

Finishing Pastoral Lambs

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ABSTRACT

The Australian lamb industry is growing, both in the domestic and export sectors. Recently the West Australian Meat Marketing Co predicted a growth in demand for lamb meat of 50% in the next three years. Where will these extra lambs come from? Most of the pastoral regions of WA already produce large, healthy sheep, so it is possible to increase the production of prime lambs from stations. However, finishing lambs is not feasible in our pastoral regions, so it may be practical to finish these lambs in agricultural zones. This paper analyses the feasibility of such an enterprise and considers the economics of selling these weaners, agisting or profit-sharing and takes into account the costs of various finishing systems.

AIMS

To investigate the relative profitability of different finishing systems for pastoral lambs in the Northern Agricultural Region (NAR) and to compare the returns to pastoralists and producers in the NAR from different marketing systems.

METHOD

In this analysis four feeding systems were studied:

1. feedlotting; hay plus grain supplementation (growth rate 250g/hd/d);
2. pasture and grain supplementation (growth rate 125g/hd/d);
3. spring pasture only (growth rate 200g/hd/d); and
4. a combination of all four feeding systems to replicate annual forage production and the availability of different forages and growth rates over the year.

Data on lamb growth rates on different feed sources at different times of the year were used as the basis for this analysis ("The Good Food Guide for Sheep", Department of Agriculture WA, (2001)). Growth rates were assumed to be 250g/hd/d in the feedlot, 125g/hd/d on pasture and grain, and 200g/hd/d for spring pasture. The estimates for lamb growth rates are for Merino crossbreeds. In the analysis lambs arrive on property in the NAR at 35 kg liveweight and are finished and marketed at 55 kg at a dressing percentage of 43%. Feed intake is set at 3% of bodyweight and an allowance is made for intake to change as the lambs grow.

In the combination system, lambs arrive in the NAR in November and go directly onto cereal stubble, with some grain supplementation. On this type of feed, the lambs are estimated to grow at an average rate of 75g/hd/d. They remain on the stubble until January; then are fed oaten hay with grain supplements. The lambs stay on on this feed until mid-April when pasture begins to grow after the seasonal break and remain on pasture, with supplementation until late July when they are marketed.

Three different marketing systems were included in the analysis. The first is a traditional system, where the pastoralist sells weaner lambs on the open market. The second involved a marketing alliance, where the pastoralist sells weaner lambs directly to a producer in the NAR. The final system is a profit share arrangement, where the pastoralist maintains ownership of the weaner lambs until sale, but the lambs are fed on a property in the NAR that is not owned by the pastoralist. In the profit share system the profits are assumed to be split 1/3 to the pastoralist and 2/3 to the producer.

The analysis is based on a partial budget showing only variables that may change in the different feeding or marketing systems. Also, capital costs have been excluded; however, the opportunity cost of capital is included to account for cost of money due to the different lengths of time in each feeding system.

RESULTS

The economic comparisons of the feeding and marketing systems are presented in Table 1. Beginning with a comparison of the feeding systems, these results show that there are differences between feeding systems, but it is important to also keep in mind the length of time animals spend in that feeding system. For example, lambs in the feedlot grow at a faster rate than those in other systems; therefore, they spend less time in the system. The lambs in the feedlot generate a lower gross margin than do lambs in other feeding systems. The pasture-only feeding system generated the highest returns, as pasture is the cheapest forage to produce on a per kilogram of dry matter basis. However, it is important to note that lambs will only grow at the rates used in this study for a short

period of time, when pasture nutrition is highest during the spring. At other times of the year, the growth rates of the lambs would be lower and hence returns would also be lower.

Table 1. Returns to Pastoralist and Northern Agricultural Region producer for each feeding and marketing system.

Marketing System		Pastoralist			NAR Producer		
Feeding System	Days Fed	Traditional	Alliance	Profit Share	Traditional	Alliance	Profit Share
Feedlot	80	\$31.75	\$33.50	\$35.91	\$9.62	\$9.62	\$9.22
Pasture + grain	160	\$31.75	\$33.50	\$38.90	\$18.07	\$18.07	\$15.19
Pasture	100	\$31.75	\$33.50	\$40.90	\$24.45	\$24.45	\$19.19
Combination	212	\$31.75	\$33.50	\$36.25	\$9.79	\$9.79	\$9.89

When comparing the single feed systems to the more realistic combination system, the returns to the producer in the NAR are relatively low for the number of days that the animals are in the system. However, these returns can be increased by changing the feeding regimen to increase growth rates, to turnoff a heavier animal (and generate a market premium), or turnoff the animals at a younger age.

Comparing the marketing systems also provides some interesting insights. Firstly, in all feeding systems and the first two marketing systems, the returns to the pastoralist are identical, as the pastoralist no longer has any financial stake in the animals. However, the returns to the pastoralist are increased in the profit share arrangement, as the pastoralist retains ownership of the animals and changes in growth rates or final value are reflected in the return to the pastoralist. In all cases the pastoralist can reap a higher income by participating in a profit share arrangement. However, this higher income can be affected by variability in prices received for the final product and the costs of feed and other incidentals. If animals do not perform as expected the pastoralist may be worse off in a profit share arrangement than with the other two marketing systems.

From the table it can also be seen that the returns to the producer in the Northern Agricultural Region, in most cases, do not differ by any substantial amount, thus in each case the producer is really no better or worse off than any other marketing arrangement. The only difference is shown in the pasture-based systems where the feed costs are much lower than in the other systems. In these situations the NAR producer is better off finishing and marketing lambs using a more traditional marketing arrangement. In the profit share scenario, the pastoralist and the producer share the risks throughout the production process, whereas in the alliance or direct purchasing situations all of the risks are borne by the producer. In this case the difference in gross margins can be thought of as the risk premium paid by the pastoralist for assuming some of the risks of retaining ownership of the animals through to the final sale.

CONCLUSION

The results show that it is economically feasible to bring lambs out of the pastoral regions of WA to grow and finish them in the agricultural regions. The scale of returns to either producer or the pastoralist depends on the feeding system and/or the marketing system. Returns to the pastoralist are also affected by the costs of initially producing the lamb. These costs were not included in this analysis. In any case, the best choice for the pastoralist or the producer in the NAR depends on their individual preferences and the ability to establish either a profit share or an alliance-type marketing arrangement. Other costs and benefits, such as income deferral or taxation issues are not included but needed to be considered when deciding if undertaking one of the marketing methods discussed.

KEY WORDS

Pastoral, sheep, profit share, marketing, feeding systems.

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REFERENCE

“The Good Food Guide for Sheep”, Department of Agriculture WA, (2001). Bulletin 4473. Edited by K Croker & Peter Watt. Department of Agriculture WA.