

SUSTAINABLE GRAZING SYSTEMS - A PROGRAM TO DEVELOP AND DELIVER IMPROVED TEMPERATE PASTURES IN AUSTRALIA

W.K. Mason¹, G. Kay², and G. Lodge³

¹RPC Solutions, PO Box 2157, Orange, NSW 2800, Australia

²Meat Research Corporation, PO Box A498, Sydney South, NSW 2001, Australia

³NSW Agriculture, PMB 944, Tamworth, NSW 2340, Australia

ABSTRACT

The Sustainable Grazing Systems Program aims to combine the efforts of producers, researchers and extension agents into a focused partnership to develop, manage and implement grazing systems that are more profitable and more sustainable. Rather than the traditional approach of undertaking the research and then developing extension packages for livestock producers, this Program has set up a network with producers, researchers and extension agents to collectively develop and test improved systems. The process is described as co-learning. Compared with more traditional approaches, producer input is greatly increased as the role of researchers and extension agents is modified, but not decreased. While there is substantial input into the Program from research and extension groups, this paper focuses on the role and input of producers.

KEYWORDS

Grazing systems, sustainability, co-learning, producer input, networks, perennial grasses

BACKGROUND TO THE PROGRAM

The Program was initiated by the Meat Research Corporation in 1992 to address issues of declining pasture productivity and low persistence of perennial grass-based pastures in the higher rainfall zone of southern Australia (annual rainfall >600 mm). Phase 1 of the Program concluded in 1996, and phase 2 will continue until 2001.

The major cause of pasture decline in the higher rainfall zone has been the loss of the highly productive and ecologically valuable perennial grasses: resulting in lower returns from livestock production, and increased rates of land degradation. Producers in the zone have tended to concentrate on the management of their stock rather than their pastures and soils. Unfortunately, animals are the least sensitive and last indicator in the soil-plant-animal continuum to signal that a system is not resilient and is becoming unsustainable. This has meant that land degradation often precedes any decline in animal production.

In phase 1, the focus of the grazing management studies was to manipulate composition to improve persistence of the perennial grasses and show that significant changes in pasture composition could be achieved. Twenty-two grazing management sites were established on either degraded or recently sown pastures of perennial ryegrass, winter active and semi-winter dormant phalaris, tall fescue, cocksfoot and the native grasses *Danthonia*, *Microlaena*, *Themeda*, *Aristida* and *Bothriochloa*. Translating these changes into animal production gains, demonstrating economic benefits and gaining increased on-farm use are the aims for the second phase of the Sustainable Grazing Systems Program.

Phase 1 results for manipulating pasture composition at individual grazing management sites are presented in several papers submitted to this IGC (Kemp, et al., 1997; Garden et al., 1997). Results strongly indicated that while there are some general principles that can be applied, there is no universal "recipe" for all species and environments.

Concurrent with the research at the grazing management sites, a skills development course was developed for livestock producers. Called PROGRAZE, this course gave producers pasture and animal assessment skills and showed them how these skills could be used in making decisions about matching animal needs and pasture supply. PROGRAZE has been undertaken by over 3000 livestock producers, with almost 100% of participants reporting that they would recommend the course to other producers, and 80% reporting that they expected to improve farm profitability by using their increased pasture and animal assessment skills.

PRODUCER INVOLVEMENT

In 1994, a survey of producers undertaken as part of the Program showed that 44% of producers expected their sown pastures to weaken and disappear within five years of sowing (80% in 10 years). As it takes 5 to 8 years to recoup the costs of sowing a new pasture, producers have greatly reduced their sowings.

The survey also highlighted that producers do not understand the potential role for grazing management in maintaining or improving the composition of their pastures, and that they have a very local focus when valuing information relating to grazing management. Preferred sources of information on grazing management were; to see the method working on a local property (78%); talking to a producer who is already using the method (64%); or seeing the method working at a local field day (61%). Talking to a technical adviser was sixth on the list, indicating that localized activities would be essential to achieving a high rate of adoption.

A high level of producer input was also seen as essential to ensuring the relevance of any improved systems, and because of the success of PROGRAZE in raising skills and awareness, it was clear that most producers would only become involved if the Program was focused on their needs. In phase 1 of the Program, producers were consulted during the planning, but were actively involved only at the implementation level (each of the grazing management sites had an associated producer group). Much more extensive involvement has been built into phase 2 at four distinct levels:

1. Planning: A Producer Planning Group was formed with 10 producers from across southern Australia. The group inspected grazing management research and extension in Australia and New Zealand and developed a business plan based on what they considered would be needed for producers to adopt improved grazing management systems. The structure of the Program and the emphasis on producer input are largely based on this business plan.

2. Program Management: In keeping with the partnership approach, the Sustainable Grazing Systems Program is managed by a board, with producers, funding corporations and research and extension agencies equally represented.

3. Regional Committees: To achieve local relevance, the target area for the Program has been divided into 11 regions. Each region

has a steering committee to identify the critical local issues and to decide the relevant activities that are needed in the region to address them. Local activities may range from training programs, on-farm demonstrations, discussion groups and field days, to monitor farms and replicated grazing sites. Regional committees (and associated networks) are led by producers, but include other interested groups.

4. Implementation: The Program is designed to involve producer groups (as opposed to individual producers) in all activities, with all sites being part of the co-learning network. While the major research sites are managed by researchers, each site has a producer group that has responsibility for ensuring that the research stays relevant to their needs. Input may vary from selecting the site, suggesting or modifying treatments, practical input into overall management, and organizing field days or visits from other producer groups. Producer domination of the decision making process increases as sites become more focused on extension or demonstration, rather than research.

CONCLUSIONS

This co-learning approach is a major departure from the traditional research-extension-producer model often used to passively transfer information and new technologies. Importantly, it was the Producer Planning Group that indicated a high level of uptake would only be achieved by producer involvement in all aspects of the Program. It is essential that the process of producer involvement is an active one, so that they have a high level of “ownership” of both the problems and their solutions. This approach also ensures that the delivery mechanism are relevant and designed to meet local needs. This combination of producer involvement and local relevance should accelerate the on-farm uptake of grazing systems that are profitable and sustainable.

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