

Terms of Reference

Natural Resource Management in a Changing Climate

Program of Work

Meat and Livestock Australia (MLA) are investing in research, development and adoption (RD&A) initiatives that contribute to programs of work to increase the productivity, profitability and sustainability of the grassfed beef and sheepmeat sectors. Proposals are sought for developing and executing collaborative and participative research to fit within this program of work.

This program of work will address multiple priorities relating to the need for a greater understanding of natural resources and methods for valuation to underpin the services that producers offer (referred to as ecosystem services) to the community.

Impacts

Impacts derived from this program of work include maintaining consumer and community support by demonstrating environmental stewardship, and pursuing market growth and diversification opportunities presented through the ecosystem services markets.

Priorities

MLA is seeking preliminary proposals to conduct research, development and generate adoption that improves profitability in red meat production by addressing the following priorities. Researchers are encouraged to address one or more of the following priorities in a preliminary application:

1. Quantify the benefit plant and animal biodiversity provides to enhance grazing land management and profitability.
2. Development of practical, cost-effective farm-level carbon accounts for a representative range of production systems across Australia to drive producer participation in the Carbon Neutral 2030 Initiative. Emissions avoidance and carbon storage options from grasslands/rangelands should also be evaluated at the farm level to provide options for producers to consider to reach a carbon neutral position by 2030.
3. Undertake a literature review of the differences between widespread grazing systems (e.g. regenerative vs. conventional grazing systems, set stocking vs. intensive grazing systems, biodynamic/organic vs. conventional grazing practices) in terms of soil carbon sequestration rates, soil biology, pasture species persistence and overall economic performance. This task is to also include a brief review of the literature on grazing approach and improvement in soil biology, soil carbon, pasture species persistence and overall economic performance.

Deliverables

Applicants to this terms of reference must clearly identify which of the priority outcomes and R&D gaps that their application is seeking to address.

It is an expectation that prior to submission of a preliminary proposal applicant/s have engaged with

producers through a regionally relevant research advisory council i.e. NABRC, SALRC or WALRC and other industry stakeholders (consultants, merchants, service providers) to identify end user requirements and appropriate extension and adoption pathways. Applications must demonstrate how any funded work will be translated into practice change on farm. This should include, but not be limited to a clearly articulated value proposition, a clear methodology to achieve adoption, as well as net benefit (per head, per hectare, per year, per kg LW gain or product) of the research output if adopted.

The following deliverables are required against each of the priorities as described above.

1. Biodiversity benefits

- a. Review of existing and grey literature
- b. Across at least 10 agro-ecologically diverse case studies, quantify (or collate where already available) the benefits of plant and animal diversity for livestock businesses
 - i. Benefits are across productivity (per head, per hectare, per year, per kg LW gain), financial (cost of production, profit), environment (natural resources, ecosystems) and social dimensions (risk, workload, decision making etc.)

2. Development of carbon accounts

- a. Candidate options for emissions avoidance and carbon storage from grasslands/rangelands systems evaluated at the farm level to provide options for producers to consider to reach a carbon neutral position by 2030
- b. Measurement protocols and recording mechanism for options in point 'a' developed for determining and reporting farm-level carbon accounts

3. Evaluation of difference between grazing systems

- a. Review of the literature (grey and published) on grazing approach and differences in soil biology, soil carbon, pasture species persistence and overall economic performance.
- b. From literature review, and case studies in contrasting agro-ecological environments, quantify differences and evaluate the grazing approaches (e.g. pros and cons, synergies, antagonisms, opportunities, trade-offs) in terms of soil carbon sequestration rates, soil biology, pasture species persistence and overall economic performance.
- c. Where there is a dearth of data for a particular production system, develop a program/project to fill the void.
- d. This work may be best linked with Priority 1 considering an overlay of 'grazing approach' and benefits on case studies.
- e. Make recommendations on grazing approach and contribution to the red meat industry's Carbon Neutral 2030 (CN30) aspiration.

Scope

The work is national in scope although the applications and solutions within each project may be regional and focused on enterprises growing grassfed cattle and sheepmeat. Where appropriate, proposals must articulate/demonstrate common strategies or solutions across multiple regions.

Collaborative teams across institutions are encouraged to apply to take advantage of complementary skills including research, development, adoption and expertise in the use of technologies.

Participation of producers and formal producer Innovation Networks is encouraged, especially in setting and reviewing the direction of research, development and adoption of practical, on-farm practices.

Participation of producers is mandatory in the climate adaptation modelling ToR work area.

Projects with budgets ranging from \$50,000 to \$500,000 per year across 3-5 years will be considered.

Confidentiality and intellectual property

Successful projects will be funded with sheepmeat and/or grassfed beef levies. MLA will also consider MDC applications outside of the specific terms of reference but consistent with the program objectives and provided that applicants are able to demonstrate how the project will contribute to industry impact.

Applicants must identify any background intellectual property (IP) they bring to the project.

All data and cited references must be acknowledged appropriately in the final publication and it is the sole responsibility of the applicant to ensure copyright laws are not breached.

Where further information is available which may assist the successful applicant in meeting the requirements of the project, MLA will provide such information to the successful applicant.

The successful applicant will be required to enter into a standard agreement with MLA.

MLA will share and discuss this proposal with producers, technical experts, other research organisations and research and development corporations. Please acknowledge this freedom to operate.

Deadline for submissions

Preliminary proposals must be received by MLA before 11.59pm (NSW time) Wednesday, 16 October 2019. Late proposals will not be accepted.

Use the preliminary proposal template to submit proposals electronically to MLA at:
projectcall@mla.com.au

Preliminary Proposals will be acknowledged and recorded on the MLA project information system. Applicants will be advised in writing of the success or failure of their Preliminary Proposal in January 2020.

Further information

If you have questions regarding this terms of reference, contact:

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