



finalreport

Project code: B.MMS.1019

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Industries, Orange

Date published: November 2013

ISBN: 9781740361743

PUBLISHED BY

Meat & Livestock Australia Locked Bag 991 NORTH SYDNEY NSW 2059

Making More from Sheep

Meat & Livestock Australia acknowledges the matching funds provided by the Australian Government to support the research and development detailed in this publication.

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Abstract

Making More from Sheep is a majority market extension program funded by Meat & Livestock Australia and Australian Wool Innovation. Phase II of MMfS commenced in NSW with a business planning process in October 2010 and delivery from December 2010 until November 2013. Lloyd Kingham of NSWDPI was initially the State Coordinator with responsibility for planning, project implementation, monitoring and evaluation. He was replaced by Shelly Anderson and then Sally Duff. Delivery involving partner organisations provided best practice management information and tools to sheep producers with target KPIs exceeded across all three tiers of engagement category. One hundred and twenty events were delivered to 2761 participants. Satisfaction and value scores averaged across all events measured 8.7 and 8.4 respectively. Operational recommendations have been included in the report.

Executive Summary

The delivery of Making More from Sheep (MMfS) in NSW has seen a large range of activities held during the contract period. This range of activities has given NSW producers the opportunity to engage in a variety of supportive learning activities.

For the contract period 1st January 2010 to 30th November 2013 key performance indicators (KPI) were surpassed for the *Number of Participants* in NSW for the MMfS project. MMfS outcomes during this period were achieved through strong emphasis on the delivery of targeted extension training to NSW sheep producers via a number of avenues including one-day accredited workshops, e-learning opportunities including webinars and online training, seasonal update activities and producer meetings, and ongoing group training involving smaller producer network groups.

A total of 120 MMfS events were held with 2,761 sheep industry participants involved. Evaluation data reveals that 83% of participating businesses said they would change something in their business as a result of attending the activity. 96% of participating businesses said they would recommend the event to others. The average satisfaction rating was 8.7 which was slightly higher than the national average of 8.6. The average value rating was 8.4, which was also slightly above the national average of 8.3.

Highlights of the year for Making More from Sheep in NSW included the successful partnership which was developed between NSW DPI and consultants *Productive Nutrition* Pty Ltd. A series of 10 workshops were rolled out in 2013 on Profitable Sheep Nutrition and Management which attracted 235 participants.

The sheep industry has greatly benefited from this program in NSW, as the results show. The benefits are magnified when the MMfS and More Beef from Pastures programs are offered and promoted simultaneously on a common platform. This hand-in-glove connection also helps to promote a holistic approach to southern mixed farming systems, and encourages greater interaction and cooperation between industry sectors and producer groups.

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1. Background

The aim of all the MMfS events in the 2010-2013 strategic plan was to focus on practice change by moving producers from simple awareness to adoption of the program's principles. In NSW the state coordinator worked as part of a state team as well as the national team, to develop material and presentations suitable for delivery as part of MMfS program activities within the state.

MMfS facilitated NSW sheep producers with their capacity to change, to improve their profitability and sustainability by influencing them to:

- a) recognise the target management practices and MMfS principles and procedures as important for their farm business
- b) be motivated and better equipped with knowledge and skills to implement the target management practices and
- c) implement into their management the target practices using the principles and procedures of the MMfS program.

2. Project Objectives

Working as part of a national team led by the MMfS program National Co-ordinator, the following objectives were established:

- 1. The State Business Plan:
 - formed the basis of the key deliverables of the project in NSW
 - included an annual operating plan of activities in line with appropriate state key performance indicators and activities targeting specified producer segments and across delivery resources (public and/or private) appropriate for A, B & C level activities
 - outlined the state delivery team, including public and private deliverers
- 2. Co-ordination of State Business Plan implementation:
 - included the implementation of the business plan activities, directing resources, training and engaging a team of public and private sector delivers/facilitators as appropriate across respective program activities
 - to be the key point of contact and co-ordinator for engaging the state based network of program producer advocates
 - maintain a database of participants and provide this list to the National Coordinator on an agreed timely basis (an Excel template was provided)
 - attend regular phone meetings to report on completed activities, engagement of producers and achievements towards the operational plan targets and a list of planned activities, including dates and location of events to be posted on the MLA website and respective MLA publications
 - attend up to two state co-ordinator face to face meetings per year to present an update of key achievements and milestones and assist in continuous improvement of program delivery, activities and tools
 - provide milestone reports promptly and to an acceptable standard to MLA and AWI
 - co-ordinate and source articles for MLA publications and the e-newsletter from delivery team members
 - · co-ordinate and integrate activities with other existing state based networks
 - comply with MLA standard processes for event promotion and use the program brand/s in accordance with MMfS style guidelines
- 3. Monitoring and evaluation data:
 - All specified monitoring and evaluation was executed as per agreed processes, with all data collated and provided monthly and six monthly reports to the National Co-ordinator, MLA and AWI. The standard MMfS monitoring and evaluation processes included:
 - a) Category A: Measuring awareness, satisfaction, value and intention to change. At least 60% participant feedback sheets using the standard MMfS template were to be collected for all Category A activities.
 - b) Category B: Measuring shifts in knowledge, skills and confidence (KSC). Knowledge and skills audits which indicate KSC change as a result of Category B activities are to be conducted with at least 80% participants of Category B activities.
 - c) Category C: Measuring practice change and program impact. Practice change was to be recorded for 80% of participants in all Category C activities.

3. Methodology

Delivery of the NSW MMfS program was administered via a dedicated MMfS coordination team including the project coordinator and the NSW DPI Extensive Livestock Industry Development (ELID) extension team (comprising regional sheep officers, technical specialists in sheep and pasture, regional agronomists, and key project support staff - data handing/analysis and project support).

In September 2011, Lloyd Kingham, who was engaged in July 2009 as the MMfS and More Beef from Pastures State Coordinator, relinquished his role with the project in favour of a permanent opportunity within NSW DPI. This decision resulted from the uncertainty of the future of the project based on the ongoing contractual negotiations. The contract was ultimately resolved and Michelle Anderson was appointed as the new Coordinator for both the MMfS and MBfP projects. From February to November 2013, Sally Duff filled the role of Coordinator whilst Michelle took maternity leave.

The MMfS project was positioned in-line with the recognised priorities of MLA, AWI and the NSW DPI Extensive Livestock (ELID) team. The DPI ELID extension team managed and delivered the majority of the MMfS initiative in NSW. The comprehensive structure of the MMfS program helped form the basis of the DPI sheep extension priorities, which themselves, aligned with the DPI highest priority R, D & E areas. Those program areas which were identified as high priority extension areas and aligned with MMfS modules included:

- Livestock genetics and selection (MMfS Module 9)
- Flock management (MMfS Module 10)
- Livestock health, welfare and traceability (MMfS Module 11)

Particular outcomes from these priority areas included:

- · Livestock genetics and selection:
 - To increase adoption of appropriate genetics and selection techniques to enable breeders to meet specific production targets.
 - Increase adoption of appropriate breeding and genetics to respond to market signals and optimise welfare, efficiency and productivity.
- Flock management:
 - o Increase the adaption of improved flock management for increased reproductive performance and weaner survival.
 - Increase the adoption of proactive decision making for timely management.
- Livestock health, welfare and traceability:
 - Improve the adoption of flock health management practices.
 - Increase the adoption of improved disease management and on-farm biosecurity practices.

The MMfS program was closely aligned with the NSW DPI ELID sheep priorities. ELID priority D and E areas were:

- 1. Productivity and food security
 - 1.1 Adoption of appropriate genetics and selection techniques.
 - 1.2. Adoption of appropriate grazing system management practices.
 - 1.3. Adoption of improved breeding management for increased reproductive performance and weaner survival.

- 1.4. Develop and use business analysis tools to assess and manage the profit drivers impacting on the flock within the whole farm business.
- 1.5. Adoption of appropriate flock health management practices.
- 1.6. Develop better processes for POCTA cases and extend appropriate animal welfare standards.

2. Biosecurity

- 2.1. Adoption of increased compliance of NLIS and promoting on-farm biosecurity programs.
- 2.2. Rapid and appropriate response to Emergency management requirements.
- 3. Water Management and Climate variability and change
 - 3.1. Develop and achieve adoption of appropriate management practices which limit the financial, social and environmental impacts of climate variability.
 - 3.2 Develop and extend knowledge on adaptation to climate change regional impacts, emissions trading, carbon management.

The promotion of MMfS in NSW was managed both by the State Coordinator and by individual event organisers and presenters. Program activities were promoted on an individual event basis through a variety of communication channels including:

- Hard copy and email event flyers circulated throughout the existing producer networks, grower groups, and at other industry events.
- Print advertising in local and regional newspapers, grower newsletters and via partner organisations.
- NSW DPI and SCnsw Twitter accounts.
- Advertising of events on the MMfS Webpage.
- Utilisation of the MLA Fax-out service during the early stages of the project (this service was cancelled in mid 2012).

The Sheep Connect NSW (SCnsw) network provided essential promotional and administrative support to MMfS in NSW through the utilisation of its extensive member newsletter system and cross-promotion of industry activities. The network provided MMfS with access to a centralised industry 'hub' with information on other MMfS activities, easy access to the information resources provided at these events, and a platform for the formation of a supportive industry community and information resource via the SCnsw newsletter blog.

The key activities delivered by NSW DPI in the MMfS program were focused around providing producers with knowledge and skills that would enable greater profitability, sustainability and capacity to better manage risk. This focus flowed through to small group discussions which helped producers to recognise opportunities for practice change by providing comfortable, information sharing forums for producers to engage in, and motivation to implement changes on farm.

NSW DPI adhered to the total MLA and AWI supplied producer targets in event Categories A, B and C:

• Category A (awareness) activities:

NSW DPI ran a campaign of seasonal update meetings (field days) across NSW over the summer and autumn months. These practical days were a means of meeting Category A targets and sought to cover general information across many of the MMfS modules. These events set up a program of industry initiated Category B type activities which reflected producer demand for

skills and knowledge during that each yearly production cycle. Other awareness activities were undertaken, particularly in collaboration with other existing programs or groups where there was available opportunity. This collaboration generally involved the partnering with one or more other industry organisations or network groups to share an event platform where large groups of producers could be targeted. These partnerships were very beneficial by facilitating cross-promotional opportunities which strengthened ongoing support of the MMfS program through other reputable organisations. Examples include EH Graham Centre activities, Evergraze activities, and CMA grower groups.

Category B (KASA) activities:

NSW DPI identified that the MMfS Category B type activities matched the enrolment and skills assessment requirements of the nationally accredited and recognised PROfarm® courses. NSW DPI aligned the learning outcomes of these courses against the relevant MMfS modules, and delivered the diverse range of courses in response to identified needs across NSW (No MMfS funds were used to subsidise PROfarm workshop delivery). By aligning existing PROfarm courses with their MMfS counterparts, NSW DPI was able to develop and include learning materials and resources to supplement existing course content. This provided significant benefits to both producer participants and trainers alike, by broadening the content and range of course information to benefit more skilled producers as well as providing a logical learning progression to other MMfS events.

Category C (practice change) activities:

Many of the activities delivered as category B activities were ultimately revealed to achieve significant evidence of practice change. MLA data analysis of the evaluation of Cat B events identified that many participants were presenting information and confirming via evaluation, considerable levels of practice change as a direct result of attending the MMfS activity. As a result, MLA altered the Category of these events in the database from Cat B to Cat C. NSW DPI targeted existing sheep network groups and ongoing MMfS groups which arose from activities delivered during MMfS Phase I and events early in 2010. These groups were essentially 'closed' groups, and consisted of a small group of like-minded producers, to whom MMfS activities were regularly delivered. These producer-driven groups were formed specifically for the purpose of MMfS and presented an ideal opportunity to gauge ongoing intended and actual practice change. NSW DPI did run a number of specific Cat C events including the majority of the Sheep Fly and Lice Prevention Workshops, held throughout late 2011 and early 2012. These workshops were developed in response to a short-term, high-priority need for information and focused specifically on obtaining practice change through practical demonstration and skill-based training of parasite management techniques. These groups presented an ideal opportunity to gauge ongoing intended and actual practice change.

NSW DPI co-branded its field days and workshops where the tools and outcomes expected were consistent with the MMfS modules. Examples of this include the delivery of the Managing Scanned Ewes workshops co-branded with the *Wean More Lambs* module. Collaboration with other industry organisation was an important component of the NSW DPI delivery model. NSW DPI worked closely with local scanning contractors to deliver these workshops as well as the Livestock Heath and Pest Authority (LHPA), sheepmeat processors, and various agri-chemical companies throughout the course of the project.

In accordance with MLA priority to develop the capacity of the private sector, NSW DPI actively sought to engage private deliverers under the MMfS banner. In early 2011 a series of Agribusiness workshops were held with the intention of scoping out opportunities to work with private service providers and to seek expressions of interest to deliver workshops under the MMfS program. Several key industry service providers, organisations and networks were identified to deliver MMfS activities in addition to those delivered by NSW DPI. Particular consideration was given to group-based networks and service providers with the capacity or

skills to deliver content under the modules which fell outside the identified state DPI extension priorities.

This aim of this process was to provide producers with greater access to a suite of advisors who could provide information and training in combination and addition to that provided by NSW DPI. The aim was to offer additional support to producers via a multi-disciplinary team consisting of both private and public extension personnel. This coordinated approach was designed to facilitate a wholistic approach to learning and develop the capacity of producers by:

- Increasing the number of producers reached by the MMfS program.
- Providing an extended support system to assist with the implementation of changes to their farm business or management practices (improved continuity of care).

NSW DPI sheep officers identified and selected a number of industry advocates to assist with promotion of the program and to showcase their own achievements with reference to practice change on-farm. These advocates were selected based on their own merit and their ability to inspire others. The advocates were only used to a limited extent throughout the three years of the project. There was no particular reason for this lack of involvement. Delays in contractual negotiations between DPI and MLA throughout the early stages of the project did inhibit formalising agreements with any advocates, which flowed through to the later stages of the project.

4. Results

4.1 Number of Participants

For the contract period 1 January 2010 to November 2013, the NSW MMfS project exceeded the key performance indicators (KPI's) for *Number of Participants* for Category A, B and C events. See Table 1.

Table 1: Number of Participants

Category	KPI	Actual	% Achieved of 3 Year Target
А	1,328	1,818	137%
В	470	634	135%
С	235	309	131%
Total	2,033	2,761	136%

4.2 Evaluation Return Rate

NSW was below the targeted KPI for *Evaluation Return Rate* for Category A, B and C. See Table 2.

Table 2: Evaluation Return Rate

Category	Target	Actual
Α	65%	60%
В	80%	31%
С	80%	37%

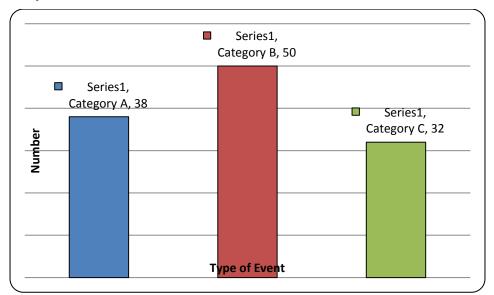
4.3 Change in Knowledge, Skills and Confidence

Pre and Post-event knowledge and skills audits were carried out during Category B and C events and participants were also asked a question relating to the level of confidence they had in putting the teachings from the event into practice. This was calculated on a score between 1 and 10. The overall average confidence score across all events was 7.9, indicating that the majority of participants were reasonably confident that they could make changes in their management or business practices on-farm.

The average pre-workshop score is 48% correct answers, with a post-workshop score of 86%, thus indicating a change in knowledge and skills.

4.4 Number of Events

A total of 120 MMfS events were held with 2,761 sheep industry participants involved. There were 38 Category A events, 50 Category B events and 32 Category C events. See Graph 1.

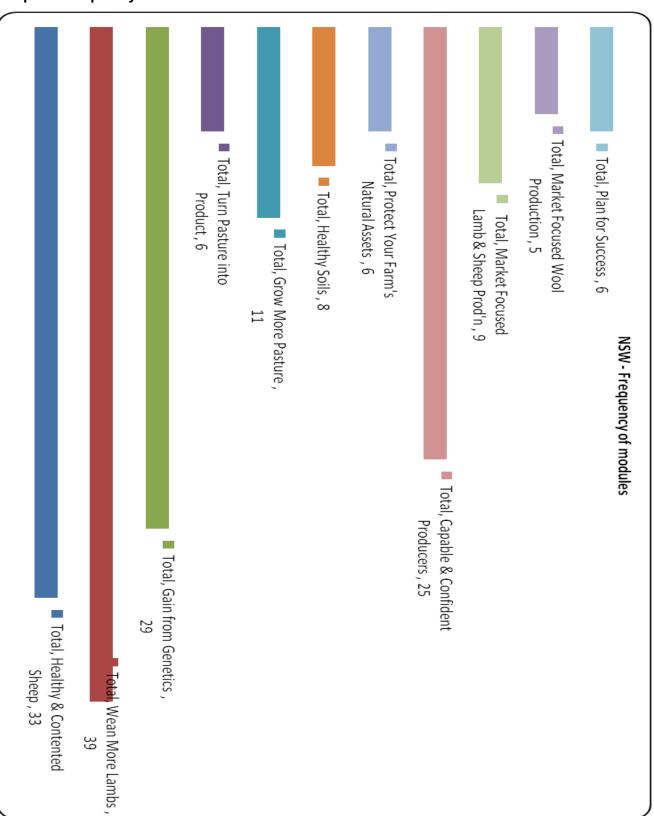


Graph 1: Number of MMfS Events in NSW

4.5 Modules Presented

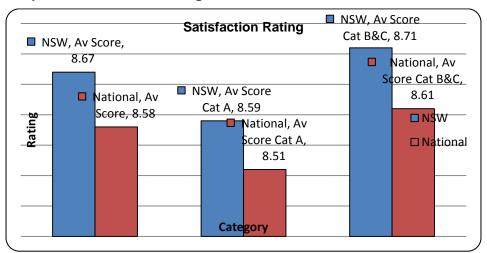
Graph 2 below shows the Frequency of Modules presented. Wean More Lambs, Healthy and Contented Sheep and Gain from Genetics were the most frequently presented modules in NSW. The KPI target of 60% delivery within the priority modules was not achieved. NSW achieved 45% delivery of the priority modules.

Graph 2: Frequency of Modules



4.6 Satisfaction Rating

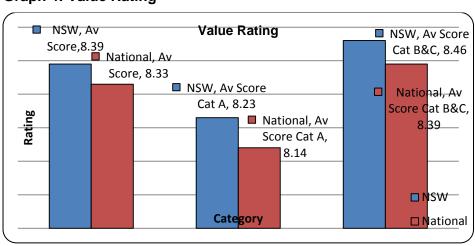
Participants were asked "Overall, how satisfied are you with this event?" The overall average satisfaction rating was 8.67 which was higher than the national average of 8.58. For Category A events the average satisfaction rating was 8.59 and 8.71 for Category B and C events, both higher than the national averages. See Graph 3.



Graph 3: Satisfaction Rating

4.7 Value Rating

Participants were asked "How valuable was this event in assisting you to manage your livestock enterprise?" The average value rating was 8.39, which was slightly above the national average of 8.33. For Category A events the rating was 8.23 which was above the national average and 8.46 for Category B and C events which was also above the national average. See Graph 4.



Graph 4: Value Rating

4.8 Practice Change

Evaluation data reveals that 83% of participating businesses said they would change something in their business as a result of attending the activity. 96% of participating businesses said they would recommend the event to others.

5 Discussion/Conclusion

As the results in the previous section show, the NSW MMfS project exceeded the KPI's for *Number of Participants* in all Category events. However were below targets for the *Evaluation Return Rate*. Several key issues have impacted on the KPI's achieved in NSW throughout the contract period:

- Drought: Over half of NSW was covered by Federal Government Exceptional Circumstances
 Declaration in March 2011, and seasonal droughts have recently been proclaimed in the
 Northern Tablelands, Western District, Monaro, and Hunter regions in Spring 2013. This has
 resulted in high farm indebtedness with many business drawing Exceptional Relief Payments
 and interest rate subsidies. High retention rates due to low prices, water and feeding issues
 have led to an overall downturn of the industry and the interest of producers in attending
 events is low.
- Minimal success of engagement with the private sector: Engagement with private service
 providers has resulted in mixed outcomes. Initially at the onset of the project,23% of the 56
 identified livestock industry consultants in NSW had identified ways of collaborating with the
 MBfP project. Despite this initial interest, engagement with the private sector presented an
 ongoing challenge. This was due to a number of factors including:
 - Ongoing contract negotiations throughout 2010 between the DPI and MLA resulted in a lack of confidence by the DPI to employ private sector deliverers until contracts had been finalised.
 - Changes to the Project Coordination team resulted in a revised business plan which placed renewed emphasis on private delivery but was affected by the timing of the DPI restructure which in turn, reduced the ability of the coordination team to initiate and manage private contracts.
 - There were ingrained issues in dealing with the private sector in NSW, mainly focusing on differing viewpoints with regards to the available funding arrangements. Virtually all established consultants require full cost recovery to operate others such as resellers, have established group protocols that don't fit the structure. Several private providers that were approached to deliver workshops were not interested in participating in the project unless they could achieve full cost recovery.
- In October 2012, the State Government announced fundamental changes to the way agricultural services are delivered in New South Wales. From January 2014, Local Land Services will operate in NSW as a new organisation combining the functions currently provided by Livestock Health & Pest Authority (LHPA), Catchment Management Authority (CMA) and some Department of Primary Industries' (DPI) advisory services. The new organisation will deliver integrated natural resource management, agricultural and biosecurity services. The loss of extension staff caused a major disruption to the capacity of NSW DPI to deliver MBfP workshops

There were several highlights of the MMfS program in NSW. Seventeen *Healthy and Contented Sheep* workshops (Fly and Lice) were held attracting 311 participants. The *Ram Select* workshops were very well received, 19 were held attracting 309 participants and the *Managing Scanned Ewes* workshops were also popular, 14 were held attracting 260 participants. Another highlight was the successful partnership which was developed between NSW DPI and consultants *Productive Nutrition* Pty Ltd. A series of 10 workshops were rolled out in 2013 on *Profitable Sheep Nutrition and Management* which attracted 235 participants. A full listing of events is detailed in the Appendix.

The MMfS program has made a significant impact on the way the NSW DPI values, considers and executes continuous monitoring and evaluation as part of its extension programs. MMfS (and similarly MBfP) is one of the first programs which has resulted in across-the-board standardisation and collection of evaluation data into real-time database format. Development of the processes to collect such information and the evolution of the subsequent database has enabled DPI to easily identify the strengths and weaknesses of its delivery systems as well as individual performance.

One of the major challenges of monitoring and evaluation is measuring impact. While it is fairly simple to measure what goes into a project, such as funds and staff time, it has always been a challenge to quantify the impact of a project in terms of learning outcomes and benefit to industry. The MMfS program has enabled the DPI ELID team to provide demonstrable outcomes to internal management and to clarify the ongoing return on investment. Several fundamental procedures employed throughout the M&E component of the MMfS program have been since replicated across several other DPI projects and also form the basis to which many individuals now formulate their own evaluation systems.

Despite the recognised benefits of the M&E component of the program, the process also presented many challenges. One of the main challenges has been reflected in the average Evaluation Return Rate (60% for Category A, 31% for Category B and 37% for Category C), which has been similarly replicated across the MBfP database. The issue of how to persuade event attendees to participate and correctly contribute to an evaluation session is an on-going problem. The DPI coordination and delivery team devised various solutions to try to resolve this issue including:

- Utilising a variety of different evaluation methods such as TurningPoint electronic keypads and group discussion, as well the usual written feedback. This exhibited promise in terms of presenting evaluation as an entertaining, 'novel' activity and eliminated some issues with literacy, but there are limitations with the type of questions you can ask and the depth of responses that can be collected.
- Conducting formal evaluation sessions at various times throughout the event, rather than just
 at the beginning and end. This assisted deliverers to avoid lengthy assessment periods at the
 end of the day, helped participants to better understand the value of their own learning
 journey and also the importance of such information to the delivery organisation, DPI, AWI
 and MLA.
- Providing incentives for completed evaluation such as lollies, mystery / lucky door prizes etc.

More often than not, it was not actually the evaluation return rate, but rather the number of <u>completed</u> evaluations which contributed to the overall result. This may be attributed to a number of issues including the time allocated to completing the questions, the manner in which the questions were written, illegible handwriting, and incomplete answers.

As a result, improvements need to be made to the manner in which evaluation is structured, conducted and analysed. Recommendations include:

- Move away from an 'event category' structure to a more outcomes-based evaluation.
- More consistency in the type of evaluation questions.
- Better integration of alternative evaluation methods and information regarding the way in which they can be used.

Data analysis and interpretation by MLA was not implemented until halfway through the contract period. This initially resulted in a lack of feedback from MLA on key evaluation results which had a big impact on the manner in which events were categorised and thus impacted on KPI's. There was quite a significant delay during this initial analysis which made internal reporting difficult and formal feedback to MLA challenging. Despite these challenges, it was important to review the processes in place, and the subsequent changes made as a result to the manner in which some

events were categorised. This has had an overall positive effect on the project and has demonstrated that higher levels of actual practice change have been achieved than was previously thought.

There were several synergies with MBfP that provided great benefit to producers as well as to NSW DPI deliverers. A common coordinator was beneficial to the roll-out of the program as well as to the effectiveness of the simultaneous promotion of the programs. Several common workshops / events were held which enabled cross-promotion of information and sharing of ideas. Deliverers also benefited from the networking opportunities made possible by collaborating with other industry partners. Dual-enterprise producers benefited from these events and attendance numbers reflected their popularity.

The maintenance and future extension of this relationship with MBfP should be encouraged. It is evident from the evaluation feedback that few single-enterprise producers have attended events, thus, it is essential that both MBfP and MMfS continue to be offered and promoted on a common platform. This hand-in-glove connection also helps to promote a holistic approach to southern mixed farming systems, and encourages greater interaction and cooperation between industry sectors and producer groups.

The balance between the delivery and coordination funding in NSW was appropriate given the number of sheep in NSW and potential scope of delivery but by the end of 2011, it was evident that a large proportion of this budget remained unspent and unallocated. There were many reasons for this including:

- Number and location of delivery staff: NSW DPI had an extensive network of sheep industry officers and technical specialists located across the state which covered a large geographical area of NSW. This meant that very little travel was required by individual staff to deliver events.
- The investment by NSW DPI in the delivery of activities, in the form of salaries for extension staff
- Replication of events: By replicating and delivering series of events and activities across
 the state, NSW DPI was able to reduce event development costs and coordinate
 combined promotion. This moderated expenditure on advertising and promotion.
- Reduced requirement for external consultants: The NSW DPI livestock officers and technical specialists provided the project with a very experienced team, well qualified in technical and extension knowledge. This reduced the need to engage external delivery personnel as all the necessary expertise to deliver MMfS modules was available inhouse.
- Lower engagement of the private sector than initially predicted: The number of private delivery organisations employed to deliver MMfS in NSW was lower than originally anticipated (as previously discussed above). This resulted in a significant portion of the budget, reserved for this delivery, remaining unspent.

6 Appendix

Full event listing

When	Where	Title	Presenter	Attendees	Module
28-Oct-10	Weilmoringle	Fly and Lice Weilmoringle	G.Turnbull	15	11
15-Nov-10	Yass	Yass MMFS Workshop	P. Graham	6	7, 8
09-Dec-10	Goulburn	Fine tuning Fertilizer	P. Graham	8	6, 7
14-Dec-10	Bathurst	Managing Flystrike Bathurst	J. Kelly	15	11
16-Dec-10	Canberra	MMFS Managing Seasonal Issues	P. Graham	16	8, 11
16-Dec-10	Mudgee	Making more from Mudgee Merino Weaners	E. Joshua	11	10, 11
08-Feb-11	Crookwell	Farmhouse CROOKWELL	D. Kearrins	10	1, 4
10-Feb-11	Lake Cargelligo	FarmPack	L. Revelant	6	1, 4
10-Feb-11	Jugiong	Farmhouse JUGIONG	D. Kearrins	12	1, 4
24-Feb-11	Bookham	Seasonal Update	P. Graham	25	7, 8
07-Mar-11	Bathurst	Healthy and Contented Sheep	J. Kelly	19	11
08-Mar-11	Molong	Healthy and Contented Sheep	J. Kelly	11	11
08-Mar-11	Taralga	Managing Scanned Ewes Taralga	E. Joshua	10	10
09-Mar-11	Yeoval	MMFS Worms Yeoval	E. Joshua	15	11
10-Mar-11	Nyngan	MMFS Worms Nyngan	E. Joshua	7	11
11-Mar-11	Coonamble	MMFS Worms Coonamble	E. Joshua	15	11
15-Mar-11	Harden	MMFS Managing Breeding Ewes	P. Graham	29	9, 10
15-Mar-11	Coonabarabran	Managing Scanned Ewes Coonabarabran	E. Joshua	16	10
16-Mar-11	Wongarbon	Managing Scanned Ewes Wongarbon	E. Joshua	7	10
17-Mar-11	Yass	MMFS Managing Breeding Ewes	P. Graham	14	9, 10
17-Mar-11	Narromine	Managing Scanned Ewes Narromine	E. Joshua	11	10
18-Mar-11	Grenfell	Wean More Lambs	M. Rogers	18	10
21-Mar-11	Boorowa	MMFS Managing Breeding Ewes	P. Graham	13	9, 10
22-Mar-11	Peak Hill	Wean More Lambs	M. Rogers	7	10
25-Mar-11	Condobolin	Dorper Information	M. Rogers	51	9
29-Mar-11	Hatfield	Fly and Lice Hatfield	S. Ware	17	11
30-Mar-11	Booligal	Fly and Lice Booligal	S. Ware	10	11
05-Apr-11	Trangie	Seasonal Update	S. Anderson	38	8, 11
08-Apr-11	Burrumbuttock	Sheep, Lice & Fly Burrumbuttock	G. Casburn	23	11
14-Apr-11	Gunning	Ewe Management	P. Graham	16	10
14-Apr-11	Crookwell	Ewe Management	P. Graham	9	10
10-May-11	Hay	Managing Scanned Ewes	C. Shands	10	10
11-May-11	Mossgiel	Managing Scanned Ewes	C. Shands	11	10
17-May-11	Boorowa	Farmhouse Boorowa	NSW DPI	4	1, 4
18-May-11	Bemboka	Farmhouse Bemboka	NSW DPI	5	1, 4
18-May-11	Holbrook	5 Easy Steps	G. Casburn	8	7, 8
19-May-11	Berridale	Farmhouse Berridale	NSW DPI	2	1, 4
07-Jun-11	Coolah	Healthy and Contented Sheep	E. Joshua	34	11
01-Jul-11	Kentucky	New England Grazier Updates	J. Meckiff	13	8, 11

05-Jul-11	Woolbrook	New England Grazier Updates	J. Meckiff	6	8, 11
05-Jul-11	Yarrowitch	New England Grazier Updates	J. Meckiff	5	8, 11
06-Jul-11	Boorolong	New England Grazier Updates	J. Meckiff	10	8, 11
06-Jul-11	Enmore	New England Grazier Updates	J. Meckiff	8	8, 11
07-Jul-11	Winterbourne	New England Grazier Updates	J. Meckiff	24	8, 11
08-Jul-11	Guyra	New England Grazier Updates	J. Meckiff	20	8, 11
22-Jul-11	Armidale	Grazing and Lice Workshop	J. Meckiff	12	8, 11
01-Aug-11	Wagga Wagga	Farmpack Wagga	NSW DPI	2	1, 4
03-Aug-11	Wellington	Breeding Flystrike Resistant Sheep	E. Joshua	27	11, 9
03-Aug-11	Burrumbuttock	Managing Scanned Ewes	G. Casburn	25	10
11-Aug-11	Tooraweenah	Healthy & Contested Sheep	E. Joshua	15	11
12-Aug-11	Coonabarabran	Healthy & Contested Sheep	E. Joshua	14	11
26-Aug-11	Molong	Managing Ewes	J. Kelly	8	10
30-Aug-11	Euchareena	Managing Ewes	J. Kelly	10	10
00.4	O a da a d	Sheepmeat/Wool Production and	0.0.11	00	0.0
30-Aug-11	Goolgowi	Marketing	G. Duddy	26	2, 3
31-Aug-11	Narromine	Practical Ram Selection	E. Joshua	10	9
31-Aug-11	Cumnock	Managing Ewes	J. Kelly	6	10
07-Sep-11	Cumnock	Practical Ram Selection	J. Kelly	8	9
21-Sep-11	Cobar	Fly and Lice Management	T.Atkinson	11	11
27-Sep-11	Kikoira	Sheep Health and Production	G. Duddy	15	11
27-Sep-11	Yanco	Lamb Marketing Information Day	G. Duddy	11	3
05-Oct-11	Lockhart	Managing Scanned Ewes	G. Duddy	7	10
12-Oct-11	Pooncarie	FarmPack Market Focused Lamb Production	NSW DPI	13	1, 4
28-Oct-11	Tilpa	workshop	T.Atkinson	70	3
13-Dec-11	Tocal	Soil Health - Landscan	NSW DPI	8	6
16-Feb-12	Holbrook	Parasites, Production and Profit	G. Duddy	64	11
22-Feb-12	Gumble	Managing Flies and Lice	J. Kelly	14	11
28-Feb-12	Cumnock	Managing Scanned Ewes	J. Kelly	11	11
29-Feb-12	Bathurst	Managing Scanned Ewes	J. Kelly	66	11
01-Mar-12	Collerreina	Lice and Flies Field day	M. Rogers	37	11
09-Mar-12	Tenterfield	Managing Scanned Ewes	C. Shands	11	10
13-Mar-12	Molong	Healthy and Contented Sheep	J. Kelly	22	11
13-Mar-12	Tocal	Landscan Day 4	NSW DPI	9	6
14-Mar-12	Blayney	Healthy and Contented Sheep	J. Kelly	12	11
15-Mar-12	Peak Hill	Healthy and Contented Sheep, Worms	M. Rogers	11	11
03-Apr-12	Inverell	Managing Scanned Ewes	C. Shands	27	10
11-Apr-12	Cassilis	Managing Scanned Ewes	C. Shands	12	10
19-Apr-12	Grenfell	Managing Scanned Ewes	C. Shands	20	10
07-Aug-12	Armatree	Ram select	Ed Joshua	17	9
13-Aug-12	Guyra	Ram select	Jim Meckiff	16	9
14-Aug-12	Hermidale	Pasture Supplement	Brett Littler	24	7, 8
15-Aug-12	Condobolin	Ram select	Geoff Duddy	15	9
17-Aug-12	Collerreina	Ram select	Megan Rogers	17	9

23-Aug-12	Molong	Ram select	Jane Kelly	12	9
24-Aug-12	Orange	Ram select	Jane Kelly	13	9
04-Sep-12	Narromine	Sheep Information day	Polly Jackson	13	7, 8, 11
10-Sep-12	Toongi	Ram select	Ed Joshua	18	9
11-Sep-12	Bathurst	Ram select	Jane Kelly	10	9
20-Sep-12	Middle Arm	Seasonal Farm Walk	NSW DPI	11	7, 8
			Jeffrey		
26-Sep-12	Harden	Seasonal Update	House	10	7, 8, 11
09-Oct-12	Avonlea	Bred Well Fed Well	NSW DPI	17	10
09-Oct-12	Orange	Bredwell Fedwell	Jane Kelly	18	10
12-Oct-12	Tullamore	Ram select	Megan Rogers	15	9
16-Oct-12	Nyngan	Pastures update	David Ward	17	8
23-Oct-12	Cowra	Wet/Dry	Megan Rodgers	10	10
08-Nov-12	Glen Innes	Ram select	Jim Meckiff	23	9
13-Nov-12	Uralla	Ram select	Jim Meckiff	20	9
15-Nov-12	Tamworth	Ram select	Jim Meckiff	28	9
16-Nov-12	Woolbrook	Ram select	Jim Meckiff	13	9
20-Nov-12	Manildra	Seasonal Update	Jane Kelly	4	7, 8, 12
21-Nov-12	Molong	Seasonal Update	Jane Kelly	5	7, 8, 11
22-Nov-12	Cargo	Seasonal Update	Jane Kelly	5	7, 8, 10
28-Nov-12	Inverell	Ram select	Jim Meckiff	16	9
29-Nov-12	Stanthorpe	Ram select	Jim Meckiff	21	9
17-Jul-13	Holbrook	Lamb Survival	Jason Trompf	19	11
26-Jul-13	Armidale	New England Merino Sire Evaluation Field Day	Jim Meckiff	58	9
28-Aug-13	Armidale	Cost of Production workshop	John Francis	12	1, 4
10-Sep-13	Bathurst	Profitable sheep nutrition and management	Hamish Dickson	29	8
11-Sep-13	Molong	Profitable sheep nutrition and management	Hamish Dickson	19	8
12-Sep-13	Parkes	Profitable sheep nutrition and management	Hamish Dickson	13	8
14-Oct-13	Tarcutta	Walk Over Weighing (WOW) workshop	David Brown	10	3, 11