

# final report

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**Prepared by:** Penny Roberts

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SE of South Australia Sheep  
Supplement Trial Group

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## South East of South Australia Sheep Supplement Trial Group

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## **2004/S05 - South East of South Australia Sheep Supplement Trial Group**

### *Animal Health Supplements*

Deane Goode

PO Box 346

KINGSTON 5275 SA

**MUTTON**

**BUDGET \$15,000.00**

#### **Aim:**

The group wish to establish a series of objective trials using this newly developed product to provide the anticipated evidence to support the commercialisation of the product.

The aim of the project is to quantify the benefits of the developed mineral supplement in increasing the production of a range of sheep classes. In addition the economics of the use of this product will be evaluated to help determine the industry wide benefit or otherwise.

#### **Objectives:**

To increase lamb liveweights at least 10% through the use of the supplement.

To increase the fertility of ewes by 15% through the use of the supplement & therefore increase the amount of lambs being weaned.

To increase the Gross Margin of sheep enterprises through the use of the supplement and its production benefits.

To increase the value of wool in a ewe enterprise through the increasing of tensile strength and fleece weight with the use of the mineral supplement

To increase the weaning weight of lambs, through the treatment of the ewe and the lamb with the mineral supplement.

To quantify if the increase of production through the use of the mineral supplement is economically viable.

#### **Co-ordinator's Comments**

- |            |   |
|------------|---|
| 3/07/2006  | Very good FR shows clearly that the minerals supplements have not improved growth of either meat or wool and not influenced lambing rates. Much learning. Requested comments from members on the changes to management as a result of these outcomes. |
| 15/03/2006 | Project slowed last year but now on track with last lot of bloods and FEC to be done soon.  |
| 11/10/2005 | Second report shows dry conditions have halted 2 sites sowing but both will sow in early 2006. Two sites have sown in 2005. This delay means the project needs extension of time with FR now due 20th December 2006.                                  |
| 12/07/2005 | Very good trials but NO benefit from either supplements being fed, the private one and a proprietary one. Blood tests show normal ranges.   |

Most work done Final Report Guidelines after last group of wethers shorn in spring 2005.

- 15/03/2005 A very busy PIRD with lots of participation and measuring going on. Very good first report.
- 13/01/2005 Contract now finalized. Waiting on first report.
- 24/11/2004 Final details sent to MLA for Contract preparation.
- 3/11/2004 Penny Roberts will help Dean and group respond to PEC queries ASAP!!
- 16/09/2004 Requested response to PEC questions. Project work really begins in November so am confident of a start.

**2004/S05 - South East of South Australia Sheep Supplement Trial Group**  
*Animal Health Supplements*

**Subject:** Re: PIRD 2004/S05 - Final Report!

Gerald

Firstly I would like to thank you and Meat and Livestock Aust and Penny and Solly Business Services for the help in organising , running and funding the Animal Health Supplement Trial.

A huge thankyou is given to all of the trial participants who gave so freely of their time. Of course if it wasn't for them the trial would not have been able to be take place.

The conclusions I take from the results are that even though deficiencies of Trace Elements are often evident in stock from some trial participants and generally in the area, the Product was unable to conclusively show significant benefit.

There seemed to be little conclusive evidence of differing weight gain in the Trials.

The blood test results provided interesting information. Generally results are unpredictable, often DGAHS had higher levels of an element but then at the next test the unsupplemented Control group could have the highest level. Perhaps this is due to some elements being out of balance and in excess and therefore tying up others and therefore making them unavailable.

The results of the Faecal Egg Counts are not significantly different in the lamb trial. However in the wether trial DGAHS treated sheep almost invariably had the lowest egg counts. It would seem that the product had an effect on the worm population.

Interestingly aside from the trial on Property 5 worm numbers reduced significantly over the summer of 05/06 without the use of any worm drench.

Of particular interest was the Pregnancy Scanning results. In this trial there were not only more pregnancies but there also were more multiples scanned.

Summarising perhaps the participants of the trial had already been addressing their trace element deficiencies more than the general farmer, thus the results were not as marked as expected. As all country has different elements in the soil maybe we require different recipes for each area.

The trial has emphasised to me the need for more research and fine tuning of the product.

There is still so much left to learn.

Project Coordinator:  
Penny Roberts  
Solly Business Services  
172 Smith Street  
Naracoorte SA 5271

### Overview

- Project Commenced: November 2004
- Project Coordinator: Penny Roberts  
Role: to coordinate project activities, manage the finances of the project, compile data, write reports and assist where necessary.
- Property Locations:
  1. Carapook, Victoria
  2. Avenue Range, South Australia
  3. Avenue Range, South Australia
  4. Naracoorte, South Australia
  5. Telangatuk East, Victoria
- Colin Trengove's services were enlisted to assist in taking and providing feedback on the blood tests taken throughout the trial.

### Acknowledgements:

- Meat & Livestock Australia for providing PIRD support for the project
- Deane Goode for providing additional funding require to run the project
- Maximin for providing their supplement at no cost to the PIRD project
- Solly Business Services for providing a coordinating role for the project



Trial Participants at the Feedback information session – 27/06/2006

## **Increasing Prime Lamb and Wool production through Animal Health Supplements**

### **Project Aim**

The group set out to establish a series of objective trials using this newly developed product to provide the anticipated evidence to support the commercialisation of the product.

The aim of the project was to quantify the benefits of the developed mineral supplement in increasing the production of a range of sheep classes. In addition the economics of the use of this product will be evaluated to help determine the industry wide benefit or otherwise.

### **Project Methodology**

To determine the increase in growth rates of lambs & and the increase in wool quality of merino wethers, through the use of the mineral supplement. Three groups of sheep were used, each group comprising of 100 animals, two groups were each treated with the different mineral supplement and the other not treated with any mineral supplement.

#### **Prime Lamb Trial**

The prime lamb trial was replicated over three properties. Treatment was given to the two treatment groups every six weeks. One group received the newly developed product that was referred to as DGAHS, the second group received a commercially available product Maximin, while the third group received no treatment. In this trial the growth rate was measured, by weighting the lambs on a regular basis to track weight gain. Subjectively at the same time notes were taken on the physical outlook of the animals if there were any significant differences in appearance (eg. Incidence of flystrike, flaky ears, weepy eyes, flystrike).

In addition Faecal Egg Counts (FEC) were taken every time the sheep weights were taken. Blood tests were taken at the beginning and end of each trial as a way of assessing the health of the sheep.

#### **Wool Production Trial**

The wool production trial was replicated over two properties. The three groups received treatments (as described in the prime lamb trial) every 6 weeks. In this trial the growth rate of the wether lambs was measured by weighing the sheep on a regular basis throughout the trial. Subjectively at the same time notes were taken on the physical outlook of the animals if there were any significant differences in appearance (eg. Incidence of flystrike, flaky ears, weepy eyes, flystrike).

In addition Faecal Egg Counts (FEC) samples were taken every time the sheep weights were taken. Blood tests were taken at the beginning and end of each trial, as well as two other times during the trial, as a way of assessing the health of the sheep. The sheep were monitored and treated over a 12 month period.

To determine wool quality wool samples were taken from each sheep and tested for, Micron, Coefficient of Variation of Diameter, Curvature, Spinning Fineness, Standard

Deviation, Comfort Factor, Yield, Greasy Fleece Weight and Clean Fleece Weight. In addition a sub sample of 16 from each group had the additional tests of Staple Length, Staple Strength, and position of break.

### **Additional Ewe Production Trial**

The methodology was the same for the ewes as it was for the wethers in the Wool Production Trial. The ewes ran in the same mob for most of the trial as one of the wether trials, as such FEC's were taken as a representative of the entire mob and it was assumed the blood test results from the wethers would be similar for the ewes.

This trial was only run on one property.

To determine the increase in fertility ewes they were pregnancy scanned to ascertain the conception rates.

### **Summary of the Data**

(The tables of results can be found in the appendix)

### **Prime Lamb Trial**

The results of the prime lamb trial showed no conclusive significant difference in the three treatment group's weights.

The blood test taken did show some slight differences between groups for some of the elements tested, however none of these were significant and in all tests the levels were within recommendation.

There were no obvious trends in the Faecal Egg Counts for two of the properties. There was a notable difference on the final FEC's result for one of the properties, that the two treatment groups had lower worm numbers than the control. However they may have not been low enough to not require treatment and this was only seen on one of the four samples taken.

### **Wool Production Trial**

The results of the wool production trial showed no conclusive significant differences in the three treatments group's weights. There were some slight differences seen in the change in weights between measurements of the treatments compared to the control, however they were too low to be significant.

The blood samples taken showed no significant difference in any of the elements tested for any of the treatment groups. There were slight differences between some minerals for some groups, however none large enough to be significant. In all tests the elements were within recommendations with the exception of one test where the DGAHS treatment sheep were slightly higher than the Hi normal limit.

There were some notable differences on some of the FEC results, with some tests showing that the two treatment groups had lower worm counts than the control, however similar to the prime lamb trial they may not be low enough to not require treatment.

Wool tests showed some significant results for the wool quality measures, however only one of these was common to more than one property, making it difficult to draw any firm conclusions from these results. However the results indicate that some further work in this area maybe beneficial.

## **Ewe Production Trial**

The results from pregnancy scanning show that there were differences in conception rates of the three treatments. The two treatment groups had lower percentages of dries than the control. They also have some (note very few) multiples compared with the control that had no ewes conceiving multiples. It is important to note that no conclusions can be drawn from these results as there was only one trial run. It would however suggest further investigation with greater replication and tighter control on variables would be of some benefit.

## **Overall Summary**

There were slight differences noted in the data in the FEC results and the wool measurement. In addition there were differences in conception rates in the one mob of pregnancy scanned ewes. However the sample sizes involved in all of these results were far too small to draw any conclusions. They were also not the focus measurements of the trial so there maybe variables that were not controlled properly influencing the results. I would recommend that further work be done focusing on these areas of FEC, wool and conception rates to validate the results in these trials.



## **The Groups Response to the outcomes and running of the MLA PIRD**

### **What did the Group learn by doing the trials? And how would the members sum up their experiences in doing the MLA PIRD project?**

The group was surprised by the lack of variation in the results, they expected to see some conclusive results in favor of using the products. However were happy that the work was completed and that there were things that could be drawn out of the results. They were happy with having the data generated of the trial and believe this had been of benefit to them. The group also learnt about the logistics of being involved in on farm trials, in terms of an increase in workload due to the higher amount of times the animals were handled and also have to access the equipment required to do the work. To one producer the trial really highlighted that there is no easy solution that will bring around a large return on investment. The group commented that the organization of the PIRD was excellent, and that it as good to always know when the next lot of measurement or treatments were due (they all were provided with a running sheet of dates).

### **Was the Group satisfied with the results of the project?**

The group was satisfied with the results. It validated that there current management, in some cases (not treating) was ok. They would have liked to see different results, ones with some results in the affirmation of mineral supplementation, however were happy that it had been carried out properly.

### **How could you have done the project better?**

The group felt that the project would have been better if there had been more interaction between the people involved in the trial and also with industry experts. They also felt that having a field day would have made the project better.

### **Is the group interested in doing another project?**

The group was somewhat divided on this question, some members would be interested in doing anther project in the future and others were not interested in doing another project in the area of livestock.

### **Would you recommend other Groups run their own trials?**

The group would recommend that other groups run their own trials if they have a particular issue they are interested in finding out more about.

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

Making sure the people involved are aware of the logistical issues that they are going to have to address. Such as increase in stock handling, having small mobs and having to organize equipment to do measurements like scales.

## Appendix - TRIAL RESULTS

### PRIME LAMB TRIAL

#### WEIGHTS RESULTS

##### Property 1.

Average Group Weight (kg)	Control	Maximin	DGAHS	Variation
Measurement 1 – 25/11/04	40.8	41.5	41	0.7
Measurement 2 – 07/01/05	44.6	44.3	44	0.6
Measurement 3 – 12/02/05	44	42.7	42.8	1.3

Change in weights between 1&2	3.8	2.8	3	1
Change in weights between 2&3	-0.6	-1.6	-1.2	-1

##### Property 2.

Average Group Weight (kg)	Control	Maximin	DGAHS	Variation
Measurement 1 – 21/12/04	23.9	23.8	24.9	1
Measurement 2 – 07/02/05	30.6	30.7	31.3	0.7
Measurement 3 – 22/03/05	34.2	34.4	34.7	0.5
Measurement 4 – 09/05/05	35.9	35.6	37.2	1.6

Change in weights between 1&2	6.7	6.9	6.4	0.5
Change in weights between 2&3	3.6	3.7	3.4	0.3
Change in weights between 3&4	1.7	1.2	2.5	1.3

##### Property 3.

Average Group Weight (kg)	Control	Maximin	DGAHS	Variation
Measurement 1 – 25/11/04	37	36.6	36.2	0.8
Measurement 2 – 31/12/04	44.2	43.8	43.5	0.7
Measurement 3 – 07/02/05	52.5	52.1	51.6	0.9
Measurement 4 – 22/03/05	56.1	56.3	56.7	0.6

Change in weights between 1&2	7.2	7.2	7.3	0.1
Change in weights between 2&3	8.3	8.3	8.1	0.2
Change in weights between 3&4	3.6	4.2	5.1	1.5

## Statistical Analysis of Lamb Weights

### PRIME LAMB WEIGHTS

Property 1.	<i>P-value</i>
Measurement 1	0.522
Measurement 2	0.622
Measurement 3	<b>0.049</b>

Property 2.	<i>P-value</i>
Measurement 1	0.175
Measurement 2	0.579
Measurement 3	0.835
Measurement 4	0.061

Property 3.	<i>P-value</i>
Measurement 1	0.552
Measurement 2	0.628
Measurement 3	0.511
Measurement 4	0.771

The table above shows that the only statistically significant result is for one of the measurements on Property 1. As there is no other statistically significant results for this trial it is difficult to draw anything from this one result.

## BLOOD TEST RESULTS

Notes:

Normals – used for the comparison of the blood samples taken

	Selenium	Copper	Zinc	Colbalt (B12)	Calcium
Low normal	50	9	7	400	2.12
Hi normal	550	25	25	5000	2.87
Units	U / gHb	umol / L	umol / L	pmol / L	mmol / L

The comments are those provided by Colin Trengove

### Property 1.

1st	Selenium	Copper	Zinc	Colbalt (B12)
Control	613	16.2	18.9	2008
Maximin	594	18.5	19.7	2532
DGAHS	617	15.3	19.1	2220

2nd	Selenium	Copper	Zinc	Colbalt (B12)
Control	308	16.9	20.1	1820
Maximin	399	17.3	14.5	1537
DGAHS	370	16.9	14.9	1963

Comments:

- No obvious trends apparent

### Property 2.

1st	Selenium	Copper	Zinc	Colbalt (B12)
Control	447	15	13.1	1747
Maximin	448	16.3	13.4	2093
DGAHS	439	15.8	13.1	1993

Comments:

- Normal selenium, copper, zinc & B12 in all groups

2nd	Selenium	Copper	Zinc	Colbalt (B12)
Control	366	17.2	13.7	2727
Maximin	343	18.8	14.1	1049
DGAHS	363	17.2	14.7	1348

Comments:

- Only appreciable difference is Control Group with much higher B12 (Colbalt), also the DGAHS is higher in B12 compared to the Maximin Group
- All other trace elements are similar for each group and in adequate range

### Property 3.

1st	Selenium	Copper	Zinc	Colbalt (B12)
Control	45	15.3	16.4	3492
Maximin	48	14.9	16.1	3695
DGAHS	45	15.7	15	3659

#### Comments:

- As expected bulk results similar for all three groups
- Lambs are Selenium deficient
- Copper & Zinc are normal
- Vit B12 are relatively high – normally associated with recent treatment

2nd	Selenium	Copper	Zinc	Colbalt (B12)
Control	314	15.1	16.5	2110
Maximin	360	14.7	16.9	2120
DGAHS	423	14.3	15.9	2422

#### Comments:

- Adequate Se, Cu, Zn & B12 in all three groups
- Only noticeable difference is slightly higher Se & B12 in the DGAHS group

## FEC'S RESULTS

### Property 1.

	Trich/Ost	Chab/Oes	Nematodirus	Trichuris	Monesia	Suspect BP	Last Drenched	Drench Used	Scouring (%)
30/11/2004									
Control	~	~	~	~	~	~	11/11/2004	Cydectin	0
Maximin	~	~	~	~	~	~	11/11/2004	Cydectin	0
DGAHS	~	~	~	~	~	~	11/11/2004	Cydectin	0
7/01/2005									
Control	60	~	10	~	~	~	11/11/2004	Cydectin	1
Maximin	60	~	20	~	~	~	11/11/2004	Cydectin	1
DGAHS	100	~	~	~	~	~	11/11/2004	Cydectin	1
12/02/2005									
Control	110	~	20	~	~	~	11/11/2004	Cydectin	0
Maximin	70	~	30	~	~	~	11/11/2004	Cydectin	0
DGAHS	100	~	~	~	~	~	11/11/2004	Cydectin	0

Property 2.

	Trich/Ost	Chab/Oes	Nematodirus	Trichuris	Monesia	Suspect BP	Last Drenched	Drench Used	Scouring (%)
21/12/2004 (control eggs lavating)									
Control	130	~	~	~	~	~	~		0
Maximin	60	~	~	~	~	~	~		0
DGAHS	110	~	~	~	~	~	~		0
7/02/2005									
Control	108	~	10	~	+	~	23/12/2004	Ivamec	0
Maximin	200	~	~	~	~	~	23/12/2004	Ivamec	0
DGAHS	170	~	~	~	~	~	23/12/2004	Ivamec	0
23/03/2005									
Control	240	20	30	~	~ + ~	~	23/12/2004	Ivamec	0
Maximin	280	20	50	~	+	~	23/12/2004	Ivamec	0
DGAHS	150	30	90	~	+	~	23/12/2004	Ivamec	0
9/05/2005									
Control	140	70	30	~	+	~	23/12/2004	Ivamec	1
Maximin	70	110	30	~	+	~	23/12/2004	Ivamec	1
DGAHS	230	110	20	~	+	~	23/12/2004	Ivamec	1

Property 3.

	Trich/Ost	Chab/Oes	Nematodirus	Trichuris	Monesia	Suspect BP	Last Drenched	Drench Used	Scouring (%)
15/11/2004									
Control	410	110	10	~	~	~	Aug 04	Cydectin	5
Maximin	410	90	30	~	~	~	Aug 04	Cydectin	5
DGAHS	530	40	10	~	~	~	Aug 04	Cydectin	5
31/12/2004									
Control	20	~	~	~	~	~	15/11/2004	Cydectin	0
Maximin	~	~	~	~	~	~	week start 6/12/04	Cydectin	0
DGAHS	40	~	~	~	~	~	week start 6/12/05	Cydectin	0
7/02/2005									
Control	20	~	10	~	~	~	15/11/2004	Cydectin	1
Maximin	40	~	~	~	~	~	week start 6/12/04	Cydectin	1
DGAHS	60	~	~	~	~	~	week start 6/12/05	Cydectin	1
22/03/2005									
Control	170	50	20	~	~	~	15/11/2004	Cydectin	0
Maximin	50	~	20	~	~	~	week start 6/12/04	Cydectin	0
DGAHS	90	~	10	~	~	~	week start 6/12/05	Cydectin	0



## WETHER TRIAL

### WEIGHTS RESULTS

#### Property 4.

Average Group Weight (kg)	Control	Maximin	DGAHS	Variation
Measurement 1 - 14/12/04	28.2	28.6	28.9	0.7
Measurement 2 - 09/03/05	27.1	26.8	26.7	0.4
Measurement 3 - 31/05/05	26.1	26.7	25.6	1.1
Measurement 4 - 30/08/05	27.7	27.3	25.8	1.9
Measurement 5 - 05/11/05	41.9	42.4	42.3	0.5
Change in weights between 1&2	-1.1	-1.8	-2.2	-1.1
Change in weights between 2&3	-1.0	-0.1	-1.1	-1.0
Change in weights between 3&4	1.6	0.6	0.2	1.4
Change in weights between 4&5	14.2	15.1	16.5	2.3

#### Property 5. - Wethers

Average Group Weight (kg)	Control	Maximin	DGAHS	Variation
Measurement 1 - 16/12/04	18.6	17.9	17.9	0.7
Measurement 2 - 15/03/05	24.7	24.6	23.9	0.8
Measurement 3 - 02/06/05	30.3	30.5	30.0	0.5
Measurement 4 - 23/08/05	28.4	29.0	28.2	0.8
Measurement 5 - 02/03/06	34.1	33.8	33.4	0.7
Change in weights between 1&2	6.1	6.7	6.0	0.7
Change in weights between 2&3	5.6	5.9	6.1	0.5
Change in weights between 3&4	-1.9	-1.5	-1.8	-0.4
Change in weights between 4&5	5.7	4.8	5.2	0.9

## Statistical Analysis of Wether Weights

### WETHER WEIGHTS

Property 4.	<i>P-value</i>
Measurement 1	0.432
Measurement 2	0.799
Measurement 3	0.223
Measurement 4	<b>0.006</b>
Measurement 5	0.864

Property 5.	<i>P-value</i>
Measurement 1	0.125
Measurement 2	0.300
Measurement 3	0.772
Measurement 4	0.435
Measurement 5	0.466

This table shows that the only statistically significant result is for one of the measurements on Property 4, the next measurement there was not statistically significant. As there is no other statistically significant results for this trial it is difficult to draw anything from this one result.

## BLOOD TEST RESULTS

Notes:

Normals – used for the comparison of the blood samples taken

	Selenium	Copper	Zinc	Colbalt (B12)	Calcium
Low normal	50	9	7	400	2.12
Hi normal	550	25	25	5000	2.87
Units	U / gHb	umol / L	umol / L	pmol / L	mmol / L

The comments are those provided by Colin Trengove

### Property 4.

1st	Selenium	Copper	Zinc	Colbalt (B12)
Control	336	21.1	12.1	3321
Maximin	384	24.7	11.9	3237
DGAHS	328	18.8	12.8	3392

Comments:

- No evidence of trace element deficiency in these lambs for the 4 minerals tested apart from marginal zinc
- B12 levels are high suggesting recent supplementation
- Copper & Selenium also good to relatively high

2nd	Selenium	Copper	Zinc	Colbalt (B12)
Control	346	16.9	8.9	2412
Maximin	375	15.1	8.8	1775
DGAHS	419	15.1	8.8	2096

Comments:

- All groups are normal for Selenium, Copper, Zinc and Colbalt levels
- No appreciable difference between groups in Zinc and Copper
- Interesting that control group has highest B12 which appears significantly different from Maximin group
- Questionable difference between groups in Selenium levels

3rd	Selenium	Copper	Zinc	Colbalt (B12)
Control	482	18.7	15	1905
Maximin	504	17.5	15.8	2194

DGAHS	594	20.3	15.1	2038
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Comments:

- All results in normal range
- Slightly higher Selenium and Copper for DGAHS but not a significant difference
- Trace elements certainly not limiting

4th	Selenium	Copper	Zinc	Colbalt (B12)
Control	548	14.4	15.1	2338
Maximin	533	14.4	13.9	2335
DGAHS	485	16.1	14	2038

Property 5.

1st	Selenium	Copper	Zinc	Colbalt (B12)	Calcium
Control	246	23.5	14.7	3932	2.42
Maximin	187	22.2	15.6	3889	2.47
DGAHS	224	20.1	17.9	3924	2.58

Comments:

- Normal Selenium, Copper, Zinc, Calcium and Colbalt for all 3 groups
- Relatively high B12 indicating remnant response to B12 supplementation usually
- Copper also relatively high

2nd	Selenium	Copper	Zinc	Colbalt (B12)
Control	337	14.9	12.6	1535
Maximin	481	15.4	12.9	1466
DGAHS	513	14.9	13.5	1966

Comments:

- All groups in normal range for all 4 trace elements
- All groups similar for copper & zinc
- DGAHS slightly higher B12 & Selenium than the other two groups

3rd	Selenium	Copper	Zinc	Colbalt (B12)
Control	162	15.1	13	2058
Maximin	228	15.5	13.9	1718
DGAHS	249	14	14.4	1650

Comments:

- No appreciable deficiencies or differences in lambs except the Control lambs are marginal for selenium & slightly higher for B12, neither likely to be significant though

4th	Selenium	Copper	Zinc	Colbalt (B12)
Control	148	15.3	12.9	3698
Maximin	189	15.7	13.4	3769
DGAHS	226	14.9	14	3825

Comments:

- All in the adequate range although selenium preferably >200
- No significant differences apparent between the 3 groups although Control are slightly lower for selenium and zinc

FEC'S RESULTS

Property 4.

	Trich/Ost	Chab/Oes	Nematodirus	Trichuris	Monesia	Suspect BP	Last Drenched	Drench Used	Scouring (%)
14/12/2004									
Control	~	~	~	~	~	~	4/12/2004	Triton	2 - 3
Maxi	30	~	~	~	~	~	4/12/2004	Triton	2 - 3
DGAHS	~	~	~	~	~	~	4/12/2004	Triton	2 - 3
9/03/2005									
Control	60	20	10	~	~	~	4/12/2004	Triton	0
Maxi	30	~	10	~	~	~	4/12/2004	Triton	0
DGAHS	20	20	10	~	~	~	4/12/2004	Triton	0
31/05/2005									
Control	20	~	10	~	~	~	4/12/2004	Triton	0
Maxi	10	~	~	~	~	~	4/12/2004	Triton	0
DGAHS	20	~	~	~	~	~	4/12/2004	Triton	0
30/08/2005									
Control	710	nil	20	~	~	~	4/12/2004	Triton	10
Maxi	430	30	30	~	~	~	4/12/2004	Triton	10
DGAHS	500	10	20	~	~	~	4/12/2004	Triton	10
15/11/2005									
Control	400	20	nil	~	~	~	15/10/2005	Triton	0
Maxi	170	10	nil	~	~	~	15/10/2005	Triton	0
DGAHS	110	nil	nil	~	~	~	15/10/2005	Triton	0

Property 5.

	Trich/Ost	Chab/Oes	Nematodirus	Trichuris	Monesia	Suspect BP	Last Drenched	Drench Used	Scouring (%)
16/12/2004									
Control	10	~	~	~	~	~	10/12/2004	Ramatin/Combi	0
Maxi	~	~	~	~	~	~	10/12/2004	Ramatin/Combi	0
DGAHS	~	~	~	~	~	~	10/12/2004	Ramatin/Combi	0
15/03/2005									
Control	40	20	30	~	~	~	10/12/2004	Ramatin/Combi	0
Maxi	30	10	20	~	~	~	10/12/2004	Ramatin/Combi	0
DGAHS	80	~	40	~	~	~	10/12/2004	Ramatin/Combi	0
2/06/2005									
Control	20	~	~	~	~	~	10/12/2004	Ramatin/Combi	0
Maxi	30	~	~	~	~	~	10/12/2004	Ramatin/Combi	0
DGAHS	50	~	~	~	~	~	10/12/2004	Ramatin/Combi	0
9/09/2005									
Control	1090	~	80	~	~	~	10/12/2004	Ramatin/Combi	0
Maxi	1240	~	90	~	~	~	10/12/2004	Ramatin/Combi	0
DGAHS	700	~	70	~	~	~	10/12/2004	Ramatin/Combi	0
23/11/2005									
Control	340	~	30	~	~	~	22/09/2005	Combo	50
Maxi	290	~	40	~	~	~	22/09/2005	Combo	50
DGAHS	160	~	30	~	~	~	22/09/2005	Combo	50
3/03/2006									
Control	30	20	10	~	~	~	22/09/2005	Combo	0
Maxi	60	nil	20	~	~	~	22/09/2005	Combo	0
DGAHS	30	nil	10	~	~	~	22/09/2005	Combo	0

## WOOL RESULTS

### Property 4.

	Micron	S.D.	C.V.	Spin F	Curv'	C.F.%	YLD%	G.F.W.	C.F.W.
Control	17.27	3.80	22.03	16.97	106.81	99.37	70.15	3.35	2.36
Maximin	16.93	3.70	21.82	16.62	109.15	99.51	71.21	3.38	2.41
DGAHS	16.59	3.60	21.73	16.27	107.11	99.56	70.15	3.39	2.39

	SL	SS	Break		
			Tip	Mid	Base
Control	87	15	59	36	5
Maximin	84	14	74	24	2
DGAHS	88	16	80	16	4

### Property 5.

	Micron	S.D.	C.V.	Spin F	Curv'	C.F.%	YLD%	G.F.W.	C.F.W.
Control	15.87	3.20	20.20	15.35	115.32	99.65	74.62	4.06	3.03
Maximin	16.27	3.21	19.71	15.68	112.45	99.56	75.41	4.25	3.21
DGAHS	16.76	3.58	21.32	16.39	108.88	99.50	71.73	3.59	2.59

	SL	SS	Break		
			Tip	Mid	Base
Control	85	15	1	97	2
Maximin	91	17	16	78	6
DGAHS	92	16	6	88	6



## **EWE TRIAL (only ewe trial site on Property 5.)**

### WEIGHT RESULTS

#### Property 5.

Average Group Weight (kg)	Control	Maximin	DGAHS	Variation
Measurement 1 – 16/12/04	18.1	17.7	17.6	0.5
Measurement 2 – 15/03/05	24.7	24.1	23.8	0.9
Measurement 3 – 02/06/05	29.7	29.4	29.0	0.7
Measurement 4 – 23/08/05	27.6	27.4	27.1	0.5
Measurement 5 – 02/03/06	32.0	32.5	32.2	0.5

Change in weights between 1&2	6.6	6.4	6.2	0.4
Change in weights between 2&3	5.0	5.3	5.2	0.3
Change in weights between 3&4	-2.1	-2.0	-1.9	-0.2
Change in weights between 4&5	4.4	5.1	5.1	0.7

## WOOL RESULTS

### Property 5.

	Micron	S.D.	C.V.	Spin F	Curv'	C.F.%	YLD%	G.F.W.	C.F.W.
Control	16.21	3.23	19.95	15.65	115.41	99.62	74.91	4.09	3.06
Maximin	16.41	3.15	19.26	15.75	115.73	99.69	73.91	4.23	3.14
DGAHS	16.26	3.19	19.64	15.67	112.89	99.63	73.43	4.19	3.08

## PREGNANCY SCANNING RESULTS

### Property 5.

	DGAHS - Blue Tags			Maximin - White Tags			Control - Black Tags		
	Singles	Multiples	Drys	Singles	Multiples	Drys	Singles	Multiples	Drys
	19	1	7	19	0	10	18	0	8
	38	2	25	31	2	23	33	0	34
Totals	57	3	32	50	2	33	51	0	42
As a percentage	62%	3%	35%	59%	2%	39%	55%	0%	45%
	Total	92		Total	85		Total	93	

## Statistical Analysis of Wool Results

### WETHER WOOL MEASUREMENTS

Property 4.	
Measurement	<i>P-value</i>
SL	0.509
SS	0.573
Tip	0.136
Mid	0.244
Base	0.261
Yield	0.949
GFW	0.481
CFW	0.929
Diameter	<b>0.001</b>
SD	0.102
CV	0.923
Comfort Factor	<b>0.003</b>
Spinning Fineness	<b>0.001</b>

Property 5.	
Measurement	<i>P-value</i>
SL	0.103
SS	0.423
Tip	0.066
Mid	<b>0.036</b>
Base	0.310
Yield	0.366
GFW	<b>0.047</b>
CFW	<b>0.046</b>
Diameter	0.094
SD	0.437
CV	0.268
Comfort Factor	<b>0.020</b>
Spinning Fineness	0.146

### EWE WOOL MEASUREMENTS

Property 5.	
Measurement	<i>P-value</i>
Yield	0.157
GFW	0.282
CFW	0.627
Diameter	0.342
SD	0.382
CV	0.141
Comfort Factor	0.109
Spinning Fineness	0.721

The statistical analysis of the wool results shows a few statistically significant results, however the only one which is common to the two properties tested was comfort factor. Due to the low number of replications it is difficult to draw any conclusions from this data.