

# AGRONOMY

UNIVERSITY OF  
FLORIDA

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IFAS EXTENSION

# NOTES

February 2003

### DATES TO REMEMBER

May 8	Forage Field Day, Jay Research Farm
July 8	Agronomy Weed Science Field Day (Deep South Weed Tour), Jay Research Farm
September 5	Row Crop Field Day, Jay Research Farm

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### **Acceptance of Transgenic Varieties of Cotton**

Delta and Pine Land Company sells about 75% of all cotton grown in the U.S. Of the cotton seed that was sold from the company in 2002, 95% was transgenic with either the Roundup Ready, Bt or a combination of the two traits. Most of the non transgenic varieties are still available but little is grown commercially.

DLW

### **Cotton Seed Supplies**

Seed production was hampered in 2002 by a bad harvest season, however, seed supplies of all varieties look adequate for 2003. It is advisable to line up seed for the newest varieties since seed of these will be in shortest supply.

DLW

### **Starter Fertilizer Needs for Corn**

Years of research on corn has shown that most hybrids will respond in growth and yield to fertilizer applied two inches to the side and two inches below the seed or to a surface dribble of a fertilizer containing N, P, and S. A mixture of 50% 10-34-0 and 50% 28-0-0-5 is often adequate to supply all of the P needs throughout the season. Even soils that are high in P will respond to starter fertilizers. However, P rates can be reduced on high P soils since no more than 2 lbs./A of P taken up on a per acre basis on corn 12 inches tall. Nitrogen must be kept out of the seed furrow since it can reduce stands.

DLW

### **Bermudagrass Establishment - Time of Planting**

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 through the year based on IFAS recommendations.”

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**“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

### **Hay Producers**

Prepare for the coming season: 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 too 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

### **Slow Growth of Cool Season Pastures**

Several complaints have been received about the slow growth of cool season pastures. Comments such as “The ryegrass is dark

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green but is just setting there” have been heard. This slow growth of cool season forages is most likely due to the extended period of cold weather. In some situations, rye may still be suffering from an early season attack of seedling diseases such as pythium.

With the arrival of warmer temperatures, adequate soil moisture and nitrogen, these grasses should begin rapid growth. Don't overgraze. Leave plenty of leaf to capture the energy in sunlight which makes the plant grow.

CGC

### **Soil Testing of Pasture**

Soil testing of pastures for pH (soil acidity or alkalinity) is still important. The target pH for bahiagrass pastures is 5.0 in South FL or 5.5 on the heavier soils in North FL. If the pH has fallen below 5.0, lime will need to be added to the pasture. Most of the time we are concerned with adding lime to correct soil acidity. But, recently it has been demonstrated that bahiagrass pastures can be over-limed. Where the pH has been pushed above 7.0, bahiagrass has died and attempts to get it reestablished have failed. At pH 7.0 or above, important micronutrients become unavailable to the plant and this causes the bahiagrass plants to die. In such situations, elemental sulfur can be added, at considerable expense, to lower the pH below 7.0 which hopefully will allow bahiagrass seedlings to establish.

CGC

### **Use of Lime Stabilized Sludge on Bahiagrass Pastures**

Lime stabilized sludge contains significant amounts of liming material that will raise the soil pH.

Producers using this material for its nitrogen content should constantly be aware of the liming effect of the material. Ask the supplier to inform you of the amount of lime (or lime equivalent) that is being applied with each load. They will need to have run a calcium carbonate equivalence (CCE) test on the material. You then multiply the amount of lime per load by the number of loads per acre to get the liming rate. Is it 1000 pounds of lime per acre? If so, one application per year for two years will give you a ton of lime per acre and may move the pH up one unit. Therefore if you are starting at 6.0, you may move the pH to 7.0. Also, take a soil sample and check the soil pH at least once each year on any land to which you are applying sludge (a.k.a, biosolids).

CGC

### **Preventative Weed Management**

Preventative weed management sounds like a beginning weed science class subject, but it actually does have some practical merit. In this article I will discuss a couple of ways preventative weed management can be used by growers and agents to spot problem issues and prevent major weed infestations.

Scouting: How much money is spent ever year scouting for insects? Why not weeds? Everyone thinks weeds can't sneak up and explode into a devastating population overnight, so why worry. Well, I won't argue that point, but I think weed resistance

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is a good a reason as any to watch out for weeds. When your scouts are in the fields, have them note unusual weed patches, or single weeds that appear to live in a sea of dead colleagues. Several weedy species, such as pigweeds, are going to a major nightmare, particularly with so many herbicides having the same mode-of-action. Remember that one pigweed will produce over 250,000 seeds and since crop rotation is limited for many growers, nipping the problem quickly is money well spent.

Clean seed and field amendments: How many times have you heard someone say – “didn’t have that problem til \_\_\_\_\_? Let me fill in the blank with several examples.

1. Chicken litter – not an issue directly out of the chicken house, but several weeds flourish on the litter piles sitting outside the house. These often go un-noticed when the litter is later hauled to be spread on the field.
2. Gin trash – cotton gin trash is often used as a source of nutrients and organic amendment, but is many times loaded with weed seeds. I performed a peanut study once with gin trash and counted over 30 species within a 100 x 100 foot area. Be sure to let the trash compost and that will eliminate many weed problems.
3. Small grain cover – small grains are used in the winter for a cover crop or winter cattle grazing. However, be sure to check the source of seed. Many folks will not use certified seed to save money, and buy the cheapest stuff available. That is OK, but be sure to check how many weed seeds you are purchasing with your small grain seed.

4. Hay – another good source of weed seeds is hay brought in for winter feeding. Weeds like crabgrass, goosegrass, panicum are easily spread through contaminated hay. It is hard to detect many of these at the time of feeding but one measure could be to limit the number of feeding sites and the area that cattle can spread the seed.

The key issue in preventative weed management is keeping ones eyes open to potential ways weeds can spread. Contaminated seed, hay, and equipment are some of the possibilities, but each operation has many unique ways. Crop rotation was a good way to reduce many problems in the past, but economics is driving many growers to plant the same crop year after year. Therefore, prevention, particularly in the case of herbicide resistant weed populations will become more and more critical.

GEM

### **Pesticide Registration Updates**

On November 7, FDACS registered BASF Corporation’s Headline® (pyraclostrobin) fungicide (EPA Reg. # 7969-186) for control of disease in citrus, peanut, potato, and other crops. (FDACS PREC Agenda, 12/5/02).

On November 8, FDACS conditionally registered Valent U.S.A. Corporation’s Regiment® (bispyribac sodium) herbicide (EPA Reg. # 59639-105) for selective postemergent control of many weeds infesting rice. (FDACS PREC Agenda, 12/5/02).

On November 8, FDACS conditionally registered Dow AgroSciences’ Grandstand

R® (triclopyr) herbicide (EPA Reg. # 62719-215) for selective postemergent broadleaf weed control in rice. (FDACS PREC Agenda, 12/5/02).

Dupont Agricultural Products received tolerances for residues of the herbicide pyrithiobac sodium (Staple®) in or on undelinted cotton seed (0.02 ppm) and cotton gin byproducts (0.15 ppm). (*Federal Register*, 12/4/02).

MAM

### Annual Report of 2002 Crop Production

The USDA-NASS has released the following estimates of crop production for 2002:

Crop	Florida		United States	
	Acres (x1000)	Average Yield	Acres (x1000)	Average Yield
Corn for grain	34	96 bu	69,313	130 bu
Corn for silage	34	18 ton	7,490	14 ton
Wheat	7	43 bu	45,817	35.3 bu
Hay, all	280	2.80 ton	64,497	2.34 ton
Peanuts	86	2300 lb	1296.7	2561 lb
Soybeans	8	31 bu	72,160	37.8 bu
Cotton	115	346 lb	13,962	663 lb
Tobacco	4.6	2600 lb	430.3	2068 lb
Sugarcane	461	38.2 ton	1026.1	35.0 ton

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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