



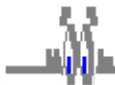
Cooperative Extension Service

Institute of Food and Agricultural Sciences



RANGE CATTLE REC NEWSLETTER

January, 1999 - Vol. 2, No. 1



Calendar Of Events

January

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| 12 | Ocala Bull Sale. South-East Livestock Pavilion, Ocala FL. Ph: 352-307-9265. |
| 21 | Florida Cattle Institute and Allied Trade Show. Kissimmee Valley Agricultural Center, Kissimmee, FL. Ph: 941-763-6469. |

February

- | | |
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| 3 | Economic and Ecological Values of Local Grazing Lands. Manatee and Sarasota Counties. Sudakoff Center of USF, Sarasota Campus. Ph: 941-907-0011. |
| 3-6 | North American Elk Breeders 9 th Annual Convention. Hyatt, Orlando, FL. Ph: 941-761-1356. |

March

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| 10-11 | Florida Cattlemen's Association Quarterly Director's Meeting. Tallahassee, FL. Ph: 407-846-6221. |
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Editorial:

Diversification of Cattle Ranching Operation: Abundant Opportunities for the Next Millennium

The Range Cattle REC Newsletter has just completed the first year milestone and we wish to thank our readers for their feedback suggestions. A few lessons were learned in the formative year that just ended. The need to reschedule publication of the Newsletter on a more timely basis is an obvious one that is receiving attention. Every effort will be made to ensure that issues come out about mid-March, mid-June and mid-September in 1999.

On the positive side, we appreciate the good comments that were received regarding information published on various aspects of pasture and grazing management, forage fertilization, and cattle nutrition. We plan to continue dissemination of brief research information to producers in 1999.

The Featured Farmer column was a real eye-opener throughout the year. It revealed the extent to which traditional extensive cattle ranching on native range in Florida has embraced pasture improvement and management, and feed supplementation. We also observed an increasing trend towards diversification in ranching operations. A number of cattle producers featured in our Newsletter had expanded their operations to include hay for sale, forage seed production, citrus groves and even vegetable production to supplement their income. Even more striking was the growing prospect of combining ranching with issue of hunting leases, Federal land conservation programs, and with some forms of eco-tourism.

Two of the things that make Florida such a wonderful state are the incredible sunshine and nature that surround us here all year. In addition to game (deer, hog, quail), panthers, though endangered, still live in the wild, along with alligators, bears, a stunning variety of birds, fish, tropical plants, flowers and insects. There are 1700 streams and 20 major waterways in Florida, so it is no surprise that canoeing is a hugely popular pastime in the Sunshine state. The lush vegetation, abundant wildlife and tranquil silence make for sublime experience to our visitors be it canoeing, horse-back or bike riding or simply walking on a nature trail.

Producers are just beginning to open up the doors of their properties to this huge demand by nature lovers. Income from eco-tourism could be respectable if the venture is planned and managed properly. (MBA)

Comings & Goings:

Dr. John Arthington Joins Range Cattle Faculty

Dr. John Arthington has accepted a faculty position at the Range Cattle REC as of January 4, 1999. John will be an Assistant Animal Scientist with a 50/50 research and extension appointment. He will conduct research on factors that affect the efficiency of cow/calf production. He will demonstrate and extend to cattlemen information on economical practices that will improve percent calf crop, calf weaning weight, post-weaning calf management, and environmental quality. In his extension role, Dr. Arthington will work closely with the South Florida Beef/Forage Extension Program.

Dr. Arthington is originally from Indiana where he obtained his BS degree from Purdue University. John obtained his MS and Ph.D. from Kansas State University where his studies focused on the influence of nutrition on immune competence in stressed calves. For the past three years Dr. Arthington has worked with American Protein Corporation at Ames, Iowa.

- Senior Lab Technician Bobby West Passes -

Bobby West, Senior Lab Technician, passed away on December 16th of heart complications. Bobby managed the forage processing laboratory at the Range Cattle REC for 21 years. Bobby was a jack-of-all-trades individual and really did many jobs from lab renovation to monitoring drinking water quality at the Range Cattle REC. Bobby's friendly smile and hard work will be greatly missed by all. (FMP)

- Chinch Bugs on Hemarthria -

Chinch bug damage on hemarthria appears as patches of yellow or brown grass which gradually increase in size. Quite a few ranchers observed this problem in 1998. Chinch bug damage is noticeable during dry periods especially if the grass is actively growing as it is after fertilization. This is often the situation in the dry fall after hemarthria has been fertilized to bring on stockpiled grass. Look for chinch bugs on the margins of the

damaged areas. When they are present in numbers large enough to cause damage, they can be found by parting the grass in the yellowed area and making close observation. Adults are small (about one-eighth inch) reddish brown or black insects with white markings (something like an hour glass) on their backs, and they can be seen scurrying along the soil surface. The immature chinch bugs are not readily observed, but they can be found by peeling back the leaf sheath and looking at the node on the stem where the leaf attaches. Immature insects are similar to the adult in over-all shape, but they have a white "belt" across the upper abdomen. Nymphs are about one quarter the size of the adult and not similar in body shape. Chinch bugs have a stylus which they inject into the plant to suck plant juices. The stylus slashes around causing internal plant damage. Unfortunately, there is little that can legally be done to control chinch bugs in pasture. If you see scattered patches of damage, you may opt to do nothing in the hope that cool weather will put a stop to chinch bugs. If areas are extensive you may try grazing or cutting for hay or even burning to remove the canopy. Hopefully, new growth will take place in an environment less favorable to chinch bugs. There may be some preventive measures such as planting hemarthria only on the wetter sites where it is best suited. Avoid the build up of a large canopy in summer which provides good cover for these insects. Don't wait until October or November to fertilize hemarthria for winter growth. Research has shown that September is the time to fertilize for stockpiled forage. Usually, it is wetter at that time so it may be less favorable to chinch bugs. **(RSK)**

Review of Fertilizer Recommendations - for Floralta Limpogress Requested -

Current IFAS recommendations of P_2O_5 and K_2O fertilization for perennial grass pastures, with exception of bahiagrass, are not based on data derived from research studies with these grasses under grazing conditions, their most common use. Recommendations for these forages under grazing appear to be derived from research data developed for annual grasses, from harvested plot studies, from text book information, and most probably from opinions with large margins for error.

Prior to 1990, IFAS recommended that all perennial grasses being grazed be fertilized with 80 lb/acre of P_2O_5 and 80 lb/acre of K_2O annually when grown on soils testing low or very low for these elements, which are soil test results typical for south Florida. Following a multi-county fertilization study on grazed bahiagrass conducted by the South Florida Beef/Forage group and the Range Cattle REC, and select studies by research faculty at the Range Cattle REC, the P_2O_5 and K_2O recommendations for bahiagrass were reduced in 1990 to zero when 50 lb/acre of N was applied. Results of bahiagrass studies prompted a reduction in the P_2O_5 recommendation for Floralta limpogress and other perennial grasses to 40 lb/acre annually, the level currently recommended. The K_2O recommendation for these grasses remained at 80 lb/acre. Following a review on bahiagrass fertilization in 1997, P_2O_5 and K_2O recommendations for grazed bahiagrass were reduced to zero in south Florida for all situations.

Recent field results suggest that the current recommendations of 40 lb/acre of P_2O_5 and 80 lb/acre of K_2O (low to very low soil test) for Floralta limpogress being grazed are too

high. Drs. Rechigl, Kalmbacher, and Adjei have completed field studies on the P_2O_5 and K_2O needs of Floralta limpogross under grazing conditions. These studies did not show an economical response by Floralta limpogross to any level of P_2O_5 or K_2O fertilization. Drs. Adjei, Kalmbacher, and Rechigl are currently conducting additional studies at five sites throughout south Florida to further define the P_2O_5 and K_2O needs of Floralta limpogross under grazing conditions. Additionally, two completed studies have shown that Floralta limpogross does not respond to liming beyond a pH of 5.0. The current pH recommendation of 5.5 also needs to be addressed.

There is evidence to consider a reduction in the IFAS P_2O_5 , K_2O and pH recommendations for Floralta limpogross used for grazing cattle. Thousands of acres of Floralta limpogross are being planted annually in Florida, and rapidly approaching a million. If P_2O_5 and K_2O fertilization can be reduced by one-half, and pH reduced by 0.5 units, the economical benefits to the Florida beef industry are tremendous. There will be a savings of millions of dollars annually in fertilization costs. Secondly, phosphorus has been identified by regulatory agencies as a major problem in surface water runoff from agricultural enterprises throughout south Florida. Reductions in P_2O_5 application to Floralta limpogross pastures would help correct this environmental problem.

It has been requested that a workgroup of IFAS faculty be appointed to review the P_2O_5 , K_2O , and pH recommendations for Floralta limpogross. As with the bahiagrass fertilizer recommendations, this review will involve a number of IFAS researchers, extension specialist, and county extension faculty. Hopefully, in the near future fertilization recommendations for Floralta limpogross will be in line with the requirements and more affordable to the Florida beef cattle industry. **(FMP)**

- Anhydrous Ammonia Field Trial -

One of the major costs to ranchers is fertilizing pasture grasses and nitrogen is the most essential of all the nutrients required for maximum production of high quality forage. The most noticeable sign of nitrogen deficiency is the yellowing of the grass. However, this may also be a sign of sulfur or iron deficiency. Normally the whole pasture will have a light yellow color if it is deficient in nitrogen or sulfur, while small patches of yellow are a sign of either iron deficiency or a disease problem. Research studies conducted at Ona have shown iron deficiencies to go away by themselves and have had no effect on yield or quality of pasture grasses. Sulfur deficiencies are corrected with various sulfur fertilizers.

IFAS researchers have devoted the last 12 or so years trying to find ways of reducing the costs of fertilizers and determining more economical methods or sources of fertilizers for ranchers to use. Recently, we have received a number of questions regarding the potential of using anhydrous ammonia as a source of nitrogen for pasture grasses grown in Florida because it is generally substantially cheaper than other sources of nitrogen. Anhydrous ammonia is used extensively in the West where heavier textured soils trap anhydrous ammonia and retain it for plant growth. It is generally not recommended on sandy soils

because a large percentage of the anhydrous gas volatilizes to the atmosphere and is not available to the plant.

Two years ago, we initiated a research study to compare anhydrous ammonia to other sources of nitrogen fertilizer on pasture grasses. Treatments included three rates of nitrogen (0, 50, 100 and 150 lbs. nitrogen/acre) and two sources of nitrogen (anhydrous ammonia vs. ammonium nitrate). The anhydrous ammonia was applied to the soil in the summer when there was adequate moisture. It was applied under moist conditions to try and retain the anhydrous ammonia in the soil and reduce volatilization to the atmosphere. Results indicated that under moist conditions 85-90% of the anhydrous ammonia (assuming 100% availability from the ammonium nitrate treatment) was available to the plant. However, one needs to remember these are preliminary results from one field study and that results may vary depending on changes in environmental conditions and soil types. Under dry conditions, there will be a higher loss of nitrogen due to increased ammonia volatilization to the atmosphere. We are not recommending anhydrous ammonia fertilizer at this time but rather presenting preliminary results from a field study. Moreover, special equipment is required for application of anhydrous ammonia. Franklin and Bill Copeland are major suppliers and applicators of anhydrous ammonia (phone: 904-462-1586). They will deliver and apply the material to your field. The major point to remember is that you want to apply the cheapest source of nitrogen. Thus, one needs to get a delivered and applied cost for anhydrous ammonia when making price comparisons. **(JER & MBA)**

- 1998 Suerte Seed Harvest -

C. M. Payne harvested more than 5 tons of Suerte in October, which was the most seed harvested since release of the grass in 1995. Seed production has been a problem because seed shatters very quickly once it is mature. About 8500 lb of seed came from Desert Cattle and Citrus. They plan to keep all their seed to add 1000 acres to the nearly 800 acres that they already have. Suerte has proved to be an easily and quickly established grass that is persistent and, so far, free of insect and disease problems. It provides nutritious grazing for young cattle or lactating cows in summer from May to October. A management option that has been working well is to vacate pastures in August and allow Suerte to produce stockpiled grass for October and November, which bridges the gap between bahiagrass and hemarthria. Suerte maintains its digestibility well with maturity. Allowing Suerte to go to seed results in a thickening of the stand, but it is important to graze it heavily in winter or to burn the pasture in order to allow the seedlings to grow. This is a remarkable and practical grass. Payne has about a ton of seed for sale, and he has the grass in pasture at Sebring so you can see it. Give it a try! **(RSK)**

- Warm Season Grass Growth During a Frost-Free Winter -

Bahiagrass pastures make up 70% of improved pastures in Florida. However, it produces about 85% of its forage during the long days (April-September), and only 15% between

October and March. Cattle producers are compelled to feed hay, or stockpiled forage, or use other forms of supplement during the short-day cool period. In Florida, bermudagrasses and stargrasses are used more as speciality grasses for hay, haylage, and under intensive grazing where high yields of quality forage are needed.

In 1997, an experiment was conducted to compare Pensacola bahiagrass, Florakirk and Tifton 85 bermudagrasses, and Florona stargrass for dry matter yield, during short days (mid December to early March) and cool conditions with no frost. All grasses were mowed back to 3" stubble and fertilized on December 16, 1997. Grasses were harvested after 6 and 12 week regrowths. Florakirk bermudagrass followed by Florona stargrass produced the highest dry matter yields after 6 week regrowth, averaging 0.74 and 0.65 tons/A, respectively. Tifton 85 bermudagrass and bahiagrasses produced 45% and 2% the amount of Florakirk yield. When allowed to grow for 12 weeks, grasses showed a similar pattern of production. Florakirk bermudagrass and Florona produced the highest yield, averaging 2.3 and 2.2 tons/A, respectively. Again Tifton 85 and bahiagrass produced only 35% and 2% the level of yield for Florakirk, respectively. Both Florakirk and Florona produced good dry matter yields during the short-days provided winter temperatures remained warm, with no frost. If frost occurs during January, followed by warm temperatures, these two grasses will make rapid regrowth during February and March. By contrast, bahiagrass produces little forage during winter season even with warm temperatures, because it will not grow during short days. Producers must be aware of these differences in cool season performance of available grasses and take them into account when selecting grasses for future pasture renovation. **(PM & MBA)**

- Enhancing Bahiagrass Seed Production from Pasture -

Beef cattle producers grow bahiagrass seed on share-basis to generate secondary income. Harvesting, processing and marketing of seed are carried out by seed companies. Typically, bahiagrass pastures are fertilized in February-March followed by grazing until June. Cattle are withdrawn when the first seed heads become visible to allow for seed set and harvest. Modifications in the timing of cattle withdrawal and N-fertilization are necessary if high seed yields are desired and differences existed between Pensacola and Argentine bahiagrasses.

Our data showed that by delaying cattle withdrawal from mid-April to early-June on Pensacola pastures, seed yield declined from 600 lb/A to 150 lb/A. Additionally, because Pensacola seed ripens prematurely when subjected to wet soil conditions, the 1000-seed weight declined from 1.25g to 0.82 g; and seed germination declined from 87% to 40% between the mid-April and the early-June cattle withdrawal dates, respectively. Similarly, N-fertilization was 300% more effective in promoting Pensacola seed yield when applied in mid-April than in early-June. In a separate study, Argentine seed yield was only 50 lb/A when cattle were withdrawn and N was applied in March or April. Argentine seed yield increased to 200 lb/A when cattle were withdrawn and N applied in late-May. Besides being late-flowering, Argentine seed development was not affected by wet summer soil conditions and seed quality remained high at 75%, regardless of cattle withdrawal date.

We concluded that for best yield and quality of Pensacola bahiagrass seed, producers should withdraw cattle no later than the end of April and fertilize immediately with 50 lb N/A. High seed yield and quality of Argentine bahiagrass require late-May cattle withdrawal from pasture and a 100 lb N/A fertilization. (MBA)

Featured Ranch: Intensive Grazing Management Revisited at Deer Run Ranch



In the June 1998 Newsletter, we discussed cell grazing as a management option for improving beef cattle production on speciality grasses. On October 29, 1998, participants of the 'Grazing Systems Management Tour', which was organized by the South Florida Beef/Forage Extension Group, had a first-hand experience of 'Management Intensive Grazing (MIG)' in action at the Deer Run Ranch. Located at 12605 N.E. Dark Hammock Road, Okeechobee, this 170-acre ranch owned and run solely by Mr. T. (Terry) J. Cannon has a lot of lessons to teach all ranchettes in Florida.

Mr. Cannon, a retired international pilot, says he borrowed the concept of MIG from New Zealand 12 years ago when he started a purebred Bradford production program. He maintains three cow herds each with approximately 50 cows, a herd of heifers, a herd of young bulls and a herd of breeding bulls on his property. Each cow herd is kept on a 44-acre pasture that is subdivided into 22 paddocks. The boundaries of his paddocks consist of a single hot wire with pieces of PVC pipe placed every 50 feet to hold the wire up. The set of 22 paddocks are set up in such a way that it takes Mr. Cannon alone about 45 minutes a day to move all his herds of cattle. To move cattle from a paddock to the next he simply drops a line of hot tape and herd them across. From spring to fall, the herds are rotated daily to graze a new paddock (21-day regrowth period). The herds are moved to a new paddock every two days during the winter to allow for a longer period of grass growth (42-day regrowth period). Terry finds a basic problem with continuous grazing "Three to four days after cattle have eaten the grass, the regrowth comes back an inch long. That grass regrowth is like ice cream to cattle. They will walk all over the pasture looking for it, and in the process, damage the entire field". His MIG pasture rotation policy is to "get cattle on the grass for a day or two and then get them off". To derive the maximum benefit from his MIG system, all his pastures were renovated with productive grasses (stargrass and pangola grass) 12 years ago. Pastures, clean water and mineral supplement are the only sources of nutrition for his cattle and the stargrass pastures have persisted for 12 years without major weed problems. However, Mr. Cannon fertilizes his pastures heavily in order to carry a cow/calf pair to the acre and maintain an average cattle body condition score of 5.5-7.0 year-long. He applies 250 lb/A of ammonium nitrate in the fall; 250 lb/A of 20-8-16 complete fertilizer in January; and 250 lb/A of ammonium sulfate in late-February or early-March. Rainfall and soil moisture retention are adequate at his site to allow for year-round grazing. Mr. Cannon summarizes his

advantages in these words "With my type of MIG, you don't need cowboys, you don't need equipment, you don't need feed, you don't need hay and you can still sell top grade young Braford bulls and heifers at private treaty". However, he warns other adoptees of system about the need to study their situation carefully before indulgence because someone must be there every morning to rotate cattle and more maintenance will be required for the speciality grasses. Further information on the MIG system may be obtained from your county Extension Agent. (MBA)



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