

*The Cicerone Project Inc.*

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## **NEWSLETTER No 28**

April 2004

Wool Week's  
**Research and Technology Day**  
to be held on  
**Tuesday 4<sup>th</sup> May**  
from 9.00am to 4.00pm at the  
**Liaison Centre at CSIRO, Chiswick**

**"Productivity gains through precision management"**

by the Sheep CRC

who will also have a demonstration of their walk through weighing platform

**"AllStock's e-Stock service"**

Sam Gill, AllStock

**"Flock selection using electronic data collection, analysis and drafting"** Hugh  
Beattie, Practical Systems

**"MLA - investing in today's R&D for tomorrow's sheep producers"** Alex  
Ball, MLA

**"The genetics of wool shrinkage"**

Sally Barton, CSIRO

**"Dark and medulated fibre risk program"**

Ross McEwan, AWI

**Farm Walk to see The Cicerone Project Farmlets**

and look at some of their results from the farmlets and see the three different input and grazing management systems under comparison.

Entry fee **\$20** to cover the cost of morning tea and BBQ lunch

**To help with catering numbers please advise if you are coming  
(Ring 6778 3871 by Friday, 30 April)**

## OFF SHEARS TRIALS ---- THE STATS

### The farmlets ARE statistically different

The Off-shears trials were set up to see if it was possible to give sheep some protection against the effects of bad weather in the first weeks after shearing.

The first trial was at the 2001 shearing. Two hundred dry ewes from a cull mob were used in this trial. They had grazed on the farmlets from July 2000 until culling in January 2001. All sheep were shorn with a standard comb. The three treatments compared were the control, wetting with water or rugging the sheep for a period of 7 weeks. Weight changes were measured and used as an indicator of the effect of cold/wet stress.

This is particularly interesting as the sheep used in this trial had been culled in January 2001 and grazed off the farmlets, on the periphery, for the 7 months until shearing and during the 7 weeks of this trial. (Details of this trial were reported in Newsletter 15, page 5.)

In 2002 the second 'off-shears' trial began. This year we used a mob of 355 animals, which had been run on the farmlets from July 2000 to February 2002 when they were culled to the periphery. The mob was made up of older ewes, young ewes and wethers, with each type being allocated evenly between the four treatments. This year the treatments were control, rugging, and wetting the sheep, (all shorn with a standard comb) and the fourth group were shorn with a snow/winter comb. Average weight changes indicated that rugging and snow combs were both of some benefit in this dry year but subsequent statistical analysis of the data indicates only that wetting was of significant disadvantage and *there was significant difference in the weights between the three farmlets.*

This is also interesting because, as with the previous year, the sheep had been grazed off the farmlets and in the periphery paddocks for so long. (Details of this trial were reported in Newsletter 24, page 1.)

The animals used in the 2003 trial were one hundred and thirty five 2001 drop wethers

Weight changes indicated that wetting the sheep was contra-indicated and that well fitting rugs were of benefit. However a more recent statistical analysis of the data indicates that there was no significant difference found between the treatments *but there was significant difference in the weights between the three farmlets.*

which had grazed on their respective farmlets all their lives. This year they remained on their farmlets after shearing. The treatments in the 2003 trial were control (standard comb), snow combs, standard combs plus rugs, snow combs plus rugs and standard comb plus a new product, a type of 'water-proofing skin' sprayed onto the animals as they left the boards.

The average weight changes suggested that snow combs plus rugs was very marginally the most beneficial treatment. However the statistical analysis of data indicates that again there was no significant difference between the treatments *but there was significant difference in the weights between the three farmlets.*

**Thus it seems that the difference between the nutrition and management of the three farmlets, even 6 months previously, has had a greater influence on the animal's subsequent performance in these trials [in three dry years] than the specific off-shears treatments, showing the effect of management on life time performance.**

The Cicerone Project is very grateful to Libuseng Shakhane for assistance with the statistical analyses.

## FARM REPORTS

Here are some highlights from the farm reports from September 2003 to March 2004.

- **Farm A** (High input, 8 paddocks)

### Stock movements prior to lambing

Farmlet A ewes were moved in accordance with the recommendations of the Pasture Assessment group run by NSW Agriculture who met monthly from May to September. The twin bearing ewes lambed in A8. The singles grazed A7, their intended lambing paddock, from the end of July, i.e. for a number of weeks prior to lambing due to shortage of available paddocks, but at the point of lambing it became obvious that they were running out of feed and they were moved to A2, to the detriment of the new pasture there.

### Lambing Performance in the A ewes.

Despite using pasture assessments and having the A ewes in the benchmarked fat score targets for lambing, the overall lambing performance was not good. This was particularly obvious in the twin bearers, which made up nearly 50% of the total on A farmlet.

Why was this? Some contributing factors to losses were:

- The twinners were run at a high stocking rate of 38 dse/ha, in a paddock, which afforded no protection for new born lambs and no privacy for lambing ewes. Unfortunately paddock choice was restricted as a number of paddocks were not available for grazing as they are newly sown or in preparation for sowing. In hindsight, after moving the singles from A7 we could have afforded more privacy to the twinners by opening the gate between A7 and A8. However, this would have gone against the reason why the single bearers were moved out of this paddock
- Weather conditions were bad for 3 to 4 days at the peak of lambing. We had a week of cold wet weather, with temperatures around 7 degrees and 80 mm of rain in four days. These conditions have not been experienced before during lambing on the Cicerone farms. These conditions would have affected all farms equally.

2003 Marking weights and numbers					Twins		Twins		Singles		Singles	
	No Ewes	No Lambs	Av wt	%	Ewes	Lambs	Wt	%	Ewes	Lambs	Wt	%
A farm	251	207	19.4	82	123	120	17.5	97	128	87	22.0	68

A5 & A6 were the 2004 weaning paddocks on farm A as they are new pastures giving high digestibility, high growth rates and hopefully low worm burdens. The 2003 drop had zero egg counts 38 days after their Weanerguard, but by 69 days post treatment counts averaged 250 with 10% at 4,300 and they were given a levamisole 79 days after their weaning treatment. Not as high as B lambs but still warranting a treatment.

At weaning 54 over fat ewes were put in A3 with the wethers to take a bit of weight off them and to allow the 186 poorer ewes access to more feed in A8 to reach good joining fat scores. All the ewes were boxed again in early March on A2. The five steers are running separately to the sixteen heifers on to avoid problems associated with cycling. The 2003 drop lambs (140) and cattle were grazing the new pasture in A5. In January A2 and A 5 have been given an application of Green graze to help the fescue to out compete the Yorkshire fog. Once recovered these paddocks will be grazed at a higher stock density for a shorter period to try to achieve a more even graze. By early April the ewes and heifers were grazing A3, the 2003 drop and steers were moved from A5 to A4, the 02drop ewes were in A7 and the 01 wethers in A8. The farm is running 12dse/ha

2003 drop wts	Nov 03	Dec 03	Jan 04	Feb 04	Mar 04
A average	19.4 kg	19.9 kg	22.2 kg	25.3 kg	26.4 kg

- **Farm B (Lower input, 8 Paddocks)**

**Stock movements prior to lambing**

Farmlet B ewes had minimal movements and the singles lambed in B5 and the twin bearers in B3. These paddocks were selected as they were considered to have low pasture contamination, away from surface water and afforded protection for lambs with tall poa tussock.

2003 Marking weights and numbers	Twins		Twins		Singles		Singles					
	No Ewes	No Lambs	Av wt	%	Ewes	Lambs	Wt	%				
B farm	134	125	18	93	31	48	17.4	156	103	77	18.2	76

B1 was grazed with the four heifers to prepare it as a low worm pasture for weaning the 2003 lambs, but with insufficient cattle the pasture was too long for lambs. Consequently they were weaned into B7 which may have been carrying more worm larvae than B1, but contained ideally short green *Microlaena* and produced good growth rates. Seventy one days after their weaning treatment of Weanerguard the 2003 drop had very high counts, were showing signs of barber's pole worms and were treated with a levamisole on the 2<sup>nd</sup> of March.

Mobs are not moving regularly and are at low stock densities allowing a high level of selective grazing increasing the individual stock performance. The fourteen heifer are run separately from the four steers to avoid bulling. The 132 ewes have been in B2 since the singles lambed there. The 45 wethers (2001 drop) have been in B4 and 41 young ewes (2002 drop) in B8 since November. The last move for other stock was made in the first week of March when the 2003 drop lambs were placed in B1, the 4 steers into B3, 14 heifers into B5. We are preparing B6 for sowing and B7 is being rested having last been grazed to the first week of March. The farm is running at 8.7 dse/ha

2003 drop wts	Nov 03	Dec 03	Jan 04	Feb 04	Mar 04
B average	18.0 kg	19.5 kg	23.5 kg	25.6 kg	27.3 kg

- **Farm C (Lower input, 33 paddocks)**

**Stock movements prior to lambing**

Farm C ewes were split into two mobs of similar size and set-stocked for the first three weeks of lambing, after which the two mobs came together and were rotationally grazed with gates opened to allow them to drift into adjacent paddocks. The twin bearers and single were run together due to the low % of twin bearing ewes. This has worked better than our previous management regime where ewes were moved earlier in their lambing cycle.

2003 Marking weights and numbers				
	No Ewes	No Lambs	Av wt	%
C farm	129	100	16.8	78

C is currently running a split leader-follower arrangement with the cattle about 10 paddocks ahead of the sheep, allowing longer rest between sheep grazings. The 2003 lambs are one paddock in front of the main mob (which consists of the ewes, 2002 maidens and the 2001 wethers in a single mob) giving them a good selection of pasture. This is difficult to manage, as the paddocks do not have the same carrying capacity, so some paddocks are over or under grazed. Their movement varies from one to four days giving rest from 30 to 50 days at present.

Worm control on C is far superior to A or B. The 2003 drop have still not received a drench since weaning, that is 101 days after Weanerguard and counts on the 30<sup>th</sup> of March were on average 520 epg with a range of 0 to 950. They will need a levamisole in the near future.

The new grazing regime has thus provided better conditions for the lambs to grow and still maintain improved worm control compared to set-stocking although we will need to address the reasons why they have started to drop behind the A and B lambs.

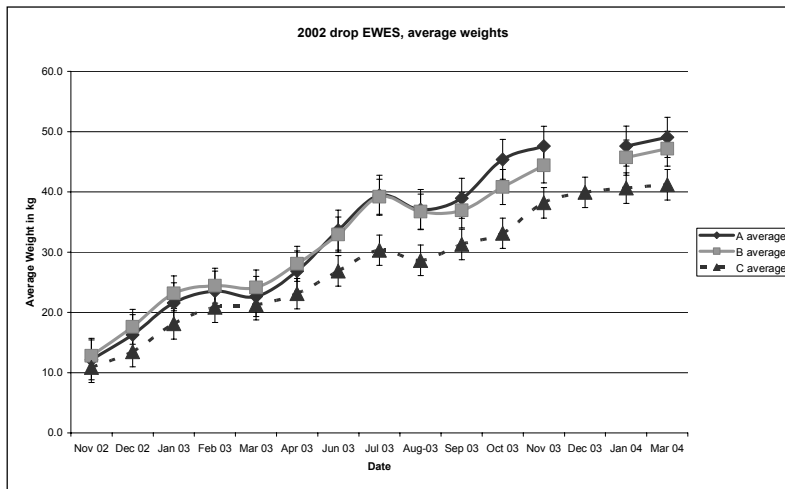
The C farm is running 8.3 dse/ha

2003 drop wts	Nov 03	Dec 03	Jan 04	Feb 04	Mar 04
C average	16.8 kg	21.5 kg	22.4 kg	24.2 kg	24.8 kg

At weaning we sold wether lambs to CSIRO for their trials, leaving us with 140 on A, 90 on B and 75 on C, mostly ewes.

- **Graphs showing the average weights of some sheep**

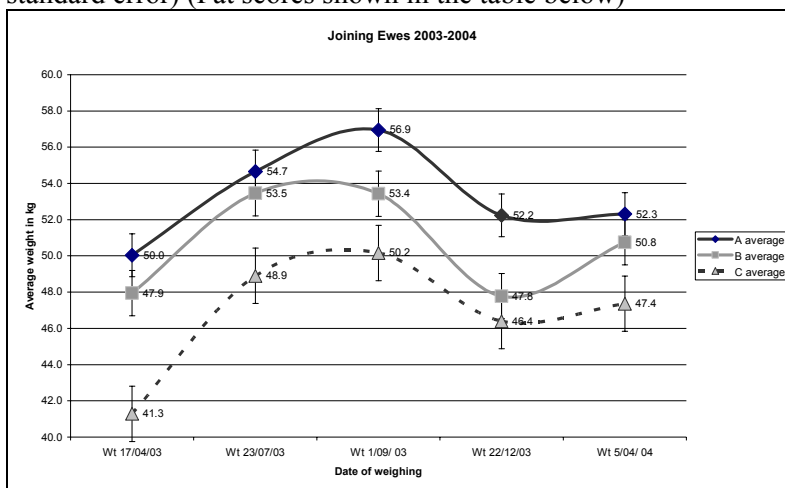
Figure 1 Average weight of 2002 drop ewes (showing standard error)



Only the ewe lambs are shown here as the wethers were sold at weaning to CSIRO for their trials. These ewes will be added to the ewe flock for their first joining this season. As can be seen from Figure 1, their joining weights will be an average of 49kg for Farm A (Fat score 3.6), 47.2 kg for Farm B (Fat Score 3.4) and 41.2 kg for Farm C (Fat score 2.8).

The rams are all from the same bloodlines and all ewes and all rams will be run together on the farmlets periphery for joining.. This helps to ensure that the influence of the ram genetics is as even as possible over the three farmlets.

Figure 2 Average weights of the breeding ewes from joining in 2003 to joining in 2004 (showing standard error) (Fat scores shown in the table below)



	FS Apr 03	FS Sept 03	FS Dec03	FS 5 Apr 04
<b>A average</b>	3.4	3.1	2.5	3.2
<b>B average</b>	3.2	3.2	2.6	3.0
<b>C average</b>	2.9	2.6	2.5	2.8

All the tables and graphs shown are using average weights of the mobs. We will be subjecting them to statistical analysis in the near future. However it is interesting that the figures from the Off-shears trials in the previous article have been subject to statistical analysis and the weight differences found between the farmlets is significant.

- **Animal health issues**

**Worm Control - Differences Between Farms**

Current figures confirm the findings in previous years and reported in past editions.

As already noted the C farm weaners were showing, to the 30th March, superior barber's pole control compared to A or B.

The 2001 drop wethers on A and B needed treating in March, whereas those on C did not need treating.

The mature ewes on A and B are also showing very high burdens compared to Farm C ewes.

This clearly shows the value of rotational grazing where short graze periods combined with long rest periods minimize pasture contamination and so improve barber's pole control.

However, the issue that we need to address on Farm C is how to improve production parameters [life-time performance] without compromising worm control.

Similarly maintaining the superior production on A and B farms yet improve worm control across all classes of sheep.

The A farmlet 2003 drop lambs had a bout of scabby mouth, with about 20% affected, and lasting for around six weeks. Lambs on B and C were not affected.

Mulesing trial with 2002 drop (treatments were 3 types of mules and an untreated control)

The unmulesed animals in the 2002 drop mulesing trial continue to become fly struck with 16 of the 25 being affected. None of the mulesed sheep have been struck. When these animals were crutched in March all the wool was collected and sorted into stained wool and clean wool for weighing. This will be an interesting comparison of the four treatments in the trial.

Mulesing trial with 2003 drop (treatments were four different commercial products)

The 2003 drop animals have not become blown and all four treatments performed as their companies claimed. A more detailed report will be in a future newsletter.

- **Paddocks to sow**

Paddocks A1, B6 and C17 are currently in a spray fallow condition ready to be sown in April /May. Adjacent paddocks B 6 and C17 will be sown with identical species so we can see how the pastures compare under the two different grazing systems.

- **Cattle**

Each of the farmlets has cattle grazing as part of the pasture management. There is a mixture of steers and heifers. The following table shows the average weights in kg. Since October the average weight gain has been 5.0 kg per week on Farm C to 5.6 kg per week on Farm A.

Farm	11-Oct-03	11-Dec-03	9-Feb-04	9-Apr-04	Gain since Oct	Weekly gain
A average	295.0	357.6	404.6	441.2	146.1	5.6
B average	302.6	350.2	401.3	442.2	139.6	5.4
C average	292.7	337.9	387.0	422.5	129.8	5.0

- **Trees**

The planting of 2400 trees in 8 tree plots has been completed. This will start to protect some of the paddocks for lambing ewes in future years. Paddocks with trees plots are A5, A7, B3, B7, B8, C5, C6, C9, C10, a total of 3ha.

Recommendations from Chris Eveleigh, Hugh Harris, Nick Reid, Jim Scott and Jon Taylor (thank you all!) led to the planting of *Pinus radiata*, *Eucalyptus radiata*, *Eucalyptus nitens*, *Eucalyptus caliginosa*, *Eucalyptus dalrympleana* and *Casurina*. These trees were selected to demonstrate on-farm benefits over the short, medium and long-term. It has cost Cicerone close to \$12500 to fence off and prepare the land,

purchase and plant the trees. We are grateful to Harnham Landcare for their assistance with the funding for the planting of the native trees with a cheque for close to \$9500 (including GST).

### DSE changes over time

The following table shows the stock numbers from October 2001 with the changing DSE per hectare over the four seasons. (In the cattle column, the + indicates cows with calves, all now gone and replaced with steers and heifers). A mob of 141 recently acquired CFA ewes from CSIRO has since been allocated to the three farmlets, with 72 for A, 22 for B and 47 for farm C. They are currently on the periphery and will be run with the rams and other ewes for joining before all return to the farmlets.

Year	First week of	Farm	State	Ewes	98/99 drop	2000 drop	2001 drop	2002 drop	2003 drop	Cattle	DSE per ha
2001	October	A	Lactating	67	85	207				13+13	17
2002	January	A	Dry	109	85	204	100			19 +12	18
2002	April	A	Joining	108		144	100				7.4
2002	July	A	Pregnant	104		144	100			15	11
2002	October	A	Lactating	103	85	59	96			15	12.7
2003	January	A	Dry	102			96	68			5.6
2003	April	A	Joining	228			82	31		26	6.7
2003	July	A	Pregnant	257			52	31		12	7.2
2003	October	A	Lactating	251			51	31		12	15.7
2004	January	A	Dry	241			51	31	204	21	14.3
2004	April	A	Joining	238			51	31	140	21	12

2001	October	B	Lactating	66	41	205				8+6	13
2002	January	B	Dry	64	42	201	90				10
2002	April	B	Joining	117		57	90				5.6
2002	July	B	Pregnant	117		57	90			12	8.7
2002	October	B	Lactating	107		57	89			12	10
2003	January	B	Dry	107			89	88			5.6
2003	April	B	Joining	112			71	41		26	4
2003	July	B	Pregnant	136			45	41		12	4.7
2003	October	B	Lactating	134			45	41		10	8.8
2004	January	B	Dry	132			45	41	125	18	10
2004	April	B	Joining	132			45	41	90	18	8.7

2001	October	C	Lactating	96		174				9+6	12.5
2002	January	C	Dry	95		175	81				9
2002	April	C	Joining	95		57	81				5
2002	July	C	Pregnant	92		53	80			15	7.6
2002	October	C	Lactating	93		54	80			15	11.4
2003	January	C	Dry	93			79	60			5.6
2003	April	C	Joining	130			65	30		26	4.25
2003	July	C	Pregnant	130			38	30		12	5.2
2003	October	C	Lactating	129			38	30		12	10
2004	January	C	Dry	124			38	30	100	21	10
2004	April	C	Joining	132			38	30	76	21	8.3

Information provided by Justin Hoad, Caroline Gaden, Betty Hall and Alison Healey

**Find the Bureau of Meteorology web site hard to contact?  
That could be because it is one of the busiest web sites in Australia with  
over 400 million hits so far  
[www.bom.gov.au](http://www.bom.gov.au)**

**These are your elected members of The Cicerone Board. Please make contact with them if you have any suggestions or comments ... remember our motto is to**

*Measure, Compare, Learn, Adopt*

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<b>Phillip Dutton,</b>	Vice Chairman, Producer member Phone 6778 2127
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• **australian wool**  
**innovation**  
• limited

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