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**Department of Natural Resources
and Environment**

***Grazing for Biodiversity and Profit:*
Farmer Segmentation Study &
Evaluation of Research and
Extension Worker Attitudes**

Executive Summary

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A report commissioned for the *Grazing for Biodiversity and Profit project* (ESAI 05115):
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Background and methodology.

This market research project aims to provide the Department of Natural Resource and Environment (NRE) with insight into behavioural and attitudinal segments existing among graziers identified as having areas of native pasture and/or native woodlands on their property. It also determines segments existing within the group of people (extension officers, private consultants, farmer 'champions') who give advice on native pastures and/or native woodlands.

An extensive literature review was initially conducted to source existing reports which identify various farmer segments.

Four group discussions were conducted with graziers from the Riverina and Volcanic Plains regions known to have areas of native pasture and/or native woodlands on their properties.

A series of 20 in-depth interviews were conducted with extension officers, farmer champions and private consultants who advise graziers from these regions.

The key findings.

Literature review.

A literature review was conducted to source previous farmer segmentation studies undertaken. Several studies were identified which offered information on various segments within agricultural sectors, one specifically relating to natural resource management. In depth information relating to these studies is outlined in Section 4 of this report.

The characteristics and traits of various segments detailed in previous studies and their validity for this project were explored during a series of grazier group discussions.

Grazier survey.

Awareness of and attitude towards native pastures and native woodlands.

All graziers participating in the group discussions are aware they have native pastures and/or native woodlands on their properties.

For most, awareness was raised by extension officers visiting their property, often on other business, and identifying these areas as being significant.

The majority of group participants are keen to conserve these areas, mainly for posterity and maintaining ecosystems, but also due to the benefits of including native pastures in their grazing systems.

Many claim grazing native pastures offers health benefits to stock, particularly worm control, growth rate of foetal calves and subsequent ease of calving and feed quality for young stock.

Some of the graziers attending the groups also believe native pastures and woodlands provide production benefits, namely summer feed, particularly in very dry seasons, and the low rate of inputs required to maintain them. Group participants who are specialist fine wool producers believe grazing native pastures contributes to the low micron of their wool.

There are however, some perceived disadvantages associated with grazing native pastures and woodlands. Lower carrying capacity than improved pastures, perception of lost potential income and peer pressure to 'improve' native pastures are mentioned.

Those graziers who tend to be very production focussed are less interested in conserving native pastures unless it suits their enterprise, as in fine wool production.

Although many group participants are positive towards conserving their native pastures and woodlands, other factors are often a consideration. These factors include financial constraints, particularly on smaller properties where the whole farm needs to be productive, problems with weed invasion and severe weather conditions, resulting in more pressure on available feed and water.

Current management of native pastures and woodlands.

There is general consensus among group participants that native pastures and woodlands provide most benefits when grazed lightly and rested for longer periods than improved pastures. Excluding stock altogether has resulted in weed invasion and a general decline in quality.

Many group participants claim they lack knowledge on how to manage native pastures effectively and would appreciate further information and assistance in this area, particularly the following:

- ? effective grazing
- ? sowing and establishing native pastures
- ? effects of different soil types
- ? strengths and weaknesses of individual grass species
- ? mistakes made by other graziers

Attitudes towards increasing production from native pastures varies, from those who are willing to try things like increased fertiliser use, lime, dolomite, sea kelp application and burning, to those who believe the only way these areas will become more productive is to under sow clover and rye grass.

One group participant claims to have increased the carrying capacity of his native pastures to 3DSE per acre by cell grazing.

Activities such as seed collection, harvesting wildflowers and tourism appeal to some graziers participating in the research, but only if these activities prove to be profitable.

Understanding of and attitude towards biodiversity.

While all group participants claim to have heard the term 'biodiversity', only a few have detailed knowledge of its full implications.

Most have a rudimentary understanding of plant, wildlife and insect interactions which can benefit the productivity and profitability of their enterprise and believe it is important to maintain.

Some of the group participants display a lack of concern about biodiversity, with their whole focus being on productivity and maximising short term gains.

Preferred information sources.

Although preferred information sources vary substantially, it is evident that personal face-to-face interaction with Landcare members and extension staff has a substantial impact on awareness of native pastures and woodlands and desire to conserve them.

Graziers attending the groups who are interested in conserving native pastures and woodlands tend to prefer information received from the following sources (not in any priority order):

- ? extension officers
- ? field days
- ? courses
- ? internet
- ? industry journals and papers
- ? other farmers and trial and error on farm

Those graziers participating in the study who can see a benefit to their production (for example fine wool producers) tend to prefer information from other farmers and through trial and error on farm.

Extension officers who are knowledgeable on both native pastures and farming systems and have the ability to provide suitable information efficiently, in a non-confronting manner are the most successful at encouraging change.

Group participants highlighted the need for extension officers to fully understand the importance of farming enterprises to be profitable when delivering the conservation message.

Effect of financial incentives and grants.

During the group discussions, several graziers raised the issue of receiving some form of financial support or compensation for conserving areas of native pasture and woodlands.

Financial assistance in the form of grants to undertake activities such as fencing, is claimed to encourage graziers struggling financially.

It is notable that in each group conducted, participants raised the issue of receiving compensation. Many graziers, particularly those with a strong production focus, are keen to be compensated for conserving native pastures and woodlands which benefits the wider community, but results in lost production capability.

Some graziers who are more conservation oriented believe they should be paid ‘management money’ as a reimbursement for costs and time involved in conserving these areas (eg. spraying herbicides, fencing, etc.).

Attitudes towards legislation designed to encourage conservation of native pasture and native woodlands.

Fierce opposition towards enforcement to conserve native pastures and native woodlands is evident among all group participants, even those with strong conservation leanings. There is a culture of “*don’t tell me what I can or can’t do on my farm*”. Comments made during the groups reveal that fear of being told native pastures must be conserved has resulted in some areas being “*ripped up*” and some graziers deliberately concealing the fact they have native pastures.

Influence of women and children.

Several graziers attending the groups revealed that women and children bring substantial pressure to bear on environmental decisions made on properties. They tend to be more conservation focussed and often “*it’s the families that are holding back the plough*”.

Extension officer and industry stakeholder survey.

Knowledge of grazier attitudes and behaviour and willingness to assist with native pasture and native woodland management.

The extension officers and industry stakeholders participating in the survey revealed in-depth knowledge of attitudes and behaviours of graziers in relation to native pastures and native woodlands. On most issues, their thoughts were validated in the group discussions.

Respondents typically claim that levels of interest in conserving native pastures are broad and varied, with different motivations to do so. Sustainability, stewardship and social attitudes are all believed to be drivers of involvement in conservation and maintaining the ecological balance.

The level of interest shown by respondents to assist graziers to manage their native pastures and native woodlands is polarised, from extension officers who are very eager, to some private consultants who are slightly dubious about the benefits of grazing these areas.

Extension officers eager to assist graziers to manage their native pastures and native woodlands fall into two categories. There are some who believe native pastures can be an integral part of a rotational grazing system and can see the potential to increase productivity of native pastures. Other extension officers however, believe native pastures should be managed for conservation purposes and for posterity.

There is also a group, which consists mainly of private consultants, who are neither positive or negative towards including native pastures and woodlands in a grazing management system. While this group agrees native pastures can be useful in a low input system, they would prefer more scientific proof of their benefits in other systems before recommending their worth to clients.

Information and support requirements.

Extension officers are typically seeking information directly relating to the management of native pastures and native woodlands which they can pass on to graziers, including:

- ? how to graze these areas
- ? how to encourage more competitiveness
- ? how to control serrated tussock and other weed invasion
- ? how to encourage herbs
- ? the effects of stocking rates
- ? characteristics of different grass species
- ? the effects of fire
- ? selective herbicides

Preferred methods for extension officers to receive the above information include reports and summaries as well as hands-on experience through workshops and farm walks.

There is also some demand from extension officers for simple, user-friendly information sheets which they can pass on to graziers.

Farmer champions are also interested in more information relating to native pasture and woodland management, with a preference to receive this information from extension officers. Some farmer champions are eager to establish a network of other graziers with native pastures and/or woodlands to facilitate information sharing.

Private consultants are more likely to be seeking business management information - factual scientific proof that native pastures and biodiversity can return a gain in terms of productivity and profitability.

Delivering information through seminars and groups appeals to private consultants and some suggest providing them with contact details of people with extensive native pasture knowledge to establish a network.

Suggestions to ensure success of *Grazing for Biodiversity and Profit*.

Respondents recommended promoting the management benefits of grazing native pastures to achieve a biodiversity gain, potential increases in productivity and decreases in cost of production to ensure success of the project. Supporting this information by scientific proof is believed to give it more credibility.

They also suggest linking in to existing networks and programs, such as Sustainable Grazing Systems, as well as giving practical demonstrations at Field Days and Farm Walks.

Field Days conducted on weekends and aimed at families is recommended by some respondents, due to the influence of women and children on natural resource management issues.

Ensuring consistent messages are delivered by credible staff capable of developing relationships with graziers is also deemed important.

Grazier segments identified.

The survey results outlined above reveal that grazier segments identified in previous studies are not entirely valid for issues relating to native pastures and woodlands and the following five segments are more representative:

Stewards: Graziers who are committed and passionate about conserving native pastures and native woodlands. They have a strong sense of responsibility to the land in general and conserving pastures is high on their priority list. They tend to be financially secure and are often Landcare members. They have high levels of contact with extension officers and prefer to receive information from them. They respond well to messages of conservation and biodiversity.

Embattleds: Graziers who have been made aware they have significant native pastures and/or woodlands on their property and due to their sense of responsibility to the land in general, would like to conserve these areas, but often feel they do not have the financial resources to do so. They have some contact with extension officers and prefer to receive information from them. They respond well to messages of conservation if monetary incentives are available.

Opportunists: Graziers who have been made aware they have significant native pastures and/or woodlands on their property. They have little sense of responsibility about the land generally and tend to be production focussed, but their soil type or their niche market for their product (eg, fine wool) incidentally correlates to retaining native pastures. They tend to have some angst over extension officer contact and prefer to receive information from other farmers or by trial and error on farm. They respond well to monetary incentives.

Traditionalist: Graziers who may or may not be aware they have native pastures or native woodlands. They tend to be production oriented, with no long-term management plan or view. They lack knowledge on biodiversity and are sceptical about its importance. They have little contact with extension officers and feel threatened by government intervention. They respond negatively to messages of conservation and biodiversity and do not take advantage of monetary incentives for NRM. They prefer to receive information from other farmers.

Unaware: Graziers who are unaware they have native pastures and native woodlands on their property. They tend to live further away from regional centres and as such have limited contact with extension officers. Once made aware of their significant native pastures or native woodlands, they will become a Steward, Embattled, Opportunist or Traditionalist.

Extension officer and industry stakeholder segments

The in-depth interviews conducted uncovered three clear segments among extension officers and industry stakeholders, namely:

Protagonists: People who believe native pastures and native woodlands can be an integral part of a rotational grazing system and consequently are eager to improve the productivity of these areas. They tend to prefer receiving information via reports and summaries, but also through workshops and farm walks.

Nurturers: People who believe native pastures and woodlands should be managed for conservation purposes and for posterity. They are keen to increase the productivity of other areas of the farm so less pressure is placed on native pastures and woodlands. They also tend to prefer receiving information via reports and summaries, workshops and farm walks.

Sceptics: People who are neither positive or negative towards including native pastures or native woodlands into grazing management systems and need scientific proof of their benefits before recommending their worth to clients. They tend to be private consultants. They prefer to receive information in seminars and courses which provide opportunity for interaction and discussion.

Conclusions and recommendations.

The survey clearly identifies several attitudinal segments existing among graziers and also extension officers and industry stakeholders. These segments relate specifically to conserving native pastures and native woodlands to achieve a biodiversity gain and consequently differ slightly to other segments discovered in other studies conducted.

While the authors are constrained in their recommendations due to some sampling bias in the groups conducted and a lack of quantified data to support their findings, there is evidence to suggest the following communication strategies will successfully encourage conservation of native pastures and native woodlands by each grazier segment:

- *Stewards:*
 - provide information on managing native pastures and woodlands, particularly effective grazing and when to sow native grasses
 - offer financial support to manage these areas in order to conserve them
 - encourage other activities such as seed collection, wildflower harvesting and tourism
 - provide information on conservation and biodiversity through extension officers, Landcare, field days, courses, internet, industry journals and papers

- *Embattleds:*
 - provide information on the importance of conserving native pastures and woodlands
 - provide information on maintaining or improving current levels of farm profitability while conserving native pastures and woodlands
 - provide information about financial support available
 - offer financial support
 - provide information through extension officers and farmer ‘champions’

- *Opportunists:*
 - provide information on profitability gains likely from conserving native pastures and woodlands or biodiversity
 - provide information relating to different soil types and the characteristics of different grass species
 - offer financial incentives
 - provide information through farmer ‘champions’, industry journals and papers

- *Traditionalists* (who may be difficult to target due to their scepticism about conservation and biodiversity):
 - provide information on profitability gains likely from conserving native pastures and woodlands
 - rely on peer group pressure from other farmers

- *Unaware* (these recommendations are based on anecdotal evidence from other survey participants due to none of this segment participating in groups):
 - provide farm visits from extension officers to raise awareness of the significance of native pastures and woodlands and help graziers to identify these areas
 - offer financial support
 - provide information through the mass media

Survey results reveal several opportunities to provide extension officers and other industry stakeholders with information and support tools required to enable them to encourage graziers to conserve native pastures and native woodlands, including:

- *Protagonists:*
 - provide supporting information on how to increase productivity from native pastures and woodlands
 - provide information on grazing, stocking rates, weed control and encouraging species competitiveness
 - provide supporting information in reports or summaries
 - offer opportunity to participate in farm walks and workshops
 - provide pamphlets or Ag Notes which can be passed on to interested graziers

- *Nurturers:*
 - provide supporting information on how to manage and conserve native pastures and woodlands
 - provide information on grazing, stocking rates, weed control and encouraging species competitiveness
 - provide supporting information in reports or summaries
 - offer opportunity to participate in farm walks and workshops
 - provide pamphlets or Ag Notes which can be passed on to interested graziers

- *Sceptics:*
 - provide scientific proof of the benefits of conserving native pastures, native woodlands and biodiversity
 - offer the opportunity to participate in seminars and workshops

To encourage conservation of native woodland and native pastures to achieve a biodiversity gain, NRE could also consider the following actions:

- ? Provide specific examples of interactions between plants, wildlife and insects which result in productivity, profitability and management gains.
- ? Provide scientific proof of these gains.
- ? Provide information to extension officers from other divisions (eg. pest plants and animals) as a means of ensuring conflicting information given to graziers is minimised.
- ? Establish networks of professionals and farmer 'champions' to facilitate information exchange.
- ? Ensure extension officers are knowledgeable in both native pastures and farm management and are able to deliver messages efficiently in a non-confronting manner.
- ? Support farmer 'champions' to act as a source of information for Opportunists and Traditionalists.
- ? Conduct field days on weekends aimed at encouraging family participation.
- ? Provide information and resource materials to schools aimed at creating awareness of the importance of conserving native pastures and native woodlands

