

A production feeding system for Brahman crossbred cattle based on sugar cane by-products

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Market requirements for beef are increasingly demanding a younger more consistent product. To achieve younger turn-off in the northern environment, annual growth rates need to be boosted or the cattle can be fed to rapidly increase growth rate over a short three to four month finishing period. This experiment describes systems of production feeding which utilise locally available by-products from the sugar industry.

Forty Brahman crossbred steers (mean liveweight 406 kg) grazed unimproved native pastures (predominantly *Heteropogon contortus*) and one group was supplemented *ad lib.* with a mixture (w/w) of molasses (100), cottonseed meal (10), urea (3), salt (1) plus minerals and monensin with, in addition, 500g per day whole cottonseed. A further group was housed in a feedlot and also fed the same supplement *ad lib.*; these steers were offered 3 kg per day of roughage supplied as a commercially prepared alkali-treated bagasse pellet (Fibremax® Canefibre Products Pty Ltd.). This pellet contained 20% molasses. All steers were implanted with oestradiol 17β (Compudose 200®) at the start of the trial.

The unsupplemented steers grew at 0.19 kg/d which is higher than usual due to the unseasonal winter rain (growth rates are typically 0 to -0.3 kg/day at this time of year in the dry tropics). There was a significant increase in growth rate when steers were supplemented or lot fed. The growth rate of the steers in the feedlot is similar to that previously recorded in studies using *Bos taurus* steers (Sundstrom and Palmer 1977) which were pre-fed in the paddock for 14 days with molasses, whereas our steers were introduced to the ration in the feedlot. The bagasse pellet appears to be comparable to the grass hay used by Sundstrom and Palmer (1977) as a source of roughage. All steers remained in good health throughout the feeding period. This system offers the northern producer two options for earlier turn-off using locally available feedstuffs.

Sundstrom B. and Palmer W.A. (1977). Molasses Rations for Beef Cattle. Technical Bulletin 17. NSW Dept of Agriculture.

Table 1 Liveweight gain (LWG) of steers production-fed for 125 days.

Treatment	LWG (kg/d)
Native pasture only	0.19 ^a
Pasture + supplement	0.81 ^b
Lot fed	1.04 ^c
s.e.	0.06

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