

Bioscapes – an introduction to biodiversity in grazing landscapes

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Abstract: *This paper reviews a new course ‘Bioscapes – an introduction to biodiversity in grazing landscapes’, developed by the Department of Primary Industries. The course was developed primarily for landholders in response to a need to look at biodiversity principles and how they interact with agricultural production goals. It was also a response to a perceived lack of agricultural context being applied to some biodiversity advice that was being provided to landholders. It is a two-day workshop, delivered on-farm with a mixture of theory and practical examples. The workshop recognises and supports the influence that practical engagement can have in enhancing the knowledge of landholders on this topic.*

Key words: workshops, biodiversity, agricultural production

Background

It is now recognised that the conservation of biodiversity in agricultural landscapes has several benefits for sustainable and resilient landscapes and communities. Managing a grazing landscape for multiple purposes is a challenging undertaking. Increasingly, landholders are asked, and desire to manage agriculture production with environmental outcomes across their landscapes ranging from a small remnant patch to a collective outcome across a catchment.

Landholders are also asking about the relationship between agricultural production and biodiversity principles. There is a desire to know more about ecosystem services and how to maintain them. This was evidenced by enquires to Department of Primary Industries (DPI) on combining field days, talks and information sessions to include not just biodiversity, but biodiversity and agriculture. After conducting a needs assessment of DPI staff, it was seen that there was potential to develop and deliver a workshop on biodiversity and agriculture. In 2009, a producer survey in the Armidale district also revealed that biodiversity was ranked fifth out of 10 natural resource management concerns (C Edwards 2009, unpublished data).

At the time, there was also recognition of several well-resourced research projects and their publications (e.g. Dorrough *et al.* (2008))

and the Native Vegetation and Biodiversity Program theme in Land, Water and Wool project), which led to the decision that extension of this information was important. Extension in a form that was non-threatening and based on adult learning principles was seen as essential. The development also came about as a shift in thinking that was occurring in the agricultural communities (Dorrough *et al.* 2008) and acknowledgment of the importance of biodiversity. The course also recognises the findings that biodiversity (and conservation) can have financial benefits in agricultural systems, perceived to be important by Lindenmayer *et al.* (2011).

The Bioscapes concept

Bioscapes is a new two-day workshop focusing on biodiversity in agricultural landscapes. It follows the premise that, while agricultural communities are part of the problem, they are also part of the solution when addressing conservation (~70% of New South Wales is managed for agricultural production purposes). The workshop also raises awareness of the many facets of biodiversity and what they can do for agricultural production systems.

Agronomists and project officers from DPI developed Bioscapes and piloted the workshop in a number of Tablelands locations. Whilst initially aimed at extensive grazing areas of the Tablelands, it is flexible enough to be used in other areas such as coastal environments and cropping zones. It has also been delivered as a

training opportunity for DPI and other agency staff.

The Bioscapes workshop

The two days of the workshop are usually spaced a couple of weeks apart. It contains a mixture of theory and practical exercises. These are primarily aimed at increasing awareness of the terms and definitions used in describing biodiversity by both the agricultural and environmental communities. Topics covered include: 'What is biodiversity and why is it important'; 'What is a definition of a healthy, biodiverse landscape'; 'Can biodiversity and agricultural production goals exist in a landscape'; 'What are some of the known biodiversity indicators and benchmarks and how might we measure them'; 'Climate change and biodiversity and ecosystem services'; 'What are the incentives and programmes that exist for encouraging and affecting biodiversity in our landscapes.' Designed as a small workshop, Bioscapes is ideal when the group size is around 15 participants, as this maximises the group learning experience. The mix of theory and practical outside activities strengthens the delivery of the main messages.

Participants are supplied with a manual and two booklets on 'Nature Conservation on Farms' (George and Brouwer 1996) and 'Vegetation survey and assessment' (Bayley and Brouwer 2004). Participants are asked to fill in a pre- and post-course questionnaire to determine their attitudes and changes in knowledge. The workshop is currently undergoing alignment with National competency standards.

Discussion

Pilot workshops held in Tableland areas in 2010 received positive feedback and suggestions about the format. All workshop participants who responded to the final survey said that they would use some of the information discussed at the workshop on their property. Sixty seven percent of respondents said the workshop was 'excellent', with the remainder describing it as 'good'. Participants included landholders, producers, and Catchment Management Authority staff, as well as Landcare staff and

university students. There was a 61% increase in participants strongly agreeing with the statement 'can landholders manage for production and biodiversity?' Many of the positive evaluation comments centred around the mix of theory and field work, the presentation style and the ability to deliver concepts of landscape and ecosystems.

The workshop promotes better land use, land capability and conservation values. It also develops an understanding of how agriculture can both benefit from, and assist with improved biodiversity. The value of Bioscapes is that it provides the appropriate context and helps form an agreed understanding of the terminology used by both sectors thereby improving the quality of the message. Bioscapes is a workshop that helps land managers learn more about the linkages between biodiversity and agricultural production.

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