

Understanding land managers attitudes using focus groups

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Abstract. This paper discusses the outcomes of four focus groups held in the Central West of NSW, to gain an understanding of landholder attitudes towards, and perceptions of, land stewardship in Australia. An understanding of what and why people do what they do is seen as an essential attribute for the advancement of enhanced land management practices in the future. Land managers are often criticised for their actions in relation to the land they manage, however, their appreciation of and for their land is poorly understood. This study is aimed to gain an understanding of the *role of land stewardship in Australia*.

Keywords: Focus groups, land stewardship, environmental management

Introduction

Though land managers in Australia are recognised for the efficiency of their production systems yet at the same time land degradation continues to be a significant problem (Goldney and Bauer 1998). While land managers are seen as having a close affinity with their land, the overall landscape would still appear to be in decline. Indeed, after almost 200 years of European land management practices, we can reflect on our successes and failures as land managers in terms of economic profit and environmental outcomes. Clearly all is not well. Millions of dollars of public money are now being poured into land restoration programs by governments of all political persuasions (Goldney and Bauer 1998, p16).

There would appear to be a state of conflict (Reid 1999) in society's attitude towards the natural environment and in particular the way in which land is managed in Australia. Many may espouse the virtues of environmental protection, but at the same time be subdued by demands for increased production and financial gain. The latter can be understood in terms of immediate survival, but may be criticised by the broader community for leaving the land in a perilous state for future generations. There are a variety of views on the causes of the many forms of land degradation in Australia, but they might best be summarised as: inappropriate attitudes to the environment on the part of farmers; lack of knowledge about the damage caused by agricultural practices; and the policies of past governments which subsidised and fostered large-scale land clearing, ill-conceived irrigation developments, and excessive chemical application (Vanclay and Lawrence 1995, p. 26).

Lockie (2001, pp.233-234), in describing the slow pace of the adoption of conservation farming in Australia identifies the concerns of others in that, "*many believe that this reflected the lack of an environmental or land ethic, for were farmers to hold more positive attitudes towards the environment the adoption of environmental innovations would proceed much more rapidly*".

It is being increasingly acknowledged that personal beliefs and attitudes and personal behaviour will play an important role in achieving land stewardship (Guerin and Guerin 1994; Vanclay and Lawrence 1995 and Yencken and Wilkinson 2000). As a corollary, a change of landholder attitude towards their land has been proposed as a means of providing for a more sustainable future (Mercer 1995; Guerin 1999). However, achieving such a change is far from straightforward, with an 'individual's motivation and capacity to change natural resource management practices being influenced by a mix of social, economic and institutional factors' (Gorrie and Wonder 1999, p53), including 'participation in occupation-related training, level of farm income, optimism about future farm income, farms having a documented farm plan, membership of Landcare, and age' (Cary et al 2002, p. 56), inability to see long term benefits of change (Guerin 1999), cost of change (Yencken and Wilkinson 2000) gender (Alston 1995), personality style (Cruse and Maybery 2004), and government policy (Dovers and Wild Rivers 2003).

Given this complexity, this paper takes the view that landholder understanding and participation in achieving changed land-use management practices is vital. That is, 'top-down' directed change is

likely to be most successful when it is founded on an understanding of the manager's personal perspective rather than direct criticism. After all, 'it is nonsensical to accuse anyone of either a lack of an environmental ethic, or a contradiction between their attitude and behaviour, simply because they do not adopt the conservation farming package' (Lockie 2001, p. 235). Bottom-up change is more likely to be successful (Chamala and Mortiss 1990; Guerin and Guerin 1994) as it involves those most directly involved with land management. Carr (2002) identifies advantages in both bottom-up and top-down approaches to land management, however the greatest changes will surely occur when the community appreciates and understands the landholders' view on their management practices. It would appear not only prudent to identify better ways of managing the land, but more importantly to gain an understanding of land managers' knowledge of the issues *perceived* to be a problem in Australia today.

In exploring ways in which landholders could better manage their land a common theme emerging from the literature is land stewardship. Leopold (1949), Roberts (1992), and Keith (1994) talk about the concept of the adoption of a new land ethic, while Junor (1988), Vanclay (1992), Roberts (1995), Curtis (1997), Crosthwaite (2001) and Carr (2002) discuss the concept of stewardship of the land. When Aldo Leopold stirred up the American land consciousness in the 1930's, he noted that '*we abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we begin to use it with love and respect*' (Leopold 1949, p viii). Some make arguments for both a conservation/land ethic and land stewardship (Keith 1994; Chamala and Mortiss 1990). The underlying theme throughout is the need to manage land better than has been done in the past. Simplistically, land stewardship implies a duty of care to the land one manages. Land stewardship may be seen as a responsible and sustainable approach to the management practices applied to our land, that is; 'caring for, managing and using the land without damage or loss of fertility...This will allow it to pass from one generation to the next, as a precious commodity, almost as if it was a source of life itself' (Junor 1988, p. 11). Chamala and Mortiss (1990) define land stewardship as 'the responsible use of the resources entrusted to us, so that we enhance and preserve, rather than degrade and exhaust, the beauty and fruitfulness of the planet' (Chamala and Mortiss 1990, p. 212). Land stewardship has been characterised by the 'blend of nature, interest in a healthy environment and a concern for future generations' (Lerner 1993, p. 4).

Using the concept of land stewardship discussed above as its foundation this research seeks to investigate the fundamental philosophy of today's land managers by exploring their attitudes towards their land and how these same attitudes are reflected in their management. The research provides an essential step in identifying relationships between managers' stated attitudes, beliefs and understanding and the practices they pursue on a daily basis. Specifically this study seeks responses and understanding in the following research questions:

- What knowledge and understanding do land managers have of land stewardship?
- What plans do different land managers have to practice land stewardship? and,
- What are the factors influencing the adoption of land stewardship strategies?

Methodology

This research used a focus group approach. Focus groups are valuable in gaining an insight into participant knowledge and views on specific topics (Litoselliti 2003) and as an economical and efficient way of gathering data, enabling participants to 'bounce' ideas off each other, and to brainstorm different ideas (Alston and Bowles 1998; Sim 1998; Robinson 1999; Robson 2002; Neuman 2003). When carried out in a natural setting, they allow participants to freely express their views (Alston and Bowles 1998; Sim 1998; Robinson 1999; Robson 2002; Neuman 2003). Focus groups have been conducted 'as a means of obtaining direct feedback from a range of issues not adequately addressed through surveys' (Bell and Allan 2000, p. 325), and have been used in conjunction with numerous other research techniques in Australia (Bell and Allan 2000; Woodhead, Cornish and Slavich 2000; King *et al* 2000; Teixeira *et al* 2004). For example in Western Australia, focus groups were used prior to semi-structured interviews and a telephone survey (Murray-Prior, Hart and Dymond 2000) as a means of identifying the uptake of farm management training. Given these advantages they were identified as being a useful method of gaining an overview of attitudes of land managers towards their land and to land stewardship as a prelude to development and refinement of a questionnaire for use in a larger project on land stewardship.

Initially it was planned that four groups would be run on two successive days in two regional centres in Central Western NSW. Ideally one group in each centre was to be comprised of 'producer group' managers who might be perceived as being production orientated (i.e. NSW Farmers' Association or Prime Wheat Association), with the remainder comprising 'environmental group'

managers (i.e. with connections to Landcare or Greening Australia) who may be involved with environmental enhancement or conservation. The separation was primarily intended as a means of addressing some of the challenges of focus group discussions, including potential conflict between participants and polarisation (Alston and Bowles 1998; Sim 1998; Robinson 1999; Robson 2002; Neuman 2003), by promoting freer and more common expression and reducing the possibility of confrontation. Two other criteria for participants had to be met - through their own admission they had experience in land management and be over 18 years of age.

The formation of the groups coincided with the first significant rain in the Central West (mid-June 2004) for some months and as such it was difficult to find sufficient participants. Initial contact was made with a known representative from each of four organisations who were subsequently asked if they would assist in the recruitment for the groups. It was hoped that in this manner participants would not be directly influenced by the researcher.

As the recruitment process progressed, it became necessary for the researcher to play a greater role in recruiting in order to gain the desired attendance. This involved making personal contact with 25 people to gain group or individual participation, rather than the four that were initially envisaged. Direct recruiting was avoided, though several people spoken to by the researcher participated without being asked directly. Due to the difficulty in gaining participation the proposed segmentation of groups was not always achieved.

Overall it is believed that some 100 people were made aware of the focus groups. These are detailed in Table 1. At the commencement of each session the researcher gave a brief introduction into the proposed research and the extent of involvement sought from the participants. An experienced facilitator (a former Landcare coordinator) was then introduced to the group and the researcher became an observer for the remainder of the session. The facilitator explained that where possible, three responses were required from each participant for each of 14 questions and that they would be collected in order of answer; each response written on a separate *Post-it* notes. These responses were collected in order (1st, 2nd, and 3rd response) and placed on a flip chart. The majority of questions brought three responses from all the participants.

When all responses were in place, the facilitator sought to identify areas of commonality and consensus between each of the levels of response from the participants. While it should be noted that consensus was not a requirement of the groups it was not until a degree of agreement had been achieved that the next question was revealed for discussion. Each focus group lasted approximately an hour and a half.

Table 1. Focus Group 'Membership'

Group	Invitation	Contacted	Confirmed	Attended
1	Producer groups	8	3	0
	Native grasses	4	3	3
2	Land care	15	3	0
	Conservation farm	5	2	1
	Native grasses	4	2	2
3	Producer groups	8	5	2
4		10	2	1
	Land care	34	6	7
		15	2	0
'Branches'/Total	17	103	28	16

Results

Environmental understanding

To gauge participant understanding of their environment, participants were asked questions regarding their knowledge of soil erosion, salinity and acidity; issues that are relevant in some form to land managers associated with agriculture over much of Australia. In their responses to the question "*What is soil erosion?*" the most common themes to emerge were; "loss of topsoil", "wind and water", "overgrazing and over-cultivation", "loss of productive land", "loss of capital" and "cost of remediation". To the question "*What is salinity?*" common themes were; "rising water table", "salt mobility", "hydrologic watertable imbalance", "over clearing", "loss of productive land" and "over watering". To the question "*What is soil acidity?*" common themes were; "over use of

fertilisers”, “imbalance in soil nutrients leaning to unavailability of nutrients”, “a lot of Australian soils are naturally acid”, “to many exotic legumes”, “increased costs, skilled management required”, and “reversible!”.

In their answers participants identified both the causes and effects of soil erosion, salinity and acidity. Loss of income and reduced production were acknowledged outcomes of these environmental issues, with recognition of the aesthetic effect, along with the potential degradation outcomes. The cost of rehabilitation was noted as was the understanding that restoration was possible, notwithstanding the time and cost involved. One respondent said that ‘salinity was over rated’, a comment that did not cause any dissent within the rest of the group. Notwithstanding their responses, they also indicated that lack of education in appropriate management of soil erosion, salinity and soil acidity was an issue within the farming community. This was demonstrated by their saying that many ‘remedial’ practices adopted by farmers were either inappropriate or ill considered. It was also noted that these issues were recognised as being related to poor agricultural practice.

To gauge their understanding of broader community concepts associated with land management, respondents were asked about biodiversity and sustainability. In their responses to the question “*What is biodiversity?*” common themes were; “balancing the ecosystem - farming system to maintain production levels”, “diversity of plant and animal life in a stable environment”, “indication of environmental richness”, “essential for long-term land use productivity” and “always feel pressure from others to make farm less diverse”.

Other respondents indicated it was a “misunderstood” concept, and that it represented “horses for courses”. Underlying these responses the researcher observed a failure to appreciate the importance, complexities and aesthetics of biodiversity in the purely ‘natural’ environment. This may have resulted from the failure of many land managers to study, and experience the complexities of natural communities at least at the conscious level. While acknowledging the importance of diversity in their modified landscape they were also aware of community pressure for greater biodiversity and balancing that with the need for greater production.

Sustainable land management

To the question “*What is sustainable land management?*” common themes were; “being able to continue your operation while protecting and improving the farm”, “to leave a farm in better condition than was started with”, “good farm management - leading to ongoing profit, preventing degradation, treat with respect”, “making a profit in people, land, dollars” and “high management requirement plus an ethic to achieve it, skill-knowledge-desire-heart and head”. Other significant comments arising from the initial discussion on the question were that “sustainable management is associated with ethics” and that “agriculture is hell bent on fighting biodiversity rather than working with it”.

The discussion over sustainability brought with it an air of frustration as it became clear that many were concerned at the overuse of the term by bureaucrats and politicians in particular. It is a concept that appeared to have little real meaning to these land managers. However, despite the confusion, collectively the respondents were able to identify most of the attributes associated with sustainability – the economic, the social and the environmental.

The discussion also identified a high management requirement in addition to an ethic. Some commented that a better word was required to achieve the same outcome, or sustainability should be more clearly defined by those that promoted it. Another response indicated the importance of education in land management to achieve changes in past and current practices with an endeavour to reach long-term continuity and achievement. It is little wonder that confusion and misunderstanding of this pivotal concept occurs on the part of the land manager.

Management awareness

In order to ascertain participants’ level of environmental awareness they were asked about good and bad land management, generally and as practiced in their local area. The respondents generally identified the ‘theoretically’ good practices and acknowledged the bad. In their responses to the question “*What is good land management?*” the common themes were; “thinking holistically, nature + economics + social”, “balancing perception - with - soil biota, soil fertility, sustainable”, “aim to improve environment and economics at the same time”, “leaving the land in a better condition than when you started”, and “study new technologies- put into place”. To the question “*What is bad land management?*” common themes were; “over production/cropping”, “doing things that affect others and the environment”, “following the (poor) example set by our peers”, “attitudes of conquering the land rather than working with it”, “thinking only economically, high \$ gain - short term” and “not including drought in ‘5’ year farm plan”.

The participants identified good management as being associated with production and income. Here education was identified as an issue as managers turn to study new techniques and put them into place in an attempt to gain greater production, along with economic and environmental benefits. Inappropriate planning and the use of land were also recognised, especially where steep ground was being cultivated and the failure of managers to include drought in the '5' year farm plan. Community awareness was identified as being important as managers work with and consider their neighbours and that they (the managers) should be less selfish. One response also noted that "too many farms were being subdivided".

When asked what managers actually did practice in their local area, the responses were quite varied, reflecting the respondent's 'perception' of how land is and should be managed. Some noted changes in practice as being good: "new ideas, people willing to change versus old ideas and not willing to change", "changes in land management are positive", sometimes related to the "influx of new owners". Conversely others responded that you could "tear your hair out"; their practices are "poor, with no regard to anything but the dollar"; based on the premise that "everything natural is a problem, everything man made is an improvement". The latter response must ultimately be environmentally detrimental and equally disheartening to those endeavouring to implement change on their land and in their community. The 'influx' of new people to rural Australia was seen as having mixed outcomes; while many appeared to bring economic capital from their city lifestyle and invest it in their acquired land, others are apparently oblivious to the appropriate level of land management required. The subdivision of holdings was also seen from two contrasting positions. On the one hand it provided valuable capital for financial investment or property improvement, but concerns were expressed at the break-up of productive agricultural land, especially adjacent to growing regional centres.

It was also noted that while good land management by individuals could often have a beneficial effect on a neighbour, it could quite easily have a detrimental outcome, for example where a particular neighbour would take exception to 'new' community practices and not only continue, even increase, poor management practices. Another concern was the over emphasis placed on the benefits of tree reestablishment on degraded land and the failure to recognise the benefits of establishing pasture and grasses instead of or in addition to trees.

During this part of the discussion, the researcher noted several comments that were made by participants and that were not included on their notes. These were "that bad management is always done by someone else 'over the fence', never on my place...", "even good farmers are concerned with 'green' pressure", "peer pressure is a real issue in both a negative and positive sense" and that "the only reason for farming is for capital gain".

Responsibility and the Future

In the final set of questions managers were asked about who is responsible for the management of public and private land, now and for future generations; how is 'government' affecting their management; the value of being monitored and their (the land managers) duty of care to their land. Responses to the question "*Who is responsible for managing public land?*" and "*Who is responsible for managing private land?*" had many similarities; most commonly the responsibility devolved to "the owner" (or those with delegated responsibility) and "government structures".

In general therefore the respondents considered that it was each for their own in terms of responsibility for managing land. Landholders were responsible for their own land along with managers and lessees, and similarly the respective current public agencies should be responsible for the land for which they were assigned. At no time did the participants mention or ask for public assistance or input into their management. A number of respondents thought surplus public lands should be offered for lease or sale. These areas included Travelling Stock Routes and Crown Reserves and Leases. It was interesting that participants believed, *trained* people should be involved in taking care of public land, yet training did not emerge as an issue for private lands. A number of respondents saw an advantage of dealing with or being responsible to only one authorising or monitoring body and in NSW, local government was the most respected and preferred level of government. An underlying thought of land managers appeared to have been an increased responsibility for the land they managed, but with reduced regulation.

It was also noted there should be a "single management body" and as such local government was considered to be the most suitable body for the management of public land, but with input from the "public" and "Landcare groups". The general consensus was that "government to be more responsible for land well being - being more responsible but not responsible for more".

This perception was also reflected in responses to the question "*How is government affecting your land management?*" Local governments were seen to be "more approachable than state and federal", and to have tighter "subdivision planning control..."

State Governments were considered to be two faced in their land management approach; on the one hand they wanted improvement on private land but on the other, they ignored issues on their land, particularly the control of noxious weeds and animals. They also failed to adequately support and educate private landholders, in that “state governments [should] resurrect extension officers”.

While not dismissing the importance of some government initiatives and regulations, many respondents were concerned with the financial and time implications associated with implementing them; the “other regulations (not land management ones) have impact on ability to manage land because of time and dollar”. A regularly quoted example was the Occupational Health and Safety legislation, “a demanding piece of government legislation for which I see little return”. Ovine Johnnes Disease management policy, Native Vegetation Plans and Business Activity Statements received criticism as additional administrative impositions that impacted on their management time. The Federal Government also received criticism, particularly in terms of a perceived “money grab by public servants to maintain salaried positions without achieving real outcomes” and that some positions had the wrong focus. “Inadequate [Commonwealth] support for change” was also identified. Respondents also highlighted “duplication [between] state - federal departments”,

To the question “*What is the value of government monitoring of land management?*” common themes were; “average monitoring across all levels of government”, “legislating without practical knowledge”, “state theory ok, practice not applied”, “State government an impediment”, “monitoring usually very specific, doesn’t look at big picture”, and “weed management” (regulations in place for their control on private land-but often not adequately addressed on public lands). The foundation of the last comment was that governments did not practice and support their own policies adequately. Overall governments were thought to have a poor understanding of the issues relating to policies it sought to implement.

In their responses to the question “*Who is responsible for managing land for future generations?*” common themes were; “all society” and “present owners are custodians of the land to be passed on in an improved condition”; and to the final question, “*What is your duty of care?*” identified these themes; “to leave the area more diverse and functioning as close to nature as possible”, “ability to hand on to next generation in a better state than when we took on management”, “reverse degradation without introducing new forms of degradation”, “[consider] how does what I do, affect my neighbour?” and “the future - not managing for present, managing for the future”.

From all the changes in recent years many respondents were concerned with the lack of available on-ground extension officers. From this it was understood that government initiatives were creating ‘Ivory Towers’ for people and that help was not where and when it was wanted; on the ground and in the bush. Education and training emerged as issues throughout these responses, where land managers acknowledged their lack of expertise in all areas of their vocation and that the greater public support of the past in the form of extension officers were far less prevalent and recognisable to the rural community today, than in the past.

From these responses it would appear that these managers at least understand what should happen to their land and who is (or should be) responsible, and that such management should extend beyond the farm gate.

The researcher noted other comments made by participants not directly related to the initial question. One participant observed that “local ‘ownership’ is important in managing public land – ‘local’ area, local input”, where they thought that locals should have a say in the management of ‘their’ land. Another participant observed “government (‘environmental’) policy has minimal influence on the land”, whilst another believed “Government monitoring has not led to change”. Their frustration is apparent in the comment that “landholders do not know where to obtain worthwhile relevant and independent information”.

During the biggest focus group, individual personality differences were observed when participants were responding to questions relating to land management. Enthusiastic participants appeared to promote more responsible management systems than some of the quieter and more reserved participants.

Discussion

Knowledge and understanding land stewardship. There were deliberately no direct questions on land stewardship as the concept has various meanings and is considered to be poorly understood in rural Australia; however the participants’ responses to the *Duty of Care* would suggest that they do indeed understand the principles of land stewardship. While indirect, the responses noted that ‘everyone’ and ‘all society’ were responsible for future generations imply a level of community rather than personal land ownership. The failure of participants to fully appreciate and understand biodiversity and sustainability might well be regarded as a failure to adopt enhanced environmental and land management principles; it also identifies a need for

greater discussion and consensus between policy makers and industry in the future. Respondents' acknowledged their personal responsibility, minimal regulation (Roberts 1995) and the need to leave it in a 'good state' for future generations. *At this stage of the study one can no more than speculate whether these land managers practise what they appear so readily to promote.*

Plans to practise land stewardship. Whilst participants were not asked directly about their plans to practise land stewardship some insight can be gleaned from the responses associated with biodiversity and sustainability. Initial responses indicated uncertainty of their meaning and as such full implementation of land stewardship practices by these participants is inconclusive. Yet collectively they provided the basics with responses such as; a balanced natural system; a large range of plants and animals; environmentally aware; and, the application of an ethic. The difficulty in definition, and the varied applications of sustainability have been expressed (Norton and Dover 1994) previously.

Despite some participant reservation and frustration over having to discuss 'sustainability' and 'biodiversity', in word form at least respondents expressed an appreciation for, and understanding of sustainability, in responses of such terms as:

- 'a balanced natural system',
- 'presence of a large range of plants and animals', and
- 'an indication of environmental richness', also display a good understanding of land stewardship at least at a theoretical level.

Collective responses to the question show much similarity to definitions of sustainability presented in the literature (i.e. Reeve 2001; Cary 2002; Lerner 1992) but they highlight a lack of clarity (with ramifications for practice) – something also emphasised in the literature.

Factors influencing the adoption of land stewardship. The focus group responses identified a number of factors that may have an adverse effect on the adoption of enhanced land stewardship principles, namely:

- education – lack of practical technical knowledge, and 'failure' of governments to adequately provide sufficient extension officers in the field,
- economics – perceived cost and justification of adoption and, the supposed need for traditional production methods for profit,
- personality – do 'extravagant' and 'thrifty' people adopt at the same rate, and are given personality types 'better' land managers than others,
- incentives – 'community' demands for change are not adequately supported, along with an internationally competitive environment and focus on production overheads, and
- community – individual and public concerns and regulation, and at the frustration of the various levels of control and the 'constant' changes.

The factors identified from participant responses in the focus groups have similarities to the results of Reeve (2001) and Cary et al. (2002) which would indicate that more must be done in order to achieve long and lasting change.

Implications for government

The lack of consistency and consensus in defining biodiversity and sustainability offers a real challenge in terms of the development of government policy, because if land managers fail to fully appreciate the intention and meaning, initiatives may fail in their implementation. A possible surprise was the general acceptance of at least some form of government regulation, but the concern at duplication and various levels of control was not unexpected. Collectively they saw State governments as an impediment and would like to see regulations in the hand of local government, who they regarded as relating too and understanding of their situation. There was no appreciable difference identified between the groups, except in the case of Group 4, who in respect of the number of participants provided considerably more answers in numerical terms and subsequent ongoing discussion for consensus, than did other groups.

Methodological considerations

Benefits

The prime motivation for holding the groups was to provide assistance in gauging the level of manager understanding on a selection of land stewardship issues and to provide a foundation upon which to base a subsequent questionnaire on land holder attitudes and personality that is planned to follow this research.

The focus groups have achieved these goals and demonstrated the benefits of gaining a practical first-hand response to issues relating to land stewardship. Small groups provided a non-

threatening atmosphere at which land managers can express their views on the issues presented for discussion. They were also cost effective and relatively easy to get up and running, notwithstanding the difficulty with focus groups in endeavours associated with achieving the desired level of participation. In this study the researcher offered no direct and personal benefit for participation, only that attendance would assist (his) research.

Limitations

Despite the many advantages of the use of focus groups there are a number of limitations to this form of research that can be identified as. '*bias and manipulation; false' consensus; difficulty in distinguishing between an individual and a group view; difficulty in generalising; and difficulty and interpretation of results'* (Litoselliti 2003, p23). These are challenges faced by those using focus groups and it is apparent that the latter three may have impacted upon this study. Every endeavour was made to address these limitations at the commencement of the study, in particular, by the appointment of an experienced facilitator and the separation of 'like minded' participants. The timing of the sessions was carefully planned to fit in with 'normal' busy periods in the farm calendar and it was considered that daytime attendance during the week was as appropriate as any other time. However, it was impossible to predict that a prolonged dry period would be broken by a worthwhile fall of rain just as the focus groups were being held. There is little doubt that the validity of the responses reported here would have been enhanced by greater participation and more extensive responses.

Conclusions

Knowledge: Collectively the participants demonstrated an understanding of both the causes and effects of environmental issues that were raised with them and their attitudes towards factors affecting their management of the land. While knowledge of land management issues has been provided in the responses it has not been specific and it cannot be assessed to what level individual participants personally understood or indeed agreed with any particular point or statement. This study provides an understanding of theoretical knowledge on land stewardship, but is unable to confirm that land managers actually practise what they proffer.

Future: The understanding of managers' attitudes towards their land, or knowing why landholders do what they do, is an essential part in appreciating the *nature of Land Stewardship in Australia*. The following broad areas are seen as emerging factors from the focus groups that require further development and understanding.

- Environmental – terms such as sustainability and biodiversity are over-used and under-defined and explained, leading to a lack of appreciation of the implications and consequences to land managers.
- Enforcement – governments introduce policy with little if any practical knowledge and establish monitoring without carrying out any monitoring processes. Over-regulation by too many levels of governments and departments leads to duplication and confusion.
- Education – land managers recognise their educational shortcomings, but deplore the withdrawal of departmental advisory officers that in the past have been of great assistance to them.
- Economic – environmental and land management change can only be brought about with significant economic consequences, which appear to be poorly understood and recognised by government and the community.
- Ego – land managers as with society, are composed of an array of individual people and personalities and whose decision-making must all have a varying impact on the management of land in Australia.
- Empowerment - while acknowledging the need for improved land management practices, many respondents were concerned at the public imbalance influencing their management techniques. By this they meant that 'café managers in Newtown' have influence over environmental issues in rural Australia, but in contrast rural managers have no influence over the café manager. The ramifications of this, from the land managers' perspective, are an inequality and disparity between sections of the community, country and city, and pressure from people that they believe have little appreciation of land management or the impacts and issues associated with change).

The direction for the next stage of the broader project on land stewardship is clear. If the 'community' believe that changes in land management practice are required in this country it is imperative that the land managers themselves are engaged in the change process. To initiate engagement, land manager involvement and participation in a survey of their attitudes on land management issues is an essential first step.

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