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Comparing Feedstuffs for Livestock

Feed prices are constantly changing. One may be more economical now, but not the best option at another time. All producers should know how to compare feed costs and balance least-cost rations.

Feedstuffs are priced according to different units of measure: bushels, tons, or bales. Bales come in varying sizes and densities, so, the first step is to convert prices to the same unit, usually pounds or tons. Barley that sells for \$3/bushel is \$0.06/pound. A hay bale weighing 40 pounds, costing \$5 is \$12.50/pound. Lighter bales will increase the per pound cost of the hay.

Livestock feed rations are balanced on a "dry matter" basis. However, feedstuffs are priced "as-is," meaning that a portion of the feedstuff's weight is moisture. Because the dry matter content of feedstuffs can vary significantly, prices must be converted to a dry matter basis. This is especially important when comparing dry feeds like hay or grain with high moisture options like silage or haylage.

Livestock does not require certain feedstuffs; they require nutrients (protein, energy, minerals, and vitamins) in specified amounts. Feedstuffs vary considerably in the amount of protein, energy, and other nutrients that they contain. For this reason, the cost of providing a certain nutrient is the basis on which feedstuffs are compared.

To determine the cost of a nutrient, divide the feed's dry matter cost by the percent nutrient in the feed. Continuing with our barley example, the energy costs \$0.085/pound whereas the cost of energy in alfalfa hay is \$0.25/pound.

While grains have fairly consistent nutrient levels, forages and by-product feeds can vary drastically. In order to compare the cost of nutrients of some feedstuffs, you should have them analyzed to determine their nutritional content. For example, the protein in alfalfa hay can vary from 10 percent to more than 20 percent.

Cost is not the only factor to consider when evaluating feedstuffs. There may be limitations as to how much of a feedstuff can be fed. Corn silage is a very economical source of nutrients, but a high-producing animal may not be able to eat enough of it to meet nutritional requirements.

Feedstuffs are combined to create a ration that is nutritionally balanced. Care must be taken not to create dangerous imbalances. Some feedstuffs contain high levels of certain minerals, like dried distiller's grain and sulfur. Sulfur binds with copper and limits its absorption.

Feed cost also has to include delivery charges and waste. Some feeds have practically no waste, whereas others can have quite a lot. Feeding and storage methods have the largest effect on waste. Delivery charges are tacked on when feed is delivered to the grain bin by the feed supplier. If the ranch is hauling the feed, fuel is still a charge.

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