



Cattle Producer's Handbook

Marketing Section

835

Shrinkage in Beef Cattle

Roger Brownson, Extension Livestock Specialist
Montana State University

When you are dealing with cattle sales, the highest price per pound does not necessarily mean the highest return per animal. The number of actual pounds involved may be more important, which is why shrinkage is a vital consideration.

Types of Shrink

Weight loss in cattle can be classified according to two types of shrink:

Excretory shrink or loss of belly fill. Animals held off feed and water for a 12-hour stand usually have only excretory shrink. It takes a relatively short period on feed and water to refill the stomach and bring an animal's weight back to normal if shrinkage was due only to excretory shrink.

Tissue shrink. Tissue shrink can be defined as a decrease in the carcass weight of the animal. Tissue shrink occurs on long extended hauls or during long periods of fast. It takes longer for animals to recover from tissue shrink than from excretory shrink.

These two types of shrinkage probably do not occur as two distinct phases of the shrinkage process. In the early part of shipment only excretory shrinkage occurs. At an undefined stage in movement both excretory and tissue shrinkage occurs simultaneously. During the latter part in transit, tissue shrinkage is relatively more important.

Price Adjustments for Shrink

Tables 1 and 2 are designed to make price adjustments to compensate for different shrinkage conditions.

Conditions Affecting Shrink

The loss of weight from an overnight shrink, or a 12-hour stand, will vary because of type of feed. Cattle on grass, wet beet pulp, or silage will generally shrink 4

percent, while fat cattle on concentrates will shrink from 2.5 to 3 percent if no feed or water is available. If feed and water are available free choice, morning weights of fat cattle will be about 2 percent less than evening weights. Range cattle not familiar with enclosures often shrink more than 5 percent when held in the drylot overnight. They are accustomed to running in the open and will be upset and nervous when penned up. This is especially true of calves cut off from their mothers and shut up for the first time. Also, cattle in a strange pen will shrink more than if they are in familiar surroundings.

In a recent study in Iowa involving 4,685 feeder cattle it was found that an average shrink of 7.2 percent occurred with cattle purchased from a rancher as contrasted to 9.1 percent from those purchased from a sales yard. These cattle were shipped varying distances, from 150 to 1,133 miles. It was found that there was .61 percent shrink for each 100 miles in transit.

A controlled experiment at the University of Wyoming showed that a considerable difference occurs in the shrink of feeder steers depending on the conditions to which they were subjected. Table 3 shows those differences.

Indications are a considerable difference exists in the amount of fill that individual animals will consume during different periods of the day. This explains, in part, the wide variation in shrinkage of individual animals.

Extreme hot and cold temperatures can affect shrinkage to a large extent but only things such as wind, rain, snow, humidity, and other wet weather conditions have more effect than temperature alone.

Calves that are both weaned and shipped at the same time shrink more than those that are weaned and adjusted to hay before they were shipped. Calves brought in from the range, taken from their mothers, vaccinated, and loaded for shipment all in the same operation have all