



Cooperative Extension Service

Institute of Food and Agricultural Sciences



RANGE CATTLE REC NEWSLETTER

April, 1999 - Vol. 2, No. 2



Calendar Of Events

May

5-7	Beef Cattle Short Course. Sheraton, Gainesville, FL. Ph:352-392-1916.
10-12	International Conference on Livestock in the Tropics. Holiday Inn West Hotel, FL. Ph: 352-392-1911.
11-13	Annual Beef Cattle Reproduction Management School, Wauchula, FL. Ph: 941-993-4846.

June

8-10	Forage and Pasture Management School: Session I. Sebring, FL. Ph: 941-386-6540.
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July

13-15	Forage and Pasture Management School: Session II. Sebring, FL. Ph: 941-386-6540.
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August

13-15	Forage and Pasture Management School: Session III. Sebring, FL. Ph: 941-386-6540.
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Editorial:

Efficiency of Your Feeding Program? - Florida Forage Testing and Evaluation Program

Animal performance is influenced by forage quality, the potential of the animal for growth or production, the availability of forage and the quantity of supplemental feed available. Each of these factors must be considered in planning an efficient livestock feeding program.

The ultimate measure of forage quality is the performance of your animals when forage is the only source of energy and protein. However, the IFAS Forage Testing Program uses laboratory analyses to estimate the nutritive value of forages and possible intake information. The laboratory indices of forage quality are known to be well correlated with animal performance and include crude protein and fiber contents and total digestible nutrients (TDN). Forage tests can assist a dairyman, a rancher, or horse producer to decide whether to feed protein or energy supplement and provide the basis for formulating a complete diet for a lactating dairy herd.

The quality of forage is affected by climatic and soil factors. Additionally, management factors such as the type of forage selected, maturity of the plant and level of fertilization greatly influence chemical composition and digestibility of forages. Therefore, a prediction of feed quality is as good as the sample you submit for testing. Details in sample selection from hay, silage, green chop and pasture are provided on the submission

form. In the case of hay, producers are advised to sample as hay is stored if lots are adequately identified for future reference during feeding. Otherwise, hay should be sampled at feeding and different kinds (maturity stage, grass type) of hay should be separated. A Penn State Forage Sampler or other suitable core sampler is the recommended tool. For square bales, core samples must be drilled from the end of about 10 randomly selected bales from each lot. Similarly, core samples must be taken from the rounded side of 10 randomly selected large round bales from a lot. If the outer layer of a large round bale has weathered, it is advisable to pull away up to 2 inches and sample below the weathered portion. Pastures should be sampled 2-3 days before grazing for a rotational system and forage must be collected randomly from several spots. An effort must be made to collect forage samples that represent what the animal is eating. For pastures that are continuously stocked, forage should be collected from spots that are grazed. After collection, samples from a field should be mixed before a subsample is drawn and placed in the plastic sample bag that is provided. The cost for each sample analysis is \$8.00. Forage sampling kits may be obtained from your county agricultural extension agent who will also provide additional information. Samples should be shipped to the Range Cattle Research and Education Center for the analyses. (MBA)

Photosensitization of Cattle Grazing Frosted Stargrass or Bermudagrass

Mike Kline, of Hardee County, called me on the morning of February 16, 1999 about a problem that was occurring with cattle grazing frosted stargrass. He stated that many of the cattle grazing the frosted stargrass pasture were exhibiting runny eyes, excessive salivation, and diarrhea. Mike thought the problem was cyanide poisoning, a potential problem with stargrass, that has never been observed on pasture. In Mike's case, cyanide poisoning was not the problem.

The symptoms Mike was describing was the beginning of a condition called photosensitization. It is a rare problem in Florida, and may go unreported in many cases. Photosensitization is caused by a mold (*Periconia minutissima* Cla.) that grows on deteriorating bermuda or stargrass several weeks following a heavy frost. The frost that caused this specific case occurred about 6 weeks earlier on January 6, 1999. Following the excessive salivation and diarrhea, the next symptoms of photosensitization will be a lot of licking and scratching of irritated skin, and violent head shaking. These symptoms will be followed by blistering on the muzzle, nostrils and eyelids, then skin loss over the head and back areas. It can ultimately affect the total exterior body and internal organs, especially the liver.

Photosensitization, except in severe cases with secondary infection, seldom results in death. It does result in large weight losses, and serious scarring that last the life to the animal. There are three classes of photosensitization: 1. that caused by drugs or chemicals, 2. that caused by plants containing various compounds (Lantana poisoning in Florida), and 3. that caused by organisms that grow on plants (as the mold discussed above).

Photosensitization as it occurs in Florida in association with frosted grasses was first identified in the 1950's on organic soil pastures near Belle Glade by Mr. Ralph Kidder, the eminent animal scientist at the Everglades Experiment Station. In this case, the mold was growing on frosted common bermudagrass. This information on photosensitization was published by Kidder, Beardsley and Erwin in 1961 as University of Florida, Agric. Expt. Sta. Bull. 630.

As stated above, photosensitization is not a common problem in Florida, but ranchers should be aware of it, and where and when it can occur. The only other case that has come to my attention on the sandland areas of south Florida was a severe case reported by Travis Seawright in Manatee County a couple of years ago which involved cattle grazing frosted stargrass. **(FMP)**

- Controlling Blackberry Briars in Bahia Grass Pasture

Sand blackberry remains one of the worst woody weeds in Florida pastures. Mowing or burning provides short term control, but only treatment with herbicides can provide lasting control. Remedy (triclopyr) applied at 0.5 lb active ingredient/acre (1.0 pint/acre) in late March or April reduced blackberry coverage to an average 18% compared with 80% in non treated areas in trials at 3 south Florida ranches over 3 years. Rates up to 2.0 lb/acre have been tested, and greater rates do result in slightly better kill, but 2-4 times more herbicide (about \$80/gallon) does not justify an additional 10% reduction in cover. No single treatment will completely eliminate briars, so we believe that it is better to treat a pasture twice (in the spring of successive years) rather than to use a single high rate such as 1.0 lb/acre. Mowing or burning before herbicide application does not improve control, but mowing or burning in winter allows more complete spray coverage of regrowth in spring. Applying Remedy in a minimum of 40 gallons/acre of spray solution with a surfactant is important. **(RSK)**

- Controlling Soda Apple with Mowing and Herbicides -

Tropical soda apple is a broadleaf, perennial, noxious weed that has spread rapidly throughout Florida and other southeastern states. In Florida alone it has already affected more than half a million acres of grassland in the past eight years or about 17% of Florida's improved pasture. In addition, soda apple is found in citrus groves, sugarcane, vegetables, sod fields, roadsides, canal banks and state parks. Mature plants range from 4 to 6 ft and produce nearly all their fruits from August through March. Very few fruits and seed are produced between April and July in Florida. The germination and development of seedlings are greatest between August and March, with lower germination between April and July. Tropical soda apple is identified by its immature green fruit with white mottling like many cultivars of watermelon fruit. Mature fruits turn solid yellow and may contain 400 to 500 seeds each. Each mature plant will bear an average of 50,000 viable seed with a seed germination of 75%. The foliage of tropical soda apple is unpalatable to livestock and wildlife, but the fruit is readily eaten by animals providing an avenue for seed dissemination.

Herbicide studies by IFAS personnel have shown that mowing mature soda apple plants to a 3-inch stubble and allowing a 60-day regrowth before herbicide application provided better control compared with non-mowed plots. Two applications of Remedy^(R) at 0.5 or 1.0 lb/A were also better than a single application on both mowed and non-mowed plots. Double application of herbicides results in greater costs and increased risk of drift to nearby citrus and vegetable fields. Therefore, recent work was conducted to determine the combined effect of multiple preherbicide mowings and herbicide rates on soda apple control and seedling development. Mature tropical soda apple plants were mowed one, two or three times to 3 inches and allowed to regrow for 60 days after each mowing. Remedy was applied at 0.5 or 1.0 lb/A 60 days after each mowing treatment. Mowing tropical soda apple plants twice before a single application of 0.5 lb/A of Remedy resulted in 100% control. This good control was achieved because the first mowing decreased the total carbohydrate energy reserves in the plants by 40% and the second mowing by an additional 43% to weaken the plants. The third mowing decreased energy content in plants by only 12% and did not provide any additional benefit in herbicide control over the two mowings. Repeated mowings also prevented the plants from seeding. Our recommendation to producers with tropical soda apple is that fields must be mowed two times at a 60-day interval. After the second mowing, plants must be allowed to regrow for 60 days before Remedy is applied at 0.5 lb/A. If you encounter problems with calibration of your spray equipment, please consult with your county extension agents and always remember to read and follow label guidelines, it is the law. **(PM & MBA)**

- Fertilizing Carpon Desmodium in Bahiagrass Pastures

Cattlemen who follow IFAS recommendations for fertilization of bahiagrass are applying about 50 lb N/A only. However, a good portion of bahiagrass pastures in central Florida have been overseeded with warm season legumes through the years. We examined the effects of seven fertilizer treatments on carpon desmodium cover and yield in a bahiagrass pasture in Osceola County. Research over the past 2 years has indicated that N with no P and K led to a 50% reduction in the original cover and yield of carpon desmodium. On the contrary, fertilizing with P, K and micronutrients with no N led to a 33% increase in carpon desmodium yield and a similar decline in bahiagrass yield. Therefore, ranchers should consider including about 30-40 lb/acre of P₂O₅ and K₂O with the N in alternate years to help maintain carpon in bahiagrass pastures where good stands of the legume are found. **(RSK, JER & MBA)**

THE GRASS CORNER -

1) Bahiagrass

Woodland, open range and planted pasture have supported the Florida livestock industry for nearly 500 years. Currently, there are about 5 million acres of grazed forest lands, 3 million acres of open range and 3.5 million acres of planted pasture. Our state grasslands are under constant pressure to surrender land area for industrial and residential


construction along with roads and recreation facilities such as golf courses to accommodate the 0.25 million new residents annually. This continuous urban pressure on land translates into higher stocking rates and the need for more productive forages or pasture to support the 1.2 million beef cattle in the state. In this and subsequent issues of the Range Cattle REC Newsletter, we plan to give a brief account of the advantages and disadvantages of available warm season grasses.

Bahiagrass (*Paspalum notatum*) remains and will continue to be the predominant grass used by livestock producers in the state. It is grown by 78% of producers in central and south Florida and makes up about 70% of planted pasture acreage. Bahiagrass is popular with Florida ranchers because it : 1) tolerates a wider range of soil conditions than other improved grasses; 2) has the ability to produce moderate yields on soils of low fertility; 3) is easily established from seed; 4) withstands continuous close grazing; and 5) is relatively free from damaging insects (except mole crickets) and diseases. A major drawback of bahiagrass pasture is that forage growth slows down in October which results in very low forage during the period of short days and cool temperatures between mid-December and early March.

In recent years, about 300,000 acres of bahiagrass pastures have been destroyed by mole crickets in central Florida. Prolonged reliance on bahiagrass has led to the tendency for ranchers to evaluate all new improved grasses under similar stressful grazing management conditions as bahiagrass before acceptance.

Bahiagrasses are native to South America (Argentina, Uruguay, Paraguay and Brazil) from where several varieties have been introduced. Bahiagrass varieties in use today include Common, Pensacola, Tifton-9 Pensacola, Argentine, and Paraguay 22. Pensacola, which was found growing in Pensacola, FL in 1935 by Escambia County Extension Agent, Ed Finlayson, is the most widely grown cultivar. Tifton-9 Pensacola was released in 1987 through a breeding program by Dr. Glen Burton, USDA-ARS, Tifton GA. It is 30% higher yielding than its parent, Pensacola, and also shows a better cool season growth. Argentine was introduced from Argentina in 1944 and is most popular in the sod business because it puts out fewer seedheads than Pensacola. All bahiagrasses have similar forage quality. For more information on planting, liming, fertilization and grazing management of bahiagrasses contact your county livestock extension agents. (MBA)

Featured Farmer: **'Ecotourism', The Adams Ranch Way**



On February 4-5 1999, a workshop on Agri-tourism was organized jointly by the Florida Stewardship Foundation and Florida Center for Environmental Studies, Florida Atlantic University at the Indian River REC in Fort Pierce, FL. A field trip was made to Adams Ranch to provide insight into an Agri-tourism operation. Adams Ranch is 12 miles west of Interstate 95 on State Road 68, west of Fort Pierce, FL. For three generations, the

200,000 acre ranch has become famous for its high quality Braford cattle. It all started in 1937 when the founder, the late Alto Adams, a criminal lawyer at the time, was advised by his doctors to seek more fresh air and outdoor exercise. The fresh air paid quick dividends. He was appointed to the Florida Supreme Court in 1939 and served as Chief Justice in the 1940's.

Its current owner, Alto "Bud" Adams, son of the founder, has developed and marketed the unique Braford breed of cattle, which combines the best traits of Brahman cows and Hereford bulls to perform better on harsh Florida conditions. For many years, Bud Adams took horse enthusiasts from England, cattle ranchers from Australia and South America and a host of other visitors on tours of the ranch. The informal hospitality got to a point where he had little time for his ranch management duties, and that was when the idea of turning the tours into a commercial venture struck.

Now, the third generation of the Adams family has incorporated the tours into a new business, with the formation of Florida Ranch Tours in 1996. Mark Harrison, Adam's nephew, is the president. To keep business year-round, the Ranch Tours maintains close connections with major tourism organizations such as Disney Vero Beach Resort at Wabasso Beach, FL and Heathcote Botanical Gardens in Fort Pierce. The Disney group brings their guests to the ranch every Friday for a ranch tour and the Botanical Gardens brings 200 to 300 guests every year. Other groups from churches, condominium associations, schools, etc. use the tour as fund-raising method.

The tour starts in the board room of the ranch with a 20-minute slide show of Adams' photographs of the ranch and its wildlife. The slide show explains the methods used on the ranch to keep it ecologically sound. Mr. Adams runs the ranch "using biological rather than chemical controls". Cattle range freely, keeping the brush under control in the hammocks. As a result of foliage-control, tinder does not accumulate and the ranch hasn't had a natural range fire for more than 50 years. "None of the trees on the ranch is burn-scarred either" Adams said. Special grasses such as pangolagrass, limpograss and bahiagrass are grown to give cattle "maximum" nutrition without the need for additional purchased feed. Canals, with free-flowing water, maintain good soil moisture and are also filled with fish that eat mosquito larvae. Birds control worms and insects that threaten the grasses. Native predators such as bobcats, owls, hawks and foxes are allowed to roam the ranch controlling rodents and snakes. "But woe to a non-native predator set loose on the property. Once discovered, their hours are numbered".

After the slide show, people head for the pole barn to board one of the two cut-down school buses with camouflage paint and a surrey top. Mark drives the bus while delivering relaxed commentary that changes with each trip, depending on what wildlife and wild flowers are seen. He points out the herons, storks, the alligators sunning themselves, herds of deer, the sight of a majestic, red-shouldered hawk soaring into the trees, a barred owl that posed obligingly in the branches where it is seen by all as the bus follows bumpy ranch roads towards a fence that surrounds the 2,000 acre citrus grove. Past the trail to an artesian spring with authentic Seminole chickee huts, guests stop for their lunch by the "cracker" house built of peeled cypress poles and a tin roof. Barbecued

beef, chicken, and pork sizzled on portable stove are served with the heart of sabal palm cooked into a Florida speciality, "swamp cabbage". Before boarding the bus to return to the pole barn, guests are treated to a demonstration of cowboy whip-cracking that was used to keep cows in line, earning the cowboys the nickname "crackers". Back at the pole barn, satisfied visitors are given a sample sack of Adams citrus and the family prepares for the next visit. Tour visitor Geoff Stone, from Connecticut, recently saw this kind of Florida for the first time. " This is really interesting" he said. "Florida to me was always the beach environment and the palm trees. I didn't picture Florida like this at all and I have enjoyed it very much".

The business runs 5 to 6 tours a week with an average of 15 people on each. Tours are for two-hour, half-day or a full-day period. The tours are run for groups of at least eight people although small groups or individuals are encouraged to call because they can probably be added to other small groups. For further information on tours and costs call 941-467-2001. (Excerpts from "Pioneer ranch breaks into 'ecotourism" by Nisha Pulliman appearing in *50 Plus Lifestyles Indian River*, April 1997). (MBA)



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