

Relative Sheep Enterprise Performance 2015 prices

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This is a summary of the talk given at the Balmoral Sire Evaluation field day. The full presentation and some additional material will be on the web site.

This paper looks at the production and financial performance of sheep enterprises across NSW. No sheep enterprise is greatly superior to any others over the long term and contrary to popular belief meat based enterprises are not always the most profitable. Profitability is more influenced by managerial ability to capture genetic potential across variable seasons, than the enterprise itself.

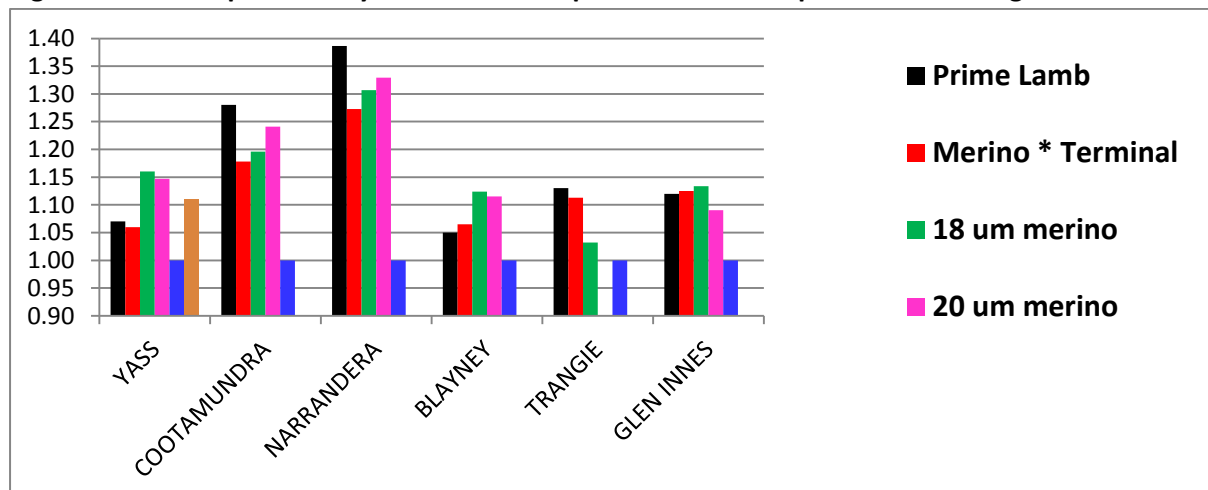
The method used ensures consistency in how the enterprises are compared. Farms are set up in GrassGro by using soil types, actual daily weather data from 1960 to 2015, and suitable pasture species and livestock management programs for each location. The purpose of this work is not to compare locations but to examine how enterprises perform at a location over a long time period.

The sheep enterprises are described in Table 1 below for key production parameters. Each enterprise is kept constant across locations and run so that the same grazing pressure is applied to the farm by each enterprise. This is achieved by varying stocking rate (ewes/ha) between the enterprises because the same amount of feed is grown at any given location, regardless of what enterprise is run. Your boundary fences cannot bulge.

Table 1: Production parameters used in GrassGro for the various enterprises

	Mature ewe wt (fleece free and empty) (kg)	Fibre diameter (um)	Fleece wt, greasy (kg)	Adult death rate (%/yr)	Weaner death rate (%/yr)	Reproductive rate (relative to 18um merino)
PL	76	29	4.5	4	1.5	+ 33%
MT	59	20.8	4.7	6	2	+ 9 %
18 um merino	53	18	5.0	4	5	0
20 um merino	59	20	5.6	4	5	+ 5%

Figure 1: Relative profitability of various enterprises across multiple locations using GrassGro*



The differences need to be greater than 7% to be meaningful. This applies to all work in this paper.

The same enterprises were run for the same years at a Skipton location. Four different prices were used, 2015 average (same as NSW), 20%, 50% and 80% percentile prices for 2011 to 2015 for lamb, mutton and the wool prices for the respective fibre diameters.

Table 2 Skipton results with the 18um merino enterprise set to 100%

	2015 prices	20 percentile	50 percentile	80 percentile
PL	97%	87%	88%	106%
MT	93%	91%	88%	119%
18um	100%	100%	100%	100%
20 um	101%	98%	104%	104%

There are no differences between enterprises using 2015 prices. The MT enterprise only pulls ahead at low prices (80percentile). The merino enterprises are ahead for a substantial spread of the market over the last 5 years.

It must be remembered that this is for 1 location and I would expect different responses across Victorian just as occurred in NSW.

The results from NSW and Skipton go against the “accepted view” of enterprise performance, why? The usual assessment is a gross margin; often these underestimated the amount of supplementary feeding required for the meat dominated enterprises and underestimate the DSE rating. If these errors are corrected (e.g. NSW GM in late 2015) then the gross margins line up with this work. It is the really dry years that push up the feeding requirements in meat systems. Because this work is based on over 50 years you get a more robust assessment of how an enterprise performs over time.

The topic of the night was about the future of the merino industry. A topic that needs to be talked about more is the increase in mature ewe live weight that is occurring in all sheep breeds. First cross ewes increased by 15 kg between 1990 and 2010 and this increase is still continuing.

In the talk the impact of increasing ewe liveweight by 5kg in the 18 um flock was examined.

- If liveweight only increased by 5kg that would result in a 6% reduction in profits. The extra meat income from CFA ewe and wethers did not offset the income lost from the reduced number of ewes/ha that could be run.
- If we add changes to reproduction rates then it would need to increase by 12% /yr (long term ave 87% to 99%) to match the base profits. An increase of 12% is above what you would expect from increasing body weight by 5kg. Management change don't count as they can also be applied to the base flock.
- A 0.35 kg increase in greasy fleece wt at 18um with a 5kg heavier ewe flock gives the same profit as the base flock. It is highly unlikely that FD would be held constant while achieving the increases in the other traits.
- An increase to 19um is more likely so the fleece wt increase would need to be 0.55kg to achieve the same profit as the base flock. Ten years breeding to change the flock from 53kg at 18um cutting 5.0kg, to 58 kg cutting 5.55kg at 19um would give you no increase in profits based on the 2015 prices. The higher the stocking rate the greater the impact of increases in mature liveweight. In pastoral zones an increase in mature weight can have a positive effect.