

The Hidden Cost of Commodity Shrink

The purchase and use of bulk ration ingredients (commodities) is becoming more prevalent with the increasing availability and use of byproducts generated from the alternative fuel industry such as distillers grains. Commodity users must be aware of a common profit robber called shrink.

Shrink due to storage and handling losses can be substantial and yet, it is often overlooked. Shrink can exceed 15-20% on some dry commodities. Consider the following: if a commodity is purchased for \$150 per tonne and 200 kg are lost in shrink, the actual cost increases to \$187.50/tonne. Even at a loss of 5% on whole cottonseed at \$180/tonne, the true cost would be \$190/tonne—\$10/tonne more. At a 15% shrinkage rate, the same product bought at \$180/tonne would have a true cost of \$212/tonne—\$32 more per ton!

The greatest shrink occurs when commodities are improperly stored, not protected in commodity sheds, or are stored uncovered outside on bare ground. In many cases, bin storage of commodities or the purchase of commodities in pelleted form can reduce shrink although not all commodities have handling characteristics that allow pelleting for flowability in a bin. The table on the right shows estimated shrink in different storage systems for some commonly used commodities.

The cost of commodity shrink needs to be considered when determining the economic feasibility of including them in dairy rations. The storage system used can have a significant impact on the true cost of the ingredient. Additional considerations include monitoring of nutrient variability, moisture content of wet feeds, and proper nutritional fit in the ration. Watch out for 'good buys' as they may be someone else's rejected loads.

sources: ADM Alliance Nutrition, Dairy Performance Edge, Fall/Winter 2007; A.F. Kertz, J Dairy Sci 81:3075(1998)

Ingredient	Open, uncovered piles ---- estimated % shrink ----	Covered, 3-sided bays bays	Closed bulk tanks tanks ----
Alfalfa meal	7-15	5-10	2-5
Alfalfa, chopped	10-20	5-10	NA
Bakery waste	8-16	4-7	NA
Barley, meal	5-10	3-8	2-5
Barley, whole	5-8	4-7	2-3
Beet pulp, dried	12-20	5-10	3-5
Bran, wheat	15-28	6-12	2-5
Brewers grain, dry	12-20	5-8	2-5
Brewers grain, wet	15-30	15-30	NA
Concentrates, typical	4-5	4-5	—
Cottonseed, whole	10-20	5-15	—
Distillers grains, dry	15-22	7-10	3-6
Distillers grains, wet	15-40	15-40	NA
Dry meals, typical	5-10	3-8	2-4
Dry grains, typical	5-8	4-7	2-4
Middlings	14-22	4-9	3-5
Soybean hulls	12-20	5-10	2-5