

1-1-2010

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Kovarik, Luke M.; Luebbe, Matthew K.; Rasby, Richard J.; and Erickson, Galen E., "Effects of Time of Transporting Prior to Sale Date on Selling Weight of Weaned Steer Calves" (2010). *Nebraska Beef Cattle Reports*. Paper 568.

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Effects of Time of Transporting Prior to Sale Date on Selling Weight of Weaned Steer Calves

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Summary

An experiment was conducted using 88 weaned steer calves to evaluate shrink difference when shipped at differing times prior to sale date. Two groups of calves were transported 24 hours prior to sale date, with one group being withheld from water and feed 2 hours prior to sale while the other group was not restricted. Another group (control) was transported 2 hours prior to the sale. All cattle were transported 95 miles and co-mingled at the sale facility prior to processing. Percent shrink for +1-Adlib, +1-R, and Control was 1.8, 2.2, and 0.6%, respectively.

Introduction

Many factors such as diet, age, weaning status, and pen conditions can affect sale weight. The objective of this study was to evaluate effects of time of transporting prior to sale date on sale weight of weaned steer calves.

Procedure

Eighty-eight crossbred steers were held for 14 days at UNL's Dalbey-Halleck Research Unit near Virginia, Neb. Calves received 2.0 lb of dried distillers grains (DDGS) and free choice bromegrass hay during the weaning phase. To initiate the study, steers were randomly assigned to one of three groups. Calves in groups one

Table 1. Effects of shipping time prior to sale.

Performance Characteristics	Treatment ¹			SEM	P-value
	+1-R	+1-Adlib	Control		
Initial BW, lb	565	554	531	23.7	0.07
Final BW, lb	550	541	527	23.5	0.33
Shrink, lb	15.4	13.2	4.0		
Shrink, %	2.2	1.8	0.6	0.02	0.80

¹Treatments: +1-R = transported 1 day prior to sale and restricted for 2 hours; +1-Adlib = transported 1 day prior to sale and allowed *ad libitum* access to feed and water; Control = transported the day of the sale.

²Shrink = (final BW – initial BW).

³% Shrink = 1 – (final BW / initial BW).

and two were weighed on day 1 and day 2 of the study. On day 2, groups one and two were transported 95 miles to the ARDC research feedlot near Mead, Neb. Calves in group three (Control) also were weighed on days 1 and 2, but remained at the Dalbey-Halleck unit until they were transported to ARDC on day 3. On day 3, one group of calves at the ARDC was removed from hay and water at 0800 hr (+1-R), while the other group was allowed access to hay and water (+1-Adlib). When group three calves (Control) arrived at ARDC on day 3, calves in the three groups were co-mingled and processed. All three treatments received free choice bromegrass hay for the entire study. The weights recorded at processing were used as sale weights. Data were analyzed using the MIXED procedures of SAS.

Results

Initial BW did not differ ($P = 0.07$; Table 1) for +1-R, +1-Adlib, and Control. No differences were observed in final BW ($P = 0.33$; Table 1). Weight loss (shrink; $P = 0.80$) was 2.2%,

1.8%, and 0.6% for +1-R, +1-Adlib, and Control, respectively. Total weight losses from two days pre-mock sale date to the mock sale date were 15.4 lb, 13.2 lb, and 4.0 lb for +1-R, +1-Adlib and Control, respectively.

Shrink is a variable physiological process in which the contents of the digestive system are highly affected. In the present study the objective was to discover the amount of shrink recovered or lost in 24 hours at a new location for weaned calves that are preconditioned to eating hay and drinking water. We hypothesized that calves shipped one day prior to the sale would gain back the weight lost in the shipping process. However, in our data, calves shipped one day prior to the sale continued to shrink in the new environment. The +1-R calves shrunk more than +1-Adlib calves. The Control calves lost the least amount of weight.

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