

Terms of Reference

Total Grazing Pressure

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. The focus of this terms of reference is to implement the actions described in the total grazing pressure investment plan developed in 2018 (MLA project B.TGB.1702 - [link here](#)).

Total grazing pressure (TGP) influences the demand for forage by all grazing animals (both domestic and non-domestic) relative to forage supply. There are both production and natural resource implications – as such timely decisions are critical to manage grazing pressure from all sources of domestic herbivores, adjusting livestock numbers in response to available feed and strategically resting pastures.

With an expected long-term increase in the frequency of variable seasonal conditions, negative impacts of unmanaged herbivores will likely be exacerbated in particular environmental impacts.

Summary

From MLA's 2016-17 Annual call, an investment plan was developed to achieve the following:

By 2024 to:

- Provide the means to quantify current total grazing pressure impacts by developing a predictive tool that identifies density/damage functions to inform proactive management decisions;
- Raise awareness of 1,500 land managers (~25 percent of the pastoral industry of Southern Australian Rangelands) of cost-effective total grazing pressure management;
- Directly engage 2000 landholders in co-learning and information exchange activities;
- Have 100 landholders contributing meta-data to the R&D program; and
- Establish a network of RD&A co-learning and monitoring sites within six nodes across three states (QLD, NSW and SA).

To achieve these objectives, three inter-related themes are to be completed.

- Theme 1 is being outlined in an existing project (plan to deliver a TGP tool)
- Theme 2 is the target of this ToR
- Theme 3 is commenced as part of this ToR

Theme 1 - Capability to manage herbivores

Theme 2 - Production and environmental benefits of total grazing pressure management. This objective is to be addressed in this investment call, see 'Priorities' for further detail.

Theme 3 - Widespread adoption of evidence-based, effective total grazing pressure management. To commence in this call, and developed in future investment calls.

- 3.1 Establishing a network of co-learning sites
- 3.2 Co-learning sites identify and implement cost effective TGP management options, where production and natural resource management are optimised.

New projects must be able to demonstrate delivery of an output that will support the industry initiative of Carbon Neutral by 2030 (CN30) and priority areas in the [Beef Sustainability \(Corporate responsibility\) Framework](#). A Sheep Sustainability Framework is developing.

Impacts

Applications to this Terms of Reference must contribute to industry impact, Meat Industry Strategic Plan (MISP), Sheep Industry Strategic Plan (SISP) and MLA Sub-Program Business Plan objectives. Specifically applications must contribute to the following KPI's:

- Alignment of Production and NRM practices with community expectations
- Deliver a demonstrable outcome towards the industry initiative of Carbon Neutral by 2030 and the [Beef/Sheep Sustainability Framework](#)
- Savings industry costs due to weeds and feral animals of at least \$150 million by 2030
- Improvement in total factor productivity of: 1.75% (southern beef); 0.5% (northern beef); 0.5% (sheepmeat); 1.5% (feedlot); 0.5% (goat)
- Improve business performance by $\geq 5\%$.

Applications must clearly demonstrate how the project will contribute to these impacts, and by how much.

Priorities

MLA is seeking preliminary RD&A proposals to conduct research, development and promote adoption that improves profitability in beef and sheepmeat production. Researchers are encouraged to address both of the following priorities in a proposal identified from *Theme 2* Program of work to implement Total Grazing Pressure management:

1. Identification of spatial and temporal impacts on resource condition and production – associated metrics of the impacts are to become an input to the 'tool'
2. On-farm benchmarking of environmental value of TGP management

These recommendations were drawn from project B.TGP.1702 "Addressing feed supply and demand through total grazing pressure management". It is recommended that the final report be considered in your application. The report can be found [here](#).

Simplicity is required to assist adoption and inform TGP decisions. The aim should be to utilise readily accessible information to the landholder from their own records (e.g. stock numbers) in association with data inputs from monitoring that may be undertaken by a range of government organisations or the private sector (e.g. kangaroo and goat populations, ground cover assessment, biomass). Some assumptions will be required where methods are not readily available to provide accurate data.

Deliverables

To be completed within 1.5 years after signing a contract with MLA, the deliverables from this ToR are:

1. Confirm with the NSW DPI team developing the Theme 1 project, the required measures from on farm benchmarking and monitoring that will inform the "status of TGP" at any point, to populate "TGP tool".
 - a. It is anticipated the targeted measures will include, but not be limited to:
 - i. Numbers and location of domestic livestock (e.g. sheep, cattle, goats)

- ii. Numbers and location of unmanaged goats, rabbits and kangaroos
 - iii. Pasture biomass (including browse)
 - iv. Ground cover
 - v. Vegetation 'condition'
2. Identify regionally representative locations in the low rainfall zones (rangelands) of Southern Queensland, NSW, SA and WA where properties being monitored may be best located to enable maximum portability of the data output to livestock producers.
 3. Identify and have in principle commitment from suitable regionally active organisations, to participate in future implementation of a monitoring/benchmarking project in Southern Queensland, NSW, SA and WA.
 4. Develop on farm monitoring protocols (what, when, how) for the targeted measures that will subsequently enable quantification of the on farm and regional impacts (in terms of farm productivity, livestock welfare and wildlife ecology).
 5. Identify and seek agreement with the landholders, and so establish a network of at least 20 properties benchmarking production and resource condition by the protocols to input into the 'tool'.
 6. Develop and test with landholders a resource and production risk profile associated with herbivore grazing / browsing.
 - a. This profile, developed from on-farm benchmarking, is to enable demonstration of environmental value of TGP management.

Applicants to the terms of reference must clearly identify which of the priority outcomes and R&D gaps 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 also identify extension and adoption pathways. Applicants must consider how any funded work will translate into practice change on farm. This should include:

- A clearly articulated value proposition
- Net benefit, (per head, per hectare, per year, per kg LW gain or product) of the research output if adopted
- An adoption method and predicted adoption rate including time to peak adoption. Where outcomes are earlier stage applied research, the applicant should demonstrate that they have considered potential adoption pathways.

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.

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 networks is encouraged, especially in setting and reviewing the direction of research, development and adoption of practical, on-farm practices.

Projects with budgets up to \$250,000 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 these terms of reference, contact:

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