

Station Ranch, New Mexico, were used. They found that bulls influenced the weaning weight of calves, which is in agreement with the results reported by Gerlaugh *et al.* (4).

TABLE 2.—WEANING WEIGHTS OF CALVES Sired BY ANGUS BULLS OUT OF GRADE HEREFORD AND GRADE HEREFORD X BRAHMAN COWS.

Breeding of Dams	Age of Calves (Days)	Weaning Weight of Calves (Pounds)
Grade Hereford x Brahman	240	465
Grade Hereford	235	444

Knapp *et al.* (9) in 1944, in performance testing of beef cattle, found that phenotypic characteristics of a bull are a poor indication of his breeding performance. They concluded that the productive ability of a sire is indicated by the weaning weight of his calves. On the other hand, Knapp and Black (11) in 1941 found that difference between progeny of different sires cannot be demonstrated by rate of gain during the period prior to weaning. Results of investigation by Gregory *et al.* (5) in 1950 were similar but they concluded the results were probably due to the limited number of bulls used and the small size of sire progeny groups available to evaluate the sires.

Gerlaugh *et al.* (4) observed that winter or early calves gained at a faster rate than calves born later in the season.

MATERIALS AND METHODS

The data used in this study were obtained from the weaning records of calves produced by the commercial herd at the Range Cattle Station during the period 1945 through 1951. This area is typical of much of the native grazing range found in central Florida. Native vegetation consists of wiregrass and various species of broadleaf paspalums, with a scattering of pine trees and occasional wooded areas of oaks. Beginning in 1946, improved pastures consisting of Pangolagrass and Bahiagrass were made available for limited grazing as a part of the pasture program.

The commercial herd consisted of grade Brahman, Hereford, Devon and Shorthorn cows. Purebred Brahman, purebred Shorthorn and crossbred Shorthorn x Brahman bulls were used in