UNIVERSITY OF FLORIDA
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Institute of Food and Agricultural Sciences

# Northeast Florida Beef and Forage Group

INSIDE THIS ISSUE:

*Fall Forage Options* 1-2

*List of By-Products for Beef Cattle Diets* 3-4

*Mineral Supplementation* 4-5

October 23, 2006

Dear Producers,

Fall is upon us and it is time again to begin thinking about winter feeding programs and herd management. In this quarter's newsletter, we have included information on forage options, beef supplementation by-products, winter supplementation and other topics to help you get through the winter. As extension agents, we try to provide up-to-date topics in a timely manner. We hope that this newsletter, along with NFBFG programs is educational to you and your operation. If you have any questions about any of the following articles or topics, please feel free to contact your local agent.

Sincerely,

David B. Nistler
Chairman
North Florida Beef & Forage Group

## Fall Forage Options

Mike Sweat, Baker County Extension

Now is the time to begin planting fall forages. Dry weather conditions have contributed to poor quality pastures and low hay production this season. Winter legumes and small grain pastures can make excellent forage to supplement livestock. They are frost tolerant and can supply highly nutritious feed during the winter and early spring months. In addition, legumes if inoculated properly, can supply their own nitrogen and provide nitrogen for other plants-growing with them.

Rye is probably the most popular of the small grains for forage. It will produce earlier than ryegrass, however it requires plowing or disking the seedbed. There is no set "planting date" for

# Fall Forage Options (cont)

winter forages, rather it is best to wait until cooler weather arrives to lessen the chance of disease fungi attacking the young seedlings. These fungi are more active when soil temperatures are warm and sometimes entire stands can be lost.

Oats are less susceptible to the fungi and can be planted a little earlier to provide early forage. Producers should seriously consider incorporating legumes such as clover into their winter pasture. Remember clover and other legumes require a higher target pH (6.0) and liming should be done well in advance of planting.

Planting winter forages on a clean, well prepared seedbed has been shown to result in earlier and more total production as compared to overseeding on a grass sod, especially if the grass is not dormant at planting time. If overseeding is the only option, mow or graze as close as possible and disk the bahiagrass sod to expose the seed to the soil. For bermudagrass, a pasture drill or no-till drill may be used without disking with good results. Rainfall in the first few weeks after overseeding is important to success.

The most efficient use of cool season forages would be as a protein and energy supplement through the use of "limit grazing" (allowing the animals to graze for only a limited amount of time at each event). Another option would be to increase the access by younger animals that need a higher quality forage by "creep grazing" (only allowing those animals access to the forage).

For specific recommendations, planting rates and dates, please refer to the table on page 5, call your local Extension Office, or visit our beef-forage web site at: (http://nfbfg.ifas.ufl.edu)

*"The most efficient use of cool season forages would be as a protein and energy supplement through the use of "limit grazing".*

# List of By-Products for Beef Cattle Diets

Elena Toro, Columbia County Extension

**Distiller Grains:** This is a product of dry corn milling industry. Distiller grains are the dry residue of fermentation of cereal grains to ethanol and carbon dioxide. When stillage is added it becomes dried distiller grain with solubles (DDGS). DDGS are an excellent source of bypass protein, crude protein level is high (28-33%), with low starch and high digestible fiber and consequently it supplements grazing animals. Variation in quality can be due to grain type, corn variety and processing plant. We expect to see more DDGS available to feed livestock as the number of ethanol plants increases. However, beware that DDGS can have micotoxins, high concentration of fat at high inclusion rates and excreted levels of phosphorus can be higher than when feeding corn or soybean meal.

**Corn Gluten Feed (CGF)**: This is a dried residue result of the wet corn milling industry after the majority of the starch, gluten, and germ have been taken out for corn starch and corn syrup production. Corn gluten is a medium crude protein level feed source (21-26%), TDN value of 83-77 but can have high concentration of sulfur. Although it is not produced locally it can be used as a protein and energy supplement because it frequently is cheaper than other feeds.

**Soybean Hulls**: By-product of soybean oil milling process; soybean hulls are the toasted coat of the soy bean. This is a very digestible high fiber feed (71-87 TDN) and a medium level source of protein (11-14%). They are an excellent supplement for forage based rations. Soy hulls are most effective when limited to 30% of the animals' intake. They are bulky, dusty feed and work best when fed pelleted or when mixed with silage or molasses to reduce dust.

**Whole cottonseed:** Very good source of energy and protein (19-25%CP). Levels included in stocker or finisher rations should not exceed 20% of the ration. Do not feed to bulls due to possible fertility problems from gossypol and do not exceed 5 lb/ head/day on brood cows diets. Should be handled properly to avoid micotoxins and mold problems. It is rather bulky and does not flow well in self feeders.

**Wheat middlings:** By-product of flour milling. This is an energy source that can very well complement forage based diets. Bulk form is pelleted and is often incorporated in formulated supplements. Make sure crude protein requirements are being met in the diet to improve its effect.

**Citrus pulp:** Very popular in Florida as energy supplement. Citrus pulp comes from shredding, liming, pressing, and drying the peel, pulp and seed residues from citrus fruit. Citrus pulp is a low protein (5-7% CP), high fiber feed that is very digestible. Dried citrus pulp supplies a more consistent nutrient profile and both wet and dry pulps require pasture forage availability.

**Brewer's grains:** Are the residue from beer manufacturing and an excellent source of protein (26-29%

*"We expect to see more DDGS available to feed livestock as the number of ethanol plants increases".*

## By-Products (cont)

CP), good source of energy and fiber is highly digestible. Most brewers' grains are offered wet (70-80% moisture) and therefore have limited shelf life (3-5 days). To extend storage period, brewers' grains can be stored in trench or bunker silos.

**Hominy Feed:** By-product in the manufacture of hominy grits from corn. This product is a mixture of bran, germ, and part of the starch portion. It is about equal to corn in energy value and can be used at high levels in cattle diets.

**Peanut Hulls:** By-product of peanut shelling process. Peanut hulls are high in fiber and very low in energy and protein and extremely bulky and hard to handle but can be used as a source of roughage if you have access to them.

**Cotton Gin-trash:** By-product of cotton gining process that contains boll residues, leaves, stems and lint. Its practical use is in hay-replacer rations when mixing it when another feed is more economical than buying hay. It is very inexpensive feed with limited use.

**Cottonseed Hulls:** High fiber, low protein by-product of the cotton industry. Should be used as a roughage at low levels (10-25%) for growing and finishing cattle. Can work well in hay-replacer rations for brood cows if they are cost effective.

References:

Hersom, M. By-product Feed Utilization for Forage Diets. Presentation used for 2006 Florida Beef Cattle Short Course.

Myer, R. & Hall, M.B. Alternative Feeds for Beef Cattle.

## Mineral Supplementation

### Wendy Burton, Bradford County Extension

*"Mineral deficiencies alone can cause a decrease in body condition scores (BCS) in beef cattle.."*

Mineral supplementation is extremely important, especially during these colder months. Mineral deficiencies alone can cause a decrease in body condition scores (BCS) in beef cattle. We like to see beef cows in a BCS of 6 meaning the ribs are fully covered, and the hindquarters are plump and full. Pregnancy rates usually are 90% or higher when at this score. When cows drop in condition, say to a 5, pregnancy rates drop to between 75%-90%. So when we are breeding in the early spring, and cows have developed a mineral deficiency, they may not rebreed when they are supposed to.

Complete mineral supplements contain salt, calcium, phosphorus, and trace minerals. A mineral supplement should contain 25% salt, 14-18% calcium, 8% phosphorus, 0.4% zinc, 0.2% iron, 0.2% manganese, 0.15% copper, 0.016% iodine, 0.01% cobalt, and 0.002% selenium.

Cows will consume an average of 2 ounces of minerals per head per day. So when we talk about the form of supplement this becomes a concern. Mineral blocks are easy to use, but do not provide the amount needed per day. It would take a cow a lot of time to get 2 ounces off that block per day. This is where a combination of blocks and loose mineral really work best. Loose mineral is easy to use as well, but in colder months you will see consumption decrease. But this time of year we are usually supplementing the cattle anyways with an alternate food source. So adding the loose mineral to cottonseed meal or to soybean

## MINERAL SUPPLEMENTATION (CONT)

hulls at a 1:1 ratio will take care of that decrease in consumption. Mineral supplementation is as important as protein or energy. Certain minerals are contributors in male and female fertility, in proper bone formation, and many other factors. So, don't forget to feed your minerals this winter!

# FALL FORAGE PLANTING GUIDE

| Seed-Propagated Crops[1] | Planting Dates[2] | Seeding Rates (lb/A Broadcast) | Seeding Depth (inch) | Grazing height (in.) | | Rest Period |
|---|---|---|---|---|---|---|
| | | | | Begin | End | |
| Alfalfa | Oct. 1 - Nov. 15 | 12 - 20 | 1/4 - ½ | 10-16 | 3-4 | Hay 35-40 Grazing 15-30 |
| Clover, Arrowleaf | Oct. 1 - Nov. 15 | 8 - 10 | 0 - ½ | 8-10 | 3-5 | 10-20 |
| Clover, Berseem | Oct. 1 - Nov. 15 | 16 - 20 | 1/4 - ½ | 8-10 | 3-5 | 10-20 |
| Clover, Crimson | Oct. 1 - Nov. 15 | 20 - 26 | 1/4 - ½ | 8-10 | 3-5 | 10-20 |
| Clover, Red | Oct. 1 - Nov. 15 | 6 - 12 | 1/4 - ½ | 8-10 | 3-5 | 10-20 |
| Clover, Subterranean | Oct. 1 - Nov. 15 | 18 - 22 | 1/4 - ½ | 6-8 | 1-3 | 7-15 |
| Clover, White | Oct. 1 - Nov. 15 | 3 - 4 | 0 - 1/4 | 6-8 | 1-3 | 7-15 |
| Fescue, Tall | Nov. 1 - Dec. 15 | 16 - 20 | 1/4 - ½ | 4-8 | 2-3 | 15-30 |
| Oats for forage | Sept. 15 - Nov. 15 | 96 - 128 (3-4 bu) | 1 - 2 | 8-12 | 3-4 | 7-15 |
| Pea, Austrian Winter | Oct. 1 - Nov. 15 | 45 - 60 | ½ - 1 | Poor grazing, tolerance. Better suited as a hay or silage crop. | | |
| Rye for forage | Oct. 15 - Nov. 15 | 84 - 112 (1.5 - 2 bu) | 1 - 2 | 8-12 | 3-4 | 7-15 |
| Ryegrass, Italian (annual) | Oct. 1 - Nov. 15 | 20 - 30 | 0 - ½ | 6-12 | 3-4 | 7-15 |
| Sweetclover | Oct. 1 - Nov. 15 | 12 - 15 | 1/4 - ½ | 8-10 | 3-5 | 10-20 |
| Turnips | Oct. 1 - Nov. 15 | 5 - 6 | 1/4 - ½ | 6-8 | 2-3 | varies |
| Vetch, hairy | Oct. 1 - Nov. 15 | 20 - 30 | 1 - 2 | 6-8 | 3-4 | varies |
| Wheat for forage | Oct. 15 - Nov. 15 | 90 - 120 (1.5 - 2 bu) | 1 - 2 | 8-12 | 3-4 | 7-15 |

[1] Always check seed quality. Seed germination should be 80% or higher for best results.

[2] Planting date range: in general, cool-season forage crops in northern Florida can be planted in the early part of the planting date range and in southern Florida, in the latter part of the planting date range.

We would like to thank Larry Varnadoe, past Nassau County Agent for all of his hard work and dedication to the NFBFG. Larry went to work for Georgia Cooperative Extension at the end of June. Good luck in Georgia Larry!!

We would like to welcome Steven Gaul, the new Extension Agent in Nassau County to our group!! We look forward to programming and working with you!!

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