enterprise mix, feed/sell and risk management strategies in the light of various climate outlooks. Completed research and work underway needs to be reviewed with a view to developing tools and information that is relevant and applicable at the regional level. There is also an opportunity to demonstrate recommended strategies at the regional level through Producer Demonstration Sites.

This priority was considered “High” by all 7 SALRC regional committees.

Focus: Research: XXX Development: XX Extension: XX PDS priority also

Category: Farm Productivity

Sub Program: Feedbase Perenniality and Persistence

Description of Priority: 1C

Breed, develop and evaluate temperate and tropical pasture and shrub species and systems that are persistent (under dry and variable climates) and optimise year-round dry matter production.

Further Notes

The current drought in eastern Australia has heightened concerns about the impact of increasing climate variability on persistence and productivity of both temperate and sub-tropical species. Pasture systems of the future need to persist under dry and variable conditions and be able to respond to rainfall whenever it falls throughout the year. Climate modelling may demonstrate that recommended species for regions have changed or that we need to develop new cultivars that are adapted to emerging conditions. Management strategies to allow native pasture/shrubs systems to recover from long periods of drought are also required.

There is also an opportunity to demonstrate new pasture cultivars/management strategies at the regional level through Producer Demonstration Sites and linking these demonstration activities to the Pasture Trial Network that is already funded.

This priority was considered “High” by all 7 SALRC regional committees.

Focus: Research: XXX Development: XX Extension: XXX PDS priority also

Category: Farm Profitability

Sub Program: Business Enterprise and Structure

Description of Priority: 2

Invest with the Bureau of Meteorology and other agricultural sectors to improve skill (accuracy) in weather and climate forecasting. Simplify and improve the presentation and interpretation of weather and climate outlooks to industry. An increased focus on education and extension is required.

Further Notes

Ongoing research is required to increase the precision of long range weather/climate forecasting and to improve the way in which this information is reported to industry. Reliable long range forecasting is a critical tool for livestock producers developing management strategies to ensure business viability under conditions of increasing climate variability. Decisions about whether to purchase feed, defer or cease sowing fodder crops, sell or retain stock are dependent on an assessment of how long a period of low rainfall will last, how large an area will be affected and the impact on stock and feed prices. There is currently little confidence in long range forecasts and so they are not used by the majority of producers in developing their management strategies. There is also an urgent need to review the way that probabilistic forecast information is presented to industry and develop education programs to increase producer knowledge and skills in this area.

This priority was considered “High” by 6 out of 7 SALRC regional committees.

Focus: Research: XXX Development: XX Extension: XX

Category: Consumer and Community Support

Sub Program: Pest and Predator Management

Description of Priority: 3

Quantify the regional impacts (in terms of farm productivity, livestock welfare and wildlife ecology) of competitive grazing species (kangaroos, deer, goats and rabbits) and predators (wild dogs, foxes, cats, and pigs). Refine tools and develop novel techniques for cost-effective and humane control and/or exclusion. Demonstrate best practice application of current techniques to increase uptake within industry.

Further Notes

Across a large part of the SALRC region, producers are increasingly impacted by species competing for pasture resources and damaging fencing infrastructure. At the same time predators are heavily impacting on reproductive performance primarily in sheep but also cattle. These predators are also having a negative impact on wildlife populations on farms.

The impact of these species on productivity, livestock welfare and wildlife ecology have not been comprehensively estimated. Various techniques exist to exclude and control these species. There is likely to be increased pressure on current techniques such, as exclusion fencing and baiting, as the broader community places the industry under increased scrutiny.

A two pronged approach is required to increase adoption of current best practice methods and develop new approaches for the future.

There are substantial opportunities to demonstrate current best practice management techniques and the benefit to reproduction rates and pasture availability and wildlife populations through Producer Demonstration Sites.

This priority was considered “High” by all 5 out of 7 SALRC regional committees.

Focus: Research: XXX Development: XXX Extension: XXX PDS priority also

Category: Consumer and Community Support

Sub Program: Animal Husbandry

Description of Priority: 4A

Establish practical and accurate objective measures of animal welfare and quantify behavioural, physiological and production / commercial responses of animals to stress.

Further Notes

Continued consumer and community support of the livestock industries will rely on a continuous improvement approach to animal welfare and the standard of care applied on farms. Objective measures for assessing welfare and behaviour and responses to stress, illness or pain need to be developed and accepted by all sectors. With an objective and agreed framework we can develop a meaningful approach to addressing practices/components in the production system and report progress to stakeholders in a meaningful dialogue.

This priority was considered “High” by 4 out of 7 SALRC regional committees.

Focus: Research: XXX Development: XX Extension: X

Category: Consumer and Community Support

Sub Program: Animal Husbandry

Description of Priority: 4B

Establish evidence of - and guidelines to help improve - the usage, cost efficiency and efficacy of registered pain relief products (cattle and sheep) in industry.

Further Notes

A number of pain relief products are now registered for use in livestock. Products such as tri-solfen, buccalgesic, numnuts and metacam are available for use in a range of routine animal husbandry practices including mulesing, tail docking, castration, de-horning and ring castration. The increased use of these products will assist in securing on-going community support for the livestock industries and contribute to certification programs in place or under development to underpin brand claims. Increased industry use of these products will rely on evidence of their benefit in animal welfare and economic terms and guidelines for best practice use.

Producer Demonstration Sites offer an important opportunity to demonstrate the application of new pain relief products and their benefits.

This priority was considered “High” by 4 out of 7 SALRC regional committees.

Focus: Research: XXX Development: XXX Extension: XX PDS priority also

Category: Farm Productivity

Sub Program: Feedbase Perenniality and Persistence

Description of Priority: 4C

Develop new legume cultivars and management guidelines to improve performance in terms of production, nodulation, persistence and low-bloat traits.

Further Notes

With increased climate variability, herbicide use in cropping rotations and acidification of soils, the performance and persistence of legume cultivars across many regions is declining. Maintaining legume content in pastures is critical for livestock performance. For many producers the quality of their pasture is declining and the costs of re-sowing legumes prohibitive. Fit for purpose varieties and management guidelines to ensure persistence are required.

This priority was considered “High” by 4 out of 7 SALRC regional committees.

Focus: Research: XXX Development: XX Extension: -

Category: Farm Productivity

Sub Program: Feedbase Perenniality and Persistence

Description of Priority: 4D

Develop feedbase species and systems specifically for low and medium rainfall mixed farming zones (<400mm pa).

Further Notes

There is a specific priority to develop feedbase species and systems for low and medium rainfall mixed farming systems. Whilst this links closely to 4C and 1C it is considered sufficiently important to have its own priority. The low to medium rainfall zones have been heavily focussed on cropping in recent years. With increased climate variability the risk associated with cropping in these regions has increased and there is renewed interest in pastures and livestock production.

There is an important opportunity to demonstrate pasture systems at the regional level through Producer Demonstration Sites and linking these demonstration activities to the Pasture Trial Network that is already funded.

This priority was considered “High” by 4 out of 7 SALRC regional committees.

Focus: Research: XX Development: XX Extension: XXX PDS priority also

Category: Farm Productivity

Sub Program: Feedbase Perenniality and Persistence

Description of Priority: 4E

Develop new and improved support tools and address barriers to producers using these tools to actively match land capability and feed resources to stocking rate and animal nutritional requirements.

Further Notes

A range of tools in various formats exist to assist producers to assess land capability, estimate feed resources and match that to animal requirements. Many of these tools are in old formats (excel etc) or are not integrated. In general they are poorly used by producers. The current drought has highlighted a low level of skills in many producers to assess feed quantity and quality and develop appropriate feeding programs based on animal requirements.

The current tools need to be reviewed, updated to new digital formats and then extended to industry through communication and extension programs and Producer Demonstration site activities.

This priority was considered “High” by 4 out of 7 SALRC regional committees.

Focus: Research: Development: XX Extension: XXX PDS priority also

SALRC PRODUCER DEMONSTRATION SITE – TOP TEN PRIORITIES

June 2019

Category: Farm Productivity

Sub Program: Feedbase Perenniality and Persistence

Link to RD&E Top Ten: 1C, 4C and 4D

Description of Priority:

Demonstrate pasture/shrub selection and management practices to;

- restore pastures after drought;
- increase year round productivity;
- increase persistence under increasing climate variability.

Where possible link to the Pasture Trial Network as a source of information. Focus on economics of investment in pastures rather than just agronomic aspects.

Further notes:

This was considered “High” priority by all 7 SALRC regions.

Category: Farm Profitability

Sub Program: Business and Enterprise Structure

Link to RD&E Top Ten: 1B

Description of Priority:

Demonstrate adaption to climate variability on a range of commercial properties within a region through business planning, enterprise mix and risk management strategies.

Further notes:

This was considered “High” priority by all 7 SALRC regions.

Category: Consumer and Community Support

Sub Program: Pest and Predator Management

Link to RD&E Top Ten: 1A and 3

Description of Priority:

Demonstrate farm level benefits (production, animal welfare, ecological and social) from control of abundant (kangaroos, deer, goats and rabbits) and predator species (wild dog, foxes, cats and pigs) through currently available exclusion and/or control programs.

Further notes:

This was considered “High” priority by 5 out of 7 of the SALRC regions.

Category: Consumer and Community Support

Sub Program: Animal Husbandry

Link to RD&E Top Ten:

Description of Priority: 4B

Demonstrate at farm level the benefits (economic, animal wellbeing, producer satisfaction) of using registered pain relief products (eg tri-solfen, buccalgesic, numnuts, metacam) in conjunction with routine animal husbandry practices for sheep and cattle, such as mulesing, tail docking, castration and de-horning.

Further notes:

This was considered “High” priority by 4 out of the 7 SALRC regions.

Category: Farm Productivity

Sub Program: Feedbase Perenniality and Persistence

Link to RD&E Top Ten: 4D

Description of Priority:

Demonstrate feedbase species and systems specifically suited to low and medium rainfall mixed farming zones (<400mm pa). Develop novel mechanisms to ensure support to producers in areas where extension/agronomy advice is limited as a consequence of distance.

Further notes:

This was considered a “High” priority by 4 out of 7 SALRC regions.

Category: Farm Productivity

Sub Program: Feedbase Perenniality and Persistence

Link to RD&E Top Ten: 4E

Description of Priority:

Demonstrate existing and updated support tools and address barriers to producers using these tools to actively match land capability and feed resources to stocking rate and animal nutritional requirements.

Further notes:

This was considered a “High” priority by 4 out of 7 SALRC regions.

Category: Farm Productivity

Sub Program: Ewe and Lamb Management

Link to RD&E Top Ten: 3

Description of Priority:

Demonstrate improvements in sheep reproductive performance and mortality rates through the adoption of selected management techniques. Management techniques are to be aligned to agro-ecological zones and management capabilities of the site. Management techniques to be considered for demonstration include;

- ewes physical assessment prior to joining
- joining length
- nutritional management
- pregnancy scanning for multiples and early versus late
- management of twin and single bearing ewes
- wetting and drying
- predator control
- lambing group size

Further notes:

This was considered a “High” priority by 2 out of 7 SALRC regions.

Category: Farm Productivity

Sub Program: Cow and Calf Management

Link to RD&E Top Ten: 3

Description of Priority:

Demonstrate improvements in cattle reproductive performance and weaning rates through the adoption of selected management techniques. Management techniques are to be aligned to agro-ecological zones and management capabilities of the site. Management techniques to be considered for demonstration include;

- replacement heifer selection
- cow physical assessment prior to joining
- joining length
- nutritional management
- pregnancy testing and foetal aging
- reproductive disease management e.g. BVDV
- predator control

Further notes:

This was considered a “High” priority by 1 out of 7 SALRC regions.

Category: Farm Productivity

Sub Program: Precision Livestock Management Systems

Link to RD&E Top Ten: -

Description of Priority:

Demonstrate the application of commercially available remote animal management systems to address production efficiencies and address labour shortfalls, particularly in rangelands systems.

Further notes:

This was considered a “High” priority for the pastoral regions of SALRC.

Category: Consumer and Community Support

Sub Program: Soil Health

Link to RD&E Top Ten: -

Description of Priority:

Quantify and evaluate differences between grazing systems (e.g. regenerative vs traditional grazing) in terms of soil carbon sequestration rates, soil biology, pasture species persistence and overall economic performance.

Further notes:

This was considered a “High” priority for the pastoral regions of SALRC.
