



Leading Sheep 2008-2011 WP 261

Final Report.

by

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1. Introduction from Project Advisory Panel Chair

This report outlines the achievements of Leading Sheep over the last three years. Leading Sheep is a project that aims to increase the profitability and viability of wool producers in Queensland, through innovative approaches to extension and technology adoption. Leading Sheep is a partnership between the Department of Employment, Economic Development & Innovation (DEEDI), Australian Wool Innovation (AWI), and AgForce and is supported by the majority of wool producers in Queensland.

Phase one of Leading Sheep saw a focus on increasing the adoption of new technologies within the wool industry. While continuing to recognize the importance of industry uptake of technology, the second phase of Leading Sheep has focused on extension and providing producers with the skills to use new technologies.

A personal highlight for me has been the confidence that Leading Sheep has been able to rekindle in producers. This confidence has allowed producers to continue in an industry that has now become very profitable and viable.

Leading Sheep has continued to focus on delivering information at a regional level to ensure information is relevant to producers. Regional committees and coordinators have played a vital role in ensuring information is relevant to their areas. I would like to acknowledge the hard work of these committees and coordinators.

Wool producers have a constant need to incorporate new technologies and practices into their businesses. Leading Sheep has played a key role in providing producers with learning opportunities.

After six years, Leading Sheep has continued to position itself as the hub for the dissemination of information among Queensland wool producers. Leading Sheep has provided producers with a set of tools which allows them to take advantage of the improved profitability within the industry. This has been very important for the next generation of Queensland wool producers.

I have enjoyed my time as Chair of the project advisory panel and have appreciated the enthusiasm with which agency staff and wool producers have supported the project. I hope that the next phase of Leading Sheep will continue to build on these achievements.

Jack Banks
Chair, Leading Sheep Project Advisory Panel
May 2011

2. Executive Summary

The second phase of Leading Sheep (2008-2011) aimed to increase the profitability and viability of Queensland wool producers through innovative approaches to extension and technology adoption. It is a partnership between the Department of Employment, Economic Development & Innovation (DEEDI, formerly DPI&F), Australian Wool Innovation (AWI), and AgForce. Leading Sheep supported a regionally specific program model based on four areas of Queensland: South-East (Traprock), Southern Inland (Box/Sandalwood), South-West (Mulga) and, North/Central-West (Mitchell Grass). Each of these regions had a dedicated coordinator, DEEDI extension officer and a regional committee to identify and prioritise issues and then plan, conduct and evaluate events based on these issues.

The immediate and long term evaluation shows that **Leading Sheep has exceeded the targets on the four objectives**

- A total of **84 activities** across the four objectives with a total of **1954 attendees**
- Almost **83%** of attendees **gained new skills or knowledge** from these activities and 69% reported an intention to change their management practices
- Follow up indicated that **42%** of attendees had **changed practices** on their property as a result of attending Leading Sheep activities.

The practice change survey, compared responses from a random sample of sheep producers during 2006, 2007 and 2011 in the areas of predation, reproduction, parasites, wool clip value, sheep sales value and natural resource management. This survey found that **producer involvement with Leading Sheep has strongly increased** between 2006 and 2011, especially in the areas of predators (up 22%) and parasites (up 20%). Overall, Queensland producers indicated an **increase in the project's influence on their current and future actions** from 2006. Eight producer case studies gave further detailed support to these findings and in particular, that Leading Sheep was an **important and reliable source of information**.

The majority of Queensland sheep producers (88%) intend to stay in the industry, while 10% intend to leave. Queensland sheep producers appear to be quite confident in the future of the wool and sheep meat industries rating confidence at 7.5 and 7.9, respectively, out of 10.

A range of individuals involved with the project from the Project Advisory Panel, managers and on-ground staff were interviewed to see what was working and what needed to improve. Overall, the project partnership worked well, as did the delivery through a regional structure. Areas to work on were the need to improve webinars, communication within the project and smarter use of database information.

The following **recommendations** are highlighted as a result of Leading Sheep 2:

- Continue with the partnership between DEEDI, AWI and AgForce as this is recognised as a strength of the Leading Sheep brand
- Improve the use of innovative communication and information management technologies for sheep producers
- Improve the evaluation so that it collects only the necessary data.
- For the next phase of Leading Sheep, producers see wild dog control as a priority, along with nutrition, health and business optimisation.

3. Project Background

Leading Sheep was the product of a series of producer consultative forums that occurred during 2003/2004 at the request of Australian Wool Innovation. Leading Sheep sought to provide a framework to deliver an education and adoption program to Queensland wool producers. Leading Sheep supported a regionally specific program model based on four areas of Queensland: South-East (Traprock), Southern Inland (Box/Sandalwood), South-West (Mulga) and, North/Central-West (Mitchell Grass).

A critical component of Leading Sheep was the establishment of an effective partnership between AWI, AgForce and DEEDI and the producer committees – a partnership that had not been seen before in the Queensland wool industry. Active participation by producers in the development and operation of Leading Sheep enabled a focused approach that addressed the important constraints on the industry.

During the three years of funding Leading Sheep 1 delivered a total of 75 activities to 1291 attendees, covering primarily the areas of predators, reproduction, wool marketing, parasite control and resource management. Of these activities almost two thirds were face to face while the rest were either tele-workshops or used e-technology (eg webinars or eBooks).

The final evaluation showed that the overwhelming majority of participants found the activities useful and as a result they gained new knowledge and skills and plan on using this in their business. In the longer term more than half reported some form of practice change as a result of attending these activities.

Delivering information and technology has been greatly enhanced through the engagement of producers by using webinars and tele-workshops. The use of communication technology has allowed Leading Sheep to revolutionise the way it was communicated across the state which saved time and money for participants. Bringing experts to the remote areas of Queensland was as easy for industry participants as turning on their computer. This was seen by Leading Sheep as the way for doing its business in the future and Leading Sheep can claim credit for being a leader in the agricultural field.

Leading Sheep also developed an extensive network and database of sheep producers and this has provided a quick and easy method of communication and information dissemination. In addition, a major and ongoing publicity campaign led to Leading Sheep being readily recognised by producers and becoming a clear point of contact.

The success of the first phase of Leading Sheep encouraged the partners to continue with the project. The new phase of Leading Sheep (Leading Sheep 2) continued with the same operating model but placed more emphasis on:

- maintaining the partnership between AWI, AgForce, DEEDI and producers;
- establishing partnerships with other projects such as Making More from Sheep;
- continued development of the Leading Sheep website and database;
- continued marketing of the Leading Sheep brand;
- further quantifying practice change against current outcomes; and
- embracing innovative approaches identified by industry to maximise the likelihood of change such as:
 - electronic delivery by webinar technology;
 - engaging youth in the industry;
 - understanding key profit drivers; and
 - enhancing interpersonal skills.

4. Aims and methods

4.1 Aims

Leading Sheep 2 aimed to achieve the following by the end of 2010. This end date was later extended to July 2011, as requested by AWI.

1. **To have an extra 10% (80) of Queensland sheep producers implementing recognised environmental management systems in response to emerging international requirements.** These will include:
 - Integrated Parasite Management
 - Mulesing alternatives

2. **To enhance sheep and property management practices by having a total of 120 sheep producers in four regions undertaking one of the following:**
 - seasonal forecasting tools
 - automatic handling and drafting
 - electronic sharing of information and data
 - breeding, selection and production management
 - sustainable resource use

3. **To have 25% (200) of Queensland sheep producers improve the profitability and sustainability of their enterprise by:**
 - responding to key profit drivers
 - managing pasture availability
 - feeding for production
 - confinement feeding

4. **To reduce losses due to predation by providing support for participation in nil-tenure (no boundaries) integrated pest management control plans across regions for 25% (200) of sheep producers.** These will include:
 - wild dogs
 - pigs
 - foxes

The four outcomes describing how these aims were to be achieved, under the headings *Meeting Customer Needs, Enhanced Management Practices, Value Adding Production, Management of Predators*, are presented in Appendix 1.

4.2 Methods

Leading Sheep 2 had four main operational components:

1. Four regional networks of producers each with a committee tasked with identifying and prioritising needs and building ownership, capacity and leadership skills;
2. A comprehensive communication and branding strategy to raise awareness and provide a clear point of contact;
3. A rigorous program of monitoring and evaluation spanning the usefulness of individual activities to on-farm practice change; and,

4. A project management and stakeholder project advisory panel to provide strategic assessment and direction.

For project delivery, Queensland remained divided into four regions (South-East, Southern Inland, South-West, and North/Central West) and each region continued to operate a committee. Woolgrowers and service providers on each committee had the services of a part-time coordinator¹ with a DEEDI/DPI&F extension officer attached part-time to each of the four regions. Each regional committee met face to face at least once each 12 month period while holding a number (3-4) of supportive teleconferences. All regional coordinators and extension officers, as a group, along with the project manager also participated in monthly web-meetings to discuss and review activities that had been conducted and determine plans for the future.

The producer driven committees working with their regional networks identified the technology that is most relevant to their area. Co-ordinators and extension officers then organised activities delivered via the most appropriate delivery method. Co-operation between regions often allowed a series of activities to be delivered on the same topic including sharing presenters.

Managing activities across the region relied heavily on Leading Sheep 2 having an efficient and updated producer database and processes in place to make the contents available to AWI. Emphasis was placed on ensuring the current database was continuously scrutinised for errors and omissions in order to provide the extension staff with the most efficient means of communication with their regional producer networks. A communication partnership was established that enhanced Leading Sheep 2's ability to assess, document and train clients in the ability to use modern communication technology for the transfer, not just of information, but also of information technologies. Maintenance of a complete and accurate database was important to communication, and its innovative online storage enabled easy, secure access and updating by a range of authorised users.

Communication was integral to achieving project outcomes. A professional media consultant was engaged to manage the major publicity campaign, using regional media outlets across the four regions. Information was broadcast so that producers knew of new technologies and those appropriate to emerging conditions, and also knew of activities available to them to build their skill and confidence in their application. The goal was also to achieve significant public exposure and recognition of the importance of the industry to the State's regional economy and build State and National recognition of the already established Leading Sheep brand.

The collection of reliable data to inform AWI, AgForce, the PAP and DEEDI in their design of Leading Sheep 3 was achieved through a comprehensive survey of producers from all four regions.

4.3 Innovation

Leading Sheep focused on six innovative approaches to increase the potential impact of the project:

1. E-savvy producers: Building producers' interest and skills in using online tools to overcome some of the distance barriers of living in outback Queensland. By providing flexible delivery options, including e-technologies such as tele- and online- meetings, workshops, seminars, document sharing, websites, shared database, etc, producers would have greater and more affordable access to latest information and technologies relevant to the sheep industry. This approach was delivered alongside traditional

¹ A coordinator is a private consultant, with local knowledge, who works with the committee and the extension officer to determine priorities, organise and evaluate activities for delivering the project goals in their region, in the context of local producers' needs. Coordinators also facilitate the regional committees.

delivery mechanisms with the flexibility to adjust the mix according to each group's need.

2. Engaging youth, to secure the future of the industry: Partnering with educational institutions to raise the profile of the sheep industry with tertiary students from various disciplines and raise awareness of career opportunities
3. Efficiencies through synergy with other initiatives: Integrating the two projects, Leading Sheep and Making More from Sheep (MMfS), enabled the first to be enhanced with the well-developed content and tools from MMfS, and enhancing MMfS by delivering it through the well-developed networks and tools of Leading Sheep.
4. Collaboration with the Sheep CRC and other industry providers: With a particular focus on climate forecasting, automatic stock handling, genetics to improve management practices, breech strike management and lice.
5. Developing a strong foundation: Building producers' skills in stress management, business management, negotiation and leadership to grow the resilience and capacity of the industry generally: The Queensland Government's Building Rural Leadership course was adapted to suit the needs of sheep industry participants and was delivered in three centres, with courses being open to all regions.
6. Cooperative approach to predator control: In highlighting the issue as a major limiting factor to the Queensland sheep industry, Leading Sheep led the development of a partnership approach, between all major stakeholders, to managing Wild Dogs.

5. Measuring success

5.1 Overview

Monitoring and evaluation for Leading Sheep 2 was based on the information and resources developed in Leading Sheep 1. It evaluated the performance against the project's aims and objectives. The overarching Leading Sheep evaluation methodology was to:

- Develop a Leading Sheep 2 log frame based on project objectives linked to the elements of Bennett's hierarchy
- Redesign evaluation tools that match Bennett's Hierarchy elements and incorporate knowledge gained in LS 1.
- Design each activity and its expected long and short term effects using the evaluation tools
- Evaluate the immediate effects of the activity – target 100% of attendees – using a custom web-based evaluation format or a hardcopy evaluation format depending on the situation
- Regional committees to use immediate effects data to inform their future action
- Evaluate the longer term effects – target minimum 10% of original attendees with direct follow-up
- Regional committees use longer term effects data as it becomes available to inform their future action
- Report evaluation data to advisory panel and partners.

The role of the evaluator in this methodology was to support Leading Sheep staff to evaluate their work towards project objectives. This was pursued at two levels, first as practical support and second in promoting a culture of evaluation in staff and wool producers.

5.2 Evaluation methodology

Evaluation in Leading Sheep 2 at the methodology level was designed to build a platform for future long term practice change. The first step in the methodology was to determine the content for the design tool. This will come through an action research approach to evaluation of content and process.

At the individual activity scale, evaluation design tools provide the means to direct attention to achieving project objectives and monitoring progress towards outcomes. Evaluation tools used in Leading Sheep 2 evaluation were:

1. Activities Evaluation Checklist for regional coordinating committees
2. Leading Sheep 2 Activity Design Recording Sheet – for evaluation
3. Leading Sheep 2 Assessment Recording Sheet – for evaluation
4. Leading Sheep 2 Activity Generic Short Term Evaluation Sheet
5. Leading Sheep 2 Activity Generic Long Term Evaluation Sheet

These items were used by regional coordinators to link Leading Sheep 2 objectives with activities in regions. They did so by placing Leading Sheep 2 objectives in the processes of activity design, in the conduct of activities and in evaluation of the activities. As well, the checklist encouraged the committees to at least refer to previous activities.

The tools include attention to immediate and long term effects. The structure of the tools changed through feedback from project staff. For example, a generic framework was developed for eliciting participant self-assessment of their change in knowledge, attitude, skills and aspirations. This was used in the short term evaluation.

Data to measure achievement of project objectives comes from short and long term evaluation of activities and is reported in Section 6.

5.3 Industry impact assessment

Using a Delphi survey technique, the evaluation co-coordinator electronically convened a group of specialists from across Australia with expertise in evaluation with a view to designing the best possible evaluation methodology for the project. Individuals worked anonymously to say how they would do impact evaluation. These experts each know what the others suggest and are asked to take that into account when responding to the survey questions.

The technique to emerge from the combination of the literature review and the Delphi survey material is that impacts in the economic, environmental and social arenas will be more evident if they are **designed into each activity** as it is prepared and presented.

5.4 Review of Leading Sheep 2 evaluation

In 2009 a desktop review of the systems of Leading Sheep 2 evaluation was conducted by an external consultant Jeff Coutts of Coutts J&R. This was in response to the wish by both project staff and AWI to ensure the evaluation was on track and capturing all relevant information. As a result of this review a number of additional evaluation assessment items were chosen to add breadth and depth in data collected. Additions include case studies with sheep producers, informed person interviews with stakeholders not directly involved in the project and structured debriefs with project staff.

5.5 Review of Leading Sheep structure

During the Mid Term Review in October 2009 AWI proposed that the structure of Leading Sheep should be reviewed, including both positives and negatives of the structure. The purpose of the review was to assess the structure and identify how it could be more efficient and cost effective in the future. The review was conducted with regional coordinators, regional committees, DEEDI extension officers, project manager and PAP members.

5.6 Industry benchmark surveying

Benchmark surveying has been run in 2006, 2007 and 2011. Each randomly sought industry data across LS 2 regions to systematically assess producer perceptions and practice changes in relation to the objectives of Leading Sheep 1 and 2. Comparisons between the three data sets are included in the final report.

5.7 Future direction

Another survey was conducted of Leading Sheep producers in 2010 to actively seek feedback about what their needs were both now and into the foreseeable future to ensure profitable and sustainable sheep enterprises. The survey was sent to 420 producers and regional committee members and coordinators were also asked to consult one-on-one with fellow producers.

6. Achievements

6.1 Evaluation

Leading Sheep 2 has delivered 87 events over three years to 2071 sheep and wool producers.

The Leading Sheep database records that 801 *different* people have attended at least one event. The event and number of attendances relationships are shown in Table 6.1. This data shows that 73% of the participants only attended one activity. However not all attendees or attendances have been recorded in the database which points to the need to revise quality protocols.

Table 6.1 Event/attendances relationship

Activities attended	Number of participants
1	582
2	121
3	43
4	17
5 or more	38

Queensland sheep producers are confident of the future for wool and sheep meat. The majority, 87.5%, intend to continue in the sheep industry for the next three years. Only 10% report not intending to stay. They appear to be quite confident in the future of the wool industry with a State average rating of 7.5/10. For their confidence in the future of the sheep meat industry they report an average rating of 7.9/10.

While direct attribution is not possible, survey data suggests Leading Sheep's work in the industry has contributed to the confidence of producers by providing a reliable and important source of information for practice change to the industry. This is supported in the following evaluation data.

6.1.1 Progress towards project objectives

Measured industry responses to Leading Sheep 2 work on each project objective show staff have achieved all practice change targets. Table 6.2 shows the feedback obtained on activities including the change in new knowledge and skills and the intention to change for each objective.

Table 6.2 Feedback on activities undertaken under each of the objectives of Leading Sheep

Objective	Main topics	No of activities	No of Attendees	Increase in skills and knowledge (%)	Intention to change (%)
1	Integrated parasite management Breech fly strike management Mulesing alternatives	25	427	80	64
2	Sheep and property management practices, eg reproduction, handling, breeding and NRM	21	483	75	73
3	Wool and Meat profitability, pastures and feeding	25	640	86	83
4	Predator control	13	404	88	55
Total		84	1954		

The long-term survey of 10% of those attending activities found 27-51% had made changes as a result. The industry practice change survey results show significantly higher numbers making changes which they attribute to involvement with Leading Sheep. That the independent survey figures for change exceed those of Leading Sheep's own long term data suggests the projects' process of long term data collection needs attention. Both sets of data are included and where necessary we have deferred to the practice change survey data because of its evidence of independence and rigour of the implementation.

It can be seen from the percentage of producers making changes to practice, and the total attending activities, that the target for each objective has been exceeded.

Table 6.3 shows the target and the evaluation data that demonstrates that achievement exceeds the project target. This suggests Leading Sheep's recognition and influence has increased.

Table 6.3 Project targets and achievement levels

Objective	Main topics	Made practice changes (from long term evaluation data) (%)	Attendees making changes following attendance at LS activities (from industry practice change survey)	Targets No. of producers making changes in objectives	Achievement of target
1	Integrated parasite management Breech fly strike management Mulesing alternatives	47 (200)	372	240	Yes
2	Sheep and property management practices, eg reproduction, handling, breeding and NRM	27 (130)	280	120	Yes
3	Wool and Meat profitability, pastures and feeding	Not available	310	200	Yes
4	Predator control	51 (206)	410	200	Yes

6.1.2 Summary of Industry Practice Change surveys 2006, 2007 and 2011

That Leading Sheep's influence has increased is supported by the practice change surveys conducted with Queensland sheep producers in 2006, 2007 (the last year of Leading Sheep 1) and 2011 (at the end of Leading Sheep 2). The surveys were conducted by telephone with 93 producers in 2006, 73 in 2007 and 80 in 2011. As the questions and topic areas were formulated in Leading Sheep 1, the contents do not line up exactly with the objectives of Leading Sheep 2.

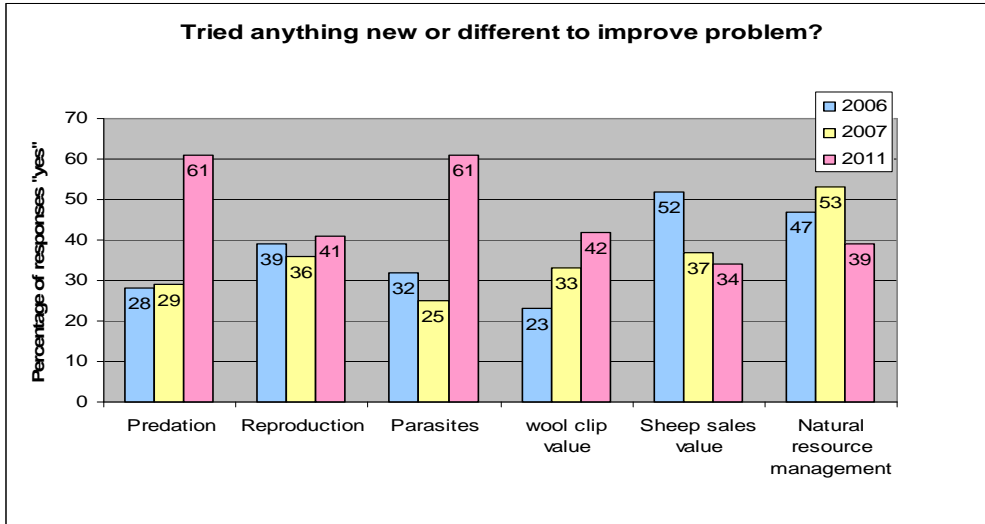
a) Problem size

Survey data shows predators have remained a moderate and increasing problem between 2006 and 2011 and parasites have increased to be a moderate issue in 2011 from a smaller problem in 2006 and 2007. Reproduction is seen as less of a problem which may be a function of satisfaction with natural resources which is in keeping with the majority of Queensland's sheep country having two wet summer seasons in 2009/10 and 2010/11 immediately prior to the survey. In addition, satisfaction with wool and sheep sales can be understood in terms of satisfaction with current commodity prices. Satisfactory environmental conditions may explain the decrease in those trying anything new with natural resources and the long term higher prices for sheep may explain the decrease in action on sheep sales.

b) Tried anything new or different to improve the problem

There has been a strong upward trend on the percentage of Queensland producers undertaking actions to do something new or different in the areas of predation (up 33%), parasites (up 29%), and wool clip value (up 19%). (Fig 6.1)

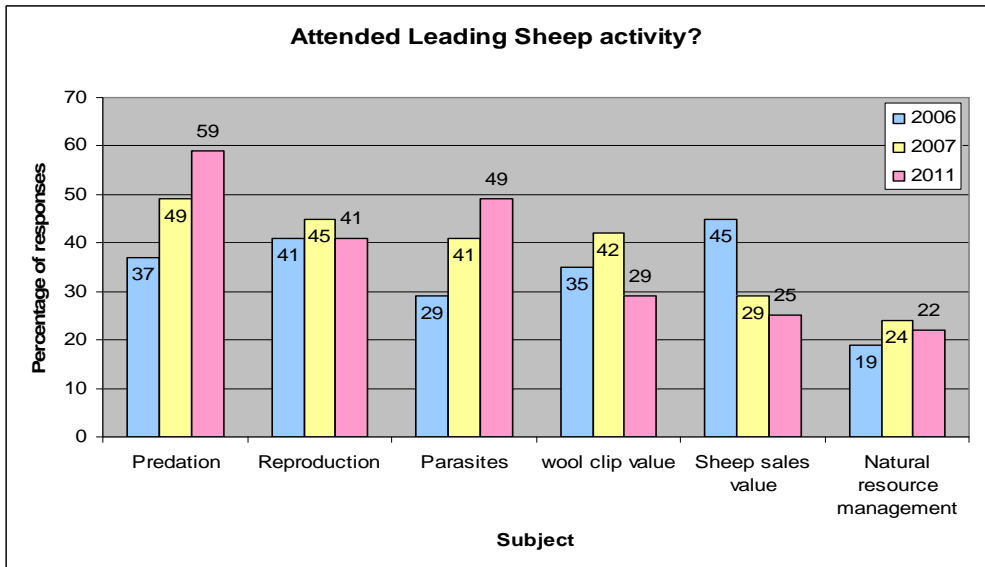
Fig 6.1 Tried anything new or different



c) Attendance at Leading Sheep activities and their influence

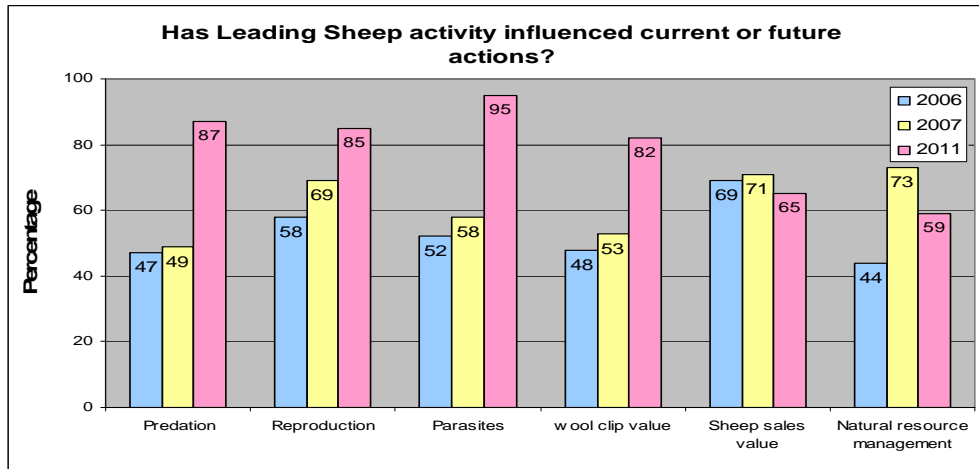
Producer involvement with Leading Sheep has strongly increased between 2006 and 2011 in the areas of predators (up 22%) and parasites (up 20%). (Fig 6.2)

Fig 6.2 Involvement with Leading Sheep



Overall, Queensland producers involved in Leading Sheep indicated an increase of the project's influence on their current and future actions (predators up 40%, reproduction up 27%, parasites up 43%, wool clip value up 34%). See Fig 6.3.

Fig 6.3 Influence of Leading Sheep



6.1.3 Case Studies of the changes made by clients

Case studies in this report are specific examples of the effect of the program. For Leading Sheep that means sheep producers who've attended one or more Leading Sheep events and changed practices.

In eight case studies 14 practice changes are reported in Managing for Improved Reproduction, Increased Weaner Survival and Parasite Control. These show that most are being innovative in and are initiating change in more than one management area.

Respondents said Leading Sheep initiatives are very worthwhile and their relevance to the region was of particular importance.

a) Costs and returns of change

Table 6.4 Case Study cost/benefit data from producer budgets and records

*Case study producer	LS objective	Change made	Costs	Production benefit	\$ benefits
Central West 1	3. Value adding production	Drenching of all sheep for worms Vaccination to prevent pulpy kidney	60c/hd (excl labour) (5,300 sheep run)	Increased weaner survival 2009 losses 15% 2010 losses 2%	\$10,000 [based on non recurrence of losses incurred in 2009]
South East 1	2. Enhanced management practices	Increase ewe flock from 300 to 1000 over next 12 months	Budget: 700 ewes \$91000 5 rams \$3000 Annual cost of supplement \$11000 Total \$105000	Income – sales of surplus sheep or store prime lambs.	Budget: Extra wool - \$30,000 Prime lambs 560 @ \$ 90 (28-30 kg stores) \$50,000 (Note: producer is currently understocked)
South West 1	1. Meeting customer needs (mulesing alternatives)	Stopped mulesing having trialed pain relief for 1 year and now purchases local rams adapted to the conditions	Nil	<ul style="list-style-type: none"> – Increased growth and survival of unmulesed lambs – More competition for wool from unmulesed sheep 	Saving of the \$2/lamb mulesing cost
South West 2	2 Enhanced management practices (breeding, selection and production)	Grade all ewes and use eID technology to record, grade and twin status for future selection	\$4/head to establish Annual cost \$2/hd	<ul style="list-style-type: none"> – Removal of non-productive ewes – Expected lift of 1.5kg dressed weight – Able to utilise country better without running more sheep 	Unavailable - full change not yet completed

* 4 of 8 producers have either budgeted the change and/or recorded related costs and returns.

Case study data offer insight into the dollar costs and benefits of changes made following involvement with Leading Sheep. The data presented show these producers, through their own measurements, have identified a benefit to their businesses from changing their management practices. They attribute the practice change to their attendance at activities presented by Leading Sheep and state that these activities have been of value to the industry.

b) Reliability and Importance of Leading Sheep information

Case study clients rated Leading Sheep as a reliable (100% of respondents) and an important source of management information (75% of respondents). (Tables 6.5 and 6.6)

Table 6.5 Reliability rating for Leading Sheep information for sheep management

Info not reliable 1	2	3	Not always reliable 4	5	6	Info very reliable 7
					√√√√√	√√√

Table 6.6 Importance of Leading Sheep to you as a source of information for sheep management

Not important 1	2	3	About 50/50 4	5	6	Very important 7
		√	√		√√√√√	√

Specific comment was made of Leading Sheep initiatives providing value for the wool grower dollars invested and providing information that is always up to date, specific and relevant. This is borne out also in activity and long term evaluation data.

6.1.4 Webinar delivery

Queensland sheep producers support webinar delivery with case study producers rating it positively because of cost and time efficiencies. Fifty percent of respondents rated webinars as ok and the other half rated them higher. They do however; qualify their responses in ways that signify that effectiveness varies for webinars in their current format. For example:

- ‘a bit dry – lack of discussion’ and ‘good for delivering information – not so good for interaction’

They also report access difficulties as making webinars more difficult for some. However, the limitations referred to have not seen any large decrease in the total numbers attending although they are off their peak of 2009. Table 6.7 shows attendance data for LS webinars.

Table 6.7 Attendance at webinars during Leading Sheep 1 and Leading Sheep 2

Project	Year	No. webinars delivered	Total no. participants	Average no. participants
LS 1	2007 only	11	181	17
LS 2	2008	5	129	26
	2009	14	472	34
	2010	14	367	26
	Jan-Apr 2011 only	4	88	22

Continuing producer difficulties experienced in using the technology appears the major limit to gaining attendance at webinars. Other factors affecting attendance may be the relevance and timing of the topic together with the skill of the presenter and facilitator.

In achievement debriefs Regional Coordinators and LS Extension Officers recognise the difficulties and suggest ways to improve webinar delivery (Table 6.8).

Table 6.8 Suggested improvements for webinar delivery

- | |
|--|
| <ul style="list-style-type: none"> - Their potential is yet to be developed - I don't think they have been anywhere near as successful as they could be - Need an educational program about (webinars) and development of their use - Develop skills to, 'deliver webinars in better or new ways to deliver appropriate messages' - Uptake of the methodology was quickest by the 'computer savvy' and would be assisted by instruction and demonstration of its use and potential [to others] |
|--|

The future for webinars in meeting the distance challenges of Queensland's industry and supporting the achievements of Leading Sheep 3 will require action to:

- Generate positive experiences with technology for producers, and
- Increase delivery skill, knowledge and practice for facilitators and presenters.

Other webinar events

Three other webinar events were run to support the Leading Sheep network in Leading Sheep 2. Following two flooding events webinars were held to provide flood support information to the network. Both events drew an audience of about 50 people. A third event, the Leading Sheep dialogue was held to connect the Minister for Agriculture, Food and Regional Communities, Hon. Tim Mulherin MP, with members of the Leading Sheep network. This event had 17 attendees.

6.1.5 Informed person interview data

Informed Persons, for the purposes of the Leading Sheep evaluation, are those with a stake in the outcomes; however they do not contribute at the operational level. Informed Persons represent DEEDI, AWI, AgForce and the consultant to the project.

All interviewees report a positive impression of the project and that they believe Leading Sheep 2 is meeting its objectives reasonably well. Particular positive reference was made to innovativeness in delivery methods and ways of engaging with extensive livestock industry. In relation to achieving objectives they suggest there is more to be done with getting youth involved and to ensure actions match the promise of recognition.

Other qualifying comments include '(Leading Sheep 2) didn't build on success of Leading Sheep 1' and that it 'needs pushing to improve engagement, content & professional delivery' because at times it, 'struggles for direction'. The primary difficulty identified by interviewees was the breakdown of continuity of personnel which produced staffing, project leadership and management issues.

Interviewees believe the partnership across DEEDI, AWI and AgForce worked well and the project was valuable.

6.1.6 Structured Debriefs

A "structured debrief" is a systematic way to capture the observations and experiences of people working in the project.

a) With Regional Coordinators

Regional Coordinators agree the LS brand is well recognised in the regions. They acknowledge the value of Regional Co-ordination Committees and the partnership between DEEDI, AWI and AgForce as strengths of the project and important in achieving project outcomes.

Regional Coordinators are concerned about:

- Frequent extension staff turnover, and insufficient staff
- The reduced flexibility for Regional Coordinator and Committee input on activity topics compared that permitted in Leading Sheep 1
- The insufficiency of Making More from Sheep funds to meet the actual costs of delivering events

To make Leading Sheep 3 a stronger project, Regional Co-ordinators offered the following:-

- Have continuity of Extension staff
- Better planning among Leading Sheep staff with participation in interregional gatherings
- Have a clear evaluative framework from the start (rather than multiple ones)
- Increased use of the Leading Sheep network for information dissemination
- Remember to not over-evaluate at activities and to focus on long-term evaluation (because of its value in assessing practice change).
- Increase communication between the Project Advisory Panel and the regions.

b) With Extension Officers

Six Extension Officers responded in the debrief. All identified the importance of the Regional Coordinating Committees and the impact they have on outcomes. They also recognise the value of the network and its role in the success of the project.

Extension officer concerns include:

- Funding inadequate for activities
- A lack of training or instruction on how to conduct webinars

Among the suggestions for a stronger project, Extension Officers suggest:

- Better use and maintenance of the network and data base
- More and better use of technology (including webinars)
- More appropriate planning, timing of initiatives and evaluation and reporting and linking activity to project goals and objectives
- An increase in communication between the Project Advisory Panel and the regions
- Introduction of new research and measurement of adoption, and
- Better leadership of and support and training for extension officers.

c) Project Managers

Two DEEDI staff filled the position of Project Manager in Leading Sheep 2. They report that Leading Sheep is a recognised brand that has stood the test of time by using a structure that includes the industry.

They report that at a state and industry level Leading Sheep had the first real impact on dog control with their educational approach to it. As well they recognise the role Leading Sheep played in establishing Queensland Government support for wild dog control coordination.

A strength referred to is Leading Sheep's recognition as a network and the network it has with AWI projects in other states.

They suggest the Project Advisory Panel has lessened its connection with the people in the regions however it has determined strategic direction. A suggested future model is to have the Project Advisory Panel made up of one Regional Coordinating Committee member from each region which is then headed by an independent chair.

They recognise the innovative use of webinars to overcome distance difficulties in producer access to information. They suggest Leading Sheep 3 needs to manage for staff succession and remain innovative to stay relevant.

6.1.7 Industry impact assessment

Evaluation experts were engaged in a Delphi survey to develop ideas for impact assessment. A summary of the steps the skilled professionals consistently gave as important in the process of social, environmental and economic impact evaluation for an industry are shown below.

1. Clarify (with partners) the purpose and agreed outcomes for the project for social, environmental and economic situations
2. Prepare the logframe to incorporate social, environmental and economic outcomes
3. Develop with core stakeholders an understanding of what is to be evaluated (and what is not), as well as why and how. For each activity design it to move the project towards the agreed social, environmental and economic impact
4. Decide on data collection methods matched to the data and sources
5. Analyse the data against the logframe, and key performance indicators and report it to all stakeholders

6.1.8 Review of Leading Sheep structure

A review of Leading Sheep structure was conducted with regional coordinators, regional coordinating committees, DEEDI extension officers, project manager and the Project Advisory Panel.

The review shows that due to Queensland's size, the structure of the four regions has worked well and allowed for each region to have area-specific workshops. The majority of people interviewed for this review indicated that they would like to see the continuation of the current structure – with the regional coordinators.

However, the main recommendation from this review is that regions be changed from four to three, by combining the Southern Inland and South East regions and leaving North/Central West and South West as they are. This suggested change would reinvest the \$45,000 of salary for the coordinator, over the life of the project, into operating for on-ground activities.

Also, to ensure everyone is aware of what is going on, from the Project Advisory Panel down to the committees and back up again, more work needs to be done on communication.

6.2 Future direction

An electronic survey to determine the priority issues facing Queensland sheep producers received 86 responses. Regional committee members and coordinators also consulted one-on-one with fellow producers. With the committee and survey responses combined it is estimated the results of this survey represent the views of 25% of Queensland sheep producers.

The key topic areas (in order of priority) producers require assistance with or information about are:

1. Feral animals
2. Use of day-to-day technology including E-technology eg webinars, mobile phones, computers, GPS, property mapping systems
3. Marketing and selling options for sheep
4. Nutrition to improve fertility
5. Animal welfare – working dogs and guardian animals
6. Marketing and selling options for wool
7. Maximising returns and minimising costs

Producers' first preference for receiving training was via face to face delivery (71%) and only 30% rating webinars as number one. While for receiving information producers prefer it via email or an emailed newsletter, with 53% and 55% respectively rating this as the number one information delivery method.

6.3 Communication and promotion

Leading Sheep 2 successfully delivered on its communications strategy achieving multimedia coverage and publicity for programs and activities and awareness raising of Leading Sheep 2 within sheep communities. The strategy focused at both the State and regional levels.

Over the life of Leading Sheep 2 there were 99 media releases produced and these were published in the Queensland Country Life, regional papers (Western Times, Longreach Leader, Western Star, Balonne Beacon, Goondiwindi Argus and Border Post), the Rural Weekly section of regional papers as well as on ABC radio.

Regular updates were provided for the Leading Sheep website including coming events for the calendar and published news releases.

For a full list of media releases generated throughout the Leading Sheep 2 project, please refer to the spreadsheet prepared by Collie (2011) titled: List of Media Releases 2008-2010.

7. Recommendations

1. Partnerships are essential to success

Strong linkages between Leading Sheep and AWI, MLA (Making More from Sheep), Sheep CRC, AgForce, DEEDI (including Biosecurity), DERM, and private consultants have been critical to this project's success. These partnerships should continue to be developed and strengthened to achieve even better results, more efficient use of resources and the elimination of duplication. This includes more efficient promotion of messages and activities of, not only Leading Sheep, but also the initiatives of the partners, while demonstrating broad support for the Leading Sheep project. A particular partnership initiative will be to collaborate on the QDOG project, as wild dogs are a significant obstacle to growth of the Queensland sheep industry.

2. Increase the use of e-technology by Queensland sheep and wool producers.

Leading Sheep has pioneered the use of webinars in delivering information to producers. The success of this venture needs to be built on and there are a number of ways to achieve this including:

- Getting producers to use additional on-line tools such as blogs and wikis and particularly targeting the young producers for this
- Training for presenters and facilitators so they are better able to use these e-tools to achieve more learning, interaction by the group and hopefully practice change
- Focusing webinars on topics that are of most interest to producers at the current time

If the webinars are well designed to promote interaction and discussion and focus on timely and relevant topics this should also increase attendance at webinars which has reduced over the last phase of Leading Sheep 2. However according to the survey by Stirton (2010) producers' first preference to receive training was via a face to face delivery method and this needs to be considered when planning the activity along with other constraints such as financial, time and other resources.

There is high staff turnover. There has been a reduction from 36 person years of webinar experience to only five years. As new staff come on board, attention will need to be paid to training in order to maintain quality and the user experience.

3. Producer determined key areas to focus on

Data obtained from an electronic survey of sheep producers in Queensland has been the basis of determining priorities for Leading Sheep 3. The main areas to focus on will be predators, nutrition, health, business, wool and meat marketing and selling. We will use current survey data from AWI and MLA to deliver responsive services that target topical issues as they emerge. Constant contact with regional committees will provide feedback to adapt services to meet real and current needs of producers.

4. Focus on a suite of relevant activities, rather than just one-off events

Over the life of the project Leading Sheep 2 has delivered 87 events. However this has to be tempered by the fact that almost 75% of producers have only attended one Leading Sheep event. If the events are focussed on relevant and timely topics, promoted successfully with engaging speakers it is assumed that producers would attend more than one event. Particularly if the event is planned as not just a one-off activity but rather a series of events over time and even with different delivery methods such as a face to face workshop, followed by a webinar for follow-up questions, then some information emailed at a later date. With this kind of support it is assumed that this would also assist and encourage producers to implement at least some of the promoted practice changes on their property. Particularly as the case study

data shows that Leading Sheep is seen as a reliable and important source of management information.

5. Improving evaluation

Through both Leading Sheep 1 and 2, evaluation has been a priority and a lot of work has been done to plan, capture and report this data. However, at times there has been a tendency to over-evaluate and not just collect the most important information as evidenced by the comments from both regional coordinators and extension officers in their debriefs.

Evaluation has also been made more complex by a number of projects and organisations contributing to the one event eg Leading Sheep and Making More from Sheep both funding and supporting the one workshop. The difficulty is that each project has its own set of requirements for evaluation which have to be combined together in the one format, so there is only one evaluation for the participant to complete. This adds to the number of questions and the complexity of the evaluation for the participant.

The most valuable future use of resources for Leading Sheep may be to reduce event evaluation to:

- usefulness of event
- scale of commitment
- what can be done to make the work of Leading Sheep of more assistance to you in making management decisions to change practices
- what can we learn for our future delivery

This would enable resources to be devoted to long term evaluation for implemented practice change and measurement of the impact on the industry as a whole.

By changing evaluation procedures to collect essential data only, Leading Sheep 3 can be better able to demonstrate its achievements without alienating its clientele. However, the issue of multiple funders (with differing evaluation requirements) for the one event still needs to be addressed.

6. Maintain a high emphasis on communication and promotion

Communication and maintenance of networks will continue to be a high priority. External communication with industry will improve the quality of design of workshop and webinar programs. Internal communication within the project team will ensure alignment, focusing on priorities and group learning for continuous improvement. High quality, frequent, effective communication to producers and partners will ensure messages are heard in a way which attracts participants to Leading Sheep activities and encourages their commitment to apply new knowledge.

Instead of contracting a communications officer on a long-term basis, better value for money can be gained by engaging DEEDI communication officers on a day to day basis, and employing communication specialist for priority work on an event/as needed basis.

This strategy would also help address high staff turnover and loss of experience as they have excellent skills and networks for promotion to attract the audience.

To achieve this it will be important to engage enthusiastic staff who are passionate about advancing the industry.

7. Improved use of the network, database and website

Setting up and maintaining a network requires a lot of technical skill and personal local knowledge. This high value information can be keenly sort after by other organisations who have much to gain by using the network. The network must only be used for activities aligned

with Leading Sheep. All communications need to be approved by the Project Manager in order to maintain quality and relevance. To maintain up-to-date information and the completeness and accuracy of the database it is necessary to give one person overall responsibility, including regular quality control at monthly staff meetings.

The role of Leading Sheep in the QDOG initiative will be as a conduit of information between producers, QDOG and Biosecurity Queensland, so that the producers drive initiatives. Leading Sheep will continue to utilise the website manager for promoting the coordination of predator control through the improved efficiency of the database and website.

A project is planned to develop a suite of tools to enable more efficient and effective evaluation, that is, data collection, analysis, reporting and storage. The database will also be used to store key documents for easy access and retrieval.

8. Maintain the focus on innovation.

Leading Sheep has been described as the 'premier extension team, within DEEDI, in delivering e-Services to primary producers' and is put forward as the model for problem solving through adoption of new communication technologies. This reputation should be sustained and built on by maintaining a focus on innovation, designing and testing new and better ways of meeting producers' needs and of growing the industry.

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Appendix 1. Outcomes of Leading Sheep 2

The four outcomes below were derived from consultation with industry representatives from across Queensland. All interested parties participated in a state wide workshop held in Charleville in March 2007 where regional groups were given the opportunity to be part of the overall direction of Leading Sheep 2. Following the workshop, further regional consultation fine tuned the direction industry wanted to take and these outcomes were considered critical in delivering increased profitability.

<u>Outcome One</u>	Target	Achievement Criteria
<i>Meeting customer needs</i>		
Groups	Sheep producers and industry service providers.	Attendees from both groups at LS 2 activities.
Outputs	Activities (workshops, seminars, field days, tele-workshops, webinars, publications) promoting EMS pathways. (Including IPM)	Deliver one activity per region per year on EMS pathways and IPM principles which address issues of chemical residues.
Immediate Outcome	After each activity, have 20% of attendees inquiring about how to establish integrated parasite management programs for their wool enterprise. A proportion (50%) of wool growers in Queensland aware of emerging international requirements.	Regional record on the database of the numbers inquiring after each activity.
Intermediate Outcome	10% of attendees have implemented an integrated pest management plan each year.	Evidence of producers with IPM plans in place.
Final Outcome	Meeting customer needs according to international requirements.	Increased amounts of Queensland meat and wool in the market which is meeting international standards for clean, ethical and environmentally sustainable production.

<u>Outcome Two</u> <i>Enhanced management practices</i>	Target	Achievement Criteria
Groups	Sheep producers and industry service providers.	Attendees from both groups at LS activities.
Outputs	Activities (workshops, seminars, field days, tele-workshops, webinars, publications) promoting; <ul style="list-style-type: none"> • seasonal forecasting tools • automatic handling and drafting • electronic sharing of information and data • breeding, selection and production management • sustainable resource use. 	One activity per region per year depending on the demand addressing needs of advanced property management practices.
Immediate Outcome	After each activity, 20% of attendees inquire about the technology presented. A proportion (50%) of sheep producers in Queensland are aware of technical advances and new technology.	Regional record on the database of enquiries after each activity.
Intermediate Outcome	10% of attendees have implemented practices for enhanced property management practices.	Evidence of infrastructure or plans that have been put in place.
Final Outcome	Adopted enhanced property management practices.	Producers using; <ul style="list-style-type: none"> • electronic tags to identify individual sheep. • automatic handling and drafting systems into their management. • tools for seasonal forecasting and decision making. • database selection • other emerging technologies.

Outcome Three <i>Value adding production</i>	Target	Achievement Criteria
Groups	Sheep producers and industry service providers.	Attendees from both groups at LS 2 activities.
Outputs	Activities (workshops, seminars, field days, tele-workshops, webinars, publications) providing technical information on; <ul style="list-style-type: none"> • key profit drivers • managing pasture availability • supplementary feeding for production • confinement feeding. 	One activity per region per year, depending on the demand addressing local needs on management practices.
Immediate Outcome	20% of attendees after each activity inquire about management practices that will lead to an increase in the value of their wool and/or meat. A proportion (50%) of sheep producers in Queensland aware of the practices required to increase the value of their wool and/or meat.	Regional record on the database of enquiries after each activity. Record of activities to create awareness of the management practices.
Intermediate Outcome	10% of attendees implement practices that will lead to the increase in value of their wool and/or meat.	Evidence of practices or plans that have been implemented from sources such as the Making More From Sheep (MMFS) program.
Final Outcome	Adding value to their wool and/or meat production.	Producers managing through attention to; <ul style="list-style-type: none"> • the key profit drivers • the pasture and its availability. • the feeding for production. • confinement feeding when appropriate.

Outcome Four <i>Management of predators</i>	Target	Achievement Criteria
Groups	Sheep producers and industry service providers.	Attendees from both groups at LS 2 activities.
Outputs	Activities (workshops, seminars, field days, tele-workshops, webinars, publications) providing technical information on control plans for; <ul style="list-style-type: none"> • wild dogs • feral pigs • foxes. 	One activity per region per year depending on the demand addressing local needs on predator control programs.
Immediate Outcome	20% of attendees after each activity inquire about practices and participation for the control of predators. A proportion (50%) of sheep producers in Queensland aware of the practices required to achieve total management of predators.	Regional record on the database of numbers enquiring after each activity. Record of activities to create awareness of the management practices.
Intermediate Outcome	10% of attendees implement practices that will lead to the integrated control of targeted predators.	Integration across all regions of control practices that will minimise the effects of predation on sheep by wild dogs, feral pigs and foxes.
Final Outcome	Improved total management of predators in each region.	Evidence of less predators and a decrease in the losses reported by sheep producers.

Appendix 2. List of Leading Sheep 2 activities

Name of activity	Location	Date	Numbers attended
Best practice baiting techniques	Webinar	15 April 2011	23
Fire: Master or Servant? Your call!	Webinar	25 March 2011	31
Marketing opportunities for Qld lamb	Webinar	15 March 2011	14
Flood support	Webinar	4 March 2011	20
Bred Well, Fed Well	Goondiwindi	9 December 2010	80
Skintraction	Webinar	2 December 2010	10
Worm burdens in the pastoral zone	Webinar	18 November 2010	11
Pittsworth Abattoir	Webinar	28 October 2010	14
Zolvix	Webinar	7 October 2010	15
Predator control	Thargomindah	4 October 2010	17
Pimelea	Webinar	24 September 2010	24
Wean more lambs	Longreach	15 September 2010	36
Buying sheep from southern states	Webinar	5 August 2010	12
Blowfly management and pasture ID	Quilpie	30 June 2010	16
Sheepmeat MSA	Webinar	24 June 2010	16
Sheep reproduction and MSA for sheep meat	Winton	27 May 2010	15
Sheep reproduction and MSA for sheep meat	Quilpie	24 May 2010	13
Wool classers code of practice	Webinar	23 April 2010	4
Sheep Lice – getting it right	Webinar	29 March 2010	9
Sheep Lice – getting it right	Muttaborra	18 March 2010	16
Sheep Lice – getting it right	Blackall	17 March 2010	12
Flood information and grants	Webinar	4 March 2010	78
Predator control	Nindigully	26 February 2010	32
Predator control	Bollon	25 February 2010	10
Improving your flock genetics	Longreach	25 February 2010	31
Electric fencing	Webinar	25 February 2010	55
Managing worms	Webinar	18 February 2010	40
Sheep lice – getting it right	Inglewood	10 February 2010	14
Sheep lice – getting it right	Dirranbandi	9 February 2010	11
Managing flystrike risk	Webinar	4 February 2010	70
Ley pastures and sheep	Webinar	28 January 2010	9
Supplementary feeding	Longreach	11 December 2009	59
LiceBoss	Webinar	9 December 2009	14
LiceBoss	Webinar	8 December 2009	18
Wild dog trapping	Tambo	4 December 2009	29
Wild dog control – making it happen	Webinar	3 December 2009	59
LiceSense	Webinar	2 December 2009	11
LiceSense	Webinar	1 December 2009	20
Gain from genetics - ASBVs	Webinar	1 December 2009	19
Cost of production – follow up	Goondiwindi	6 November 2009	7
Cost of production – follow up	Cunnamulla	4 November 2009	7
Cost of production – follow up	Longreach	2 November 2009	9
Wild dog trapping	Blackall	12 October 2009	15
Cost of production	Goondiwindi	25 September 2009	8
Cost of production	Cunnamulla	23 September	6
Cost of production	Longreach	21 September 2009	11
Lice detection test	Webinar	17 September 2009	16

Breech strike management	Talwood	30 July 2009	11
Breech strike management	Bollon	29 July 2009	22
Market focused wool and meat (global economics)	Webinar	24 July 2009	24
Breech strike management	Wyandra	24 July 2009	14
Breech strike management	Quilpie	23 July 2009	16
Breech strike management	Longreach	16 July 2009	17
Breech strike management	Blackall	15 July 2009	22
Leading Sheep dialogue forum	Webinar	30 June 2009	19
Farm Safe regional tour	Cunnamulla, Thargomindah & Quilpie	30 June, 1 & 2 July 2009	37
Sheep reproduction and genetics	Longreach	28 May 2009	27
Sheep reproduction and genetics	Blackall	27 May 2009	20
Market outlook for wool	Webinar	7 May 2009	138
Flock reproduction and managing scanned ewes	Cunnamulla	29 April 2009	22
Flock reproduction and managing scanned ewes	Dirranbandi	28 April 2009	12
Flock reproduction and managing scanned ewes	Goondiwindi	27 April 2009	27
Predator control	Morven	23 April 2009	18
Predator control	Quilpie	22 April 2009	25
Farm Safe	Morven	2 April 2009	7
Carbon neutral wool	Webinar	24 March 2009	44
Climate risk	Webinar	16 March 2009	90
Plan for Success	Cunnamulla	18 February 2009	33
Mulesing accreditation	Bollon	31 October 2008	10
Mulesing accreditation	Quilpie	29 October 2008	7
Predator control	Hughenden, Isisford & Blackall	24 September 2008	135
Mulesing accreditation	Thargomindah	22 September 2008	11
Gain from genetics	St George	18 September 2008	17
Gain from genetics	Cunnamulla	9 July 2008	16
Feedlot calculator	Webinar	1 July 2008	16
Carbon neutral wool	Webinar	5 June 2008	23
Wild dog management	Webinar	8 May 2008	41
Upright shearing platform	Webinar	17 April 2008	12
Carbon trading	Charleville	17 April 2008	13
Carbon Trading	Goondiwindi	15 April 2008	22
Carbon trading	Webinar	10 April 2008	20
Dung beetles and pasture	Webinar	3 April 2008	13
Worms and management	Webinar	13 March 2008	4
Total number of events	87	Total number of participants	2071

Appendix 3. Project Advisory Panel

Name	Address	Phone	Email	Representation
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Appendix 4. Regional Coordinating Committees

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