

final report

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Making More from Sheep - Victoria

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Abstract

Making More from Sheep (MMfS) is the key extension and communication program for Meat and Livestock Australia (MLA) and Australian Wool Innovation (AWI) for the sheep industry. MMfS has provided Victorian sheep producers with the opportunity to keep up to date and implement best practice farm management practices. MMfS has been delivered in Victoria since 2005 however this report focuses on the period between January 2014 and December 2016. During this period 106 MMfS activities have been delivered by a team of more than 34 private consultants, industry providers, and Agriculture Victoria staff, to a total of 1767 producers. Wean More Lambs was by far the most popular workshop, with 30 events focusing on improving reproductive performance. This was reflected in the practice change achieved with 42% of actual practice change aligned to the Wean more Lambs module. Other modules to feature prominently were Turning Pasture into Product, Healthy and Contented Sheep and Plan for Success.

Participant evaluation of MMfS activities in Victoria has demonstrated the successful delivery of MMfS in Victoria. The feedback has been very positive, as shown by:

- 99.5% of producers who attend MMfS activities would recommend them to another producer. One producer out of 1264 responses replied no to recommending to other producers and 2 not sure.
- Participant average rating for the value and satisfaction of MMfS activities was 8.5 and 8.8 out of 10 respectively.
- Producers demonstrated an increase in knowledge by an increase in correct answers from 42% in the pre event survey compared to 68% in the post event survey
- 928 producers responded to the practice change question of which 90% indicated they had or intended to implement a practice change and were able to document the intended change. In total, (including those that didn't respond to the practice change question), 55% of producers plan to implement a practice change.

The primary aim of MMfS has been to provide producers with knowledge, skills and confidence to implement changes within their farming business, leading to greater profitability and sustainability. The high rate of practice change rates reflects the success of MMfS delivery in Victoria.

Executive summary

MMfS is the key extension and communication program for MLA and AWI for the sheep industry. The primary aim of this program is to provide producers with knowledge and skills that will enable greater profitability, sustainability and capacity to better manage risk. Using a multitude of tools including the producer manual, workshops, seminars, and various communication channels, MMfS is designed to enable producers to engage at different levels with the program through a standardised but flexible delivery framework. Engagement for MMfS were categorised into three levels;

Category A - Awareness type activities

Category B - Activities designed to increase skills and knowledge and

Category C - Activities which facilitate/support practice change

The delivery mechanism of MMfS in Victoria was primarily through the BestWool/BestLamb (BWBL) producer network. The BWBL program has 60 established groups supported with professional coordination. MMfS was a perfect partner for BWBL as this funding supported the provision of technical specialist to deliver best practice management (from the manual). MMfS was also delivered to producers outside of the BWBL network. Partnering with the BWBL network to deliver MMfS events was one of the key factors in the successful delivery of MMfS in Victoria. Along with access to producer groups, the BWBL network provided excellent linkage with the private sector to enable a smooth process for delivery of MMfS. Having the established network in the form of producer groups, has resulted in the seam-less delivery of category B events. Established groups that are comfortable in their surrounds, accustomed to the learning environment and well supported in decision making have also greatly enhanced the practice change process for MMfS. The continuity of the BWBL program also provides the opportunity for follow up of MMfS activities, to further increase the likely chance of practice change being achieved and therefore enhance the impact of this investment.

MMfS has been delivered in Victoria since 2005 however this report focuses on the period between January 2014 and December 2016. An initial business plan was developed for MMfS delivery for the 2014-15 period which provided two year delivery targets. A further twelve month extension was granted to allow delivery through to the end of 2016 with additional targets as reflected in the table below. During this period 106 events have been delivered to 1,767 participants. In Victoria the main delivery focus was on category B activities which made up 89 of the 106 events delivered, with the remaining 17 workshops being at category A level. The introduction of the 80% producer contribution for category C events during this period resulted in no events delivered at this level. All category C outcomes (practice change) were achieved via category A and B events. Key performance indicators for all category types were significantly exceeded as shown in the table below.

Category	2-year target	12 month extension	Total Target	Total to date	% Achieved
A	573	500	1073	1767	165%
B	202	380	582	1406	242%
C	101	150	251	514	205%

Fifty percent of Victorian sheep industry businesses consists of flocks less than 1000 sheep. MMfS had a target to engage with producers running larger flock sizes. Victoria's two year target was to deliver MMfS to 15% of flocks with greater than 2000 sheep. In Victoria, 42% of MMfS participants for category A and B activities were from flocks with greater than 2000 sheep. This demonstrates that MMfS is appealing to larger producers.

Wean More Lambs was the most popular module with producers and appeared to have a significant effect in achieving practice change. The most commonly reported management changes were; pregnancy scanning ewes, managing the twin and single bearing ewes separately, reducing mob size at lambing and to monitor more closely ewe condition and nutrition. This result supported the national evaluation results with 42% of all practice change documented nationally relating to the Wean More Lambs Module. The other more popular modules delivered were Turning Pasture into Product, Healthy and Contented Sheep and Plan for Success.

The success of MMfS in Victoria was highly evaluated, including producer assessment of the average value (8.5/10), satisfaction (8.8/10) and preparedness to recommend to other producers (99.5%). Participants of category B events were required to complete a pre and post event skills and knowledge audit, to assist with continuous improvement of the MMfS delivery process and to further capture the success of the program. The results of the skills and knowledge audit showed an overall increase from 42% of correct answers in the pre survey compared to 68% in the post survey.

The real success of the MMfS program will be measured by the impact on the Victorian sheep industry. As already stated, the main aim was to increase the sustainable profitability of Victorian sheep producers by implementing improved business management practices. In Victoria the MMfS program has initiated practice change or planned practice change on at least 55% of participating businesses. Of those who actually completed the practice change question, 90% indicated they had or intended to implement a practice change, and were able to document the change. A wide range of practice changes were captured, which should lead to more viable businesses and strengthen the Victorian sheep industry in to the future.

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1. Background

A long history of investment in research and development by the wool and sheep meat industries means that much of the information, technologies and tools already exist which allow sheep and wool producers to significantly increase their productivity, profitability and sustainability. However, the information is widely spread and often difficult to find. MLA and AWI have produced a manual as part of their continuing efforts to deliver on-farm knowledge and technology to help producers increase the long-term profitability and sustainability of sheep and wool production systems.

MLA and AWI recognise the importance of delivering on-farm knowledge and technology to sheep producers to help reduce costs and increase production while minimizing risk in an ever-changing environment. This project provided the resources required to manage the delivery of the messages and tools from the MMfS manual to Victorian sheep producers.

MMfS is the key extension and communication program for MLA and AWI for the sheep industry. The primary aim of this program is to provide producers with knowledge and skills that will enable greater profitability, sustainability and capacity to better manage risk. Using a multitude of tools including the producer manual, workshops, seminars, and various communication channels, MMfS is designed to enable producers to engage at different levels with the program through a standardised but flexible delivery framework. The levels of engagement for MMfS were categorised into three different levels;

Category A - Awareness type activities

Category B - Activities designed to increase skills and knowledge and

Category C - Activities which facilitate practice change

State Coordinators are a critical component to achieving the overall objectives and KPI's of the program. Working as part of a national team guided by the MMfS Executive and National Coordinator, the State Coordinator provides the local/regional input into the design of MMfS activities and facilitates the engagement of producers through their own schedule of local extension and communication events. The State Coordinator was responsible for delivering on the State Business Plan. The Business Plan was developed for the 2014-2015 period, however delivery was extended to include 2016 with revised KPI's aligned to the additional twelve month delivery period.

MMfS delivery in Victoria was managed by Agriculture Victoria Branch within Agriculture Services and Biosecurity Operations of the Department of Economic Development, Jobs, Transport and Resources. MMfS was a key productivity focused service offered to sheep producers across the State.

The sheep industry is a priority industry for Agriculture Victoria and hence a key focus which allows strong alignment with MMfS. BestWool/BestLamb (BWBL) has been the primary delivery mechanism for MMfS. BWBL is a sheep producer network with 3459 members, including 1409 members in groups and 2050 more passive associate members. BWBL provided an effective and efficient delivery model with BWBL providing the audience and the enabling process and MMfS providing one of the technical delivery options, or the curriculum. MMfS was delivered by both private providers and Agriculture Victoria staff. MMfS was also promoted and delivered outside of the BWBL network, which provided a growth benefit for BWBL

2. Project objectives

Making More from Sheep delivered awareness, learning and supported adoption opportunities to lamb and wool producers to improve the productivity, profitability and resilience of their business.

This project provided Victorian State Coordination for the national MMfS program. Working with the National Coordinator (NC), the State Coordinator was responsible for delivery of the annual state business plan to achieve the awareness, engagement and practice change targets as outlined in table 1 below. Table 2 below shows the Additional targets for the three delivery categories as a result of the extended delivery period. Additionally, the State Coordinator delivered the defined monitoring and evaluation data specified in the State Business Plan.

Table 1: Victorian Business Plan Key performance indicators 2014-2015

Category	Measure	Description	Producers Engaged	M&E method
A	Awareness of MMfS	≥30 % of target sheep producers participate in Category A activities by December 2015	573	MMfS event evaluation
B	Participation in MMfS	≥ 30% of producers in A participate in MMfS Category B activities to influence a KASA change by December 2015.	202	MMfS event evaluation
C	Practice change/s from MMfS	≥ 50% of producers in B participate in Category C activities to influence adoption of ≥ 1 MMfS procedure by December 2015	101	MMfS event evaluation

Table 2: Additional Victorian Key Performance Indicators 2016

Category	Measure	Producers Engaged	Total Target Producer Engagement 2014-2016	M&E method
A	Awareness Activities	500	1073	MMFS event evaluation
B	Activities designed to increase skills and knowledge	380	582	MMFS event evaluation
C	Activities which facilitate/support practice change	150	251	MMFS event evaluation

Working as part of a team, led by the National MMfS Co-ordinator, the following was delivered:

1. State Business Plan

The State Business Plan formed the basis of the key deliverable. The business plan 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 tiers of activities including;

- Outline of the state MMfS delivery team, including public and private deliverers;
- Engaged the private sector in line with the MLA extension investment principles.

2. Implementation of the State Business Plan

- Included implementation of the business plan activities, allocating resources, training and to engage a team of public and private sector deliverers/facilitators across respective program activities.
- 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 Co-ordinator on a monthly basis. Utilising the Excel template 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 and AWI websites and respective MLA and AWI 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.
- Co-ordinate and source articles for MLA and AWI publications and the e-newsletter from delivery team members.
- Co-ordinate and integrate activities with other existing state based networks; and
- 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 processes were executed as per agreed processes, with all data collated and provided with monthly and six monthly reports to the National Co-ordinator and MLA. The standard MMfS monitoring and evaluation processes included:

Category A: Measuring awareness, satisfaction, value and intention to change.

At least 60% participant feedback sheets using the standard MMfS template to be collected for all category A activities and entered into the supplied excel spread sheet.

Category B: Measuring shifts in knowledge, skills and confidence (KSC).

Pre and post knowledge and skills audits conducted with at least 80% participants of category B activities. Full results of the pre and post knowledge and skills audits were required to be entered into the standard MMfS spread sheet

Non accredited training KSC assessment

Non accredited training will require 100% usage of the generic (but adapted regionally) MMfS pre and post knowledge and skills audit questions.

Accredited training KSC assessment

Accredited training activities will ensure key MMfS audit questions are used for at least 30% of accredited courses delivered to ensure these courses can be included in the overall MMfS M&E reporting.

Category C: Measuring practice change and program impact

Practice change will be recorded for 80% of participants in all category C activities. This will require the State Co-ordinator (SC) to ensure shifts in practice change are recorded by group facilitators using the standard template provided and mapped against practices within the MMfS manual modules. Results are to be recorded in the standard excel spread sheet, including names and contact details of participants.

Case studies to measure impact.

The SC was required to assist in identifying and recruiting case studies to enable tracking of profitability and productivity gains as a result of participating in the MMfS program.

All events (category A, B and C) have an event record which was provided to MLA using the standard Excel spread sheet.

3. Methodology

The delivery mechanism of MMfS in Victoria was primarily through the BWBL producer network. The BWBL program has 60 established groups with professional coordination. MMfS was a perfect partner for BWBL as the MMfS funding supported the provision of technical specialist to deliver best practice management (from the manual). MMfS was also delivered outside of the BWBL network. Other non BWBL MMfS events were delivered to McKinnon clients, Livestock logic clients, Perennial Pasture Systems group and cropping groups across Victoria.

Where MMfS was delivered to an existing BWBL group, the BWBL coordinator was responsible for ensuring the evaluation was developed in conjunction with the state coordinator and the deliverer. The coordinator was also responsible for facilitation on the day and providing the activity debrief and the evaluation paper work to the state coordinator after the event.

Guidelines for available funding were calculated by dividing the delivery budget allocation by the KPI's (number of participants) to ensure that the KPI's were met. The KPI's were exceeded due to shared costing of activities and greater than 10 businesses attending many events (16 participants on average). The inclusion of producer or sponsor payment of \$50 or equivalent

also helped to spread the MMfS budget further with the majority of events delivered in Victoria being category B level.

The emphasis on delivery for the 2014-2016 period was on category B and C events, however with the requirement for 80% producer contribution for category C events, none were delivered despite heavily promoting the opportunity to producer groups and group coordinators. With the lack of interest in category C events it was decided to focus on category B events of which 89 were delivered out of the total of 106 activities.

At the beginning of each 12 month period, a call for expressions of interest to run category B and C events was made to BWBL and other groups. All Victorian sheep producers had the opportunity to apply for MMfS funding through this process. Applications were required to outline details of the producers involved (expected audience), the topic/issue they would like to address, the nature of the event and a budget. Applications for category C events were asked to provide more detail on the topic they are addressing and some indication of current production levels (where appropriate) and the approach to achieving some KPI's following implementation of a change to their farming business. Groups that applied for funding were supplied with the Standard Operating Procedure for running a MMfS event (Appendix 2) and the guidelines for developing evaluation questions (Appendix 3). This provided clear direction to the event organiser and were the key to ensuring MMfS requirements were met.

The majority of the MMfS delivery in Victoria was conducted by private consultants. Only 10 of the 106 events were delivered by Agriculture Victoria staff. Groups selected the deliverer, with most groups choosing to use the opportunity to fund the use of a private consultant. The relationship between BWBL and the private sector is very strong which made this delivery partnership simple to manage.

The state coordinator meetings were useful to share ideas and experiences. These meetings provided the opportunity to discuss any issues such as developing good evaluation questions, which resulted in the development of guidelines for this process. These meeting generated a team environment which stimulated the sharing of various templates and processes for improved delivery of MMfS.

4. Results

In Victoria, 106 MMfS events (listed in appendix 1) were delivered to 1767 participants surpassing the three-year target for all category events (table 3). As documented in the methodology, a strong emphasis was placed on delivering category B level activities due to the lack of interest in category C events. The 106 events were delivered to a wide cross section of Victoria (as can be seen in figure 2), 17 at category A level, and 89 at category B level (figure 1).

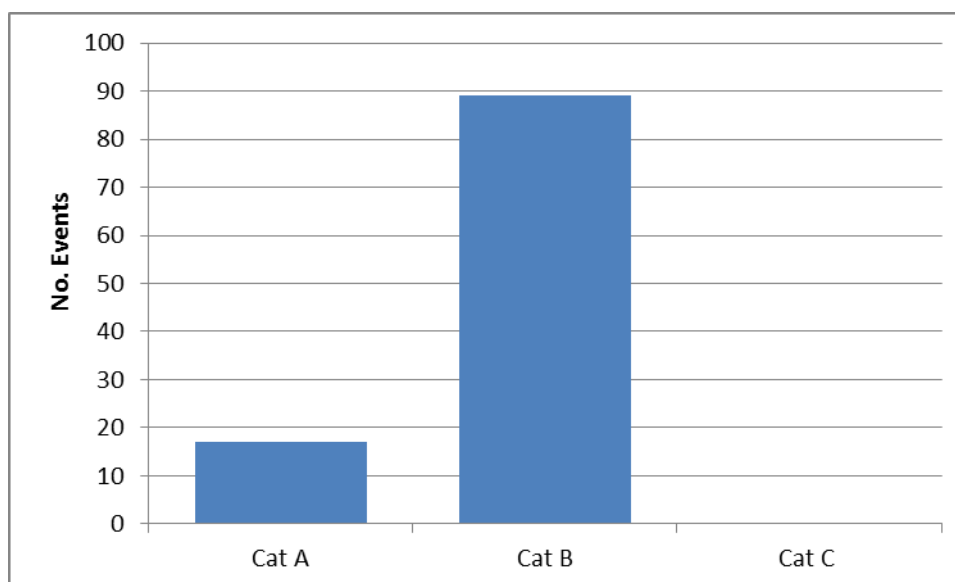


Figure 1: Number of MMfS Events by Category

Table 3: Percentage of 3 year target achieved - number of participants

Category	2-year target	12 month Extension	Total Target	Total Achieved	% Achieved
A	573	500	1073	1767	165%
B	202	380	582	1406	242%
C	101	150	251	514	205%

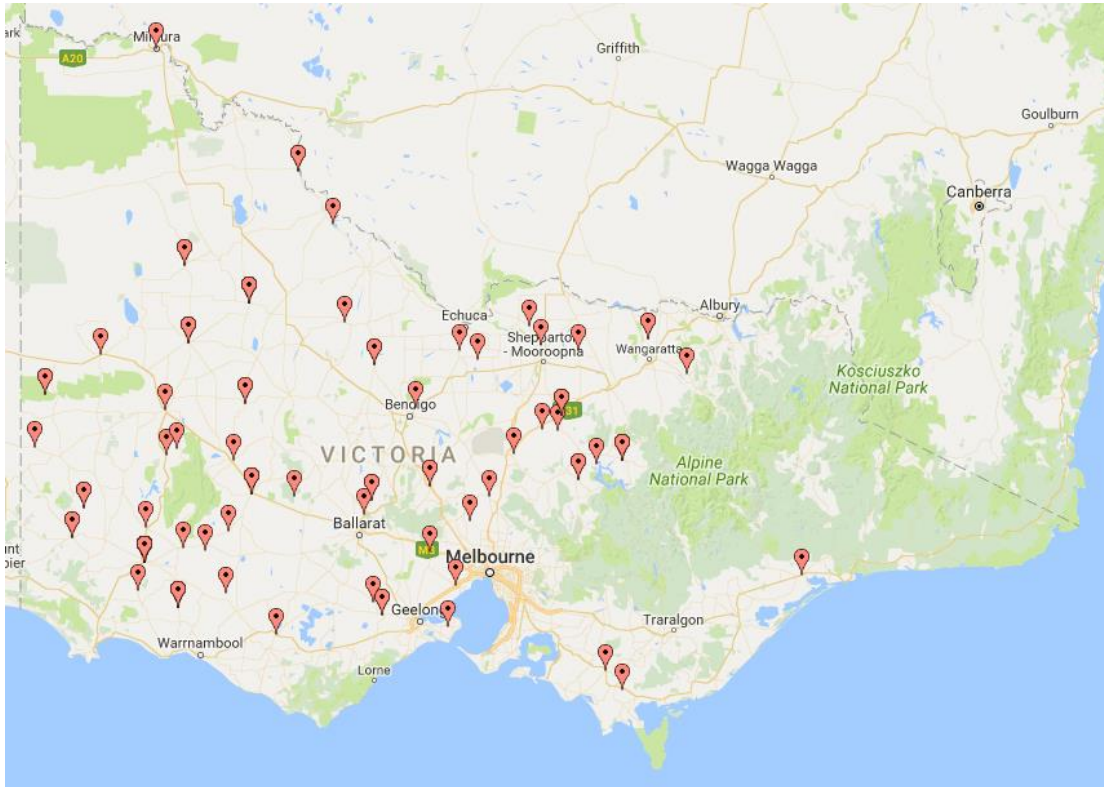


Figure 2: MMfS Delivery Locations

- ❖ Some Locations have multiple events

Table 4 provides the achieved evaluation return rate as per the SOP. The target return rates were achieved for both category A and B events and no category C events were delivered.

Table 4: Percentage of 3 year target achieved for evaluation return rate

Category	Target	Actual
A	65%	77%
B	80%	81%
C	80%	NA

Figure 3 shows the frequency of each module delivered. Wean More Lambs was once again the most popular module to be delivered with 30 workshops in total. The next four modules to be highly delivered were Plan for success (17), Market Focused Lamb & Sheep (16), Grow More Pasture (16) and Healthy and Contented Sheep (14).

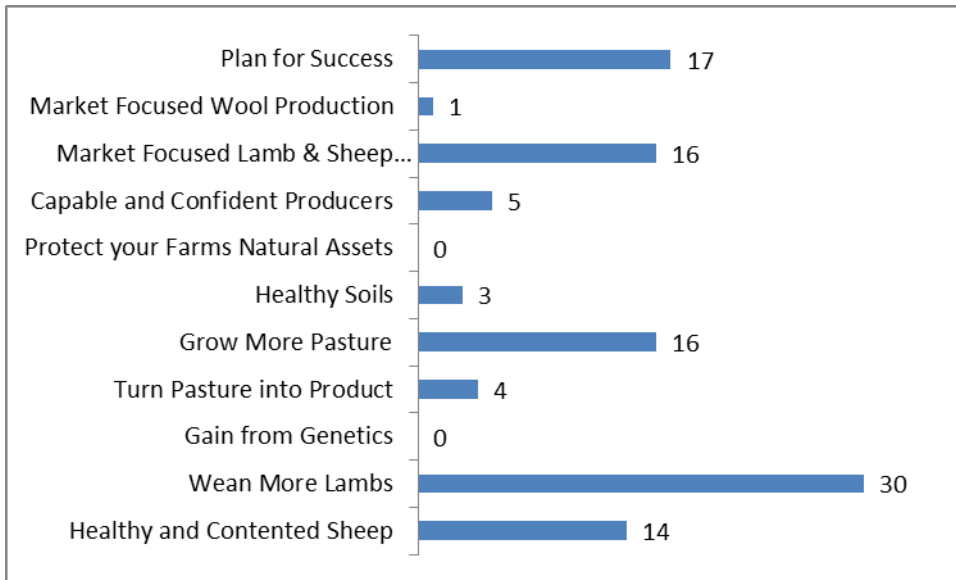


Figure 3: Frequency of modules presented

MMfS had a target to engage with producers running larger flock sizes. Victoria's three year target was to deliver MMfS to 15% of flocks with greater than 2000 sheep. Victoria has delivered Category A and B MMfS activities to 42% of producers with a flock size greater than 2000 sheep. This demonstrates that MMfS is appealing to the larger producers considering the significant number of small producers who make up the Victorian flock as shown in figure 4.

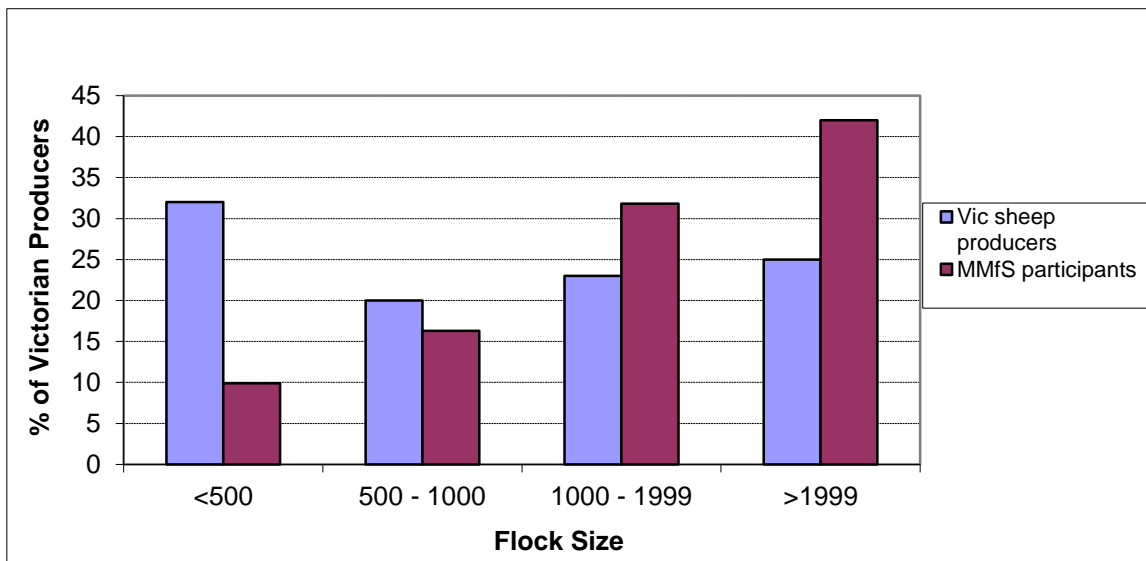


Figure 4: MMfS participant engagement

Table 5 summarises the flock demographics of participants of MMfS in Victoria. Of the participants who supplied flock size information (64%) the average flock size was 4,189 and the median number of sheep was 2350. The average ewe flock size was 3139, with an average of 2106 lambs sold and 114 bales of wool sold. Figure 5 further illustrates participant demographics by sheep numbers, number of ewes and number of lambs sold.

Table 5: Victorian participant flock demographics

	Average Number	Median Number
Sheep Flock Size	4189	2350
Ewe Flock Size	3139	1500
Lambs Sold	2106	1200
Bales Sold	114	60

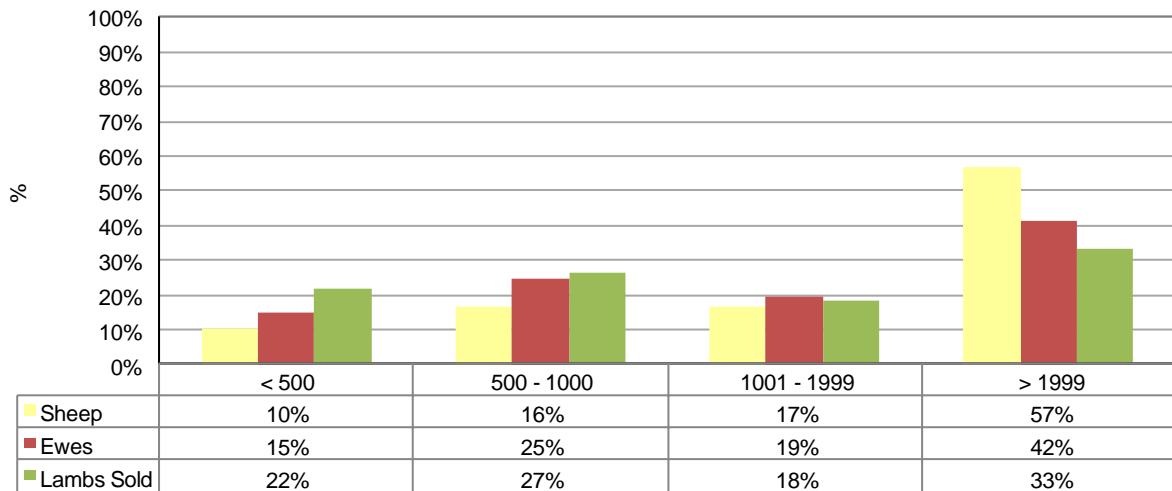


Figure 5: Attendance by number of sheep, ewes and lambs sold

Participant by property size is shown in figure 6. Of the 953 participants who supplied property size information (74%), the median property size was 900 ha. Seventy-one percent of participants had a property size of greater than 500 hectares.

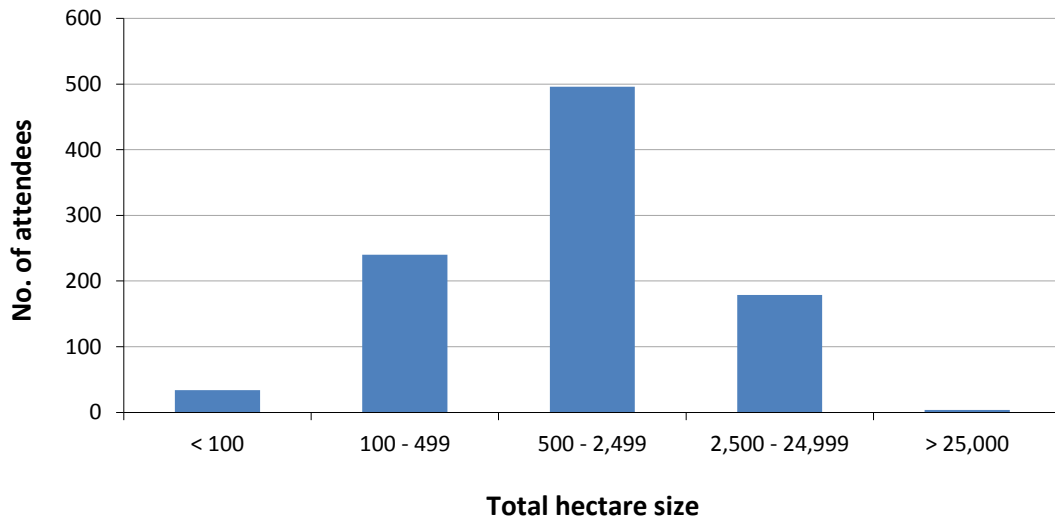


Figure 6: Frequency of property size

5. MMfS budget reconciliation – Confidential

6. Discussion/conclusion

In Victoria the key performance indicators for category A, B and C events was exceeded. Category A events reached 165% of the target KPI and category B & C events were 242% and 205% respectively. The high degree of participation at category B level reflects the emphasis that was placed on this level of activity. All category C level outcomes were delivered via category A and B events with no C events delivered.

Partnering with the BWBL network to deliver MMfS events was one of the key factors in the successful delivery of MMfS in Victoria. Along with access to producer groups, the BWBL network provided excellent linkage with the private sector to enable a smooth process for delivery of MMfS. Having the established network in the form of producer groups, has made delivering category B activities a straightforward process. Access to established groups that are comfortable in their surrounds and accustomed to the learning environment has also greatly enhanced the practice change process for MMfS. The continuity of the BWBL program has also provided the opportunity for follow up of MMfS activities to further increase the likely chance of practice change.

The average satisfaction and value ratings are a good indicator of successful delivery of MMfS activities in Victoria. The average satisfaction and value ratings were 8.8 and 8.5 out of 10. Another very good gauge of the success of MMfS events was the level of participants that would recommend the activity to other producers, with 99.5% of participants replying that they would recommend the event to another producer. Only one producer out of 1264 responses indicated that they would not recommend an event to other producers and two replied that they were unsure. The primary aim of MMfS is to provide producers with knowledge and skills that will enable greater profitability and sustainability by introducing best practice management into their business. As a result of MMfS 90% of participants who completed the practice change question planned to make a change to their business. Fifty-five percent of the total producers attending MMfS activities indicated that they plan to implement a practice change, another highly successful outcome.

Return rates of evaluations increased significantly during the current funding period indicating that event coordinators had a better understanding of the importance of evaluation and had implemented better processes to capture the required evaluation outcomes. Target return rates of 65% for category A events was exceeded with 77% achieved, and 81 percent return rate for category B events achieved against the 80% target return rate.

In the initial stage of MMfS delivery, it became clear that deliverers were struggling to remember the processes required to deliver a MMfS activity. This was resulting in a lack of understanding of the evaluation requirements and in particular a lack preparation time for developing appropriate evaluation questions. The other issue early was the significant amount of time that was spent chasing up paper work. To overcome these issues event organisers were provided with a simple flow chart outlining the standard operating procedures for delivering a MMfS activity and the guidelines for writing evaluation questions. The standard operating procedures reduced the number of phone calls required and increased the speed of the evaluation returns, as it was made clear that payment was linked to completion of evaluations and the activity debrief. The document which assisted the most was the guidelines for writing evaluation questions. After this document was provided to event organisers the time spent writing evaluation questions was significantly reduced.

The big change in this funding period was the introduction of producer contributions. Category C events required an 80% contribution which presented a barrier to delivery at this level. One of the real success stories of the prior funding period was the development and delivery of Category C activities. In the final year of the prior funding period nine category C events were delivered and there was significant interest and momentum for groups to design and deliver events at this level. Groups were required to:

- submit a plan which outlines the key objectives to be addressed,
- outline current performance in those areas (where applicable),
- provide some targets for the group members (KPI's)
- include a delivery plan and budget

Feedback from these events was very positive, with a considerably greater chance of more significant change to the farming business. No expressions of interest to deliver category C events were received during this funding round and conversations with coordinators indicated that they did not think producers would contribute as high as 80% of the activity costs. There was concern that the level of commitment required to plan and develop the concept was quite high and that the likely response from producers would be low and hence it was far less risky to deliver events at category B level.

There were few challenges involved with the delivery of both category A and B MMfS events in Victoria. The most significant of the challenges was ensuring the development of "GOOD" evaluation questions, at the appropriate level. The questions need to be, at a level that producers were not able to easily answer them before the activity and not too hard to scare them from participating in the evaluation process. Questions needed to be developed to allow us to determine if the activity had achieved the desired outcome, a change in knowledge and/or skills. There were also some modules that were easier to write good questions for compared to others. Plan for Success is an example a module which can be very difficult to write good questions. This appears to be due to the grey areas of business planning with less definitive answers. In other modules with issues which have a correct and an incorrect response, writing questions is much less challenging.

Another challenge for MMfS delivery was ensuring that the evaluation process was framed in a positive light at the beginning of each event. The best evaluation processes occurred at events where the coordinators discussed the evaluation process, explaining that the evaluation was important to ensure that continuous improvement of the MMfS program and to gauge the success of the event.

In Victoria development of the funding model for MMfS and More Beef from Pastures (MBfP) events was developed together to create consistency between the two programs. The two state coordinators discussed the potential to co-fund beef and sheep relevant activities with a mixed audience and discuss regularly opportunities to work together. MMfS in Victoria was open to partnering with other organisations to deliver events. This was one of the reasons that the KPI's were exceeded within the budget.

7. Appendices

Appendix 1 MMfS Activity Table

Event Date	Event ID	Event Name	Event Town	Event Co-ordinator	Total No of Participants	Category
04.02.14	MMS040214VSM	Managing the flock to increase lambing percentages	Smeaton	Neil James	11	B
19.03.14	MMS190314VLA	Sheep Nutrition following a major fire	Laharum	Ken Solly	12	B
29.05.14	MMS290514VHA	Managing highly productive ewes in late pregnancy & early lactation	Hamilton	Kate Joseph	39	B
01.08.14	MMS010814VEU	Soil profiling and soil fertility parameters	Euroa	Geraldine Perkins	10	B
03.09.14	MMS030914VAR	Perennial Pastures Systems 6 Annual Conference	Ararat	Rob Shea	53	B
24.09.14	MMS240914NWE	Production System Field Trip	Wellington	Geraldine Perkins	13	B
26.09.14	MMS260914VHA	Pasture Variety Selection	Hamilton	Peter Ham	14	B
09.10.14	MMS091014VBA	MLA Pasture Trial Site	Barnoolut	Tim Leeming	7	B
12.11.14	MMS121114VZE	Trace Elements in sheep – fact and fiction	Zeerust	Kristy Howard	17	B
23.02.15	MMS230215VLO	Steps to Successful Succession Planning	Longwood	Kristy Howard	19	B
25.02.15	MMS250215VKA	Productive pasture Species for Low Rainfall (300-500mm)	Kaarimba	Kristy Howard	9	B
22.04.15	MMS220415VHA	Meeting Feed Demands	Hawkesdale	Peter Ham	7	B
23.04.15	MMS230415VVA	Lamb Survival & Post Mortem Workshop	Warracknabeal	Steve Cotton	11	B
07.05.15	MMS070515VSM	Sheep Reproduction	Smeaton	Neil James	10	A
26.05.15	MMS260515VEU	Ruminant Nutrition	Euroa	Norm Tozer	17	B
27.05.15	MMS270515VBO	Ruminant Nutrition	Bowmans Forest	Norm Tozer	13	B
18.06.15	MMS180615VNH	Lamb Postmortem	Nhill	Alison Frischke	10	B

Appendix 1 continued. MMfS Activity Table

Event Date	Event ID	Event Name	Event Town	Event Co-ordinator	Total No of Participants	Category
19.06.15	MMS190615VBI	Lamb Postmortem	Birchip	Alison Frischke	11	B
23.06.15	MMS230615VEL	Managing a production system to meet a target market	Stawell	Ken Solly	14	A
26.06.15	MMS260615VMA	Managing Ewes	Mansfield	Matt Mahoney	12	A
26.06.15	MMS260715VHA	Lamb Postmortem	Hawkesdale	Peter Ham	11	B
01.07.15	MMS010715VSH	Cost of Production	Shelford	James Whale	7	A
03.07.15	MMS030715VSE	Livestock Pastures within a cropping program	Loddon Valley	Andrew Whale	6	B
15.07.15	MMS150715VCR	Growing and Grazing Cereal Crops	Creswick	Neil James	13	A
09.06.15	MMS090615VBO	Grazing Crop Workshop 1	Boorhaman	Tim Ekberg	15	B
21.07.15	MMS090615VBO	Grazing Crop Workshop 2	Boorhaman	Tim Ekberg	5	B
27.07.15	MMS100715VAL	Grazing Steep Hills	Alexandra	Jon Graftdyk	5	A
27.07.15	MMS100715VWA	Cost of Production	Warracknabeal	Steve Cotton	16	A
29.07.15	MMS290715VBI	Birchip Sheep Management Showcase – Banking on livestock	Birchip	Alison Frischke	73	A
07.08.15	MMS070815VHO	Winter Grazing of Cereals	Horsham	Ken Solly	20	B
10.08.15	MMS100815VKY	Sheep Enterprise Benchmarking	Kyneton	Erica Schelfhorst	10	B
11.08.15	MMS110815VCA	Labour Efficiency Workshop	Campaspe	Erica Schelfhorst	11	B
12.08.15	MMS120815VAR	Perennial Pasture Systems	Ararat	Rob Shea	37	A
17.08.15 25.08.15 03.09.15	MMS17015VHA	Three sessions delivered on safe vaccination technique and trace mineral deficiencies	Hamilton	James Whale	72	A
24.08.15	MMS240815VCA	OH&S on farm management	Cavendish	Andrew Speirs	6	B

Appendix 1 continued. MMfS Activity Table

Event Date	Event ID	Event Name	Event Town	Event Co-ordinator	Total No of Participants	Category
25.08.15	MMS250815VCA	OH&S on farm management	Casterton	Andrew Speirs	14	B
26.08.15	MMS260815VWI	Your Lambs Your Profit	Willaura	Andrew Kennedy	10	B
02.09.15	MMS020916VCA	Your Lambs Your Profit	Wando	Andrew Kennedy	10	B
02.09.15	MMS020915VBI	Managing Sheep in Autumn Planning for Potentially Tight Times	Birchip	Alison Frischke	6	B
03.09.15	MMS030915VWE	Managing Sheep in Autumn Planning for Potentially Tight Times	West Wimmera	Alison Frischke	11	B
04.09.15	MMS040915VHO	Managing Sheep in Autumn Planning for Potentially Tight Times	Hopetoun	Alison Frischke	7	B
26.02.15	MMS260215VST	Sheep Health	South Gippsland	John Bowman	20	B
15.09.15	MMS150915VBO	Sheep Health - Presentations on flock health and managing feet problems	Boorhaman	Tim Ekberg	11	B
18.09.15	MMS180915VAL	Pasture Improvement	Alexandra	Jon Graftdyk	6	A
29.09.15	MMS290915VWE	Improving efficiency of farming systems – what's the potential?	Werribee	John Webb Ware	103	A
06.10.15	MMS061015VPI	Sheep Reproduction Workshop	Piangil	Peter Hamence	18	A
07.10.15	MMS071015VMI	Sheep Reproduction Workshop	Millewa	Peter Hamence	18	A
12.10.15	MMS121015VHA	Silage making Workshop	Hawkesdale	Peter Ham	7	B
19.11.15	MMS191115VNA	Production Risk and Healthy Farming	Nareen	Tim Leeming	14	A
25.11.15	MMS251115VHA	Market Focused Lamb and Sheep Meat Production	Hawkesdale	Peter Ham	20	B
02.12.15	MMS021215VAR	Introduction to Marketing	Ararat	Rob Shea	15	B
02.02.16	MMS020216VTI	Sheep Benchmarking Workshop	Timmering	Erica	9	B
03.02.16	MMS030216VBO	Sheep Benchmarking Workshop	Boort	Erica	12	B

Appendix 1 continued. MMfS Activity Table

Event Date	Event ID	Event Name	Event Town	Event Co-ordinator	Total No of Participants	Category
25.02.16	MMS250216VLE	Succession Planning 4 Day workshop	Leongatha	John Bowman	50	C
01.03.16	MMS010316VLA	Feeding Ewes and Finishing Lambs	Central Murray	Rick Ellis	31	B
04.03.16	MMS040316VMA	Containment Areas Workshop, Feed Rations and Strategy after Autumn Break	Mansfield	Matthew Mahoney	19	B
11.03.16	MMS110316VBI	Containment feeding	Birchip	Alison Frischke	15	B
11.03.16	MMS110316VHO	Containment Feeding	Hopetoun	Alison Frischke	19	B
22.03.16	MMS220316VWE	Containment Feeding	Nhil	Alison Frischke	16	B
31.03.16	MMS310316VFI	Finding and using market information	Fiery Creek	James Whale	8	B
14.04.16	MMS140416VBR	Growing and Utilising more Pasture	Brimpean	Ken Solly	20	B
19.04.16	MMS190416VMA	Lamb Post Mortems	Marnoo	Steve Cotton	13	B
20.04.16	MMS200416VDO	Dookie Students Training – Ewe Nutrition, Lamb survival and pregnancy scanning	Dookie	Lyndon Kubeil	9	A
28.04.16	MMS280416VAR	Soil & Fertiliser Workshop	Ararat	Rob Shea	8	B
04.05.16	MMS040516VDR	Growing and Utilising More Pasture	Drysdale	Ken Solly	14	B
04.05.16	MMS040516VBO	Ewe Nutrition, Lamb survival and pregnancy scanning	Mansfield	Lyndon Kubeil	8	B
16.06.16	MMS160616VHA	High Performance Sheep Flocks	Hamilton	Peter Ham	16	B
17.06.16	MMS170616VIN	Worm Control	Inverleigh	Helen McGregor	10	B
17.06.16	MMS170616VMA	Pasture Renovation	Mansfield	Matt Mahoney	10	B
22.03.16	MMS220616VBA	Abattoir Visit	Bacchus Marsh	Peter Ham	11	B
27.06.16	MMS270616VSE	Seymour Wool Marketing Group	Seymour	Jane Court	27	B

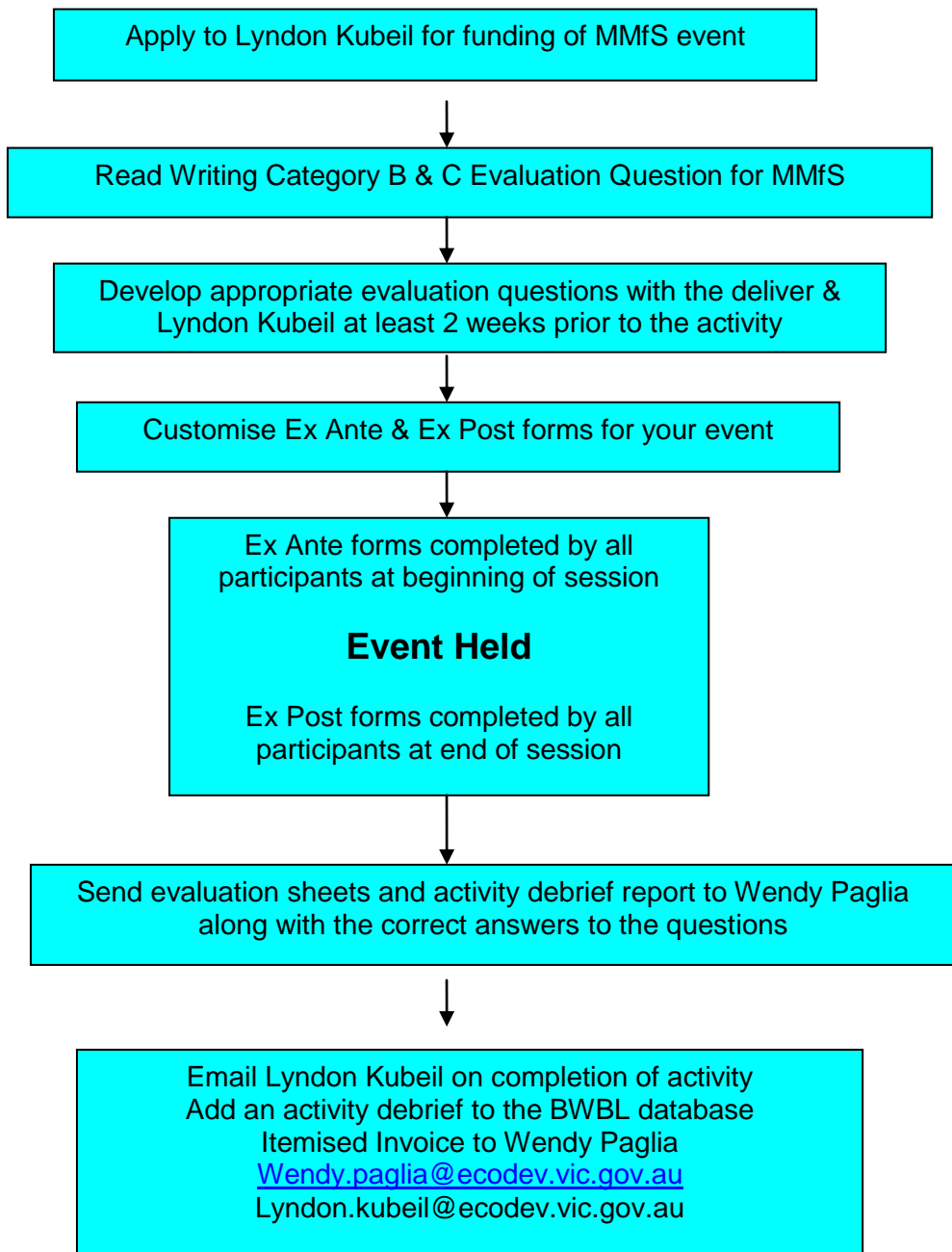
Appendix 1 continued. MMfS Activity Table

Event Date	Event ID	Event Name	Event Town	Event Co-ordinator	Total No of Participants	Category
12.07.16	MMS120716VCA	Lambs Alive – Fine Tuning the Lambing Plan	Camperdown	Ken Solly	10	A
15.07.16	MMS150716VNA	Limestone Coast Lamb Forum “Can we do it better”	Naracoorte	Peter Ham	10	B
27.07.16	MMS270716VKY	EID Presentation	Burke & Wills	Erica Schelfhorst	17	B
12.08.16	MMS120816VMA	Planning for success	Mansfield	Matt Mahoney	12	B
13.08.16	MMS120816VHA	Managing Maternal Ewes	Hamilton	Andrew Whale	12	B
17.08.16	MMS170816VBI	BCG Sheep Management Showcase 2016	Birchip	Alison Frischke	139	B
17.08.16	MMS170816VNA	Lambs Alive	Nareen	David Rendell	7	B
23.08.16	MMS230816VHA	Lambs Alive	Hamilton	James Whale	6	B
24.08.16	MMS240816VHA	Lambs Alive	Hamilton	Andrew Whale	7	B
26.08.16	MMS260816VHA	Lamb Mortality	Hamilton	Peter Ham	10	B
01.09.16	MMS010916VHA	Sheep Information Night	Hamilton	Livestock Logic	80	B
01.09.16	MMS010916VSE	Managing Ewes For Optional Lamb Survival	Serpentine	Andrew Whale	4	B
02.09.16	MMS020916VMA	Lambs Alive	Marnoo	Scott Nicholson	14	B
07.09.16	MMS070916VHA	Lamb Autopsy	Hamilton	David Rendell	6	B
13.09.16	MMS130916VGL	Plan for Success	Glenthompson	Andrew Whale	20	B
13.09.16	MMS130916VIV	Work Smarter not Harder	Central Murray	Rick Ellis	14	B
14.09.16	MMS140916VDU	Lamb Autopsy	Dunkeld	Andrew Whale	8	B

Appendix 1 continued. MMfS Activity Table

Event Date	Event ID	Event Name	Event Town	Event Co-ordinator	Total No of Participants	Category
22.09.16	MMS220916VHE	Growing & Utilising More Pasture	James Whale	Hexham	7	B
29.09.16	MMS290916VHA	Market outlook for Sheepmeat – Confident livestock marketing	Hawkesdale	Peter Ham	5	B
30.09.16	MMS300916VHA	Market outlook for Sheepmeat – Confident livestock marketing	Hamilton	Peter Ham	5	B
05.10.16	MMS051016VHO	Turn pasture into profit - 2 day study tour	Horsham	Ken Solly	6	B
06.10.16	MMS061016VCC	Succession Planning	Creightons Creek	Jim Shovelton	10	B
20.10.16	MMS201016VMI	Sheep Feeding Calculator	Mildura	Peter Hamence	14	B
21.10.16	MMS211016VHA	Worm Management workshops	Hamilton	Andrew Whale	7	B
21.10.16	MMS211016VPI	Sheep Feeding Calculator	Piangil/Kooloonong	Peter Hamence	16	B
24.10.16	MMS241016VHA	Worm Management workshops	Hamilton	Andrew Whale	6	B
26.10.16	MMS261016VKI	Better Fertilizer Decisions	Kilmore	James Whale	16	B
28.10.16	MMS281016VHA	Worm Management workshops	Hamilton	Andrew Whale	6	B
31.10.16	MMS311016VHA	Market focused lamb and sheep meat production	Hamilton	James Whale	5	B
07.11.16	MMS071116VHA	Worm Management workshops	Hamilton	Andrew Whale	5	B
09.11.16	MMS091116VHA	Worm Management workshops	Hamilton	Andrew Whale	7	B
25.11.16	MMS251116VHA	Worm Management workshops	Hamilton	Andrew Whale	8	B
28.11.16	MMS281116VHA	Worm Management workshop	Hamilton	Andrew Whale	8	B
30.11.16	MMS301116VHA	Worm Management workshop	Hamilton	Andrew Whale	8	B

Appendix 2 Standard Operating Procedures for MMfS Events



Appendix 3 Guidelines for Writing Evaluation Questions



Writing Making More from Sheep Evaluation Questions

Prepared by **Natasha Morley (MMfS SA State Coordinator)** and **Lyndon Kubeil (MMfS Vic State Coordinator)**, February 2012.

Knowledge, skills and confidence audits are a key part of MMfS evaluation for Category B and C events.

For any Category B and C event, no more than two MMfS modules should be covered in a single session/day. For each module addressed, a minimum of four knowledge/skill questions are to be developed. The number of questions required will be determined by the length of the session and the key learning outcomes covered.

The questions need to relate to the module covered. The same questions are asked at the beginning of the session and at the end of the session to allow for change in KASA and confidence to be measured. During the session, participants should learn the content that allows them to answer the questions.

Questions need to have 4 responses and an unsure option, for example;

1: When talking about rainfall and pasture growth variability Decile 1 refers to;

- A) The lowest 10% of rainfall years for the farm?
- B) The highest 10% of rainfall years for the farm?
- C) The average rainfall for the farm?
- D) The driest 10 years recorded for the farm?
- E) Unsure

In some cases it will be possible to measure a change in skills by assessing the skills prior to a session and again at the end. This could involve condition scoring at the start of the day and then again at the end of the day. This process needs to be documented so that the outcomes can be measured, for example line up 5 sheep A to E and ask participants to CS, record the results and repeat the process at the end of the day. This would be equivalent to one multiple choice question.

A confidence question should also be incorporated in addition to the KASA questions at the beginning and end of each session with a 1 to 10 rating, for example

1. How confident are you to assess pasture availability?

Not Confident								Very Confident	
1	2	3	4	5	6	7	8	9	10

Writing questions or unfinished statements (stems)

- The question should be clear, and simple to avoid confusion
- The question should be meaningful, and be able to stand alone, without having to read all the options first
- The question should contain material only relevant to answering the question
- Where possible, design questions which avoid simple recall.

Writing responses

- Avoid using 'all of the above':

When a participant is considering the 'answers', recognition of one wrong option eliminates 'all of the above', likewise, recognition of two correct options identifies 'all of the above' as the answer.

- Avoid using 'none of the above' as an answer option:

This option does not necessarily measure the participants ability to identify the correct response.

- Try not to repeat wording from the question in an answer option
- Avoid negative questions: eg which one does not work to avoid confusion in interpretation

Writing the incorrect answer options (the distractors)

This is one of the most difficult aspects of writing multiple choice questions. A few things to keep in mind when writing the incorrect answer options:

- Avoid including responses that are obviously wrong
- The options should be attractive and credible to the uninformed
- Statements developed around common misconceptions often make strong distractors
- Avoid using 'never', 'always', 'all', as participants will rule these out.
- Keep the distractor appropriately different to the correct response in 'content', not just by using 'clever' or 'subtle' wording.

Writing the correct response

- Try to avoid giving a clue by having the correct response noticeably different in length, grammar etc
- Try to avoid questions which are opinion based or are open to interpretation, there needs to be a correct response

General tips

- Try to avoid using extremes such as: never; always and only
- Look out for typos and grammatical errors

Typos: These are likely to appear in a distractor/ incorrect answer option rather than in the question or correct answer option.

Grammatical inconsistency: Can appear between questions and distractors. Often the question and correct answer are grammatically consistent; however distractors are potentially afterthoughts and may not mesh properly with the stem. Participants will pick up on this.

It is also good practice to allow enough time at the end of the session to work through the questions with the group. Working through the answers to the questions, and perhaps even why the distractors are not the appropriate answer will help reinforce the key messages and confirm the learning's from the day for the participants.

An option may be to provide a handout which covers a summary around the questions asked.