

# Shrink Happens

*Weight loss at shipping time is inevitable, but minimizing shrink is the best policy for both buyer and seller.*

Story by  
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Plenty of old-time cattle traders took pride in their ability to manipulate shrink. On the day they took delivery on a set of cattle, crafty buyers might find ways to submit cattle to excessive sorting. They might make sure the trucks would arrive late, so the cattle had to stand and wait. The objective was to increase the shrink — the weight loss that occurred before the cattle actually crossed a set of scales. Increased shrink meant a lower pay weight.

To compensate, some sellers used tricks of their own, like withholding water for a period of time. Then, just prior to shipment, cattle would be allowed to take on a big fill of water (and weight). Some shady characters might try to cheat on the shrink yet today, but savvy cattlemen are wise to such tactics. They do little to foster long-term business relationships.

“You can shoot yourself in the foot when purposely trying to manipulate shrink,” warns University of Kentucky Extension Beef Specialist Roy Burris. “You might make a few extra dollars today, but getting caught can cost you future business.”

And, according to Burris, the buyer who thinks it's clever to buy wrung-out cattle may find that he cheated himself. He paid less for the cattle than he might have, betting that he could recover that weight soon after he got them home and filled up with feed and water. It doesn't always work that way.

Shrink happens and, if excessive, it can cost both buyer and seller. However, understanding influential factors can help all parties manage

cattle to minimize shrink and price cattle fairly.

## Understanding shrink

There are two types of weight loss that occur when cattle are sorted, processed or hauled, or when they are held without feed or water for several hours. “Fill shrink” is the loss of rumen fill, which cattle expel as manure and urine. Experienced producers know that rates of expulsion tend to accelerate whenever cattle are worked. Some loss of fill is unavoidable, even when cattle are handled for relatively short periods.

“Tissue shrink” involves the loss of fluid from body tissues. It is more subtle, affecting cattle that undergo stress such as prolonged confinement in close quarters, rough handling or long hauls. And, some cattle, because of their nervous dispositions, are more prone to this effect of stress.

Fill shrink occurs first. Generally, any shrink less than 6% represents loss of fill, and the weight probably will be regained within 24-48 hours. Cattle that have been grazing lush pasture or high-moisture feed will experience more loss of fill than those that have been consuming dry feed.

Weight loss of more than 6% is attributable to stress-induced tissue shrink. It will take longer to recover this weight loss, particularly when cattle experience additional stressors at their destination, such as commingling with unfamiliar cattle, acclimation to a new ration or sickness. Tissue shrink can account for as much as 60% of the total weight loss, and cattle may require several days or weeks to regain their premarket weight.

Research suggests that for every



30 minutes cattle are moved about in a corral, about 0.5% weight loss can be expected. However, cattle will continue to shrink when left standing in a drylot, as when waiting for trucks to arrive or for their turn in the auction ring. According to Burris, cattle standing in a drylot for eight hours are likely to experience weight losses of more than 3%. Standing for 24 hours increases shrink to 6% or more.

“Transportation time has the greatest influence. A study has shown that eight hours in a moving truck results in 5.5% shrink. After 16 hours, cattle shrink 7.9%, and 24 hours results in 8.9%,” Burris explains.

“Nine percent is common after long hauls. That's pushing it to the point where it can seriously affect cattle health,” he adds, noting that as

shrink increases, so does the incidence of bovine respiratory disease (BRD).

## Adapting for prevention

Tom Moxley understands the importance of keeping shrink to a minimum. The Council Grove, Kan., stocker-operator buys 400- to 600-pound (lb.) calves to background and graze his Flint Hills pastures. Most are commingled bunches representing multiple herds in the southeastern U.S. He has developed good relationships with area order buyers who know his needs and wants. Still, he tracks cattle by buyer. Weighing calves upon arrival, Moxley sees how those weights compare with pay weights at points of origin. He weighs groups of calves again after 30 days to evaluate how

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well the cattle have recovered shrink and started to gain.

“If cattle from a certain buyer consistently show more than a normal amount of shrink, we avoid that buyer in the future — or offer \$3 to \$5 a hundred less for his cattle,” Moxley says. “The cattle might have been weighed into a sale

yard instead of as they came out, or maybe they stood in the sale yard too long after they were weighed. Whatever the reason, those cattle are worth less to me.”

But what is a normal amount of shrink? The experts generally agree that gross shrink of 2% is unavoidable, even if cattle are transported a very short distance. And, 3%-4% is more common. Those numbers are commonly used to calculate an

adjustment for shrink among cattle sold at private treaty. The buyer and seller recognize that some shrink is inevitable and agree to a specific percentage of “pencil shrink,” applying that to actual weights taken at the point of origin.

For example, suppose buyer and seller agree to a price of \$100 per hundredweight (cwt.), with a 4% pencil shrink. At the point of origin, the average weight of the

cattle is 800 lb. After calculating a 4% shrink, the pay weight is 768 lb.

Of course, the cattle should be managed to minimize weight loss prior to weighing, or the seller may lose money due to excessive actual shrink as well as pencil shrink. Moxley sells a lot of yearlings privately, right out of the pasture. He and his crew handle large numbers of cattle, so good, easily accessible facilities are a must.

“We make sure the pens and scales are ready to use, and we have cowboys that know what they are doing. It’s especially important with big bunches of cattle that take more time to gather, sort and load,” Moxley says. “While we’re handling them or while they’re just standing in the pens, those cattle are shrinking up to 1% per hour. On 800 head of 800-pound yearlings, that shrink could be costing over \$100 per minute. We want the trucks there when we’re ready to weigh and load.”

Moxley starts gathering early in the morning if he’s pretty sure shipping day will turn hot and humid. On more temperate days, he would prefer to wait until cattle have spent some time grazing. A Kansas State University study found that allowing cattle to graze until mid-morning not only adds weight, but also reduces the rate of shrink (0.86% per hour) during the first few hours after cattle are gathered.

Burris advises producers who sell cattle at auction to consider this strategy, too. Allowing cattle to eat in the early morning and delivering them as near to sale time as possible minimizes the length of time they will stand in the yards and shrink. This is especially applicable to calves being pulled off the cow on market day. Evidence suggests freshly weaned calves may shrink up to 8% when forced to stand in sale yards overnight. Generally, calves that have been weaned and preconditioned withstand stress better and should shrink less.

Burris says the exception to same-day delivery to an auction market might be the producer whose cattle must be trucked a very long distance. Bringing the cattle to town a day or two early gives them time to settle down, eat, drink and regain lost weight prior to sale day — assuming the cattle are accustomed to eating hay and they don’t refuse strange-tasting water.

Regardless of how cattle are marketed, the human factor will have an effect on shrink. Have facilities in good repair beforehand, then gather, sort and load cattle as quietly and smoothly as possible. Slow and easy handling generally is faster in the long run.

“Minimizing shrink is good business for buyer and seller,” Burris says.

“Anything we can do to have healthier cattle is better for both parties and the industry.”