

OPTIMUM USE OF FORAGES

by

Rick Lundquist, Ph.D.
Lundquist & Associates

Cool dry weather promotes the highest digestibility in forages, while warm wet weather produces the poorest quality forage. Unfortunately, warm, wet weather is the norm for much of the year in Florida. High ambient temperature promotes lignification, which decreases digestibility, and excess water has an even greater negative affect on digestibility. Increasing daylight, as occurs in the spring, promotes sugar production. As daily temperature increases, the sugars and other carbohydrates are converted to less digestible products and lignin. Excessive rainfall accelerates this conversion.

Because of the scenario described above, our best forages will be grown in the winter and spring, regardless of forage variety. Our best feeding strategy is to utilize forages grown during this time, such as corn silage, small grain silages and first cutting grasses, as much as possible for our high producing and fresh cows.

Lower quality forages grown during the summer months would be best utilized for lower producing cows and dry cows. Because of the unavoidable effects of weather on digestibility of summer forages, reducing time between cuttings will produce the best quality possible.

We can get high milk production with low quality forages by feeding more grain. But cow health may suffer because of the potential for acidosis. Byproducts that supply fiber, such as citrus pulp, soyhulls and whole cottonseed help when forage quality is low. Ideally, we should not have to "overcome" our forages in the ration. We would like to be able to maximize the use of forages without having to give up production. We can best accomplish high production and good rumen health by feeding high quality forages.

Cottonseed hulls have been commonly used as a fiber source in Florida. They can supply adequate fiber, but only with a large decrease in energy density of the diet. Cows tend to eat more dry matter on cottonseed hull based diets, so feed efficiency is often reduced. However, cottonseed hulls do have an advantage over silage when feeding in shallow troughs because they reduce the bulkiness of the ration and decrease waste caused by overfilling troughs.

Many Florida producers feed alfalfa hay imported from Idaho and other western states. Quality is as important with alfalfa as it is with our homegrown forages. Palatability is greatly affected by alfalfa quality. Because of the cost, most Florida dairy producers use alfalfa to supplement homegrown forages and to supply effective long fiber in the ration. If quality is poor, cows tend to separate the alfalfa from the TMR and select concentrate instead. This causes fiber imbalances. Keeping adequate moisture in the TMR (40 - 45%) will help to reduce separation.