

Comparing Protein Costs

Clyde D. Lane, Jr., Professor and Warren Gill, Professor
 Animal Science

Producers need to compare the costs of available sources of protein for the beef herd. Costs need to be compared on a cost per pound of protein, not just cost per ton of feed.

The first step in comparing protein cost is to get the feed converted to an as fed basis. This is the way feed is purchased. To convert the protein content from a dry matter basis to an as fed basis, just multiply the percent protein by the percentage of dry matter in the feed. For example:

Calculate the protein content of corn gluten that is 25.6 % protein on a dry basis to an as fed basis.

Assume the corn gluten is 90% dry matter. Multiply the 25.6% by 90%. This will equal 23.04% on an as fed basis.

Now compare the cost of two protein supplements. Compare 48% soybean meal selling for \$260 per ton with 25.6% corn gluten that sells for \$150 per ton. The calculation to convert the corn gluten to an as fed basis has been made so the comparison can be made.

First determine the pounds of protein in each feed. To calculate this, multiply the percent protein times 2000 lbs (1 ton)

$$2000 \times .48 = 960 \text{ lbs crude protein in soybean meal}$$

$$2000 \times .23 = 460 \text{ lbs crude protein in corn gluten.}$$

Next calculate the cost per pound of crude protein. This calculation is made by dividing the cost per ton by the pounds of crude protein in a ton of feed.

$$\$260 / 960 = 27 \text{ cents per pound of crude protein in soybean meal}$$

$$\$150 / 460 = 33 \text{ cents per pound of crude protein in corn gluten feed}$$

In this example the lower cost per ton protein source (corn gluten feed) was actually the higher cost supplement when comparing on an actual cost per pound of protein. Each time a purchase is anticipated, make the calculation described above to get the best buy on protein. For additional information on calculating protein costs, contact the local Extension office.