

## Pre-weaning Growth Rates of Early and Late Castrates, Short Scrotum and Entire Male *Bos indicus* Cattle in Northern Australia

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The use of entire males or short scrotum bulls (SSB) in Australian beef production remains a poorly adopted practise. This is attributed to management difficulties and the consumer perception that meat from entire males and SSB is of lower quality compared to steers. This is despite the growing body of international evidence that suggests entire males and SSB grow at 27% and 20% faster than castrated animals (Kellaway, 1971). Differences in growth rates between entire males, SSB and castrates are rarely seen prior to 4-7 months of age, which typically coincides with the onset of puberty in *Bos taurus* animals (Bailey et al., 1966). Male cattle of *Bos indicus* decent however, do not reach puberty until a much later stage (Torres-Junior and Henry, 2005). The subsequent production of male hormones has an anabolic effect resulting in superior liveweight gains, most notably during the finishing phase.

High grade *Bos indicus* calves (n = 407) were sourced from a peninsula breeding property in Nth Queensland with an average weight of 90.27 kg. Calves were randomly allocated to one of four treatment groups (Early castrate, Late castrate, Short scrotum bull and Entire) at branding. Following branding calves were 'mothered up' and were grazed on extensive rangelands consisting of native pastures for the duration of the wet season (Nov-Mar). Given the severity of the flooding across the region weaning was delayed until June. At weaning the average Liveweight of all calves was 223.57 kg. There were no significant differences in liveweight (P > 0.05) between treatment means at weaning.

It is concluded that there is no difference in pre-weaning growth rates between entire, SSB and castrated male cattle. These results are attributed to a pre-pubertal effect. However, it is expected that a post-pubertal effect on growth will be seen between treatment groups.

**Table 1. Mean ( $\pm$  SEM) branding and weaning liveweights (kg) of early and late castrates, short scrotum and entire male *Bos indicus* cattle from northern Australia**

Treatment	n	Branding weight (kg)	Weaning weight (kg)
Control (early castrate)	110	90.03 $\pm$ 3.04	222.58 $\pm$ 3.55
Late castrate	107	93.40 $\pm$ 3.11	226.90 $\pm$ 3.03
Short scrotum	99	87.35 $\pm$ 3.37	221.50 $\pm$ 3.49
Entire	91	90.27 $\pm$ 1.65	223.13 $\pm$ 3.24

Bailey C.M. Probert C.L. and Bohman V.R. (1966). *J. Anim. Sci.* **25**, 132.

Kellaway R.C. (1971) *Aust. J. Exp. Agri. Anim. Husb.* **11**, 599.

Torres-Junior J.R.S. and Henry. M. (2005) *Anim. Reprod.* **2**, 114.

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