8-1-1996

Estimating the Dollar Value of Hay

E. Kim Cassel
South Dakota State University

COOPERATIVE EXTENSION SERVICE
SDSU
Extension Extra

ExEx 4013
August 1996
Dairy

SOUTH DAKOTA STATE UNIVERSITY / U.S. DEPARTMENT OF AGRICULTURE

Estimating the Dollar Value of Hay

by E. Kim Cassel, Extension dairy specialist

**"I have an analysis . . .
What is this hay worth to buy or feed?"**

This is a question being asked more and more due to more dairies buying hay, volatile grain markets, and adverse weather conditions. Hay is an important contributor of protein, energy, fiber and other nutrients to the rations of dairy cattle, from calves to lactating cows. As such, its dollar and feeding value can not be overlooked, especially when trying to maximize income over feed costs to enhance the overall profitability of a farm operation.

Kansas State University extension workers developed a spreadsheet that calculates the relative feed value (RFV) of a hay and its dollar value based on nutrient analysis and the prevailing market prices for corn and soybean meal.

The RFV of the hay is calculated from the formula used in Minnesota and Wisconsin. It is important to note crude protein is not a part of the relative feed value calculation.

The following are examples of output from this program:

Example 1.

Hay Analysis (dry matter basis):
- 85% Dry matter
- 18% Crude Protein
- 36% Acid Detergent Fiber
- 44% Neutral Detergent Fiber
- 129 Relative Feed Value

Hay Value ($/Ton as fed):

if:		
	corn $7/cwt, SBM $13/cwt	$116.00
	corn $7/cwt, SBM $14/cwt	$122.11
	corn $8/cwt, SBM $13/cwt	$123.26
	corn $8/cwt, SBM $14/cwt	$128.09

Example 2.

Hay Analysis (dry matter basis):
- 85% Dry matter
- 20% Crude protein
- 34% Acid Detergent Fiber
- 42% Neutral Detergent Fiber
- 138 Relative Feed Value

Hay Value ($/Ton as fed):

if:		
	corn $7/cwt, SBM $13/cwt	$125.36
	corn $7/cwt, SBM $14/cwt	$131.00
	corn $8/cwt, SBM $13/cwt	$131.09
	corn $8/cwt, SBM $14/cwt	$137.65

Example 3.

Hay Analysis (dry matter basis):
- 85% Dry matter
- 20% Crude protein
- 30% Acid Detergent Fiber
- 40% Neutral Detergent Fiber
- 152 Relative Feed Value

Hay Value ($/Ton as fed):

if:		
	corn $7/cwt, SBM $13/cwt	$130.66
	corn $7/cwt, SBM $14/cwt	$136.96
	corn $8/cwt, SBM $13/cwt	$137.61
	corn $8/cwt, SBM $14/cwt	$143.92

These examples clearly indicate the increased feeding and dollar value of hay as hay quality and the price of corn and soybean meal increase.

As hay quality improves from a RFV of 129 to 152, the hay increases in value approximately $15/T as fed whether corn is $7 or $8/cwt and SBM $13 or $14/cwt.

The "ideal" hay -- 20% CP, 30% ADF and 40% NDF -- ranges in value from $130.66/T as fed to $143.92/T as fed depending on the price of corn and soybean meal.

The dollar values generated by these examples are higher than typical Upper Midwest hay prices, which is a plus for the buyer but a minus for the seller. However, in years with high grain prices and a limited supply of high quality hay, the balance will likely shift from the buyer to the seller.

If you would like to obtain a copy of this spreadsheet program or have this program run for you, contact your county or state Extension office.

COOPERATIVE EXTENSION SERVICE
SDSU

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the USDA. Mylo A. Hellickson, Director of CES, SDSU, Brookings. South Dakota State University is an Affirmative Action/Equal Opportunity Employer (Male/Female) and offers all benefits, services, education and employment opportunities without regard for ancestry, age, race, citizenship, color, creed, religion, gender, disability, national origin, sexual preference, or Vietnam Era veteran status.

650 copies printed by CES at a cost of 7 cents each. August 1996.