



Grazing Fundamentals EDGE: partnerships, collaboration and co-design in practice

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Abstract

Across the Australian southern rangelands, 54% of the total land area is utilised for extensive livestock production (Hacker and McDonald 2021). With such a significant influence over land management, it is critical that pastoralists are supported to implement land and livestock management practices that ensure ongoing sustainability of both landscapes and businesses. The Grazing Fundamentals (Southern Rangelands) EDGE course is a capacity building workshop that builds foundational knowledge and skills in the areas of land management, grazing management and livestock production. It has been developed to suit a range of learning styles with the inclusion of presented information, classroom-based activities and hands-on exercises. Using varied teaching and group facilitation methods, the workshop encourages attendees to share their knowledge and observations, supporting peer-to-peer learning.

The initial delivery of this workshop in South Australia was highly successful, engaging 146 workshop participants who manage a total of 22 million ha and reported an overall satisfaction score for the workshop of 9.4/10. 92% of participants indicated an intention to change management practices as a result of attending the workshop, with the most common area of change being to begin assessing land condition. The collaborative nature of the project is a key factor that determined the workshops success. In instigating the project, partnerships were formed with relevant industry stakeholders to effectively leverage the varying resources and skillsets of partner organisations. This allowed consensus to be formed on technical concepts to standardise terminology and messaging between northern and southern rangeland systems. Content was co-designed and delivered by project partners, ensuring relevance and appeal to the target audience.

Introduction

The Australian southern rangelands are described by Hacker et al (2019a) as lying outside of adjacent mixed farming zones with annual rainfall mostly within the 250mm isohyet and rainfall patterns being either winter dominant or aseasonal. While definitions of the southern rangelands vary (Foran et al. 2019), this definition was deemed most relevant as it aligns with the production area this extension product targets.

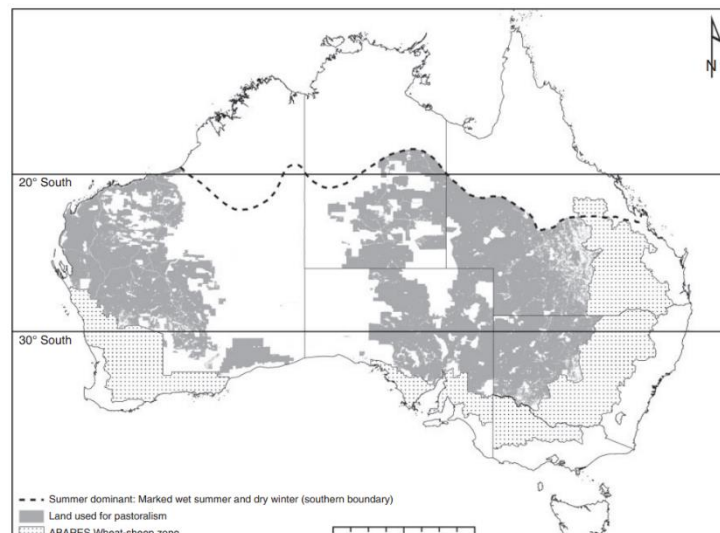


Figure 1. Approximate boundaries of the southern rangelands (Hacker et al. 2019a).

As is shown in Figure 1, the southern rangelands makes up a significant portion of the Australian land mass. Within the southern rangelands 54% of the total land area is utilised for extensive livestock production (Hacker and McDonald 2021). With such a significant influence over land management, it is critical that pastoralists are supported to implement land and livestock management practices that ensure ongoing sustainability of both landscapes and businesses.

Decades of primarily public investment in research and development has led to a valuable knowledge base being available for best practice grazing management, land management, and livestock production principles within the Australian rangelands context. However, collation of this literature into producer facing resources such as technical guides and capacity building workshops has largely been limited to northern rangelands systems and the southern rangelands of New South Wales. These existing products include *Grazing Fundamentals (Northern) EDGE*, *Grazing Land Management EDGE* and *Tactical Grazing Management*. The southern rangelands are unique to Australia's northern rangelands as they incorporate a variety of chenopod dominated land systems, have a diversity of both C3 and C4 plant species and are utilised for grazing of sheep, cattle and goats. For this reason, it is important that resources be designed specifically for the region.

This extension resource gap had been identified by various southern rangeland practitioners. Through the Australian Governments Future Drought Fund, the South Australia Arid Lands Landscape Board (SAAL) delivered the 'From the Ground Up' project, a multi-year demonstration type project designed to build drought resilience. Within this project, SAAL partnered with Meat & Livestock Australia (MLA) to develop and deliver a one-day training course that covered the foundations of animal nutrition, land management and grazing management, specifically for the southern rangelands.

This course is known as *Grazing Fundamentals (southern rangelands) EDGE*. Course objectives are to build actionable technical knowledge and skills with pastoralists to increase the environmental and economic sustainability of pastoral businesses.

Methods

In delivering this project, MLA engaged six technical experts to contribute under the structure of a project Working Group. This group was involved in developing the course outline, content and extension design, delivering the course and providing strategic and tactical advice on project delivery. This level of collaboration brought together a diverse range of skills, knowledge and experience across research, development and adoption within the Australian pastoral industry.

The course was designed to cover three core modules of nutritional requirements for animal production, grazing land ecosystems and grazing management. A focus was also placed on teaching methods to ensure it incorporated practical activities, supported peer-to-peer learning and appealed to varying learning styles.

Course development

The approach of the project team was to use existing industry resources as a foundation for the course to reduce the need for starting a literature review from scratch. Content updates and/or gaps were identified, and literature was subsequently identified, collated and reviewed to inform the development of new material. Sections that required specific content development for the southern rangelands were climate, the management of shrublands and grazing management. Initially, a participant/deliverer technical manual was completed, which then guided the development of workshop slides and activities.

A significant aspect of the course development process was the delivery of a pilot workshop to SAAL staff and stakeholders with a knowledge of the region and target audience. Feedback from this group, combined with reflections from the working group strongly informed the final product. A key outcome from this was better defining the target audience and intended learning outcomes. The audience was defined as younger industry participants or those with less experience and exposure to scientific rangeland management concepts. The learning outcomes were sharpened to focus on key principles of rangeland management and how they may be implemented on-ground.

Course content was developed to suit diverse learning styles, using a mix of presented information, classroom-based activities and hands-on exercises. A focus was placed on deliverers utilising a range of presentation and facilitation methods to encourage participants to share their experiences, ask questions and learn from each other, through a supported peer-to-peer learning process.

Course delivery

Course delivery occurred as two distinct series in August and October 2023. These times and locations were guided by SAAL staff with local knowledge of participant availability and competing events.

Courses were co-delivered by two working group members, with a third working group member also co-delivering three courses under a trainee model. Alternating delivery of the workshop sections between deliverers allowed all to become comfortable with all course material, facilitating future commercial delivery.

Course review

Courses were reviewed primarily by a formal participant evaluation form. Course deliverers, SAAL representatives and Working Group members present at each workshop also provided feedback. To review and update the course in response to evaluation forms and peer observations, two different processes were followed.

In the first instance, debriefs were held following each workshop to share feedback and review evaluation forms. Wherever possible, changes and updates were made at this time to present the best product for the next workshop.

Where identified updates required more significant changes or research, these were addressed at the end of each workshop series. The primary changes made to the course were the way in which practical activities and the case study property were presented.

Results

Eleven workshops were delivered to 146 participants, at an average of over 13 people per workshop. These participants represented 66 pastoral businesses and a total management influence of over 22 million hectares, 150,000 head of cattle and 370,000 head of sheep.

The overall value and satisfaction scores for the workshops were 9.1/10 and 9.4/10 respectively. Value scores broken down by module (Nutrition, Grazing ecosystems, Grazing management) show a ratings difference of only 0.1/10 between each module.

Overall intention to implement change as a result of attending the workshop was measured at 92% of participants. Further insight to this figure is provided in Table 1, where the most common intended change to implement, at 64% of participants, was to assess land condition of paddocks.

Table 1. Summary of intended practice change

| Will you make any changes? | Yes % | No % | Maybe % | Already doing it % | Not applicable % |
|--|-------|------|---------|--------------------|------------------|
| Review livestock nutritional requirements | 51 | 0 | 19 | 22 | 8 |
| Review stock numbers and feed supply around key decision dates | 48 | 0 | 6 | 37 | 8 |
| Assess the land condition of your paddocks | 64 | 0 | 4 | 28 | 5 |
| Work out safe utilisation levels and/or carrying capacity | 54 | 0 | 16 | 23 | 7 |
| Do a forage budget | 43 | 5 | 38 | 6 | 9 |

Discussion

When considering workshop results, they can be compared to the benchmarks maintained by MLA for delivery of similar industry training programs. A key performance indicator (KPI) for producer adoption programs is to maintain satisfaction and value scores >7.5/10, indicating that this course far exceeded that benchmark with the above listed value and satisfaction scores of 9.1 and 9.4/10 respectively. The consistency of module value ratings is also quite significant in demonstrating the relevance of all three course modules and the consistent high quality of delivery.

Some key learnings gained though the delivery of this project include:

- The target audience and intended learning outcomes must be clearly established at the start of the course design process.
- Having deliverers involved in course development ensures consistency between workshop design and delivery, streamlining progress from one stage to the next.
- Partnering and collaborating with local service providers is highly beneficial in accessing local networks to ensure strong attendance, provision of locally relevant resources and ground truthing of course material prior to delivery.
- Consider course content order to deliver the ‘hook’ upfront in the workshop. In this instance, the livestock nutrition session was of high interest to producers so was delivered first. This contributed to early and sustained engagement throughout the day.
- The structure of the workshop reinforced the value of activities for engagement, including outdoor, hands-on, ‘on your feet’ type exercises.

The course supported participants to identify opportunities to enhance their business productivity, resilience and sustainability in relation to livestock and land management. By providing information alongside practical activities, participants were encouraged to consider how they could apply management concepts to their own business. Combined with the expertise of regional service providers, workshop deliverers and peers, participants were also given an opportunity to discuss, share and learn from the experience of other livestock producers and land managers.

The objective of creating an actionable capacity building product specific to the southern rangelands was achieved. Its success is validated in evaluation data that indicates a very high portion of participants intend to implement a change in management practice as a result of course attendance. This course now provides a valuable resource, accessible to producers right across the Australian southern rangelands through a commercial delivery model.

Initiated through an industry partnership and executed through broad collaboration, this project has demonstrated the value of co-design practices to develop and deliver high impact extension and adoption products.

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