

# Marketing Shrink Study

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Introduction: Cattlemen in North Dakota have rather limited options when it is time to market their livestock. Normally, these options would include selling on the farm to an order buyer or neighbor, shipping their cattle to a stockyard, buying station or commission house both in state or nation wide; or selling at a local or regional auction market facility. Whenever producers have less than "semi-truck" load groups of cattle to market they are forced to "pool" with other producers to market locally in order to avoid exorbitant transportation costs. However cattle are marketed, body shrink and selling price become of paramount importance and ultimately determine the size of payment received.

The Dickinson Research Center was asked to document body shrink and selling price when cattle are marketed at local "auction markets" based on the time of delivery prior to actual sale. Several factors that influence selling price include: the overall appearance and condition of the cattle; the amount of stomach fill; and the conformation and general health of the animals. In order to research this topic, cattle from the Dickinson Research Center Ranch Headquarters were marketed in two phases.

In **phase I**, eighty head of Charolais crossbred heifer calves approximately 8 ½ months old were marketed. These heifers had been weaned on October 18, and fed a mixed ration of corn silage, mixed tame hay, rolled barley and supplement, designed to promote gains of two pounds per day. On November 15, each heifer was individually weighed and paired with a similar heifer based on weight and type. One heifer in each pair was randomly assigned to be hauled to market the day before the sale (early) or hauled to market on the day of sale (late). On Wednesday, Nov. 15<sup>th</sup> after weighing and sorting, the (early) heifers were loaded onto livestock trailers and hauled approximately 26 miles to Stockmen's Livestock Market in Dickinson, ND. The (late) heifers were returned to their feedlot pens where they had access to feed and water until the next morning. On Thursday, November 16, these (late) heifers were individually reweighed, loaded on livestock trailers and hauled to Stockmen's Livestock Market.

Just prior to the time of the sale, both groups were sorted into uniform sale groups by employees of Stockmen's. The (early) and (late) market heifers sold one group following the other at 2:00 P.M. Both groups were sold in less than

twenty minutes.

**Phase II** of the marketing-shrink trial was conducted identical to Phase I except that steers were marketed instead of heifers. Sixty nine head of Charolais crossbred steers were sold on January 4, 1990. These steers had been weaned on October 18, 1989 and fed a backgrounding ration of mixed chopped hay, corn silage and barley plus supplement. On January 3, all the steers were individually weighed and paired with a similar steer of like weight and type. One steer of each pair was randomly assigned to the "early" treatment and the other steer was assigned to the "late" treatment and returned to the feeding pens. The "early" steers were loaded into stock trailers and hauled approximately 26 miles to Stockmen's Livestock Market in Dickinson. Upon their arrival at the market (approximately 12 noon), the steers were penned and given access to both hay and water, which is the normal handling procedure at Stockmen's.

The following day, January 4, the "late" marketed steers were reweighed, loaded into stock trailers and hauled to Stockmen's. Arrival time of the "late" steers was approximately 11:30 AM. Both groups of steers were sorted by yard employees into uniform sale groups just prior to selling. Both groups were sold one following the other starting at 12:30 PM. Both groups were sold in less than 25 minutes.

Discussion: After two marketings, the results have been similar. (see Tables 1 and 2) In both cases, cattle delivered on the day of the sale had less total shrink and returned more net dollars. In Phase I, heifers delivered on the day of the sale had a 1.88% shrink compared to a 5.62% shrink on those hauled in the day before the sale. They also averaged \$12.26 more (\$474.45 vs \$462.19) than the "early" heifers. Steers sold in Phase II performed much like the heifers. The steers hauled to market the day of the sale had 2.93% shrink compared to 6.47% for those hauled in the day before. They also returned an average of \$29.17 more than the "early" delivered steers. Due to the strong demand for cattle during both marketings, there was no noticeable price discount for the cattle delivered on the day of the sale because of body fill.

Summary: Based on the results of this trial, it appears that cattlemen could expect less shrink on their cattle if they were able to deliver their cattle on the day of the sale, preferably as close to sale time as possible. During periods of strong demand, buyers did not discount prices of cattle carrying a normal "fill". Cattle delivered on "sale day" returned \$12.26 / head more in phase I and \$29.17 / hd more in phase II than did the heifers and steers delivered to

the market the day before the sale.

It is planned to continue this trial in order to see if the results obtained this year can be repeated.

<b>Table 1.</b> Results of the marketing-study. Phase I - Heifers marketed at Stockman Livestock in Dickinson, ND.		
	Time of Delivery to the Market	
	Day before Sale (Early)	Day of Sale (Late)
Date sold	Nov. 15, 1989	Nov. 16, 1989
Number of heifers sold	40 head	40 head
Weight off the farm	23,972 lbs.	23,391 lbs.
Arrival time at the market	1:00 PM (11/15/89)	9:45 AM (11/16/89)
Time of actual sale	2:30 PM	2:30 PM
Hours at market prior to sale	25.5 hrs.	4.75 hrs.
Weight across the market scale	22,625 lbs.	22,950 lbs.
Total shrink	1,346 lbs.	441 lbs.
Percent shrink	5.62%	1.88%
Sale results:		
3 hd. Ave wt. 723# @ \$76.00	\$1,649.20	
14 hd. Ave. wt. 617# @ \$82.75	\$7,153.74	
21 hd Ave. wt. 512# @ \$83.00	\$8,926.65	
1 hd. Ave. wt. 585# \$71.75	\$419.74	

1 hd. Ave wt. 470# @\$72.00	\$338.40	
Total return	\$18,487.73	
Average return per head	\$462.19	
4 hd. Ave. wt. 721# @ \$77.25		\$2,228.66
20 hd. Ave wt. 592# @ \$82.75		\$9,805.88
15 hd. Ave. wt. 515# @ \$85.00		\$6,566.25
1 hd. Ave. wt. 490# @ \$77.00		\$377.30
Total return		\$18,978.09
Average return per head		\$474.45
Dollar advantage per head		\$12.26
Dollar advantage- Total		\$490.30

<b>Table 2.</b> Results of the marketing-study. Phase II - Steers marketed at Stockman Livestock in Dickinson, ND.		
	Time of Delivery to the Market	
	Day before Sale (Early)	Day of Sale (Late)
Date sold	Jan. 3, 1990	Jan. 4, 1990

Number of steers sold	35	34
Weight off the farm	27,630 lbs.	26,953 lbs.
Arrival time at the market	12:15 PM (1/3/1990)	11:30 AM (1/4/1990)
Time of actual sale	12:45 PM	12:45 PM
Hours at market prior to sale	24.5 Hrs.	1.25 hrs.
Weight across the market scale	25,840 lbs.	26,055 lbs.
Total shrink	1,789 lbs.	787 lbs.
Percent shrink	6.47%	2.93%
Sale results:		
11 hd. Ave wt. 808# @ \$85.75	\$7,627.46	
19 hd. Ave. wt. 741# # \$86.00	\$12,117.40	
5 hd. Ave. wt. 571# @ \$91.25	\$2,605.19	
Total return	\$22,350.05	
Average return per head	\$638.58	
26 hd. Ave. wt. 809# @ \$86.75		\$18,247.86
6 hd. Ave. wt. 650# @ \$89.25		\$3,485.21
2 hd. Ave. wt. 557# @ \$87.00		\$970.05
Total return		\$22,703.12
Average return per head		\$667.74

Dollar advantage per head		\$29.17
Dollar advantage- Total-(based on 35 hd)		\$1,020.60