

VALUE OF WINTER FORAGE CROPS FROM A NUTRITIONISTS VIEWPOINT

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Dairymen seek the advice of nutritionists about values of feedstuffs for their cows. Thus, the viewpoint of their nutritionist is an important factor in evaluating winter forage crops. Economic considerations are of major importance in this picture.

Winter forage crops fill a valuable place in the nutrition of California dairy cattle herds. As alternative sources of fiber, winter forages compete with alfalfa hay, corn silage and other fiber sources such as almond hulls, cottonseed hulls and the like. Cereal hays and silages frequently are offered to dairymen at prices that are economical in relationship to these competitive forage sources.

From the viewpoint of the dairy nutritionist, small cereal hays and silages are lower in energy concentration than corn silage, which is a disadvantage in feeding of lactating dairy cattle. On the other hand, the lower energy can be of advantage in the feeding of dry cows and replacement dairy heifers that are fed to appetite. These lower energy forages can help to avoid excessive weight gain compared to high energy corn silage.

Maturity of all forages affects feeding value. This also is the case with winter forages, but unlike with alfalfa hay, predicting the effect is more difficult. When maturity advances beyond the soft dough stage we generally feel that reduction of feed intake is a major nutritional consideration. Neutral detergent fiber (NDF) analysis gives us the best indication of how intake may be affected. Higher NDF levels lead to lower intakes. In contrast to winter forages, corn silage is more consistent in nutritional value over a wide range of maturities.

It is preferable from a palatability and ease-of-feeding standpoint to feed cereal forages as silage, rather than hay. Moisture level at the time of ensiling affects quality of the silage. Moisture levels exceeding 72% can result in fermentation pattern that lead to undesirable results such as butyric acid formation. Wilting of high moisture silage crops is therefore highly desirable. Conversely, excessive wilting to moisture levels below 60% can result in overheating during the fermentation process due to inadequate supply of moisture for fermentative organisms and/or due to unavailable air inclusion in the silage pit.

Winter forage crops are not complete diets for any group of cattle on the dairy, but must be supplemented with sources of protein, minerals and vitamins for well-balanced nutrition. For certain groups of cattle an energy supplement is also needed, especially if the maturity of the crop is greatly advanced and voluntary intake is reduced.

In recent years we have realized good success in using wheat silage as a substitute for corn silage in diets for lactating dairy cattle. In many cases this is because the wheat is cut at a relatively early stage due to desires on the part of the farming operation to follow as early as feasible with another crop.

Enhancement in the value of winter forages as a feed for dairy herds is dependent on more

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