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EMS Pathways to Sustainable Agriculture Program

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Executive Summary

The 2008 Landleader project (Landleader 2008) has successfully engaged 11 priority regional natural resource management bodies across Australia to collect information on the environmental and livestock management practices of 362 broad acre graziers. The project is a joint initiative of Australian Wool Innovation (AWI) and Meat & Livestock Australia (MLA) and funded under the Australian Government's EMS Pathways to Sustainable Agriculture Program.

MLA supported Landleader 2008 to build on the success of the Landleader trials held in 2007 and to enhance the project by capturing further best practice data from Australian broadacre farmers with the objective of documenting the red meat industry's current environmental management practices and to provide direction for land managers to continuously improve their environmental performance.

A key component of Landleader 2008 has been the provision for data to be collected on a regional basis by working closely with a sample of natural resource management (NRM) bodies. This process provided an opportunity to test the robustness and validity of using farm practice data to report on regional NRM targets. Ten NRM bodies and one producer group were instrumental in the distribution of the Landleader surveys. An independent evaluation of this distribution process and the value of the self assessment survey to the participants – both landholders who completed the survey, and also the NRM bodies who facilitated the distribution was undertaken. This evaluation and ongoing discussions are important to the future roll-out of the Landleader project as a key component of the industry's objectives for continuous improvement in environmental stewardship.

MLA recognises that protecting the environment is a key responsibility for the red meat industry and a vital part of maintaining sustainable production. The industry recognises the need to understand, accurately report and, where appropriate, improve performance in environmental sustainability.

The red meat industry is custodian of a significant proportion of the continental land mass and plays a vital role in managing Australia's natural resources. MLA's Strategic Plan 2007 – 2011 recognises the role of responsible management of those natural resources in sustainability and the importance of documenting its environmental credentials. Demonstrating responsible environmental stewardship is important as it can play a role in maintaining access to natural resources, influencing consumer opinion and promoting markets.

MLA considers Landleader 2008 to have been successful in setting the foundations for an ongoing program. Highlights are the establishment of a

custom built data collection tool (survey) and database which captures and stores information on the grazing industries and monitors environmental best management practice change over time. The project provides baseline data for continued evaluation of adoption of environmental best practices. The development and inclusion of a module on greenhouse gas best practice made possible under National Agriculture Climate Change Action Plan (NACCAP) funding for MLA is an important component of the Landleader survey because of the emerging focus on reducing greenhouse gas emissions across all sectors and on the impacts of climate change. This point was raised by participating CMAs in the evaluation as particularly important in their reporting. In addition, the project has enhanced working relationships between MLA and the 11 participating groups while giving public recognition to MLA's focus on environmental as well as production issues.

The independent evaluation saw an encouraging future for Landleader, with a generally positive view from the NRM bodies involved. Ninety per cent of participating landholders expressed a willingness to be involved again, hence providing potential for landholder practice change, and NRM body respondents saying they would be interested in distributing the Landleader survey in the future.

1. Introduction

1.1 Background

In September 2007, the Australian Government under its EMS Pathways to Sustainable Agriculture program contracted Meat & Livestock Australia (MLA) and Australian Wool Innovation (AWI) to deliver a best management practice survey program, Landleader.

AWI and MLA collaborated successfully on the Wool Pathways Project, Stage 1, (the Landleader project) from November 2005 to August 2007 as part of the Department of Agriculture, Fisheries and Forestry's (DAFF) "Pathways to Industry Environmental Management Systems Program". The initial trials showed that accessing data from broadacre producers on their environmental and livestock management practices could be successfully achieved using paper based, web based and telephone survey techniques.

Under MLA's initial project proposal for 2008, funding was sought to pilot an environmental module for its Livestock Production Assurance (LPA) Quality Assurance (LPA QA) program as well as funding to work with AWI on the Landleader project. The environmental module in LPA QA was intended to be an audited process providing accreditation for producers demonstrating good environmental practice. This component of the MLA project was terminated because it became apparent that AusMeat (the sole provider of LPA QA services) would not be able to train auditors so as to deliver the planned project output by June 2008. There was also insufficient time to gain full industry support so as to ensure acceptance and success for the LPA QA process. MLA, therefore, submitted project variations to delete the LPA component from its contract with DAFF, and funding was adjusted accordingly. Following the project variation, MLA's sole focus was on achieving the four Landleader objectives.

MLA recognises that protecting the environment is a key responsibility for the red meat industry and a vital part of maintaining ongoing sustainability and productivity for Australia's producers. MLA also recognises the importance of understanding, accurately reporting and, where needed, improving the performance in environmental sustainability for the red meat industry. MLA has invested over \$6 million in research and development projects to address a range of issues relating to environmental sustainability. This amount includes \$2 million commencing in the 2008/09 financial year that has been specifically allocated for climate change projects. These activities will help producers and processors meet the challenges of meeting government and consumer expectations for environmental responsibility.

The red meat industry is custodian of a significant proportion of the continental land mass and plays a vital role in managing Australia's natural resources. MLA's Strategic Plan 2007 – 2011 recognises the role of responsible management of those natural resources in sustainability and the importance of documenting its environmental credentials. Demonstrating responsible environmental stewardship is important as it can play a role in maintaining access to natural resources, influencing consumer opinion and promoting markets.

Through the 2007/08 Landleader project (Landleader 2008), MLA sought to build on the work undertaken in the previous pilot project as well as to begin to look at the relationship between farm practices and catchment targets by:

- Capturing further best practice data from Australian broadacre farmers so as to highlight the red meat industry's existing footprint and to provide direction for land managers to continue to improve their environmental practices;
- Regionalising the collection process by working closely with a sample of natural resource management (NRM) bodies to test the robustness and validity of using farm practice data to report on regional NRM targets;
- Collaborating with other broadacre industries to identify opportunities to aggregate information from different agricultural sectors; and
- Using the opportunity to facilitate a route for farmers to move into environmental accreditation should they so desire.

It is important to note that Landleader was not developed to establish an Environmental Management System (EMS) for the broadacre grazing industry. There are existing EMS approaches for producers or groups who may wish to undertake that approach and it was considered inappropriate to duplicate these approaches. Landleader evolved from extensive market research that identified the need to collect data to document current environmental and livestock management practices and identify opportunities for the broadacre grazing industries to improve them. The information collected in 2008 provides a baseline or starting point from which to monitor management improvements and a basis for evaluating and reporting adoption of practice change. There is potential to use Landleader as a platform from which land managers can voluntarily move into more rigorous reporting of management practices, including accredited management systems. The Landleader approach also provides guidance for industry organisations, regional bodies and other policy makers of priority areas requiring resources for improvement in environmental and livestock management practices.

1.2 Objectives

The Landleader project has 4 main objectives:

1. To tailor the Landleader survey to assist priority NRM bodies and CMAs monitor environmental and livestock best management practice on broadacre grazing properties within their regional boundaries;
2. To capture environmental best practice data from Australian broadacre farmers;
3. To signpost learning opportunities for farmers via existing tools & products which describe environmental Best Management Practice (BMP) and other environmental management systems; and
4. To develop an ongoing mechanism to support the Landleader program post June 2008.

1.3 Method

The following activities were undertaken to achieve the objectives of the project:

1. An alliance was formed between AWI, MLA, 10 regional NRM bodies and one producer group (Enviromeat). Under this arrangement AWI and MLA took a lead in the coordination, refinement and production of the Landleader survey while the NRM bodies were responsible for the distribution and promotion of the Landleader survey to land managers. All participating organisations have access to the aggregated data collected under the survey. The alliance was built around collaboration and data sharing.
2. The Landleader survey was adjusted based on experience gained in the "Pathways to Industry Environmental Management Systems Program". Initial plans were to align the survey with selected catchment targets, however the higher than expected participation rate of NRM bodies made this impractical and a common format was used.
3. A part time Landleader project officer was employed to work with the NRM bodies and others, to refine the Landleader survey and to coordinate activities with the participating NRM bodies. A part-time officer was also engaged by MLA to develop an auditable LPA QA module as proposed in the initial project design. This component did not proceed for reasons described above but the initial evaluation will provide a valuable contribution into future planning for an environmental stewardship accreditation scheme for the red meat industry.

4. At the conclusion of the project all participating groups were involved in an independent evaluation and discussions to look at how to roll-out Landleader post 2008. The full evaluation report is included in Appendix 4.

2. Achievements

2.1 Strengthened Capacity

This project did not set out to establish or support an EMS for the grazing industries. To meet the need identified in the preceding Landleader project, the current project aimed to assist land managers to become involved in environmental stewardship through raising awareness and an easy 'base level' for initial engagement. The Landleader survey approach of capturing data on environmental and livestock management practices is a process that could form a strong entry point for broadacre graziers to progress to a commercially available and more involved and more time-consuming EMS documentation.

At the beginning of Landleader 2008 feedback was sought from past participants. Of the returns received, 25% of respondents said they had followed up on some of the information sources provided and 75% asked to again be included in the 2008 Landleader survey. One of the respondents said that they would be moving into an environmental management system. While it would be premature to use these figures to report any general trends, it is fair to say that across a small trial Landleader was well regarded and prompted a positive response from land managers.

The evaluation of Landleader 2008 asked survey participants to rate the relevance of the survey to their business. Information received from these participants clearly demonstrates that most land managers felt that the Landleader survey was highly relevant to their business with more than 60% of respondents rating the relevance of the survey as 7 or above out of a maximum score of 10. In addition, the vast majority of landholders indicated their willingness to re-assess themselves using the Landleader survey again. 55% stated they would be willing because of the opportunity to assess their own management, while 59% said they would undertake the survey again in order to provide industry data. These figures provide confidence in the potential for wider rollout of Landleader in the future and indicates the survey's relevance to land managers. To be successful however there is a need to increase participation and to strengthen the capacity of land managers to engage in best practice management.

Information gathered under the Landleader survey and stored in the custom-built dedicated database provides benchmarking information on the current management practices of broadacre grazing industries. This information is considered a baseline from which to measure and report ongoing

improvement across the red meat and wool industries and it is intended to continue to gather the data through an ongoing survey process. MLA will use this information to report to markets and along the production line, on current practices and also on trends in practice over time. The data will also be assessed for their value in supporting on-going monitoring and evaluation of the environmental outcomes of MLA's Environment programs, including Strategic Plan objective 3.4: Ensuring Sustainability . MLA is evaluating its environment program on the basis of influencing adoption of practices that lead to improved environmental outcomes and the Landleader survey information will potentially add value to results from broader ABARE surveys in reporting the success of investment for environmental outcomes.

A significant initiative of Landleader 2008 was MLA's development of a trial series of greenhouse gas Best Management Practices (BMPs) suitable for the livestock industry. A set of four questions was developed to enable livestock producers to identify practices that contributed to reducing greenhouse gas emissions. These questions also enable NRM groups to gain some information on practices within their catchment boundaries and provided an tool for the industry to raise awareness of best management practices for greenhouse gas mitigation and to trial collection of data on greenhouse gas intensity of red meat production. The BMPs developed for the livestock industry in this preliminary survey are consistent with more detailed sets of recommendations for best practice in the Department of Climate Change's draft "Farming for the next generation – guidelines for managing greenhouse gas emissions" and the Victorian Department of Sustainability and Environment's recommendations for agricultural practices to reduce greenhouse gas emissions. The Landleader questions cover the areas:

1. Optimise livestock feed quality and digestibility (to reduce methane emissions from the rumen);
2. Maximise livestock production efficiency (to improve rumen function and reduce methane emissions);
3. Maximise nitrogen cycle efficiency (by managing fertiliser application and livestock waste in grazing systems to minimise nitrous oxide emissions); and
4. Reduce fossil fuel consumption (and maximising energy efficiency on farm to reduce greenhouse gas emissions).

Of Australia's total greenhouse gas emissions in 2005, approximately 16 per cent was due to agriculture and of this livestock emissions made up 71 percent. MLA is aware of the responsibilities of all sectors including agriculture, and including livestock producers, to contribute to Australia's greenhouse gas mitigation objectives. MLA takes seriously its responsibilities to support broadacre grazing with reliable and accurate information on climate change and management practices that reduce emissions or increase carbon dioxide sequestration. The value of collecting the additional data for the greenhouse gas module extends beyond the program itself and supports and compliments other natural resource programs within MLA such

as Grain and Graze, Making More from Sheep and More Beef from Pastures and Grazing Land Management initiatives.

NRM bodies coordinate and fund many natural resource projects at the catchment scale and have targets for a range of environmental outcomes, which for many includes greenhouse gas considerations. Comments were received from both participating NRM bodies and individual respondents about the greenhouse gas sections which suggest that the questions were successful in increasing awareness of the issues associated with the agricultural sector.

In early 2008 MLA and AWI launched the Making More from Sheep project which brings together significant information to support producers better manage their sheep enterprises. A strong link between Landleader and Making More from Sheep has been developed to guide land managers towards best practice management for long term sustainability. In the same way cattle producers are supported by MLA's More Beef from Pastures and Grazing Land Management initiatives. The personalised Landleader report for producers has the capacity to be further regionalised and refined in line with educational material and information sources of the NRM bodies, so allowing regionally specific issues to be addressed as part of a move towards encouraging greater environmental stewardship.

The evaluation of the NRM bodies' staff regarding Landleader provided useful feedback for the further development of the survey. There is a keen interest in the NRM bodies in being able to influence the questions and design of the survey to ensure relevance to their constituents and enable them to gather specific information. In particular they commented on their desire to strengthen the NRM components of the survey.

Sample size at the catchment level was a serious limitation on interpretation of data for NRM bodies. A larger sample size at the catchment level would make the data more useful. Incentives for completion were one suggestion for increasing numbers of landholders taking part. Despite the concerns over sample size, data were considered accurate, and NRM bodies reported they would use the data for planning, promotion and comparison with data obtained in other ways. It will be critical for Landleader to achieve high participation rates in the future if a rollout of the program is to be successful but this is always going to be a difficulty for a voluntary survey.

In summary a range of beneficial outcomes were initiated and/or developed under the Landleader project. These include:

- A national database of broadacre farm practices which has the potential to provide industry leaders with data on the environmental and livestock management credentials of the grazing industry;

- The introduction of best management practices associated with mitigation of greenhouse gas emissions in broadacre grazing industries;
- The establishment of a custom built data collection tool (survey) and database which captures and stores information on the grazing industries and monitors environmental best management practice change over time;
- Engagement of 362 land managers in the process of monitoring environmental stewardship and a core group of land managers willing to participate in the Landleader program into the future;
- Enhanced working relationships between the industry bodies, AWI and MLA, and the 11 participating regional groups;
- Broad market awareness of the Landleader program; and
- Increased recognition of MLA's focus on environmental sustainability as complementary to, and embedded in, programs promoting productivity in the red meat industry.

2.2 Built or strengthened linkages

MLA's work with NRM bodies and CMAs in the past has been predominantly on projects that focus on natural resource management outcomes from improved pasture management. Landleader is important as a project in which MLA has partnered with another industry group and approached the NRM bodies with a focus more broadly on the monitoring of natural resource management activities and practices. Through the Landleader project MLA has increased the NRM bodies understanding of the importance it places on sustainable natural resource management and it is anticipated this heightened awareness will help to build new and stronger partnerships in the future.

MLA has built sound working relationships with ten NRM bodies and one industry group during the course of the Landleader program. These relationships have been based on a shared interest in environmental sustainability and the role of grazing industries in ensuring sustainable management. There was a shared desire to continually improve the management of the natural resources in the catchments they represent. The partnerships present an opportunity to secure information for reporting and policy decisions for all organisations involved while avoiding duplication in data collection and avoiding the impost on producers to respond to surveys. The partnership also recognised the different capabilities and strengths the organisations can bring to the partnership. From an operational point of view, MLA is able to provide experience in project coordination and capacity for national reporting. This coordination also provides an opportunity for some degree of comparative analysis between the NRM bodies and hence the opportunity for regional leaders to share experiences and learn from one another. It will take time to ascertain if the NRM groups do take the opportunity to share information and further improve their

effectiveness. The NRM groups provide access to regional networks and on-ground knowledge of individual land managers to secure a greater uptake of the program. It is also envisaged that in the future the NRM groups will help regionalise the survey to enable some degree of reporting against catchment targets and will have input into the information sources provided in the customised reports.

These relationships were built through a process of engagement that involved AWI and MLA approaching the NRM bodies with a proposal that provided benefit to all organisations. The Landleader proposal was well received as it was seen to be an activity where all participants gained something of value. For AWI, MLA and the NRM bodies it was information which leads to a better understanding of where the grazing community currently stands, and for the individual participant it was a report on their performance and information on best management practices which gave them an opportunity for future improvement and for monitoring progress against individual goals.

It is interesting to note that initially the NRM bodies were less interested in tailoring the survey questions to meet their information needs than was anticipated, however in the final evaluation some indicated their desire to influence the survey questions in the future. The groups were interested in trialling the process with the broad questions, which they believed would give them a good indication of the usefulness of the project. They perceived benefit in having a national approach to enable some degree of comparison between States and regions. This was again emphasised by some of the groups in the evaluation.

Working at a national level to engage a number of regional bodies highlighted the significant differences between the NRM bodies in terms of their organisational processes, their relationships with land managers and the priority issues on which they focus. These differences can be just as great *within* States as *between* States.

One example of these differences is the ability of NRM bodies to identify land managers in their catchment and the processes they have to make contact with them. Some groups have extensive databases and regularly use a variety of methods, such as printed newsletter and email notification for ongoing information flow. Other groups were not able to identify relevant land managers and rarely used communication tools other than newspaper advertising to disseminate information. The small sample sizes at the catchment level reinforced these differences and highlight the need to provide greater support and promotion in future surveys.

The individual characteristics of each NRM group highlighted the importance of maintaining strong relationships between each organisation and Landleader. It cannot be assumed that all NRM groups will value Landleader in the same way or see the same benefits of the program to their business. As

a result the ongoing value of Landleader into future years will likely need a significant investment in supporting and maintaining the relationship between MLA and each of the NRM groups. MLA uses a variety of forums to communicate with and support stakeholders, including industry magazines , producer forums and website. MLA will need to assess the effectiveness of engaging NRM groups as a component of its overall communication and adoption strategy. Costs of building relationships and the future role of NRM groups under new government policies and funding arrangements will need to be considered but the red meat industry has a strong commitment to environmental stewardship as part of a strong sustainability program and will use existing or new relationships to ensure outcomes.

Initial contact with the NRM bodies was made through their CEO or General Manager. In some cases this person remained the principle contact for the Landleader project and in other cases a staff member was allocated the job of coordinating the project through their organisation. Not surprisingly, the coordination role was most successful where the person coordinating the process for their organisation took ownership, had a detailed understanding of what the project was trying to achieve and was able to enlist additional support from within their organisation.

One of the most critical aspects of the Landleader project was the interface between the NRM body and the individual participant. In seeking to partner with NRM bodies, MLA hoped to capitalise on a close relationship of the NRM body with land managers within its catchment. One of the difficulties in this approach was the slippage of timeframes in the survey distribution process due to competing priorities within the NRM bodies and seasonal activities of land managers across such a wide geographic distribution. In the future consideration needs to be given to providing a longer time for the distribution and return of the survey that better reflects the planning cycle of the NRM bodies and the seasonal agricultural activities of land managers. In review this was again highlighted by several of the NRM bodies.

Of the 10 participating NRM bodies, 6 used their existing networks and contact databases to distribute the Landleader survey and 4 used a database of appropriate land managers rented for the purpose of Landleader. No perceivable difference was seen between the 2 methods, but the rented database provided some frustration with unopened surveys 'returned to sender' due to incorrect mail addresses. One consideration in this comparison is how representative each distribution method is. One of the participating NRM groups chose to use the random approach as it believed it would achieve a more representative picture of practices across its catchment than by selecting not only those land managers who already participated in its activities. The evaluation did not cover this issue.

A number of organisations involved in the development and support of established EMS approaches have expressed an interest in the 2008 results of

Landleader and have talked about its potential for comparative analysis between the various systems. In addition to this the Department of Primary Industries in NSW is actively looking to form an alliance with Landleader into the future and the merits of forming a closer alliance between the Grains Research and Development Corporation's survey and Landleader have been discussed.

Participating NRM groups

Nine of the groups who participated in Landleader 2008 were self selecting from a larger group of 31 NRM bodies invited to participate, while 2 groups (Glenrac and Enviromeat) approached the Landleader Project Officer asking to be involved. The selection of this wider group of 31 was based on the geographic location of the broadacre grazing industry across Australia. Each of the 31 NRM bodies was deemed to have a significant number of broadacre graziers in their catchment. A full list of the 31 NRM bodies is included in Appendix 1.

Many of NRM bodies who did not participate in Landleader expressed a strong interest to be kept informed of the project's progress and to be considered as possible participants in the future. Each of these organisations has a greater awareness of the project and its objectives and will be informed of the outcomes of the 2008 survey.

The following organisations participated in Landleader 2008:

- South West NRM, Queensland
- Desert Channels, Queensland
- West Gippsland Catchment Management Authority, Victoria
- Enviromeat, Victoria
- Western Catchment Management Authority, NSW
- Glenrac, NSW
- Murrumbidgee Catchment Management Authority, NSW
- Lachlan Catchment Management Authority, NSW
- NRM South, Tasmania
- Northern and Yorke NRM, South Australia
- Avon Catchment Council, Western Australia

Reporting of contributions to catchment targets

Landleader specifically sets out to provide a national system to capture and demonstrate the incremental improvements producers are making via on-farm practice change. Landleader 2008 has laid the foundation for industry and land managers to be able to report their contribution to catchment targets. Landleader focuses on current practices which in many cases NRM bodies use as a surrogate to measure contributions to the achievement of catchment targets. A key factor in the refinement of Landleader for future

years is to achieve greater alignment between the Landleader survey questions and regional catchment targets. This will provide not only direct reporting of activities for the NRM bodies, but also the ability to undertake trend analysis at a catchment level.

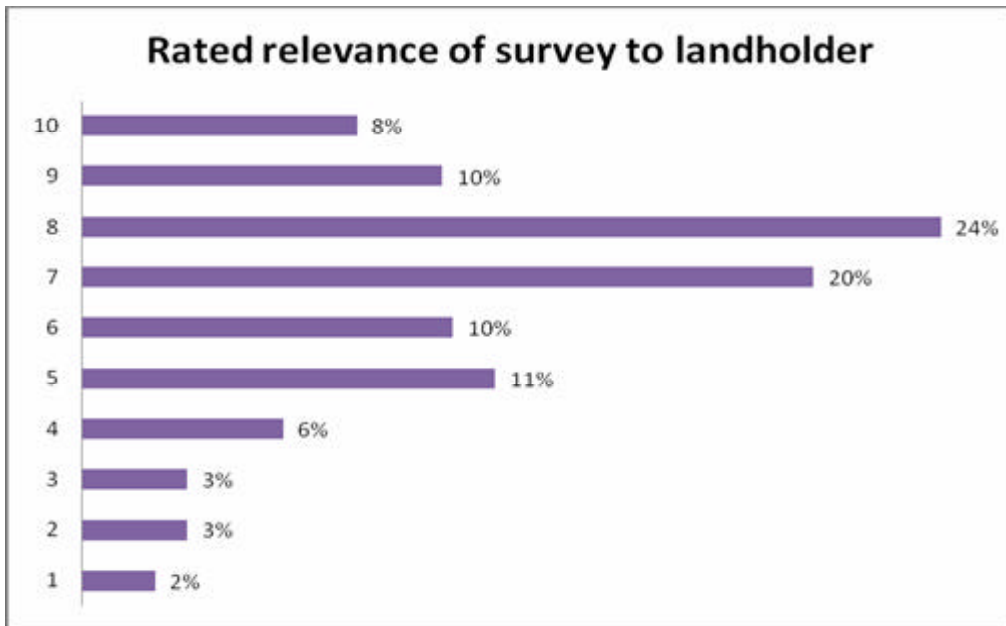
Preliminary discussions with the NRM bodies have considered how the alignment with catchment targets can be achieved without losing the benefits of having a national survey and without making the survey too onerous for a participant to complete. Worthwhile ideas include the development of a base survey with regionally specific supplements and alternate delivery methods such as web-based surveys which allow streamlining of questions.

2.3 Increased uptake

The Landleader project was specifically designed to assist graziers identify environmental best management practices and to report change in management practice to information seekers such as NRM bodies. The project did not set out to increase the up-take of EMS across the broadacre grazing industry, but rather to signpost learning opportunities for land managers via existing tools and products which describe environmental best management practice and other environmental management systems. Broadacre graziers who participate in Landleader are introduced to the concept of environmental reporting and continuous improvement and are provided with the opportunity to access further information on improved environmental and livestock management practices. 362 completed surveys were returned and each participant received a customised report which benchmarked them against industry best practice and highlighted opportunities for improving the productivity and profitability of their business.

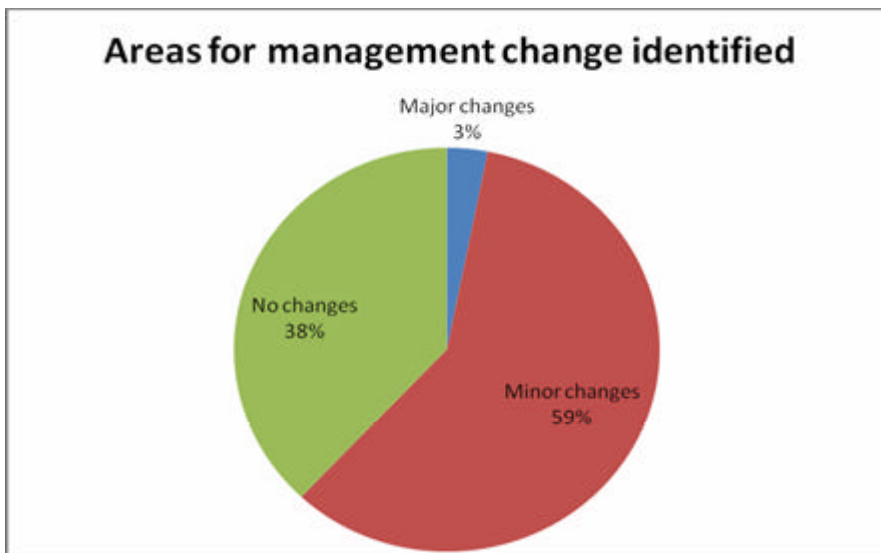
The Roberts Evaluation is attached to this report as Appendix 4.

This figure demonstrates that most land managers felt that the Landleader survey was highly relevant to their business with more than 40% rating it as 8 or higher out of 10 with 10 being the most relevant, and 60% rating it at 7 or higher. However 25% rated the survey as 5 or less and effort should be invested in addressing the needs of these producers.



Relevance of survey to participants, where 1 is irrelevant and 10 is very relevant

Over 60% of landholders nationally stated that they would make changes to their management post Landleader completion. This is a positive result, indicating that Landleader has the potential to encourage land management change but follow up monitoring is needed to determine how many actually followed through on the intention to instigate changes.



Landholder identified areas for management changes post Landleader completion

That 40% of respondents identified either no or minor changes to their management could be a combination of three factors:

- o These producers believe their practice is at, or close to, industry best standards

- These producers do not know where their practice stands in relation to industry best practice and therefore are unaware of changes which may be necessary
- These producers know already what changes they wish to make and Landleader did not assist in identifying them.

A more interesting picture of the ability of the survey to encourage change would be established if landholders were interviewed after receiving the feedback provided post-Landleader survey completion. It would be expected, due to social pressure, that when compared to demonstrated industry best practice, those who identified a low rating in their management practices would be more likely to identify potential management changes. (Roberts Evaluation, September 2008)

The best management practices used in Landleader have been aligned with the current industry standards adopted by AWI and MLA. It is recognised that these standards may change over time to reflect improving technology, knowledge, information, community values or government policies. As Landleader is further developed and longer term partnerships are formed with groups such as NRM bodies it is envisaged that these standards may be modified or enhanced with information and knowledge brought to project by the various partners.

The real benefits of Landleader will be measurable in future years when land managers are able to re-survey themselves and consider their practice changes over time. MLA recognises that an increase in on-ground uptake and the widespread adoption of best management practices will be an incremental process and will be dependent on identifying the right industry drivers such as cost savings or short term market returns and opportunities. MLA has used a mantra of 'Good for business, good for the environment' in promoting environmental best practice and this continues to be a key concept in promoting sustainability.

Early indications of the Landleader survey identify current participants as being environmentally conscious and more likely to be interested in the concept of an Environmental Management Systems (EMS). Not all will move to this next step and the basic introduction provided by Landleader is important in its own right in promoting environmental stewardship. There is a definite need to further explore drivers for participation and opportunities for a more widespread promotion of EMS including the possibility of government support for EMS.

3. Project highlight

Highlight: It is envisaged that the aggregated results of Landleader 2008 will assist NRM bodies to prioritise and target resources for improved natural resource management within their catchments. Comparisons between the NRM regions may also lead to information sharing across catchment where gaps or areas of weaker performance are identified.

Landleader set out to form an alliance between AWI, MLA and at least 5 regional NRM bodies for collaboration and data sharing. A significantly higher than expected interest in participation in the project highlighted the value the NRM bodies saw in Landleader.

All NRM bodies who responded when asked whether they would be interested in distributing Landleader surveys in future replied in the affirmative. There were qualifiers from a few respondents who wanted more input into questions and more time for preparation. Two of the NRM bodies did not rule out the contribution of funding based on the ability to influence the questions. Others said they would be unable to contribute funding at all.

4. Future pathway

Initial results from the evaluation of Landleader 2008 indicate that there is a place for an introductory level, voluntary environmental stewardship program such as Landleader. Landleader is a starting platform to engage land managers as a first step in understanding sustainability and a first step towards achieving improved on-farm environmental management. Market research indicates that industry needs to collect data on practices and practice change to be able to demonstrate to both the market and community their current environmental and livestock management practices and how they are seeking to improve them. MLA has initiated discussions with conservation groups, industry councils and government agencies with responsibility for resource management (e.g. through leasehold land strategies) with the objective of developing a staged environmental stewardship program that is effective and acceptable to major stakeholders in natural resource management.

Strategic partnerships

Landleader's future success will depend on the formation of strategic partnerships across industry, with individual land managers and along the production chain to national and international markets. The project provided an opportunity to begin the formation of these partnerships in 2008, but to realise the potential of Landleader the partnerships need to be maintained and strengthened.

Partnerships across industries are required to ensure participation in Landleader results in on-ground practice change at a scale sufficient to impact on catchment targets and extensive enough to collect reliable data for national and international reporting. Participation is critical but farmers have many reporting obligations and management commitments. Participation is more likely to increase where land managers see value in the program through incentives or market advantage but will be encouraged by the involvement of industry groups that have established a supportive, credible and reliable relationship over an extended period of time. These groups may include grains, wool and meat industry Research and Development Corporations, NRM groups, farming organisations and extension officers in government primary industry agencies. These partnerships need to provide land managers with access to relevant training and related regional market-based incentives. The relevance and value placed on the customised Landleader report by land managers will also play an important role in encouraging ongoing participation.

The future of Landleader looks positive, with a generally supportive response from the NRM bodies involved, landholders being prepared to be involved again, and their being potential for landholder practice change, and all NRM bodies who answered saying 'Yes' they would be interested in being involved in Landleader in the future.

Industry incentives or market drivers

Clear financial incentives or market drivers are still absent for the uptake of environmental accreditation or labelling for the grazing industries. However, for the greenhouse gas emissions module there is a likelihood that there will in future be an incentive through the Australian Carbon Pollution Reduction Scheme. Incentives may come through coverage of agriculture in an emissions trading scheme or less directly through complementary measures that recognise good practice for emissions reduction. Subject to resources it is hoped to progress this module during the coming year.

Appendix 1 - NRM Bodies invited to participate in Landleader 2008

New South Wales

Murray Catchment Management Authority
Murrumbidgee Catchment Management Authority
Southern Rivers Catchment Management Authority
Lachlan Catchment Management Authority
Central West Catchment Management Authority
Namoi Catchment Management Authority
Lower Murray Darling Catchment Management Authority
Western Catchment Management Authority

Queensland

South West NRM
Desert Channels Queensland
Queensland Murray Darling Committee

South Australia

South Australia Murray Darling Basin NRM
South East NRM
South Australia Arid Lands NRM
Eyre Peninsula NRM
Northern Yorke NRM
Adelaide and Mount Lofty Ranges NRM

Tasmania

NRM North
NRM South

Victoria

Glenelg Hopkins Catchment Management Authority
Corangamite Catchment Management Authority
West Gippsland Catchment Management Authority
Goulburn Broken Catchment Management Authority
North Central Catchment Management Authority
Wimmera Catchment Management Authority
Mallee Catchment Management Authority
North East Catchment Management Authority

Western Australia

Avon Catchment Council
South West Catchment Council
Northern Agricultural Catchment Council
South Coast NRM Inc

Appendix 2 - Landleader survey 2008

Attached as a pdf file

Appendix 3 – Sample Landleader customised report

Attached as a pdf file

Appendix 4 – Independent Evaluation Report – Roberts Evaluation

Attached as a pdf file

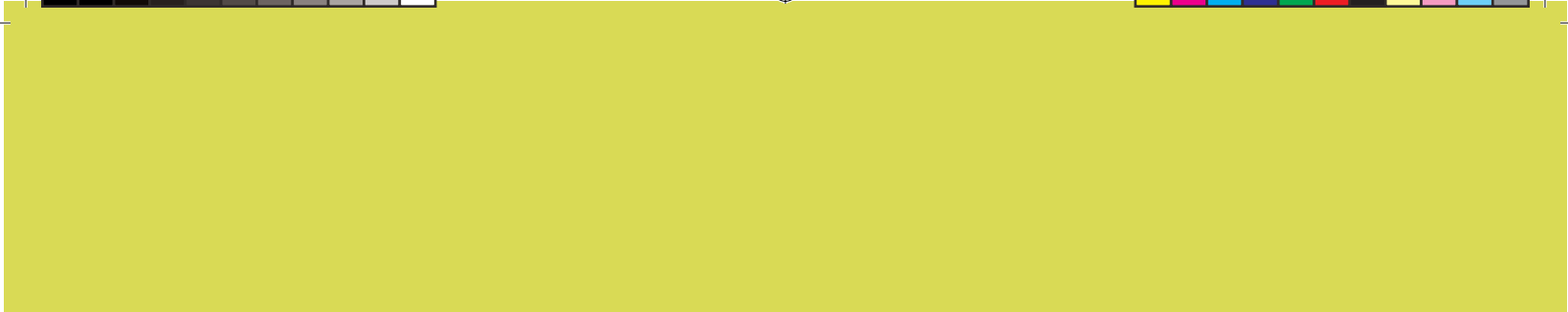
It only takes an
hour of your time
to support your
industry and help
your business

Australian Grazing Industry Stewardship Questionnaire 2008.
Please return to AWI by 14th April, 2008.



Landleader

Best practice for a better future



It only takes an hour of your time to support your industry and help your business

Australian Grazing Industry Stewardship Questionnaire



Landleader
Best practice for a better future

Is this just another survey? Definitely not!

Australian agriculture's environmental and livestock management practices are increasingly being scrutinised by consumers and the community. Without being able to demonstrate our environmental standards and sound livestock management practices we risk losing consumer confidence, market share and financial returns.

By spending approximately one hour of your time completing this Landleader questionnaire, you will be providing AWI, MLA and your local catchment with the information they need to start objectively demonstrating the environmental and animal welfare credentials of your industry.

Importantly, this information is what markets, government and community groups are now asking for.

So, what is Landleader?

The Landleader program allows land managers to assess their current environmental management practices against recognised industry standards and to track improvements over time. This is done through structured data collection tools and educational information developed specifically for the program.

The program looks at the following key areas, identified as important by a range of organisations involved in the wool and red meat industries:

- Sustainable management of natural resources (soil, water and vegetation);
- Stock management; and
- Chemical use on farm

A key attribute of the data collection process is that it is simple to complete and can be done quickly (we estimate about an hour).

What do you get out of it?

Information gathered in the Landleader questionnaire will be used in two ways:

1. To report nationally and internationally on the environmental and livestock management performance of the broadacre wool and red meat industry
2. To provide you with a customised report that compares your practices to industry best practice. This may assist you to improve your business over time

No individual information gathered in this questionnaire will be released to anyone other than you. The Landleader database is completely secure and only aggregated data will be released.

For your own, and your industry's future prosperity, please complete this questionnaire as accurately as possible.



It only takes an hour of your time to support your industry and help your business

Australian Grazing Industry Stewardship Questionnaire

Please answer all questions with a **dark blue** or **black** pen.

My details

- Please provide an electronic version of my report.

My email address: _____

- Please provide a paper version of my report

First name: _____

Surname: _____

Property/Street/Road _____

PO Box: _____

Town: _____

State: _____

Postcode: _____

How to submit your questionnaire

Please enclose your questionnaire in the reply paid envelope provided or send to:

Landleader Program, c/o AWI, GPO Box 4177, Sydney NSW 2001

Privacy Protocols

No individual information gathered in this questionnaire will be released. The Landleader database is completely secure and only aggregated data will be publicly released.

To be able to provide a report back to you after you complete this questionnaire we need your contact details and preferred method of reporting. Personal information will be otherwise dealt with in accordance with MLA's and AWI's privacy policies which can be obtained directly from our websites www.mla.com.au or www.wool.com.au



Please note

1. The questions have been formed so as to provide an unbiased report back to land managers. Please note that they are not designed to indicate a range from poor practice to best practice.
2. Not all questions relate to best practice. For several areas there is no "one" best practice that is appropriate, but a range of practices that will vary depending on region, pasture base, stock classes, time of year etc.
3. Some questions may not be relevant to you. Answer only those that are applicable.
4. Please answer your questions from the basis of the 2006/07 financial year (except for cropping details which can be recorded as cropping year 2007).

Australian Grazing Industry Stewardship Questionnaire

Please answer all questions with a **dark blue** or **black** pen.

General Farm Data

General Farm Data enables us to identify the region you are operating in, your usual climatic conditions and some key characteristics of your operation (e.g. stock type, property size etc). We also ask some questions about your planning process and what some of your longer term goals are.

Q1.1 Do you own, lease or share farm more than one property?

Yes Please use a separate form for each property that is managed differently or is located in a different postcode

No Please continue

Q1.2 What is the **Postcode** of the property reported on in this questionnaire?

Postcode

Q1.3 In what NRM (Natural Resource Management) region or CMA (Catchment Management Authority) region is the property located.

Catchment/region Name Don't know

Q1.4 Do you seek technical or financial assistance from this CMA or regional NRM authority?

Yes No Don't know

Q1.5 What is the **total area** of the surveyed property, including any unused land managed as part of this property? *(Please answer in either Hectares or Acres)*

Ha **OR** Ac

Q1.6 What is the total **Arable Area** of your property?

* Arable - land that is capable of being farmed (or grazed) in a productive way

Ha **OR** Ac

Q1.7 What is the **average annual rainfall** on your property?

(Please answer in either Millimetres or Inches)

Millimetres mm **OR** Inches Inches

Q1.8 What was the **total rainfall** recorded on your property in the 2006/2007 financial year?

Millimetres mm **OR** Inches Inches

Q1.9 How many **breeding cows** and **other cattle** do you run on your property in an average year?

Breeder cows Head Calves Head Other cattle Head

Q1.10 How many **breeding ewes** and **other sheep** do you run on your property in an average year?

Breeder ewes Head Lambs Head Other sheep Head

General Farm Data *cont...*

Questionnaire Section 1.0

Q1.11 Is your property accredited for any of the following?

An **organic farm**?

Yes No Don't know

A **biodynamic farm**?

Yes No Don't know

A **quality assurance scheme** (e.g. Cattlecare)?

Yes No Don't know

An **Environmental Management System**?

Yes No Don't know

Q1.12 Is there any other unique aspect of your management you would like to include?

Please specify

Q1.13 Does your physical farm plan/map include:

(Please tick multi response)

- Areas of different soil type
- Areas for different land uses (e.g. native pastures, degraded areas, native vegetation and drainage lines)
- Areas that identify limitations to pasture growth and productivity (e.g. Water logging)
- No plan

Questionnaire

1.0

Australian Grazing Industry Stewardship Questionnaire

Please answer all questions with a **dark blue** or **black** pen.

General Farm Data *cont...*

Questionnaire Section 1.0

Q1.14 Which of the following **natural resource** management **practices** do you undertake and **record** on your **farm**? *(Please tick, multi response)*

- Establish photo reference points
- Tree and shrub establishment survival rates
- Conduct bird surveys
- Water quality testing
- Soil testing
- Monitor pasture composition changes
- Pest animal counts
- Groundwater levels (piezometers)
- Plant tissue measurements
- Other

Q1.15 Please specify Other?


Cropping Data
Questionnaire Section 2.0

We are only seeking a response to a few key questions on cropping. The wool and meat industries have been working closely with the grains industry (that has a similar questionnaire to this but with a greater focus on cropping practices). Please remember to answer these questions for the **2007 cropping year**.

Q2.1 Did you undertake any cropping activities in 2007 (please tick)?

Yes No

If no, please go to section 3

Q2.2 In the cropping year of 2007, what area of your property was under cropping?
(Please answer in either Hectares or Acres)

Ha **OR** Ac

Q2.3 How much of this **cropping** area was managed using the following **cultivation** practices?
(Please answer in either Hectares or Acres and ensure figures add up to total area cropped.)

No Tillage (One pass, direct drill with disks or knife points)

Ha **OR** Ac

Minimum Tillage (One pass, direct drill, full cut)

Ha **OR** Ac

Conventional Tillage (more than two cultivations prior to sowing)

Ha **OR** Ac

Other (pasture cropping, wide row cropping etc)

Ha **OR** Ac

Q2.4 Please specify Other?

Questionnaire

2.0

Australian Grazing Industry Stewardship Questionnaire

Please answer all questions with a **dark blue** or **black** pen.

Cropping Data *cont...*

Questionnaire Section 2.0

Q2.5 A number of **stubble management practices** are common amongst cereal farmers. How much of your stubble did you manage using the following practices? *(Please answer in either Hectares or Acres)*

No treatment – sown into a standing stubble

Ha OR Ac

Grazing only

Ha OR Ac

Grazing, then stubble removed but not burnt (mown, baled)

Ha OR Ac

Stubble removed but not burnt (mown, baled)

Ha OR Ac

Grazing, then light stubble removal and burnt (windrowed, header rows burnt)

Ha OR Ac

Grazing, then heavy stubble removal (hot burn)

Ha OR Ac

Heavy stubble removal (hot burn)

Ha OR Ac

Other

Q2.6 Please specify Other?

:


Pasture Data
Questionnaire Section 3.0

This section seeks to identify what sort of pastures you have on your property and how they are managed. For the purposes of this questionnaire the following definitions are used:

- Perennial species are plants that live for two or more years
- Annual species are plants that usually germinate, flower and die in one year
- "Introduced pastures" are those that have been sown, broadcast or deliberately introduced into your system. They may include Perennial rye grass, Phalaris, Cocksfoot, Lucerne, Buffel grass etc
- "Native and naturalised pastures" are those that have plant species native to Australia and/or species that have been introduced into Australia and have spread without being deliberately sown. They may include Wallaby grass, Microlaena, Red grass, Kangaroo grass, Mitchell grass, Salt bush, Wiregrass, Barley grass, Vulpia, Haresfoot clover, Paspalum.

Q3.1 Approximately what percentage of your property falls into the following **pasture classifications**? (Please ensure all figures add up to 100%)

Introduced perennial pasture species	<input type="text"/>	%
Introduced annual pasture species	<input type="text"/>	%
A mixture of introduced perennial and annual pasture species	<input type="text"/>	%
Native and naturalised pastures	<input type="text"/>	%
A mixture of introduced, native and naturalised pastures	<input type="text"/>	%
Other?	<input type="text"/>	%

Q3.2 Please specify Other?

Q3.3 Do you assess your pastures for species composition and quality?

Yes No Sometimes

Q3.4 Do you **adjust** stocking rates to **protect native** and naturalised **pasture** composition?

Yes No Sometimes

Q3.5 Do you **adjust** stocking rates to **protect introduced pasture species**?

Yes No Sometimes

Q3.6 In **what year** did you last undertake any pasture renovation/manipulation?

 year

Please answer all questions with a **dark blue** or **black** pen.

Pasture Data *cont...*

Questionnaire Section 3.0

Q3.7 Which of the following **grazing regimes** best describes your **predominant pasture management practice**?

- | | |
|---|---|
| <input type="checkbox"/> Set stocking | <input type="checkbox"/> Rotational grazing based on time |
| <input type="checkbox"/> Cell grazing | <input type="checkbox"/> Rotational grazing based on pasture growth |
| <input type="checkbox"/> Rotational grazing | <input type="checkbox"/> Other |

Q3.8 Please specify Other?

Q3.9 What **weeds** do you actively **manage** on your property?

- | | | |
|--|--|--|
| <input type="checkbox"/> All weeds | <input type="checkbox"/> Noxious weeds only | <input type="checkbox"/> No weed control |
| <input type="checkbox"/> Selective problem weeds | <input type="checkbox"/> Selective noxious weeds | <input type="checkbox"/> Not applicable |

Q3.10 What **pests** do you actively **manage** on your property?

- | | | |
|--|---|--|
| <input type="checkbox"/> All insect pests | <input type="checkbox"/> All feral animal pests | <input type="checkbox"/> No pest control |
| <input type="checkbox"/> Selective insect pests | <input type="checkbox"/> Selective feral animal pests | <input type="checkbox"/> All native animal pests |
| <input type="checkbox"/> Selective native animal pests | <input type="checkbox"/> Not applicable | <input type="checkbox"/> Other |

Q3.11 Please specify Other?

Q3.12 Do you use any **integrated pest management strategies** to manage problem pests on your property?

- Yes No Sometimes Don't know

Q3.13 Do you use any **integrated weed management strategies** to manage problem weeds on your property?

- Yes No Sometimes Don't know



Soil & Fertiliser Management

Questionnaire Section 4.0

This section seeks to understand the soils on your property and how you manage them. We are interested in your management practices not your knowledge of scientific terminology or measurement. The questions are general in nature as we understand that soil and tissue tests can vary greatly and equally there is a huge variation in fertiliser types.

- Q4.1** How many **hectares** of your property do you manage according to the different types of soil?
(Please answer in either Hectares or Acres)

Ha **OR** Ac

- Q4.2** Do you apply fertiliser or other soil ameliorants (e.g. lime, gypsum, rock phosphate, chicken manure) to your paddocks?

Yes No Sometimes

Confidential

Please answer all questions with a **dark blue** or **black** pen.

Soil & Fertiliser Management *cont.*

Questionnaire Section 4.0

Q4.3 If you applied **phosphorus fertiliser**, on average how many units of P did you apply per Hectare (or acre). *Note: see P conversion table below*

	Units of P/Ha	OR	Units of P/Ac
Crops (2007 cropping year)			
Pasture (2006/07 financial year)			
Did not apply phosphorus in 2006/07			
Do not know			

		Superphosphate (9% P) Kg/Ha						
		40	60	80	100	120	140	160
Units of P (Kg/Ha)	3.6	5.4	7.2	9	10.8	12.6	14.4	
		Double super (16% P) Kg/Ha						
		40	60	80	100	120	140	160
Units of P (Kg/Ha)	6.4	9.6	12.8	16	19.2	22.4	25.6	
		Granuloc 15, Starter 15, Hifert, Pivot 15 (13%P) Kg/Ha						
		40	60	80	100	120	140	160
Units of P (Kg/Ha)	5.2	7.8	10.4	13	15.6	18.2	20.8	
		DAP, Starter NP (20% P) Kg/Ha						
		40	60	80	100	120	140	160
Units of P (Kg/Ha)	8	12	16	20	24	28	32	
		MAP (21.9% P) Kg/Ha						
		40	60	80	100	120	140	160
Units of P (Kg/Ha)		8.8	13.2	17.6	22	26.4	30.8	35.2

Soil & Fertiliser Management *cont.*

Questionnaire Section 4.0

Q4.4 How do you make **decisions** about applying fertiliser or other soil ameliorants (e.g. lime, gypsum, rock phosphate, chicken manure) to your paddocks? *(Please tick, multiple response)*

- | | |
|--|---|
| <input type="checkbox"/> Based on paddock performance | <input type="checkbox"/> Based on soil tests |
| <input type="checkbox"/> Using nutrient budgets | <input type="checkbox"/> Based on agronomists advice |
| <input type="checkbox"/> Based on pasture growth and composition | <input type="checkbox"/> Based on decision support programs |
| <input type="checkbox"/> Based on plant tissue tests | <input type="checkbox"/> Not applicable |
| <input type="checkbox"/> Based on soil microbiology | <input type="checkbox"/> Other |

Q4.5 Please specify Other?

Q4.6 What **pH tests** do you undertake to monitor the **soil acidity** on your property?

- Surface pH test
 Sub-soil pH tests
 None

Q4.7 Do you **consciously** maintain **ground cover** to manage run-off?

- Yes
 No
 Sometimes

Q4.8 Do you use any type of pasture mass measurement tool or set benchmarks to manage your groundcover?

- Yes
 No
 Sometimes

Q4.9 Does your property have any areas affected by **salinity**?

- Yes
 No
 Don't know

Q4.10 What area does this **salinity** cover? *(Please answer in either Hectares or Acres)*

Ha
 OR
 Ac

Please answer all questions with a **dark blue** or **black** pen.

Soil & Fertiliser Management *cont...*

Questionnaire Section 4.0

Q4.11 Which, if any, of the following methods do you use specifically to **manage salinity**.

Control stock access (total exclusion, or restricted access)

Ha **OR** Ac

Revegetation of saline areas or discharge sites (where groundwater moves to the surface)

Ha **OR** Ac

Interception plantings of trees or other high water use perennials in recharge areas
(where water leaks into groundwater)

Ha **OR** Ac

Increased water use efficiency on cropped lands (eg. alley farming, intercropping)

Ha **OR** Ac

Engineering solutions (eg sub-surface drainage, banks and other earthworks)
(Answer using kilometres)

kms



Native Vegetation

Questionnaire Section 5.0

In this section we are interested in the native vegetation on your property from an environmental rather than a production point of view. There may appear to be some overlap in questions between this and other sections, but we ask you complete this section as fully as you can.

Native vegetation is defined as any trees (shrubs, saplings and scrub), understory plants, native grasslands and wetland plants.

Q5.1 Do you have **native vegetation** on your property?

Yes No Don't know

Q5.2 How many **hectares of** native vegetation do you have on your property that fall into the following classifications? *(Please answer in either Hectares or Acres)*

Native vegetation (eg bush)

Ha OR Ac

Native vegetation (e.g. bush) **where stock access is controlled** (eg fencing)

Ha OR Ac

Native vegetation (e.g. bush) **that is never grazed**

Ha OR Ac

Not applicable

Q5.3 Do you have a plan for your property that considers the retention, restoration and revegetation of native vegetation?

Yes No Partially Not applicable

Q5.4 Do you actively **control weeds** in your **native vegetation**?

Yes No Sometimes



Rivers & Water (Riparian) Management

Questionnaire Section 6.0

Riparian areas are the land which adjoins rivers, creek and streams. They have a significant impact on the health of these waterways, and are also often very productive pieces of land.

We have defined **watercourses**, for the purpose of this questionnaire to include creeks and streams that flow intermittently, usually after an average rainfall event. We have not included drainage lines or waterways on plains country that carry water only in extremely high rainfall events.

Gullies are defined as drainage lines. They may have been eroded by surface water run off over time and may now be stabilised with vegetation or still eroding

- Q.6.1** Approximately how many **kilometres** of rivers, creeks or watercourses do you have on your property? *(Please answer in kilometres, do not include gullies)*

 kms

 Not applicable

- Q.6.2** How many **kilometres** of these rivers, creeks or watercourses are **managed in the following way?** *(Please answer in kilometres, do not include gullies)*

Stock have complete access at all times

 kms

River, creek or stream is fenced into a riparian paddock which is managed specifically to protect the waterway

 kms

River, creek or stream is fenced as part of whole farm management and stock have controlled access

 kms

- Q.6.3** How many **kilometres** of these rivers, creeks or watercourses have you **revegetated** with native species using the following **methods?** *(Please answer in kilometres)*

Natural regeneration (e.g. exclude or controlled grazing)

 kms

Planting tube stock or seedlings

 kms

Direct seeding (for riparian areas only)

 kms

Please answer all questions with a **dark blue** or **black** pen.

Rivers & Water (Riparian) Management *cont.*

Questionnaire Section 6.0

Q.6.4 How often do you **assess the condition** (riparian health) of the rivers, creeks and watercourses on your property?

Regularly Sometimes Never Not applicable

Q.6.5 Approximately how many **kilometres** of gullies do you have on your property?
(Please answer in kilometres)

Please answer only for those gullies that you regard as significant, whether stabilised or active.

kms

Q.6.6 How many **kilometres** of these gullies are eroding or becoming more degraded?
(Please answer in kilometres)

Please answer only for those gullies that you regard as significant.

kms

Q.6.7 How many **wetlands** do you have on your property?

Wetlands are where water forms pools or flows that last long enough for plants and animals to base a significant part of their year or life-span around their existence. They do not include farm dams.

Number

Q.6.8 How many **hectares** do these **wetlands** cover? *(Please answer in either Hectares or Acres)*

Ha OR Ac

Q.6.9 How many hectares of **wetlands** do you **control livestock access** to?

Please answer only for those wetland areas that you actively restrict or exclude livestock from?

Ha

Q.6.10 Do you have **plans** to improve the control of livestock accessing riparian or **wetland** areas (i.e. additional fencing, stock gates, ramps)?

Yes No
 Don't know Not applicable



Your environmental issues

Questionnaire Section 7.0

In this section we are interested in environmental issues that are having a negative impact (if any) on your property and how you are managing them.

Q.7.1 What do you consider to be the **top 3 environmental issues** that you are facing on your property, and the % of the property they affect? *(Please answer in order of importance)*

Number 1

% affected:

Number 2

% affected:

Number 3

% affected:

Q.7.2 Please specify the main strategies you use, or intend to use, to manage these environmental issues.

Number 1

Number 2

Number 3

Please answer all questions with a **dark blue** or **black** pen.

Livestock Management

Questionnaire Section 8.0

In this section we want to know about your livestock management practices. We know that these will vary enormously depending on region, climatic conditions and type of stock. Consequently these questions are quite general.

Q.8.1 Are you **aware** that a **Code of Practice** exists for all livestock producers that specifies best practice for **animal welfare**?

Yes No

Q.8.2 Which of the following **practices** do you do when managing your livestock?
(Please tick, multi response)

Inspect livestock on a regular basis Individually inspect sick or poor livestock
 Monitor stock losses Seek professional advice when death rates rise
 Record stock losses Other

Q.8.3 Please specify Other?

Q.8.4 How do you determine the **condition** of your livestock? (Please tick, multi response)

By eye Condition scoring method Weighing animals

Q.8.5 Do you set **condition score** targets for your **livestock**?

Yes No Sometimes

Q.8.6 In times of poor pasture availability, how do you maintain **livestock condition**? (Please tick, multi response)

Wean early Reduce stocking rates
 Supplementary feed Other

Q.8.7 Please specify Other?


 Livestock Management *cont.*

Questionnaire Section 8.0

Q.8.8 Which of the following **influences** your decision to de-stock or hand feed livestock?
 (Please tick, multi response)

- | | | |
|--|--|--|
| <input type="checkbox"/> Condition score | <input type="checkbox"/> Current stocking rate compared to carrying capacity | |
| <input type="checkbox"/> Time of year | <input type="checkbox"/> Intuition | <input type="checkbox"/> Age of livestock |
| <input type="checkbox"/> Market conditions | <input type="checkbox"/> Pregnancy status | <input type="checkbox"/> Pasture condition |
| <input type="checkbox"/> Weather forecast | <input type="checkbox"/> Rainfall recieved | <input type="checkbox"/> Not applicable |
| <input type="checkbox"/> Other | | |

Q.8.9 Please specify Other?

Q.8.10 When **managing water** for your livestock which of the following do you do?
 (Please tick, multi response)

- | | |
|---|---|
| <input type="checkbox"/> Allow stock ad-lib access to water | <input type="checkbox"/> Check/test water quality for salt levels |
| <input type="checkbox"/> Check stock water supply regularly | <input type="checkbox"/> Check/test water for turbidity (muddiness) |
| <input type="checkbox"/> Ensure stock are not without water for more than 48hrs | |
| <input type="checkbox"/> Check/test for algae | |

Q.8.11 Do your livestock have access to **shade and shelter in the paddock**?

- | | | | |
|------------------------------|-----------------------------|------------------------------------|---|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Sometimes | <input type="checkbox"/> Most of the time |
|------------------------------|-----------------------------|------------------------------------|---|

Q.8.12 Does the risk or level of exposure to extreme weather conditions determine when you **lamb, calve or shear**?

- | | | | |
|------------------------------|-----------------------------|------------------------------------|---|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Sometimes | <input type="checkbox"/> Not applicable |
|------------------------------|-----------------------------|------------------------------------|---|

Q.8.13 In what condition would you describe your stock **handling facilities** (especially in relation to being well maintained and conducive to good animal movement)?

- | | | |
|-------------------------------|-------------------------------|-------------------------------|
| <input type="checkbox"/> Good | <input type="checkbox"/> Fair | <input type="checkbox"/> Poor |
|-------------------------------|-------------------------------|-------------------------------|

Q.8.14 When transporting livestock do you (or your carrier) use the MLA 'is it fit to load' guide

- | | | |
|------------------------------|-----------------------------|-------------------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Don't know |
|------------------------------|-----------------------------|-------------------------------------|

Please answer all questions with a **dark blue** or **black** pen.

Livestock Management *cont...*

Sheep Specific Questions *(please go to Q8.23 if you do not run sheep)*

Q.8.15 When managing **lamb survival** which of the following do you do? *(Please tick, multi response)*

- Maintain ewes in condition score 3
- Limit stock movement during late pregnancy and following lambing
- Manage single-bearing and twin-bearing ewes separately (provide extra feed resources to twin-bearers)
- Provide adequate shelter for ewes at lambing
- Plan timing of lambing to maximise survival of new-born lambs
- Not applicable
- Other

Please specify Other?

Q.8.16 Do you **vaccinate lambs to protect** against clostridial diseases (eg pulpy kidney, black leg and tetanus)?

- Yes
- No
- Sometimes
- Not applicable

Q.8.17 Do you vaccinate **adult sheep to protect** against clostridial diseases (eg pulpy kidney, black leg and tetanus)?

- Yes
- No
- Sometimes
- Not applicable

Q.8.18 Do you **mules** lambs?

- Yes
- No
- Sometimes
- Not applicable

Q.8.19 How **often** do you **treat** sheep (jet or treat with other products) for **blowfly control**? *(Please tick, single response)*

- Never
- Only when fly waves appear
- At the same time each year
- Not applicable
- Rarely
- As many times as they need it
- Individuals on a needs basis
- Other


 Livestock Management *cont...*

Questionnaire Section 8.0

 Q.8.20 Please specify Other?

 Q.8.21 How **often** do you **drench** sheep for **worms**? *(Please tick, single response)*

- Once a year at the same time of year
 More than once a year when they appear to need it
 Once a year when they appear to need it
 Only when faecal egg counts suggest it
 More than once a year at the same times of the year each year
 Not applicable
 Other

 Q.8.22 Please specify Other?

 Q.8.23 How **often** do you **treat** sheep (dip or treat with other products such as back-liners) for **lice control**? *(Please tick, single response)*

- | | |
|---|---|
| <input type="checkbox"/> Never | <input type="checkbox"/> Rarely |
| <input type="checkbox"/> Annually off shears | <input type="checkbox"/> Usually late in season, and only if they have lice |
| <input type="checkbox"/> Off shears, only if they have lice | <input type="checkbox"/> Not applicable |

Q.8.24 When mulesing lambs, do you use a muleser accredited by the National Mulesing Accreditation Program?

- | | |
|-------------------------------------|---|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| <input type="checkbox"/> Don't know | <input type="checkbox"/> Not applicable |

Please answer all questions with a **dark blue** or **black** pen.

Livestock Management *cont...*

Questionnaire Section 8.0

Cattle Specific Questions *(please go to Section 9.0 if you do not run cattle)*

Q.8.25 Do you **vaccinate calves to protect** against clostridial diseases (eg pulpy kidney, black leg and tetanus etc) ?

Yes No Sometimes Not applicable

Q.8.26 Do you **vaccinate adult breeding cattle** to protect against clostridial diseases (eg pulpy kidney, black leg and tetanus etc)?

Yes No Sometimes Not applicable

Q.8.27 How often do you treat cattle (drench or pour-on) for worms?

- Once a year at the same time of year
- More than once a year when they appear to need it
- Once a year when they appear to need it
- Don't treat for worms
- More than once a year at the same times of the year each year
- Not applicable
- Other

Q.8.28 Please specify Other?

Q.8.29 Do you treat cattle for lice?

Yes No Sometimes Not applicable

Q.8.30 Do you treat cattle for ticks?

Yes No Sometimes Not applicable


Chemical Use
Questionnaire Section 9.0

Similar to livestock practices, we acknowledge that the need to use chemicals will vary enormously depending on region, climatic conditions, stock classes and individual producer preferences and marketing strategies. Consequently these questions are also quite general and are not all reflective of best practice. However, we are keen to get an understanding of the practices you use. Please answer the questions for all veterinary and agricultural chemicals you use on your property.

Q.9.1 Which of the statements below best describes the overall approach to the **use of chemicals** and **chemical management** on your property? *(Please tick, multi response)*

- Never use chemicals
- Use chemicals as little as possible, because I prefer to minimise their use
- Use chemicals infrequently, because my management doesn't generally require them
- Use chemicals as part of an integrated pest management plan. (ie time shearing etc to minimise chemical requirements)
- Use chemicals quite often and I comply with label recommendations

Q.9.2 Which of the following do you do when **handling** and **storing** your **chemicals**? *(Please tick, multi response)*

- | | |
|---|--|
| <input type="checkbox"/> Keep chemicals away from dwellings | <input type="checkbox"/> Check for changes in chemical OH&S laws |
| <input type="checkbox"/> Store chemicals under lock & key | <input type="checkbox"/> Have a specific chemical storage area or facility |
| <input type="checkbox"/> Ventilated chemical storage area | <input type="checkbox"/> Have a 'Bunded' and sealed floor |
| <input type="checkbox"/> Keep material safety data sheets | <input type="checkbox"/> Do not handle or store chemicals |
| <input type="checkbox"/> Not applicable | |

Q.9.3 Do you **document** the **purchase** of any **chemical** or **animal health** products?

- Yes No Sometimes Not applicable

Q.9.4 Do you **document** the **use** of **chemical** and **animal health** products?

- Yes No Sometimes Not applicable

Q.9.5 How often do you use **protective clothing** when using chemicals on your property? *(Please tick, multi response)*

- | | |
|---|--|
| <input type="checkbox"/> Never | <input type="checkbox"/> Some of the time |
| <input type="checkbox"/> All the time | <input type="checkbox"/> When the label specifies to do so |
| <input type="checkbox"/> Not applicable | |

Please answer all questions with a **dark blue** or **black** pen.

Chemical Use *cont...*

Questionnaire Section 9.0

Q.9.6 Which of the following **practices** do you undertake when **applying chemicals** to livestock?
(Please tick, multi response)

- | | |
|--|--|
| <input type="checkbox"/> Use a quick and easy method | <input type="checkbox"/> Apply chemicals carefully to minimise waste |
| <input type="checkbox"/> Constrain animals appropriately | <input type="checkbox"/> Calibrate application equipment for each job |
| <input type="checkbox"/> Follow wool harvesting intervals | <input type="checkbox"/> Follow withholding periods and export intervals |
| <input type="checkbox"/> Record treatment dates | <input type="checkbox"/> Do not sell stock within withholding periods |
| <input type="checkbox"/> Complete wool harvest declaration | <input type="checkbox"/> Do not sell wool within withholding periods |
| <input type="checkbox"/> Not applicable | |

Q.9.7 Does your **property** comply with the requirements for the **European Union Eco Label**?

- Yes No Don't know Not applicable

Q.9.8 Do you ever **dispose** of surplus chemicals?

- Yes No

Q.9.9 Which of the following **practices** do you undertake when disposing of **surplus** chemicals?
(Please tick, multi response)

- | | |
|---|--|
| <input type="checkbox"/> Avoid waterways, desirable vegetation and tree roots | |
| <input type="checkbox"/> Rinse container and add rinse fluid to spray tank | |
| <input type="checkbox"/> Dispose of unwanted chemical on site | <input type="checkbox"/> Use ChemClear |
| <input type="checkbox"/> Store in other containers | <input type="checkbox"/> Take to the tip |
| <input type="checkbox"/> Burn container with excess product | <input type="checkbox"/> Not applicable |

Q.9.10 Which of the following **practices** do you undertake when disposing of **empty chemical containers**? (Please tick, multi response)

- | | |
|---|--|
| <input type="checkbox"/> Use drumMuster | <input type="checkbox"/> Take to the tip |
| <input type="checkbox"/> Store on farm | <input type="checkbox"/> Clean and reuse |
| <input type="checkbox"/> Burn empty container | <input type="checkbox"/> Not applicable |
| <input type="checkbox"/> Other | |

Q.9.11 Please specify Other?

Q.9.12 Do you, or does anybody on your **property** currently have **certification in chemical management**?

- Yes No Don't know Not applicable


Greenhouse Emissions
Questionnaire Section 10.0

Agriculture is one of the largest greenhouse gas emitters in Australia. Greenhouse gases are emitted in the form of methane, nitrous oxide and carbon dioxide from everyday agricultural practices such as using electricity and fuel, applying fertilisers and grazing livestock.

Q.10.1 Which of the following practices do you use to optimise livestock feed quality and digestibility? *(Please tick, multi response)*

- Always ensure adequate feed to maximise production efficiency
- Actively select and improve pastures to increase pasture digestibility (species composition, legume composition)
- Actively manage pastures to improve pasture digestibility (high leaf to shoot ratio)
- Use dietary supplements to cover nutrient gaps when grazing lower quality feed
- None of the above Not applicable

Q.10.2 Which of the following practices do you use to maximise livestock production efficiency? *(Please tick, multi response)*

- Actively select against unproductive animals
- Improve rumen function by using rumen modifiers (e.g. Rumensin) or feed additives (e.g. Tannins)
- None of the above Not applicable

Q.10.3 Which of the following practices do you use to maximise nitrogen cycling efficiency? *(Please tick, multi response)*

- Minimise stock camping to improve nitrogen redistribution across paddocks
- Manage soil structure to improve water infiltration
- Optimise nitrogen applications based on soil tests and anticipated plant growth
- Split nitrogen applications to minimise leaching and volatilisation
- None of the above Not applicable

Q.10.4 Which of the following practices do you undertake to reduce fossil fuel consumption? *(Please tick, multi response)*

- Consider energy efficiency (fuel consumption) when selecting new plant or equipment
- Purchase plant and equipment which can run on alternative fuels (solar, biofuels, natural gas)
- Match plant and equipment to the task to reduce fuel consumption
- None of the above Not applicable

Please answer all questions with a **dark blue** or **black** pen.

Other information about your enterprise

Questionnaire Section 11.0

This last section of the questionnaire provides you with an opportunity to tell us about other important things on your farm in relation to your environmental or livestock management that have not been covered by the questionnaire questions. We are particularly interested to know about your future intentions

Q.11.1 Please describe any **unique features** of your property or your management.

Q.11.2 Please describe the **main challenges** that you face in managing your property.

Q.11.3 Please describe any **future plans or developments** (especially in relation to environmental management practices) for your property or business.



Survey Feedback

Survey Section 12.0

Australian Wool Innovation (AWI) and Meat and Livestock Australia (MLA) are interested in your feedback regarding the Landleader survey. This questionnaire is designed to obtain your feedback and will take about 2 minutes to complete. Your comments will be most valuable to further improve or refine Landleader. Your comments will be collated with those from other landholders and not appear on their own.

Q.12.1 How did you hear about the Landleader survey (you may **tick**, more than one option)? From:

- | | |
|--|---|
| <input type="checkbox"/> An officer of a natural resource management Regional Body or Catchment Management Authority | <input type="checkbox"/> The television |
| <input type="checkbox"/> The radio | <input type="checkbox"/> A neighbour/friend |
| <input type="checkbox"/> The newspaper | <input type="checkbox"/> Previous participant |
| <input type="checkbox"/> Industry newsletter | |
| <input type="checkbox"/> Other (please specify) | |

Q.12.2 Could you please rate the relevance of the questions in the Landleader survey to your business? Please give your answer on a scale of 1 to 10 where 1 = not relevant and 10 = very relevant. Please **tick**, one of the boxes.

- 1 2 3 4 5 6 7 8 9 10

Q.12.3 As a result of completing the Landleader survey did you identify areas of your management that you would like to modify?

- Yes, some major changes Yes, some minor changes No

Q.12.1 Would you be willing to re-assess yourself against the Landleader survey in one to two years' time? (Please **tick**, as many boxes as apply).

- Yes, to provide data for my industry Yes, to help me assess my own management
 No, I would not be willing to complete the tool again
 Other (please explain) _____

Thank you for taking the time to complete this questionnaire. Your information is extremely valuable in helping the sheep and cattle industry to demonstrate how producers are improving their environmental and livestock management. Please ensure that you include your name and contact details if you would like to receive a Report back.



This Questionnaire is printed on recycled stock



If you would like more information please contact:
Clare Hamilton, Landleader coordinator
Phone: 0428 791 359, Email: samandclare@bigpond.com.au





04 Aug 2008

Survey ID: 0023

Dear Landleader Survey Respondent

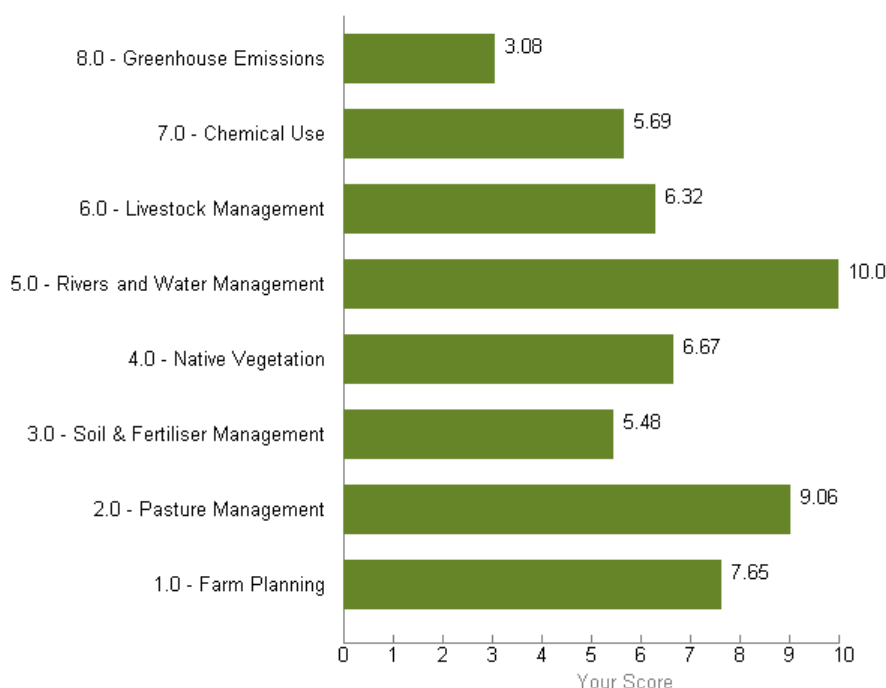
Thank you for participating in Landleader 2008, your response has been valuable in building a picture of broadacre grazing industry environmental and livestock management credentials.

This confidential report compares your practices to industry best practice as defined by Australian Wool Innovation (AWI) and Meat & Livestock Australia's (MLA) best practice packages, Making More From Sheep and More Beef from Pastures.

Not all the information you provided us with has been used in this report. Much of the information will be aggregated with that of other survey respondents and used to report more generally on the environmental and livestock management credentials of the broadacre wool and red meat industries. To protect your confidentiality no data will be reported against individual names or properties, only you will receive this land manager report.

This report looks at 8 priority areas covered in the survey. As a general rule, the higher your score the closer you are to achieving best practice while lower scores represent a greater opportunity for your business to make significant gains by examining new or improved practices that may enhance your environmental or livestock management. In some cases, a score of 0 may mean this priority area is not relevant to your business. Your score across these 8 areas is summarised below:

Landleader Priorities





It is important to realise that this assessment is only indicative as many management practices are regionally specific and in some cases “trade-offs” between practices need to be made by a business. All best practices are considered to be of equal importance.

Most importantly, this report provides a list of useful resources to learn more about the environmental and livestock management practices promoted by AWI and MLA. If you would like any more information on Landleader please contact Clare Hamilton on 02 6379 1628 or by email Landleader@woolinnovation.com

Yours sincerely

Lu Hogan
Program Manager
Australian Wool Innovation

Michael Goldberg
Program Manager
Meat and Livestock Australia



General Farm Data

The following table is a summary of your data. In future years, as the sample size increases, we will be able to provide a more meaningful comparison to other Landleader participants.

	Your Property
Total property area	1200.0 Ha
Total arable area	900.0 Ha
Average annual rainfall	1000.0 mm
Recorded rainfall for 2006/07	1000.0 mm
Average stocking rate	12.5 dse/Hectare
Your NRM / CMA Region	Northern Rivers CMA



1.0 Farm Planning



Why is it important?

Planning is the process of analysing and planning a property's operations from a personal, physical and financial perspective with the ultimate goal of achieving sustainable and profitable production, conservation of resources and an attractive, enjoyable place to live.

When it comes to demonstrating environmental stewardship to markets or the Australian community, planning, monitoring and recording performance helps provide confidence.

This section is about assessing what you monitor on farm and your approach to physical planning. It does not consider personal or financial plans. It also identifies what current accreditation schemes you operate on your property.

Farm Accreditation:

EnvironmentalManagementSystem

Best Practices		Score
1	Prepare an inventory of your farm's natural assets and plan for continuous improvement (maximum possible score 3)	3.0
2	Seek technical or financial assistance from your CMA or regional NRM authority (maximum possible score 1)	1.0
3	Measure, manage and monitor your farm's natural resources (maximum possible score 13)	9.0
Corrected Score out of 10 for this section		7.65



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For more information

Recommended

- Module 5 'Protect Your Farm's Natural Assets' from AWI and MLA's best practice package for sheep and wool - 'Making More From Sheep'
- Module 1 'Setting Directions' from MLA's best practice package for cattle - 'More Beef from Pastures'
- Regional NRM Authorities or Catchment Management Authorities (CMAs) are critical links for natural resource management and funding - if you know your local authority website, proceed straight to it, but for access to all regional NRM Authorities across Australia go to www.nrm.gov.au/apps/projects/town-search.html which includes a map for easy navigation.

General

- Farming for the Future (1999). Physical Property Planning. Eds David Brouwer, Andrea Clowes and Bruce Thompson. NSW DPI (available for \$36 from CB Alexander College, Tocal, Paterson NSW 1800 025 520 or www.tocal.nsw.edu.au)
- Farming for the Future Self Assessment Tool - www.agric.wa.gov.au
- FarmSAT - available from www.tfga.com.au/pages/TFGAFarmSATProject.htm
- Environmental Management in Agriculture www.dse.vic.gov.au/dse
- Victorian Environmental Management Systems www.dpi.vic.gov.au/dpi



2.0 Pasture Management



Why is it important?

The productivity and profitability of many grazing enterprises can be greatly improved by increasing the amount of pasture utilised. The health and fertility of the soil and stage of growth at which pasture is grazed have a major effect on pasture growth and quality. Vigorous, healthy pastures are more likely to resist pest species attack and weed invasion.

The way a pasture is grazed has a major bearing on the species that survive and dominate. Grazing strategies can be developed to maintain desirable species and optimise growth rates.

In many situations, perennial species are more productive in grazing systems where adequate rest periods are provided between grazing events. Deep rooted perennial species stay green longer, using more water and producing feed over extended periods for livestock. Pasture composition and growth stage at grazing should be assessed to ensure the productive growth and survival of desirable species. The grazing needs of the pasture species you want to encourage should be matched with the grazing tactics you employ.

Your scorecard for Pasture Management:

Best Practices		Score
1	Graze to keep the desirable species productive and dominant (maximum possible score 3)	3.0
2	Actively manage weed species (maximum possible score 5)	4.5
3	Actively manage pest species (maximum possible score 8)	7.0
Corrected Score out of 10 for this section		9.06



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For more information

Recommended

- Module 7 'Grow More Pasture' from AWI and MLA's best practice package for sheep and wool - 'Making More From Sheep'
- Module 5 'Protect Your Farm's Natural Assets' from AWI and MLA's best practice package for sheep and wool - 'Making More From Sheep'
- Module 3 'Pasture Growth' from MLA's best practice package for cattle - 'More Beef from Pastures'
- Module 4 'Pasture Utilisation' from MLA's best practice package for cattle - 'More Beef from Pastures'

General

- Towards Sustainable Grazing - the professional producer's guide (2003) Edited by W. Mason, L. Warn and G. Cahill. Published by Meat & Livestock Australia. To order a copy, phone 1 800 023 100, or visit www.mla.com.au/tsg
- The MLA Pasture Health Kit, available from MLA, Ph: 1 800 023 100 or visit www.mla.com.au Meat and Livestock Australia (2002). SGS 'Tips and Tools' for making change series. A large number of titles are available covering: grazing management of native pastures, phalaris, perennial ryegrass, fescue, cocksfoot and kikuyu-based pastures. Series available from MLA Ph: 1 800 023 100 or visit www.mla.com.au
- 'Quickchecks' - Healthy Land ... Healthy Wool Growing Businesses, developed through the Native Vegetation and Biodiversity sub program of the Land, Water and Wool Program (www.landwaterwool.gov.au)
- Pasture Legumes for Temperate Farming Systems - The Ute Guide (\$35) (www.wool.com.au/publications or www.grdc.com.au). Helps you identify pasture legumes and select the cultivars best suited to your environment and farming system
- Prograze™ Profitable and Sustainable Grazing. A course which aims to develop pasture and livestock assessment skills. For details contact your local Department of Agriculture/Primary Industries.
- Attend a Grazing for Profit or Holistic Resource Management course. For Grazing for Profit Ph: 1 800 356 004 or go to www.rcs.au.com For Holistic Resource Management go to www.holisticmanagement.org.au/educators.html
- 3D Weed Management publications are available for African Love Grass, Chilean Needle Grass, Patterson's Curse, thistles, Serrated Tussock, and Silver Leaf Nightshade, see www.mla.com.au or www.wool.com.au
- The Weed Management CRC website contains weed management publications for many weeds. www.weeds.crc.org.au/publications/weed_man_guides.html
- Best Practice Management Guide For Environmental Weeds www.weeds.crc.org.au/documents/bpmgggeneral.pdf
- WEEDeck - identification cards for Australian weeds. Available from www.weeds.org.au/weedeck.htm
- For more information on Timerite and RLEM management go to www.timerite.com.au
- Integrated Pest Management - Southern Farming Systems website (www.sfs.org.au) or for more generic information, www.goodbugs.org.au/news.htm



3.0 Soil & Fertiliser Management



Why is it important?

The key principle of soil management is to optimise the use of your soil resources by making sure that you align the expectations you have of your soils with their productive capability. To do this you need to know what soil types you have and how to manage them appropriately. You also need to identify any difficult-to-manage areas such as drainage lines, areas prone to waterlogging, shallow soils, steep slopes and areas where salinity, acidity or sodicity may be a problem.

The most critical management tool to protect soils and improve soil health is to maintain high levels of groundcover. This is provided by litter, stubbles and plant material. The standard benchmark is a minimum of 70% groundcover at all times.

Soil and plant tissue tests help monitor nutrient levels and soil health on different areas of your property. These then guide decisions about fertiliser and other soil ameliorant applications.

Your scorecard for Soil & Fertiliser Management:

Best Practices		Score
1	Manage according to soil capability (maximum possible score 1)	0.7
2	Build and maintain soil fertility (maximum possible score 9)	5.0
3	Test soils for indicators of soil health (maximum possible score 2)	1.0
4	Maintain groundcover to protect your soil and keep the 'soil bugs' healthy (maximum possible score 2)	1.0
Corrected Score out of 10 for this section		5.48



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For more information

Recommended

- Module 6 'Healthy Soils' from AWI and MLA's best practice packages for sheep and wool - 'Making More From Sheep'
- Module 3 'Pasture Growth' from MLA's best practice package for cattle - 'More Beef from Pastures'
- The MLA Pasture Health Kit, available from www.mla.com.au

General

- MLA provides 'Tips & Tools' fact sheets on pasture monitoring and simple tactics to increase earthworm numbers in soils. Download these from the 'Information Centre' section of the website www.mla.com.au
- 'Soil Biology Basics' are individual fact sheets on soil biology and agriculture, and a great place to start www.dpi.nsw.gov.au/aboutus/resources/factsheets/soil-biology-basics
- An interesting fact sheet about 'life in the soil' www.ento.csiro.au/staffhome/gvadakattu.html
- A Potter Foundation funded site covering many aspects of soil health www.soilhealth.com
- The MLA EDGENetwork® program is coordinated nationally and has a range of courses to assist lamb and mutton producers.



4.0 Native Vegetation



Why is it important?

In most regions, there are regulatory restrictions on the way native vegetation (pastures and bushland) can be managed. Vegetation clearing and the protection of rare and threatened species have particularly strong legislative control.

For the conservation of native vegetation and enhancement of biodiversity, there are two key elements that have over-riding importance. These are the extent (amount and degree) of connection between patches of native vegetation on your farm and its condition (species mix and health, and degree of freedom from exotic weeds).

There are 3 key principles (referred to as the 3 Rs) that indicate how native vegetation and biodiversity can be managed, protected and enhanced on grazing properties. These are Retain, Restore and Revegetate.

Overgrazing poses the greatest on-going threat to native vegetation. Many regional NRM authorities have funding available to assist with fencing of remnant and riparian areas so that grazing can be restricted to a level that supports vegetation health. If you have native / naturalised pastures on your farm, then active management is required if you want to keep them productive and to maintain their conservation values. Native pasture species are also less competitive at high levels of soil fertility. Low rates of fertiliser can profitably boost native pastures, but higher levels tend to destabilise the pasture by stimulating the more competitive, exotic annuals.

Your scorecard for Native Vegetation:

Best Practices		Score
1	Have a plan for the retention, restoration and revegetation of native vegetation (maximum possible score 1)	1.0
2	Implement management practices that improve native vegetation (maximum possible score 3)	1.0
Corrected Score out of 10 for this section		6.67



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For more information

Recommended

- Module 5 'Protect Your Farm's Natural Assets' from AWI and MLA's best practice packages for sheep and wool - 'Making More From Sheep'
- Towards Sustainable Grazing: the professional producers guide. Available from MLA www.mla.com.au

General

- Grassland Flora - a field guide for the Southern Tablelands (NSW and ACT). D. Eddy, D. Mallinson, R. Rehwinkel and S. Sharp (1998).
- Langford, CM, Simpson, PC, Garden, DL, Eddy, DA, Keys MJ, Rehwinkel, R and Johnston, WH (2004) Managing native pastures for agriculture and conservation. NSW DPI.
- Land, Water & Wool has published a series of detailed case studies focusing on woolgrowers who are actively managing their properties for improved natural resource management www.landwaterwool.gov.au/publications.asp?section=276
- MLA Tips & Tools for a range of fact sheets on production and conservation topics www.mla.com.au/TopicHierarchy/InformationCentre/TipsandTools/Default.htm
- Quickchecks - a monitoring tool specifically for woolgrowers www.landwaterwool.gov.au
- Birds on Farms (www.birdsaustralia.com.au)
- Exchange - a service provided by Greening Australia to link practical knowledge with research knowledge, and can provide you with the resources and contacts to help resolve your vegetation management challenges <http://live.greeningaustralia.org.au/GA/NAT/TipsAndTools/exchange/>
- Native pasture groups in each state - eg www.stipa.com.au
- Land For Wildlife schemes - these are state based so Google 'land for wildlife' to get the website for your state
- Land water and Wool - www.landwaterwool.gov.au



5.0 Rivers and Water Management



Why is it important?

Well managed waterways and wetlands can improve water quality, increase water yield and increase the value of the waterways and surrounds for wildlife habitat - wins all round.

The first step in improving the value of waterways and wetlands is usually to restrict stock access so that vegetation can be retained, restored or re-established. This can be achieved by both specifically fencing and grazing a riparian area as an individual unit, and by using rotational grazing so that particular areas are managed to maintain or enhance their value.

There are many good reasons for excluding stock from riparian zones, including the damage they cause to riparian vegetation, the erosion they stimulate along the stream banks, the decline they cause in water quality through pugging and fouling.

Reticulated water supplies have many conservation and production advantages over direct stock access to riparian zones and water courses, including improved water quality and protection from soil erosion.

Your scorecard for Rivers and Water Management:

Best Practices		Score
1	Implement management practices that improve waterways and water quality (maximum possible score 2)	2.0
2	Implement management that support healthy wetlands (maximum possible score 1)	1.0
Corrected Score out of 10 for this section		10.0



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For more information

Recommended

- Module 5 'Protect Your Farm's Natural Assets' from AWI and MLA's best practice packages for sheep and wool - 'Making More From Sheep'
- Towards Sustainable Grazing: the professional producers guide. Available from www.mla.com.au

General

- "Stock and Waterways: a manager's guide" available from www.lwa.gov.au
- The Land Water Wool website has information and case studies from woolgrowers relating to riparian areas (www.landwaterwool.gov.au/products/pb061114)
- "Managing gullies on wool-producing farms" available from www.landwaterwool.gov.au/products/pf061166
- Wool Industry River Management Guides for 1) High rainfall zones including tableland areas or 2) Sheep/wheat zones. Hard copy manuals available from www.landwaterwool.gov.au, or downloadable from www.rivers.gov.au/lww
- MLA Tips & Tools for a range of fact sheets on production and conservation topics www.mla.com.au/TopicHierarchy/InformationCentre/TipsandTools/Default.htm
- Quickchecks - a monitoring tool specifically for woolgrowers www.landwaterwool.gov.au
- Land water and Wool - www.landwaterwool.gov.au



6.0 Livestock Management



Why is it important?

Consideration of livestock management has always been an integral part of grazing systems in Australia. Livestock producers recognise that animals that are well cared for are also productive.

Increasingly, the welfare of farm animals is becoming an issue of public concern.

It is important that livestock producers are able to provide an assurance that their husbandry practices are necessary and meet acceptable standards of animal welfare.

State and Commonwealth governments are responsible for setting welfare standards and, with the RSPCA, for enforcing them. The focus on welfare of livestock may increase the likelihood of prosecution of producers which could impact on the image of the industry.

The internationally recognised guide to good animal welfare is the 'five freedoms':

1. Freedom from hunger, thirst and malnutrition;
2. Freedom from fear and distress;
3. Freedom from physical and thermal discomfort;
4. Freedom from pain, injury and disease; and
5. Freedom to express normal patterns of behaviour.

These 'five freedoms' are an integral part of the industry best practices in relation to livestock management.



Your scorecard for Livestock Management:

Best Practices		Score
1	Maintain your livestock in appropriate body condition to achieve production targets and minimize health problems (maximum possible score 7)	6.0
2	Manage sporadic outbreaks of disease (maximum possible score 6)	1.0
3	Meet animal wellbeing requirements (maximum possible score 10)	6.0
Sheep specific practices		
4	Manage ewes and lambs to improve survival rates (maximum possible score 5)	2.0
5	Implement a preventative sheep health management program (maximum possible score 2)	2.0
6	Monitor your flock for disease and health problems and take corrective action where needed (maximum possible score 3)	3.0
Cattle specific practices		
7	Implement a preventative cattle health management program (maximum possible score 2)	2.0
8	Monitor your herd for disease and health problems and take corrective action where needed (maximum possible score 3)	2.0
Corrected Score out of 10 for this section		6.32



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For more information

Recommended

- Module 10 'Wean More Lambs' from AWI and MLA's best practice packages for sheep and wool - 'Making More From Sheep'
- Module 11 'Healthy and Contented Sheep' from AWI and MLA's best practice packages for sheep and wool - 'Making More from Sheep'
- Module 7 'Herd health and welfare' from MLA's best practice package for cattle - 'More Beef from Pastures'

General

- Codes of accepted farming practice for the welfare of sheep, saleyards and transport are available from all state government offices and departments of primary industries websites.
- Livestock transport Fit to load Guide www.mla.com.au/TopicHierarchy/InformationCentre/AnimalHealthandWelfare/Animalwelfare/Transport+guide.htm
- NSW Department of Primary Industries Feed Cost Calculator www.agric.nsw.gov.au/reader/choosing-feeds/dai201b.htm
- Sheep CRC Feedlot Calculator Tool uses production, economic and feeding scenarios to calculate if feed lotting sheep is profitable. www.sheepcrc.org.au/index.php?id=301
- Sheep CRC Lamb Growth Rate Predictor Tool www.sheepcrc.org.au/index.php?id=300
- Lifetime Wool - Tools for Management; www.lifetimewool.com.au/index.aspx
- Planning for Profit - A practical guide to assist woolgrowers recover from drought. AWI Publication, September 2003 Phone 1800 070 099
- 'Wean More Lambs' Workshop MLA EDGENetwork course www.mla.com.au
- Stock Water - a system for calculating farm water supply, quality and reliability www.wool.com.au/attachments/Wool_production/Natural_resources/AWI_Stock_water_Oct06.pdf
- WormBoss is a web-based tool to help sheep and wool growers manage worms in sheep www.wormboss.com.au
- Integrated parasite management - sheep. Information on regional programs is available on the AWI website www.wool.com.au/ipm
- AWI information on shearing shed and yard design www.wool.com.au
- NSW DPI stock handling course: Stock Safe - safe, responsible livestock handling This course aims to improve safe handling skills of stock on farm, reduce the risk of injury to those working with livestock, and raise awareness of animal wellbeing as an issue of public concern www.dpi.nsw.gov.au/agriculture/profarm/courses/livestock/stocksafe
- Low stress stock handling course www.lss.net.au/training.htm



Landleader

Best practice for a better future

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7.0 Chemical Use



Why is it important?

Best practice chemical use is about cost-effective weed and pest control, as well as the highest standards of environmental protection, human safety and quality of final product, wool and meat.

By following best practices associated with chemical use on farm you will minimise the risks associated with chemical use and allow wool and meat producers to take full advantage of the 'clean, green' image of the Australian broadacre industry.

Best practices include:

- Minimising chemical use;
- Chemical storage and recording;
- Chemical preparation and application;
- Protecting meat quality;
- Protecting wool quality;
- Managing occupational health and safety (sheep rehandling);
- Protecting the farm environment; and
- Undertaking training in chemical management.

Your scorecard for Chemical Use:

Best Practices		Score
1	Purchase, handle and store chemicals safely and securely (maximum possible score 9)	2.0
2	Use appropriate and calibrated equipment, protective clothing and recognize withholding periods (maximum possible score 11.5)	9.5
3	Safely dispose of unwanted chemicals and containers (maximum possible score 4)	2.0
4	Undergo chemical training and certification (if applicable) (maximum possible score 1)	1.0
Corrected Score out of 10 for this section		5.69



For more information

Recommended

- Module 2 & 3 'Market Focused Wool Production', 'Market Focused Lamb & Sheepmeat Production' from AWI and MLA's best practice packages for sheep and wool - 'Making More From Sheep'
- Module 8 'Meeting market specifications' from MLA's best practice package for cattle - 'More Beef from Pastures'
- Wool Pathways 'Pesticide use and residues' module - BMP supplement. This includes guidelines on producing wool compliant with the EU-Ecolabel. At present, only the European Union has published environmental standards for chemical contaminants. These may start to affect the wool market from late 2007. It is expected that environmental standards similar to those of the EU will gradually become a feature of other export destinations. This module is currently under development.

General

Types of material	Internet	Phone
Chemicals regulations and advice - Queensland	www.dpi.qld.gov.au/health	Department of Primary Industries and Fisheries 132523
Chemicals regulations and advice - NSW	www.agric.nsw.gov.au/reader/chemicals	Department of Primary Industries 02 6391 3100
Chemicals regulations and advice - Victoria	www.dpi.vic.gov.au	Department of Primary Industries 136186
Chemicals regulations and advice - Tasmania	www.dpiw.tas.gov.au	Department of Primary Industries and Water 1300 368 550
Chemicals regulations and advice - SA	www.pir.sa.gov.au	Primary Industries and Resources 08 8207 7900
Code of Practice for the Use of Agricultural and Veterinary Chemicals - WA	www.agric.wa.gov.au	Department of Agriculture and Food 08 9368 3333
Poisons Information Centres in each state - advice in case of accidental poisoning		Poisons Information Centre 131126 (same number all states)

Continued next page



General continued

Template for record keeping from MLA's Livestock Production Assurance program	www.mla.com.au	MLA 02 9299 5155
Template for record keeping from the Australian Wool Exchange Code of Practice for the Preparation of Australian Wool Clips	www.awex.com.au	AWEX 02 9428 6100
PUBCRIS searchable database of all registered sheep health products and their labels	http://services.apvma.gov.au	Australian Pesticides and Veterinary Medicines Authority (APVMA) 02 6210 4700
Coopers 'Lice Advice' manual	www.spah.co.nz	
Current list of withholding periods (WHIs) and estimated slaughter intervals (ESIs)	www.apvma.gov.au/residues/ESI.shtml	Australian Pesticides and Veterinary Medicines Authority (APVMA) 02 6210 4700
Information on the National Vendor Declaration	www.mla.com.au	MLA 02 9463 9333
Information on drumMUSTER	www.drummuster.com.au	drumMUSTER 02 6230 6712
Information on ChemClear	www.chemclear.com.au	ChemClear 1800 008 182
Fact Sheet: 'Guidelines for producing European (EU) eco-label, low or nil residue wool'	www.agric.wa.gov.au	Department of Agriculture and Food WA 08 9368 3333
EU Eco-label web site	http://ec.europa.eu/environment/ecolabel/index_en.htm	
PUBCRIS searchable database of all registered sheep health products and their labels	http://services.apvma.gov.au/PubcrisWebClient/welcome.do	Australian Pesticides and Veterinary Medicines Authority (APVMA) 02 6210 4700
Wool residue testing service at CSIRO Textile and Fibre Technology (can be organised through the Australian Wool Testing Authority)	CSIRO www.csiro.au/csiro/content/standard/ps1s5.html or AWTA www.awta.com.au	CSIRO 03 5246 4000 or AWTA 03 9371 4100
Australian Wool Exchange Code of Practice for the Preparation of Australian Wool Clips (2006 revision) - Section 3.1, 'Eliminating contamination risk' and Section 16, 'The woolclasser's specification'	www.awex.com.au	AWEX 02 9428 6100



Landleader

Best practice for a better future

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8.0 Greenhouse Emissions



Why is it important?

Our climate has become warmer and more extreme and there is a general consensus in the scientific community that greenhouse gas emissions are a contributing factor:

Agricultural activities, including the production of livestock, are contributors to greenhouse pollution. Production of livestock is in itself a contributor to greenhouse pollution. When livestock eat, their food is digested via a fermentation process which releases methane. These emissions are contributing to global warming.

Protecting the environment is a key responsibility for the wool and red meat industries and is vital to maintaining their ongoing sustainability.

As well as assisting the wool and red meat industries to adapt to a changing climate, we are investigating how to lower livestock gas emissions. The success of this research will lead to more efficient production practices with more wool and meat produced from less feed and reduced greenhouse gases.

Best Practices		Score
1	Optimise livestock feed quality and digestibility (maximum possible score 4)	1.0
2	Maximise livestock production efficiency (maximum possible score 2)	1.0
3	Maximise nitrogen cycling efficiency (maximum possible score 4)	1.0
4	Reduce fossil fuel consumption (maximum possible score 3)	1.0
Corrected Score out of 10 for this section		3.08



i

For more information

Recommended

- MLA Research and Development and information on Climate Change
<http://www.mla.com.au/TopicHierarchy/InformationCentre/Environment/Default.htm>
- Australia's national greenhouse accounts
<http://www.greenhouse.gov.au/inventory/index.html>
- Australian government programs for climate change and agriculture
<http://www.greenhouse.gov.au/agriculture/index.html>
- CSIRO climate adaptation flagship
<http://www.csiro.au/org/ClimateAdaptationFlagship.html>
- Victorian Greenhouse in Agriculture program providing information particularly relevant to greenhouse emissions from agriculture
<http://www.greenhouse.unimelb.edu.au/gia.htm>
- The National Climate Change Research Strategy for Primary Industries
<http://www.greenhouse.unimelb.edu.au/gia.htm>
- Managing Climate Variability Program helping primary producers manage climate risk
<http://managingclimate.gov.au/>
- National Agriculture and Climate Change Action Plan
<http://www.daff.gov.au/natural-resources/climate>
- Australian Bureau of Meteorology provides information on weather and climate including climate averages, seasonal outlooks and climate change
<http://www.bom.gov.au/climate/>
- Rural Industries Research and Development Corporation - Climate Change and Climate Variability
<http://www.rirdc.gov.au/programs/ccv.html>
- Department of Climate Change - Agriculture Impacts and Adaptation
<http://www.greenhouse.gov.au/agriculture/impacts.html>
- Victoria Department of Primary Industries - Climate Change
http://www.dpi.vic.gov.au/dpi/vro/vrosite.nsf/pages/climate_change

Thank you again for supporting Landleader 2008. If you would like to provide any feedback on this report, its format and usefulness, please contact Clare Hamilton on 02 6379 1628 or email Landleader@woolinnovation.com



Landleader

Best practice for a better future

Landleader is a joint initiative of Australian Wool Innovation and Meat & Livestock Australia and is funded under the Australian Government's \$3 billion Natural Heritage Trust.



Australian Government
**Department of Agriculture,
Fisheries and Forestry**

EMS Pathways to Sustainable Agriculture

Landleader 2:

Monitoring and Evaluation

October 2008



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GLOSSARY

AWI – Australian Wool Innovation Limited
CMA – Catchment Management Authority
EMS – Environmental Management System
Glenrac – Glen Innes Natural Resource Advisory Committee
MLA – Meat and Livestock Australia
NRM – Natural Resource Management

Executive Summary

Landleader, part of the *Pathways to Industry* program funded by the Australian government. The first stage began in 2007, with funding from the Federal Government in partnership with Australian Wool Innovation (AWI) and Meat and Livestock Australia (MLA). It is a survey-based, self-assessment tool for landholders in the meat and wool industries. Stage 2, 2008, is called *Consolidation and Collaboration*. The questionnaire was further refined and offered to landholders through a Catchment Management Authority (CMA) or similar organisation and called the *Australian Grazing Industry Stewardship Questionnaire 2008* and referred to as *Landleader 2*, or the survey, throughout this report.

An evaluation was required to look at the value of the *Landleader 2* to landholders, and the success of its distribution through CMAs. Landholders answered evaluation questions regarding their reflections about the survey at the conclusion of the survey itself. Feedback was also sourced from 8 of the 11 CMAs who were involved in disseminating the *Landleader 2* survey.

Of the 362 landholders who completed *Landleader 2*, responses from 341, from 19 catchments, were analysed for this evaluation. Some landholders were sent the survey directly by AWI, not through a CMA that is why there are 19 catchments represented but only the staff of 11 directly involved. Half of the respondents had heard about *Landleader 2* through an officer of an NRM agency or CMA, and 12% had heard about it through industry newsletters. Most respondents thought the survey had a high level of relevance, with more than 40% rating the relevance to their business as 8 or above out of 10.

Only 3% of landholders identified major changes to their management after completion of the *Landleader 2* survey, although 59% identified minor changes, suggesting that *Landleader* does have potential for encouraging practise change, although more interesting and conclusive results about the potential for practise change would be obtained by speaking to landholders once they have received their benchmarking report.

A total of 90% of respondents would be willing to reassess using *Landleader 2*, for both their own interests and for the good of the industry.

Staff from the CMAs who distributed *Landleader 2* to landholders generally had a positive experience, and felt it was not too onerous a task. Many simply sent the survey out to the landholders specified by the *Landleader* team. Emails, distribution at local events and phone calls to landholders were employed by a small number of CMAs as a way encouraging participation.

Positive aspects of involvement by the CMA respondents were seen as: benchmarking, the simplicity of their involvement, getting a good response from their follow-up encouragement to landholders, being part of a national initiative, the survey itself, and also not being out of pocket.

To improve their experience, CMA respondents suggested allowing more time, ensuring accurate address lists are provided, allowing flexibility in delivery method (i.e. other than by post) and also some flexibility/alternatives in survey content, and perhaps shortening the survey.

Further suggestions made by respondents were: that they wanted to hear which other CMAs were involved in Landleader 2 so that they compare their results and that questions about landholders' NRM capacities should be included.

Avon Catchment Council and Desert Channels Queensland felt there was little benefit from their involvement in Landleader 2. This could be because they had not yet seen/received their results. Others drew varying benefits, such as partnerships built, lessons learnt about survey design, information gained, and exposure to new people.

Only 2 CMA respondents felt there were questions in Landleader 2 which were not relevant, Both mentioned areas of farming practice. Particularly useful for the CMAs were the NRM practise related parts of the survey and results, although the broadness of the survey was also perceived as important. There were comments which indicated future Landleader surveys should reflect the growing importance of Greenhouse gas emissions.

The size of samples was a concern for many respondents from the CMAs, who felt it made the data less useful, as they thought the sample size when broken down by catchment was too small for responses to be statistically significant. A larger sample size would make the data more useful for the CMAs. Incentives to encourage landholders to complete the survey was one suggestion. Despite the concerns over sample size, data was seen as accurate, and CMAs reported they would use the data for planning, promotion and comparison with data obtained in other ways.

The future of Landleader looks encouraging, with the generally positive view from the CMAs involved, landholders being prepared to be involved again, there being potential for landholder practice change, and CMA respondents saying 'Yes' they would be interested in distributing Landleader in future.

Recommendations

Table 1 Recommendations

Recommendations	Section
1. Publicise the Landleader survey in industry newsletters.	4.1.1
2. In the evaluation part of the survey, have respondents specify exactly how they found out about it in the category 'other'.	4.1.1
3. In future evaluation, include data collection from landholders after they have received their Landleader report, to ascertain whether their opinion on making practice changes has changed.	4.1.3
4. Continue to employ a simple process for organisations that assist with dispersal of the survey, with some recommended follow through.	4.2.1.2
5. Inform CMAs earlier about the upcoming survey, and allow more time for sending the surveys to farmers and their return.	4.2.1.3
6. Ensure all staff within CMAs involved in Landleader receive results.	4.2.1.4
7. Reflect the growing importance placed on Climate Change and Greenhouse Emissions from agriculture in the Landleader survey.	4.2.2.1
8. Strengthen the NRM aspect of the survey to encourage participation by CMAs.	4.2.2.2
9. Make available the list of CMAs involved to all participants.	4.2.2.3

10. Make clear in presentation of results what refers to a particular CMA.	4.2.2.3
11. Reassess the survey to see whether the suggested areas can be included.	4.2.2.3
12. Strive for greater numbers in future rollout of Landleader.	4.2.3.5
13. Attempt to reach a broader range of landholders through diverse ways of distributing Landleader, and perhaps offer incentives for completion.	4.2.3.5
14. Consider the costs and benefits to allowing input from CMAs in return for funding.	4.2.4

1 Background

The concept of Environmental Management Systems (EMS - a systematic assessment of the agricultural sector's use of natural resources) has been discussed since the late 1990s. One of the first EMS projects was in the grazing industry funded by Meat and Livestock Australia (MLA). The funding of a much larger program was taken up by the Federal government and launched in 2003. It initially began with projects from several industries but working mainly at the producer level. A more recent round of funding targets whole industries and is called the *Pathways to Industry* program. The Wool Pathways Project is part of the more recent program, and is based in the wool and red meat industries. Stage one of this project was called *Landleader* and ran in 2007. The current stage (Stage two), *Consolidation and Collaboration*, runs this year, 2008, and is the subject of this report.

A survey based self-assessment tool was used to gain base line data in stage one and this was consolidated and expanded in stage two and called *Australian Grazing Industry Stewardship Questionnaire 2008*. It is referred to as Landleader 2, or the survey, throughout this report. In an attempt to increase impact, a number of regional bodies (catchment management authorities - CMAs) were engaged to help with the distribution of the survey to as many graziers as possible. Only paper based surveys were used, following the findings of the evaluation of *Landleader 1*.

2 Introduction

The objectives of the *Consolidation and Collaboration* project were:

1. To tailor the *Australian Grazing Industry Stewardship Questionnaire 2008* based on the experience gained under Landleader 1. This will be done in close cooperation with priority CMAs (or other state equivalent) to monitor environmental and livestock best management practice on broad acre grazing properties within their regional boundaries.
2. To capture environmental best practice data from Australian broad acre farmers (target 500);
3. To signpost learning opportunities for farmers via existing tools & training programs which describe environmental Best Management Practice (BMP) and other environmental management systems; and
4. To develop an ongoing mechanism to support the Landleader program post June 2008.

2.1 Objectives of the evaluation

An evaluation is required of the distribution process and the value of the self assessment survey to the participants – both landholders who completed the survey and also the staff of the CMAs who facilitated its distribution.

An evaluation of the distribution process includes an assessment of:

1. How the CMA officers felt about their delivery of the survey to relevant landholders with whom they work

2. The value to the CMAs of the grouped data they received, whether they believe the Landleader survey should continue, and if so, operated by whom?
3. Working with officers in the CMAs to deliver the survey to graziers with whom they work
4. The surveys sent to MLA to be put onto the data base
5. Results of the surveys then given back to the graziers and to the CMAs.

The evaluation also looks at the value of the survey for the landholders who complete it:

1. The relevance of the content of the self assessment survey to the landholder
2. Ease of its completion
3. Value of the exercise to the landholder's business in terms of managing natural resources.

3 Methodology

In order to evaluate the Landleader self assessment survey from the landholder point of view, some evaluation questions were added at the end of the survey. These questions are attached here as Appendix 5.1. They were designed to ascertain where landholders had found out about the Landleader 2 survey, how relevant they found it, whether it had assisted them in identifying any areas for change, and also whether Landleader was something they were prepared to be involved in again.

Interviews were also conducted by phone and via an online survey tool with 8 of the 11 CMA staff (or NRM body, henceforth referred to as CMAs) involved in dissemination of the Landleader 2 survey. This was to establish:

- Whether distributing the survey via CMAs was a positive experience for CMA staff
- How valuable were the data they received as a result,
- The feasibility of distribution via CMAs if Landleader is to continue.

Not all respondents answered all questions.

4 Results and Discussion

4.1 Landholders

Overall there were 341 landholders (of 362) who completed the self assessment survey in time for analysis in this evaluation. Staff from 11 organisations were asked to distribute the survey. Other surveys were mailed direct to landholders by AWI or MLA. The distribution of landholders can be seen in Table 2, below.

Table 2 Landleader 2 participants by Catchment body

Catchment	State	Respondents
*Avon Catchment Council	Western Australia	6
Border Rivers Gwydir CMA	NSW	13
Central West CMA	NSW	9
Cradle Coast NRM	Tasmania	1
*Desert Channels Queensland	Queensland	53
East Gippsland CMA	Victoria	5
Glenelg Hopkins CMA	Victoria	1
*Lachlan CMA	NSW	39
Murray CMA	NSW	4
*Murrumbidgee CMA	NSW	64
North East CMA	Victoria	1
*Northern & Yorke NRM	South Australia	35
Northern Rivers CMA	NSW	19
*NRM South	Tasmania	22
Port Phillip & Westernport CMA	Victoria	5
SA Arid Lands NRM	South Australia	1
*South West NRM	Queensland	22
*West Gippsland CMA	Victoria	26
*Western CMA	NSW	15
OVERALL		341

*Organisations specifically targeted to distribute the questionnaire.

Two of the 11 organisations (Glenrac and Enviromeat) are industry based and do not appear on the list above. Landholders they represent appear in the numbers of neighbouring CMAs such as Northern Rivers and Border Rivers for Glenrac and West Gippsland and Port Philip and Westernport for Enviromeat.

4.1.1 Ways in which Landleader 2 participants heard about the survey

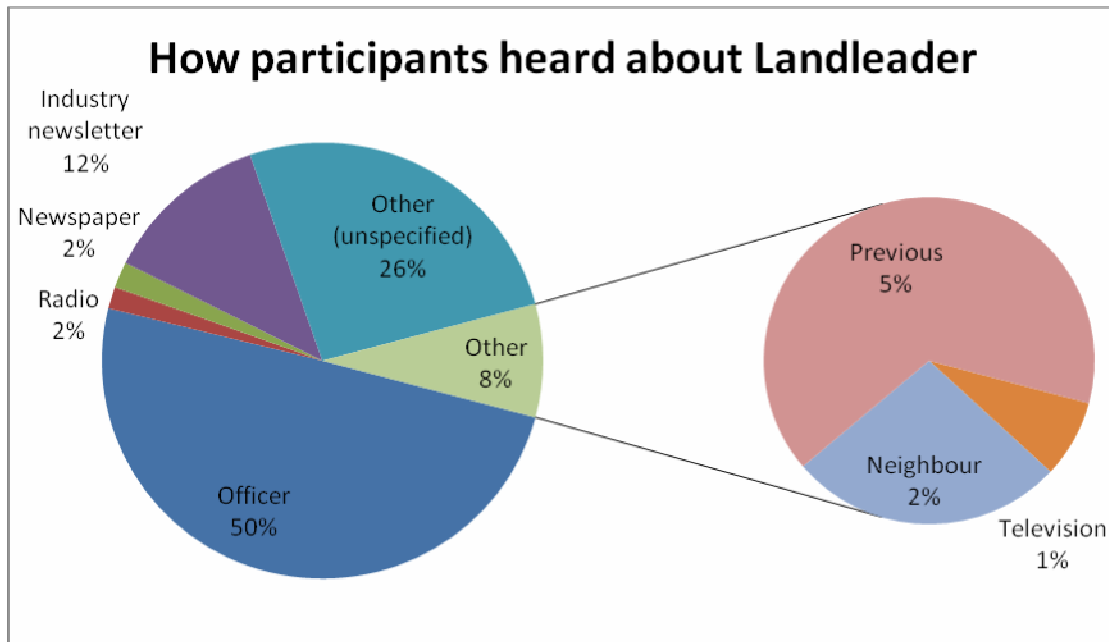


Figure 1 Ways in which Landleader participants heard about the survey

Half of those who participated in the Landleader 2 survey heard about it via an officer of one of the 11 NRM agency or CMA, as shown in Figure 1. This was the method chosen for distribution of the survey and it is interesting that this figure is not higher especially given that two thirds of the respondents were represented by these 11 organisations. This may be due to some landholders directly contacted by AWI and MLA, as 19 catchments are represented by the landholders, but only 11 CMAs were involved in disseminating the survey. A significant proportion (12%) heard about the survey through an industry newsletter. Only 5% of those surveyed this time were repeat participants. Neighbours were not a commonly cited means of hearing about Landleader 2, neither was radio nor television.

The category 'other' was not specified in the data so it is difficult to determine whether these 'other' channels for reaching landholders were many different ones, or mostly a particular method not already specified.

West Gippsland CMA (Victoria) was notable because of the large proportion of their respondents who had heard about the Landleader 2 survey through their neighbours (six of the total eight). This may be due to the intervention of the main contact there who is a farmer herself and a member of the Enviromeat group.

In the Port Phillip and Westernport CMA (Victoria), NRM South (Tasmania) and Central West CMA (NSW) more respondents had heard about Landleader 2 via 'other' unspecified means. This is in contrast to almost all other catchments, where most respondents heard about Landleader 2 through officers of the NRM bodies (CMAs). Again, if this 'other' were known it would provide useful data on alternative means of disseminating Landleader in the future.

Discussion

A reference by 12% of respondents to an industry newsletter indicates this may be a worthwhile method of publicising future Landleader surveys.

The fact that only 5% of those surveyed this time were repeat participants may indicate that few of those landholders surveyed in Landleader 1 were reached in this, Landleader 2, or it could suggest they were not interested in completing it again.

It is likely that the Landleader survey is either not being discussed amongst landholders, due to the low number who reported hearing about it through neighbours, or those who hear about it are not completing the survey. Radio, newspaper and television also seem to be ineffective means of reaching would-be participants.

In future the specification of the 'other' methods of finding out about Landleader may lead to discovering an untapped method for the distribution of the survey.

Recommendations:

Publicise the Landleader survey in industry newsletters.

Continue to use NRM/CMA officers to publicise the Landleader survey

In the evaluation part of the survey, have respondents specify exactly how they found out about it in the category "other".

4.1.2 Perceived relevance

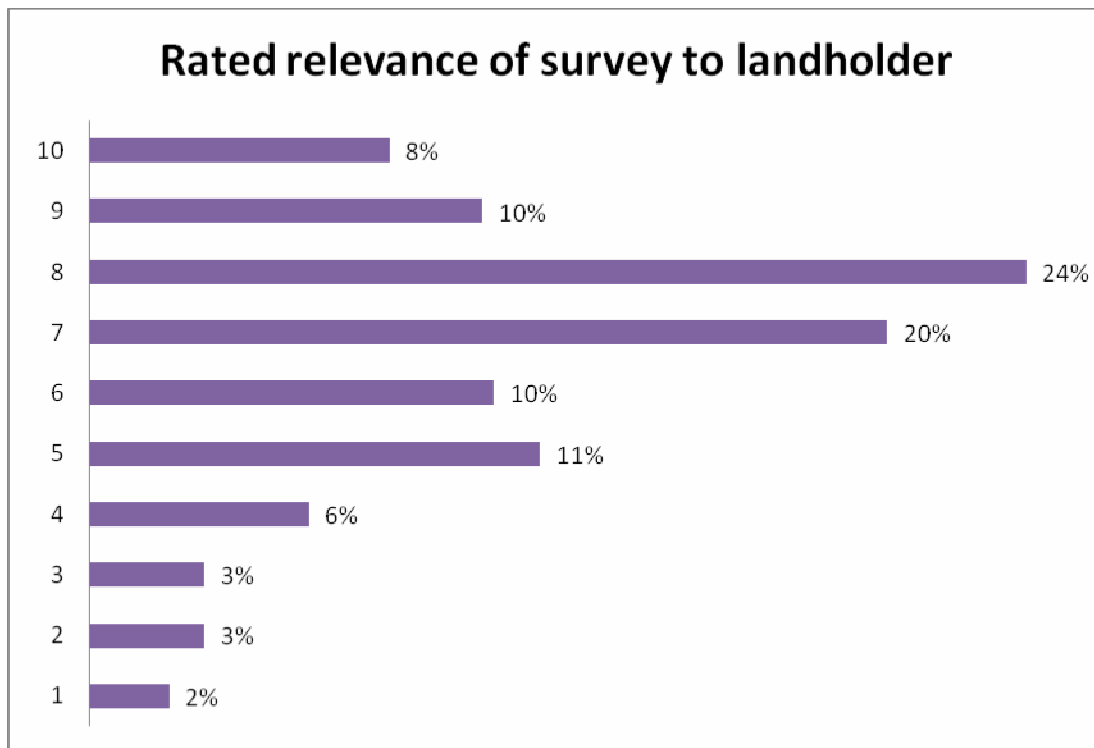


Figure 2 Relevance of survey to participants, where 1 is irrelevant and 10 is very relevant

Figure 2 clearly demonstrates that most landholders felt that the Landleader 2 survey was highly relevant to their business. More than 40% of respondents rated the relevance to their business as 8 or above out of 10 (where 10 is very relevant), and more than 60% rated it as 7 or above out of ten. However, 25% rated the survey as 5 or less, and the average rating overall was 6.6.

Table 3 Average rating by catchment (alphabetical) given for relevance of Landleader 2 survey by respondents (out of 10, where 1 is irrelevant, and 10 is very relevant)

Catchment	Average Rating for Relevance
Avon Catchment Council	5.0
Border Rivers Gwydir CMA	7.1
Central West CMA	6.8
Cradle Coast NRM	5.0
Desert Channels Queensland	6.7
East Gippsland CMA	6.2
Glenelg Hopkins CMA	6.0
Lachlan CMA	7.8
Murray CMA	5.8
Murrumbidgee CMA	6.8
North East CMA	8.0
Northern & Yorke NRM	6.0
Northern Rivers CMA	6.2
NRM South	6.3
Port Phillip & Westernport CMA	8.8
SA Arid Lands NRM	7.0
South West NRM	4.2
West Gippsland CMA	7.5
Western CMA	5.5
OVERALL	6.6

Table 4 Average rating for relevance of Landleader 2 by catchment sorted from lowest to highest

Catchment	Average Rating for Relevance
South West NRM	4.2
Avon Catchment Council	5.0
Cradle Coast NRM	5.0
Western CMA	5.5
Murray CMA	5.8
Glenelg Hopkins CMA	6.0
Northern & Yorke NRM	6.0
Northern Rivers CMA	6.2
East Gippsland CMA	6.2
NRM South	6.3
Desert Channels Queensland	6.7
Central West CMA	6.8
Murrumbidgee CMA	6.8
SA Arid Lands NRM	7.0
Border Rivers Gwydir CMA	7.1
West Gippsland CMA	7.5
Lachlan CMA	7.8
North East CMA	8.0
Port Phillip & Westernport CMA	8.8

In Lachlan CMA (NSW), all respondents rated the relevance of the Landleader 2 survey 5 or above. This was not the case with any other catchment, where at least some landholders gave it a low score. Almost 80% of respondents from Lachlan rated the relevance of the survey 7 or above, which is much higher than any other catchment. Despite this, the average rating given by Lachlan respondents was not the highest – Port Phillip and Westernport CMA (Victoria) respondents gave the relevance of the survey, on average, 8.8 and North East CMA (Victoria) respondents gave it 8.0 on average, where Lachlan respondents gave it 7.8 (see Table 3). South West NRM respondents thought the survey was only moderately relevant, giving it an average 5.0 out of 10.

4.1.3 Potential for practice change

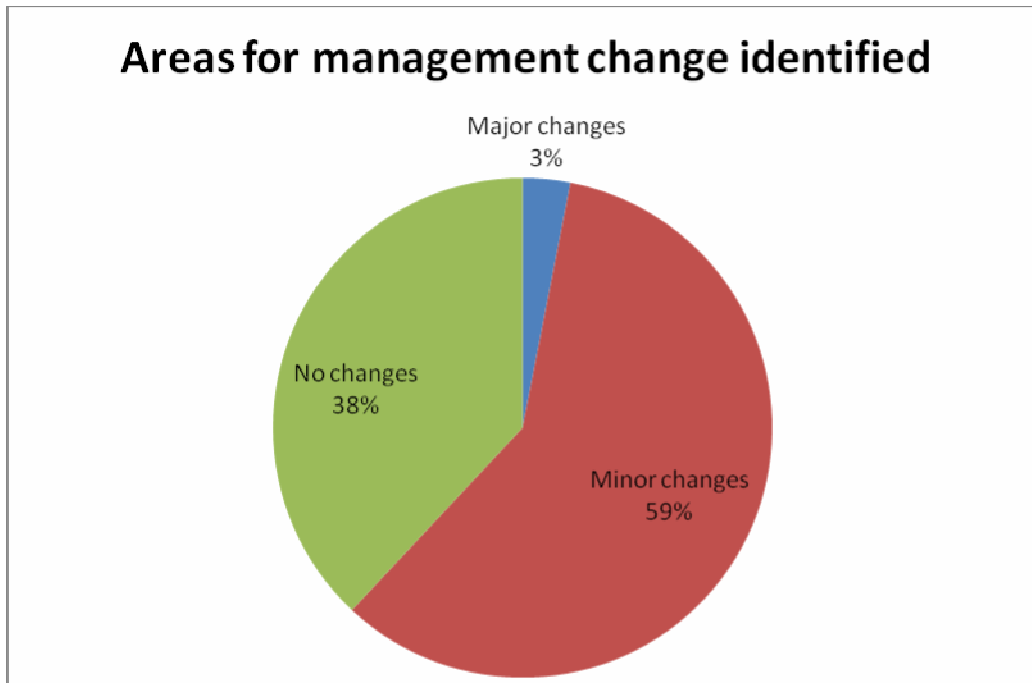


Figure 3 Landholder identified areas for management changes post Landleader completion

More than 60% of landholders who responded to this question on change identified either major or minor changes they would like to make to their management as a result of completing Landleader 2 (see Figure 3).

If broken down to Catchment level, respondents in the majority of Catchments followed the same overall pattern with regard to how many would make minor changes. That is, most respondents identified they would make minor changes. The exceptions at catchment level were in the pattern of who would not make any changes. At national level it was 38% whereas it was 50% for: Border Rivers and Gwydir CMA, Northern and Yorke NRM, Port Phillip and Westernport CMA, South West NRM and Western CMA. It is beyond the scope of this data and report to guess at why this may be.

Discussion

Over 60% of landholders nationally stated that they would make changes to their management post Landleader completion. This is a positive result, indicating that Landleader has the potential to encourage land management change. That 40% of respondents identified either no or minor changes to their management could be a combination of three factors:

- These producers believe their practice is at, or close to, industry best standards
- These producers do not know where their practice stands in relation to industry best practice and therefore are unaware of changes which may be necessary
- These producers know already what changes they wish to make and Landleader did not assist in identifying them.

A more interesting picture of the ability of the survey to encourage change would be established if landholders could be interviewed after receiving the feedback provided post-Landleader survey completion. It would be expected, due to social pressure, that when compared to demonstrated industry best practice, those lagging behind in their management practices would be more likely to identify potential management changes.

Recommendation: In future evaluation, include data collection from landholders after they have received their Landleader report, to ascertain whether their opinions about changes they intended making have altered.

4.1.4 Willingness to undertake future Landleader surveys

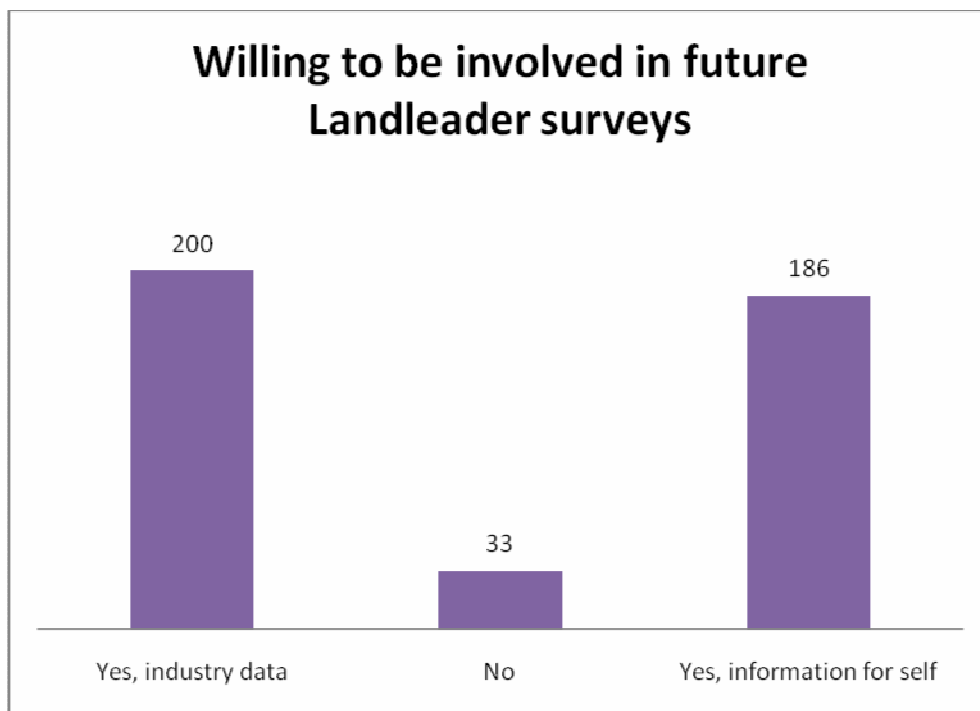


Figure 4 Willingness of landholders to be involved in future Landleader surveys

The vast majority of landholders were willing to reassess themselves against the Landleader survey again, with 186 (55%) stating they would be willing because of the opportunity to assess their own management. A total of 200 landholders (59%) said they would be willing to undertake the survey again in order to provide industry data. Only 33 (10%) said they would *not* be willing to reassess themselves.

Some catchments demonstrated less willingness to be involved in future surveys – as Figure 5, of the Northern & Yorke NRM responses indicates, below. Northern & Yorke, Murrumbidgee CMA and South West NRM all had a greater proportion of respondents who were unwilling to be involved in future Landleader surveys.

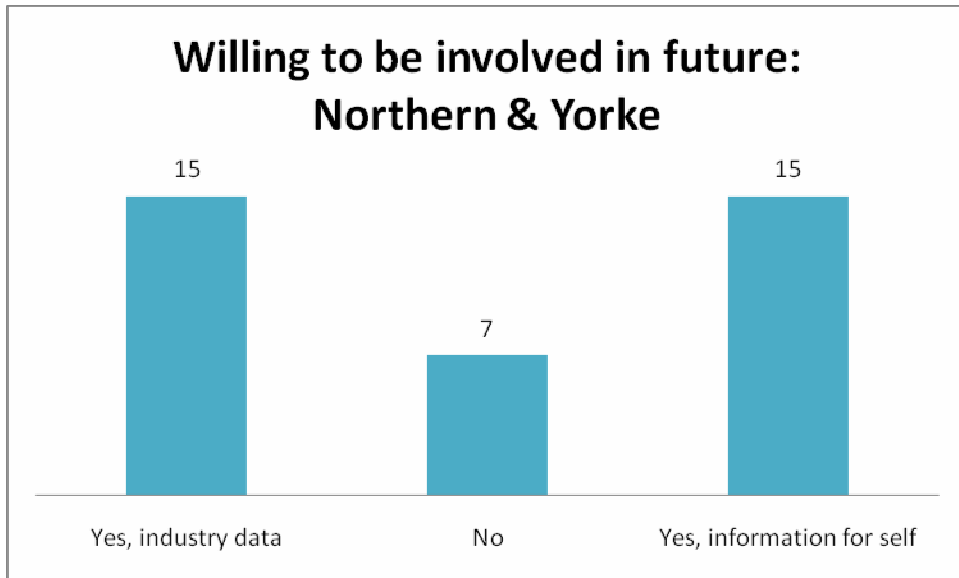


Figure 5 Landholder willingness to be involved in future Landleader surveys in the Northern & Yorke NRM

At the catchment level, there seems to be little connection between perceived relevance of the current (Landleader 2) survey and willingness to be involved in future Landleader surveys.

Discussion

The fact that 90% of respondents said that they would be willing to complete the survey again bodes well for future rollout of the Landleader survey and is testament to the survey's relevance to landholders, and also the potential for practice change.

4.2 CMA Staff

Staff from 11 organisations around Australia were asked to distribute the Landleader 2 survey. They represented the catchments and organisations of:

South West NRM, Queensland
Desert Channels Queensland
West Gippsland CMA, Victoria
Enviromeat, Victoria
Western CMA, NSW
Glenrac, NSW
Murrumbidgee CMA, NSW
Lachlan CMA, NSW
NRM South, Tasmania
Northern and Yorke NRM, SA
Avon Catchment Council, WA

4.2.1 About the experience

When asked generally about their experience with Landleader, most respondents spoke positively, with two specifically mentioning the ease of their involvement. Two talked about an interest in Landleader stemming from other activities they were involved in – in the case of the Enviromeat group from Gippsland, it was the ability to link their EMS with what was happening nationally. NRM South in Tasmania were keen to check the results of Landleader against the results of a pilot rural landholder survey they were involved in a few years ago.

The positive image of Landleader already held by people was demonstrated by this comment from Desert Channels Queensland:

“We’re conscious of not overloading people or having our name involved with unnecessary things because it erodes our currency. Our board thought this was useful.”

4.2.1.1 Encouraging participation

Officers of the CMAs (and NRM bodies) involved in disseminating Landleader mostly just sent the survey out to the landholders specified by the Landleader team. Staff from the South West NRM (Queensland) and Western CMA included a letter of recommendation. Staff from the Desert Channels CMA found they had little response to their mail out and so followed it with an email entitled “Pain in the arse”, which set out why completing the survey was beneficial to them and the industry - *“The responses flooded in.”*

Officers from the Avon Catchment Council in Western Australia wanted to include a specific group of farmers in their survey and pointed out that aside from this they were not involved in the creation of the contact lists, and relied on the Landleader team for them. This perhaps connected with their tight timeline for getting the surveys out. They also said not a lot was done to encourage landholders to participate.

At the Glen Innes Natural Resources Advisory Committee (Glenrac, NSW), distribution at local events and phone calls were also used to encourage landholders to participate. The distribution

of the Landleader 2 survey coincided with a busy time at Northern and Yorke NRM (South Australia), who could not spend time talking to landholders directly to prompt the survey. They were disappointed with the low response they received, and wondered how they might improve it – a suggestion they offered was some sort of incentive. The concern about the small numbers completing the Landleader survey was echoed by a number of those involved, and is discussed in greater detail later in the report.

4.2.1.2 What worked well

Staff from two CMAs (South West NRM and Northern and Yorke NRM) mentioned the simplicity of the process (being given a survey to deliver) again, when asked what worked well about the Landleader experience. Respondents from Enviromeat, Desert Channels and Glenrac all commented on the benefits of a benchmark being set for both landholders and the industry. Staff from Desert Channels also felt their follow up (the “Pain in the arse” email), which encouraged greater participation in Landleader, worked well. NRM South felt that being reimbursed for their costs was a real positive, as a small organisation, and also the chance to be part of something that was happening nationally. The respondent from the Western CMA thought that the comprehensive survey questions were a successful part of Landleader.

Recommendation: Continue to employ a simple process for organisations that assist with dispersal of the survey.

4.2.1.3 Improving the experience

Respondents from NRM South, Avon Catchment Council and Western CMA felt the timelines for the Landleader 2 survey were tight, and that this could be improved – especially greater time at the planning stage.

The respondent from the South West NRM was somewhat critical of the address list provided, with a significant number returned “not at this address”.

The person at the Western CMA also felt that postal surveys were not appropriate for their catchment, due to the time lags in mail pick ups (some landholders in their catchment get mail only once a week) and also the “*poor reading skills of a high percentage of landholders*”. A phone survey was suggested as a better option. This is at odds with research conducted by Roberts Evaluation during stage one of Landleader, which showed that landholders preferred to complete a hardcopy paper survey unaided, and that by phone was the least preferred method.¹

Staff from Northern and Yorke NRM mentioned often throughout their feedback that they wanted more involvement in the survey design and also implementation. The respondent from Avon Catchment Council also observed that Landleader 2 was unable to embrace new questions, or extend to cover wheat farmers, although at what stage the questions were suggested and whether they realised the study was funded by MLA and AWI is not known.

Three respondents, Enviromeat, Western CMA and Desert Channels, felt that a shorter survey would improve the response rate from landholders. The disadvantage of a shorter survey, according to the person from Desert Channels, was that farmers then do not get the mental boost of skipping questions. The person from the Western CMA also felt that data quality might

¹ Roberts Evaluation, 2007. Landleader Monitoring and Evaluation Project, prepared for Miracle Dog.

be compromised. The respondent from Enviromeat felt the biggest improvement would be just getting more landholders to fill out the survey, and also to have the initial landholders complete the survey each year so changes could be tracked. The Glenrac respondent also wanted to get more people on board – through advertising more widely, though they noted the need for financial support to do so.

Recommendations:

Inform CMAs earlier about the upcoming survey, and allow more time for sending the surveys to farmers and their return.

4.2.1.4 Benefits of being involved

Some respondents had either not received their results from Landleader (Avon Catchment Council), or had not had them passed on to them by others (Desert Channels), hence they felt that there was little benefit to them being involved in this evaluation (and it limited the feedback they could provide). The person from Desert Channels even went as far as to say that Landleader was the one to benefit from the partnership, due to the access to Desert Channels contacts.

The Western CMA respondent took a different view to this, feeling that the partnership built with the Landleader team was at this point more valuable to them than the results they received from their involvement. Northern and Yorke respondents also felt that the benefits outside of the results were better for them; in this case the lessons learnt about surveys and sampling.

For NRM South and Glenrac individuals, the information they got back from Landleader was the biggest benefit to being involved, though the respondent from Glenrac also felt that linking NRM with practical, on farm matters rather than just 'green' activities was important also.

The person from Enviromeat stated that supporting an industry initiative connected to environmental management, which is a particular interest of theirs, was for them the best part of Landleader. For South West NRM, having their name and organisation exposed to people who may not have heard of them, exposure to new clients as such, was the biggest benefit from their involvement.

Recommendation: Ensure all staff within CMAs involved in Landleader receive results.

4.2.2 Regarding the survey

4.2.2.1 Questions which were not relevant or which could be improved

Of the eight respondents, only the individuals Desert Channels and NRM South felt that there were areas which were not relevant. In the first case it was questions related to 'farming' [tilling of the soil], as in Desert Channels region they *'only have graziers'*. For NRM South, it was sheep and cattle specific questions, although they recognised that this bent was due to sponsorship from MLA and AWI.

The NRM South respondent also commented on the assumption they felt was implicit in the results for the section on Greenhouse Gases– that other than livestock nothing the landholder did contributed emissions. The respondent noted that they had not seen the Landleader survey

itself (having more of an overseeing role), but they felt there were other ways of considering energy efficiency.

The Glenrac respondent reiterated here the opinion expressed by others earlier (refer to 4.2.1.3) that the survey was long, and this '*probably meant that some stakeholders simply didn't fill it in*'.

Although happy generally with the content of the current Landleader 2 survey, staff from the Northern and Yorke CMAs again raised the idea of influencing the questions and design of the survey – having previously mentioned that they would be interested in future in stratifying the sample of landholders they reached. They said when asked about questions which could be improved that they would like to tailor particular questions to apply to certain groups (within a stratified sample).

For Avon Catchment Council it was not about the survey questions, but what can be done with the information afterwards that is important – though with this response it is important to remember that Avon has thus far not seen results.

The respondent for Desert Channels Queensland did not comment from this point on as they ran out of time.

Recommendation: Reflect the growing importance placed on Climate Change and Greenhouse Emissions from agriculture in the Landleader survey.

4.2.2.2 Particularly useful

For respondents from Enviromeat and Western CMA all sections of the Landleader 2 survey and feedback were useful, and the person from Enviromeat particularly highlighted the need to keep the areas broad so as to track trends.

For Glenrac and NRM South respondents, parts related to NRM practices were more relevant. While they did not specify NRM practices (rather 'farm planning'), the areas Northern and Yorke respondents mentioned as particularly useful were those related to NRM, and they felt that native vegetation was '*an interesting section*'. NRM South also felt that the Greenhouse section was interesting, despite some issues with the content.

Recommendation: Strengthen the NRM emphasis of the survey to encourage participation by CMAs.

4.2.2.3 Inclusions to make Landleader more useful

South West NRM, Enviromeat and Glenrac respondents were all happy enough with Landleader as is, and could not suggest any inclusions.

The NRM South respondent was interested to find out how many of their landholders were dedicated meat and livestock farmers in comparison to hobby or lifestyle farmers. They were also curious to know where other landholders came from – i.e. which other CMAs were involved in Landleader, as this information was not given to them. They felt knowing what they were comparing against would give a better sense of where they stood. They also made one small critical comment of the layout of the data provided, and that was what they perceived as unclear labelling – was NRM them, NRM South?

Northern and Yorke respondents again raised the idea of stratified sampling and their target groups – once these were defined, they felt they could then suggest target questions.

The person from Western CMA was interested in the inclusion of questions about landholders' capacity to manage for NRM outcomes, such as skills and knowledge, and what influences that skill and knowledge.

Staff from the Avon Catchment Council (who had not received their results) were interested in the results.

Recommendations:

Make available the list of CMAs involved to all participants.

Make clear in presentation of results what refers to a particular CMA.

Reassess the survey to see whether suggested areas can be included.

4.2.3 Regarding the data

4.2.3.1 Potential benefit of the data

The CMAs rated the potential benefit of the Landleader data they received on average 4.9 out of 10 (where 10 is very useful). If the rating of Avon Catchment Council (who had not received their data) is removed, the average rating rises to 5.5. The qualifications which came with peoples' ratings were mostly that it was due to sample size – a couple said specifically that their ratings would rise if the sample size in their area had been larger. Glenrac, who gave the highest rating of 8, said that it gave them access to information they didn't already have.

4.2.3.2 What CMAs liked or found of value in access to the data

South West NRM respondents said that the value in access to the data for them was that it confirmed their planning. NRM South, Glenrac, Enviromeat and Western CMA respondents all said that the information it provided was valuable. For Enviromeat and NRM South individuals, the comparison it provided between their regions and nationally was important.

For the person from Enviromeat, it was also seeing whether they are leading the way in what they are doing, and how they were doing with Greenhouse Gas emissions, as they had noted that as an area of consumer interest. Not only that, but they were using the data to see where they, as a landholder group, linked in with catchment targets.

The NRM South respondent commented on the results regarding where landholders went for information. For Glenrac it was also the benchmarking that was useful.

Northern and Yorke individuals said merely that they would use the data, and that the board would see it.

4.2.3.3 What the data will be used for

NRM South, Glenrac, South West NRM and Northern and Yorke respondents all said the data would be used for planning purposes. The individual from South West also said they would use it for promotion also – which is what the individual from Enviromeat would like to do, but feel they cannot due to the small sample size. For NRM South the comparison with data gathered in a different pilot survey they were involved in in the past would provide a picture of whether things had changed. The data from Landleader would also allow them to *'tailor programs and services more appropriately.'*

Northern and Yorke respondents specified that expected results would give weight to their plans, whereas unexpected results would reshape their planning. Results could also be utilised for funding applications.

For the Western CMA, a review of the results was needed to determine how useful they would be, although for the short term the results would assist with background information for their own benchmarking survey.

4.2.3.4 Making the data more useful

Larger numbers of landholders completing Landleader was the common suggestion for making the database more useful.

The individual from NRM South suggested that disaggregation and refined analysis would allow comparison with other surveys.

The individual from Enviromeat was concerned with the skew of the data, as they felt that only proactive and/or environmentally conscious landholders would be completing the survey. The proposed solution was finding other ways of accessing landholders, perhaps through meat profit days, MLA and AWI field days, discussion groups, places where a broader group might be accessed, and some prize offered for completing the survey.

4.2.3.5 Accuracy of the information

The person from Glenrac backed the opinion of the individual from Enviromeat that the data was skewed, commenting that *'respondents are most likely to be "top" producers, rather than the "followers"*. For Glenrac and Enviromeat respondents, accuracy for those who completed the survey was considered good, but perhaps not representative.

The NRM South respondent also expressed concerns over results due to the sample, with size being their concern. For the individual from South West NRM, despite the small sample size, they felt that the results reflected what they were hearing. The individuals from Northern and Yorke also said the results were what they would have expected.

Recommendations:

Strive for greater numbers in future rollout of Landleader.

Attempt to reach a broader range of landholders through diverse ways of distributing Landleader, and perhaps offer incentives for completion.

4.2.4 Future of Landleader

All 6 individuals from CMAs who responded when asked whether they would be interested in distributing Landleader surveys in future said yes. The respondent from Glenrac said yes, because it was a good tool for their organisation. There were qualifiers from a few respondents who wanted more input into questions and more time for preparation. The person from the Western CMA stated they would also have to ensure it did not compromise their own surveys, the frequency of repeat surveys, and whether they could get a greater response rate.

NRM South and Northern and Yorke NRM respondents did not rule out the contribution of funding. For Northern and Yorke NRM respondents it was more of a possibility, though for both the funding would be based on the ability to influence the questions. Others said they would be unable to contribute funding at all.

Recommendation: Consider the costs and benefits to allowing input from CMAs in return for funding.

4.2.5 Final Comments from CMA respondents

Glenrac: *“Appreciate the opportunity to take part in the survey this year. To date I have not had the opportunity to fully analyse the results but will be doing so in the near future. This area is a very strong grazing based area and I feel that the survey was a worthwhile process for both Glenrac & local land managers”*

NRM South: *“I think it's been generally a positive experience and a positive relationship. I'm delighted we have responses as quickly as we have, unlike some other organisations.”*

Northern and Yorke: *“Pleased with the whole thing.”*

4.3 Summary

Of the 362 landholders who completed Landleader, the responses from 341, from 19 catchments, were analysed for this evaluation. Half of those had heard about Landleader through an officer of an NRM agency or CMA, and 12 % had heard about it through industry newsletters. Most respondents thought the survey had a high level of relevance, with more than 40% rating the relevance to their business as 8 or above out of 10.

Only 3% of landholders identified major changes to their management after completion of the Landleader 2 survey, although 59% identified minor changes, suggesting that Landleader does have potential for encouraging practise change, although more interesting and conclusive results about the potential for practise change would be obtained by speaking to landholders once they have received their benchmarking report.

90% of respondents would be willing to reassess using Landleader, for both their own interests and for the good of the industry.

Individuals who distributed the Landleader 2 survey to the landholders generally had a positive experience with the distribution, and felt it was not too onerous a task. Many simply sent the

survey out to the Landholders specified by the Landleader team. Emails, distribution at local events and phone calls to landholders were employed by a small number of CMAs.

Benchmarking, the simplicity of their involvement, getting a good response from their follow-up encouragement to landholders, being part of a national initiative, the survey itself, and also not being out of pocket as a result were all seen as positive aspects of involvement by the CMA respondents.

To improve the experience, respondents from the 11 participating organisations suggested allowing more time, ensuring accurate address lists are provided, allowing flexibility in delivery method (i.e. other than by post) and also flexibility in survey content, and perhaps shortening the survey.

Avon Catchment Council and Desert Channels Queensland felt there was little benefit for their involvement in Landleader 2, likely because they had not yet seen/received their results. Others drew varying benefits, such as partnerships built, lessons about survey design, information gained, and exposure to new people.

Only 2 CMA respondents felt there were questions in Landleader 2 which were not relevant, Both mentioned areas of farming practice. Particularly useful for the CMAs were the NRM practise related parts of the survey and results, although the broadness of the survey was also perceived as important. There were comments which indicated future Landleader surveys should reflect the growing importance of Greenhouse gas emissions.

Hearing which other CMAs were involved in Landleader for comparison and meaningfulness of results, and also including questions about landholders NRM capacities were simple suggestions made by respondents.

Sample size at the CMA level was a concern for many respondents, who felt it made the data less useful. A larger sample size at the CMA level would make the data more useful for the CMAs. Incentives for completion were one suggestion for increasing numbers of landholders taking part. Despite the concerns over sample size, data was seen as accurate, and CMAs reported they would use the data for planning, promotion and comparison with data obtained in other ways.

The future of Landleader looks bright, with the generally positive view from CMAs involved, landholders being prepared to be involved again, there being potential for landholder practice change, and all CMA respondents who answered saying 'Yes' they would be interested in distributing Landleader in future. NRM South and Northern and Yorke NRM also responded that funding contributions would be possible if they had an ability to influence survey design.

5 Appendices

5.1 Questionnaire completed by landholders

The Australian Wool Innovation (AWI) and Meat and Livestock Australia (MLA) are interested in your feedback regarding the *Landleader survey*. This questionnaire is designed to obtain your feedback and will take about 2 minutes to complete. Your comments will be most valuable to make changes to the *Landleader Survey*. Your comments will be collated with those from other landholders and not appear on their own.

1. How did you hear about the *Landleader survey* (you may tick ✓ more than one option)?

From:

- An officer of a natural resource management Regional Body or Catchment Management Authority
- The radio
- The television
- The newspaper
- A neighbour/friend
- Industry newsletter
- Previous participant
- Other (please specify)

2. Could you please rate the relevance of the questions in the *Landleader survey* to your business? Please give your answer on a scale of 1 to 10 where 1 = not relevant and 10 = very relevant. Please tick one of the boxes.

1 2 3 4 5 6 7 8 9 10

3. As a result of completing the *Landleader survey* did you identify areas of your management that you would like to modify?

- Yes some major changes
- Yes some minor changes
- No

4. Would you be willing to re-assess yourself against the *Landleader survey* in one to two years' time? (Please tick as many boxes as apply).

- Yes to provide data for my industry
- Yes to help me assess my own management
- No I would not be willing to complete the tool again
- Other (please explain) _____

THANK YOU FOR YOUR COMMENTS. THEY WILL BE MOST HELPFUL

5.2 Questionnaire completed by Landleader distributors

Hello, my name is Eleanor Pritchard; I am calling from Roberts Evaluation. We are carrying out a survey with CMA staff who have worked with Australian Wool Innovation, Meat & Livestock Australia and landholders to implement the Landleader survey. We have been asked by AWI & MLA to find out what your experience was, how useful you think the data from the survey will be, and to help them improve the survey in future years. Can I have about 15 minutes of your time to go through some questions? Is now a good time or should I call back?

Because this is a small survey, and it is important for AWI and MLA to know about the difference in the experiences in the regions, your CMA will be identified with your comments. So if you want to make a comment that you would like kept confidential, let me know so that it is not reported.

5.2.1.1.1 Questions

1. Now that the Landleader surveys have been completed, tell me about the experience...
2. What did you do to encourage landholders to participate in Landleader?
3. What about the Landleader experience do you think worked well?
4. What would you do differently next time or how could the experience be improved?
5. What did you see as the benefits of your CMA being involved?
6. With regards to the Landleader **survey**:
 - a. Are there questions that were not relevant to your CMA or that could be improved?
 - b. Can you suggest sections or results that were particularly useful?
 - c. Would you like anything included to make it more useful to your CMA?
7. With regards to the Landleader **database**:
 - a. On a scale of 1 to 10, where 1 is useless and 10 is very useful, how would you rate the potential benefit of the Landleader data to your CMA?
 - b. Why?
 - c. What did you like or find of value in having access to the database?

- d. What will you use the data for? (eg planning, reporting or promotional purposes)
 - e. Can you suggest anything that would make the database more useful to your CMA?
8. From what you know about the landholders in your catchment and the catchment generally, what do you think will be the accuracy of the information gained from Landleader?
9. Would your CMA be interested in distributing future Landleader surveys beyond 2008, if relevant data was made available to your CMA? *If the answer is no, then ask:*
- Are there any specific changes that could be made that would encourage you to participate again?
- Who should distribute Landleader surveys in the future?
10. Would your CMA be interested in contributing funding to future Landleader surveys in your catchment area?
11. Do you have any other comments you would like to make about anything to do with Landleader?

THANK YOU FOR YOU COMMENTS. THEY ARE MOST HELPFUL