

A Case Study of Bull Beef Profitability From a Northern Australian Production System

S.A. Wainewright^A, A.J. Parker^A, W.E. Holmes^B, H. Zerby^C and L.A. Fitzpatrick^A

^AAustralian Institute of Tropical Veterinary and Animal Science, School of Veterinary and Biomedical Sciences, James Cook University, Townsville, Qld, 4811, Australia

^BDepartment of Employment, Economic Development and Innovation, PO Box 1085, Townsville, Qld, 4810, Australia

^COhio State University, 2029 Fyffe road, Columbus, Ohio, USA

Assessing the differences in gross margins of a Northern Australian beef production system was undertaken using Breedcow herd budgeting software (Holmes, 2009). The analysis reviewed the viability of producing grain finished beef for the domestic market from either steer or bull production. It was assumed bulls were either marketed under the current pricing model or marketed at the same price as steers.

The case study herd constituted of a 1200 cow breeder unit with an annual branding rate of 69%. The production system was broken into three sections; the pre-weaning or growing period, backgrounding and finishing periods. With no hormonal effect pre-puberty, it was assumed that there was no difference in performance between bulls and steers prior to feedlot entry. It was assumed bulls grew 16% faster and converted feed to liveweight 13% more efficiently than steers during the feedlot phase.

Under current market values it was more profitable to produce steers for the domestic trade in a northern Australian production system. If however, as argued in the literature that there are undetectable differences in eating quality between young bulls and steers (Woodward et al., 2000), an unfair bias may exist in the marketing of beef from young bulls produced in accordance with domestic specifications. When bulls were marketed at the same value as steers the model predicted the production of bulls would be \$29,455 more profitable than the production of steers.

Table 1. The combined gross margins of the growing, backgrounding and finishing phases of a bull and steer production system when the bull progeny are valued at the bull market price (i) or at the steer market price (ii) and steers are valued at the steer market price

	Steers	Bull (i)	Bull (ii)
GM for bull/steer growing phase	\$ 166,006	\$ 123,751	\$ 166,006
GM for bull/steer backgrounding phase	\$ 56,613	\$ 47,037	\$ 56,613
GM for bull/steer finishing phase*	-\$ 23,345	\$ 1,263	\$ 6,110
Total GM	\$ 199,274	\$ 172,051	\$ 228,729
Calculated AE rating over time	352	334	352
GM/AE	\$ 113	\$ 98	\$ 130

*Assume gross margin/hd is (i) \$3.52, (ii) \$17.02 and steers -\$65.03. The values shown are total values from 367hd less 2% mortality

Holmes W.E. (2009). Dynama Herd Budgeting Software (Version 5. DEEDI, Townsville, Australia)

Woodward B.W. Denise S.K. and Marchello J.A. (2000) *J. Anim. Sci.* **78**, 804.

Email: anthony.parker@jcu.edu.au