

Effects of early life nutrition of Brahman crossbred steers on subsequent feedlot performance

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A recent review (Ball *et al.* 1997) has highlighted the importance of nutrition in early life (the first six to twelve months) on subsequent growth rates of beef cattle. The present experiment used early-weaned Brahman crossbred calves, 3 to 4 months old, to study the effect of three planes of nutrition after weaning on subsequent growth rates under a feedlot finishing system.

The steers grazed unimproved native pastures, predominantly *Heteropogon contortus*, and were supplemented with a mixture (w/w) of crushed sorghum (77), cottonseed meal (14.2), urea (1.2), salt (0.5), bentonite (3), and minerals and vitamins plus monensin. Three levels of supplement were chosen to give growth rates of 0.3 (Low), 0.5 (Medium) and 0.8 kg/day (High) from weaning in April 1994 to December 1994. All steers then grazed native pastures until July 1995 when steers in the Medium and High groups were supplemented *ad lib.* with molasses plus 8% urea for 60 days, and then molasses plus 3% urea and 10% cottonseed meal until December 1995.

The High steers reached a target weight of 420 kg at 22 months of age and the Low group took 4 months longer. Each group then entered the feedlot when the group mean weight was 420 kg.

The growth rate of the Low steers in the feedlot was significantly lower when compared with the Medium and High groups. It was also observed that the carcasses in the Low group were more variable in weight i.e. there was a higher proportion of underweight carcasses.

These results show that Brahman crossbred steers need to gain a minimum of 0.5 kg/day during the immediate post-weaning stage to achieve optimum feedlot growth rates and consistent carcass weights.

The Cattle and Beef Industry CRC provided partial funding for this work.

Ball, A.J., Oddy, V.H. and Thompson, J.M. (1997). In: *Recent Advances in Animal Nutrition in Australia 1997*, pp. 192–208 (eds. J.L. Corbett, M. Choct, J.V. Nolan and J.B. Rowe). University of New England, Armidale NSW.

Table 1 Liveweight gains, kg/d, during feedlot finishing of early-weaned steers.

Treatment	Days 0–98	Days 14–98	Overall
High	1.63 ^a	1.49 ^a	1.59 ^a
Medium	1.56 ^a	1.46 ^a	1.56 ^a
Low	1.36 ^b	1.21 ^b	1.32 ^b
s.e.	0.06	0.05	0.06

Within column values followed by different letters are significantly different ($P < 0.05$).