



# MAY Newsletter

In this letter I have presented the results of the recent ewe comparison trial conducted on the Elmore field day site. These results are from a 5 year trial and you can access more detailed results by searching for “Elmore Ewe Trial” on the internet. By discussing these results we hope to explain our views on efficient lamb production. The ewes were selected by the breed groups as being suitable to represent their genotype. All the ewes were run together and mated to terminal sires. We have Multimeat X Merino ewes in the next round of the trial with ewes supplied by 3 of our clients

Lamb, wool and skin returns/ewe average for 5 adult years

<b>Genotype</b>					
	SuperBorder X Merino	Merino Loddon Valley	Merino Centre Plus	Merino Dohne	Merino SAMP
Lamb returns	\$ 154.54	\$ 102.32	\$ 130.04	\$ 108.68	\$ 157.08
Wool return	\$ 19.94	\$ 52.96	\$ 49.67	\$ 38.70	\$ 23.17
<b>GROSS INCOME</b>	<b>\$ 174.48</b>	<b>\$ 155.28</b>	<b>\$ 179.71</b>	<b>\$ 147.38</b>	<b>\$ 180.25</b>
<b>DSE/ewe-lamb unit, average 5 adult lambings</b>					
DSE rating av/adult ewe over 5 years	3.07	2.21	2.62	2.42	3.06
<b>Production Statistics over 5 adult lambings</b>					
CFW av/ewe over 5 yrs	3.97	4.84	4.12	3.53	2.66
Lamb lwt av/ewe over 5 yrs	63	42.6	53.4	44.6	64.2
Ewe lwt av/ewe at joining over 5yrs	79.6	63.6	70.7	70.6	79.7
Ewe CS av/ewe at joining over 5 yrs	4.34	3.55	3.77	4.05	4.38
Lambs preg scanned percent over 5 adult lambings	157%	129%	148%	126%	160%
Lambs born percent over 5 adult lambings	150%	116%	138%	120%	156%
Lambs marked percent over 5 adult lambings	132%	96%	116%	96%	132%
Lamb losses expressed as % of lambs born over 5 adult lambings	12%	17%	16%	20%	15%
<b>Ewe Lamb statistics from 2009</b>					
Wt at Joining	55	43	44	51	52
CS at joining	4.0	3.3	3.2	3.9	4.0
Age in mths	9.7	10.1	7.7	10.4	10.1
Lambs marked////Excludes unmated ewes	105%	44%	52%	83%	74%
Lambs marked if unmated ewes included	105%	38%	29%	83%	74%
Ewes not joined due to less than 40kg	0	6	19	0	0
<b>Gross Profit/Genotype</b>					
Gross Income /DSE	\$ 56.83	\$ 70.26	\$ 68.59	\$ 60.90	\$ 58.91
Gross Income/hectare	\$ 341.00	\$ 421.57	\$ 411.55	\$ 365.40	\$ 353.43

The first point to be made is the difference between per head and per dse returns. If you just focus on per head returns then first cross and the SAMM look to be performing well. When you correct for the dse rating however you find that the 2 Australian merino genotypes are the best.

The next point is that the stocking rate in this trial was 6 dse per hectare which they say is the average district stocking rate. So in this trial they are running the crossbred ewes at 2 to the hectare. The gross returns for the crossbreds are therefore \$341 per hectare. The variable costs of running a prime lamb flock are put at \$92 per head by the PIRSA FARM GROSS MARGIN GUIDE, where the cost of replacing ewes every 5 years is \$45 per head per year.. The producer is then left with \$164 per hectare operating profit. This does not take into account the cost of the land,.labour and other overhead costs such as machinery and infrastructure. Holmes and Sackett estimate these costs at \$20.67 per dse. So another \$120 is used to pay these expenses.

The land at Elmore is worth \$2000 per hectare which at 8% interest is \$160.

As you can see there is not much profit in prime lamb production using crossbred ewes if it is done in the manner of this trial.

What I particularly want to concentrate on is the performance of the Superborder merinos. On a per head basis it looks as though they have performed quite well marking an average of 132% lambs and producing 63 kgs of lamb per ewe. The per hectare profitability however is abysmal. This is principally the result of the low stocking rate. My rule of thumb for reasonable land is 1 crossbred ewe per hectare for every 100 ml of rainfall. On this conservative basis they should be running 4.5 ewes per hectare instead of 2. If you rate a crossbred ewe at 2 dse then this is a rate of 10 dse per hectare.

The first very important lesson to come from this is if you are scanning above 160% and marking 130% from your crossbreds you should have a serious look at your stocking rate because it is very likely that you could substantially improve your per hectare productivity and profitability by lifting it. It is only in livestock production that producers still look at per head returns.

If you look at the myriad of comparisons of producing meat lambs out of merinos versus crossbred ewes then the merinos have always won as in this trial. The Dohnes and the SAMMS were never going to be able to compete although at this low stocking rate they appear to be as good as the crossbreds.

The big determinants of prime lamb profitability are the interactions between stocking rate, ewe weight, scanning percentage and weaning rate. If you run a low stocking rate you will have a higher scanning rate and weaning rate but a lower weight of lamb produced per hectare. It will look and feel good but as in the case of the Elmore trial is unprofitable.

The first scanning results we have received this year are representative of what we consistently see.

### **Table 1**

#### **Multimeat Cross Terminal Rams**

<b>Dries %</b>	<b>Singles %</b>	<b>Twins + %</b>	
<b>2</b>	<b>13</b>	<b>85</b>	<b>183%</b>

#### **Border Merino Cross Terminal**

<b>Dries %</b>	<b>Singles %</b>	<b>Twins +%</b>	
<b>6</b>	<b>55</b>	<b>39</b>	<b>133%</b>

**The Multimeat ewes were mated at condition score 2.7 and the crossbreds at condition score 3.**

If the ewes had also been scanned for triplets then there would have been about 25% triplets in the Multimeats.

Last year the weaning rate of those scanned as 2+ marked 173%.

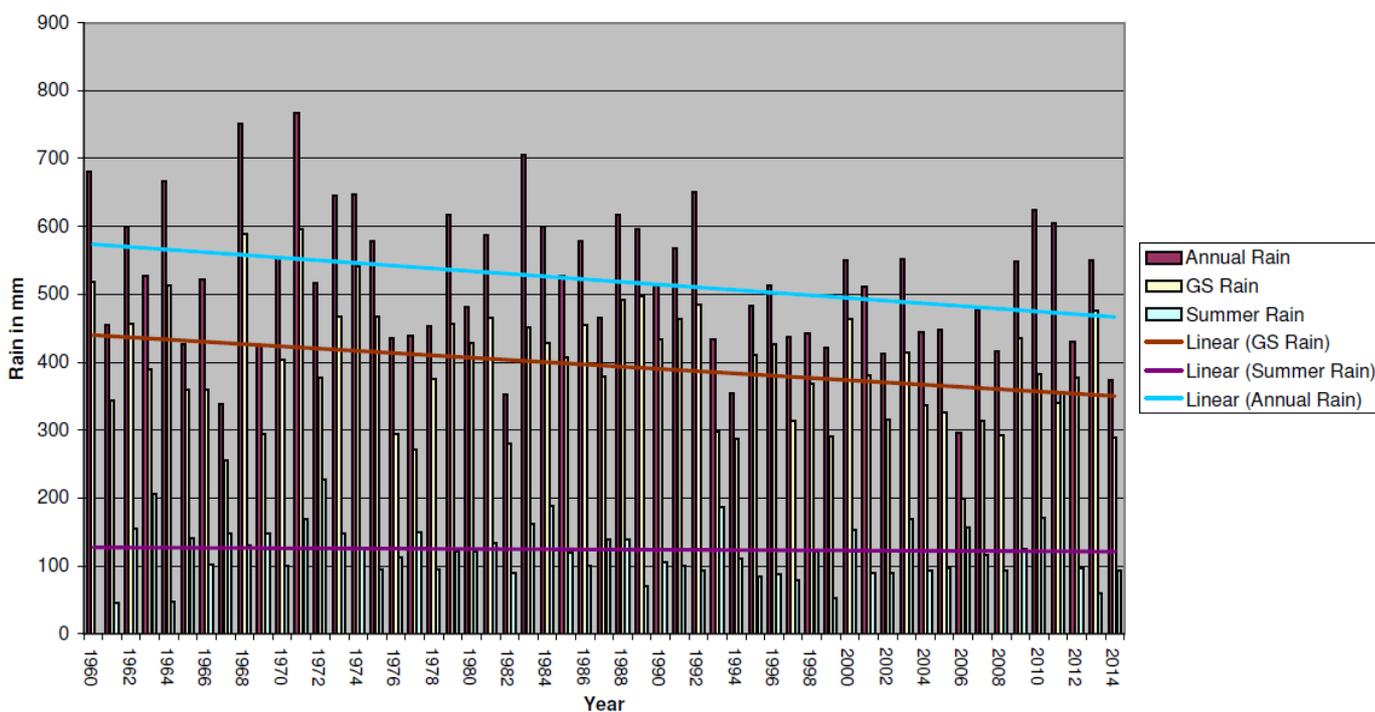
What you can see is that the connection between ewe weight and scanning rate is altered in a very predictable way. The use of the Booroola gene increases the scanning rate by about 60% at the same ewe mating weight.

A single rearing crossbred ewe will produce a great lamb but is not very profitable. The PIRSA gross margins guide calculates the gross margin of a flock rearing 105% to be \$25 per dse and that of a flock rearing 135% to be \$35 per dse. This equates to an extra \$20 per dse increase in your gross margin.

You can elevate the scanning rate of crossbreds by as much as you want by feeding. My calculations show that supplementary feeding to increase weaning percentages costs about \$50-60 per extra lamb.

Below is a graph of the rainfall at Phil's Woolumbool property close to Naracoorte over the last 54 years. What it shows is a steady decline in growing season rain (GS rain), the orange line. Climate does change and our management systems have to adjust with them. What causes these changes and the effects on our systems are not fully understood. The declining rainfall in the mid-south east will definitely reduce our production, but a reduction in wetter areas may enhance production.

Yacca Downs & Greenvale + Lochaber  
Annual Rain Chart



Decreased growing season rain means that you can carry less stock. It does not necessarily mean you need to sell less weight of lamb. Ewes that rear twins convert feed into lamb 46% more efficiently than ewes that rear one lamb. This means that if your flock has a much greater percentage of twin rearing ewes then you will produce a lot more lamb from the same amount of available feed. There is nothing more inefficient than a large ewe rearing one lamb.

Unfortunately prime lamb production systems have been historically based around low fecundity genotypes as shown in Table 2. The Composite breeds imported from New Zealand also have very similar scanning rates despite higher claims made for them.

Table 2

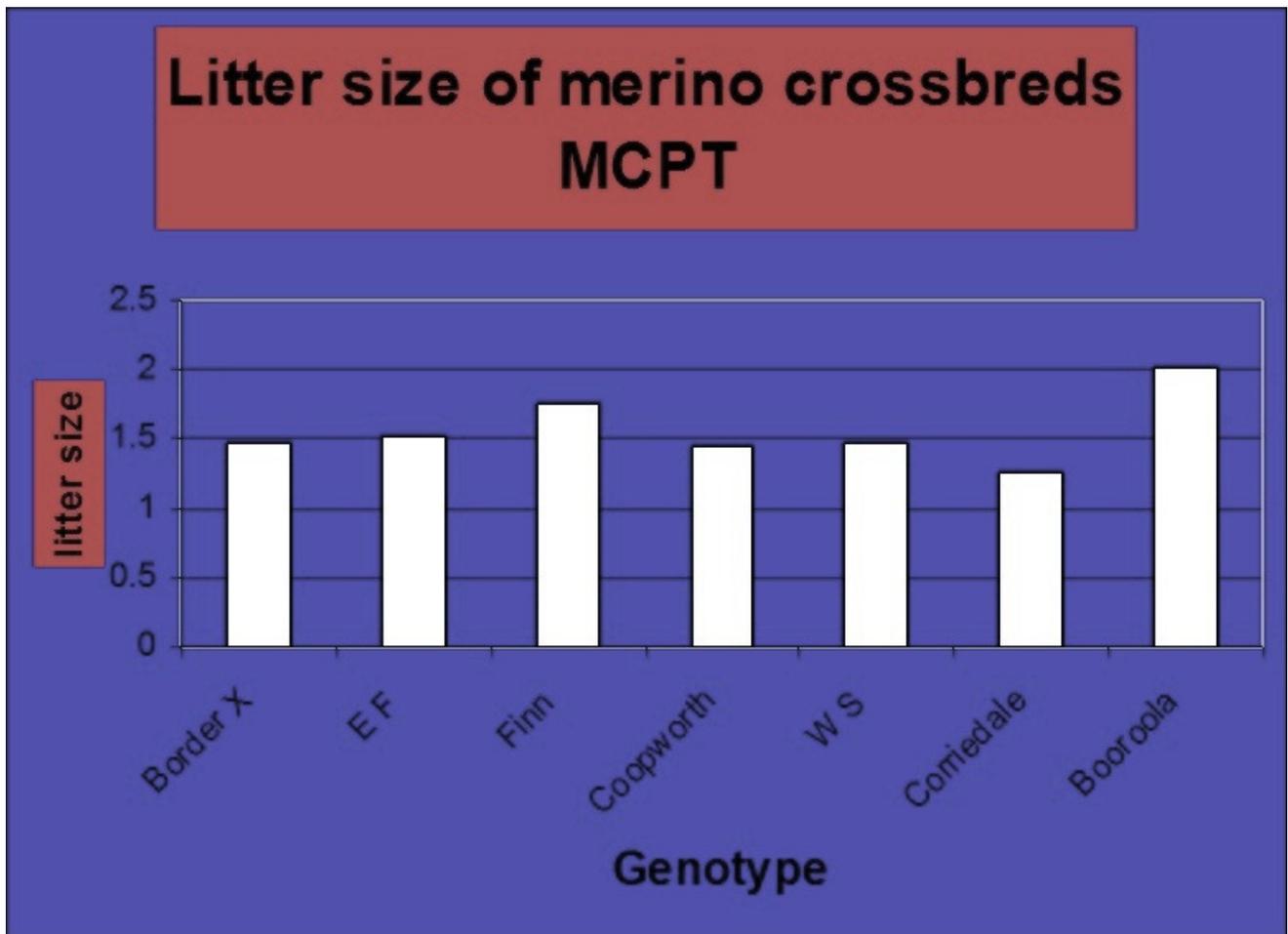
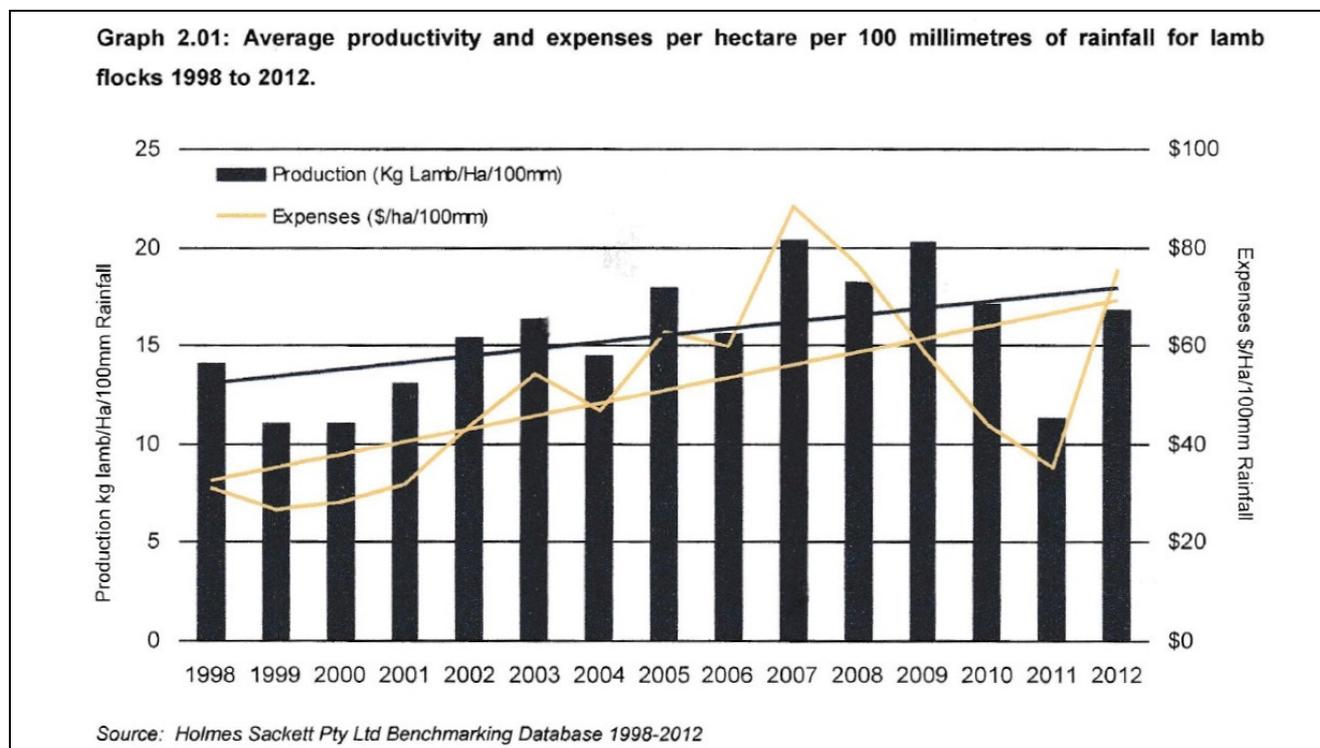


Table 2 above shows the results from the Maternal Central Progeny test. The ewes in the trial were from the Merino crossbreds produced by these genotypes and evaluated over 5 years. What it shows is that only the Booroola gene carrying rams and the Finn can significantly increase scanning percentages. Also when you go to less than half Finn the increase drops off rapidly. We have a number of clients who have Multimeats and other composites and the common observation is that these composites have similar scanning rates as Border crosses.

The deficiency in our genotypes was realised many years ago and commencement of the development of a genotype called the Multimeat based on the Booroola gene was initiated. We now have a genotype which can in one cross produce crossbred ewes which will scan 60% more lambs at the same mating weight. So instead of feeding them to increase the number of lambs conceived you actually hold their weight down at mating.

Where your feed supply is declining you can reduce your ewe stocking rate, and use Multimeats to convert your feed into the same amount of lamb or even more. If your feed supply is increasing you can maintain your stocking rate but use Multimeats to increase your lamb production.

All forms of agriculture are under the pressure from increasing costs and uncertain returns. To survive increases in efficiency have to be continuously sought and adopted. When a new agronomic cultivar is developed with a 20% improvement in production it is immediately adopted. It is only in livestock with its fixation on per head production where increases in efficiency are ignored.



The graph above is from Holmes and Sackett. What it shows is that their clients have increased production but the expenses have been increasing at a faster rate.

The point I am making is that things are changing in many ways. You cannot expect to just continue to do the same thing and get the same level of profitability. From all of the analysis I and others have done on prime lamb production systems it is evident that the relatively low fecundity of our genotypes is the area where we could achieve the greatest increase in efficiency. We have developed the genotype which can do this and a production system which works for them. The system is not difficult but it is different. Using it you will not get the top prices in the lamb market but you will be more profitable. The Multimeat system is as applicable in lower rainfall areas as high rainfall zones because the same principles apply in all zones. That is you are trying to turn what feed you have into as much lamb as you can. Running less ewes to produce the same amount of lamb is always going to be a safer and more efficient system.

Colin and Phil

