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## High quality alfalfa in short supply - now what?

### Abstract

Wetter than normal growing and harvesting conditions have resulted in a short supply of high quality alfalfa. Because forage quality affects milk production in early lactation cows, dairy farmers are encouraged to consider other alternatives to feeding low quality alfalfa to high-producing dairy cows.; Dairy Day, 1993, Kansas State University, Manhattan, KS, 1993;

### Keywords

Dairy Day, 1993; Kansas Agricultural Experiment Station contribution; no. 94-149-S; Report of progress (Kansas Agricultural Experiment Station); 694; Dairy; Alfalfa quality; Alfalfa prices; By-products; Relative feed value; Forage

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## **HIGH QUALITY ALFALFA IN SHORT SUPPLY---NOW WHAT?**

*J. R. Dunham*

### **Summary**

Wetter than normal growing and harvesting conditions have resulted in a short supply of high quality alfalfa. Because forage quality affects milk production in early lactation cows, dairy farmers are encouraged to consider other alternatives to feeding low quality alfalfa to high-producing dairy cows.

(Key Words: Alfalfa Quality, Alfalfa Prices, By-products, Relative Feed Value.)

### **Introduction**

High quality alfalfa is an important ingredient in most dairy rations in Kansas because it is an excellent source of protein and highly digestible fiber. However, the quality of the alfalfa crop of 1993 is lower than normal because of the wet conditions during the growing and harvesting period. These conditions delayed harvesting; and, in many situations, caused field losses of leaves before the crop could be put into storage as either hay or haylage. Late maturity and leaf loss results in high-fiber, low-protein alfalfa that is less digestible. Thus, the quality of much of the alfalfa crop is lower than normal.

High quality alfalfa is usually considered to have a Relative Feed Value (RFV) greater than 140. A lot of alfalfa will have an RFV of 170 to 180. Because RFV is determined by the contents of acid detergent fiber (ADF) and neutral detergent fiber (NDF), much of this year's alfalfa will have an RFV of less than 140.

Because forage quality impacts performance, especially of early lactation cows, dairy farmers are encouraged to consider some alternatives to feeding low quality alfalfa.

### **Alternatives**

**Minimize Hay Feeding.** Because corn silage should be plentiful, feeding herds corn silage should minimize the amount of alfalfa fed. Rations composed of large amounts of corn silage usually require some hay to keep the dry matter content of the ration above 50 percent. A general rule of thumb is to feed at least 5 lb of dry hay with high corn silage rations.

Producers feeding herds mostly alfalfa hay or haylage should consider feeding minimum amounts of forage and maximum amounts of grain and other by-products.

For normal rumen function, the total ration should contain a minimum of 27 percent NDF or 17 percent ADF. By-products such as whole cotton seeds and soy hulls could be substituted for alfalfa to maintain adequate fiber.

Dairy farmers are encouraged to work closely with a nutritionist when formulating rations with minimum fiber. Care should be taken to buffer low fiber rations.

The amounts of by-products that may be substituted for forages are restricted. Because of the high fat content of whole cotton seeds, 6 lb per hd per day is the maximum recommended. Soy hulls should

be restricted to about 5 lb per hd per day because the fiber length is short.

**Split the Herd.** Where practical, herds could be split into early lactation and later lactation groups for feeding purposes. Because forage quality is more critical for early lactation cows, the high quality alfalfa could be allocated to them and the lower quality alfalfa to cows late in lactation.

**Purchase High Quality Alfalfa.** Just because a dairy farmer produces low quality alfalfa does not mean that it has to be fed on that farm. If all of the low quality alfalfa cannot be utilized by heifers and cows in late lactation, consider selling it to farmers with other classes of livestock and purchasing high quality hay.

Although high quality alfalfa will be relatively expensive this year, it can be a valuable ingredient for high-producing dairy herds. Table 1 shows the value of alfalfa hay for dairy rations as determined by K-State computer programs (HayPrice and Lact-Cow) . Price comparisons were made with corn and soybean meal priced at \$4.50/cwt and \$12.00/cwt, respectively. Average quality alfalfa hay was priced at \$85.00/ton.

Table 1 shows that a difference of \$35.36/ton between the lowest and highest quality alfalfa. This value is based strictly upon the difference in nutrient content. The high quality hay would be worth even more if the effect of feeding it on milk production could be calculated.

**Table 1. Value of Alfalfa Hay with Various Nutritional Contents**

ADF %	NDF %	RFV	Protein %	Value
40	50	107	16.0	\$77.64
37	47	119	17.5	\$86.48
34	44	132	19.0	\$95.32
31	41	147	20.5	\$104.16
28	38	164	22.0	\$113.00