

# AGRONOMY

UNIVERSITY OF  
**FLORIDA**  
IFAS EXTENSION

# NOTES

February, 2004

### DATES TO REMEMBER

Feb. 24	Winter Forage Program Field Day & Tour, Range Cattle REC, Ona
Feb. 24-25	FL Weed Science Society Annual Meeting, Ft. Pierce
Mar. 25	Beef Cattle Field Day at the North Florida Research and Education Center's Beef Unit, Marianna
May 22	4 <sup>th</sup> Annual Perennial Peanut Field Day, Moultrie, GA
May 27	Corn Silage Field Day, Citra

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## **Corn Disease and Silage Production**

Silage producers have had a high rate of southern corn leaf blight and rust disease for the last few years resulting in low quality silage and making scheduling of cutting difficult. Choose varieties that have the best disease resistance packages and plant early. Diseases usually build up throughout the season and later planted corn normally has more disease than early planted corn. Corn planted in late February and the first half of March normally has less disease than corn planted in late March and April. When planting early, use starter fertilizer to get the crop off to a faster start. Starter fertilizer will help the crop to mature a week or so earlier than corn without starter and thereby avoids some of the consequences of disease as well. Avoid planting a second crop of corn on the same land in the same year. Disease will normally take out the second crop early because there are no hybrids with disease packages good enough to withstand the high level of inoculum along with the high temperature and humidity encountered from June and July plantings.

DLW

## **Corn Hybrids**

Top choices of corn hybrids should be made early. Some of the best corn hybrids are often in short supply since dealers don't make money on unsold inventory and do not order large supplies of any hybrid without a pretty good idea that it will be sold. Seed of the better yielding Roundup and Roundup/Bt hybrids have been hard for many growers to get in the past year or two due to not making orders early enough for dealers to get them.

DLW

## **Cotton Varieties**

Growers like to see conventional cotton varieties out in the market for planting. However, according to statistics compiled by the cotton industry, Florida is the first state to have 100%

of the acreage grown to transgenics. All of the seed companies breed conventional varieties to put genetic traits into. Most of the cotton seed companies have about half of their varieties that are conventional, but about 93% of the sales in 2003 were transgenic varieties. The top 5 cotton varieties sold in the U.S. in 2003 were Bt/Roundup Ready varieties. After a good variety is developed by traditional breeding methods, about 4 years are required to put desired genetic traits into that variety and get it to the market. Because of the move to transgenic varieties, fewer conventional varieties will probably be offered in the future since sales are low and it is difficult for seed companies to keep up with one variety without traits especially when there are transgenic varieties, with Bt and Roundup alone and with the combination of Bt and Roundup Ready and now stacked Bt genes.

DLW

## **Seed Traits vs. Crop Protectants**

Crop protectant chemical sales have decreased by about 15% in the last 5 years due to the fact that more traits are going into seeds (Bt and Roundup Ready as well as others) thereby reducing the need for chemicals. More money was spent in 2003 by growers on seed than for crop protectant chemicals, which is a first during the modern age of agriculture. This trend will continue as more traits are incorporated into the seed. Most of the major chemical companies have aligned with seed companies to develop traits that will use chemicals from their company as well as seed.

DLW

## **Bermudagrass Establishment**

The improved hybrid bermudagrasses do not produce sufficient seed and must be established from vegetative plant parts. Dug sprigs, consisting of underground rhizomes, plant crowns and stolons can be planted from mid-February through July. Sprigging bermudagrass in mid to late winter before it starts growing (before breaking dormancy) is encouraged.

Sprigs dug in early spring after the plants have broken dormancy have lower levels of energy reserves. Energy reserves are needed to initiate and develop new shoots (sprouts). Also, soil moisture is usually more favorable in late winter as compared to spring (April-May). In the spring, when top growth reaches four to six inches, digging and planting of sprigs should be delayed until after the first hay harvest or harvest of tops for planting. Tops (green stems) can be planted in June and July. The grass should be overly mature with six weeks or more of growth when the tops are harvested for planting. (-source Florida Forage Handbook)

CGC

### **Best Management Practices for Pastures**

“On bahiagrass pastures nitrogen is applied in relation to intensity of use, but generally 50 to 60 pounds of nitrogen/acre should be applied in late winter. This time correlates with a period of low to moderate rainfall and nitrogen fertilizer is least likely to be washed into surface waters. It is also the time ranches are most in need of forage. Other perennial grasses may need nitrogen in late winter and at other times throughout the year based on IFAS recommendations.”

“Timing of Nutrient Application: To avoid nutrient losses through runoff, apply fertilizers during times with the least potential for leaching or surface runoff. Refer to the water budget (provided by NRCS) for your county to determine the times when the lowest potential for nutrient losses from rainfall occur. Time nutrient applications so that they coincide as closely as possible with periods of plant growth and nutrient uptake.”

“Optimize Nutrient Uptake: Maintain proper soil pH for optimum utilization of applied nutrients, while preventing toxic effects from other accumulated elements, such as copper. The pH recommendations are published in Univ. of Florida, IFAS Fact Sheet # SL-129.”

“Prevent Nutrient Movement Off-Site: Include erosion control practices to minimize soil loss and runoff that can carry dissolved and soil-borne nutrients to surface waters. Filter strips along streams are very effective in reducing the levels of suspended solids and nutrients.

Try to prevent spreading fertilizers in ditches as this is a means of movement off-site. Also, plan fertilizer loading sites away from ditches and canals where spills can contaminate the water.”

[Source: Water Quality Best Management Practices for Cow/Calf Operations in Florida; June 1999.]

CGC

### **Cool Season Forages**

**Nitrogen** - The cool season grasses need nitrogen for sustained vigorous growth. Apply an additional 50 to 65 lb/A of N after the first or second grazing period. Two hundred pounds of ammonium nitrate contains approximately 67 lb of N. Ammonium sulphate is 21% nitrogen and 24% sulphur. Three hundred pounds per acre would apply 63 lb of N. If possible, apply the N after a grazing cycle when the grass has been grazed down and apply later in the day when the dew has dried.

**Grazing Management** - Cross fencing and rotational grazing (stocking) provides the opportunity to prevent overgrazing. Allow pastures to grow 6 to 10" tall and then graze. When the cool season forages have been grazed down to a 2 to 3" stubble height, the animals should be moved to a new pasture. Overgrazing slows the rate of recovery and reduces future growth. Cross fencing of a large pasture with electric fencing can provide the subdivisions needed for rotational grazing. Rotational grazing (stocking) promotes uniform grazing and maximum use of the forage.

CGC

## **Dairy Producers - When to Harvest Small Grains for Forage**

Forage quality of small grains (oats, wheat, rye, triticale) generally decreases as they mature from the boot to the dough stage. Lignification of the stem tissue (the stem becomes more woody) appears to be the main reason for reduced digestibility of the forage. If the forage is to be fed to high-producing dairy cows, it is suggested that the small grain crop be harvested at the boot-stage when it will have a feed value close to that of top quality alfalfa. Since small grain crops harvested at the dough stage produce the most digestible nutrients and protein per acre, it is recommended that the crop be harvested at the dough stage if the forage is intended for animals that do not require top quality forage.

CGC

## **Grazing Management of Perennial Grasses in Late Winter**

Most of our improved perennial pasture grasses need extra attention in late winter and early spring. When warm weather arrives, these grasses need time to grow new roots and rebuild energy reserves in the crown and roots.

Allowing the plants to rebuild and attain a healthy condition permits them to better withstand any stress that might come along during the remainder of the growing season.

In some pastures, the grass will have been grazed down to the ground by mid February or earlier. Although bahiagrass can withstand a certain amount of overgrazing, other grasses cannot. When warm weather arrives and the grass starts to regrow, cattle should be removed from these pastures and kept off until the grass has fully recovered.

Floralta and Bigalta Limpograss (hemarthria) are susceptible to overgrazing, especially the Bigalta cultivar. Therefore, cattle should be removed from these pastures once they are grazed down during the winter. Cattle should not be put back in until the regrowth is 14 to 16" tall. Then

rotational grazing can be started with cattle being removed when the grass has been grazed to an 8" stubble height.

If grazed close during the winter, Pangola and the other digitgrasses should also be allowed to regrow to a height of 10 to 12". Rotational grazing can then be started with cattle being removed from a pasture (rotated) when the grass has been grazed down to a height of 4 to 6". In mid-summer, these pastures need a minimum of one week and preferably three weeks rest between grazing periods. Three to four weeks of rest between grazing periods is needed before and after mid-summer.

Allow stargrass to regrow to a height of 10 to 14" and then graze back to a 5" stubble before rotating cattle. If grazing is needed before the desired height is reached, follow the old rule of thumb "take half, leave half."

In general, it is always desirable to have pasture size and cattle numbers adjusted so that a pasture can be grazed off in one week or less.

CGC

## **Hay Producers**

Burn frosted bermudagrass stubble to reduce spittlebug infestation, certain fungal diseases, remove trash, and kill early germinating winter weeds. Burning also seems to allow the sun to warm the ground and stimulate growth. Do not burn to soon. Wait until a few green shoots are present, indicating that the bermudagrass is breaking "dormancy". If a hard freeze follows shortly after growth is stimulated, the stand could be damaged. This is especially true for a non-cold tolerant bermuda such as Coastcross - 1. Coastal and other bermudagrasses that have rhizomes have greater cold tolerance and will likely survive a hard freeze.

Study soil tests and consider last years growth. Are there areas in the field where growth appeared to be reduced or where the stand is thinning? Bermudagrass uses a lot of potassium

and over time there may be excessive “drawdown” of the potassium in the soil profile if only minimal amounts have been applied. Thinning of the stand is a common symptom of insufficient potassium.

Fertilize the new growth with 80 pounds of N per acre and the soil test recommended amounts of potassium and phosphorus.

Be prepared to control winter weeds in the first growth period if needed. Burning will kill many of the weed seedlings, but a herbicide may be needed to kill weeds that escape the fire or that germinate later. Try to kill these weeds early so that they will have enough time to dry and disintegrate before the first harvest is taken.

CGC

### **Inoculating Peanut Seed**

Being a legume, peanuts require that nitrogen-fixing bacteria infect the roots for efficient and economical growth. These bacteria are present in soils that have been used to grow peanuts, or where beggarweed, alyceclover, hairy indigo, and certain other legume weeds are growing. There have been relatively few inoculation failures in Florida peanuts, with most of them occurring where new land was cleared of trees and vegetation that did not include the common legumes, or on old bahiagrass pastures that did not include any legume growth. If it is unlikely that natural bacterial infection will occur, an inoculant containing the cowpea or peanut strain of nitrogen-fixing bacteria can be added to the seed or seed furrow at planting. These inoculants can be purchased at many seed or farm supply stores, but because of limited sales, they may not be kept in stock. The material can be ordered, but the dealer should be notified of the need well in advance of planting.

EBW

### **Peanut Varieties for the Green Market**

The selection of a variety to plant for sale on the green market depends on a number of factors. First would be the needs of the customer, as

there are demands for large peanuts, for peanuts at a certain time, and whether or not the peanuts will be sold before or after boiling. Much of the green market trade is with valencia peanut varieties. These varieties generally have good flavor, often three or four kernels per pod, and are early maturing. Growers also like the early maturity characteristic because the peanuts can often be harvested in 90 days or less after planting if there are good growing conditions. Valencia varieties that have been popular include New Mexico Valencia A, New Mexico Valencia C, McRan, Georgia Red, and Georgia Valencia. New Mexico Valencia C 101A and Genetex are new varieties and have performed well in tests. Some customers want the larger peanuts for boiling. Gregory is a large-seeded peanut that appears to be well-suited for boiling, but requires three to four weeks longer to mature than the valencia types. Most runner varieties have about the same maturity as Gregory, but have a smaller kernel.

EBW

### **Planting Dates for Green Market Peanuts**

There are probably about 10,000 acres of Florida peanuts grown and harvested each year for sale or use as boiling peanuts. They are grown in most areas of the state. Green market peanuts are not dried prior to use as are those used for peanut butter, candy, or roasting. Since these peanuts must be processed, and generally consumed, within a few days of harvest, they are planted at times that allow harvest during opportune market windows. Since supplies are limited from late fall through the spring months, southern Florida growers plant peanuts for harvest during this period. Prices are naturally higher during period, but the risk of cold weather or frost during the growing period is also greater. Even if frost is not a problem, cold weather may slow the growth of peanuts enough that the targeted marketing windows are missed. In the absence of research information, it is suggested that peanuts be planted so that they would be expected to be harvested before the average date of the first fall or winter freeze, and planted after the last freeze of the winter. The grower should also study weather records from

the area of planned production to learn of the expected weather patterns. If the daily minimum temperatures are frequently in the 30's to low 50's, growth and development may be slow even if the daily highs are in the 70's and 80's. Naturally the prospects for price will dictate the amount of risk that a grower will accept.

EBW

### **Tobacco Barn Testing**

Two pieces of equipment are available for testing tobacco barns. One is an instrument that can be used to measure the composition of the combustion gases and thereby provide an indication of adjustments that could be made to improve the efficiency of the burner. With heating fuel being a major cost of producing tobacco it is important to use the fuel (LP or diesel) as efficiently as possible. The other instrument measures the carbon dioxide level in barn in an effort to determine if there may be a crack or leak in the heat exchanger. While CO<sub>2</sub> is not of concern, it is a result of combustion and therefore may indicate if NO<sub>x</sub> gases are also entering the curing chamber where they would react with the tobacco and form nitrosamines. The nitrosamines are undesirable compounds in the tobacco. Both instruments are available to county agents for them to check individual barns.

EBW

### **Tobacco Plant Bed Management**

There may be a number of management practices that will be needed in February to help insure an adequate number of healthy plants being available for transplanting tobacco in March. If needed, irrigate to keep plants growing, but do not irrigate more than needed because many diseases, such as blue mold and damping-off, can become a greater problem under wet conditions than they would be the case under drier conditions. Inspect the beds frequently for the presence of disease and apply appropriate fungicides if needed. Also inspect for insect pests, such as cutworms, vegetable

weevil larva, and aphids. Apply insecticides as needed for control. If the plants are growing slowly, and have a yellow color, it may be advisable to apply a nitrogen fertilizer, such as nitrate of soda (16-0-0), nitrate of soda-potash (15-0-14), or other suitable material. Do not apply excessive rates as the plants may become succulent and blue mold may be more severe. Usually 3-5 pounds of nitrate of soda per 100 square yards of bed will be adequate. If sulfur or magnesium appear to be deficient, a magnesium sulfate fertilizer can be applied. If outside temperatures get into the 80's for two or three consecutive days, the plants may suffer from heat damage, which is usually yellowing and slow growth. Remove the plastic covers if heat damage develops, or if conditions are favorable for development. Clipping may be started in February if plant growth is rapid.

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### **Tobacco Program Continuation**

Flue-cured tobacco farmers voted in January to continue the current federal program. This vote is required at three-year intervals and farmers can vote to either continue or discontinue the quota and price support program which is administered by the federal government. Approximately 93 percent of the votes were in favor of continuing the program. Depending on the wording, legislation for a buyout of quota could eliminate the program. It is expected that there will be further attempts in the current session to enact congressional legislation that would provide for a buyout of quota. Previous attempts at legislation have not made it past committee hearings.

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### **2004 North Florida Beef Cattle Field Day, March 25**

“Mark your calendars and plan to attend the second annual Beef Cattle Field Day at the North Florida Research and Education Center’s Beef Unit, Marianna, on Thursday, March 25. The program will get underway at 8:00 AM

(CT) and will end at 3:00 PM. Lunch and refreshments will be provided.

The field day will include demonstrations along with field tours of ongoing research. Topics covered will include: an update on various cattle reproduction technologies, the integration of cattle grazing into a crop rotation scheme, an update on cool season forages, supplemental

feeding of beef cattle, animal identification demonstration, and factors affecting cow productivity.

The NFREC Beef Unit is located one mile west of Greenwood, Florida on state highway 162. For additional information call (850) 482-9904. A small registration fee (\$5) will be charged to help defray the cost of lunch and refreshments.”

CGC

### Annual Report of Field Crop Statistics for 2003

The USDA National Agricultural Statistics Service reported the following estimates of field crop production in 2003.

Crop	Florida Acreage	Florida Yield	United States Yield
Corn, all purposes	75,000	-	-
Corn, grain	39,000	82 bu/A	142.2 bu/A
Corn, silage	28,000	19 ton/A	16.2 ton/A
Wheat, all purposes	20,000	-	-
Wheat, grain	12,000	41 bu/A	44.2 bu/A
Hay, all	255,000	2.50 ton/A	2.48 ton/A
Peanuts, planted	125,000	-	-
Peanuts, harvested	115,000	3000 lb/A	3159 lb/A
Soybeans, planted	13,000	-	-
Soybeans, harvested	12,000	30 bu/A	33.4 bu/A
Cotton, planted	94,000	-	-
Cotton, harvested	92,000	678 lb/A	725 lb/A
Tobacco, all	4,400	2500 lb/A	1997 lb/A
Tobacco, flue-cured	4,400	2500 lb/A	2000 lb/A
Sugarcane, seed and sugar	441,000	39.5 ton/A	34.5 ton/A

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Publications

Updated Publications

SS-AGR-29 ..... Tobacco Varieties for 2004

NEW Publications

SS-AGR-85 ..... Field Corn Production Guide

The use of trade names does not constitute a guarantee or warrant of products named and does not signify approval to the exclusion of similar products.

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