

## Pricing Alternative Feeds

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Determining the relative value of alternative feeds can be a cost-saving strategy. Relative value is calculated from the value of the nutrients in the alternative feed as compared to a common feed.

First, a feed analysis of the alternative feed is needed. An actual laboratory analysis report for the feed is best, but NRC Composition Data of Selected Feed can also be used. Second, a price and feed analysis for a commonly available feed is needed.

The most expensive component of a livestock diet is energy. Energy is measured as either Mcals of NE or as TDN (total digestible nutrients). Price per pound of energy is calculated by adjusting the feed price to a 100 percent dry matter basis. Corn priced at \$2.50 per bushel (56 pounds) and 14 percent moisture would calculate:

$(2.50/56)/(100-14) \times 100 = \$0.0519$  per pound of corn on a dry matter basis.

Since corn is 90 percent TDN (dry matter basis), cost per pound of energy would be calculated as:

$\$0.0519/.90 = \$0.0576$  per pound of energy.

Relative value of alternative feeds can be priced according to the energy price of corn. If wheat middlings are 70 percent TDN and 10 percent moisture,

then:  $\$0.0576 \times .70 \times [(100-10) \times 100] \times 2000 = \$72.57$  per ton for energy only.

Wheat middlings have a higher crude protein percentage than corn, so credit for the additional protein should be added. Value of the additional protein is calculated relative to a protein supplement like canola meal (assumed price of \$175 per ton) as:

$\$175/2000/(100-13) \times 100/40.6\% \text{ CP} = \$0.2477$  per pound of added crude protein.

Since wheat middlings are 18 percent crude protein and corn is 9.8 percent, the additional crude protein is calculated as:

$2000 \times (.18-.09) \times [(100-10) \times 100 \text{ moisture}] \times \$0.2477 = \$36.56$  per ton.

If additional protein is needed in the diet, then relative value of the wheat middlings can be increased to \$109.13 per ton when corn is \$2.50 per bushel.

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