

# Sheep for Profit® Newsletter

April 2007



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## Sheep for Profit reports

As more farms join our data base we identify more things that need attention in our data base. At the outset the system was designed on the assumption everyone would enter all their data as set down in the protocols! That worked in the Pilot study but as time has moved on things have changed. We accept there are times when data collection can be a hassle but this should be balanced by the value of that information – better having some information than no information!

We are working furiously on reviewing and updating most of our reports.

The Between Farm Comparison reports are taking too long to download. Each time a report is downloaded the system has to search all the farms for all the data that makes up the reports. The solution is to have the data base do all that searching and calculating at four o'clock in the morning so what is downloaded next day is the previous day's data.

Some reports are being modified so they do not appear until all data has been entered. eg Your Sale Lamb Performance report shows as soon as you put your first entry in. Generally you should see an extremely high growth rate which is calculated as the weight change per day since weaning. These first lambs sold are likely to be heavier than the average weaning weight so they have "grown very quickly"! Changes will be made so your growth rate does not

appear until you tell the system all your sale lambs have been entered.

Many Between Farm Comparison reports have become a bit misleading where the Top, Average and Low quartiles don't make sense. The calculations for these reports involve searching for all the data, putting it in order and then identifying which quartile it is in. If there is no data, the system has been giving it a zero value, which ends up in the average and generally in the Low quartile. We have fixed this for Mating Performance, Lambing Performance and Ewe Flock Performance.

The Lambing Performance report now shows ewe wastage.

## Making more money from beef cows

Same old story, when sheep prices drop beef becomes more sexy, but the poor old beef cow still tends to miss out.



There seems to be an ever increasing array of recommendations to lift beef cow performance but let's not forget two basic principles that affect the role of the beef cow herd:

1. Most herds will not compete on a cents/kgDM basis but the key is to make sure the cows are adding value by eating either lower quality pastures and/or cheaper pastures. Duncan Smeaton is leading a M&WNZ project looking at the profitability of the beef cow. Some of the outcomes to date include:
  - Two year old bulls grazing lower quality pasture would return \$246 gross margin less than cows grazing the same pasture.

- A 4250 ewe flock expected to “tidy up” pasture that would normally be done by 510 cows (same stocking rate) would achieve 103% lambing and wean lambs at 24.7kg to generate \$24,200 less than the cows.

Beef breeding cows are most profitable when they complement other stock classes. Improve their profitability by calving when spring pasture starts growing – very cheap feed compared to autumn saved pasture. Later calving cows on better feed get in calf quicker and their calves grow faster.

2. Herd income = No. calves sold x weight x price

Smeaton used Farmax to give an indication of the difference between average (80-82 calves weaned per cow mated, 0.8kg/day calf growth rate) and high performing (93 calves weaned per 100 cows mated, 1-1.2kg/day calf growth rate) beef cows. The modelling assumed the different stock systems grazed the same pasture.

	Ave beef cow	High fertility ewe	1 year bull system	High beef cow
GM (\$/ha)	449	717	796	680
GM (c/kgDM)	6.6	8.6	10.7	8.9
Net LWG/ha	350	591	908	490
kgDM/kg product	40	25	15	32

No. calves sold is a factor of:

- In-calf rate
- Cow survival
- Calf survival
- Replacement rate

Average calf weaning weight is a factor of:

- Birth weight
- Growth rate
- Calving span

In-calf rate and calving pattern are important drivers and both are a function of fertility – getting the cow pregnant as early as possible within the optimum mating time. Let’s compare an average and a high performance 150 cow herd. Assumptions for both herds:

- Calf birth weight 35kg
- Calves weaned 250 days after start of calving
- 5% cow death rate
- 10% cull cows

Herd	% in-calf	No. calves born each 3 weeks			kg calf weaned	No. repl’s
		1st	2nd	3rd		
Ave	82	59	43	21	26,587	46
High	93	97	36	7	42,350	30

Benefits for the high herd = \$29,373 per year

- Can select all replacements from 1<sup>st</sup> cycle calves
- 16 more calves to sell or higher culling rate
- 15,763 more kg to sell at \$1.80 = \$28,373
- 1 less bull (\$4,000 over 4 years) = \$1,000



How does the high herd do it?

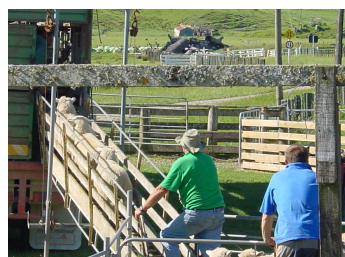
- Calving at the optimum time
- Buying high serving capacity bulls
- Annual bull testing

The key is to make sure there is plenty of bull power and the cows are all cycling early. Bull power is NOT number of bulls, it is how many cows the bulls can get in calf over the first 6 weeks of mating.

More detailed information on bull performance and testing is in the Forum.

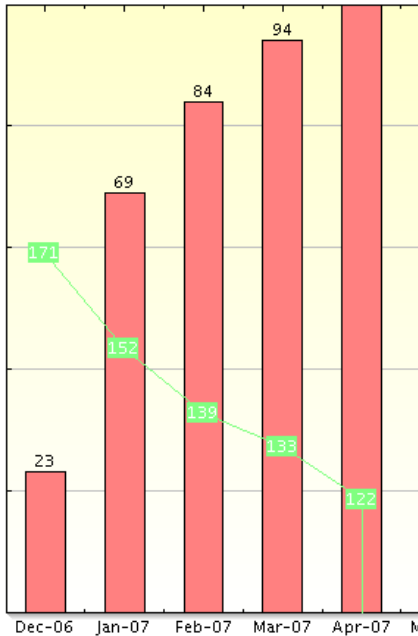
### Sale lambs

One of the graphs in our Sale Lamb performance reports shows the monthly average cents/kg lamb liveweight sold against the proportion of lambs sold.



Unfortunately what tends to happen is that as monthly numbers of lambs sold goes up the value is going down.

**“Cut down” version of Sale lamb report.**



On this property lamb value fell from \$1.39/kg LWt in February to \$1.22 in April. Drilling down into the data we find 60% of the lambs sold in March and April averaged 37.5kg and \$45.60. Average days to sale for these lambs was 50 days after the February draft.

If these lambs grew at 120g/day they would have been 31.5kg at the previous draft in February, and, if they were worth \$1.39/kg they could have been sold for \$43.78.

Keeping them added another \$1.82.

Over 100 lambs, total pasture eaten would be equivalent to just under 7 tonnes of barley.

What's the best option of converting that good pasture into money? An extra \$1.82 per lamb, or lifting the pre-mating condition of a whole lot of condition score 2 ewes?

**Facial eczema tolerant genetics at work**

A new Sheep for Profit farm on the East Coast NI, had an horrendous experience with facial eczema last year which resulted in his MA ewes lambing 96% with 33% lamb wastage and 2T ewes lambing 69% with 28% lamb wastage.

A comparison of the performance of his FE challenged 2T ewes with non-challenged sibling 2T ewes identified an opportunity cost to him of around \$21.00 per 2T

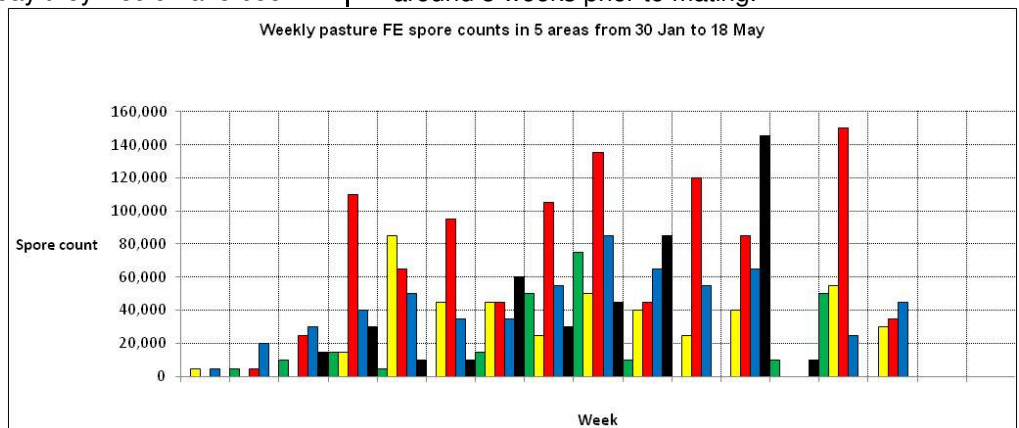
ewe mated last year because of facial eczema.

Risk management strategies put in place for mating 2007 included getting set up to monitor pasture spore counts from 5 sites on a weekly basis to observe the trends and be better prepared to either shift stock to safer grazing or protect the stock with zinc capsules BEFORE significant liver damage occurred.

As a long term strategy FE tolerant rams are now being purchased from 2 studs that have been testing and breeding for FE tolerance for at least 20 years. 100 cull ewe hoggets from one of the studs were also purchased.

The spore counts over the 5 sites rose significantly after 6th February to reach an average of 50,000 by 14<sup>th</sup> February with one of the sites hitting 110,000.

Zinc capsules were administered to every ewe except the 100 bought-in FE tolerant 2T ewes, which was around 3 weeks prior to mating.



Pasture spore counts averaged 50,000 with 2 sites peaking above 130,000 during the 6 week span of zinc capsule protection. Note in the graph how the spore counts vary between the different areas of the farm. Bloods were taken from zinc treated ewes and FE tolerant ewes 3 weeks after the zinc capsules had run out.

	Zinc capsuled		FE Tolerant
	MA ewes	2T ewes	2T ewes
1	69	56	46
2	36	61	38
3	48	55	38
4	75	51	56
5	88	1726	65
6	46	39	48
7	45	55	47
8	54	61	42
9	48	68	102
10	53	56	55
11	44	97	66
12	57	41	65
13	49	48	157
14	55	33	48
15	66	47	54
16	62	170	49
17	114	54	29
18	55	67	98
19	21	59	38
20		34	58
<b>Ave GGT</b>	<b>57</b>	<b>144</b>	<b>60</b>
<b>% &gt; 100</b>	<b>5</b>	<b>15</b>	<b>10</b>
<b>% &gt; 300</b>	<b>0</b>	<b>5</b>	<b>0</b>

GGT levels above 100 are suggestive of liver damage.

Apart from one of the treated 2T ewes, probably losing her capsule (GGT 1726), it appears that the zinc capsules have been relatively successful at preventing liver damage and the untreated FE tolerant ewes have coped very well with the FE challenge on this farm over mating this year.

We know the GGT levels reduce with time after the liver has been damaged so a low level in this result does not mean liver damage has not occurred- there may have been some damage earlier in the season.

A good scanning result will confirm the effectiveness of the FE risk management practiced on this farm this year. It will also give the farmer more confidence that the move to FE tolerant genetics will, in the long term, pay dividends and help him achieve his goals.

### Thinking of applying nitrogen in spring?

The price of nitrogen and the \$ return for lambs are two key factors which can impact on the return from applying nitrogen to increase pasture supply for lactating twinning ewes in early spring.

Urea has just gone up to over \$560/tonne ex store. Assuming cartage at \$20/tonne and fixed wing applied at \$100/tonne the applied cost is around \$1.50/kg N.



The model below gives an indication of the expected return on 30kg N/ha (\$45/ha) applied to paddocks for twin ewes stocked at 12 ewes/ha.

Lamb value (\$/kgLWT)	1.35	1.45	1.55	1.35	1.45	1.55
N response (kgDM/kgN)	10	10	10	15	15	15
Change in lamb GR (g/day)	15	15	15	20	20	20
Change in lamb survival (%)	1	1	1	2	2	2
Change in ewe weaning LWT (kg)	1	1	1	1	1	1
Benefit from weaned lambs (\$/ha)	26.77	28.75	30.74	38.56	41.41	44.27
Benefit from ewes (\$/ha)	7.94	8.53	9.12	8.04	8.64	9.23
Summary Cost Benefit (\$/ha)	-10.29	-7.72	-5.15	1.60	5.00	8.50

The model is designed to look at the impact of the extra pasture allowance to the twinning ewes. It includes growth rate of the lambs over the first 50 days of lactation, lamb survival, and ewe weaning weight which affects next years scanning performance.

Note the key drivers are:

- Cost of N and response to nitrogen,
- Extra kg lamb weaned/ha (lift in lamb growth rate and lamb survival)
- Extra kg of ewe liveweight at weaning
- \$ value of the lamb.

The talk at the moment is that average lamb prices will probably be around \$1.45-\$1.50/kg LWT again next season.

AgriNetworks  
49 Benson Road  
Te Awamutu 3800  
Postal:  
PO Box 45  
Te Awamutu 3840

Phone: 07 872 0247  
Fax: 07 872 0246

[www.agrinetworks.co.nz](http://www.agrinetworks.co.nz)  
[www.agrinetworks.co.nz/forum/](http://www.agrinetworks.co.nz/forum/)