

ONA REPORTS

published in

THE FLORIDA CATTLEMAN AND LIVESTOCK JOURNAL

October-1997

Results of On-Farm 1996-97 Hay Ammoniation Demonstrations In Florida

By William F. Brown

University of Florida, Range Cattle REC



For questions or comments regarding this publication contact [William F. Brown](mailto:William.F.Brown@ufl.edu)

The past year's use of ammoniated hay developed to a commercial scale and not a research/demonstration project coordinated by the University of Florida. In past years, we were aware of most ranches in south Florida using ammoniated hay, because we assisted with ammoniation procedures or delivery of anhydrous ammonia. In most cases, hays were sampled before and after ammoniation, and forage quality analyses were conducted to demonstrate the response of ammoniating hay. As private companies became involved, and ranchers purchased anhydrous ammonia nurse tanks, more people are ammoniating hay, but we have not received as many untreated and ammoniated hays for quality analysis. For these reasons, a description of hay ammoniation procedures will not be provided in this article. If you have never ammoniated hay, and would like to try, please contact me. Publications are available under the "Publications" section of our World Wide Web site, located at <http://www.ifas.ufl.edu/~ona/onahp.html>.

Franklin and Bill Copeland (phone: 904-462-1596) are major suppliers of anhydrous ammonia in central and south Florida. They own a 20-ton capacity transport tanker, and many 2-ton capacity nurse tanks. They will deliver ammonia to your ranch, and pick up the empty nurse tank when you are finished. For the 1997-98 season, they will park their 20-ton tanker at a central location, service people in that area, then move the tanker to another location, and service people in that area. This will require organization, and you should contact the Copelands early so that a schedule can be developed. The Range Cattle Research & Education Center - Ona also has a nurse tank that you can borrow at any time.

A company with a consistently low price for plastic is First Line Corporation in Valdosta, GA (phone: 800-765-9629). A 40 foot by 100 foot sheet of 6-mil thickness black plastic will be approximately \$70.00 per roll this fall and winter, which is about \$5.00 cheaper than last year. The minimum purchase is one pallet containing 8 rolls, and shipping is

free. If you do not need 8 rolls, I can put you in touch with another person who also needs a partial order. Plastic can also be purchased from most hardware supply stores.

The potential toxic effects of ammoniated hay should be reviewed. During the winter of 1996, two ranches that I am aware of experienced symptoms in cows and calves fed ammoniated hay. In very rare and isolated cases, a toxic compound is formed during the ammoniation process. The identity of this compound is unknown, and appears to form at the time ammonia is injected into the hay stack. Early research suggested that forages high in moisture or sugars, or higher levels of ammonia treatment contributed to formation of this compound. Recent studies indicate that high environmental temperatures at the time ammonia is injected into the hay stack contribute to this problem; therefore, high forage moisture may contribute indirectly because wet hay goes through a heat. Currently, there is no way to predict if this compound will develop, and no way to determine if the compound exists in the hay prior to feeding. Symptoms of this problem include nervous disorder, with cattle running in circles or through fences, heavy breathing, or excessive urination. Some deaths, either shortly after birth or still-born, have been reported in calves from cows fed ammoniated hay. This problem is very rare, but should remain in your mind as you decide which, and how much hay to treat with anhydrous ammonia. We suggest that ammonia be injected into the hay stack at night to reduce the effects of high environmental temperature.

We are in the process of developing a Hay Ammoniation Newsletter which will summarize items such as hay ammoniation procedures and results from laboratory analysis of untreated and ammoniated hays. If you would like to be included on the mailing list, please contact me (phone: 941-735-1314).