

9. FLOCK STRUCTURE

Returning a flock to pre-drought levels of productivity and profitability as quickly as possible is the key to recovering from drought. Often this requires compromises. The main one is the trade-off between selling stock to keep the cash flow as healthy as possible, versus retaining stock to increase numbers. One of the keys to long-term prosperity in agriculture, is to avoid taking so long to recover from the drought that you lose substantial profits each year when subsequent seasons are average or better. By the time productivity is back to normal levels you will be just in time for the next dry year. On the other hand, it is probably not the best strategy to go into the market straight after the drought has broken and pay ridiculous premiums for restocker sheep.

Somewhere in between, there is a sensible middle ground that provides for recovery in the medium term but does not put the business at risk in the short-term. A key component of the strategy is to optimise flock structure. A ewe-dominant flock provides substantial advantages because of its reproductive potential but requires additional management, both for the lambing ewe and the weaner. In comparison, the wether is easy to run but only contributes a fleece at the end of the year.

The aim of this section is to look at the effect of a range of strategies on flock profitability.

Livestock capital

Assuming capital is limiting, it is important to consider the capital invested in the different livestock classes. Both capital per head and per DSE need to be considered, Table 9.1 and Table 9.2 show the extra dollars invested in a wether flock compared to a ewe flock. Of the ewe options, the early/winter lambing ewe provides the best value per DSE compared to the spring lambing ewe because of the lower DSE rating per ewe. These calculations are based on winter DSE ratings which, for most farms in sheep producing areas, is the feed limiting time of the year.

Table 9.1: Effect of per head value on capital invested in wethers

	Wethers (1.1 DSE/hd)		
Value /Hd	\$30	\$40	\$50
Capital/1000 DSE	\$27,270	\$36,630	\$45,450

Source: Holmes Sackett & Associates Benchmarking

SECTION KEY MESSAGES

The most profitable flocks tend to be self-replacing, running 20-50 per cent wethers.

There is a short-term opportunity to capitalize on high re-stocker prices following the drought by increasing the proportion of ewes in your flock, although this is associated with additional management requirements.

One of the keys to long-term prosperity in agriculture, is to avoid taking so long to recover from the drought that you lose substantial profits each year when subsequent seasons are average or better.

There is a sensible middle ground that provides for recovery in the medium-term but does not put the business at risk in the short-term.

Table 9.2: Effect of per head value of capital invested in ewes

Value/Hd	Ewe Value				
	\$30	\$40	\$50	\$60	\$70
Capital/1000 DSE late winter/spring lambing (1.3 DSE/Hd)	\$23,070	\$30,790	\$38,482	\$43,154	\$53,846
Capital/1000 DSE late autumn/early winter lambing (2.3 DSE/hd)	\$13,043	\$17,391	\$31,739	\$26,087	\$30,434

Source: Holmes Sackett & Associates Analysis

Profitability

Results from five years of analysis of flocks, predominantly in south eastern Australia but including all major sheep production areas, shows the effect of flock structure on profitability (refer Table 9.3).

Table 9.3: Effect of flock structure on profitability

	Proportion DSE's on wethers		
	<20%	20-50%	50-80%
Sheep Trading	\$6.26	\$3.80	-\$0.37
Wool	\$18.03	\$22.44	\$25.51
INCOME/DSE	\$24.29	\$26.13	\$25.17
TOTAL EXPENSE/DSE	\$22.53	\$20.82	\$23.21
NET PROFIT/DSE	\$1.76	\$5.31	\$1.96

Source: Holmes Sackett & Associates Farm Benchmarking

The main points from this table are:

Flock profitability tends to peak when wethers make up 20–50 per cent of the total DSE.

- Flock profitability tends to peak when wethers make up 20-50 per cent of the total DSE. This represents the standard self-replacing merino flock with wethers kept until they are 4-5 years of age.
- Flocks with fewer than 20 per cent of total DSE as wethers tend to have been less profitable over the last five years. The reason is that they have lower wool value per DSE and this is not adequately compensated for with extra income from the sale of surplus sheep. It is worth a note of caution here, because the enterprises that sell high a proportion of young sheep tend to be traditional breeding flocks in the drier areas. These properties usually have medium and broad wool flocks which had their profitability reduced in the late 1990s due to low prices for these types of wool. Therefore, there is some potential for the effect of flock structure/flock profitability to be confounded by the type of sheep run in these flocks.

- Wether dominant flocks tend to have lower profitability due to the losses they experience in sheep trading. This has occurred because, for the last five years, it has cost more to buy in young wethers than they have been worth to sell out as a five year old. This has meant that each year there is, on average, a loss on the changeover of sheep. This trading loss has not been compensated for by the extra wool value per DSE of a wether dominant flock. Interestingly, wether flocks are not necessarily the cheapest to run with a high annual cost per DSE.

While the above refers to long-term effects of flock structure, in the short-term the situation is likely to be very different, due to a combination of:

- Re-stocker demand following the drought.
- The Australian sheep flock at approx 100 million sheep, the lowest level in fifty years.
- High sheep meat prices.

When all these factors are taken into account, there is likely to be a short-term opportunity to increase the proportion of ewes in the flock at the expense of wether numbers. The effect of such a change on flock returns is shown in Table 9.4.

Table 9.4: Earlier sale of wethers increases flock gross margins at times of high wether prices

Sale price (\$/hd)	Age at sale		
	Lamb	2.5 years	5.5 years
\$35.00	\$33.42	\$31.36	\$29.62
\$45.00	\$35.90	\$32.76	\$30.51
\$55.00	\$39.59	\$34.12	\$31.40
\$65.00	\$42.73	-	-

Wool prices were assumed to be based on an estimate of the average price for 2001 - 2010 which has adjusted medium and broad wool prices up, to match the effect of the wool stockpile during the 1990s.

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There are clear benefits from reducing the sale age of wethers, providing ewe numbers are increased in order to sustain flock productivity. The gains are substantial, but not so large that it is necessary to follow. Remember that, even if you continue to sell wethers at five years old, you still receive the benefits from the high sheep prices through the sale of the old ewes as well as the wethers. A change in flock structure means increasing the number sold but not the value of each category of sheep.

There are some important issues to consider before you make large scale changes to the flock structure including:

- More ewes mean more weaners. Keeping Merino weaners alive through their first summer provides headaches for most and migraines for some. Consider how you would successfully run more weaners through their first 12 months. There is no point in producing the lambs but then failing to get them through to sale age.
- Reducing wether numbers may result in reduced grazing flexibility in many flocks. Ewes cannot be treated the same as wethers, even though this analysis allowed for different DSE ratings. However, if you rely on wethers to utilise stubbles, for weed control, or for surviving on poorer quality pastures, don't expect to be able to do the same with the ewes.
- Ensure that you can get the younger wethers to minimum weight or condition. The live sheep trade is usually less demanding in terms of minimum liveweight as long as the sheep have sufficient condition. If wethers go straight to slaughter, the price will be directly related to liveweight. Once again, those flocks that use their wethers as buffers might not be able to get them to a sufficient liveweight by 1-2 years of age. If you run them easier so they can grow quicker, returns per head will increase but returns per hectare may decrease.
- How will you achieve the increased ewe numbers? In most cases the options are either retention of an additional age group or increased retention of young ewes, or some combination of both. If particularly old ewes or low quality ewes are retained, the returns will be lower, due to lower fleece value. Returns may also be reduced if ewes need to be purchased for a premium, or quality is not available.
- Fewer wethers mean greater demands on labour. Some people consider the labour requirement per DSE for ewes and wethers to be similar, while other flocks have much higher labour requirements for ewes. If your current labour resource is stretched to the limit, and more ewes means more labour, the additional cost of the labour will erode some of the advantages of younger weaner turnoff.

Case Study – Flock structure

Beryl and Bruce had been running a standard self-replacing Merino flock on their property. The wool was typical medium wool at 20-21 micron for the adults and 18.5 -19 for the weaners. Wethers were kept until 5.5 years of age and then sold to the live sheep trade or to Fletchers or Southern Meats, who usually paid premiums for heavy old wethers.

Last year, as they came into drought, they sold the oldest age groups of ewes as well as the two oldest age groups of wethers. They were in good condition and the money looked attractive compared to the cost of feeding them through the drought. It also meant the available dollars for feeding sheep would go further, particularly given the cost of grain at the start of the drought.

Looking at their options coming out of the drought, they liked the idea of continuing to receive \$50 or more per head for their surplus sheep. It looked pretty attractive to sell the wethers at a younger age, take the money, and increase the size of the ewe flock. Before they jumped in completely they crunched a few numbers to see if the high prices for those sheep would translate into additional returns across the whole flock. After all, it was going to reduce the number of wethers they had to shear, wool income would be down. The numbers they came up with after doing their calculations are shown in Table 9.5.

Table 9.5: Gross margin from selling wethers of various ages (\$55/head)

Age of sale	Gross Margin/DSE	% Income Meat	% Income Wool
1.5	\$37.92	37%	63%
2.5	\$34.17	30%	70%
5.5	\$31.40	22%	78%

Their figures showed quite clearly that they were better off increasing their ewe numbers and selling wethers at a younger age.

It would result in an extra \$6.50 per DSE or a total of \$26,000 over the 4,000 DSE they run, which should all go into additional profit. This was allowing for the additional rams they would have to buy. They didn't do the figures for wether weaners because they could see that it would not be possible to run a virtually all ewe flock. That would put too much pressure on the property, not to mention the management!

There was also the issue of which type of sheep they would run in the couple of pretty ordinary paddocks where the wethers were normally run. It was always considered to be good wether country and not really suitable for lambing ewes.

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At a pinch, they could get away with ewes but they certainly wouldn't be able to treat them the same as they would the wethers. It would mean running fewer ewes than wethers in the poorer paddocks.

The advantage of taking this approach was that they could reap the benefits from the high sheep meat prices while they were available. They were not too sure the high prices were going to last. The one lesson Bruce had learned was that high prices never last. He had even seen times when everyone thought things were so different this time that the good times were here to stay but, sure enough, something happened somewhere to bring prices back to where they normally were.

Therefore, the one thing Bruce was really strong on, was making sure they didn't burn their bridges just in case this was just another passing phase. If it lasted well and good, they will keep doing well out of it, but if sheep meat prices came back into line a couple of years after the drought, it would be pretty easy to swing back to their standard flock structure.

Despite the promise of attractive returns, there were a few issues that Beryl and Bruce realised required good planning to make sure the new system was going to work. The first was going to be managing the additional Merino weaners through their first summer – that was normally enough of a headache with a few weaners but there was now going to be at least 30 per cent more. That will mean careful planning of weaning paddocks, worm control and being prepared to feed if necessary. Also, some ewes would be run on wether country so they will need to be sure not to overdo those paddocks. That would mean keeping a close eye on ewe condition and being prepared to feed or adjust the numbers if necessary.

The other factor they would need to watch is to ensure the wethers are in good enough condition, that is, heavy enough to receive premiums in the market place. Traditionally, they hadn't worried too much about growing the wether hoggets as quickly as possible, because they had until five years of age to reach their final weight. They could do it with supplementary feed but that would be at a high cost and would erode some of the gains. Therefore the plan was to grow them out as best they could, aiming to sell them December-January off - shears which coincided with their peak liveweight through the year. They would not aim to be turning off fat sheep in autumn or winter when it was difficult to have fat sheep. That would ensure it would not become a high cost operation.

Overall, the increase in profit looked worthwhile pursuing and the risks were low. The key would be planning and managing to avoid the likely problems and adjusting management practices when and if required.

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