

APPLICATION OF SYSTEM CONCEPTS IN COW-CALF MANAGEMENT

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The problems I have encountered in recent years with regards to producing good quality forage for winter supplement are not unique. The problem was not forage quantity, but quality. The dry hay we produced in the past failed to provide the supplemental energy and protein our cattle needed during the winter months. The problem with producing good quality dry hay in Florida is the fact that the weather, which supports lush pasture growth early in the summer, prohibits the rapid drying necessary for hay preparation. This in turn would result in drying times in excess of a week, and/or pasture isolation until mid-October when the production of cured hay was feasible.

The round bale silage system has allowed me to harvest six to ten week maturity forage at high moisture levels and preserve it as silage for optimum quality and yield. Since adopting this system in 1988, the biggest advantages have been little or no rain damage, decreased field losses (2nd and 3rd cuttings allow you to decrease overall acreage needed for forage production), decreased protein supplement, 2 to 3 cuttings of bahiagrass are possible with only one late spring fertilization, excellent palatability, decreased waste and most importantly forage quality dictates harvest scheduling.

The production of round bale silage varies little from that of conventional hay; however, some equipment modification is needed. We begin cutting at about 7:00 a.m., using a Lely reel cutter, and cut approximately 5 to 15 acres, never cutting more than can be baled in that day. The cut grass is then put into wind-rows using a Ford hay rake and we begin baling at 11:00 a.m., allowing a wilt time of approximately 4 to 5 hours; i.e., we bale in the order the grass was cut to allow a uniform wilt

throughout. We use a model 848 New Holland Baler that produces a 48" x 52" bale weighing approximately 1300 to 1800 lbs., depending on forage dry matter. The bales are then wrapped in the field, using System Bee connected to a 4440 John Deere, where they remain until an appropriate time for stacking is available. It takes us approximately 90 seconds to approach, pick-up, wrap and leave the bale, having applied four layers of stretch film per bale. For storage we haul eight bales at a time from the field (two on the tractor and six on a conventional hay trailer) to a small open lot where the bales are placed 4 to 6 inches apart. A John Deere 3240 with a bale grasper (Hay Van) on the front and hay forks on the rear are used for moving and stacking. This method decreases bale/plastic trauma during moving from field to storage site.

An anaerobic environment must be maintained within the bale for production of good quality round bale silage. We have used various types of plastics (stretch polyethylene) in the past and have found no superior brand. However, some more than others do seem to resist UV damage better, but complete plastic deterioration has not been a problem nor has rodent damage.

Feeding is similar to conventional hay except for the removal of the plastic. Our cattle do very well on the round bale silage, they spend less time at the bale versus cured hay, and our winter protein supplement has decreased approximately 50%. Palatability is excellent and bale waste is negligible. We do not use silage inoculants and recent results on bahiagrass protein content ranged from 9.5% to 13.5%.

I feel there are many advantages of the round bale silage system that make it a necessary

component of our winter feeding program. With an initial investment and annual plastic costs, we are producing optimum quality forage for winter supplement with excellent results and unequaled cattle performance.