INCREASING MEAT PRODUCTION AND RETURNS FROM CULL COWS

1. POOR CONDITIONED, NON-PREGNANT COWS

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Cull cows represent 30% of animals slaughtered in northern Australian abattoirs. Cattle producers in extensive areas of Australia are faced with a dilemma when selling cull cows. Most cows are generally in poor condition (<160kg carcase weight), with the better conditioned cows being pregnant (Ladds *et al* 1975). If sold immediately, most of these cull cows grade into the U.S. manufacturing meat market with poor financial returns to producers due to a combination of low carcase weights and depressed prices per kg of carcase weight. A profitable management option may be to transfer these cows to finishing pastures (eg Central Queensland) to increase carcase weight and finish.

Two experiments were performed to investigate returns on finishing

i) poor conditioned non pregnant cows (this paper) and
ii) pregnant cows and then selling either pre or post calving (Jeffery *et al* 1993).

In this experiment, four year old, non-pregnant cows in poor body condition were transferred from northern Queensland to Central Queensland for finishing. One group of cows (I) was slaughtered within two weeks of arrival at Brigalow Research Station, Theodore. The remaining cows were placed on frosted sown grass pastures without (P) or with (P+G) a grain ration (34% grain, 16% concentrates) for four months until slaughter. Mean grain intake for the fed group was 9 kg/hd/day over the feeding period. Liveweight and carcase weight changes, carcase fat depths and market grading suitability are shown in Table 1.

Table 1 Effect of paddock grain feeding on liveweight and carcase characteristics and market grading of cull cows.

Treatment	Turnoff liveweight (kg)	Live wt. gain (kg)	Carcase wt. (kg)	Calculated carcase wt change[1] (kg)	Dressing %	Rump fat depth (mm)	% Grading	
							MX[2]	Primal[3]
I	349	16	152	7	43.6	1.5	100	0
P	391	60	168	24	43.0	2.6	100	0
P+G	457	126	220	76	48.2	13.3	3	97

1 Estimate of initial carcase weight of cows based on actual carcase weight and dressing percentage of the initial slaughter group.
2 MX = manufacturing market grade cow carcase, grassfed, carcase weight - all, dentition 0-8, carcase fat depth - any.
3 Primal Cut grade = grassfed cow carcase, carcase weight - all, dentition 0-8, carcase fat depth _ 7-32mm.

Live weight and carcase weight gains of the P+G cows were two and three times those of the P cows, while dressing percentage and rump fat depths increased by 5.2 percentage units and 10.7 mm respectively (Table 1). There was a small increase in carcase weight and rump fat depth, but no change in the carcase grading suitability of the P cows (because of the low fat cover) compared to the I cows. In contrast, only one cow from the P+G group failed to grade into the primal cut market after four months of feeding. Both treatments increased the sale value of the cows over I, due to the increase in carcase weight at slaughter. Car-case values of the P and P+G groups increased by $43 and $161 respectively. A simple benefit:cost ratio analysis, based on the value of I and including interest costs at 12% and ration costs at $145/tonne, shows a positive response to P (4.37:1) and P+G (1.04:1) compared to I. The pasture only option would be more attractive to beef producers due to the lower cost of inputs, but fails to improve the quality and therefore marketing options of the carcases compared to the pasture plus grain treatment.

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