



The response of sheep consultants and extensionists in southern Australia to lifetimewool

(Report on the email survey
August 2008)

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September 2008

Key findings

Ninety five percent of consultants and extensionists have changed or validated their recommendations to clients based on the new information from lifetimewool.

Seventy one percent of consultants who had changed or validated their recommendations have clients who have changed practice due to lifetimewool.

There is an extremely high recognition and support of lifetimewool messages with key messages having >85% agreement by respondents.

Recognition and or use of lifetimewool tools such as the handbooks and feed tables is >85% across all rainfall zones within 2 years of publishing.

Respondents represent an estimated 2835 producers with consultants representing 1290 clients and extensionists representing 1545 clients.

Respondents working with groups were more likely to have accessed a greater range of information from lifetimewool, including attending events, presentations and using tools, although they were less involved in groups than in 2006.

Those involved in producer groups were more likely to have changed their recommendations and had change in client's practices (73% with clients who had changed practices compared to 48%).

Respondents felt that unless the messages were continued to be extended the momentum initiated by the project would be lost. It was important that the messages be incorporated into other programs and materials.

“This has been a marvellous success in terms of woolgrower \$ investment in R&D.”

Response from consultant respondent

Index

- 1.0 Introduction
 - 1.1 Methods
- 2.0 Results
 - 2.1 About the Respondents
 - 2.2 Respondent's Knowledge and Beliefs
 - 2.3 Impact on Respondents recommendations
 - 2.4 The Success of lifetimewool
 - 2.5 The Future for lifetimewool
- 3.0 Discussion and Conclusions

1.0 Introduction

Lifetimewool is a national project that has developed comprehensive ewe management guidelines to increase productivity and profitability of the Merino industry (visit www.lifetimewool.com.au). The project has been using an evaluation plan to support the adoption and impact of the research outcomes. Lifetimewool had a communication and adoption phase for 2006-2008 which used consultants and extensionists as agents of change and developed a range of products and tools to support the skills and knowledge needed by producers to make that change.

A survey of consultants and extensionists was conducted in 2004 (Reactions and Attitudes Associated with the lifetimewool Project Amongst Consultants and Extensionists involved in sheep production, 2004) and in 2006 (Analysis of the needs and attitudes of sheep consultants and extensionists in southern Australia 2006). The survey in 2006 found that consultants and extensionists were keen to be involved in lifetimewool, making it clear that these people would be useful to use as change agents. The survey also found that there were gaps in the knowledge that consultants and their clients have for managing ewe nutrition. The results of the 2006 survey were used to shape the communication and adoption plan that has been implemented over the last 2 years.

This report is based on the results from the 2008 survey and looks at the success or otherwise of the Communication and Adoption Strategy in affecting the knowledge and recommendations of consultants and extensionists.

The survey in 2008 aimed to;

1. to report on how lifetimewool has impacted consultant and extensionists knowledge and understanding of the lifetimewool recommendations
2. understand the recommendations consultants and extensionists give to clients,
3. to explore the differences in information and tools needed by the public sector and the private sector
4. gain feedback on the value of the lifetimewool tools and products and
5. ascertain what the future for those products should be

1.1 Methods

State department staff from each state made a list of consultants and extensionists who give farmers advice on sheep management. The questions for the survey were developed based on the survey of consultants and extensionists in 2004 and 2006 and the national survey of farmers done in 2005 and 2008. Both consultants and extensionists in 2008 were asked the same questions. Clear Horizon conducted the email survey on lifetimewool's behalf. The survey questions for the consultants and the extensionists are in Appendix A.

2.0 Results

2.1 About the Respondents

Forty three extensionists responded to the survey from an initial list of 151 across southern Australia giving a response rate of 28%. Extensionists were defined as people employed by state government departments of primary industries or equivalent to communicate or extend information to the sheep industry, particularly Merino producers.

Forty one consultants responded to the survey (after removing those who no longer worked in the industry or had no involvement in sheep) from an initial 111 across southern Australia giving a response rate of 37%. Consultants were defined as those outside of government departments who gave advice, made recommendations to the sheep industry either on a one-to-one basis or at larger gatherings. This included universities, private consulting

companies, veterinarians and agribusiness corporations. Three consultants reported that they worked in more than one state (reported as 'multi' state in Figure 1).

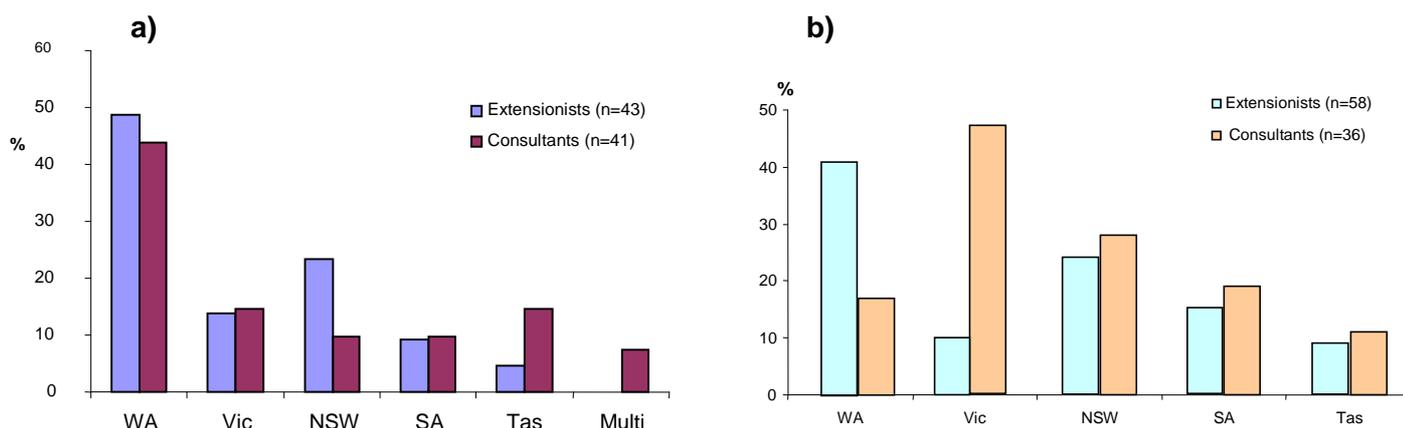


Figure 1. Proportion of respondents from each state in a)2008 and b)2006

In 2006 there were a greater number of extensionists than consultants (58 compared to 36) but a similar number in total to 2008. In 2006 we had a better response from consultants in all states except WA than in 2008, however, more consultants were invited to respond in 2006.

Both groups were asked in which rainfall zone they work from most of their time. The proportion of consultants and extensionists in each zone was similar. Fifty six percent worked in the 400-600mm rainfall zone and this included those from the predominately annual pasture areas of the west and the perennial pastures and of the southern slopes of New South Wales. Twenty four percent were from the high rainfall zone (>600mm) and were represented by all states. Twenty percent were from the cereal-sheep zone (<400mm) rainfall.

Extensionists, although selected by personnel in each state department as an extensionist who had involvement in delivery of sheep and wool information to producers, gave a range of descriptors of their role. Some of those are listed below.

- Organise forums, seminars & workshops for producers
- Technical Consultant and facilitation
- Animal Health Adviser
- Provide whole farm advice in relation to drought, nutrition, pastures, genetics, sheep management, economics
- District Veterinary Officer providing advice one on one

Consultants were from a range of backgrounds, organisations and were involved in the sheep industry in many ways. A sample of the roles given is listed below.

- farm consultant including budgeting and technical advice
- wool brokers, woolclip analysis & market analysis
- nutritional / genetic consultant
- Veterinary advisory service; nutritional supplements
- Training to producer groups, project management
- Agronomic and NRM consulting services
- Facilitate and deliver training to producer groups
- Strategic management advice combined with stud and flock sheep classing.
- enterprise and business management and planning advice

Consultants and extensionists were asked to estimate the proportion of their clients who could be classed as either i. specialist Merino producer; ii. cereal/sheep producers; iii. specialist prime lamb producers. Those who gave estimates of >70% in a category were classed as delivering to that category of clients. Those who had a mixed clientele or who didn't know were classed as 'mixed'.

Figure 2a shows that both consultants and extensionists had similar mixes of clients with most clients being either cereal/sheep producers or a mix of clients who were spread across all categories.

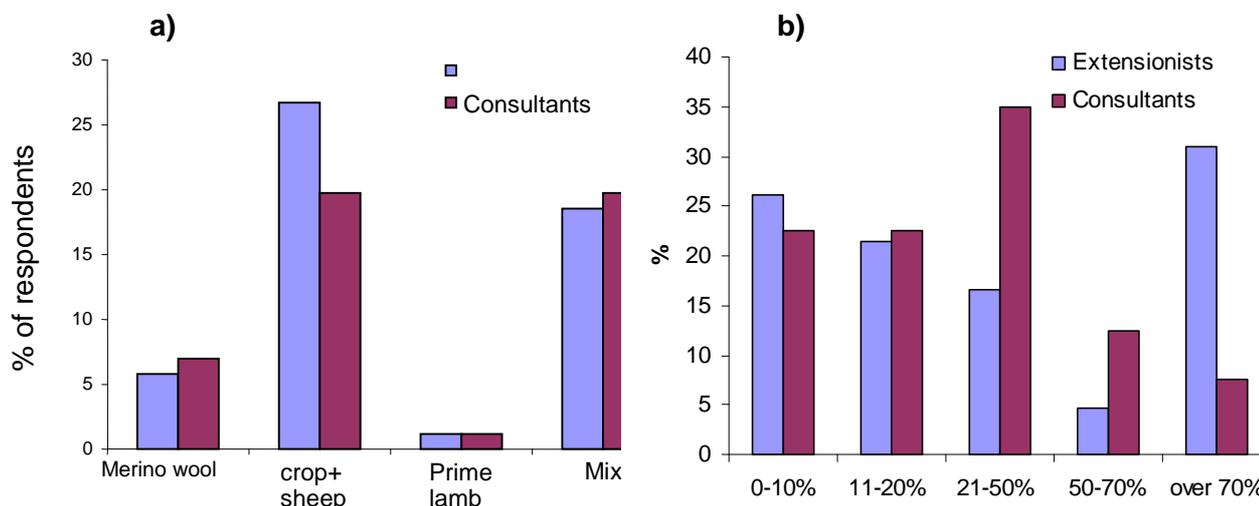


Figure 2 a) The percentage of consultants and extensionists with a majority of their clients in each enterprise. b) The proportion of time spent advising on sheep and wool by extensionists and consultants

Extensionists, when asked about the time they spend advising on sheep and wool issues, were fairly evenly distributed between working predominately in sheep and wool and spending only a small proportion of their time on sheep and wool issues (see Figure 2b). In contrast, in 2006, 70% of extensionists worked less than 20% of their time in sheep issues.

Extensionists from NSW and SA tended to either work most of their time in sheep and wool (>70% of their time) while 90% of those from WA spent less than 50% of their time advising on sheep and wool matters. Similarly most consultants (89%) from WA spent less than 50% of their time advising on sheep and wool. The remainder were evenly spread on the amount of work time spent on sheep and wool.

Respondents made estimates of the Merino farm businesses they worked with last year. This estimate, when converted to the median number of the range (those answering 100+ were given a value of 150 clients), shows that they worked with approximately 2835 Merino producers across southern Australia. It must be remembered that they sometimes worked one on one and at other times presented to workshops or answered direct queries from the public and that some clients could be represented in both groups.

Nearly half of all respondents (45%) in 2008 were not involved in facilitating or running any producer groups (Table 1). Those involved in groups in 2008 were involved in running one or more groups. Other groups such as Best Prac, CSBP Grow for Profit and Evergraze were listed. The groups that have the most involvement are lifetimewool, Bestwool, Edge network, Grain and Graze and Prograze.

In the 2006 survey, 86% of consultants surveyed stated they were 'involved' in a sheep producer group and of the extensionists surveyed, 73% were 'involved' in a sheep producer group. Although there maybe some respondents in 2006 who answered yes because they

presented at group meetings, it could be assumed that most would have been involved in group function similar to the responses in the 2008 survey. The significant drop between 2006 and 2008 probably reflects the change in policy and funding by AWI, MLA and state departments where group training is seen as expensive compared to return and lower numbers of groups were operating.

Table 1. Involvement in producer groups by consultants and extensionists

	Extensionists	Consultants	Total
Best wool/lamb	2	2	4
Lifetimewool *	15	3	18
Edge Network	7	3	10
Grain & Graze	8	1	9
Prograze	9	4	13
Wool 4 Wealth	6	2	8
Sheep's Back	1	5	6
Sheep+	1	2	3
8 X 5	0	2	2
none	17	22	39

(* including Life Time Ewe Management)

2.2 Respondent's Knowledge and Beliefs

2.2.1 Willingness to advise on practices and tools

Respondents were asked to rate their willingness to use a number of practices and tools to ascertain their receptiveness to lifetimewool's messages and products. Those who indicated they were 'Already advising on these practices', 'Very Willing' or 'Somewhat willing' were bulked together and reported in Table 2 as willing to use these practices. The remainder classed themselves as either 'Only willing with more evidence' or 'Not willing'.

More than 50% of consultants and extensionists were willing to use a range of lifetimewool practices and tools. Extensionists were very keen to use pasture assessment tools to help producers as well as 'hands on' scoring to monitor ewes compared to consultants who were less keen on any of the interventions for management other than pregnancy scanning and using that information to manage single and twin bearing ewes. Willingness to monitor ewes using liveweight ranked lowly indicating the understanding that liveweight is not a practical method to assess ewe condition (using liveweight to monitor ewes was also not a lifetimewool recommended practice).

Table 2. The proportion of respondents willing or already using practices and products

Use of practices and products	Extensionists (%)	Consultants (%)	Total (%)
Pasture tools	67	36	52
'hands on' monitoring of ewes	71	49	60
Liveweight to monitor	51	31	41
Separate lighter & heavier ewes	47	48	47
Feed budgeting as a tool	49	43	46
Use pregnancy scanning	65	62	64
Separate twin & single ewes	49	60	54

2.2.2 Agreement with lifetimewool key messages

Respondents were asked to rate their agreement with a number of statements, some of which were phrased in the negative and others in the positive. These statements were based on lifetimewool's key messages which have been incorporated into recommendations, products and presentations. The percentage agreement and disagreement for each statement by both consultants and extensionists is reported in Table 3.

The message “Whole farm profit is sensitive to the changes in condition of ewes during the year” is the first of three key messages that were central to the recommendations of lifetimewool. Both consultants and extensionists agreed with the statement (86% strongly agree or agree). All of the consultants in the <400mm zone agreed or strongly agreed with the statement, although there is a much heavier emphasis of cropping on whole farm profitability in this area. The same statement was asked in 2006 and only 76% of respondents agreed at that time.

“You don’t need to condition score ewes or weigh them to accurately assess their condition was another of the three key messages central to the recommendations of lifetimewool, but phrased in a negative context. All of the extensionists believed that ewes needed to be weighed or scored to accurately assess condition, whereas 14% of consultants either were neutral or disagreed. Fewer consultants were strong in their belief also with only 40% strongly believing it to be so.

The message that was universally accepted by both consultants and extensionists was that “Ewes in better condition at joining conceive more lambs”. This message confirmed previous knowledge and gave clear levels of response to increasing condition.

Table 3. Percentage agreement with the statements by respondents

statements	Agree	neutral	disagree
Whole farm profit is sensitive to the changes in condition of ewes during the year	86	9	5
Production from ewes and their progeny can be predicted from knowledge of ewe condition during the year	89	10	1
You don’t need to condition score ewes or weigh them to accurately assess their body condition	4	4	93
Management of feed on offer and supplementation is the key to achieving the optimum condition score profile of ewes during pregnancy	97	1	1
Ewes that are in better condition will have a higher clean fleece weight and fibre diameter than ewes in lower condition	88	10	2
Ewes that are in better condition at joining conceive more lambs	100		
Poor ewe condition during late pregnancy leads to lower lamb birth weights	95	3	1
Lamb birth weight does not affect lamb survival	7	4	89
It is important to manage ewe condition during pregnancy for improved ewe and lamb survival	98	2	0
Ewes with better condition at lambing will have less mortality than ewes with lower condition score	81	14	4
Poor condition of the ewe at lambing has less of an affect on twin lamb survival than single lamb survival	4	7	89
The impact of ewe condition during pregnancy on lamb survival is not economically important	10	1	88
Poor condition of the ewe during pregnancy and early lactation can increase the wool fibre diameter of her offspring	68	12	20
Poor ewe condition during pregnancy and early lactation can decrease fleece weights in progeny	87	11	8
The impact of ewe condition on progeny clean fleece weight and fibre diameter makes improving ewe condition during pregnancy financially worthwhile	79	17	4
The effects that the body condition of a ewe has on the fleece weight and fibre diameter of her progeny are not permanent over the progeny’s lifetime.	7	7	86

Of all the messages, the least accepted was “Poor condition of the ewe during pregnancy and early lactation can increase the wool fibre diameter of her offspring” with 9 extensionists and 7 consultants disagreeing or strongly disagreeing with the statement. In 2006 consultants indicated that this was of an area of information within which they had a key interest. The results in 2008 reflect that interest and that lifetimewool has yet to convince all consultants of the results.

The response to the negatively phrased “The impact of ewe condition during pregnancy on lamb survival is not economically important” was the second most disputed statement with 4 extensionists and 5 consultants agreeing with it. Although the positive impact of ewe condition on lamb survival was a key message recent work has shown that there is only a

small impact on whole farm profit if lamb survival is compromised due to increases in stocking rate and a number of consultants support this new evidence.

A neutral response to “The impact of ewe condition on progeny clean fleece weight and fibre diameter makes improving ewe condition during pregnancy financially worthwhile” was given by 8 extensionists and 9 consultants and also to “Ewes with better condition at lambing will have less mortality than ewes with lower condition score” was given by 6 extensionists and 5 consultants.

Comments were collected on ‘Which of the lifetimewool messages has the most potential to contribute to the sheep enterprise?’ from all respondents. Managing ewes to a condition score profile and its impact on productivity was seen as very important by those who responded. Recognising the longer term impacts on ewe, lamb and profitability as well as lamb survival and wool quality impacts on progeny also rated highly. The importance of feed budgeting, getting the stocking rate/pasture utilisation right and the impact of later lambing on profitability were of the next order.

Comments such as;

“There is no stage in the production cycle when sheep can be nutritionally neglected and not have negative commercial impacts”

“The concept of managing a ewe condition during pregnancy to ensure her and her progeny's lifetime performance”

“Hitting condition targets at critical times of the year, and the effect this has on flock performance”

“Importance of feed budgeting and tools to assist decisions”

“The optimum CS profile will allow producers to make decisions about feeding to target CS, and the ramifications of not meeting these targets”

“Better use of pastures driven by stocking rate and grazing management”

“In the longer term the understanding of the lifetime effect on wool production may well be the key legacy”

“Later lambing flocks are more profitable “

“Responsiveness of a flock to increased conception from improvements in fat score”

“Running ewes in the optimum condition score and the economic benefits associated with this. Being able to put a \$ figure on this know can demonstrate to producers the benefits”

were common with both consultants and extensionists.

A couple of consultants indicated that they weren't happy with the way the research had been analysed or the assumptions made. One suggested that an independent review of the data be made by private consultants. One cited that the use of the Ruminants Standards of Australia feeding levels was flawed and contradicted ‘world class research’.

2.3 Impact on Respondents recommendations

All extensionists and all but one of the consultants had heard of lifetimewool indicating that the high level of awareness has been maintained from the 2006 survey.

In all cases consultants recorded less exposure to lifetimewool messages and products than extensionists and that only approximately 50% of consultants and extensionists had accessed the website and email newsletters (Figure 3). The lower proportion who reported that they received information through emails and newsletter indicates the value the respondents give this message in that nearly all received at least an email newsletter (4 editions).

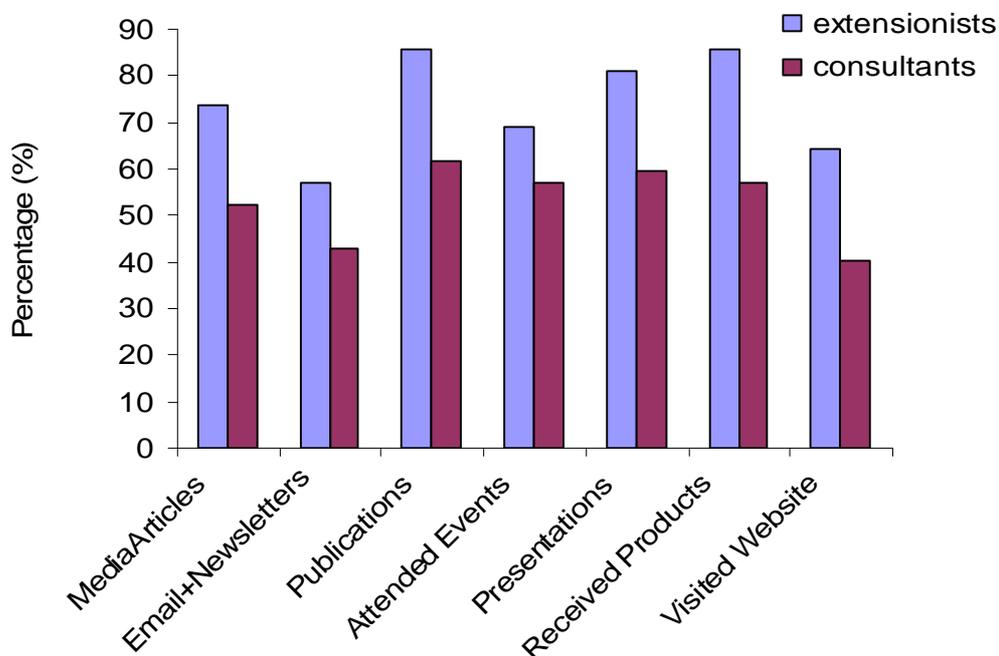


Figure 3. How consultants and extensionists received information from lifetimewool

Fifty five percent of consultants and 79% of extensionists received information from 4 or more sources. Of the consultants who work with producer groups, 72% had received a range of information from lifetimewool compared to 25% of consultants who didn't work with any producer groups. Of the extensionists who work with producer groups, 85% accessed 4 or more types of information compared to 70% of extensionists who didn't work with producer groups.

In 2006 consultants and extensionists were asked to give their preference for a range of communication tools. Of those, 'website with results' and 'newsletters' ranked highly with 70% of consultants wanting newsletters and 80% wanting website based results. Extensionists ranked website results and newsletters lower at 50% for both, however, 'downloadable tools' rated highly for 80% of extensionists. This appears to contradict the usage results in 2008.

Products and tools were a major part of the adoption strategy and production of these started in early 2006 based on the feedback we had received from the previous survey of consultants and extensionists and the skills and knowledge gaps identified by the team and from feedback from the demonstration phase producers.

Respondents were asked whether they had heard of or used any of the tools developed by lifetimewool. Table 4 shows those who indicated which products they actually use. The heard of figure is those who have heard of the product but don't use the product. A very low proportion of tools heard of by the extensionists were not used with the exception of the decision support tool. The consultants generally had used less of the tools although the total of heard or used was similar to the extensionists.

Highly valued by the extensionists were the feed budgeting tables with 78% using them in the 400-600mm zone and 80% using them in the 600mm zone using the tables (average of 76% across all zones).

Table 4. The proportion of respondents who had either heard of or used the products developed by lifetimewool in 2006-2008.

Product	Extensionists		Consultants	
	% heard	% used	% heard	% used
Feed budget tables	22	76	46	46
Feed On Offer photo gallery	39	54	43	49
Condition score models	41	56	44	54
Lifetimewool web site	41	56	50	37
Condition score sheet	24	66	46	46
Condition score profile	34	41	56	24
Ewe Management Handbook	20	63	49	41
Decision Support tool (electronic)	61	10	68	5

The response to the Feed budget Tables (dry, break of season and green phases) has been excellent, particularly with extensionists. Extensionists also indicated that they were much more interested in feed budgeting (67%) than consultants (36%) and this is reflected in the use of the tools.

“used the feeding tables and ewe condition score to recommend feed regimes”

“Meeting ME needs of sheep at different stages of their reproductive cycle and with different FOO and CS situations”

“Feed budgeting tables to feed budget in green and dry periods, and to describe the ME requirement for different classes of sheep;”

“I use the feed budgeting tables to develop rations for drought feeding and have also used the figures to input maintenance requirements (and predict weight gain/loss) for a feed budget spreadsheet which I use with my clients”

The Feed on Offer Photo Gallery was produced in mid 2007 and was only distributed to WA, SA and Victoria. An Herbage Mass guide (as used in NSW) had not been produced and as a consequence was not distributed there. Many positive comments were given on the Photo gallery both in this survey and through unsolicited feedback from consultants and producers. Included are some comments from respondents;

“The pasture photos have been fabulous”

“I’ve stood in the paddock and demonstrated the Feed on Offer photo gallery;”

“the pasture photos for a quick easy guide to assessing FOO levels”

“have used pasture photo gallery and ewe condition score profiles extensively”

“Use feed budget tables and FOO gallery consistently throughout the year with all clients and groups that I manage”

“FOO photos to help calibrate”

“Photo gallery was used as a discussion point and also linked in with the soils workshops we were running”

The Ewe Management Handbooks were developed over; late 2006 for the high rainfall zone (Vic, SA, Tas); early 2007 for the medium rainfall zone (WA only); late 2007 for the cereal-sheep zone (WA, SA, Vic); the southern slopes zone will be released in August 2008. This

staggered release of the handbooks has meant for some regions the information has not been available until recently which could have influenced their use.

The condition scoring card, profile and models had variable responses to use but many respondents choose to comment on the importance of using the concept of condition scoring to monitor and plan as a key product.

“At drought workshops we have used the CS card and the profile targets”

“Due to the current drought conditions, condition scoring has become an obvious vital 'drought tool'”

“Condition Scoring demonstrations with hands on by participants. Condition scoring models at field days”

“I've stood in the yards and showed people how to weigh & condition score as a more accurate measure (providing the client with a copy of the product at the same time).”

“The condition score models have been used extensively to train farmers to accurately condition score”

“Condition score models used in demonstrations/talks but not on farm, one-to-one”

“condition score models are effective hands -on tools that provide a concrete learning experience, most so than chalk and talk events”

“I have used the table on condition score profiles to explain where and when feed is required”

Most extensionists had heard of the website but only 53% used it. A comment from a consultant was;

“I use the website to keep abreast of latest developments”

and suggestions for the future included:

“An electronic library of tools and techniques from lifetimewool and similar projects should be developed with a link to all relevant sheep and producer sites”

“Maintain the website”

“maintain the web site and incorporate the key messages in other mla and awi extension material”

There were a couple of products that seemed to indicate different patterns of use or exposure. Of those extensionists who had used the website, all but one had seen or used all of the other tools indicating for those that did use websites it provided a good way into other products.

Of those using the handbook however, the use of other tools was highly variable.

The awareness and use of the decision support tool was similar in both extensionists and consultants with the use of it being particularly low. Comments from some respondents were;

“Economic spreadsheet tool could be a lot friendlier”

“Computer DST is clumsy and could be made a bit more use friendly”

which may indicate some of the low usage rates for the tool. However, a comment from an extensionist as a highlight for them was;

“use of the computer program on a seasonal basis to decide on feeding of ewes pre-lambing”

An extensionist made a comment on attribution and recognition of the products amongst producers.

“There are many people in the district who may not have heard of the project, but I have provided them with the products of the project which they are using to their advantage (ie. they may not be able to attribute the products to lifetimewool, but they are using them with success)”

2.3 The Success of lifetimewool

The impact of lifetimewool on consultants and extensionists was similar whether they had ‘changed considerably’, ‘changed somewhat’ or not at all. Less than five percent of respondents had not changed or validated their recommendations in response to lifetimewool (Figure 4a) reflecting that more than 95% were able to attribute influence on their recommendations by lifetimewool. In 2006 more than 15% stated they had not changed (Figure 4b). More than 15% were happy to state that they had changed their recommendations to their clients ‘considerably’.

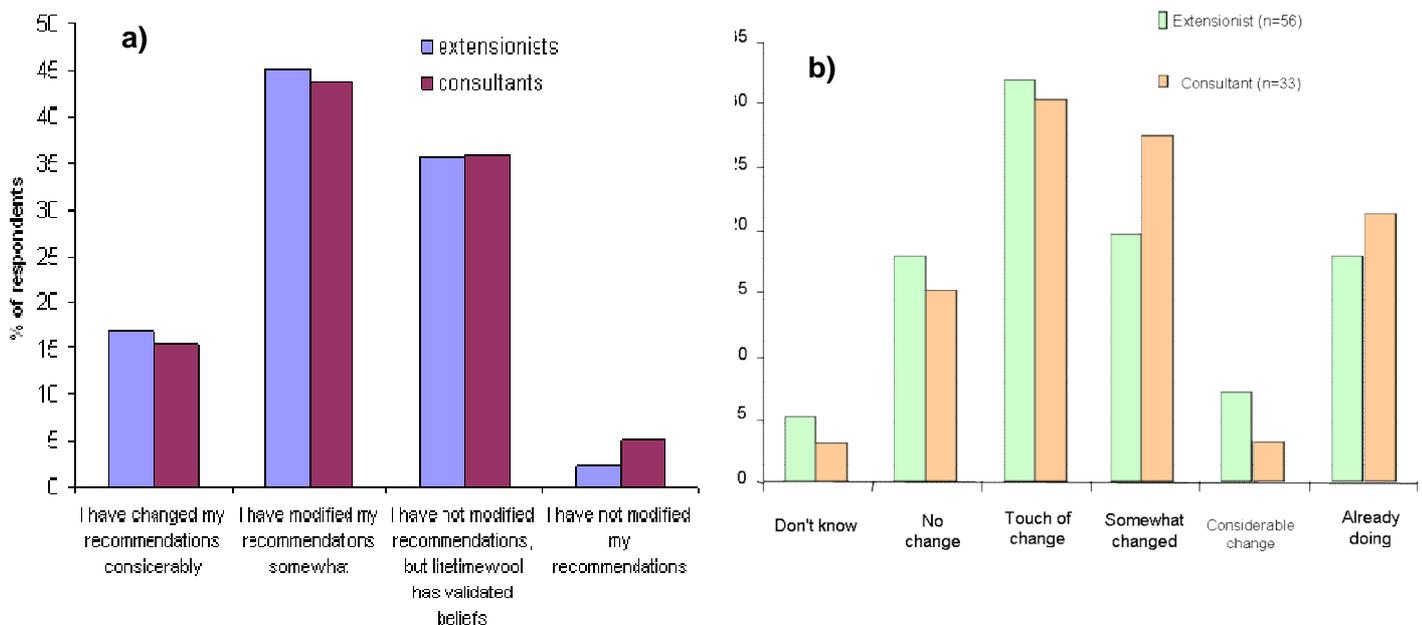


Figure 4. Extent of change due to the influence of lifetimewool on recommendations of respondents in a) 2008 and b) 2006

A number of comments were made on how existing recommendations had been influenced or why recommendations hadn't changed;

“It gave \$ values to different ewe management. It gave us more validation”

“Lifetimewool has acted as an ideal vehicle to capture the management challenges the 21st century will bring to the sheep and wool industry”

“Provided real data particularly on the effect of pregnancy and lactation on lambs”

“As someone new to sheep, I relied on lifetimewool information”

“Still waiting on seeing the whole picture so I can see how the recommendations were developed”

“Information has not flowed well from research to me or producers”

Of those respondents who stated that they had changed their recommendations ‘considerably’ or ‘somewhat’ or who had had their beliefs validated by lifetimewool, 71% indicated that they had clients who had changed practice as a result.

The consultants who had modified their recommendations or who had their recommendations validated by lifetimewool and who listed clients who had changed practice represented 855 clients. The consultants who said they had ‘changed their recommendations considerably’ represented 110 (13%) of the 855 clients.

The extensionists who had modified their recommendations or who had their recommendations validated by lifetimewool and who listed clients who had changed practice represented 1060 clients. The extensionists who said they had ‘changed their recommendations considerably’ represented 155 (14%) of the 1060 clients.

Changes in client’s practices ranged from tactical changes such as pregnancy scanning and managing ewes in different mobs, increasing skills such as pasture assessing and condition scoring to enterprise management such as time of lambing and concentrating on lambs/hectare. Some of the specific comments are included here;

“Better feeding of ewes at joining and early lactation.”

“Given up on trying for more twins, improved management in last trimester.”

“Scanning, pre mate flushing, separating twins, separating poorer ewes”

“Most are achieving better ewe condition score profiles during mid-pregnancy.”

“Nutritional management of ewes- have a preferred CS profile trying to achieve”

“Put greater effort into monitoring ewe condition”

“Good adoption of condition scoring and trying to meet condition targets”

“Many now weigh, condition score and actively assess feed on offer, where before they would just visually assess their mobs from the ute & make decisions based on what they thought they could see.”

“Keep lambs from better seasons and cull a higher percentage of drops from poor feed years.”

“More attention to FOO at critical times of year.”

2.6 The Future for lifetimewool

Respondents were asked what they thought should happen to the project and the projects information and products and to give feedback on how successful the project had been from their perspective.

Generally the project was seen as very successful and contributing to the sheep industry in many ways. Some of the respondent’s comments are below;

“The research was well done particularly the economic modelling. It has been great to see a concerted effort at targeting the extension programme at each specific group. The effort put into “getting the message across” has been commendable.”

“You need to spend more time involving consultants and other technical info users BEFORE and during the project.”

“A shift of emphasis in nutrition of merino ewes from “just enough” to good is long overdue, mainly for sheep welfare, health and survival reasons. The economic benefits are a bonus.”

“The LTW project has provided essential information to sheep producers which will allow more efficient management of breeding ewes”

“Good project that generated good information that has been well accepted by graziers”

“This has been a marvellous success in terms of woolgrower \$ investment in R&D.”

There was an excellent range of comments and ideas for the future of lifetimewool information and where the industry could take this new information. A feature of the comments was that there was so much information and value generated by the project that respondents wanted to ensure that the messages and information and products were not lost. The responses have been listed below.

Information Flow

- *invite consultants to meeting (in each state) once a year*
- *LTW contact for people to access publications*
- *products should continue to be available & promoted*
- *network of contacts should remain on the lifetimewool website for future questions*
- *All products very worthwhile, so promote them and tell the story of its findings in the major rural newspapers*
- *Keep working on extending this information to producers*
- *publish all the findings and completing extension products eg the ewe management guidelines (including a financial analysis)*
- *Maintain the website. Ensure that the key messages are not lost*

Training and Extension

- *extension of lifetime wool through the LTEM course*
- *Run a course on lifetime wool results*
- *ewe management groups are likely to be the most effective means of extending the messages*
- *LTW training courses and extension of key messages to farmer groups.*
- *Run more LTEM groups in targeted areas - this will bring most profound practice change*
- *Give training and products to consultants and agribusiness*
- *Need to make sure that all TAFE and VET trainers are aware of it and use it*
- *Producers...need personal contact (at a meeting or 1 to 1) and need to revisit the issue a number of times*
- *follow through with farmer recommendations and PIRDs*

Further research and development work

- *Summary reports of financial analysis*
- *Enough new stuff has emerged during the project to suggest that there is other new stuff to be found*
- *Expansion of research into low rainfall livestock systems*

- *build on the information accumulated by LTW and the Mackinnon weaner study to actually trial different weaner management*
- *Need to explore the impact on ewe nutrition on progeny lamb performance in Xbred flocks*
- *Look at profitability of different sheep breeds and crosses*
- *Integrate into EverGraze - feed profiles for different perennial pasture types*

Further products

- *information kit for extension people*
- *electronic library of tools and techniques from lifetimewool and similar projects*
- *more work on sheep production on cereal stubbles and the economics of feeding at high grain prices and low sheep prices*
- *Trial protocols, data and publications made available so that future researchers can access this and use it to enhance future work, modeling and decision making*
- *a financial budgeting tool to use with clients to track how changes to their enterprise using LW strategies are affecting whole farm profit.*

3.0 Discussion and Conclusions

Given the list of consultants and extensionists that were selected to participate in the survey was comprehensive and developed with the help of key extension staff in each state, we could expect that this represented nearly all of the total population of extensionists and consultants with interest in sheep and wool. It was disappointing that more than 60% didn't participate in the survey, however, timing (end of financial year) and general busyness of the audience and that many had already given feedback and ideas over the last year, may have contributed to the poor return rate.

The number of consultants and extensionists who responded to the survey in 2008 was lower than in 2006 but with a greater proportion from WA, probably due to greater numbers of project staff being in WA or greater contact by staff with the audience in WA. There was good representation from the 400-600mm rainfall zone and mixed cereal-sheep producers. The respondents had contact with an estimated 2830 producers. The proportion from each state that were invited to respond was also very different in 2005 which will have influenced the result.

Respondents were less involved in running or facilitating producer groups in 2008. Fifty five percent of consultants and extensionists were involved in running groups in 2008 compared to 80% in 2006. The consultants who worked with groups were more likely to receive lifetimewool information in a range of sources. Those consultants facilitating groups generally received lifetimewool from more than three sources (including website, newsletters, presentations, products, events etc) but they were also more likely to attribute lifetimewool with changing their recommendations considerably (23% changed "considerably") compared to those consultants not involved in groups (4% changed recommendations "considerably").

They also were more likely to have reported change in their client's practices (73% compared to 48%). The lower proportion with access to producer groups may have meant that the impact of lifetimewool recommendations on producer behaviour was compromised as it can be seen that those involved in groups were more likely to use the lifetimewool tools and understand the recommendations.

Respondent's knowledge and acceptance of the lifetimewool recommendations and key messages was high and consistent across states. At least 80% of both consultants and extensionists either agreed or strongly agreed with the 3 key messages which supported the overall approach of lifetimewool. There was some variation in response to statements on

pregnancy scanning and managing ewes differentially- two areas that lifetimewool itself has identified as needing more development.

Events, presentations and hard copy products and publications were the most recognised communication methods by both consultants and extensionists with electronic methods rating lowest. The feed budget tables, condition scoring sheet and models and the Ewe Management handbooks were seen as the most utilised products with the electronic decision support tool and the website the least (although there was still high recognition of those products). This is extremely high recognition and use of tools that have only been in the market place for up to 2 years. Although the website ranked lower in use many saw it as a key to maintaining a link to all the products and information once the project had finished.

The impact of the lifetimewool project was evident from the numbers of consultants and extensionists who had modified their recommendations or who had their recommendations validated by lifetimewool and who listed clients who had changed practice. The consultants who said they had 'changed their recommendations considerably' represented an estimated 13% of the 855 total clients estimated to be represented by consultants. The extensionists who said they had 'changed their recommendations considerably' represented an estimated 14% of the 1060 total clients estimated to be represented by extensionists.

Changes in client's practices ranged from tactical changes such as pregnancy scanning and managing ewes in different mobs, increasing skills such as pasture assessing and condition scoring to enterprise management such as time of lambing and concentrating on lambs/hectare.

Respondents saw it as very important that the information generated by the project continues to be accessible, particularly the tools and products and suggested that this is through the website or a nominated contact person. Respondents felt that unless the messages were continued to be extended the momentum initiated by the project would be lost and that it was important that the messages be incorporated into other programs and materials.

Further work or analysis was also identified particularly with weaner management and how lifetimewool information relates to low rainfall and meat sheep enterprises. Seven respondents suggested that Lifetime Ewe Management courses would be an excellent method to get messages and skills changes in producers and others suggested further training days and updates for extension staff.

The overall response to the project was outstanding.

Appendix 1

Survey Questions for Consultants 2008 questionnaire (5th June 2008)

Qu 1 Which State do you work in most of the time? Please choose one of the following:

WA	Victoria	NSW	Qld
Tasmania	ACT	SA	

Qu 2 Which rainfall zone do you work in most of the time? Please choose one of the following:

<400mm	400-600mm	>600mm
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Qu 3 Briefly describe the services you provide to sheep producers.

Qu 4 What proportion of your clients fall into these categories?

a) Specialist Merino wool producers	_____ %
b) Mixed cereal/sheep farming enterprise	_____ %
c) Specialist prime lamb producers	_____ %
d) I don't know	<input type="checkbox"/>

Qu 5 Approximately what percentage of your work time (excluding administration) do you spend advising on sheep management issues (including pastures)?

_____ %

Qu 6 Approximately how many sheep farmers did you personally consult to on a one-on-one basis last financial year?

Qu 7 Are you responsible for facilitating any of these sheep-producer groups? Please select as many options as necessary

	lifetimewool	Best Wool/ Best Lamb	Edge Network
	Grain and Graze	Prograze	Wool for
Wealth	Lifetime Ewe Management	Sheep's Back	Sheep Plus
	8 X 5	Other (please specify)	None

Qu 8 Using a scale of 1 to 4, where 1 means you are VERY WILLING and 4 means you are NOT AT ALL WILLING, please rate your willingness to advise your clients to use the following practices for ewe or pasture management. Alternatively, please select 5 if you already are.

Scale: 1 Very Willing

2 Somewhat willing

3 Only willing with more evidence

4 Not willing

5 Already advising on these practices

- | | |
|----|---|
| a) | Use pasture assessment tools (such as a photo gallery) to estimate pasture quantity |
| b) | Use hands-on condition scoring (at the loin short ribs) to monitor ewe condition |
| c) | Use hands-on fat scoring (at the mid-side long ribs) to monitor ewe condition |
| d) | Use live weight to monitor ewe condition |

- e) Separate ewes into lighter and heavier mobs and manage the mobs according to their different nutritional needs?
- f) Use feed budgeting (for example with feed budget tables or GrazFeed) to manage ewes to target
- g) Pregnancy scanning to identify single and twin bearing ewes
- h) Separate twin bearing ewes to manage them as separate mobs

Qu 9 Please rate your agreement with each of the statements from 1 to 5, with 1 indicating you STRONGLY AGREE and 5 meaning you STRONGLY DISAGREE. If you don't have an opinion one way or the other please rate as a '3'.

Scale: 1 Strongly Agree

2 Agree

3 Neutral

4 Disagree

5 Strongly Disagree

- a) Whole farm profit is sensitive to the changes in condition of ewes during the year
- b) Production from ewes and their progeny can be predicted from knowledge of ewe condition during the year
- c) You don't need to condition score ewes or weigh them to accurately assess their body condition
- d) Management of feed on offer and supplementation is the key to achieving the optimum condition score profile of ewes during pregnancy
- e) Ewes that are in better condition will have a higher clean fleece weight and fibre diameter than ewes in lower condition
- f) Ewes that are in better condition at joining conceive more lambs
- g) Poor ewe condition during late pregnancy leads to lower lamb birth weights
- h) Lamb birth weight does not affect lamb survival
- i) It is important to manage ewe condition during pregnancy for improved ewe and lamb survival
- j) Ewes with better condition at lambing will have less mortality than ewes with lower condition score
- k) Poor condition of the ewe at lambing has less of an affect on twin lamb survival than single lamb survival
- l) The impact of ewe condition during pregnancy on lamb survival is not economically important
- m) Poor condition of the ewe during pregnancy and early lactation can increase the wool fibre diameter of her offspring
- n) Poor ewe condition during pregnancy and early lactation can decrease fleece weights in progeny
- o) The impact of ewe condition on progeny clean fleece weight and fibre diameter makes improving ewe condition during pregnancy financially worthwhile
- p) The effects that the body condition of a ewe has on the fleece weight and fibre diameter of her progeny are not permanent over the progeny's lifetime.

Qu 10 Have you heard of lifetimewool? (yes or no)

[If yes, go to Q11. If no, end survey]

Qu 11 How do you receive lifetimewool information?

- a) I receive emails and/or newsletters directly from the lifetimewool Project
- b) I have read media articles about the lifetimewool Project
- c) I have read publications produced by the lifetimewool Project
- d) I have attended events and/or training run by lifetimewool
- e) I have listened to presentations about lifetimewool at other events
- f) I have received copies of lifetimewool tools and products
- g) I have visited the lifetimewool web site
- h) Other (please specify?)

Qu 12 What is your opinion of the lifetimewool project?

Qu 13 To what extent has the lifetimewool project influenced your recommendations? Please choose one of the following

- a) I have changed my recommendations considerably
- b) I have modified my recommendations somewhat
- c) I have not modified my recommendations, but lifetimewool has validated my previously held beliefs
- d) I have not modified my recommendations

Qu 14 Please explain further why lifetimewool has/hasn't influenced your recommendations?

Qu 15 Which of the lifetimewool messages has the most potential to contribute to the sheep enterprise?

Qu 16 Have any of your clients changed practice as a result of lifetimewool information given through your service? If yes, please provide examples.

Qu 17 Have you heard of, or do you use, any of these lifetimewool products?

	Use?	Heard of?	
a)	Feed budget tables	<input type="radio"/>	<input type="radio"/>
b)	Feed On Offer photo gallery	<input type="radio"/>	<input type="radio"/>
c)	Condition score models	<input type="radio"/>	<input type="radio"/>
d)	Lifetimewool web site	<input type="radio"/>	<input type="radio"/>
e)	Lifetime Ewe Management course	<input type="radio"/>	<input type="radio"/>
f)	Condition score sheet	<input type="radio"/>	<input type="radio"/>
g)	Condition score profile (regional recommendation)	<input type="radio"/>	<input type="radio"/>
h)	Ewe Management Handbook	<input type="radio"/>	<input type="radio"/>
i)	Computer program for economic assessment of feed budgeting decisions	<input type="radio"/>	<input type="radio"/>
j)	Other (specify)	<input type="radio"/>	<input type="radio"/>

Qu 18 Can you provide an example of how you have used the lifetimewool information or products with your clients?

Qu 19 Would you like to make any other comment on the lifetimewool Project or products?

Qu 20 The lifetimewool Project will end in August this year. What do you think should happen to build on the lifetimewool Project, now that it is about to finish?