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Results of On-Farm 1 993-94 Hay Ammoniation Demonstrations in Florida

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Over the past five years we have assisted ranchers in Florida with anhydrous ammonia treatment of their hay. This article presents hay ammoniation results from several ranches during 1993-94, and summarizes comments made by ranchers who have fed ammoniated hay.

Availability of anhydrous ammonia has limited the widespread use of hay ammoniation in south-Florida. Now a company near Lakeland is supplying anhydrous ammonia to livestock producers. They own several nurse tanks, and will deliver ammonia to the ranch. The Ona Research Center, has a nurse tank mounted on a gooseneck trailer that ranchers can borrow. When using our tank, ammonia can be obtained at Port Sutton, about five miles south of SR-60 on US-41 near Tampa.

Dan Sumner, cattle manager of Bay View Farms near Ruskin, has utilized ammoniated hay in their commercial cow-calf operation for four years. Their operation is within 20 miles of Port Sutton, and they purchased an anhydrous ammonia nurse tank for use in their hay production program. Dan ammoniates rain damaged weathered hay, allowing him to utilize something that otherwise would be wasted. Dan bales and ammoniates frosted old-growth from their bahiagrass pastures and from pastures on nearby ranches. They produce good quality hay for sale to dairies, and ammoniate the low-quality bahiagrass forage for their own use. Dan says there is better consumption and much less waste of ammoniated bahiagrass hay than untreated bermudagrass hay they produce. Also, cattle tend to consume less liquid supplement when ammoniated hay is fed.

Dave Partin from Kenansville uses ammoniation to improve the quality of their bermudagrass hay. Dave says that hay can be baled sooner than normal with slightly more moisture if the hay is to be ammoniated. The ammoniation process eliminates spoilage and mold growth. He also finds greater hay intake with much less waste when

ammoniated hay is fed. Dave states that they use less supplement when ammoniated hay is fed.

Charles Clark, located near Haines City, used ammoniated hay for the first time in 1993-94. He fed ammoniated hay plus a natural protein block to replacement heifers, and was pleased with their body condition this spring. He says that the amount of labor required to stack and cover hay with plastic was only slightly more than the amount of labor normally required to gather untreated hay out of the field. Charles says he will ammoniate hay this fall, especially with a company that delivers ammonia to the ranch.

Ranchers sampled their hay before and after ammoniation and lab results are listed below. Initial hay quality was low, and typical of most hay produced in Florida. Anhydrous ammonia treatment increased the crude protein (CP) concentration of all hays. Total digestible nutrients (TDN) in the hays were increased by approximately 10 units due to ammoniation. All ranches reported that cattle consumed ammoniated hay better than untreated hay with less waste. If differences in hay waste are accounted for, ammoniation costs are reduced 30 to 50 percent.

We have prepared a publication detailing ammoniation procedures, associated costs, and results from experiments conducted over several years. If you have further questions, or would like assistance with ammonia treatment of your hay please contact me at (813) 735-1314.

		Crude protein		Total digestible nutrients	
Ranch contact,	Grass				
Location	species	Untreated	Ammoniated	Untreated	Ammoniated
Charles Clark	Bahia/				
Haines City	Bermuda	6.0	17.5	40	51
Burntwood Ranch					
Lakeland	Bahia	5.8	14.9	45	57
Elmer Taylor					
-Arcadia	Bahia	7.3	18.8	45	55
Ona-AREC	Star	6.2	15.7	48	57
Dan Sumner					

Ruskin	Bahia	5.0	13.8	45	56
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