Mexican Steers Having Brahman Influence Perform Well on Rangeland.... Sometimes

J.W. HOLLOWAY, B.G. WARRINGTON, AND B.H. SOYARS

Texas A&M Agricultural Research & Extension Center at Uvalde

BOTTOM LINE

Brahman ancestry was important to the growth of Mexican steers grazing south Texas rangeland only when conditions constrained performance.

Summary

- Daily gain by steers improved as percent Brahman increased to about 50% when range conditions were poor (supporting less than .5 lb per d).

- As range condition improved (supporting increasing levels of average gain for the group), Brahman influence became less important to individual steer performance.

- Apparently, Brahman influence allowed steers to gain faster on poor range conditions, possibly by contributing to hybrid vigor or by contributing to increased ability to use lowly digestible forages.

Introduction

An average of one million Mexican steers are imported into the USA each year. These steers vary greatly in breed composition and, often, are initially held on south Texas rangeland. At the time of importation, these steers are priced on the basis of a classification that is partially influenced by apparent percent Brahman ("eared" cattle are classified as Mexican grade #2 or 3 and discriminated against). This experiment was designed to evaluate apparent Brahman influence on performance on south Texas rangeland under varying conditions.

Experimental Approach

Performance of 1,367 steers imported from Mexico was evaluated during a 3-yr study. At the time of importation, Brahman influence was estimated according to phenotypic expression of ear size and position, hair length, size of thoracic or cervical hump, and pendulousness of sheath. Eight truckloads were imported in the fall, winter and spring seasons through the ports of El Paso, Presidio, Del Rio, Eagle Pass, and Laredo and handled through industry channels. They grazed south Texas rangelands on ranches near Spofford, LaPryor, or Eagle Pass, Texas. Dominant range species were Wright threeawn, buffalograss, and bristlegrass (grasses), and mesquite, twisted acacia, blackbrush, and guajillo (shrubs). Range varied in condition from fair to poor and was stocked at the approximate rate of 5-15 acres/animal. Steers were weighed at the beginning and end of grazing periods that lasted about 160 d. As a result of the variation in conditions over the duration of this experiment, daily gain for the various truckload lots varied from .18 to 1.1 lb per d. Regression analyses were used to relate estimated percent Brahman to steer gain over the variety of conditions studied. Mean daily gain for the truckload lots was used in these analyses as indicators of the quality of conditions that were sustainable under the prevailing conditions.

Results

Brahman breeding was advantageous only to steers that suffered the greatest limitation to gain. When range condition was low, and nutrition was limiting (and thus average gain for the truckload lot was low), daily gain improved as estimated percent Brahman increased to about 40%. Steers estimated to have no Brahman ancestry gained .3 lb/d, whereas those having 40% Brahman gained about .5 lb/d (Figure 1). As range condition improved (and average truckload gain was less limiting), estimated percent Brahman was less related to steer gain.

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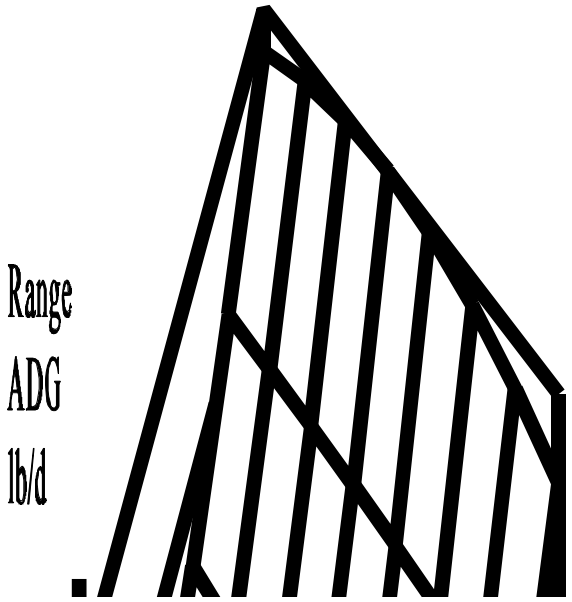

Figure 1. Influence of estimated percent Brahman and environmental conditions on steer growth (Range ADG is for individual steers, Average ADG is the average for truckload lots).