Last month's article discussed nutrient and dry matter losses from round-bales of hay stored uncovered in the field. With weathered hay, not only is there a 25-30 percent loss of nutrients, but another 30 percent of the remaining hay dry matter actually fed will be refused by cattle because it is unpalatable.

In the 1980's Dr. Bill Brown evaluated a procedure at Ona by which low-quality hay was treated with anhydrous ammonia. To ammoniate, the hay is stacked in a 3-2-1 pyramid and covered with a plastic sheet. Anhydrous ammonia is then applied under the plastic at a rate of 4% of the hay dry matter.

Dr. Brown's studies showed that ammonia treatment gave the best response when treating low-quality hay. It increased crude protein content from 5% to 12% and digestibility from 40 to 55%. Compared to untreated hay, ammoniation increased hay intake 30 to 80% and increased weight gains over 0.5 pounds per head per day when fed to yearling cattle.

One rancher in central Florida started selling his better quality stargrass hay to area cattlemen and dairies. He then cut, baled, and ammoniated bahiagrass hay to feed his own cattle. He felt that ammoniated bahiagrass hay was at least equivalent to well fertilized stargrass hay.

It has been observed that there is little wastage of hay treated with anhydrous ammonia compared to untreated hay. It is apparent that cattle relish any forage treated with ammonia. Although weathered hay was not used in feeding studies conducted at Ona, commercial cattlemen that have used this technique report
that the ammoniation of weathered hay greatly improved its feeding value and palatability, reducing wastage to practically zero.

The cost of treating hay with anhydrous ammonia is $15 to $20 per ton or $6 to $8 per 800 pound bale. At this price it is cost effective to treat low quality or weathered hay with ammonia considering the proven increase in hay quality and animal performance, and the reduction in hay wastage.

The procedure for treating hay with anhydrous ammonia is outlined in detail in UF/IFAS Bulletin 888, authored by Drs. Bill Brown and Bill Kunkle, and entitled "Improving the Feeding Value of Hay by Anhydrous Ammonia Treatment." The publication can be accessed on the UF/IFAS EDIS internet site http://edis.ifas.ufl.edu/.

For questions or comments regarding this publication contact Findlay Pate.