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AN UPDATE ON THE FLORIDA FORAGE TESTING PROGRAM

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Perennial grass pastures typically become dormant during the winter resulting in reduced forage availability. The recent cold weather has killed most of the top growth causing the forage to become very low in quality. During the winter when pasture availability and quality become limiting and will not meet the requirements of lactating cows or developing heifers, supplements such as hay, molasses mixtures and dry feeds, will usually be fed. Before proper feeding programs can be developed, protein and TDN content of the supplemental feeds, in addition to protein and TDN requirements of the animals must be known. Lactating cows and developing heifers require a diet that is 10-12 percent protein and 55-65 percent TDN. Protein and TDN content of supplemental feeds such as molasses-urea or a dry feed will be provided by the feed company, but protein and TDN content of the hay probably will not be known. Quality of the hay is important because most of the protein and TDN that cows or heifers consume will come from the hay. Hay or silage samples can be sent to the University of Florida Forage Testing Laboratory for quality analysis.

The purpose of the Florida Forage Testing Program is to provide fast and accurate quality analysis of forage samples for livestock producers to assist in planning balanced and economical feeding programs. The entire state of Florida can now submit samples for analysis. Hay, silage and haylage from tropical grasses such as bermudagrass, stargrass, limprograss (*Hemarthria*), digitgrass (*Pangola*) and bahiagrass can be submitted for analysis. Corn and sorghum silage can also be analyzed. Legumes such as alfalfa and alyce clover can also be submitted. Perennial peanut hay and silage samples can be analyzed.

Forage samples should be submitted in a forage testing kit. Forage testing kits can be obtained from county extension agents. Each kit contains a plastic bag, a sample

information sheet and a cloth bag to mail the sample. A representative hay sample should be taken with a Penn State Forage Sampler, and many extension agents have these. Ten to 20 bales should be sampled to obtain a representative sample. If a sampler is not available, a handful of hay from 10 to 20 bales should be taken and mixed together. Representative silage samples should be taken. The sample information sheet should be completed, including information concerning species, weeks of regrowth and additives, and placed into the envelope which is attached to the cloth bag. A fee of \$8.00 per sample should also be included. The sample should be sent to: Agricultural Research and Education Center, 3401 Experiment Station, Ona, Florida 33865.

Upon arrival at the research center, the sample is dried in an oven to determine moisture content. The sample is then ground and placed into the near infrared reflectance spectrophotometer (NIRS) for forage quality analysis. The NIRS machine is used so that results can be obtained rapidly. Results are returned within two to four days after the sample arrives at the laboratory.

Results include moisture content, crude protein (CP) concentration, total digestible nutrients (TDN), neutral detergent fiber (NDF) concentration and a quality index. The NDF and TDN results are used to develop the quality index which is an estimate of the intake potential of the forage. These results can be used to determine the proper level of supplemental feed to provide to the class of cattle being fed.