final report

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South East Prime Lamb
Young Achievers

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Mating Ewe Lambs

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Project Summary:

There were many interesting results to come out of the Mating Ewe Lamb project as the individual lambs were followed through joining as ewe lambs and again as 1.5 year olds.

The results from joining as ewe lambs highlighted that conception rates may not be solely attributed to the ewe live weight at joining. Much of the literature recommends that in order to achieve higher conception rates in ewe lambs they need to be between 45-55 kg live weight and condition score 3. There was also a trend between condition score and conception rate and when investigated further a correlation between body weight and condition score was shown at joining. As a result the two effects can not be separated, so it can not be concluded if it was a body weight or condition score effect or a combination of both. The trial showed that while body weight and/or condition score was important, it also indicated that age was also very important. In this trial conception rates over 60% were achieved when animals were over 8 months of age.

In addition there was a correlation seen between condition score and body weight, so naturally there was a trend between conception rate and condition score.

It is also important to not exclude the possibility of a breed/maturity effect influencing the results.

The results from the subsequent joining as 1.5 year olds showed that conceiving, singles or multiples as a ewe lamb did not affect the mature weight (taken as 1.5 year olds), as compared to those ewes who failed to conceive as ewe lambs. The results also indicated that there was a benefit in early weaning that was used in the best practice group, where the best practice group ewes were more likely to conceive as 1.5 year olds if they had conceived as ewe lambs. This is in comparison to the ewes in the current practice group who were less likely to conceive if they had conceived as ewe lambs.

The early weaning did not appear to affect the performance of the lambs that were weaned at 12 weeks; whilst only one set of data was available the early weaned lambs were actually almost 2kg heavier, than those weaned later.
Overall it appears as long as ewe lambs are managed well and kept in at least a condition score 3 and growing; there is no negative effect of joining ewe lambs.

General Aim:

To develop a best practice model for mating Ewe lambs in the Southern Regions of South Australia and Western Victoria, which achieves higher lambing percentages and/or decreases the current average mating length. To establish the economical benefit of the increase in production due to the mating of ewe lambs. To develop the skills, knowledge and network of the group.

Methodology of the Main Trial:

The main trials were replicated on four properties, at Stewarts Range and Kybybolite in South Australia, Apsley and Casterton in Victoria. Two of the properties (Kybybolite and Casterton) used bought in ewe lambs in the trial and the other two properties (Stewarts Range and Apsley) used ewe lambs they have bred on their properties. The ages of ewe lambs ranged in ages at mating from the youngest at 6-7 months to the oldest at around 9-10 months.

The trial compared the control, the current management practice on each of the four properties to the 'best practice' model the group develop with assistance from appropriate industry people.
Each property randomly split their 2004 born ewe lambs into the two groups. The ewes in each group were given an appropriately coloured (as per which group they were in) ear tag that had a unique number on it, allowing individual animals to be traced throughout the trial.
Pregnancy Scanning for multiples was used to determine conception rates of the ewe lambs. Additionally lambmarking and/or weaning percentages were taken in each group, this was to provide insight into the period of greatest lamb loss.
Weights and Condition Scores were recorded at strategic times throughout the trial trying as much as possible to work in with normal management practices.
Feed and the condition of the ewe lambs were monitored throughout the trial to ensure that the ewes were maintaining or increasing their condition to the optimal levels that had been set. Supplementary feeding was done when paddock feed was too low to meet the animals needs.
Financial costs were recorded, to enable the financial benefit of mating the ewe lambs to be determined at the conclusion of the trial.

In Appendix 1 is the 'Best Practice' model developed for this trial (note this may have varied from property to property depending on the situation but acted as the guide throughout the trial).

In Appendix 2 is the Current Management Practices for each of the four trial properties documented.

Aim and Methodology of the Additional Trial – Teaser Trial:

Aim: To increase conception rates of ewe lambs whilst decreasing time of joining with the use of teasers to synchronise oestrous of the ewe lambs.

Methodology:

- There were two groups, with 250 ewe lambs in each group. The 250 ewe lambs in each group were randomly drafted off the entire mob of 500.
- The first group, the control, was to be a replication of the current management practice (a reasonable representation of district practice), and was a 10 week mating with no stimulation of the ewe lambs prior to mating.
- The second group, the teaser group, had teasers (in the form of wethers treated with Ropel) introduced to the group 14 days prior to joining. The teasers were taken out of the mob on the day the rams were introduced. This group had a 6 week joining.
- Pregnancy scanning for multiples was done to determine the conception rates of the two groups.
- Lambing and Weaning percentages were taken to quantify the numbers of lambs to survive and to be weaned from the trial group and the control.
- A financial analysis was to be done at the end of the trial to determine the profitability of the use of teasers & having a shortened lambing as compared to the control group with a 10 week joining. Due to there being very little difference between the results and the costs this was not done, as it would not have provided any additional data.

Aims for the individual properties:

Property 1 - Stewarts Range

Current Conception Rate in ewe lambs: Not Available
Lambing percentage: 80 – 90%
Weaning percentage: 80 – 90% (one lamb lost between lambing and weaning in 2004)
Aims to get out of the trial: This producer is already achieving high conception rates, lambing and weaning percentages, however are doing so with a 10 to 12 week joining. The aim is to see if through the implementation of the 'best practice' model the conception, lambing and weaning percentages can be retained at current level but have a reduced mating length (6 week in the 'best practice' model). To increase the conception rates as 1.5 year olds through the shortening of the mating length as ewe lambs, having a 12 week weaning, therefore enabling the ewe more time to regain condition ready for mating again in December.

Property 2 - Casterton

Current Conception Rate in ewe lambs: 88.5%
Lambing percentage: 82%

Weaning percentage: 65-70%
Aims to get out of the trial: To decrease the joining length from 8 weeks to 6 weeks, without decreasing the current conception rate. To investigate and try and extrapolate the reason for the high mortality rate between lambing and weaning and possibly decrease this mortality rate.

Property 3 - Apsley

(2003 was the first year ewe lambs were mated)
Current Conception Rate in ewe lambs: 20%
Lambing percentage: 24%
Weaning percentage: 24%
Aims to get out of the trial: To increase conception rate to the project aim of 80%. To achieve the target mating weight as ewe lambs in the best practice model of 45-55kgs economically as the ewe lambs will just be 6.5 months of age at mating. To increase conception rates as 1.5 year olds by managing the ewe so she regains condition ready for mating again in February.

Property 4 - Kybybolite

Current Conception Rate in ewe lambs: 60%
Lambing percentage: 80%
Weaning percentage: 75%
Aims to get out of the trial: To increase conception rate to the project aim of 80% and to reduce mating length from the current 8 to 9 weeks to the 'best practice' 6 week and still achieve 80% conception rate. To increase the conception rates as 1.5 year olds through the shortening of the mating length as ewe lambs, having a 12 week weaning, therefore enabling the ewe more time to regain condition ready for mating again in December.

Results Summary

Ewe lamb data (2005)

(As there was a great deal of data collected during the trial many of the tables and discussion individual property results can be found in Appendix 3, only the summary data is shown in this section)

Notes for Reader:
It is important to note that the Age used in the data is that of the oldest lambs at joining, for example the 8 month olds would have ranged in age from 8 to 6 months at joining.
The conception rates used in this summary are those obtained at pregnancy scanning, which appeared to be reasonably accurate, there were some miss scanning noticed, but very few and all the data required to include them in this section is not available; also including them would not have significantly changed the conclusions made in this section.

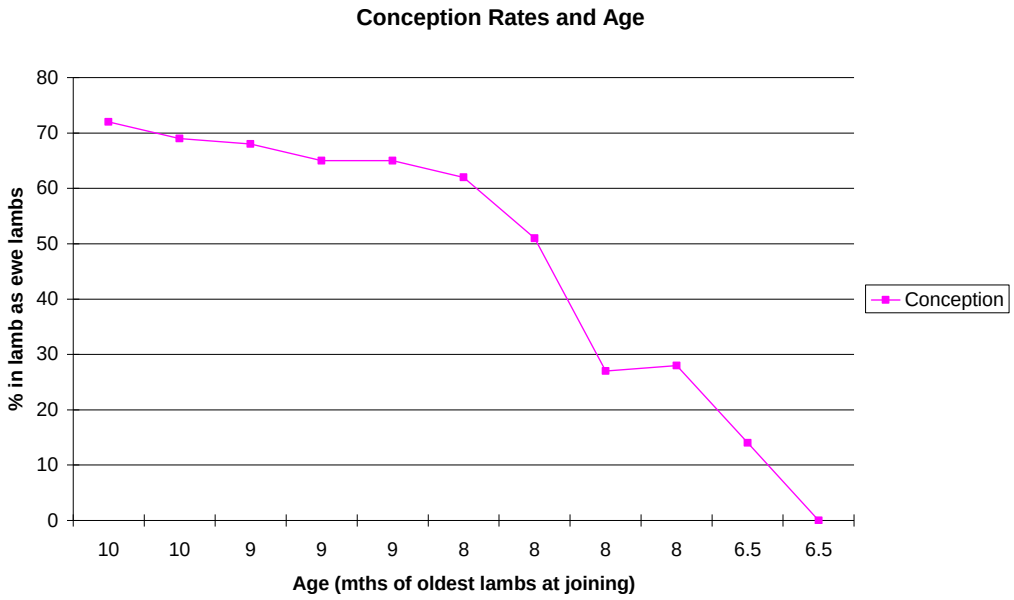
Summary of conception rates

	Age (mths at joining)	Conception (% in lamb)	Weight (kg at joining)	Condition Score (condition at joining)
Property 4 Best Practice	10	72	43.3	3.1
Property 4 Current Practice	10	69	43.2	3.1
Property 1 Best Practice	9	65	45.3	3.36
Property 1 Current Practice	9	65	45	3.38
Property 2 Best Practice	8	27	41.9	2.3
Property 2 Current Practice	8	28	40.7	2
Property 5 Best Practice	8	51	42.5	3.2
Property 5 Current Practice	8	62	43.5	3.2
Property 3 Best Practice	6.5	14	37.9	3
Property 3 Current Practice	6.5	0	36.1	2.7

Table 1

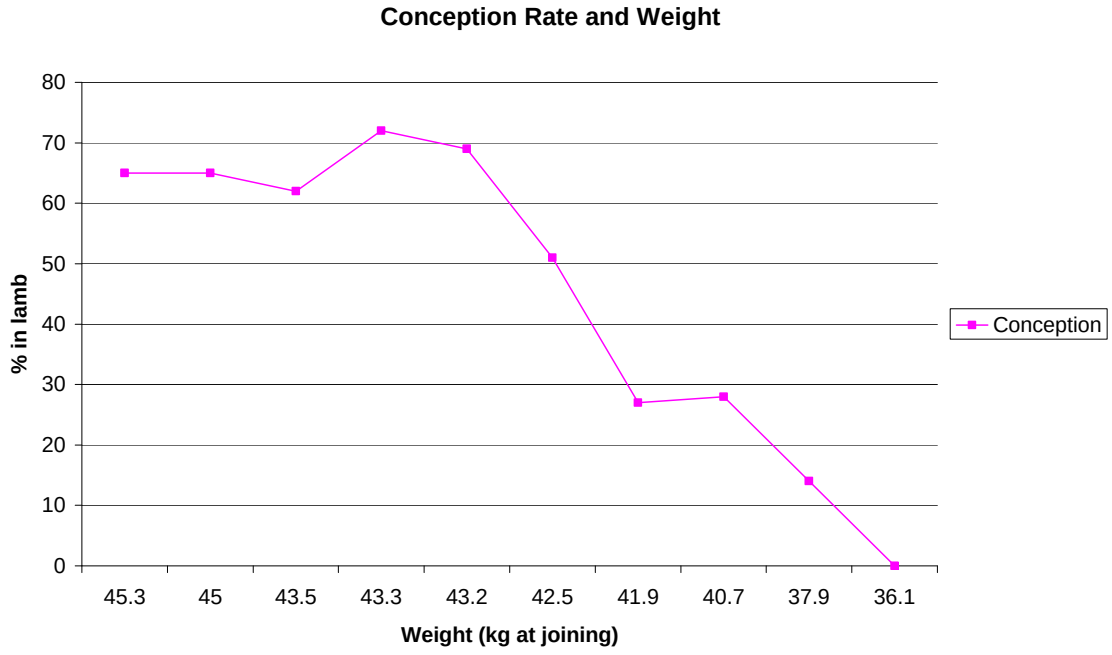
Table 1 is in order of the ages of the ewe lambs at mating. This highlights a few things, the older the age of the animal the higher the conception rates. Comparing property 4, with the highest conception rates in the trial, with property 5, with a lower conception rates, there was no notable difference between weights and condition scores of the two properties, yet a 7-21% difference in conception rates. This finding was supported by addition results from property 3 who in addition to the Best Practice group and Current Practice group joined an additional group of Ewe Lambs in March; a month after the other two groups and in this group had a conception rate of 68% (this additional piece of information is included in graph 1), considerably higher than the other two groups at 27% & 28% which were joined in February.
The difference noted in conception rates of the groups joined in January and the group joined in February could also be influenced by a breed/seasonality effect.

The data from table 1 is depicted below in graph form.



Graph 1

Graph 1 shows that there is a trend that as age decreases so did conception rates, in this trial those ewe lambs that had the highest conception rates were 9-10 months of age.



Graph 2

Graph 2 shows the conception rates of the ewe lambs of the different properties compared to the average weight at joining. While there was some variation the general trend, overall as weight increases the conception rates

increase. It is notable that the higher conception rates, of above 60%, were achieved where the average joining weight of the animal was over 43kg.

Conception Rates for different weight ranges at joining
(combined total in each weight range for all properties)

Weights at joining (kg)	In Lamb	Dry	Total	% in lamb
31-35	21	104	125	17%
36-40	94	128	222	42%
41-45	177	115	292	61%
46-50	120	42	162	74%
51-55	34	13	47	72%

Table 2

Table 2 shows 5kg weight ranges and the subsequent combined total of all the properties for animals within those weight ranges at joining and their conception rates. This reinforces the results shown in Graph 2, that to achieve conception rates above 60%, the animals needed to be above 41 kg at joining.

As the group discussed the two trends noticed here, age and body weight could also be related. It was thought by the group, that those animals that are born earlier, therefore older, would tend to be heavier. They believed it would be of use to investigate this further in a situation where ages were tighter and more accurately known.

Graph 3

Graph 3 shows the average conception rates for each property as compared to the average condition score at joining. The graph shows that whilst there is

variability that conception rates are higher where condition scores are higher, optimum appears to be in the range of condition score 3.

Graph 4

Graph 4 again shows the conception rate as compared to condition score, however this time the condition score axis is not in descending order, it is in the same order as that of Graph 2, conception rate as compared to weight at joining. If the two graphs are compared you can see that the graphs are exactly the same, this is explained by the results shown in table 3.
Table 3 shows the average weights of the animals of differing condition scores at joining. The data shows there is a correlation between body weights and condition scores at the time of joining, that the higher the condition score the higher the body weight. Due to this it is expected that Graph 2 and Graph 4 should show the same trend.
This indicates that the increase in conception rate seen at higher body weights could also be due to condition of the animal at time of joining, because they are correlated in this data, the effect can not be separated. It could also be due to the combination of a higher body weight and condition score.

Body weights and corresponding condition score at joining

Condition Score	Property 1	Property 2	Property 4
1.5		39	
2.0		40	40
2.5	38	43	41
3.0	43	45	43
3.5	45	46	45
4.0	51		46

Table3

Results Summary

Ewe lamb data (2006)

(As there was a great deal of data collected during the trial many of the table and discussion of individual results can be found in Appendix 4, only the summary data is shown in this section)

Notes to Reader: After pregnancy scanning in 2005 it was decided that property 3, which had very low conception rates would discontinue with the trial as the data from this property would not contribute to the aim of the trial. The teaser trial was also only conducted in one year (property 5).

Pregnancy Scanning Results for 2005 & 2006
(of properties that scanned in 2006)

	2005		2006	
Property 1.	Best Practice	Current Practice	Best Practice	Current Practice
Dry	35%	35%	17%	18%
In Lamb	65%	65%	83%	82%
Single	39%	47%	52%	57%
Multiple	26%	18%	31%	25%
Expected Lambs	182	165	221	207
Property 2.	Best Practice	Current Practice	Best Practice	Current Practice
Dry	73%	72%	2%	4%
In Lamb	27%	28%	98%	96%
Single	24%	25%	40%	40%
Multiple	3%	3%	58%	56%
Expected Lambs	31	33	154	149
Property 4.	Best Practice	Current Practice	Best Practice	Current Practice
Dry	29%	31%	12%	9%
In Lamb	71%	69%	88%	91%
Single	59%	56%	67%	68%
Multiple	12%	12%	20%	23%
Expected Lambs	75	72	96	99

Table 4

Table 4 shows the results of the pregnancy scanning for both 2005 and 2006 for the individual properties. As expected the conception rates were a lot higher in the 2006 joining at 1.5 year olds.
Results from property 1 shows that in both years the expected number of lambs was higher for the best practice group as compared to the current practice group, it also shows that the multiple rates are higher in both years. It needs to be noted that in 2005 there were 11 ewes in the current practice group that raised a lamb but were scanned dry, this is likely to be due to the longer joining time (10 weeks in the current practice group compared to 6 weeks in the best practice group), that the later conceived lambs were not being detected. One of the major aims of property 1 was to decrease their

joining time without affecting the conception rate, based on the pregnancy scanning results, even with adding in additional expected lambs to the current practice group the trial appeared to have achieved this aim.
The results from property 2 show similar scanning results between the two years. One of the individual aims on this property was to reduce the joining length from 8-9 weeks to 6 weeks without affecting conception rates, the results show that this was achieved.
Results from property 4 show similar numbers of expected lambs in both years. As with the other two properties one of the aims of this property was to reduce the joining time from 8-9 weeks to 6 weeks and to not affect conception rate. The results indicated that this was achieved.
The overall aim of increasing conception rates in the ewe lamb to 80% was not achieved through the best practice model or the aim to increase the conception rate as 1.5 year olds to 150%.
It was noted that for all properties (data shown in appendix 4) the ewe throughout the trial were maintained in a condition score 3 for both the best practice and current practice group and the weights were also similar throughout the trial for both groups. It maybe due to this that there was not much difference noticed between the two groups.

Comparison of 2005 & 2006 Pregnancy Scanning Results
(Combined figures of all properties that scanned in 2006)

	Best Practice	Current Practice
Of the ewe lambs that scanned dry in 2005:		
% conceived in 2006	83%	82%
% conceived singles in 2006	42%	43%
% conceived multiples in 2006	40%	38%
% scanned dry in 2006	14%	8%
Of the ewe lambs that scanned as conceiving singles in 2005:		
% conceived in 2006	87%	86%
% conceived singles in 2006	56%	62%
% conceived multiples in 2006	30%	24%
% scanned dry in 2006	10%	11%
Of the ewe lambs that scanned as conceiving multiples in 2005:		
% conceived in 2006	86%	80%
% conceived singles in 2006	61%	46%
% conceived multiples in 2006	26%	34%
% scanned dry in 2006	11%	16%

Table 5

Table 5 shows the result of the 2006 pregnancy scanning based on what the ewe scanned in 2005. The results are split between the best practice and current practice groups. The results for the best practice group show those animals that conceived as ewe lambs were less likely to scan dry as 1.5 year olds, as compared to those who scanned dry as ewe lambs. The results for the current practice group however, shows an increase in the percentage of animals scanning dry as the number of conceptions increased. This difference maybe due to the early weaning of the best practice group giving those

animals conceiving more time between the weaning of the lamb and the ram introduction as 1.5 year olds to begin cycling again.

Comparison of the pregnancy scan results in 2005 with the final weight results in 2006

Property 1.	Best Practice	Current Practice
2005 Scanning Results	Last Weight 2006	Last Weights 2006
Dry	60	59
Single	59	57
Multiple	58	58

Property 2.	Best Practice	Current Practice
2005 Scanning Results	Last Weight 2006	Last Weights 2006
Dry	59	59
Single	60	61
Multiple (low numbers)	59	63

Property 3.	Best Practice	Current Practice
2005 Scanning Results	Last Weight 2006	Last Weights 2006
Dry	61	61
Single	57	58
Multiple	59	57

Table 6

Table 6 shows the results of the weights of the ewe as 1.5 year olds as broken down into their scanning pregnancy status as ewe lambs. This is to show if pregnancy as ewe lambs affected the mature weight of the ewes. While there are some small differences, conceiving as ewe lambs does not appear to have had a major impact on their mature weight taken as 1.5 year olds.

Results of the progeny born in 2005

Progeny of the ewe lambs born in 2005

Property 1.	Best Practice	Current Practice
Weaning (kg)	27.7	26.1
Pre Sale(kg)	48.9	47.1
Property 4.		
Weaning (kg)	28.5	29.9

Table 7

Table 7 shows the average weights of the lambs born to ewe lambs for the best practice and current management groups. There is little difference in the weights between the groups. This indicates that the early weaning, 12 weeks, of the lambs did not appear to have an affect on their production, in fact the lambs were about 2kg heavier in the early weaned group. It does need to be noted that there is only one set of data to compare.

Group Discussion of Results

Did the group achieve the results planned at the beginning?

The group felt that they achieved several of the aims set out at the beginning of the trial, more particularly the individual ones of reducing joining time from there current 8-10 weeks to 6 weeks without impacting on conception rates. The trial did not achieve the increase in conception rates, which was one of the aims of the trial.
It was thought that the poor seasons in which the trial was conducted may have had an impact on the conception rates compared to previous years.

What changes have members made as a result of doing the project, or what changes are planned?

Property 1 is going to wean early from now on after seeing the results of the early weaning in the trial and it having no negative affect on the lambs, and it having the benefit of providing the ewe more time to regain condition prior to joining again.
This property will also as a result of the trial continue to use teasers on the ewe lambs, however will leave the teasers out for longer, around 3-4 weeks.
The joining time will also be reduced from the current practice of 10 weeks to 8 weeks. They are also going to pay a lot more attention to the weights and condition scores. They have already started checking the condition scores of the stock when ever they are in the yards.

Property 2 as a result of the trial, are going to move their joining date to a later time, so they ewe lambs will be older at joining. They will continue to use pregnancy scanning to identify dry, single and multiples.

Property 3 are not going to try joining their stock at such a young age and lighter weights, they will be more strategic about it if they chose to join ewe lambs in the future. The trial also highlighted for them that they need to be continuing to look at and improve their finishing systems. They will continue the resumed pregnancy scanning program to enable them to better manage the stock.

Property 4 will continue to wean early after the trial results. If the teasers are available they will be using them on the ewe lambs, and will be leaving them out for a longer period around 4 weeks. They are also going to shorten the joining length to 8 weeks and will continue to use pregnancy scanning strategically.

Property 5 will continue to wean stock early and use pregnancy scanning. They are not going to use teasers in the future. They are also joining the ewe lambs a month later than normal.

Comments from producers that did not have a trial running on their property are they are going to look at shortening joining time, continue to use

pregnancy scanning, and use teasers on ewe lambs more as a result of the outcomes of the trial.

Have the trial measurements enabled you to show the economics of the outcomes and what benefit, in dollar terms, members gained?

An economic comparison was not done between the two groups, due to there not being a lot of difference in the data, and there was not a lot of extra cost in running the best practice group as compared to the current practice group.
The group felt however that the economic benefit shown by the trial was in reduced labour, by having a shorter lambing length. They felt that they now have more options, because they know a lot more, that they can use the information from the trial more strategically, and that they have more management flexibility as a result. The group felt that the gain was not just limited to this enterprise but will impact on the whole business. The group felt that the results showed they are not loosing anything by joining ewe lambs.

Description of any Open Days, Field Days etc and how many attended?

At the beginning of the trial a bus tour was conducted to the main properties involved in the trial to discuss the problems they may encounter and how to best manage them to ensure the success of the trial, nine people attended this tour.
Throughout the trial regular updates were given at the groups workshops (~6/year), in addition to an update in every edition of the groups quarterly newsletter. There were meetings held throughout the trial of those involved in the trial to discuss how things were going, and if any changes needed to be made.
A presentation was also given on the result of year 1 to the Greenways Lamb Group, at their final results workshop of the Prime Time PIRD “Minimising Lamb Losses”.
Seven people attended the final meeting to discuss the outcomes and what those involved in the trial felt about the outcomes and running of the trial.

Was the group satisfied with the results of the project?

The group was happy with the result of the trial. It has given them a better idea of what works and what doesn’t work. They were expecting to see more difference in conception rates, especially with the joining as 1.5 year olds and having the early weaning in the best practice group to give them more time to regain condition.

Is the group interested in doing another project?

Yes, they already have ideas for the next project. Doing trials gives them the confidence to play around and do trials on their own.

Would you recommend other groups run their own trials?

Yes, if you don’t run trials, you’re not going to make changes.

Comment on the organisation and management of PIRDs, this will assist MLA in better management of future projects.

You need to have a good coordinator/facilitator, the project would not have been do and been a success with out this.
The project would have had more scope if there had been more funding.
There should be more funding at the producer level of PIRDs, property 4 believed that the structure was too top heavy.
The group felt that the payment options needed to be more flexible, because for non-profit producers groups the amount of money in the final payment, which is received after the project is completed is restrictive to more people taking on PIRDs. This is due to the amount of funding pending needed to be covered (as the supplier need to be paid) by someone until the final payment has been received. The group suggests that this would be less of an issue if the final payment was for example 15% or less of the total funds.

***Press Coverage* – (see Appendix 5 for print press)**

- Featured in the National Television "On the Land" program. The filming for this event took place on the morning of the 18th November 2004. The segment went to air on the 5th December 2004.
- Front cover photo on the April 06 Edition of the MLA Feedback magazine in addition to having an article in the magazine
- A radio interview for the ABC rural report was done at the start of the trial.
- The media coverage received in newspapers and newsletters can be found in Appendix 5.

APPENDIX 1

'Best Practice' model developed for this trial (note this may have varied from property to property depending on the situation but acted as the guide throughout the trial:

Time	Activity	Sheep Targets
July 2004	Ewe 04 lambs are born	Lambing Ewes, Fat Score 3 (if possible)
August 2004	Marking – modified mules – take half as much off and tail strip	Vaccination – 6 in 1 plus B12
September 2004	Wean 04 lambs – 04 lambs individually tagged, weighed and condition scored FEC are taken Pasture Assessment	Score 3 and growing
October 2004 (1st Week in Oct)	04 Lambs weighed and condition scored FEC are taken Pasture Assessment	Score 3 and growing
November 2004 (1st Week in Nov)	04 Lambs weighed and condition scored FEC are taken Pasture Assessment	Score 3 and growing
December 2004 (1st Week in Dec)	04 Lambs weighed and condition scored FEC are taken Pasture Assessment	Score 3 and growing
End December 2004	Assess Ram Condition; check feet and legs, mouths, testes for size and abnormalities. 7 weeks prior to mating begin feeding lupins to rams (dependent on rams condition)	(if any rams develop an infection or flystrike they are removed from trial rams and not use as will be infertile)
January 2005 (1st Week in Jan)	04 Lambs weighed and condition scored FEC are taken Pasture Assessment Rams kept at least 1km away from 04Lambs prior to joining (if possible)	Score 3 and growing
Wednesday 5th January 2005	Teasers are given first injection (2mls) of Ropel	
Wednesday 12th January 2005	Teasers are given second injection (2mls) of Ropel	
Wednesday 19th January 2005	Teasers are given their final injection (2mls) of Ropel Teasers are introduced to the 04 Lambs 14 days prior to joining of 04 Lambs	3% teasers

Thursday 3rd February 2005	04 Lambs are weighed and condition scored FEC are taken Pasture Assessment Teasers are removed from 04 Lambs and Rams introduced	04Lambs 45-55 kgLW and on a rising weight Small Paddocks, 2% older rams, mate 6wks. 04 Lambs maintained at score 3 and maintain or slightly increase weight
March 2005 (1st Week in Mar)	Pasture Assessment Ewes NOT disturbed	
Around 17th March 2005	Rams are removed from the 04Lambs after 6wk joining. No weights taken during mating.	Score 3 and Growing
April 2005 (1st Week in April)	2 weeks after rams have come out of 04 Lambs the 04 Lambs are weighed & condition scored FEC's are taken 04 Lambs Pasture Assessment	Score 3 and Growing
May 2005 (1st Week in May)	04 Lambs are weighed and condition scored FEC's are taken Pasture Assessment	Score 3 and Growing
May 2005	Pregnancy Scanning (100 days from the start of joining) for Multiples	Score 3 and Growing
June 2005 (1st Week in June)	04 Lambs are weighed and condition scored FEC's are taken Pasture Assessment	Score 3 and Growing
June 2005	04 Lambs given injection of Vitamin A, D and E 2 weeks prior to the start of lambing 04 Lambs are weighed and condition scored FEC's are taken	
July 2005 (1st Week in July)	Pasture Assessment Ewes NOT Disturbed	
July 2005	Lambing of 04 Lambs Weighs and condition scores are not taken during lambing	04 Lambs 50+kgLW, fat score 3
August 2005 (1st Week in Aug)	Pasture Assessment Ewes NOT Disturbed	
September 2005 (1st Week in Sept)	Pasture Assessment Ewes NOT Disturbed	
September 2005	Marking at 6 to 7 weeks – just tailing. 05 Lambs are tagged as per management group they are from	
October 2005	Early weaning at 12wks 04 Lambs and 05 Lambs are weighed and condition scored FEC's are taken	Lambs 25-35 KgLW

	Pasture Assessment	
September to December 2005	Weighs and condition scores are taken on 05 Lambs before sale and sale dates and information recorded Pasture Assessment 1st Week of each month	Build up Ewe to mating weight and condition, ave. score 3.
December 2005 (1st Week Dec)	04 Lambs weighed and condition scored FEC's taken on 04 Lambs Pasture Assessment	
End December 2005	Assess Ram Condition; check feet and legs, mouths, testes for size and abnormalities. 6 weeks prior to mating begin feeding lupins to rams (dependent on rams condition)	(if any rams develop an infection or flystrike they are removed from trial rams and not use as will be infertile)
January 2006 (1st Week in Jan)	04 Lambs weighed and condition scored Pasture Assessment	Score 3
Thursday 2nd February 2006	04 Lambs are weighed and condition scored FEC are taken Pasture Assessment Rams introduced to the 04 Lambs	Score 3 and on adequate plane of nutrition, especially protein
March 2006	Rams are removed from the 04 Lambs after 6wk joining. No weights are taken during mating.	Score 3
March 2006	2 weeks after rams have come out of 04 Lambs the 04 Lambs are weighed and condition scored Pasture Assessment	Score 3
April 2006 (1st Week in April)	04 Lambs weighed and condition scored FEC's are taken Pasture Assessment	Score 3
May 2006 (1st Week in May)	04 Lambs are weighed and condition scored Pasture Assessment	Score 3
May 2006	Pregnancy Scanning (100 days from the start of joining) for Multiples	Score 3

- From weaning onwards throughout the trial the aim was to keep the 04 Lambs in an average (for the mob) score 3 condition in addition to having them gain weight

- Aim to keep 04 Lambs growing throughout pregnancy and in an average (for the mob) condition score 3.
- Weights and condition scores will not be taken during mating or lambing to minimise stress on the 04 Lambs
- It is expected that the 04 Lambs will loose some condition over lambing

Appendix 2

Current Management Practices for each of the four trial properties.

Stewarts Range

Time (Month)	Activity
1st May 2004	Begin lambing
Mid June 2004	Lamb Marking
Late September 2004	Weaning, lambs receive a drench, Vaccination plus B12 Once weaned they go out onto good pasture to grow out. The 04 Lambs are monitored to ensure that they are growing and are in good condition, score 3 to 4.
December 2004	04Lambs receive 1st Summer Drench
Mid January 2005	Rams go out with the 04 Lambs
End March 2005	Rams are taken out after a 10 week joining
	04Lambs are monitored to ensure that they are still growing, if it looks like they are starting to slip back in condition they receive a supplement.
Mid May 2005	Crutching, 04 Lambs are vaccinated plus B12 and are Drenched pre lambing
Early June 2005	04 Lambs are udder scored and are divided into two mobs as a result
Mid June 2005	Lambing Begins
Late August 2005	Lamb Marking, 04 Lambs receive vaccination plus B12 Possible receive a drench depending on the year, Conditions etc. 04 Lambs may also be drenched Depending on the conditions.
Late October to November 2005	04 Lambs are Weaned and Drenched 05 Lambs are weaned onto finishing pasture, predominately Lucerne.
Early December 2005	Rams go out with the 04 Lambs. The 04 Lambs are now Bought back into normal mating time.
December 2005	Summer Drench
Mid February 2006	Rams are taken out after a 8 week joining
Late March 2006	04 Lambs are given a pre-lambing crutch They are drenched and vaccinated plus B12
May 2006	Lambing of the 04 Lambs

Kybybolite

Time (Month)	Activity
November 2004	Buy in 04 Lambs
January 2005	04 Lambs are drenched
Mid January 2005	Rams go out for a 8 to 9 week joining 04 Lambs are feed quality hay throughout mating and pregnancy.
Late February 2005	04 Lambs may get drenched
Mid June 2005	Start Lambing
July/August 2005	Lambmarking, 04 Lambs maybe drenched.
Early to Mid October 2005	Lambs are weaned 04 Lambs are placed in the best paddocks and feed if necessary to bring them up in condition ready for mating.
Late December 2005	Rams go out with the 04 Lambs to bring them back into line with the other stock.
Late May 2006	Start Lambing
November 2006	Weaning

Apsley

Time (Month)	Activity
Mid July 2004	Lambing Starts
Mid September 2004	Lambmarking, modified mules 6 in 1 vaccine
Mid October 2004	Weaning – drenched and given 2nd 6 in 1 vaccine Grazed on green pasture. When pasture dries out, are fed adlib lucerene hay and oats
December 2004	Weighed and Tagged and given 1st Summer Drench
Mid February 2005	FEC's are taken & drenched if needed. Pre-mating – weights and condition scores are taken
Mid February 2005	Rams go out with the 04 Lambs for a 6 week mating
End March 2005	Rams are taken out. 04 Lambs are weighed and condition scored
April 2005	Shearing of the 04 Lambs
Early July 2005	04 Lambs are Vaccinated with 6 in 1 vaccine
Mid July 2005	Lambing Starts
Mid September 2005	Lambmarking of 05 Lambs (at 6 weeks)
Mid – Late October 2005	Weaning of 05 Lambs (at 12 weeks)
Mid February 2006	Rams go out with the 04 Lambs
End March 2006	Rams are removed
April 2006	Shearing of the 04 Lambs

Casterton

Time (Month)	Activity
November 2004	Buy in Ewe Lambs
Mid/Late December 2004	First Summer Drench, Ram Vet Checks
Early January 2005	FEC's on Ewe Lambs. Feed Ewes 500g/day for 5 days.
Late February 2005	Weigh Ewe Lambs and Drench, Combi/Drench, B12, A,D &E + mineral drench
Early March 2005	Place rams in with Ewe Lambs at 2%. Feed ewe lambs 1.5-2kg grass silage for three weeks
Late April 2005	Remove Rams form Ewe Lambs
Mid June 2005	Scan Ewe Lambs. FEC's taken.
Mid/Late June 2005	Pre-lambing treatments, combi/rametin if needed, copper bullets, B12, 6in1 +Sel.
Very late June	Split into 400-500 mobs at pastures of 3000kg/dm.
July/August 2005	Lambing
Late August 2005	Lamb Marking, 6in1 +sel, B12, the lambs are tagged.
Late September 2005	Weaning Lambs, 6in1 +sel, B12, Combi/Drench + Mineral drench
Early November 2005	Weigh lambs, split heavy, mids and lights.
Late November 2005	Crutch Ewes and Lambs, Shear Rams
Mid/Late December 2005	First Summer Drench, shear Ewes and Lambs. Rams Vet check.
Early January 2006	FEC's Lambs. Feed Ewes 500g/day for 5 days.
Mid January 2006	Feed Ewes 500g/700g of Maize silage for 3 weeks
Early February 2006	Rams placed out at 1.5%. Feed increased to 1000g of Maize silage, 3 weeks.
Late March 2006	Rams removed from Ewes.
Mid May 2006	Scan Main Ewe Flocks
Mid June 2006	FEC's all Ewes

Appendix 3 – 2005 Results

PROPERTY 1 – Stewarts Range

The Ewe Lambs were 9mths at joining.
Best Practice Group – 6 week joining, teasers used prior to joining

Count of Pregnancy Status		Count of Conceived	
Conceived	Total	Pregnancy Status	Total
Early	22	In Lamb	
Late	9	Multiple	52
Mid	98	Single	77
Did not conceive	71	Total Conceived	129
Total Scanned	200		

% In Lamb with Singles 60%
% In Lamb 65% % In Lamb with Multiples 40%
Expected lambs: 181

Current Practice Group – 10 week joining

Count of Pregnancy Status		Count of Conceived	
Conceived	Total	Pregnancy Status	Total
Early	8	Multiple	36
Late	47	Single	93
Mid	74	Total Conceived	129
Did not conceive	69		
Total Scanned	198		

% In Lamb with Singles 72%
% In Lamb 65% % In Lamb with Multiples 28%
Expected lambs: 165

It was noted at lambing that in the Current Practice Group there were 11 ewes scanned dry that reared a lamb, if this number is added to the number in lambs and split between the singles and multiples based on the percentages at scanning it creates the following changes:
Current Practice Group:
% In Lamb 71%
% In Lamb with singles (101) 72%
% In Lamb with multiples (39) 28%
Expected lambs: 179

These results show that the percent of Ewe Lambs scanned in lamb were the same for both groups at 65%, however when the missed ones are added into the in lamb percentage for the current management group it increases this to 71%, higher than the best practice group. It is notable that there is a higher multiple percentage in the Best Practice group as compared to the Current Practice group. This has resulted in a higher expected number of lambs in the best practice group even when compared to the adjusted figures. There will also be a more condensed lambing for the Best Practice Group as compared to the Current Practice Group, one of the aims for this property.

PROPERTY 2 - Casterton

Note: The pregnancy scanner used on this property did not identify the early, mid or late pregnancies. Teasers were not used with the Best Practice Group on this property.

The Ewe Lambs were 8mths at joining.
Best Practice Group – 6 week joining

Count of Pregnancy Status	
Pregnancy Status	Total
Did not conceive	77
Multiple	3
Single	25
Total Scanned	105

% In Lamb 27%

Current Practice Group – 8 weeks joining

Count of Pregnancy Status	
Pregnancy Status	Total
Did not conceive	76
Multiple	3
Single	27
Total Scanned	106

% In Lamb 28%

The notable thing from these two tables is the very low conception rates, especially when compared to the conception rates they normally have of around 88.5%. The other thing to note from these two tables is the percent in lamb is almost the same for both groups. This property also did another mating group of ewe lambs a month later and had a conception rate of 68% with an 8 week joining.

PROPERTY 3 - Apsley

The Ewe Lambs were 6.5mths at joining.
Best Practice Group – 6 week joining, teasers used prior to joining

Count of Pregnancy Status		Count of Conceived	
Conceived	Total	Pregnancy Status	Total
Early	1	Multiple	1
Late	1	Single	7
Mid	7	Total Conceived	8
Did not conceive	56		
Total Scanned	65		

% In Lamb 14% % In Lamb with Singles 88%
% In Lamb with Multiples 13%

Current Practice Group – 6 weeks joining

No Ewes Conceived.

The results show that the conception rates were very low in the Best Practice group, with most of the pregnancies mid joining. The Current Practice had no lambs conceived. It is also important to note that these were the youngest lambs in the trial.

PROPERTY 4 - Kybybolite

The Ewe Lambs were 10mths at joining.
Best Practice Group – 6 week joining, teasers used prior to joining

Count of Pregnancy Status		Count of Conceived	
Conceived	Total	Pregnancy Status	Total
Early	39	Multiple	11
Late	5	Single	53
Mid	21	Total Conceived	64
Did not conceive	25		
Total Scanned	90		

% In Lamb with Multiples 17%
% In Lamb 72% % In Lamb with Singles 83%

Current Practice Group – 8 week joining

Count of Pregnancy Status		Count of Conceived	
Conceived	Total	Pregnancy Status	Total
Early	47	Dry	
Late	3	Multiple	11
Mid	11	Single	50
Did not conceive	28	Total Conceived	61
Total Scanned	89		

% In Lamb with Multiples 18%
% In Lamb 69%% In Lamb with Singles 82%

The results show there was a slightly higher in lamb percentage for the Best Practice Group, 3%. The estimated lambing percentage will be similar in both groups, with the number scanned in single and multiple similar for both groups.
There will be a more condensed lambing for the Best Practice Group as compared to the Current Practice Group, due to the two weeks shorter mating length, one of the aims of this property.

TEASER TRIAL – PROPERTY 5

Note: this trial was just to look at the difference between the use of teasers and conception rates.
The Ewe Lambs were 8mths at joining.

Group	Scanned In Lamb	Single	Multiple	Dry	% In Lamb
Teased	144	127	17	141	51%
Un-teased	177	195	18	107	62%

The above table summarizes the pregnancy scanning data from the teased group, which had teaser wethers with them for 2 weeks prior to an 8 week mating, and the un-teased group that had 10 week joining. The results show that there was a significantly lower conception rate in the teasers of 11%, this questions how effective the use of teasers were in this trial.

Correlations between Conception Rates and Mating Weights and Condition Scores

PROPERTY 1 Ewe Lamb Mating Trial Results - Joining Weights

Best Practice (kg)	In Lamb	Dry	total	% Yes	% No
31-35	1	2	3	33%	67%
36-40	13	11	24	54%	46%
41-45	96	50	146	66%	34%
46-50	16	4	20	80%	20%
51-55	3	1	4	75%	25%
56+	1		1	100%	0%

Current Practice (kg)	In Lamb	Dry	total	% Yes	% No
<30		1	1	0%	100%
31-35	1	5	6	17%	83%
36-40	12	8	20	60%	40%
41-45	48	29	77	62%	38%
46-50	44	21	65	68%	32%
51-55	23	5	28	82%	18%
56+	1		1	100%	0%

Ewe Lamb Mating Trial Results - Joining Condition

Best Practice	In Lamb	Dry	total	% Yes	% No
2			0		
2.5	4	4	8	50%	50%
3	34	33	67	51%	49%
3.5	71	25	96	74%	26%
4	21	6	27	78%	22%
4.5	1		1	100%	0%

Current Practice	In Lamb	Dry	total	% Yes	% No
2		1	1	0%	100%
2.5	1	2	3	33%	67%
3	49	43	92	53%	47%
3.5	67	21	88	76%	24%
4	12	1	13	92%	8%
4.5			0		

	Best Practice	Current Practice
Condition Score	Ave. Weight (kg)	Ave. Weight (kg)
2.5	37	38
3	43	42
3.5	43	47
4	50	51

The first two tables are comparing weights and conception rates. The second two tables are comparing condition scores and conception rates.

Both tables show that as you either increase the condition score or the weights of the ewe lambs, the conception rates increases. This suggests that there is a correlation between condition score and body weight, that as the weight of the ewe lamb increases her condition score increases, the final table demonstrates that in the case of property 1 ewe lambs, this is true.

PROPERTY 2 Ewe Lamb Mating Trial Results - Mating Weights

Best Practice (kg)	In Lamb	Dry	total	% Yes	% No
<38	0	7		0%	100%
38.5-40	3	17	20	15%	85%
40.5-42	13	19	32	41%	59%
42.5-44	10	19	29	34%	66%
44.5-46	1	13	14	7%	93%

Current Practice (kg)	In Lamb	Dry	total	% Yes	% No
<38	1	4	5	20%	80%
38.5-40	7	36	43	16%	84%
40.5-42	17	24	41	41%	59%
42.5-44	6	11	17	35%	65%

Ewe Lamb Mating Results - Mating Condition

Best Practice	In Lamb	Dry	total	% Yes	% No
1.5	2	13	15	13%	87%
2	11	24	35	31%	69%
2.5	11	27	38	29%	71%
3	3	10	13	23%	77%
3.5	1	4	5	20%	80%

Current Practice	In Lamb	Dry	total	% Yes	% No
1.5	4	21	25	16%	84%
2	13	36	49	27%	73%
2.5	12	17	29	41%	59%
3	1	2	3	33%	67%

	Best Practice	Current Practice
Condition Score	Ave. Weight (kg)	Ave. Weight (kg)
1.5	39	39
2	40	40
2.5	43	42
3	45	44
3.5	46	

The results from property 2 show the conception rates on the best practice group are variable for the different mating weights. The best practice group shows as the weights increase the conception rates decreased. It is important to note on these results the weight ranges are different from the other two properties due to the tight weight range in the lambs (only 11kg variation).

The table that compares condition scores and conception rates shows variability, as do the weights. As the condition score of the best practice group increase the conception rate increases, however in the current practice group does not show this trend.
The table comparing condition score and weight shows as the condition score increases so does the weights.

PROPERTY 4 Ewe Lamb Mating Trial Results - Mating Weight

Best Practice (kg)	In Lamb	Dry	total	% Yes	% No
31-35					
36-40	11	3	14	79%	21%
41-45	36	19	55	65%	35%
46-50	15	3	18	83%	17%
51-55	1	1	2	50%	50%
56+					

Current Practice (kg)	In Lamb	Dry	total	% Yes	% No
31-35		2	2	0%	100%
36-40	11	7	18	61%	39%
41-45	29	15	44	66%	34%
46-50	18	3	21	86%	14%
51-55	3	1	4	75%	25%
56+					

Ewe Lamb Mating Trial Results Mating Condition

Best Practice	In Lamb	Dry	total	% Yes	% No
2		2	2		
2.5	8	8	16	50%	50%
3	36	12	48	75%	25%
3.5	18	3	21	86%	14%
4	7	1	8	88%	13%
4.5					

Current Practice	In Lamb	Dry	total	% Yes	% No
1.5		1	1	0%	100%
2	2	2	4	50%	50%
2.5	7	8	15	47%	53%
3	27	13	40	68%	33%
3.5	15	2	17	88%	12%
4	5	2	7	71%	29%

	Best Practice	Current Practice
Condition Score	Ave. Weight (kg)	Ave. Weight (kg)
2	40	39
2.5	41	41
3	43	43
3.5	44	46

4	46	46

The previous tables are from property 4. The correlation between the weights and conception rate show that, in the current practice group there is a trend. The best practice results show more variation, and no noticeable trend. The condition score at mating, as in the case of property 1, does show as the condition score increase so does the conception rate. The final table shows a positive relationship between weight and condition Score.

Appendix 4 – 2006 Results

PROPERTY 1. – Stewarts Range

Property 1.	Best Practice		Current Practice	
	Weight	Condition	Weight	Condition
7/11/2005				
Average	39.5	3.2	39.1	3.1
Minimum	24.4	2	18.1	2
Maximum	52.4	4.5	52.8	4
7/12/2005				
Average	43.7	3.3	43.6	3.2
Minimum	29	2	21.7	2
Maximum	59.6	4.5	59	4
5/01/2005				
Average	45.3	3.4	45	3.4
Minimum	31.5	2.5	30	2
Maximum	62.5	4.5	59.5	4
19/05/2005				
Average	46.6	3.3	44	3.1
Minimum	34	2.5	28.5	1.5
Maximum	60	4.5	58.5	4
16/10/2005				
Average	58.3	3.1	59.3	3.2
Minimum	44.5	2	31.5	2.5
Maximum	70.5	4.5	70.5	4
1/04/2006				
Average	58.8	3.3	58	3.2
Minimum	37.5	2.5	44.5	2
Maximum	74.5	4.5	74	4

Table 1

Table 1 shows that the average weights were similar for both groups throughout the trial. The condition scores were also around the same for both groups throughout the trial. It is notable the ewes were maintained and average condition score around 3 throughout the trial for both groups. The weights and condition scores were within that of the aim of the trial for joining which was 45-55kg and condition score 3.

Best Practice Pregnancy Scanning Results 2005

Count of Pregnancy Status			
Pregnancy Status	Total		
Dry	70	% in lamb	65%
Mutiple	52	% In Lamb with Singles	39%
Single	78	% In Lamb with Multiples	26%
(blank)		% Dry	35%
Grand Total	200	Expected Lambs	182

Current Management Pregnancy Scanning Results 2005

Count of Pregnancy Status			
Pregnancy Status	Total		
Dry	69	% in lamb	65%
Multiple	36	% In Lamb with Singles	47%
Single	93	% In Lamb with Multiples	18%
(blank)		% Dry	35%
Grand Total	198	Expected Lambs	165

Best Practice Pregnancy Scanning Results 2006

Count of Pregnancy Status			
Pregnancy Status	Total	% in lamb	83%
dry	34	% In Lamb with Singles	52%
multiple	60	% In Lamb with Multiples	31%
single	101	% Dry	17%
Grand Total	195	Expected Lambs	221

Current Management Pregnancy Scanning Results 2006

Count of Pregnancy Status			
Pregnancy Status	Total		
dry	35	% in lamb	82%
multiple	48	% In Lamb with Singles	57%
single	111	% In Lamb with Multiples	25%
(blank)		% Dry	18%
Grand Total	194	Expected Lambs	207

Table 2

The results in table 2 are the pregnancy scanning results for the two groups for 2005 & 2006. As expected there is a jump in conception rates from ewe lambs to 1.5 year olds with the conception rates as 1.5 year olds similar between the two treatment groups. However there is a higher rate of multiples in the best practice group in the 2005 and 2006 scanning results. The result of this is a higher expected number of lambs in the best practice group. There is a similar number of dries in both groups in both years, making the main difference the variation in singles and multiples.

Comparison of 2005 & 2006 Scanning Results

Best Practice Group			Current Management Group		
Of those scanned dry in 2005 in 2006:					
No. Dry in 2005	70		No. Dry in 2005	69	
Conceived	48	69%	Conceived	48	70%
Conceived Single	27	39%	Conceived Single	30	43%
Conceived Multiple	21	30%	Conceived Multiple	18	26%
Dry	20	29%	Dry	8	12%
Of those scanned as conceiving singles in 2005 in 2006:					
No. Single in 2005	78		No. Single in 2005	93	
Conceived	67	86%	Conceived	77	83%
Conceived Single	39	50%	Conceived Single	57	61%
Conceived Multiple	28	36%	Conceived Multiple	20	22%
Dry	8	10%	Dry	14	15%
Of those scanned as conceiving multiples in 2005 in 2006:					
No. Multiple in 2005	52		No. Multiple in 2005	36	
Conceived	45	87%	Conceived	28	78%
Conceived Single	34	65%	Conceived Single	18	50%
Conceived Multiple	11	21%	Conceived Multiple	10	28%
Dry	6	12%	Dry	6	17%

Table 3

Table 3, the comparison of the 2005 & 2006 scanning results show that there doesn't appear to be any disadvantage in the ewe lambs conceiving and the subsequent conception as 1.5 year olds in the best practice group, in fact the results show that if they failed to conceive as ewe lambs they are less likely to conceive as 1.5 year olds.

The current management results show a different trend, while the percentage increase is low, 2%, the data shows that the more foetuses the ewe lambs conceived the greater the chances of scanning dry as 1.5 year olds.

This difference between the two groups could be due to the early weaning of the best practice group, giving the ewe lambs rearing lambs a greater chance to become fertile again before joining.

PROPERTY 2. – Casterton

Property 2.	Best Practice		Current Practice	
	Weight	Condition	Weight	Condition
24/01/2005				
Average	41.9	2.3	40.7	2
Minimum	38	1.5	38	1.5
Maximum	47	3.5	45	3
3/05/2005				
Average	45.7	3.1		
Minimum	40	2		
Maximum	53	4		
31/05/2005				
Average			47.8	3.4
Minimum			44	2.5
Maximum			53.5	4
3/11/2005				
Average	62.6	3.4	62.3	3.4
Minimum	49.5	2.5	44.5	2.5
Maximum	75.5	4	79.5	4
1/05/2006				
Average	59.1	3.7	59.8	3.8
Minimum	42.5	2.5	49	2.5
Maximum	69	4.5	71.5	4.5

Table 4

Table 4 shows that the weights and condition scores were similar for both groups throughout the trial. At joining the average of the group was below the aim of the trial (note the closest weigh and condition score date to that of joining, early February, was a month, so the lambs would have been a lot closer to the target than these results show) of 45-55kg and condition score 3. As with property 1 the ewe lambs were maintained in an optimal condition score of 3 for both groups throughout the trial.

Best Practice Pregnancy Scanning Results 2005

Count of Pregnancy Status	
Pregnancy Status	Total
Dry	77
Multiple	3
Single	25
Grand Total	105

Expected Lambs	31
% in lamb	27%
% In Lamb with Singles	24%
% In Lamb with Multiples	3%
% Dry	73%

Current Mangement Pregnancy Scanning Results 2005

Count of Pregnancy Status	
Pregnancy Status	Total
Dry	76
Multiple	3
Single	27
Grand Total	106

Expected Lambs	33
% in lamb	28%
% In Lamb with Singles	25%
% In Lamb with Multiples	3%
% Dry	72%

Best Practice Pregnancy Scanning Results 2006

Count of Pregnancy Status	
Pregnancy Status	Total
dry	2
multiple	57
single	40
(blank)	
Grand Total	99

Expected Lambs	154
% in lamb	98%
% In Lamb with Singles	40%
% In Lamb with Multiples	58%
% Dry	2%

Current Management Pregnancy Scanning Results 2006

Count of Pregnancy Status	
Pregnancy Status	Total
dry	4
multiple	55
single	39
(blank)	
Grand Total	98

Expected Lambs	149
% in lamb	96%
% In Lamb with Singles	40%
% In Lamb with Multiples	56%
% Dry	4%

Table 5

The pregnancy scanning results in table 5 show that from a very low conception rate as ewe lambs there was a large increase in the number conceiving as 1.5 year olds.

There is very little difference in results between groups in either year, with the exception of some very small differences in the number of multiples and drys between groups in 2006. The dry percentage is 2% higher in the current management group and the multiples are 2% higher in the best practice group. This is reflected in the higher number of expected lambs in the current management group.

Comparison of 2005 & 2006 Scanning Results

Best Practice Group			Current Management Group		
Of those scanned dry in 2005 in 2006:					
No. Dry in 2005	77		No. Dry in 2005	76	
Conceived	74	96%	Conceived	68	89%
Conceived Single	30	39%	Conceived Single	28	37%
Conceived Multiple	44	57%	Conceived Multiple	40	53%
Dry	1	1%	Dry	3	4%
Of those scanned as conceiving singles in 2005 in 2006:					
No. Single in 2005	25		No. Single in 2005	27	
Conceived	21	84%	Conceived	23	85%
Conceived Single	11	44%	Conceived Single	11	41%
Conceived Multiple	10	40%	Conceived Multiple	12	44%
Dry	1	4%	Dry	1	4%
Of those scanned as conceiving multiples in 2005 in 2006:					
No. Multiple in 2005	3		No. Multiple in 2005	3	
Conceived	2	67%	Conceived	3	100%
Conceived Single		0%	Conceived Single		0%
Conceived Multiple	2	67%	Conceived Multiple	3	100%
Dry		0%	Dry		0%

Table 6

The results in table 6 show that there does not appear to be any disadvantage to the ewe lambs if they conceive in their subsequent conception as 1.5 year olds.

PROPERTY 3. – Apsley

Property 3.	Best Practice		Current Practice	
	Weight	Condition	Weight	Condition
23/10/2004				
Average	28	2.7	27.5	2.7
Minimum	19.4	2	17.7	2
Maximum	39.5	3.5	39	3.5
15/12/2004				
Average	34	3	33.3	2.8
Minimum	26.2	2	23.7	2
Maximum	43	4	44.5	3.5
14/01/2005				
Average	35.6	3.3	35.4	2.8
Minimum	25	2	26.6	2
Maximum	48.5	4.5	45.1	3.5
4/02/2005				
Average	37.9	3	36.1	2.7
Minimum	25.7	2	25.2	2
Maximum	48.5	4	45.1	3.5
22/05/2005				
Average	36	2	32.2	1.7
Minimum	27.1	1	21.5	1
Maximum	47	3.5	45	3

Table 7

Table 7 shows that throughout the trial the weights were similar for the two groups. Conditions scores were slightly lower in the current practice group than the best practice group throughout the trial. These were the youngest ewe lambs in the trial, the table shows at joining they were at the optimum condition score around 3 however there weights were lower than the optimum of 45-55kg. (Note that after scanning and the pregnant ewes were separated the rest of the stock were run as dry stock).

PROPERTY 4. – Kybybolite

Property 4.	Best Practice		Current Practice	
	Weight	Condition	Weight	Condition
21/11/2004				
Average	40.3	3	40.2	3.1
Minimum	31.5	2	32	2
Maximum	49.5	4	49	4
6/01/2005				
Average	43.3	3.1	43.2	3.1
Minimum	36.5	2	32.5	1.5
Maximum	54	4	51.5	4
5/05/2005				
Average	47.8	2.8	49	2.9
Minimum	38.5	1.5	37.5	2
Maximum	58	4	57.5	4
weaning 05				
Average	58.5	3.1	58	3.2
Minimum	44	1.5	42.5	1.5
Maximum	74	5	75	5
5/12/2005				
Average	61.4	3.6	60.9	3.5
Minimum	50.5	2	49	2
Maximum	77	5	79	5
1/04/2006				
Average	58.3	2.6	58.6	2.6
Minimum	46	1.5	48	1.5
Maximum	69	4	71	4

Table 8

The result in table 8 shows that throughout the trial the weights and condition scores of the two group were very similar.

Best Practice Pregnancy Scanning Results 2005

Count of Pregnancy Status			
Pregnancy Status	Total	Expected Lambs	75
Dry	26	% in lamb	71%
Multiple	11	% In Lamb with Singles	59%
Single	53	% In Lamb with Multiples	12%
Grand Total	90	% Dry	29%

Current Management Pregnancy Scanning Results 2005

Count of Pregnancy Status			
Pregnancy Status	Total	Expected Lambs	72
Dry	28	% in lamb	69%
Multiple	11	% In Lamb with Singles	56%
Single	50	% In Lamb with Multiples	12%
Grand Total	89	% Dry	31%

Best Practice Pregnancy Scanning Results 2006

Count of Pregnancy Status			
Pregnancy Status	Total	Expected Lambs	96
Dry	11	% in lamb	88%
Multiple	18	% In Lamb with Singles	67%
Single	60	% In Lamb with Multiples	20%
(blank)		% Dry	12%
Grand Total	89		

Current Management Pregnancy Scanning Results 2006

Count of Pregnancy Status			
Pregnancy Status	Total	Expected Lambs	99
Dry	8	% in lamb	91%
Multiple	20	% In Lamb with Singles	68%
Single	59	% In Lamb with Multiples	23%
(blank)		% Dry	9%
Grand Total	87		

Table 9

Table 9 shows in both years there are only very small differences between the two groups.

Comparison of 2005 & 2006 Scanning Results

Best Practice Group			Current Management Group		
Of those scanned dry in 2005 in 2006:					
No. Dry in 2005	26		No. Dry in 2005	28	
Conceived	21	81%	Conceived	25	89%
Conceived Single	16	76%	Conceived Single	17	61%
Conceived Multiple	5	19%	Conceived Multiple	8	29%
Dry	4	15%	Dry	3	11%
Of those scanned as conceiving singles in 2005 in 2006:					
No. Single in 2005	53		No. Single in 2005	50	
Conceived	47	89%	Conceived	46	92%
Conceived Single	38	72%	Conceived Single	38	76%
Conceived Multiple	9	17%	Conceived Multiple	8	16%
Dry	6	11%	Dry	3	6%
Of those scanned as conceiving multiples in 2005 in 2006:					
No. Multiple in 2005	11		No. Multiple in 2005	11	
Conceived	10	91%	Conceived	9	82%
Conceived Single	6	55%	Conceived Single	5	45%
Conceived Multiple	4	36%	Conceived Multiple	4	36%
Dry	1	9%	Dry	2	18%

Table 10

Table 10 results show that the percent of dries were lower in the best practice for those sheep that conceived as ewe lambs. In the current practice group there was a lower percentage of dries in the single group and a higher percentage of dries in the multiple group as compared to those scanned dry in 2005, this indicates that the early weaning in the best practice group may have assisted the multiple baring ewes regain condition to conceive again as 1.5 year olds.

The results also indicate generally there does not appear to be much of a disadvantage to the ewe in conceiving as a 1.5 year old if she conceived as a ewe lamb.