EFFECT OF CHAROLAIS CONTENT ON POST WEANING GROWTH OF BRAHMAN CROSS STEERS IN THE DOUGLAS DALY REGION OF THE NORTHERN TERRITORY

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As well as the benefits of heterosis, crossbreeding with European breeds can be used to produce leaner animals for live export, as breeds with larger mature size tend to be larger and leaner at any particular age (Amer *et al.* 1992). However, in harsh environments such as the Northern Territory, reducing the *Bos indicus* content results in animals that are more vulnerable to environmental stresses (Frisch and Vercoe 1984). The most productive animals in such environments will be those with the right balance of genes for growth potential (*Bos taurus*) and stress resistance (*Bos indicus*).

In 1996, Charolais genes were introduced into a Brahman herd at Victoria River Research Station with the aims of improving reproductive performance and producing progeny that would be leaner after export and finishing in SE Asian feedlots. Some of the progeny were transported to Douglas Daly Research Farm (DDRF) following weaning and aspects of their growth were monitored for a year post weaning to try to determine the optimum level of Charolais genes for the Douglas Daly region in the NT. The genotypes used were pure Brahman (Bra), and 3 Brahman/Charolais crosses, ⅛ Charolais (⅛ Cha), ¼ Charolais (¼ Cha) and ⅜ Charolais (⅜ Cha). After weaning in May, groups of 9 steers of each breed were allocated to 6 ha paddocks (1.5 head/ha) at DDRF. They grazed fertilised Buffel pasture and had access to mineral supplement blocks year round. They were weighed monthly and annual growth was calculated from fasted weights taken at the beginning and end of the year. Fat depth was measured ultrasonically at the P8 site in May at the end of the experiment. The experiment was repeated in a second year.

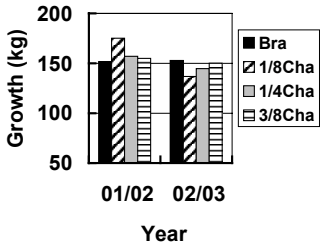

Figure 1. The effect of Charolais content on post weaning growth.

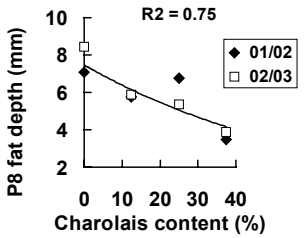

Figure 2. The relationship between Charolais content and P8 fat depth.

There was no significant difference between the different genotypes in growth in either year (Figure 1). This may be due to the small sample size (9 head/genotype/year), since P.E.R. Ridley (unpublished results) found that ¼ Cha steers grew significantly more than Bra steers in a larger experiment at DDRF. Other studies in central Queensland have found that Charolais x Brahman steers grew significantly more than straight Brahman steers (Rudder *et al*. 1975). In contrast, Figure 2 shows that there is a strong relationship between increasing Charolais content and decreasing P8 fat depth (r^2=0.75, P<0.05).

This work suggests that up to ⅜ Charolais content in Brahman steers does not significantly reduce growth in the top end of the Northern Territory, but does reduce fatness. This is useful information for producers who may want to target markets that have a preference for leaner cattle. However, it should be noted that in this study, the sample size was small, and the animals used represented a small selection of the Charolais breed.

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