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EVALUATING EMS IN THE WESTERN QUEENSLAND RANGELANDS

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ABSTRACT

Thirty-one producers from western Queensland trialled and evaluated an Environmental Management System (EMS) that was customised for the pastoral industry. This evaluation was conducted using three questionnaires that sought to obtain producer feedback on the EMS process and whether it influenced their management practices. Most producers found their motivation to improve environmental management increased. However, at this early stage, EMS had little influence over their adoption of best management practice and it has not given them a market benefit. Presently, the merits of EMS are tenuous and thus more incentives are needed for continued development and implementation.

INTRODUCTION

The impact of agriculture on the natural environment in Australia and overseas is being increasingly scrutinised by regulators, non-government lobby groups, the general community and markets. For this reason, EMS has been promoted to primary producers as a mechanism to achieve and demonstrate responsible use of natural resources. EMS is known as a process standard because it specifies a 17-step process that an organisation uses to reduce its environmental impact, rather than setting performance targets that must be met. EMS has been trialled across a range of industries and regions as part of the EMS National Pilot Program funded by the Natural Heritage Trust through the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF). The Pastoral EMS project is one of 15 pilot projects funded under this program.

Over a period of 18 months, western Queensland pastoral producers volunteered their time to trial the "Pastoral EMS" (Pahl *et al.* 2006). The Pastoral EMS, developed by the pilot project team, is a customised and simplified EMS consisting of seven elements: environmental policy, risk assessment, objectives and targets, action plans, implementation, monitoring and management review. This paper reports the main findings of a formal benefit-cost evaluation of the development and implementation of the Pastoral EMS by producers in the western Queensland rangelands.

METHOD

EMS was evaluated using three questionnaires, one developed by the pilot project team and the other two by URS (an environmental and engineering consultancy firm that managed the EMS National Pilot Program on behalf of DAFF). All three questionnaires contained open-ended and closed questions.

Pilot project questionnaire

The pilot project questionnaire sought to identify factors that had influenced producer progress with EMS development and implementation, and those that would encourage ongoing use after the project ended.

URS questionnaires

The first URS questionnaire was completed at the start of the project to capture detail on environmental planning and monitoring being conducted by producers. The second URS questionnaire covered this, as well as: producers' current and long-term thoughts and expectations about the issues addressed by EMS; priority and target aspects of management, if EMS had changed their rate of adoption of best management practice and their intentions to continue using EMS into the future.

Completion of questionnaires

The initial URS questionnaire was completed by 39 producers during mid 2004, either one-on-one or in groups with project staff. The second URS questionnaire and pilot project questionnaire were conducted one-on-one with individual producers from 31 properties during December 2005 to February 2006.

RESULTS

The results outlined below include the outcomes producers have achieved with EMS, the factors that influenced their progress and future use of EMS.

What outcomes has EMS achieved?

After 18 months of EMS implementation, 87% of producers thought EMS had 'motivated them to improve their environmental management', and 77% thought EMS had 'strengthened their ability to address environmental issues'.

As a result of EMS implementation, producers with a formal documented environmental plan (i.e. the Pastoral EMS) increased from 23% to 74%, and the number of producers monitoring pasture, weeds and vegetation regrowth and encroachment also increased.

In contrast to this, 67% of producers claimed that EMS had little influence on their adoption of industry best management practices (BMP). Reasons for this included they were already using BMP; they needed to increase their understanding of BMP before adoption; and drought was hindering their adoption of new practices.

Similarly, producers thought EMS implementation had not influenced their target levels of management over the next five years for significant issues such as livestock husbandry and productivity, financial and whole farm planning, and drought. Few producers thought EMS had made them more aware of an issue; instead they thought it reinforced their current views. At the end of this pilot project, 70% of producers believed EMS had not provided them with marketing benefits.

Factors that influenced producers progress with EMS

When provided with a list of factors that potentially affected their progress with EMS development and implementation, 90% of producers thought assistance from project staff had the greatest positive influence on their progress, followed by the meeting schedule at 61%. Sixty-eight per cent of producers rated drought as the factor which had the greatest negative influence on EMS progress, followed by 52% of producers who noted a lack of time. Access to funding for on-ground works and cost of implementation were rated as having low to no influence on EMS progress by 52% and 55% of producers respectively.

Future EMS use

Will producers continue using EMS?

Eighty-seven percent of producers claimed they will continue using EMS to manage their property. The four main reasons given for continuing were, the potential benefits of documentation (35% of producers), to improve their management (32%), for potential marketing or other financial rewards (16%), and the structure the EMS process provided (13%).

Factors that would encourage producers to further develop and implement EMS

When presented with a list of factors that could potentially encourage further development and implementation of EMS, the most popular factor, chosen by 90% of producers, was a financial incentive. This was followed by 84% choosing marketing benefits and 77% choosing continued assistance.

Identified future benefits

Future benefits of EMS identified by 87% of producers were that it would assist them to 'demonstrate that they are managing sustainably' and 84% thought it would 'strengthen their ability to address environmental issues'. However, they are less confident, 67% of respondents, EMS would assist them to 'maintain access to their natural resources'.

DISCUSSION

Considering the relatively short period of time EMS has been implemented by producers in western Queensland, there are some strong preliminary points for discussion. The discussion below looks at the impact EMS had on the uptake of BMP and environmental monitoring, the factors that have influenced EMS development and implementation and future use of EMS.

Impact of EMS

According to the ISO 14001 standard, EMS should encourage a business to consider implementation of the best available techniques where economically viable (Standards Australia 1996). In western Queensland, best practice information for various aspects of property management is only now becoming more readily available with producer awareness increasing. Therefore, it is not surprising that during EMS implementation, producer uptake of BMP has been low.

Environmental monitoring is not something that producers have traditionally conducted, and while they notice changes, formal monitoring has generally been a low priority. After 18 months of EMS implementation, the Pastoral EMS seems to have increased monitoring by producers as well as recording of this information. However, formal monitoring of environmental issues is still not common amongst the producers that are implementing EMS, and is an area that could be improved.

Factors influencing EMS development and implementation

The training and assistance provided by pilot project staff was the major factor in encouraging producers to develop their EMS. However, the ongoing drought created conditions that were not favourable for the introduction and development of EMS, and producers were mainly concerned with the survival of their business and stock, having little time for other activities. Thomson (2004) also reported that producers would lose motivation and interest for EMS, during busy and/or stressful periods such as drought. Whilst producers reported internal business benefits, such as documentation, these were overshadowed by perceived barriers namely, time and effort.

Continued use of EMS in the western Queensland pastoral industry

Whilst producers claim they will continue using EMS, the majority are not actively developing or implementing their EMS, except when visited by pilot project staff. However, these producers still regard themselves as having and using EMS, even though most have little intention of building on this or reviewing it in the future. They seem to think that because they have written plans their EMS is complete, and do not recognise that EMS is an on-going continuous improvement process. A number of producers also failed to fully implement their action plans. Likewise, Rivers *et al.* (2005) found that of those that developed plans, less than one-third were actively implementing them. Producers prefer to conduct planning in their heads and then adjust as events unfold.

Without external recognition and/or some type of financial incentives from markets, government or industry, it is unlikely that many producers will make the effort to develop, document or maintain their EMS. Even with these incentives, it is likely that producers will need some form of assistance, such as a structured training program, to prompt and guide their development and implementation of EMS.

CONCLUSION

The evaluation of EMS in the western Queensland pastoral industry showed that whilst producers have seen benefit in developing an EMS, the costs far outweighed these. Market benefits and financial incentives were nominated by producers as reasons why they would continue with EMS, but neither of these will be available in the foreseeable future. At this stage, the application and continued use of EMS seems limited to the small number of motivated producers who see the internal business benefits of continually documenting and reviewing their management.

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