

Bull beef: production per head or per hectare?

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Introduction

In January 2003, bull beef producers at Branxholme in southwest Victoria wanted to maximise profitability from their bull beef enterprise over the coming season. Due to the drought elsewhere, there was an unusual opportunity to purchase bulls at a range of weights. Given the current pasture supply, what was the risk of

failure to meet market specifications by the end of the growing season? Was it more profitable to maximise beef production per head by running bulls at a low stocking rate and aiming for bull beef market specifications of 550 to 750 kg liveweight, or was it more profitable to aim only for feedlot entry specifications (420 kg) and to maximise beef

production per hectare? Animals between the two specifications (feedlot entry and bull beef) are unattractive in the marketplace.

Methods

The decision-support tool GrassGro was used to explore the risks associated with each option and to calculate breakeven prices required for stock to be finished to bull beef specifications with supplement. The soil moisture, amount and quality of pasture, and initial liveweights of animals on the farm were described for 1 January 2003. Production risk was evaluated between January and December using local weather data from 1957 to 2002. A range of information was used to make a decision on the number of stock required. Local knowledge and market analysis were combined with GrassGro outputs of pasture supply and quality, animal growth rates, supplementary feeding, and the profitability and risk of

reaching the various target liveweights before pastures were likely to hay off in November/December.

Results

Given pasture supply in December 2002, the highest gross margin (\$747/ha) was achieved at a stocking rate of 2.5 bulls/ha, but less financial risk was incurred at a similar gross margin (\$717/ha) when the stocking rate was dropped to 2 bulls/ha. Meat production/ha was greatest at a stocking rate of 4 bulls/ha, but this was the least profitable option because of a penalty for failing to make specifications and additional supplementation costs.

References

- Moore, A. D., Donnelly, J. R., and Freer, M. 1997. GRAZPLAN: Decision support systems for Australian grazing enterprises. III. Pasture growth and soil moisture submodels and the GrassGro DSS. *Agricultural Systems* 55(4): 535–582.