



## final report

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# Profitable Grazing Systems – review of pilot supported learning projects.

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## **Executive summary**

The objective of the Profitable Grazing Systems (PGS) pilot project was to design, trial and develop a business case for an extension and adoption model for MLA to implement to achieve industry scale increases in red meat production and profitability.

The PGS pilot project delivered ten individual supported learning (coaching) projects to groups of red meat producers across Australia, including both northern and southern production zones. The topics covered were typically business and feedbase focussed, with the majority of coaches developing their own supported learning projects (SLP) to deliver through PGS. The coaches had varying degrees of experience with the design and delivery of supported learning or coaching activities.

The purpose of this report is to deliver detailed analysis of the SLP delivery experience during the pilot project, to provide insight and information for the current PGS coordination team to assist with implementing this delivery model. This includes the opportunities and challenges encountered through the pilot project and some solutions identified to assist in addressing these challenges. It also provides an opportunity for the development of benchmarks associated with high quality SLP delivery, which may assist the PGS coordination team in reviewing and assessing monitoring and evaluation (M&E) data collected during PGS implementation.

The majority of supported learning projects delivered through the pilot project were of high quality and delivered the results expected of a high value supported learning project, that producers are willing to invest in. The characteristics of these projects were well-designed and delivered projects, with strong supported learning fundamentals, including repetition and a very strong focus on skill development using a guiding and supporting approach, rather than telling or advising. The M&E data from these projects was robust, with a reasonable number of consistent and skills-focused practice and confidence questions, skills-focussed KASA questions and attention to detail in delivering the M&E to participants and conducting the self-assessments and participants feedback.

In regard to SLPs that did not deliver the outcomes expected of a high quality project, the foundations for this result were set in the design and development phase, which then flowed into the delivery. Four pilot SLPs did not fulfil the definition of supported learning, either partially or completely. Characteristics of these less successful projects included using a discussion group or consulting delivery model, both of which are generally inconsistent with a supported learning approach. These delivery models provided very little opportunity for skill development and/or opportunity to apply skills and practices within participants' businesses. This is not a surprising outcome, as for many deliverers it was their first attempt at supported learning methodology, and there was no deliverer training (apart from feedback during the development of their supported learning projects and provision of supporting tools and resources). This was a deliberate approach to the pilot project, as one of the objectives was to understand the existing capability of the deliverer network to use a supported learning approach.

The other major issue around deliverer capability was experience with M&E. Skills audit results are impacted by both the standard of delivery and the quality of the M&E processes. The pilot project highlighted the importance of having robust M&E processes, including different elements of M&E, which can be combined to give an overall picture. It also reinforced the need to train and support deliverers to ensure consistency in how skills audits are written and delivered. The importance of having consistency in some of the variables assessed, for example confidence and practice questions, also became apparent.

Some of the common weaknesses identified in the M&E materials and processes included the timing of completion of the pre and post assessments, limited inclusion of questions that measure skills (the number of questions is not as important as the type of question, and the way in which it is asked), altering the practice and/or confidence questions between the pre and post assessments, and not asking sufficient practice and/or confidence questions to cover all key aspects of knowledge and skills being taught during the SLP.

Overall, the majority of pilot project coaches valued the supported learning approach and the potential for impact in increasing skill development and adoption. However, there are challenges associated with the model that deliverers should be aware of, and these must be addressed in PGS program design. The following recommendations are made based on the analysis of the pilot project results.

- Increased training and support for the delivery network to build their knowledge and skills to enable successful implementation of the PGS delivery model.
  - Training and support for PGS deliverers to assist them to develop their skills to develop, implement and recruit for high quality supported learning projects.
  - Training and support for PGS deliverers to assist them to develop their skills to design and implement project-specific M&E processes, including how to effectively deliver KASA-based M&E.
- A comprehensive, consistent and supportive approach to monitoring and evaluation is required at both an individual project and broader program level.
  - Taking a multi-pronged approach to M&E, including assessing knowledge, skills, confidence, and practices of participants, and providing opportunity for continuous improvement to deliverers.
  - Ensuring consistency in M&E templates and processes, especially with respect to practice and confidence questions.
  - Developing resources to assist PGS deliverers to design and implement high quality M&E that meets PGS requirements, including example skills questions and methods for assessment which coaches are encouraged to use.
  - Further exploring the value of a National Farm Monitor Program to measure economic impact of supported learning projects at an industry level.
- MLA may need to have an active role in developing SLPs where service providers don't believe that there is commercial viability in developing their own SLPS or where the successful implementation of projects covering all pillars of the PGS curriculum may be limited.
  - Where market failure exists, MLA may need to support the development of SLP packages that can be "picked up and delivered" by suitably competent deliverers. It will be important to ensure deliverers of these packages receive adequate training in the resources and are competent to deliver using a supported learning approach.

Where market failure exists, MLA coordination and contribution to "bolt-on" coaching components for their own programs that are currently focussed on knowledge building.

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## 1 Introduction

#### 1.1 Project background

In 2016 MLA contracted the development of a business plan and delivery of a pilot project to provide a framework and recommendations for a new approach to extension and adoption. There were three elements to this project, called the Profitable Grazing Systems pilot project, which were delivered over a period of nine months from February to November 2016:

- 1. Development of curriculum across five knowledge pillars driving business profit (business, feedbase, reproduction and genetics, value chain and people) and across the red meat industry sectors (southern sheep and beef, northern beef and goats);
- 1. Delivery of a pilot program to trial a supported learning methodology.
- 2. Development of a business plan for the PGS framework.

A detailed final report was produced as a result of this project: *Profitable Grazing Systems – MLA's extension and adoption pilot project (L.ADP.1601)*. This current report focuses on a comprehensive write up of stage 2, the pilot supported learning project delivery. The timeframe for delivery of the overall E&A pilot project was incompatible with the timeframes required to deliver meaningful supported learning projects (SLP), meaning that the pilot SLPs concluded in 2017, post-submission of the PGS Business Plan.

The key purpose of delivering the pilot supported learning projects was not to prove supported learning as a methodology but to explore some of the potential issues associated with the model, including deliverer capacity and capability, the most appropriate delivery platform and support structures for deliverers, recruitment, pricing and alternative funding models, and also to better understand some of the potential incentives and barriers for both deliverers and producers in engaging with a supported learning model.

The objective of providing a detailed analysis of the pilot SLP delivery is to assist the current PGS coordination team in understanding some of the challenges associated with this delivery model, and potential solutions to manage these challenges. It also provides an opportunity for the development of benchmarks associated with high quality SLP delivery, which will assist the current PGS coordination team in reviewing and assessing M&E data in context of what has been delivered previously.

#### 1.1.1 Supported learning

As a supported learning methodology is core to the Profitable Grazing Systems program and to the pilot project, it is important for there to be a shared understanding as to exactly what supported learning actually is. Extension and adoption programs have historically focussed on *what* the best producers do differently and promoted this to the masses. Over time there has been significant uptake but limited benefit – "more producers doing the right things the wrong way". To radically improve the return from extension and adoption programs, a focus on a methodology that involves increasing the number of producers doing the right things the right because unlike many other businesses, primary production is complex (people, plants and animals) and is set in a very dynamic and leaky environment (climate, seasonality, weather, soils and the economy). Because of this dynamism, primary production and business performance is almost entirely a function of managerial competency or skilfulness. Skill development is the factor that allows producers to capitalise on new technologies and techniques such that the change in practice is associated with improved business performance. Since skill development has been clearly shown as a key profit driver this is the major focus of the MLA's proposed extension and adoption program.

In order to develop skills, both theory and practice are required. In order to practice the right things, the right way some level of support (generally coaching) is necessary. This provides an opportunity for producers to practice the skills and to implement and refine them in the farming system while increasing confidence and capability.



#### Figure 1: The link between profit, skill and the time spent in supported learning (Doonan, 2012)

The size of the spheres represents the time spent in supported learning activities (Figure 1). The smallest spheres represent 1 year, the next size up 2-3 years and the largest spheres more than three years. Clearly training and the associated improvement in capability increase business performance.

Supported learning is an expensive delivery model (generally supported learning takes more time to deliver, over more sessions and usually, but not always, works with smaller groups of participants), compared to one off workshops or field days or information sessions. It should therefore only be used where skill development is key to lifting profit.

As per the PGS Glossary the following definition of supported learning is provided.

#### The key outcomes of supported learning activities are:

- Improved capability and practice linked with improvement in business performance
- Increased participant confidence and skills
- Improved ability to process data and evidence into knowledge and corresponding actions
- Linking cause and effect on-farm
- An ability to evaluate decisions from an economic and/or farming system perspective

#### The critical components of a supported learning program are:

- Participants should have opportunities to evaluate the outcomes of their skill development on their management capability/business performance
- Participants should have opportunities to implement new practices in their farming system, with peer support
- There is opportunity to practice (repetition) and for reinforcement of skills and knowledge, including time to reflect
- Based on peer reviewed scientific principles
- The deliverer encourages participants to find their own solutions based on their new skills and knowledge

- It provides an opportunity for peer to peer learning
- Supported learning is not a series of workshops covering a range of topics presented by different deliverers
- Group size is a consideration for supported learning activities groups are typically smaller, although actual size will depend on the type of supported learning program, the experience of the deliverer, logistics, type of learning activities, level of interaction required, and complexity of tasks and skills

## Supported learning programs are comparatively expensive to deliver and are used to best effect when:

- There are a number of skills to be learnt, that require practice/s to be embedded within the farming system
- The skills/knowledge/practice/s and decisions are complex and interwoven
- Implementing the skills and knowledge within the farm business will be challenging because the operating environment is complex

## 2 Methodology

Due to the tight timeframes, deliverers known to the PGS pilot project team were approached directly. Some of them had previously delivered supported learning projects and the project team believed they would be capable of delivery of supported learning projects within the timeframes, while providing geographic and enterprise spread across Australia. Ten coaching groups were established as per Table 1. Five of the coaches had previously been engaged by MLA for the Farm300 project and had previous experience of a supported learning model with MLA.

Name*	Organisation	Curriculum pillar	Industry
David Brown	Holmes Sackett	Business/feedbase	mixed species
James Whale	Meridian Agriculture	Business/feedbase	beef/sheep
Kristy Howard	Inspiring Excellence	Business	sheep
Ed Riggall	Consulter	Business/feedbase	sheep
Garry Armstrong	Armstrong Livestock Solutions	Feedbase/repro	beef/sheep
Simon Vogt	Rural Directions	Feedbase	beef/sheep
Desiree Jackson	Desiree Jackson Livestock Management	Feedbase	northern beef
Jill Alexander	Applied Ag	Feedbase	northern beef
Ian McLean & Simone Parker	Bush AgriBusiness	Business	northern beef
Trudi Oxley	Department of Primary Industry and Fisheries, NT	Feedbase	northern beef

 Table 1: Coaches engaged through the E&A pilot project

\* to protect the privacy of individual coaches and their participants, all coaches were supplied with a unique identification number, which has been used in this report where results from different coaching groups are compared. Where it was not necessary for the individual coaching groups to be identified the order of coaching groups has been randomised, so that they are never listed alphabetically or in identification number order. The table above does not list coaches in order of their unique identification number.

The coaches were engaged during March/April 2016 and were provided with a toolkit of resources to assist them in developing their supported learning projects and writing M&E (KASA) questions. An introductory webinar was held for coaches to introduce them to the pilot project, the requirements for coaches and the support available to them. Regular email updates were provided to coaches, and a second coaches' webinar was held in September 2016 to provide an opportunity for coaches to share learnings and hear from each other. The support tools and resources provided to coaches are outlined in Appendix 1– these were additional to a coaches' toolkit which provided an overview of requirements of coaches, guidance on achieving these requirements, and a coaching project application form – which provided a template for learning project development, and the economic analysis data required from coaches. All coach tools and resources were filed in a Dropbox folder to which all coaches were invited to share. This ensured that all coaches were able to readily access the latest versions of tools and resources.

All coaches developed their own supported learning projects and submitted them to the coordination team for approval. The key criteria which supported learning programs were assessed against were as follows:

- That there was a requirement for a supported learning approach, that is that the project required skill development;
- Repeated content and opportunity to practice skills at different sessions;

- Opportunity for reflection and shared learnings;
- Opportunity for participants to take ownership and commit to change / adoption;
- Linkages between theory, practice, and skill across sessions;
- Participants encouraged to implement learnings in their business;
- Learning activities don't just list the topics which are to be covered at a session how the theory and skills will be taught is identified;
- Where implementation or practice change takes place, there is an opportunity to observe and evaluate outcomes;
- There is opportunity for participants to learn how to undertake marginal cost marginal benefit analysis to support decision making;
- The foundations of the program are based on scientific principles and use an evidencebased approach.



#### Figure 2: Location of pilot coaching groups

All coaches were required to complete pre-, mid- and post-project skills audits (KASA). The pre- and midproject KASA results were used to provide input data to the PGS Business Plan (MLA project number LADP.1601). The post-project KASAs for all projects were completed after submission of the business plan in December 2016 and are summarised in this report.

The starting date for delivery of the first SLP session was highly variable and influenced mainly by recruitment, but also by the need to time sessions to coincide with less busy periods on-farm. The timeframe for delivery of the pilot SLPs extended beyond the period of data collection for the Business Plan, with the majority delivered over a 9 to 12-month period. Supported learning projects would normally be delivered

over at least an annual cycle, with the session schedule flexing around producer availability. This enables producers to refine their skills, and experience practical application of new skills and knowledge at key times of the production cycle. To give the pilot SLPs the best chance of success it was believed that they should run over a realistic timeframe as determined by individual coaches.

The pre- and mid-project KASA audits were also utilised as an opportunity to obtain further data from producers on incentives and barriers to participation, pricing, and their experience of the SLP delivery model. All of the skills and knowledge audit questions (including questions related to assessing participant confidence and practice change) were populated by coaches, with feedback and review provided by the program coordinator. Additionally, coaches were also asked to collect feedback from producers at every session and to conduct a self-assessment of their own performance following the delivery of each session (this was done using standardised templates). This data was all entered by the coaches into an excel template and submitted to the program coordinator for analysis and feedback.

The pilot project coaches were also asked to complete economic modelling on the potential impact of their projects. Given their projects were not expected to affect measurable changes on participant profitability within the timeframe of the pilot project, this was done via coaches' estimating what changes participants could be reasonably expected to make to their businesses as a result of the project, and what impact this would have on production and profit. A baseline scenario (average, typical or example farm business) was then compared with the post-program scenario, to provide the net profit (the improvements accounted for either additional capital expenditure or running costs to achieve them giving a net benefit). The net benefit was then standardised across all programs as increase in Return on Assets Managed.

The coaches were funded \$20,000 each for their participation in the pilot project, including collecting and providing M&E data from producers and themselves. They were also asked to provide detailed information on pricing and income for their projects to feed into development of the Business Plan. Trainers were not given any formal training in supported learning development or delivery although they were provided with unlimited support in developing their supported learning projects, M&E materials and economic analysis. The intention of this approach was to enable an assessment of the pre-existing capability within the industry.

## 3 Results

#### 3.1 Development of supported learning projects

Coaches developed their own supported learning projects as outlined in Table 2. The majority of coaches developed their own SLPs from scratch (without the benefit of the curriculums, as these were being developed concurrently), except for one trainer who used an existing package developed by another private consulting organisation and another who used a Victorian DPI developed package and tailored this for delivery. Supported learning projects were then marketed to producers to recruit participants by individual coaches (support from the coordination team or MLA was not provided for recruitment). All four northern Australian trainers set up their SLP as a "bolt-on" to an EDGE package (e.g. Business EDGE, Grazing Fundamentals or Nutrition EDGE). In most cases the theory had been delivered via EDGE and participants at these EDGE workshops were keen to be part of a coaching bolt-on to help them apply the learnings to their own businesses.

There was large variation in the quality of the supported learning projects submitted by coaches and the number of iterations required to bring them up to an acceptable standard for this model of delivery. On first submission, most SLPs were content heavy with too broad a scope. Many consisted of a series of unlinked workshop activities with little repetition or reflection. If after four or five iterations a project was still not considered as meeting the requirements of a supported learning project, it was allowed to progress to the delivery phase, as this provided an opportunity to assess the impact of project design on the quality of delivery. There were two projects that were not considered to fulfil the requirements of a supported learning project that progressed to delivery. There were another two projects where coaches, on receiving feedback on their original SLP submission, were able to re-write so that their projects met a high standard of SLP (with significant opportunity for practice, reflection, reinforcement, repetition).

One coach when asked to reflect on their project mid-way through observed that "If I did this again I would run it differently – I would trim the content and run an extra session". Other coaches made similar observations, including "I did go about it the wrong way, it was too content heavy". Many of the coaches noted that one of the reasons for making their SLPs too content heavy and broad was the perception that this was how they needed to deliver value, but on reflection they had over-estimated the baseline knowledge and skills of participants – "The expectations of deliverers is too high. What we think is basic isn't to producers."

Location	Торіс	Enterprises	Outcomes as defined by pilot coaches	Delivery techniques	Recruitment approach
Victoria	Business	Sheep (some beef)	To have farming businesses working smarter not harder by optimising their on-farm productivity and profitability and developing their own 'blueprint for success' for their farming future.	Group workshops and one on one coaching via property visits	Structured marketing campaign (using email) targeting existing clients first and then wider audience via farmer contacts, other deliverers and media.
Western Australia	Business	Sheep and beef	By changing from an operational farming focus to a business focus, individual business managers will be encouraged to review their systems to focus on per hectare output and profit margin, rather than being price focused. This change will lead to increased productivity per hectare and increase business performance.	Group workshops combined with one on one coaching via property visits. Use of online tools to maintain group contact between sessions	Participants from a previous workshop (More Lambs More Often)
South Australia	Feedbase	Sheep and beef	<ul> <li>Producers being able to accurately determine leaf stage of different pasture species</li> <li>Producers being able to calculate and identify leaf emergence rate</li> <li>Producers able to set rotation length and grazing area based on leaf emergence rate throughout the growing season</li> <li>Producers able to determine the pasture intake requirements for different classes of livestock at different points in the reproduction cycle and allocate animals to available pasture according to the best nutritional fit</li> <li>Producers able to develop an annual feed budget for their property and livestock enterprises</li> </ul>	Group workshops with limited one on one coaching for host producers (via property visits)	Core group composed of existing clients, then direct approach to near neighbours to complete group

#### Table 2: Summary of the pilot supported learning projects delivered (as presented in L.ADP.1601)

Location	Торіс	Enterprises	Outcomes as defined by pilot coaches	Delivery techniques	Recruitment approach
Northern Territory	Feedbase	Beef	<ul> <li>To improve participants ability to assess and identify management options to improve nutrition and therefore productivity. This requires a combination of increased skills and confidence in:</li> <li>Collecting the necessary baseline data</li> <li>Skills in being able to estimate the costs and benefits of implementing a strategy</li> <li>Skills in using economic criterion to compare strategies most likely to increase profit</li> <li>Ability to implement a change strategy, monitor outcomes, reflect on the result and communicate their results and learnings with the group</li> </ul>	Group workshops and webinars combined with one on one coaching via property visits	Participants from a previous workshop (Nutrition EDGE), delivered at beginning of E&A program project
Queensland	Business	Beef (some sheep)	<ul> <li>Improved financial literacy</li> <li>Ability to measure whole business performance</li> <li>Understanding of current business performance and key profit drivers</li> <li>Identification of areas for improvement</li> <li>Ability to make informed decisions and implement changes that will lead to improved business performance</li> </ul>	Group workshops and webinars combined with one on one phone calls (and email)	Direct approach to existing clients, producers who had previously expressed interest in a producer group activity, and introductions through other deliverers in the region (phone calls most effective)
NSW	Feedbase & Genetics	Sheep (some beef)	At the conclusion of the program, participants will be better equipped to make decisions around the right plant for the right situation. They will then have the required skills to match livestock class to the feed source to reduce turn off times and improve reproductive performance. Participants will also gain a better understanding of the genotype required to deliver higher weight gains,	Group workshops	Core group from a recently delivered program (LTEM); other members recruited through word of mouth

Location	Торіс	Enterprises	Outcomes as defined by pilot coaches	Delivery techniques	Recruitment approach
			reduced turn off times and improved reproductive performance.		
NSW	Business	Sheep, beef and goat	<ul> <li>Increase producers financial literacy and 'measure to manage' proficiency</li> <li>Able to extract key data from existing records (sales, purchases, stock numbers and chart of accounts) to be able to create management accounts and develop financial and production KPIs</li> <li>Identify the key issues restricting the profitability of their business</li> <li>Find a cost-effective solution to the main issue affecting their profitability</li> </ul>	Group workshops combined with one on one phone calls (and email)	Mixture of existing clients, producers reached through a previous field day, via phone calls
Victoria	Business	Sheep and beef	Embed new skills and new approaches to farm business decision making amongst participants. Improve clarity amongst participants on what changes can be made to business to improve whole-farm financial performance. Ultimately, improved financial performance amongst participant businesses.	Group workshops	Client of delivery partner (agribusiness), recruited by partner.
Queensland	Feedbase	Beef	<ul> <li>Have a basic understanding and core principles for maintaining and improving land condition</li> <li>Locally, know what level of seasonal variability to expect and how best to manage around this variability</li> <li>Know their current and potential property carrying capacity and have initiated actions that will get them on the path to cost-effectively achieving their potential long-term property carrying capacity</li> </ul>	Group workshops combined with one on one coaching via property visits	Previously delivered workshops (Grazing Fundamentals EDGE)

Location	Торіс	Enterprises	Outcomes as defined by pilot coaches	Delivery techniques	Recruitment approach
			<ul> <li>Understand the variable nutrient needs of different classes of animals and be aware of the variation in pasture feed quality throughout the year.</li> <li>Start to put together a grazing and feed year plan</li> </ul>		
Queensland	Feedbase	Beef (some sheep)	<ul> <li>Improved understanding of the diet quality technology and how it is influenced by pasture species composition, the level of C3 versus C4 plants in the diet, and plant growth phases.</li> <li>Comparing diet quality with animal nutrient requirements and how to manage for this either by weaning or supplementation, including selection of supplement groups.</li> <li>Estimating pasture yields and forage budgeting on an AE basis.</li> <li>Exposing producers to new technologies for delivery of coaching/training (e.g. GoToTraining online sessions).</li> <li>Demonstrating to producers the benefits of financially investing in a coaching program.</li> <li>Assisting producers to continually build on their learnings and taking technologies for implement various management strategies.</li> <li>Monitoring changes in fertility, mortality and turnoff.</li> </ul>	Group workshops combined with one on one coaching via property visits	Previously delivered workshops (Nutrition EDGE and Stocktake)

#### 3.2.1 SLP group demographics

All the trainers in the pilot project charged participants on a per business basis, some with numbers capped and others with no cap on number of participants per business. The minimum number of businesses engaged was five, and the maximum 13, with an average of 9.6 businesses per group (Table 3). The average number of participants per group was 13, with a minimum of ten and maximum of 19 (Table 3).

Group	Number of Producers	Number of Businesses
PGS01	19	12
PGS02	14	8
PGS03	12	10
PGS04	13	13
PGS05	10	6
PGS06	15	11
PGS07	11	10
PGS08	10	5
PGS09	13	10
PGS10	13	9
Total	130	94
Average	13	9.4

Table 3: Numbers of producers and businesses engaged in the E&A pilot project by group

Given the enterprise scale differences across the country, further analysis of participating producer demographics was conducted on a state by state basis. Table 4 outlines the group size by state – interestingly there were very few differences, with the exception of Victorian groups having larger numbers of producers than other states, and Queensland groups having fewer businesses (this data set is too small for these results to have any statistical validity).

Table 4: Numbers of producers and bu	usinesses engaged in the E&A	pilot program by state
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State	Average number of producers per group	Average number of businesses per group
NSW	12.5	11.5
NT	13	9
QLD	12	7
SA	13	10
VIC	16.5	10
WA	11	10
Average	12.9	10.0

Participating businesses managed an average of 26,000 ha, and a total of over 1.5 million hectares (the Northern Territory accounted for over 1.25 million hectares) (Table 5). The animal numbers managed by participating producers (Table 6) indicate that the producers engaged by the program are large scale and commercial, especially when compared to the average ABARES data for 2015/16 (average cattle herd 395 head and sheep 1,242, compared to 7,813 and 33,527 averages per business for the pilot project participants).

State	Average area managed (ha)	Total area managed (ha)
NSW	2,038	46,863
NT	138,638	1,247,742
QLD	12,953	310,862
SA	2,022	20,220
VIC	1,430	25,740
WA	835	8,350
Total	-	1,659,777
Average	26,319	-

#### Table 5: Area managed by producers engaged in the pilot project

#### Table 6: Total animal numbers managed by producers engaged in the pilot project

	Total number of cattle turned off per year	Total number of beef breeders	Total number of lambs turned off per	Total number of ewes	Total number of goats turned off per year
State			year		
NSW	4,017	3,844	38,820	75,160	400
NT	14,800	33,330	0	0	0
QLD	10,425	7,303	19,327	15,717	0
SA	235	510	14,500	17,780	0
VIC	1,070	1,235	32,720	33,888	0
WA	655	656	18,200	25,090	0
Grand Total	31,202	46,878	123,567	167,635	400
Average	5,200	7,813	24,713	33,527	400

#### 3.2.2 SLP financials

Three trainers obtained cash support additional to MLA's support and the producer contributions for their programs (Table 7). This support consisted of cash contributions that ranged from \$2,000 to \$7,000 per project and was obtained from agribusiness (finance sector) and Natural Resource Management (NRM) / Catchment Management Authority (CMA) groups. Other trainers received in-kind support including covering venue and catering costs, provision of expert presenters/advisors and recruiting. The in-kind support was provided by agribusiness (finance sector) and Local Land Services, Agriculture / Primary Industry Departments and the value ranged between \$500 and \$5,000. Only one trainer obtained both cash and in-kind support; the others were either/or.

Cost to participate per business	External cash support (\$)	Total cost of delivery (\$)	Total cost of program development (\$)	% producer contribution to delivery	% contribution from MLA to delivery	Net profit- loss for delivery only (with \$20k MLA contribution)
\$300	\$7,000	\$25,988	\$8,200	12	65	\$4,612
\$800	\$2,000	\$33,375	#	15	77	-\$7,375
\$1,300	0	\$31,050	\$5,400	44	56	\$4,550
\$500	0	\$47,025	*	18	82	-\$22,525
\$500	0	\$25,400	\$4,560	17	83	-\$1,400
\$697	\$2,000	\$37,818	\$11,880	24	69	-\$8,848
\$400	0	\$18,650	\$6,000	17	83	\$5,350
\$500	0	\$18,900	\$1,400	20	80	\$6,100
\$2,000	0	\$36,000	\$15,000	33	67	-\$6,000
0	0	\$26,500	\$4,000	0	100	-\$6,500
\$700	\$1,100	\$30,071	\$6,271^	20	76	-\$3,204

# included in delivery cost

\* utilised pre-existing package, other development costs included in cost to deliver

^ for some coaches, recruitment costs are included in the cost of program development

The average business contribution charged by coaches was \$700 (and all coaches charged on a per business basis), with a maximum fee of \$2,000 per business and minimum of zero (only one deliverer did not charge) (Table 7). The proportion of producer contribution of total income ranged between 12% up to a maximum of 44% (average of 20%), while the proportion of income from MLA ranged from 56% up to a maximum of 83% (average of 76%) (Table 7). Four coaches noted that the price that they charged per business would be increased post-pilot (and of these, two had charged the highest fees already in the pilot project).

Coaches provided the costs for development and delivery of their projects – some variation in daily rates was observed, although the majority were at the upper end of the scale (e.g. \$1,500 per day). There also appeared to be variation in the accuracy of recording time spent on the project. As a standard cost allocation process was not provided to coaches, variation in how they allocated time to recruitment, development, delivery or unallocated is likely, and time spent on recruiting varied significantly. The total cost estimated for delivery ranged between \$12,000 and \$46,895, with an average of \$30,071. The total cost estimated for SLP development (and for some coaches this included recruitment) ranged between \$1,400 and \$25,000 with an average development cost of \$6,271 (Table 7).

Based on the data provided (for delivery only, including the total MLA contribution of \$20,000), four pilot coaches made a loss, with the amount ranging from -\$3,300 to -\$22,395. One coach broke even and four made a profit ranging between \$2,340 and \$12,000. The average profit – loss was -\$3,204. The range in profit - loss may be due to variations in daily rates of different coaches, how recruitment activities were allocated (i.e. some coaches allocated to development and others to delivery), differences in travel costs, and venue hire / catering and importantly how much one on one was conducted.

The modelled economic benefits of the pilot coaching programs are provided in Appendix 2: Results from pilot coaching project – economic impacts. As outlined in the methodology section, pilot trainers were required to undertake this assessment. The majority of the pilot trainers had some business experience and were able to undertake this activity relatively easily. However, two of the pilot trainers had technical expertise in areas other than business and were not capable of conducting this assessment. These individuals were provided with an experienced business consultant to assist them through this process. Of the ten pilot projects, two economic analyses were considered unreliable (one high and one low). For the remaining eight assessments outlined, the net gain averaged around \$57,000 per participating business.

#### 3.2.3 Value, satisfaction and pricing

As part of assessing the value of the pilot projects, both coaches and participants were asked to rate the pricing of the SLP they were involved in (too expensive, about right, too cheap, unsure). For four of the ten SLPs both producers and coaches assessed the pricing of the projects that they had participated in as about right. The actual pricing of these SLPs varied from \$200 to \$2,000 per business. For PGS10, the coach assessed the price as too cheap, and 72% of their participants were in agreement with this. For other SLPs the situation is more complex as outlined below in Table 8.

			Producer rating % of participants)				
Group	Cost	Coach rating	Too expensive	About right	Too cheap	Unsure	
PGS02	\$500	About right		62	38		
PGS03	\$400	About right	38	62			
PGS04	\$1,300	Too cheap	9	91			
PGS06	\$300	Too cheap		70	30		
PGS07	\$500	Too cheap		27	64	9	
PGS09	\$500	About right	33	50	17		

Table 8: Summary of coach and producer perception of value of SLPs, where discrepancies noted

While one coach (PGS04) of a modestly priced SLP believed that the cost was about right, 38% of participants believed that it was too expensive (i.e. did not deliver sufficient value for money). It is worth noting that this SLP received the lowest rating for value (7.8/10) (Figure 3 and Figure 4) and was amongst the lowest ratings for satisfaction (8.5/10). The reverse was true for PGS02, where the coach believed that the modestly priced package was about right, but 38% of participants rated it as too cheap. This coach received the one of the highest ratings for value (8.9/10) and higher than average for satisfaction (9/10) (Figure 3 and Figure 4).

PGS10, where both coach and participants overwhelmingly rated it as too cheap, was rated second highest for both value (9.1/10) and satisfaction (9.4/10). In group PGS07 64% of participants believed that the project was too cheap, and the coach also believed it to be too cheap. This coach received the average rating for value (8/10) and higher than average for satisfaction (9/10) (Figure 3 and Figure 4).

In group PGS09 33% of participants believed that the project was too expensive while the coach believed it to be about right. This rating by participants didn't match well with the rating for value and satisfaction - the coach received an above average rating for value (8.3/10) and the average rating for satisfaction (9/10) (Figure 3 and Figure 4).

The key message to take home from Table 8, is that producer perception of value is not correlated with the actual cost of the SLP, but that it generally does reflect ratings of value and satisfaction, and producer feedback should be regularly monitored to ensure that SLPs are delivering value to participants.



Figure 3: Average value of E&A pilot program as rated by participating producers (by coaching group)



Figure 4: Average satisfaction with E&A pilot program as rated by participating producers (by coaching group)

#### 3.2.4 Knowledge and skills development

On average, producer KASA scores increased from an average of 46% pre to 84% post (Figure 5). The average scores of coaching groups in the post-KASA were all greater than 75% (with the exception of group PGS08, see comments below). This is a positive result and indicates that producers are becoming skilled as a result of their participation in the SLPs (a threshold of 75 to 80% is considered to be proficiently skilled to enable the skills to be implemented on-farm effectively - this threshold is marked on Figure 5) (Doonan, 2008). On average, 16% of participants received a "pass" or higher (75%) on the pre-KASA audit, while 87% passed the post-project audit (Figure 6). Therefore, over three quarters of SLP participants were sufficiently skilled at the conclusion of the pilot project to implement their new skills and adopt new practices on-farm. Variation in the outcomes of knowledge and skill development of the different coaching groups was observed and this is able to be used to provide some insights into delivery. Some of this variation can be explained by the project delivery and some by the quality and/or delivery of the skills audit and whether it was designed to test skills or knowledge. On average across all ten post skills audits, only 15% of knowledge guestions were included, meaning the skills audits were predominantly focused on knowledge(Table 9). The SLPs covering feedbase typically had a higher proportion of skills questions, compared to those covering business. For example, 100% of producers from groups PGS04, PGS07, PGS09 and PGS10 passed the post skills audits, which is a very high standard. However, while PGS09 and PGS10 included 25% skill-based questions, PGS04 and PGS07 skills audits were dominated by knowledge style questions.

PGS09 producers had the greatest improvement in skills and knowledge, increasing from 18% pre to 88% post (an increase of 70%). Even more pleasing, the standard errors are similar pre and post which indicates that the whole group progressed, and that no outliers were being left behind. Group PGS02 also had a very strong improvement in skills and knowledge (26% average pre to 80% post). The standard errors post did indicate some variation in the group, but the improvement was still positive for the majority of participants. PGS06 demonstrated a great improvement in the skills and knowledge of participants from 35% pre to 86% post (again with some small variation between participants, as noted by the standard errors).

At the beginning of the program there was one group (PGS08) where the average group score was 79%, and the post -KASA average score dropped to 69%. There were two potential reasons for this identified by the coach:

- The terminology used in business analysis is unfamiliar to some and while they are now able to understand and apply the concepts, they may not have had enough opportunity to remember the language;
- The pre-coaching evaluation was completed after the content heavy initial benchmarking meeting where the business analysis was explained in significant detail and this was fresh in their minds. The post-coaching evaluation however, was completed at the end of a long on-property meeting where the concepts of business analysis were applied but not necessarily in the format or terminology of the questions asked

These comments highlight the importance of using skills-based questions in the KASA audit rather than knowledge questions (which typically test only recall), as the KASA used for this project asked no skills questions (Table 9).

Another group in which issues around the delivery of the pre and post-skills audits influenced the results was group PGS05 where participants had a very high initial score (71%), increasing to 84% post. The preskills audit for this group was conducted directly following a feeder activity (on the same topic as the coaching project), so it would be expected that recall would be high and that responses would be largely correct. This makes it very difficult to accurately determine the true effectiveness of this coaching project. And similarly, with PGS08, this KASA asked no skills questions (Table 9).



Figure 5: Average pre, mid and post scores of producers for the skills and knowledge audit by coaching group



Figure 6: Precent of participants in each coaching group passing the KASA test (pre and post) (pass mark set at 75%)

Coaching group	Number of skill questions	Number of knowledge questions	Total number questions	% knowledge questions
PGS01	1	7	8	13%
PGS02	0	8	8	0%
PGS03	4	5	9	44%
PGS04	1	9	10	10%
PGS05	0	8	8	0%
PGS06	5	8	13	38%
PGS07	0	9	9	0%
PGS08	0	8	8	0%
PGS09	4	13	17	24%
PGS10	2	6	8	25%
Average				15%

Table 9: Types of questions asked in the post-project skills audit

#### 3.2.5 Confidence and practice change

In addition to testing skills and knowledge, the skills audit also asked producers to rate their level of confidence in using particular skills or doing particular activities using a score out of 10. Each coach developed their own confidence questions – hence it is not possible to compare directly between different programs delivered on the same topic. Additionally, some coaches varied the confidence questions between the pre and post skills audits (Table 10). Only five coaches kept the same confidence questions pre and post, while three coaches changed all of the questions they asked.

SLP group code	% pre-confidence questions which were repeated in post KASA	Total number of confidence questions asked in post KASA
PGS01	100%	2
PGS02	50%	6
PGS03	50%	1
PGS04	100%	1
PGS05	0%	3
PGS06	100%	5
PGS07	100%	2
PGS08	0%	3
PGS09	100%	2
PGS10	57%	4

Table 10: Summary	v of how confidence	e questions were a	asked pre and	post by coachir	a aroup
rable iv. Summary		e questions were	askeu pre anu	post by coachin	ig group

Changing questions reduces the power of the analysis to determine whether the coaching program is helping with confidence in specific areas or not, as it is not possible to directly compare confidence for the same skill or practice pre and post. However, the average confidence data for each program has been collated and analysed (Figure 7).

PGS01, PGS02, PGS06, PGS07, PGS09 and PGS10 all increased the confidence of participating producers significantly (an average increase of greater than 2.4 out of a possible score of 10). PGS06

asked five confidence questions, which were exactly the same pre and post, so this result is robust and gives the coach reliable data on the impact of their coaching project on producer confidence.

PGS04 had the least effect on producer confidence (average increase of 0.4 pre and post, with only one question which was the same pre and post being asked). PGS03 also had a poor effect on confidence (average increase of 0.8 pre and post, with two confidence questions asked pre and only one of these repeated post). This result highlights the risk of focusing on only one aspect of participant confidence and makes it difficult for the trainer to interpret the impact of their coaching project and whether there are issues that they need to address. PGS08 producer confidence decreased by 0.4 between pre and post audits – the confidence questions were all different pre and post, so this decrease may be a result of asking different questions, or it may reflect the quality of the project.



**Figure 7: Average self-rating of producers' confidence pre and mid by coaching group** (standard errors not available for this data, due to variations in approach to this question between coaching programs)

#### 3.2.6 Practice change

There were three elements to assessing the impacts of the pilot supported learning projects on practice change of participating producers:

- 1. Questions in the KASA audit (pre and post) regarding frequency of use of different practices (considered best practice to achieving productivity performance improvements by coaches)
- 2. Question in post KASA audit regarding intention to change practice
- 3. Question to coaches in their final report regarding whether they believed that their participants were on a pathway to changing practices

Figure 8 provides a summary of producer responses to the question regarding intent to change practices across all coaching projects in the pilot program. These results are positive for the pilot program as a whole, with nearly 80% of participants having already made changes and 15% intending to make changes. However, when broken down by coaching group some trends in response to this question emerge (Figure 9). Groups PGS03, PGS04, PGS07 and PGS08, all had producers respond to this question with varying degrees of reluctance to change. These negative responses were strongest in PGS03 and PGS04. For PGS03, over 20% of participants indicated that they didn't believe any changes were necessary, while a further 8% didn't feel confident yet to make any changes. This is consistent with the low impact that this project had on increasing producer confidence (Figure 7). For PGS04, 5% of participants indicated that they didn't believe any changes and just over 40% had already made a change. PGS07 also had 5% of participants indicating that they didn't believe any changes were necessary, however, over 80% of participants had already made a change. For PGS08, 5% of participants indicated that they weren't ready to make a change, while just over 60% of participants had already made a change.



Figure 8: Summary of intent to change practices indicated by all participating producers



## Figure 9: Summary of intent to change practices indicated by participating producers, by coaching group

A sample of some of the changes that producers across a range of SLPs indicated are as follows:

- Monitor amount of pasture with visual forage budgets. Revised supplement program to improve cost effectiveness.
- Added extra water points and improved existing ones. Used dung sampling to improve supplementary feeding. Analysed hay quality. Reviewed and changed supplements. Intend on: increasing pasture yield by ad
- Business plan direction, vision, business analysis, improve record keeping, continue regrowth control and add legumes to existing pastures.
- Cost benefit analysis, data collection and analysis streamlined
- Have changed the way we market lambs, increased ewe numbers, focused on income per hectare rather than per head
- Monitor more closely the leaf emergence rate. Use the calculator and measure feed on offer in and out of paddock.
- Better communication and planning for our business. Increased stocking rate to help with Kg lamb/hectare, and hopefully \$/ha. Stock containment area to help with pasture improvement and growth.

These results compare favourably with a detailed analysis of MMfS/MBfP data conducted in 2014 (Howard et at 2014), where 50% of MBfP and 59% of MMfS participants that attended MLA funded events can be thought to have made changes as a result. The types of practice change that a supported learning program should aspire to are fundamental skill-based practices which are likely to have a high impact on productivity and profitability. While technological adoption can support these outcomes, on their own they will not be sufficient to really impact business performance (e.g. pregnancy scanning on its own will not deliver as positive an outcome as if combined with skills to manage feed allocation. It will simply be an extra cost to the business). This is an underlying issue with many past E&A programs, where there is a focus on copying what the best producers do rather than how they do it.

At an individual project level, there was correlation between the percent of participants who had "already made a practice" change and the average improvement in knowledge and skills score (between the pre and post KASA audit) of the group ( $R^2 = 0.5979$ ) (where groups not considered to fulfil the SLP requirements or with doubt about the validity of the KASA results were removed (Figure 10)).



## Figure 10: Correlation between improvement in KASA score (pre and post) and percent of participants indicating that changes have been made already

In the KASA audits, coaches included a question which listed a range of best practices relevant to their area of learning and asked producers to rate the frequency which they used each of these practices. As with the confidence questions, each coach developed their own practice questions, so it is not possible to compare directly the impact on practices of different programs delivered on the same topic. Additionally, some coaches varied the practice questions between the pre and post skills audits, and the number of practice questions also varied between coaching projects. The majority of practice questions were based around adoption of skills-based practices.

This data was analysed individually for each coaching group, by averaging the percent of practices within each frequency category pre and post, for participants who completed both audits. This data is presented in graphs on the following pages, with the exception of PGS04 where practice questions were not included in the post KASA.



Figure 11: Percent of practice categories selected by producers before and after participating in PGS01



## Figure 12: Percent of practice categories selected by producers before and after participating in PGS02







Figure 14: Percent of practice categories selected by producers before and after participating in PGS05



Figure 15: Percent of practice categories selected by producers before and after participating in PGS06



Figure 16: Percent of practice categories selected by producers before and after participating in PGS07



Figure 17: Percent of practice categories selected by producers before and after participating in PGS08



Figure 18: Percent of practice categories selected by producers before and after participating in PGS09



Figure 19: Percent of practice categories selected by producers before and after participating in PGS10

The following coaching groups demonstrated very strong shifts in changing practices between pre and post KASA audits – PGS01, PGS05, PGS06, PGS07 and PGS10. PGS08 showed a shift from those never using the practice pre to rarely using it post, and those sometimes using the practice pre, moving to normal practice post. PGS03 was the only project where there was a decline in participants using normal practice between the pre and post audits.

All pilot project coaches believed that their participants were implementing new skills and increasing their productivity and were able to provide examples where significant changes occurred. However, one coach (delivering a business-focussed program) indicated that they believed their participants were on the right path but would expect a minimum of three years before seeing meaningful change within participating businesses. Another believed that their group had opened their minds to different possibilities and ways of doing things as a result of having access to independent benchmarking data within a safe environment (i.e. good group dynamics). When asked whether anything else would be required to support participants adopting new practices four coaches believed some level of follow up with opportunities for further practice and repetition of skills would build greater confidence and competence to use the skill on an ongoing basis.

Some comments from pilot coaches include:

- A highlight for me was seeing the significant and permanent on-ground changes participants made during the coaching period. It was extremely satisfying knowing that the strategies you devised with the participants were successful and the end result meant they were in a better position than they were when you first started working with them
- Adoption is always a challenge as it takes quite a lot of resources to make it happen. So, having the backing to deliver the program was fantastic.
- Highlights for me were seeing "lightbulb" moments from several members of the group as they gain a better understanding of the business of running livestock; Implementation of serious changes to systems resulting in benefits being seen during the cycle of the program; Adoption of a new language and attitude following the recognition of what drives profit.
- I enjoyed seeing participants confidence grow as they were able to verify management decisions through the use of objective data. They had a common language and parameters for analysing issues and I observed the level of discussion and inquiry increase exponentially as participants got excited about the potential benefit of their increased skills and knowledge to their business.
- Every property made significant on-ground changes during the coaching period. I have never been involved with a project that has been the catalyst to so much on-property management change.
- Value of a supported learning approach, where producers are provided with significant opportunity to practice and refine skill development, is very evident. Despite a very engaging two-day workshop, recall at the first coaching session of some of the key principles was lower than anticipated. Without the opportunity for revision and practical application of the key principles within the coaching sessions, the level of successful implementation would have been low.
- Outcomes for participants can be extremely positive and there is no need to give advice as a deliverer. Just lead them on a path of self-discovery and teach some skills along the way

#### 3.2.5 Coach feedback on the E&A pilot project model

There was a significant proportion of one to one activity delivered as part of the pilot coaching program (eight SLPs included one to one, with six being property visits (some multiple property visits). Phone/email contact was also used - primarily to obtain farm financial data to prepare for upcoming group activities. The coaches who used one to one delivery overwhelmingly rated it as being positive for both themselves (increased understanding of individual situations, including areas of need and the ability to ensure delivery is tailored to meet needs) and the participants (able to delve deeper into topics they're interested in, benefits of one on one coaching to maximise learning, able to raise issues/concerns that they weren't comfortable doing in front of a group). However, one to one delivery is an expensive methodology for coaches to adopt (especially when it involves property visits and where properties are remote or large distances from each other and the coach). Given that even with the MLA investment of \$20,000 per group, six deliverers made a loss, with an average profit-loss across the ten deliverers of -\$3,204 (only including delivery costs, not project development costs) (Table 7), one to one is a method that deliverers in future will need to consider carefully in establishing commercially sustainable extension business models. Additionally, five of the ten coaches reported challenges in establishing boundaries or managing expectations of producer participants in terms of the level of individual support that they could expect to receive as part of the coaching program. Some coaches reported that this resulted in them "over-delivering", further increasing their costs. To address this challenge, one coach indicated in their final report that they would offer property visits as an extra fee for service activity for participants.

The majority of coaches in their final reports provided commentary regarding the positives of working with groups of producers; creating opportunity for discussions, interactions and sharing experiences and learnings. The importance of effective group dynamics (and attitude of individual participants) to the success of programs was also noted by many coaches. "I valued the increasing input from group members during the project and the willingness to provide advice and observations that would improve the businesses of other participants. All issues were taken seriously, and members came from a point of wanting to help and see the others succeed". A number of coaches also noted the importance of working with producers who were committed to the program and to changing their current practices.

All four northern deliverers (Northern Territory and Queensland) utilised webinars or similar technology to deliver some sessions. Despite some technical issues being experienced, both coaches and participants were positive about the advantages of this technology, particularly in remote areas where travel is time and cost prohibitive. Another deliverer experimented with using iMessenger and WhatsApp to facilitate discussion outside group workshops and to maintain momentum and activity.

A feature of four of the ten coaching projects (PGS01, PGS02, PGS06, PGS08) was the development of individual action plans by participants, with commitment to achieving priority actions. This tool was used by coaches to embed a commitment to practice change.

For some of the coaches, particularly those located in northern Australia, the distance between coaches and participants, and between participants themselves proved a challenge. For producers to attend meetings meant travelling great distances and investing significant time and coordinating group members to be able to meet on a given date was challenging and frustrating for some coaches. A number of coaches noted that a way of overcoming this was to maintain continuity and contact between sessions (either phone or email), and to use facilitation techniques to ensure that group dynamics are positive, and trust develops rapidly. Another coach observed a similar phenomenon - the challenge of participants prioritising group activities improved over time as group rapport and trust increased.

"Continuity of messages between meetings and avoid backsliding - utilising group messaging is good to keep the discussion happening, but it's important to touch base on the phone at least once between meetings". However, others observed that there is a balance between maintaining the momentum and not over-delivering. Other tips for maintaining enthusiasm and commitment of participants included:

- Tackling something new and fresh at each coaching session
- The coaching sessions being timed according to seasonal developments
- Building on the social interaction amongst participants over time
- Making the coaching sessions enjoyable
- Charge a price sufficient enough to act as a barrier for those who are not sufficiently motivated to participate actively in extracting their value for money from the program.

In their final reports at least two coaches touched on the importance of managing expectations, and one noted that maintaining enthusiasm can be challenging if the program isn't what producers expected. Therefore, having a clear outline of the program from the start is very important. However, another coach highlighted the balancing act required to address the skills participants know about and want to learn versus the skills they don't know they need to learn.

Some coaches provided observations on the learning process, and that participants grow and develop in the skills at different rates, and it is critical to support these different learning speeds, providing extra support to those slower to grasp the skills, and opportunities for the more advanced to stretch themselves or support others. To be an effective coach don't believe all the nods of agreement...test people on the key skills on a one on one basis so you know where they're really at. Additionally, be aware that as a deliverer your assumption of retained knowledge from workshops is quite out of line with the reality.

Others provided comments on their experiences of coaching, (for some the pilot project was their first experience of using this learning technique) and indicated that further training for them in the skill of 'coaching' could be beneficial. *I feel competent with my approach to coaching but have no doubt I could still learn a great deal from others*". "Being self-reflective is critical to being a good coach". Six of the pilot coaches in their final reports indicated that they would be interested in further professional development and/or networking opportunities with other deliverers. Access to the latest R&D information was also highly rated by deliverers, in addition to support with marketing/recruitment for their coaching projects.

A final observation made by the majority of coaches delivering a business project was around the variation in business acumen and record keeping amongst participants and cutting through existing perceptions of what drives profit and therefore priorities for businesses. Some coaches believed that this would improve with more coaching projects and easy record keeping systems, and that *the motivation to improve is driven by the delivery of benchmark data- i.e. producers value the data and thus keep better records*.

## 4 Discussion and conclusion

The PGS pilot project has provided valuable on-ground data to inform the delivery model for the PGS program. The overall impact of a supported learning approach on the adoption of new practices and skills by producers is clear, both from the M&E data, but also from observations provided by coaches. The pilot project has also provided insights into some of the potential pitfalls of the approach and solutions to address these.

Skills audit results can be impacted both by the standard of delivery and the quality of the M&E processes. Some of the inconsistencies in results from the pilot project highlight the importance of having different elements of M&E, which can be collated to give an overall picture, and in training deliverers to ensure consistency in how skills audits are written and delivered. Feedback from pilot coaches indicated that overall the M&E was valued, although some struggled with this aspect of the project. One coach reflected on their experience with *developing the pre and post course skills assessment, "on reflection, I feel the questions I asked could have been much better at capturing change in skills, knowledge and practice change".* 

Despite some of the variances in the quality of M&E data collection processes, there are some clear findings that can be drawn from the pilot project, based on assessment of the coaches' final reports, M&E data and KASA audits, and early reviews of the actual supported learning projects.

Based on review of submitted SLPs and the M&E data collated from the pilot project, the PGS06 pilot project was a standout in terms of the standard of the supported learning project itself, the M&E materials developed, processes used and the outcomes for participants. This project was well-designed, with strong supported learning fundamentals, including repetition and a very strong focus on skill development. It was well-delivered, with guiding and supporting approach, rather than telling or advising. The M&E data from this pilot project was robust, with the KASA including a reasonably high proportion of skills-based questions, and a large number of consistent and skills-focused practice and confidence questions. Additionally, participant value and satisfaction ratings were very high. The coach of this project had no prior experience in coaching and designed and developed their own SLP and materials with support from the coordination team. The effort that this coach put into upskilling themselves and in ensuring their M&E processes were high quality, delivered the results expected of a high value supported learning project that producers are willing to invest in.

In contrast, four other pilot projects did not demonstrate the strong outcomes that would be expected of a true supported learning project. The foundations for this result were set in the design and development phase of the SLPs, which then flowed into the SLP delivery. The observations made of these SLPs from the beginning of the pilot project were generally supported by the results of the M&E data, although there were some inconsistencies due to the quality of the M&E processes, which were not sufficiently robust or high quality.

These four SLPs were not considered to fulfil the definition of supported learning, either partially or completely. The delivery models used in these projects were either a discussion group or consulting model approach. The discussion group model (multiple topics and sometimes presenters) resulted in limited opportunity for skill development and practice, insufficient opportunity for reflection and required more opportunity for practical application of the new skills within participants businesses. The consulting model examples had a focus on comparative analysis and benchmarking and not real skill development (i.e. they went to the what but not the how). The latter projects do build producer awareness of the potential opportunity to improve and would be highly effective if linked with projects that then provide upskilling opportunity for skill development and/or opportunity to apply skills and practices to participants' businesses.

This is not a surprising outcome, as for many deliverers it was their first exposure to this methodology, and there was no deliverer training (apart from feedback during the development of their supported learning projects and provision of supporting tools and resources). This was a deliberate approach to the pilot project, as one of the objectives was to understand the existing capability of the deliverer network to use a supported learning approach. Some of the coaches inexperienced in developing and/or delivering supported learning projects were able to grasp the concepts of supported learning once feedback was provided and in response were able to redesign their projects, however others appear to require more training and professional development.

A key issue for some coaches was their perception that to provide sufficient value to producers, the SLP required a diversity of topics and presenters, rather than delving into the topic in detail and allowing opportunity for practice, reinforcement and reflection to enable meaningful adoption of the new skills. This has significant implications for ongoing delivery through Profitable Grazing Systems using a supported learning model. It implies that deliverers undervalue their own contributions and performance, making it challenging for them to sell a strong value proposition to producers. It also increases the cost of delivering programs (particularly where one-on-one sessions are also built into SLPs) – which is a significant issue in transitioning to a user pays model. There is a significant opportunity for deliverers with complementary skills to partner in the delivery of projects, and either co-deliver or transition producers from one deliverer to another. This requires deliverers to have a core objective of building producer independence through knowledge and skill development, so that they are able to manage their own businesses to increase profit and productivity (i.e. not delivering with the primary intention of creating dependency, or one on one consulting opportunities).

The other major issue around deliverer capability was experience with M&E, and how they valued this information (i.e. feedback on their performance). As with the design and development of SLPs, some limited support was provided to coaches, but again the objective was to understand the typical capacity of deliverers with respect to M&E, where the weaknesses were and what design and support would need to be considered to increase the robustness of M&E in the PGS program. Some of the common weaknesses identified in the M&E materials and processes included:

- timing of completion of the pre and post KASA audits (e.g. conducting the pre KASA at the end of the first session instead of the beginning);
- limited or no inclusion of questions in the KASA audit which would measure skills (60% of KASA audits had less than 20% of the KASA questions assessing skill);
- altering the practice and/or confidence questions between the pre and post KASA; and
- not asking enough practice and/or confidence questions to cover all the key skills / knowledge being taught during the SLP.

Overall, most pilot project coaches valued the supported learning approach and the impact this model had on skill development and adoption of improved practices. However, there are challenges associated with the model that deliverers should be aware of and address.

In the design phase of the SLP, it is important to develop a program that is cost effective and not
prohibitive to producer participation. Containing costs to ensure a commercially sustainable
business model is established may require different approaches to delivery (e.g. use of webinars
to reduce the face to face meeting time, one-on-one property visits could be offered as an optional
extra (for a fee) with phone or skype (or similar) used if one on one sessions are desired);

- Don't assume pre-existing levels of knowledge and skills in participants will be high based on attendance at past theory workshops or field days;
- Effective facilitation is essential to build group rapport and commitment quickly, which will contribute to the sense of value participants feel they have gained from being involved in the SLP and ensure their commitment;
- Managing participant expectations from the beginning is critical, including communicating a clear value proposition when promoting the activity and ensuring participants understand the learning outcomes being targeted;
- Getting the cost right and selling the value is key to recruiting participants;
- Red meat businesses typically have poor record keeping and business performance measures and cutting through existing perceptions of what drives profit can be challenging.

## 5 Recommendations

- Increased training and support for the delivery network to build their knowledge and skills to enable successful implementation of the PGS delivery model.
  - Training and support for PGS deliverers to assist them to develop their skills to develop, implement and recruit for high quality supported learning projects.
  - Training and support for PGS deliverers to assist them to develop their skills to design and implement project-specific M&E processes, including how to effectively deliver KASAbased M&E.
- A comprehensive, consistent and supportive approach to monitoring and evaluation is required at both an individual project and broader program level.
  - Taking a multi-pronged approach to M&E, including as many different elements as possible to measure the impact on producers' skills, knowledge and adoption, including skills and knowledge, confidence and practice change (intent to change, in addition to use of practices. M&E should also incorporate opportunities for continuous improvement (e.g. participant feedback on different elements of the project, value and satisfaction ratings, and coach self-assessment).
  - Ensuring consistency in M&E templates and processes, especially with respect to practice and confidence questions.
  - Developing resources to assist PGS deliverers to design and implement high quality M&E that meets PGS requirements, including example skills questions and methods for assessment which coaches are encouraged to use.
  - Further exploring the value of a National Farm Monitor Program to measure economic impact of supported learning projects at an industry level.
- MLA may need to have an active role in developing SLPs where service providers don't believe that there is commercial viability in developing their own SLPS or where the successful implementation of projects covering all pillars of the PGS curriculum may be limited
  - Where market failure exists, MLA may need to support the development of SLP packages that can be "picked up and delivered" by suitably competent deliverers. It will be important to ensure deliverers of these packages receive adequate training in the resources and are competent to deliver using a supported learning approach.
  - Where market failure exists, MLA coordination and contribution to "bolt-on" coaching components for their own programs that are currently focussed on knowledge building.

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## Appendix 1: Overview of trainer tools and templates

Τοοί	Purpose	Use				
Project management & program development tools						
Economic Model.xls	Used as a proforma to demonstrate a change in profit or productivity. Where trainers have their own tools they may prefer to use these.	Template – optional use				
Example SLP.doc	An example SLP, based around a program to upskill producers in pasture and grazing management.	Example – optional use				
EA SLP template.doc	Part 4 of the trainer application form, and also included in the tool kit as a separate document.	Template – compulsory use				
Learning activities (E&A Coaching).xls	Contains the learning activities developed based on the learning outcomes. Describes the activities that will be undertaken to increase skills and knowledge	Example – optional use				
Roles and responsibilities (E&A Coaching).doc	A summary of the fundamental responsibilities that the trainer must undertake. To be shared with producers.	Template – optional use				
Running Sheet (E&A Coaching).doc	Help trainers complete their tasks at each coaching session	Example – optional use				
E&A intro.ppt	Presentation which outlines the background for the pilot project for trainers to share with participants. Using the presentation is optional, but trainers must provide a context for the program to producers	Template.				
Curriculum overview.doc	Summary of key curriculum learning topics, learning outcomes and value proposition for participants for each pillar	Draft document for information – feedback or comment welcome				
E&A glossary_160304.doc	Definitions for learning activities, and other key terms (e.g. productivity, value chain) to ensure consistency in language	Draft document for information – feedback or comment welcome				
M&E tools						

EA Skills Audit_preSLP_FINAL_V1.1.doc	A pre SLP skills audit populated with set (section A and B) and example (section C) questionsT c			
EA Skills Audit_MidSLP_FINAL_V1.1.doc	A mid-term SLP skills audit populated with example (section A) set section B questions	Template & example – compulsory use		
EA Skills Audit_postSLP_FINAL_V1.1.doc	A post SLP skills audit populated with example (section A) set section B questions	Template & example – compulsory use		
Tips for writing skills audit questions	The document gives some advice and suggestions in writing effective skills audit questions. It was developed as part of the MMfS program.	Advice - compulsory use		
Example skills audit questions	The document gives some example skills audit questions, relating to the different MMfS modules.	Advice - compulsory use		
Self-assessment (E&A Coaching).doc	Monitoring group and trainer performance to determine if additional support required. For use at all sessions. This document was revised in September 2016, to a format to encourage trainers to be more analytical in reviewing their performance	Template – compulsory use		
Feedback (E&A Participants).doc	Monitoring trainer performance and to determine if additional support required. For use in group sessions	Template – compulsory use		
E&A M&E data entry template.xls	Excel file which contains worksheets for trainers to record the M&E data they have collected. This is the data that must be submitted to the coordinator to meet milestones. This template should not be modified and data must be entered as per column headings	Template – compulsory use		

	Area	Fai	rm Value	Additional		Benefit		ROAM
Model assumptions				Capital	Annual Gain	less Amortised Capex*	Net Benefit	
	ha	\$/ha	\$	\$	\$ pa	\$ pa	\$ pa	%
Additional weight gain or beef trading	316	8,250	2,607,000	316	70,468	0	70,468	2.70%
	830	4,150	3,444,880	0	18,884	0	18,884	0.55%
	2,000	3,000	6,000,000	10,000	132,300	1,359	130,941	2.18%
Identifying low kg lamb live weight sold/ha as a weakness. Changes to production system to address achieving 15% increase in measure	700	7 350	5 145 000	30 000	52 500	12 000	40 500	0 79%
Improved carrying capacity, and	100	1,000	0,110,000	00,000	02,000	12,000	10,000	0.1070
performance, weaners grown heavier	605	418	253,138	9,527	36,747	1,294	35,452	14.01%
ID profit drivers & target better productivity - lower operating and labour per stock unit, lower asset values per stock unit	512,858	10	5,291,227	0	25,000	0	25,000	0.47%
Improved land condition more strategic grazing mgmt & supplementation, increase SR, improved conception.	12,144	91	1,105,787	0	110,592	0	110,592	10.00%
Supplementing heifers with P, Augmenting with legumes	130,000	54	7,000,000	0	29,669	0	29,669	0.42%
increase lamb marking by 10%, decrease turn off time by increased pasture growth	688	1,000	688,000	234,000	316,000	31,793	110,592	16.07%
Increase the SR, increase weaning %. Better pasture utilisation.	303		1,870,000	25,000	3,000	3,397	-397	-0.02%
Average (9)							57	4.72

## Appendix 2: Results from pilot coaching project – economic impacts

\* data from PGS03 and PGS01 is not included in the analysis as these were considered to be outliers