Determining Monetary Values of Feedstuffs

Pete Erickson, UNH Professor of Dairy Management and Extension Dairy Specialist

Concentrates are always a high proportion of the cost of a feed ration due to their contribution as primary energy and protein sources in dairy feeds. Dairy producers can use alternative feeds to: 1) reduce cost of the ration, and 2) replace some of the corn and soybean meal. A simple formula for determining feed value is presented here based on the market value of corn meal and soybean meal. To determine the value of an alternative feedstuff, you need to know the following: the cost/ton of DM, the CP content, and the TDN content of corn, soybean meal, and the alternate feed.

<table>
<thead>
<tr>
<th>Item</th>
<th>TDN %</th>
<th>CP %</th>
<th>Cost/ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn Meal</td>
<td>89</td>
<td>9.6</td>
<td>$ 242</td>
</tr>
<tr>
<td>Soybean Meal</td>
<td>81</td>
<td>48.0</td>
<td>$ 421</td>
</tr>
</tbody>
</table>

**Example:** Alternative Feedstuff = Barley

| Barley | 83    | 12.4 | $ 229    |

**To calculate value of barley, use the following equation:**

\[ A = \frac{[\text{TDN of corn meal} \times \text{CP of barley}] - (\text{CP of corn meal} \times \text{TDN of barley})}{[\text{TDN of corn meal} \times \text{CP of soybean meal}] - (\text{CP of corn meal} \times \text{TDN of soybean meal})} \]

\[ A = \frac{(89 \times 12.4) - (9.6 \times 83)}{(89 \times 48.0) - (9.6 \times 81)} - 306.8/3494.4 = 0.09 \]

\[ B = \frac{(\text{CP of barley}) - (\text{CP of soybean meal} \times A)}{(\text{CP of corn meal})} = \frac{(12.4) - (48.0 \times 0.09)}{9.6} = .842 \]

\[ \text{Value/ton of barley} = (A \times \$ \text{ per ton of soybean meal}) + (B \times \$ \text{ per ton of corn meal}) \]

\[ \text{Value/ton of barley} = (0.09 \times 421) + (0.842 \times 242) = $37.89 + $203.76 = $241.65 \]

Based on this information barley would be a good buy. For barley not to be a good buy it would have to be priced above $241.65/ton. The current price is $229, so barley can enter a ration, resulting in a cost savings for the producer, and replace some of the corn and soybean meal.
About the Author

Dr. Pete Erickson is Professor of Dairy Management and Extension Dairy Specialist at the University of New Hampshire. His primary research area is in the area of optimal colostrum production and management through feeding of the prepartum cow and the newborn calf. He also works in the area of calf and heifer nutrition along with the feeding of alternative feedstuffs.

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References

www.omafra.gov.on/ca/english/livestock/dairy/facts/03-005.htm

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