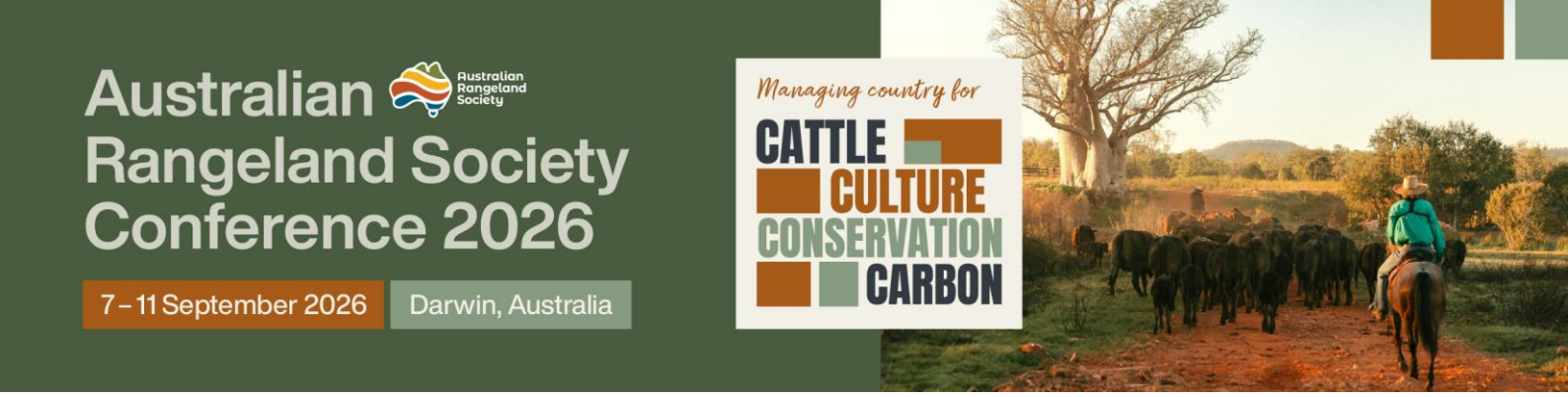


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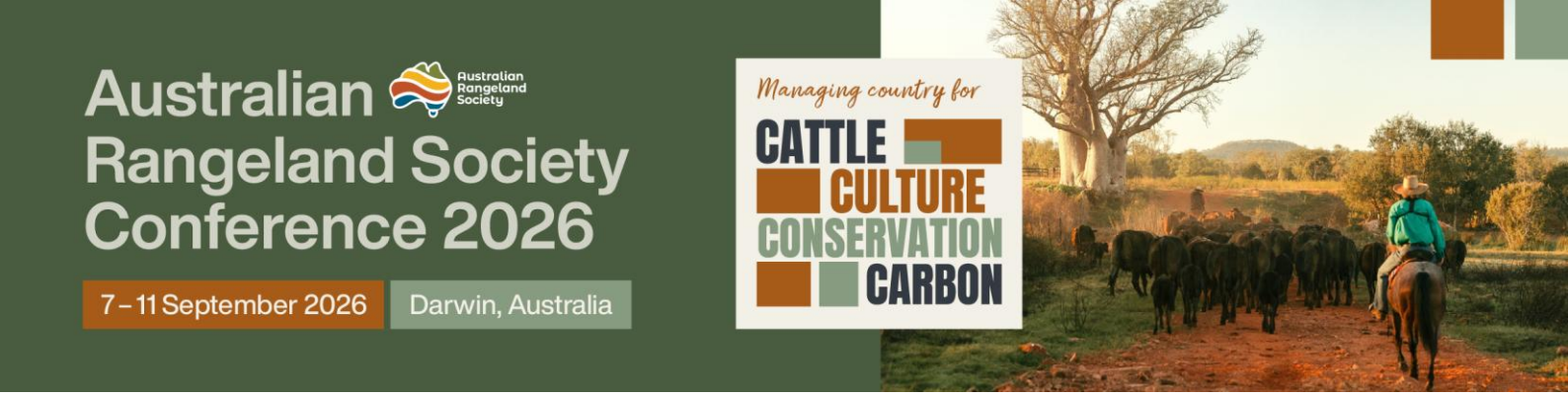
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Do incentives accelerate grazing practice change? A review of the evidence from the Grazing Resilience and Sustainable Solutions (GRASS) Program

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Abstract
The Grazing Resilience and Sustainable Solutions (GRASS) Program, now in its second phase concluding on 30 June 2026, has successfully utilised grazier engagement and incentive funding to achieve improved land management outcomes in Great Barrier Reef (GBR) catchments. Over the life of the project, the Department of Primary Industries (DPI) and Natural Resource Management (NRM) organisations have supported graziers in the Burdekin, Fitzroy and Burnett Mary catchments to improve land condition and reduce sediment runoff into waterways. The program has aimed to balance environmental stewardship with sustainable grazing practices and businesses, contributing to the protection of the GBR.

Across two phases of the program, significant delivery outcomes have been achieved. As of mid-2025, the program has engaged over 1,350 graziers, supporting the development of 821 Action Plans for Land Management (APLMs) across 5.3 million hectares, including significant areas of poor condition or degraded land.

A key component of GRASS has been the provision of targeted incentive funding to support on-ground works. Evidence from program delivery experience and producer feedback indicates that incentives can play a meaningful role in accelerating practice change. For some producers, funding acted as a catalyst to bring forward planned improvements, with one noting it "put a timeframe on work that would otherwise have been done when time allowed." Others highlighted that the co-investment reduced financial barriers and increased confidence to proceed with implementing property upgrades.

A government investment of $3.65 million has leveraged $6.95 million in co-contributions from producers, resulting in the delivery of more than 320 on-ground projects. These works are estimated to have prevented approximately 30,000 tonnes of fine sediment from entering waterways. While incentives were an important contributing factor in the implementation of practice change, participant surveys also show that producers viewed all aspects of the environment as a primary motivator.

Introduction

Maintaining good grazing land condition is fundamental to the long-term productivity and resilience of beef enterprises while also reducing sediment loss to waterways within the Great Barrier Reef catchment (Reef Water Quality Scientific Consensus Statement 2024). The Queensland Government's Reef Protection regulations require graziers in the reef catchments to maintain or improve land condition and document management actions where land is in poor or degraded condition (Queensland Government 2026). The Grazing Resilience and Sustainable Solutions (GRASS) Program was developed under the Queensland Reef Water Quality Program to support graziers in meeting these requirements while also improving land condition, strengthening business resilience and reducing sediment loss to the Great Barrier Reef.

The GRASS Program is delivered by the Department of Primary Industries (DPI) in partnership with regional Natural Resource Management organisations; North Queensland Dry Tropics (NQ Dry Tropics), Fitzroy Basin Association (FBA) and Burnett Mary Regional Group (BMRG) across the Burdekin, Fitzroy and Burnett Mary reef catchments respectively. The program uses an integrated extension model combining one-on-one extension, tailored Action Plans for Land Management (APLMs), specialist technical advice and co-investment incentive funding to assist graziers in implementing improved land management practices. Throughout the delivery of the program, DPI extension staff have worked directly with graziers to assess land condition, identify priority land management actions, develop APLMs, provide technical advice and integrate specialist expertise from

across the DPI, including soil conservation and pasture agronomy. Where an APLM identified an opportunity for an on-ground incentive project, DPI extension staff worked with the grazier to develop technically sound, property specific incentive projects and prepare an incentive funding application for independent assessment by a technical assessment panel. Approved projects received co-investment funding for their on-ground works administered through the regional NRM organisation.

Working alongside graziers from initial property assessments through to the implementation of on-ground works enabled DPI extension staff to observe how one-on-one support, technical advice, APLMs, specialist expertise and financial incentives interacted to influence producer engagement, decision-making and implementation. These observations are complemented by the findings of independent program evaluations and [provide] insights into how the integrated extension model GRASS operates in practice.

The aim of this paper is to reflect on lessons learned from the delivery of the GRASS Program to date, explore the role financial incentives played within the integrated extension model used by GRASS, and identify practical learnings that could be used to inform the design and delivery of future government extension programs.

Methods

This paper draws on multiple sources of evidence, including the on-ground experience of DPI extension staff delivering the GRASS Program, feedback received from producers during program delivery, follow-up discussions with participating graziers, findings from the independent GRASS 1 Legacy Evaluation, and behavioural data from the Paddock to Reef Perceptions of Practices Report for Project Proponents – GRASS Program 2024. Findings from these sources were considered together to identify consistent themes relating to producer motivations, decision-making, barriers to implementation, and the role of extension, technical support and financial incentives in supporting grazing practice change.

Results

Producer motivations for practice change

Throughout delivery of the GRASS Program, DPI extension staff consistently observed that most producers engaging with the program were already motivated to improve the condition of their land. In many cases, producers recognised existing land management issues and wanted to implement improvements but were constrained by uncertainty around what actions to take, where to prioritise investment, or how to fund on-ground works. Interestingly, while financial incentives were rarely identified as the primary motivation for practice change, they were frequently identified as a key reason for initially engaging with the GRASS Program.

These observations were consistent with findings from the independent GRASS 1 Legacy Evaluation and the Paddock to Reef Perceptions of Practices Report, which found that producers were primarily motivated by improving land condition, increasing productivity and leaving their properties in better condition for future generations. Rather than creating motivation for change, financial incentives were generally viewed as reducing the financial barriers to implementing desired practice changes.

Extension identified priorities, incentives enabled implementation

DPI extension staff observed that one-on-one extension was central to translating producer motivation into practical, property-specific management actions. Through on-farm discussions and development of Action Plans for Land Management (APLMs), extension staff worked with producers to assess land condition, identify priority land management actions and develop practical implementation pathways. Access to specialist expertise within DPI, including soil conservation and pasture agronomy, further strengthened this process by providing producers with tailored specialist advice where required.

Producer feedback throughout delivery of the program consistently highlighted the value of the one-on-one extension, practical technical advice and property-specific planning. Many producers indicated that this process increased their confidence in selecting appropriate land management actions and progressing on-ground works.

The independent evaluation similarly found that producers highly valued personalised technical advice and the opportunity to discuss management options with trusted extension staff.

While extension engagement supported producers to identify and plan management improvements, DPI extension staff observed that financial incentives commonly enabled producers to undertake on-ground works that may otherwise have been delayed, undertaken on a smaller scale, or not occurred at all. Producer feedback during project development and follow-up discussions indicated that financial assistance primarily acted to help overcome the financial barriers associated with implementing desired priority land management actions identified through APLMs.

The independent Legacy Evaluation and Paddock to Reef Perceptions of Practices Report similarly found that many producers considered financial incentives to have influenced the timing and scale of implementation rather than their overall intention to change their land management practices.

Long-term adoption and engagement

Follow-up discussions with producers after completion of incentive projects indicated that many had continued implementing additional land management improvements beyond the original funded works. DPI extension staff also observed that many producers continued engaging with DPI initiatives following completion of their projects, including participating in field days, workshops and other DPI extension programs.

These observations were supported by the Legacy Evaluation, which reported increased producer confidence following project completion and evidence of continued adoption of improved grazing management practices beyond the initial incentive-funded activities.

Discussion

This review suggests that financial incentives can accelerate grazing practice change, but not by creating the motivation for change. Rather, they enabled graziers to implement planned land management improvements sooner, at a greater scale, or where financial constraints would otherwise have prevented implementation. Within the GRASS Program, financial incentives acted as an enabler of practice change by reducing financial barriers to implementation, rather than serving as the primary motivation for change itself.

The review also highlighted that, while financial incentives played an important role in accelerating implementation, they were only one component of the integrated GRASS delivery model. Throughout delivery of the program, one-on-one extension was critical in helping producers translate their motivation into practical plans and action. Through one-on-one support on property visits, development of Action Plans for Land Management (APLMs) and access to specialist technical expertise, producers were supported to identify priority land management issues, identify practical solutions and build the confidence to implement them. Financial incentives then enabled those planned actions to be undertaken by reducing the financial barriers.

From a delivery perspective, extension answered the questions of what to do, where to do it and why it mattered, while incentives answered the question of how to (finance it) pay for it. This aligns with previous research showing that practice change is influenced by a combination of motivation, knowledge, opportunity and financial capacity rather than any single factor (Pannell et all. 2006, Kuehne *et al.* 2017).

An additional learning from delivery of the GRASS Program was that, while financial incentives were rarely the primary motivation for practice change, they were often the primary motivation for producers to engage with DPI and become involved in the GRASS Program. Without the incentive component, many of these producers may never have engaged with DPI extension services. The value of incentives therefore extended beyond the on-ground practice change they enabled. They also enabled DPI to establish relationships with producers we otherwise may never have worked with, creating opportunities to provide ongoing extension support and connect producers with other DPI programs and services.

Follow-up with producers also demonstrated that the value of incentive funding often extended beyond the initial funded GRASS project. Many producers reported continuing to implement additional land management improvements using their own resources and remained engaged with DPI through field days, workshops and other DPI extension programs. This suggests that incentive funding can do more than accelerate initial practice change. When combined with ongoing extension support, it can also

build producer confidence and leverage continued investment in improved land management beyond the original funded project.

A limitation of these findings is that it draws on the experiences of just those producers who chose to participate in the GRASS Program and the evaluation. These producers may have been more engaged or more willing to adopt improved practices than the broader grazing industry. However, the consistency of findings across both evaluations suggests the relationship between extension, incentives and practice change is likely to be relevant across similar land management focussed extension programs. This interaction and how to maximise its capacity to accelerate practice change is worthy of further investigation in other contexts.

The experience of the GRASS Program demonstrates that financial incentives are most effective when they form part of an integrated extension model. Extension identifies the right actions, builds confidence and supports implementation, while incentives provide producers with the opportunity to act. Together, they offer a practical model for accelerating grazing practice change and offer useful lessons for the design of future government extension programs.

Overall, these findings suggest that the greatest value of financial incentives lies in how it enables practice change, for the initial activity and those beyond it. Extension creates the pathway for change by building knowledge, confidence and a clear plan for action. Financial incentives give producers the ability to put that plan into practice, but both need to work together for maximum impact.

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References

Kuehne, G, Llewellyn R, Pannell DJ, Wilkinson R, Dolling P, Ouzman J, Ewing M (2017) Predicting farmer uptake of new agricultural practices: A tool for research, extension and policy. *Agricultural Systems,* 156, 115–125. https://doi.org/10.1016/j.agsy.2017.06.007

Mosaic Insights. (2025) Legacy review of GRASS 1 Program: Evaluation report. Prepared for the Department of the Environment, Tourism, Science and Innovation.

Pannell DJ, Marshall GR, Barr N, Curtis A, Vanclay F, Wilkinson R (2006) Understanding and promoting adoption of conservation practices by rural landholders. *Australian Journal of Experimental Agriculture, 46*, 1407–1424. https://doi.org/10.1071/EA05037

Queensland Department of the Environment, Tourism, Science and Innovation (2024) Paddock to Reef perceptions of practices report for project proponents: GRASS Program 2024. Office of the Great Barrier Reef and World Heritage.

Rolfe J, Gregg D (2015) Factors affecting adoption of improved management practices in the pastoral industry in Great Barrier Reef catchments. *Journal of Environmental Management,* 157, 182–193. https://doi.org/10.1016/j.jenvman.2015.03.014