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On The Farm

NEWS LETTER DECEMBER 2007

UP COMING MEETINGS

Beltwide Cotton Conference

Date: January 8-11, 2008

Place: Gaylord Opryland Hotel, Nashville, Tennessee

For more information: <http://beltwide.cotton.org> or call 901-274-9030 and ask for the Beltwide Help Desk. This is an excellent meeting.

Mississippi Peanut Growers Association Annual Meeting and Short Course

Date: January 22, 2008

Place: Forest County Multipurpose Center in Hattiesburg, MS

Time: 8:00 a.m. until 4:00 p.m.

8:00 a.m. MS Grower's Association Meeting

9:15 Dr. John Beasley, University of Georgia Peanut Agronomist

10:00 Dr. Glen Harris, University of Georgia Soil Specialist

10:45 Dr. Marshall Lamb, National Peanut Lab Economist

11:30 Sponsored Dinner

1:00 Dr. Barry Tillman, University of Florida Peanut Breeder

1:30 Randy Griggs, Alabama Peanut Producer's

2:15 Chris Balkum, Auburn University Peanut Agronomist, Precision Digging

2:45 Kelvin Riggins

3:15 Grower Panel: Lonnie Fortner, John Michael Pillow, Clayton Lawrence Jr. and William Dean Atkins

ALABAMA A&M AND AUBURN UNIVERSITIES, AND TUSKEGEE UNIVERSITY, COUNTY GOVERNING BODIES AND USDA COOPERATING

The Alabama Cooperative Extension System offers educational programs, materials, and equal opportunity employment to all people without regard to race, color, national origin, religion, sex, age, veteran status, or disability

Conservation Tillage Workshop

Date: Wednesday January 23, 2008

Place: Loxley Civic Center in Loxley, Alabama.

Time: 8:00 a.m. until 1:00 p.m.

The workshop is designed for Alabama and Florida farmers desiring to learn more about conservation tillage methods from other farmers and conservation tillage researchers.

Topics to be covered at the workshop include cover crop, weed, and fertility management. Additional topics include soil compaction, water relations, equipment and USDA farm programs. The workshop is free and lunch will be provided. For more details about the program contact the Gulf Coast RC&D at (251) 580-0195 or your local NRCS or Extension office.

2008 All Crop Farm Day

Date: Wednesday, February 13, 2008

Place: Walnut Hill Community Center, 7850 Highway 97, Walnut Hill Florida

Time: 8:00 a.m. until 2:30

Topics:

8:15 Cotton Production

9:00 Corn Production

10:00 Wheat, What to do now to finish the crop

10:15 Soybean Production and disease control

11:00 Peanut Production: varieties, disease control and cost cutting measures

12:00 Sponsored Dinner

1:00 Row Crop Economics: Marshall Lamb with the National Peanut Lab

CEU, CCA, and Commercial Applicator Points, Industry Booths and Demonstrations

This meeting is in cooperation with the Alabama, Florida and Georgia Extension Systems

For more information contact- Libbie Johnson – 850.475.5230

APPLIED SCIENCE REPORT

On Farm variety testing research can be very helpful and make good field demonstrations for agronomic practices in our area. Research is conducted at the university and research stations. These however, are done on grower's fields and typically on a larger scale.

Often they are as much a part of a verification program for our area as they are research.

Soybean Variety Test 2007

Cooperator: Bob, William and Ben Griffith in Baldwin County

Auburn University Soybean Agronomist: Dr. Dennis Delaney

Regional Extension Agronomist: Richard L. Petcher

Planted Griffith Farm on June 26, 2007

Harvested November 8, 2007

This test was a single strip plot. Plots were not replicated
 Drought during growing season reduced yield by an approximate 35 %.

| Variety | Yield in Bushels per Acre |
|-----------------------|---------------------------|
| Delta King 50x34 | 36.6 Bushels |
| Terral 55R15 | 36.5 |
| Delta Pine 56x34 | 36.5 |
| Pioneer 5650 | 35.2 |
| Dyna Gro 33x55 | 35.2 |
| Dyna Gro 33x57 | 33.5 |
| Terral 59R16 | 32.8 |
| Delta Pine 5808R | 31.0 |
| Delta King 5567 | 30.7 |
| Delta Pine 5915 | 30.4 |
| Mark Seed Co. RREXCTA | 30.1 |
| Delta Pine 5414 | 28.7 |
| Delta Pine 5914 | 28.7 |
| Progeny 5706 | 26.5 |

Sponsors: The Alabama Wheat and Feed Grain Commission, Delta-Pine, Delta King, Dyna-Gro, Mark, Pioneer Progeny and Terral Seed Companies.

Peanut Full Season Variety Test

Cooperator: John and David Bitto in Baldwin County, Alabama

University of Florida Peanut Plant Breeder: Dr. Barry Tillman

Regional Extension Agronomist: Richard L. Petcher

Planted on May 18, 2007

Harvested on November 3, 2007

Planted twin row on 36 inch rows in half acre plots and were replicated 4 times.

| Variety | Average of 4 Replications | Difference in Yield |
|-------------|---------------------------|---------------------|
| York | 5612 | Top Variety |
| C99R | 5200 | -412 |
| Georgia 01R | 5123 | -489 |

The York peanut variety is a new full season peanut variety released by the University of Florida. It has a smaller vine than most peanuts and the nut is similar in size to the Georgia Green. This was their first on farm test in Alabama. The peanuts from the plot will be graded and statistics run on this test. A few growers had the York peanut on their farm for seed production. Growers reported that the new variety did very well.

Sponsors: Hayward Carroll with Birdsong Peanut Company, Joe and Tim Muleck and Dr. Barry Tillman, UFL Peanut Plant Breeder.

Broiler Litter and Sidedress Nitrogen Study on Corn

Cooperator: Rod Richardson in Washington County

Regional Extension Agronomist: Richard L. Petcher

Extension Entomologist: Dr. Tim Reed
Auburn University Soil Agronomist: Dr. Charles Mitchell
Sponsor: Wheat and Feed Grain Commission of ALFA Farmer's Federation and Rob Duffield with Pioneer Corn.

Three tons of broiler litter per acre was applied to the plots in alternating strips 80 feet wide and 1200 feet long. A pre-plant commercial fertilizer consisting of 13-40-90 analysis was applied to the other strips. This was replicated four times. The corn hybrid was Pioneer 33M53RR2 and was planted on March 8, 2007. Two hundred pounds of 10-34-0 starter fertilizer was used on the commercial plots. The corn in the commercial plots was side dressed with 440 lb. of 28-0-0-5. The side dress in the broiler litter plots was Nitrogen at 0, 40 N and 80 N rates. Leaf Tissue Samples taken at mid silk stage. Rainfall was good up until tassel. Three weeks of no rain at that time greatly reduced yields. Estimate 50 % yield loss. Rains came again just as the corn was drying down. Harvest was on August 2, 2007

Broiler Litter at the rate of 3 tons per acre was applied. The analysis of this litter was very good. The nutrient content of the litter was Nitrogen 3.18 %, Phosphorous 4.37 %, Potassium 2.38 %, Calcium 2.61 % and Magnesium 0.43 %. One ton of this litter delivers N 64lb., P205 87 lb and K20 48 lb. Three tons delivers N 192 lb., P205, 261 lb., and k20 144 lb. Costs: Broiler litter cost \$25 per ton plus \$6.00 for spreading. Total cost \$31 per ton. **Total Cost for 3 Tons Broiler = \$93 per acre.**

Commercial Fertilizer (Farmer's Choice)

Pre-plant: 13-40-90 costs \$54 per acre

Starter: 10-34-0 + minor elements. Applied 20-64 + Minors: costs \$35 per acre

Side-dress: 28-0-0-5. Applied 40 gallons or 440 lb. which delivered Nitrogen 123 lb. and Sulfur 22 lb. per acre. Cost \$56 per acre.

Total N = 156 lb., Total P = 104 lb., Total K = 90 lb.

Total Cost for Commercial = \$145 per acre.

Comparison of Nutrients:

| | Nitrogen | Phosphorous | Potassium | Cost |
|-----------------------|-----------------|--------------------|------------------|--------------|
| 3 Tons Broiler | 192 | 261 | 144 | \$93 |
| Commercial | 156 | 104 | 90 | \$145 |

Cost per treatment:

1. Commercial (Farmer's Choice) = **\$145** = \$145
2. 3 Tons Broiler + 0 Nitrogen = **\$ 93** + starter = \$128
3. 3 Tons Broiler + 40 N = \$111 + starter = \$146
4. 3 Tons Broiler + 80 N = \$129 + starter = \$164

Table of Test Results

| Treatment | Bushels/A adjusted to 15.5 % Moisture | Difference in Yield | Cost of Treatment | Difference in Cost of Treatment | Profit @ \$4.50 |
|--------------|---------------------------------------|---------------------|-------------------|---------------------------------|-----------------|
| Commercial | 68.14 | + 5 Bu/A | \$145 | \$17 | \$ 5.5 Profit |
| Broiler + 0 | 63.24 | | \$128 | \$ 0 | \$ 0 loss |
| Broiler + 40 | 63.17 | | \$146 | \$18 | \$ 18 loss |
| Broiler + 80 | 63.45 | | \$164 | \$36 | \$ 36 loss |

Commercial N cost \$0.45 per lb.

Starter fertilizer was added to the broiler litter plots as well. Typically when using broiler litter no starter fertilizer is added.

Results: This is the first year that broiler litter had ever been applied to the land used in this study. Research conducted by Dr. Charles Mitchell showed that for dryland corn three tons of broiler litter with a 3-3-2 analysis provided yields equal to or better than corn fertilized with an equivalent rate of commercial fertilizer when the litter was applied within 30 days of planting. The yield obtained in this study in all three litter treatments was the same and showed that no yield benefit was obtained by applying supplemental sidedress nitrogen. Yield obtained using commercial fertilizer was numerically greater than that obtained using broiler litter. This average yield difference of 5 bushels per acre resulted in a net return of \$5.50 per acre for the commercial fertilizer plot in comparison with the broiler litter plot that was not sidedressed with supplemental commercial nitrogen. Statistical analysis of the data have not yet been conducted and the analysis will provide additional insight into the probability that this yield difference is due to the effect of the treatment (commercial fertilizer vs. litter) or due to experimental error (i.e. possible variability in the land on which different treatments were assigned).

Wheat Management

Fertility: Fall application of 20-40 units of Nitrogen can increase tillering which increases yield. Sulfur deficiencies can often be confused with Nitrogen. Sulfur deficiency symptoms are typically yellowing of the top leaves. It is most common on deep sandy soils. If the depth to clay is greater than 16 inches apply Sulfur. Ammonium Sulfate or 41-0-0-5 can be applied to supply 15 to 20 lbs. of Sulfur per acre. Micronutrient levels are usually adequate unless soils have been over-limed and have a high pH. A soil test readily detects these conditions. If over-limed Zinc (Zn) should be added at 3 lb. elemental Zn per acre. The availability of Manganese (Mn) declines as the pH goes up, especially in our poorly drained soils. Soil applications seldom correct the problem since Mn is readily converted to unavailable forms. Foliar applications of 0.5 pounds of Mn per acre as MnSO₄ or 0.25 pounds of Mn per acre as Mn chelate will correct deficiencies, but two or more applications may be required.

Insects: Scouting for aphids is very important. In South Alabama aphids are an any time of year pest. Aphids are the vector for Barley Yellow Dwarf (BYD) disease that affects wheat and oats. Many growers have seen BYD on wheat, however, oats are far more susceptible to the disease than wheat. Know the thresholds of aphids at the different growth stages. At the 2 to 3 leaf stage the threshold to treat is 1-2 bird cherry-oat aphid per foot of row, or 10 plus greenbugs or sugarcane aphids per foot of row. When wheat is 6 to 10 inches tall the threshold is 6 aphids per foot of row. A good time to scout for aphids is around 25 to 30 days after planting, during warm spells in January and then again in mid February. If thresholds are reached, applying a labeled insecticide will pay. Hessian flies may be a problem unless your wheat is a resistant variety. In South Alabama there are no truly Hessian fly as there are no true aphid free days. Scouting for the Hessian fly itself is almost impossible. However, by spring if you have them you should be able to asses the damage and then determine weather to top dress with Nitrogen or not. Hessian flies do not attack oats.

Weed Management: This is one of the more critical parts of intensive wheat management. The main key is to not let the weeds get away. For broadleaves Harmony Extra, 2, 4-D or MCPA are some good options. For ryegrass Hoelon, Finesse or Osprey are good options. These herbicides are very dependant upon the correct additives. Check for replant restrictions on these herbicides. Many herbicides should be applied only during certain stages of wheat development to avoid crop injury. Bellow is a table of the effect of stage of growth on wheat injury by various herbicides. The source of this information is the University of Georgia Wheat Production Guide. Web Site: http://www.caes.uga.edu/commodities/fieldcrops/gagrains/documents/07_08WheatProductionGuide.pdf

The Effect of Stage of Growth on Wheat Injury by Various Herbicides

| Herbicide | 0-1 tiller | 2-3 tillers | Full tiller | Jointing |
|---------------|------------|-------------|-------------|----------|
| 2,4-D | >80 % | 30 % | 0-10 % | 70-90 % |
| MCPA | >40 % | 5 % | 0-5 % | 50-70 % |
| Peak | 0-5 % | 0-5 % | 0-5 % | 5-10 % |
| Express | 0-5 % | 0-5 % | 0-5 % | 5-10 % |
| Harmony Extra | 0-5 % | 0-5 % | 0-5 % | 5-10 % |
| Express+MCPA | >40 % | 5 % | 0-5 % | 50-80 % |
| Osprey | 0-5 % | 0-5 % | 0-5 % | 0-5 % |

Crop Rotation Restriction for Various Small Grain Herbicides:

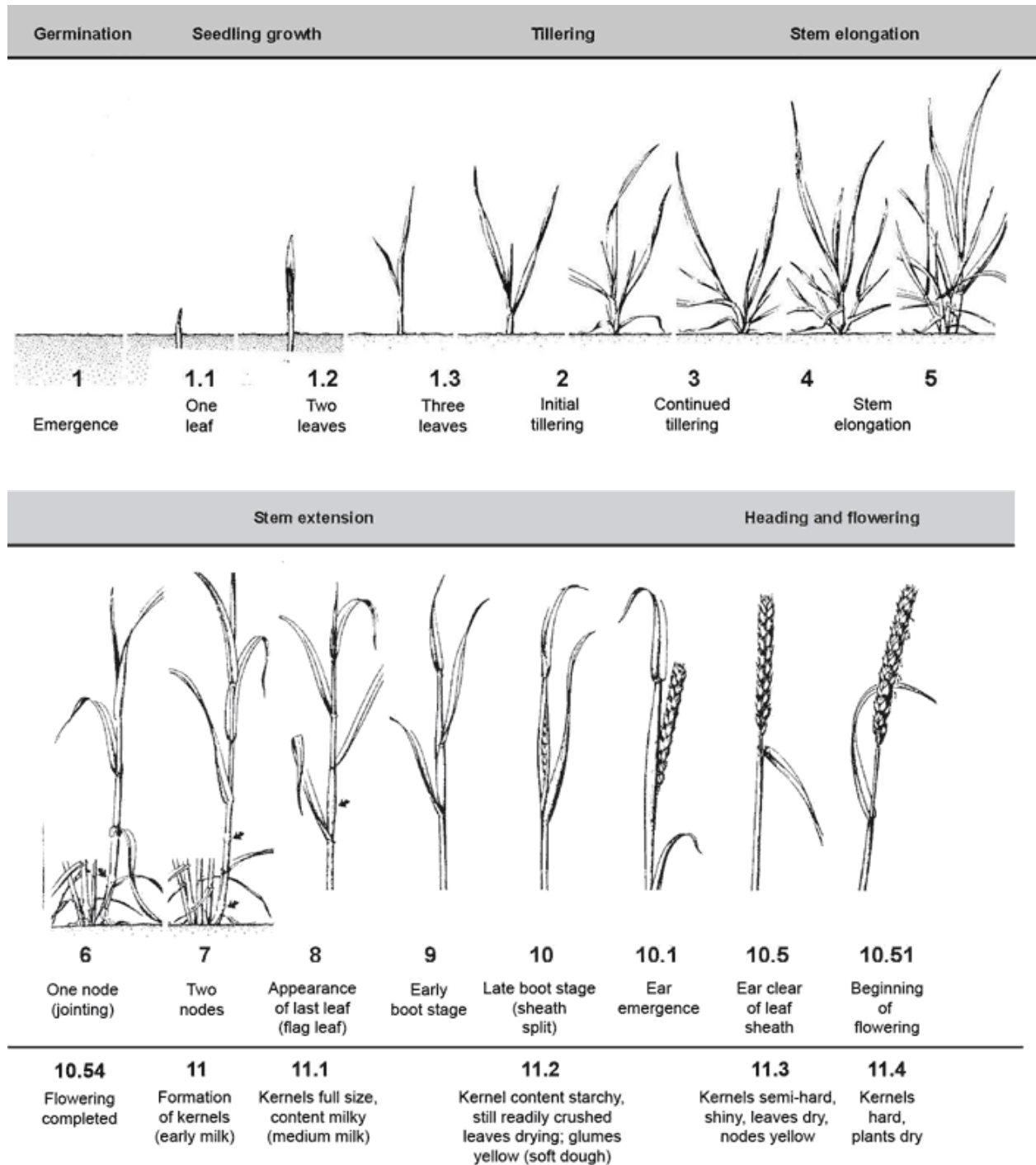
Harmony Extra: No rotational restrictions for crops following wheat treated with H.E.

Peak: There is a 10 month rotational restriction for all soybeans, cotton and peanuts following Peak.

Osprey: Ninety days for cotton, peanuts, soybeans and **12 months for corn** and 10 months for other crops

Knowing the growth stage of your crop can be very important in making management decisions such as spraying for insects and determining when to fertilize and timing and rates of herbicides. Below is Feekes Growth Stages for Small Grains.

Feekes Growth Stages of Small Grains: Resource for this is the North Carolina Extension Service: Web Site: <http://www.smallgrains.ncsu.edu/Guide/Chapter1.html>



Wishing You a Merry Christmas and a Happy New Year,
And again hope this information is helpful to you,

Sincerely,

Richard L. Petcher

Richard L. Petcher
Regional Extension Agent
Agronomic Crops