

## ALFALFA HAY QUALITY FROM THE DAIRYMAN'S POINT OF VIEW

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All dairymen recognize that high quality alfalfa hay has many advantages over hay of lesser quality. It is worth more to them because:

- Cows give more milk due to higher energy content.
- 2. It has more protein so less is required in the concentrate mix
- 3. It is more palatable so cows eat more.
- 4. There is less waste.
- 5. Young stock make faster gains.

There are a number of factors that determine acceptable hay quality and they may be classified in this manner:

### Nutrients:

- (a) Crude protein should be between 17 percent and 23 percent on an as-fed basis. The total ration (hay plus concentrates) require a minimum of 13 percent C.P. for the production of less than 65 pounds of milk per cow daily and 14.5 percent for the production of over 65 pounds of milk
- (b) TDN should be between 53 percent and 56 percent for a cow in milk. Energy levels should be between 430 and 475 Kcal per pound of feed.
- (c) Crude fiber should be between 20 percent and 25 percent on an as-fed basis for proper milk fat production. The total ration must have a minimum of 17 percent crude fiber. Hay with crude fiber levels lower than 20 percent is not desirable for milking cows.

### 2 Physical Condition:

- (a) Stage of maturity is very important. Alfalfa leaves are low in fiber and contain about two-thirds of the protein. The highest ratio of leaves to stems occurs at prebud or early bud stage so cutting at this time will produce hay of maximum quality. As the plants mature, the stems become larger, the lower leaves fall from the plant and the proportion of leaves decreases resulting in protein decline and fiber increase.
- (b) Harvesting practices affect the leafiness and, therefore, the nutrient content of the hay. Excess handling of the hay when dry causes leaf shatter. Exposure to excessive dew or rain causes leaching of nutrients and loss of color, and excessive dust makes the hay unpalatable. Mold or spoilage that occurs in hay baled with too high a moisture content also causes loss of nutrients.
- (c) Foreign material in the hay may be dangerous as well as expensive. Wire or chemical residues may cause death or serious injury to the cow, grass or weeds reduces nutrient content, and dust, dirt, trash and mustiness affects palatability and increases waste.
- (d) Storage facilities that are adequate to protect the baled hay from the sun, rain and flood waters mean the difference between having excellent quality hay or trash available in some years. Protecting the quality of the hay is as important as producing it in the first place.

Dairymen recognize that it costs the grower more to produce a superior quality alfalfa hay. Cutting at bud stage or earlier obviously reduces the tonnage, shortens the stand life and increases weediness. This probably costs considerably more than the \$3.00 to \$6.00 difference between the grades of U.S. Number 1 and U.S. Number 2 leafy that is quoted in weekly California State Hay Market News. Dairymen are willing to pay more than that for the very high quality hay as the Hay Market News frequently reports that \$3.00 to \$5.00 premiums are being paid when this hay is available.

Dairymen are well aware of the increased production that results from feeding this superior quality hay, and they can quickly calculate how much more they can afford to pay per ton. For example, feeding 55 percent TDN hay instead of 52 percent TDN hay plus the additional concentrates to properly balance the ration may result in an extra two pounds of milk per cow per day. This could translate out to as much as thirteen cents per cow per day additional income over the extra feed costs -- which could mean that the dairyman may then afford to pay \$8.00 to \$10.00 premium per ton for the 55 percent TDN hay.

It may not be practical for the grower to cut his alfalfa quite as early as the dairyman would like -- at least until he can get more money than the present market allows. It is most desirable, though, that he cut as early as he possibly can. However, if the grower will do the best possible job of harvesting and baling at the proper time and storing the hay after it is cut, paying close attention to the elimination of all foreign material, he can still get top dollar from the dairyman for his hay.