

Fast Preweaning Growth Results in Large Transit Shrink

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BOTTOM LINE

Preweaning calf management is an important factor in the estimation of transit shrink with management that effects greater weaning weights being associated with greater shrink.

Summary

- Weanling calves of similar genetics varied greatly in transit shrink.
- Much of this variation was related to pretransit weight with larger calves having larger percentage shrink.

Introduction

Transit shrink is an important component of the process of determining the price of calves at weaning. Often, cattle are priced on the basis of a “pencil” shrink. The degree that the estimated shrink is accurate determines the fairness of the price. The amount of transit shrink is influenced by the relative effects of rumen fill and rate of passage as well as the characteristics of the stresses occurring in transit. This experiment was conducted to study the effect of preweaning management on transit shrink.

Experimental Approach

One hundred seventeen calves (57 steers and 60 heifers) with a common genetic base of Brahman X Hereford F1 dams and Braford sires were reared under range conditions near Spofford, TX over a 3 yr period. Calves were out of first calving, 2-yr old females. Prior to weaning, they had been allowed one of four grazing pressure treatments ranging from 400 to 2800 lb forage DM/100 lb female weight. Stocking rate varied from 17 to 146 lb of female weight per acre (10 to 40 acres per cow). On the day of weaning (during Sep or Oct), they were weighed, held overnight and shipped to the USDA Grazinglands

Research Laboratory near El Reno OK (about 500 miles). Upon arrival, cattle were weighed and fed a receiving diet (12% CP, 3.54 Mcal/lb of Ne_m and 1.89 Mcal/lb of Ne_g) for 30 days.

Results

The average transit shrink for the 500 miles from Spofford TX to El Reno OK was 5%, but with a range from 1.5 to almost 8%. Regressing percent transit shrink on pretransit weight indicated that shrink increased .05 percentage units per lb increase in pretransit weight. Eighty-four percent of the variation in transit shrink could be attributed to variation in pretransit weight. Across all years, cattle on the highest stocking rate preweaning were 32 lb lighter pretransit and had .37% less shrink than calves on the other stocking rates. Figure 1 shows the calves pretransit weight for all three years and the percent shrink that occurred for each pretreatment and year.

Conclusions and Implications

Preweaning management of calves apparently impacts not only weight to be sold, but also transit shrink, possibly through indirect effects on gut fill and rate of passage of the digesta.

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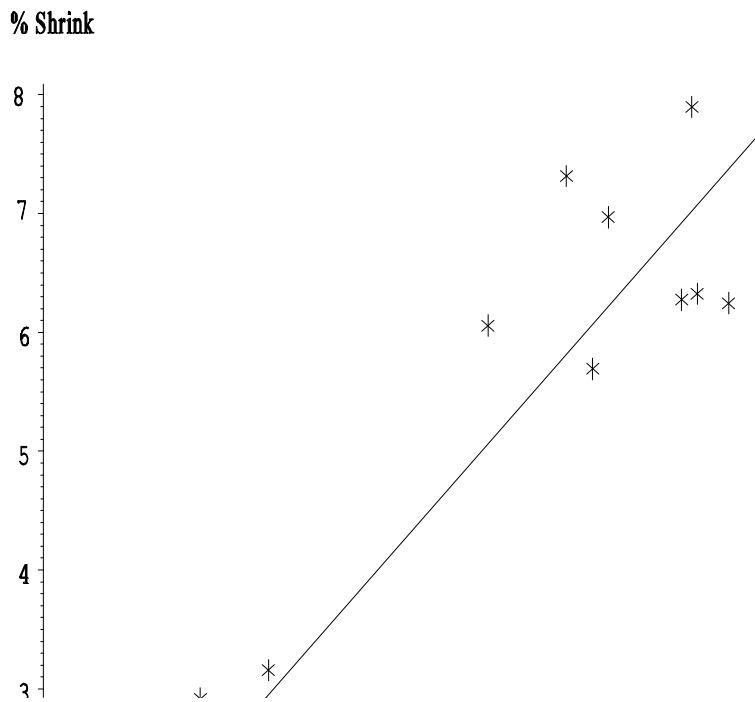


Figure 1. Percent shrink of calves based on pretransit weight shipped to El Reno, OK over a 3-yr period ($\% \text{ shrink} = -3.74 + .05\% \text{ shrink/lb}$).