

EXPERIMENTAL RESULTS

BREEDING OF DAM

A summary of the analysis of variance is given in Table 3. The adjusted mean square for breeding of dam was highly significant, the F value being 5.2. The adjusted means for dams of different breeding are shown in Table 4.

The heaviest weaning weights of calves were from cows of one-half Brahman breeding, with production being lower in cows containing less than one-half and those containing more than one-half Brahman breeding. This behavior suggests that hybrid vigor was evident in the F_1 cows. Native cows produced the lightest calves in this study. However, the numbers were small in this group. Figure 1 shows a group of native and grade cows, while Figures 2 and 3 are calves sired by Brahman bulls and Figure 4, calves sired by a Polled Shorthorn bull.

TIME OF CALVING

The estimated effect of time of calving, together with adjusted means, is shown in Table 5. Calves born during December, January and February were 14 pounds heavier at 180 days of age than calves born during March, April and May. This difference was highly significant.

INDIVIDUAL SIRE DIFFERENCES

The adjusted mean square for sire effects was non-significant when the F test was computed by using the residual as error for general inferences. The estimated sire effects, together with adjusted sire means, are shown in Table 6.

DISCUSSION OF EXPERIMENTAL RESULTS

BREEDING OF DAM

The weaning weight of the calf is a useful measure of a cow's yearly production, since this evaluation is obtained at the end of the period over which the cow exerts maximum influence on the growth of the calf. A cow influences the weaning weight of her calf by the genes transmitted, by nourishment provided in the milk and by other items of mothering ability. The environment a cow provides a calf probably exerts a stronger influence on the weaning weight of the calf than do the genes transmitted by the parents. This is because the major part of