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COOPERATIVE EXTENSION
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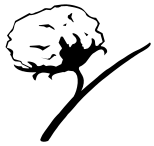

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Upcoming Dates

- **Beltwide Cotton Conference (Atlanta) – January4 - 7**
- **Georgia/Florida Small Grain/Soybean Expo (Perry) - January 13**
- **Georgia Peanut Farm Show (Albany) – January 20**

Current Climate Situation: We are receiving more rain, but it certainly isn't enough to offset what we lost last crop season yet. La Nina is still in full swing and promises less rainfall than normal and a warmer winter, even though that is hard to imagine right now. It will likely persist into the spring of next year. The 30 day (from publication date) rainfall recorded at the USDA Multi-Crop Irrigation Research Farm in Shellman recorded 2.61" (30 year average is 4.26") inches with a daily average temperature of 50.24ºF and an average daily maximum temperature of 62.65ºF. Average daily temperatures are about 4 degrees lower than the 30 year average. The average minimum temperature was 37.83ºF. The average 4" soil temperature over the last thirty days is 54.16ºF. The evapo-transpiration 30 day average is (.04) inches per day, which is average. To monitor soil temperatures and weather information at various weather stations including the USDA Multi-Crop Irrigation Research Farm visit www.georgiaweather.net.

UPCOMING EVENTS

2011 Randolph County Extension Commodity Meeting Dates

January 27, 2010	Time: 6:00 pm	Dewey Lee – Corn
February 21, 2010	Time: 6:00 pm	John Beasley, Bob Kemerait, David Adams – Peanuts
March 1, 2011	Time: 6:00 pm	Guy Collins, Phillip Roberts & Glenn Harris – Cotton

Please put these dates and times on your calendars!!
Also contact me if there is a specific topic you are interested in!!
We hope to see you there!!

WHEAT

WHEN IS TOO LATE TO PLANT SMALL GRAINS?

Dewey Lee, Small Grains

Many factors determine the effects that planting dates have on small grain production. Temperature, moisture, disease, weeds, and/or insect pressure and irradiation are the environmental factors that generally affect plant growth during the fall and winter months. Obviously, each year is therefore different. So as you can see, the best planting dates are often moving targets. In general, though, research and experience has shown us that the week before and after the first frost day, is usually the best period. For most of Georgia this will occur sometime in early to mid-November. This window of time allows small grains to grow roots deep enough and produce enough tillers to sustain an excellent yield potential. As you past these dates, growing degree units decline and negatively affect the number of tillers and roots that can be produced. Very seldom are yields of a December planted crop better than one that is planted in November. In addition, the vernalization requirement of the variety may not be met when planted late in the season thus delaying the reproductive phase and growth at the proper time. Grain yields of late planted small grains will easily be reduced 25 to 75% of normal. Yield loss progressively increases the later one plants. The same is true for planting small grains for cover crops. Studies in Tifton have shown the dry matter production of small grains planted in December is reduced by 60% of that from small grains planted in October. It is important therefore to plant in a timely manner to achieve the best yields for either grain or dry matter production. As you plant later, expect yields to decline and accelerate in loss as you approach mid to late December. Medium to late maturing, long vernalizing varieties should be only planted early to mid way of the planting window. Medium maturing varieties with medium to short vernalization varieties can be planted throughout the planting window. Yield reductions occur less with medium to early maturing/medium to short vernalizing varieties when planted late as compared to the later materials. If you are two to four weeks past your prime planting period,

then only use short to medium vernalizing varieties. Generally, I will not recommend planting beyond that window.

MANAGING RYEGRASS IN WHEAT DURING THE 2008/2009 SEASON

Stanley Culpepper, Weed Scientist

By now, most growers are very comfortable using Axial, Hoelon, and Osprey to control ryegrass in wheat. Hoelon and Axial resistant ryegrass has plagued many growers until Osprey recently received registration. Unfortunately, there are alarming concerns that there are numerous ryegrass populations in Georgia that have already developed resistance to Osprey as well. Thus, these populations may now be resistant to Axial, Hoelon, Osprey and even PowerFlex, a new herbicide just labeled for Georgia.

It is crucial growers develop a long-term management plan rotating herbicide chemistry. The discussion below on new ryegrass management tools and Table 1 will help growers develop a long-term plan. For example, PowerFlex is a new ALS herbicide similar to Osprey. Growers should rotate PowerFlex OR Osprey with alternative chemistry; never treat the same piece of land two years in a row with these herbicides. Similarly, Axial and Hoelon are ACCase herbicides and growers must rotate these herbicides with alternative chemistry; never treat the same piece of land two years in a row with these herbicides.

Table 1. Herbicide modes of action used to control ryegrass in wheat.

Herbicide	Mode of Action	Note
Axial	ACCase inhibition	Will not control holeon-resistant ryegrass
Axiom	Inhibition of very long-chain fatty acids plus photosystem II inhibition	Product quantity is limited, application procedure is critical; primarily provides residual control
Hoelon	ACCase inhibition	Very effective on non-Hoelon resistant ryegrass
Osprey	ALS inhibition	Slow acting, resistance is now likely in GA
PowerFLex	ALS inhibition	Will not control ryegrass resistant to Osprey
Prowl	Microtubule assembly inhibition	Provides only residual control

Several new herbicides have recently been obtained to manage ryegrass in wheat and will be discussed individually below.

PowerFlex: Limited research with PowerFlex, active ingredient pyroxsulam, has been conducted in Georgia. Use of PowerFlex is suggested on limited acreage until more experience is obtained. PowerFlex, according to the label, can be applied in wheat at 3.5 oz/A from the three-leaf stage until jointing. Apply after the majority of the ryegrass has emerged but before it exceeds the two-tiller stage. Add non-ionic surfactant at 1 qt per 100 gal spray solution.

In addition to ryegrass, the PowerFlex label claims control of several broadleaf weeds including Carolina geranium, common chickweed, hairy vetch, wild mustard and suppression of henbit. The label does not mention wild radish but two Georgia studies conducted last season

suggest excellent control of radish up to 8 inches in height. For additional broadleaf control, PowerFlex may be mixed with Harmony Extra. Do not mix with dicamba, 2,4-D, or MCPA. PowerFlex is a sulfonylurea-type herbicide, and similar to other sulfonylureas, PowerFlex works slowly. Symptoms appear two to four weeks after application; and four to eight weeks may pass before ryegrass dies.

Labeled rotational restrictions include 1 month for wheat; 9 months for grasses including barley, field corn, grasses, millet, oats, popcorn, seed corn, sweet corn, sorghum and for broadleaves including alfalfa, canola, chickpea, soybean, dry bean, field pea, flax, lentil, mustard, potato, safflower, sugar beet, and sunflower. All crops not listed have a 12 month rotational restriction. Limited research in Georgia has shown no problem with double-cropped soybean or cotton planted behind wheat treated with PowerFlex in December or January.

Prowl H20: Prowl H20 at 1.5 to 2.5 pt/A can be applied **postemergence** to wheat as long as the wheat is between the 1st leaf stage and the flag leaf being visible. Prowl does not control emerged weeds but can provide residual control of sensitive weed species if the herbicide is activated by rainfall or irrigation in a timely manner. Data on Prowl's ability to control broadleaf weeds like henbit, chickweed, etc. is currently limited with our hopes of generating more data this winter. The Prowl H20 label does allow for mixtures with any labeled wheat postemergence herbicide.

In my mind, the two greatest uses for Prowl H20 would include the following: First, a mixture of Prowl H20 with a postemergence (Axial, Hoelon, PowerFlex, Osprey) annual ryegrass herbicide. In theory with this application, the postemergence herbicide would control the emerged ryegrass and the Prowl H20 would provide residual control. However, it is worth mentioning that most ryegrass that growers see at harvest is not ryegrass emerging after their postemergence herbicide treatment but rather from ryegrass that was not controlled with their postemergence herbicide because the ryegrass was too large when treated……Prowl H20 will not help in this situation.

A second use for Prowl H20 in wheat would be in a situation where the wheat emerges while the ryegrass is late to emerge. One could apply the Prowl H20 over one leaf wheat and if activated by rainfall or irrigation it would provide residual control into the season improving the likelihood of making "timely" postemergence applications.

Axiom DF: For 2008, the availability of this product will limit its use. Those wanting to use Axiom need to review the label very carefully. Application rates vary based on soil type. Most GA growers will be using 6 to 8 oz of product per acre but again this should be determined from the label. Axiom should be applied in wheat from the spike stage up to the 3 leaf growth stage. If used properly, the herbicide can provide excellent control of radish, henbit, and chickweed.

Ryegrass control by Axiom will vary based on its stage of growth at application timing. If the application to wheat is during the spike wheat stage and this is prior to ryegrass emerging (assuming herbicide activation by rainfall or irrigation) good ryegrass control can be noted; however, if the ryegrass is emerged at the time of application control will be poor.

PEANUTS

2010 Randolph County Nighttime Peanut Fungicide Application Test Plot

Buster Haddock

As you know I have been testing the nighttime application of soilborne fungicides with Clifford Rigsby for three years now for control of white mold. We have had some great success with the results. Ultimately, we have determined that perhaps the most threatening disease we face growing peanuts given the means and materials used to control it is white mold. Of course, CBR is extremely difficult to control, but it affects much fewer acres. Other diseases like leaf spot and rhizoctonia are more of a problem in wet weather patterns, but white mold seems to be a constant problem year after year.

The method is simple, spray your normal scheduled soil borne fungicide application from 5-6 A.M. or earlier. This means if you are on a two block program you only have to do this 2 times and a four block 4 times. The first year of the test we averaged 1115 lbs/A more in the nighttime plots. This was using an Abound program. Last year we used a tebuconazole program with four sprays and the results were an increase of 494 lbs/A. We had extremely heavy rainfall last year and that certainly played in to the results because we could not dig the peanuts on the desired date due to rainfall. After two years the average for nighttime sprayed peanut was 804 more lbs/A. This year certainly began as a promising year with early high temperatures which promotes white mold expansion. However, a few things seemed to affect the outcome of the test results. In the two previous years we were using AT-215 and Georgia O-6G, however this year we used Georgia Greener. The change in varieties did not necessarily have a profound effect on the results. The two factors that did have an affect are dry weather. Moisture levels were low and irrigation was not enough to offset the lack of moisture that would have caused more white mold. White mold was present in the plots and field, but it had obviously been more prolific earlier in the season. The fungicide of choice this year was Provost, which was a four block program. Provost is a mixture of prothioconazole and tebuconazole. It has been reported by Bayer that Provost has some translocating abilities. Although the test did not prove this fact the results did support that this was a possibility. One interesting fact is the plot yield average was higher in 2010 than the previous two years. Both nighttime and daytime plots were rated for disease and the nighttime plots had 16% less disease than the nighttime plots, but the yield difference was not statistically significant at 19 lbs/A more for the nighttime plots.

Ultimately, the 3 year average for the nighttime peanut fungicide application test was 542 lbs/A. However, tests here in Randolph and around the state seem to support a few constants.

1) Nighttime fungicide application seems to be the most affective on white mold, therefore if conditions for white mold production are not met it is likely that nighttime fungicide application will not be worthy.

2) Fields with a short rotation and a history of disease are much more likely to show good results with the practice. Fields with a long rotation and no history of disease are not likely to respond to nighttime fungicide application.

3) Nighttime fungicide application normally is more affective when the application is made in the early morning hours. It is the assumption that dew helps the material move lower into the peanut canopy.

4) Since other leaf spot fungicide applications are made during the day, leafspot has not been shown to be an issue with nighttime fungicide application.

Fungicide Plots, Spray Dates and Materials Used
John Rigsby Farm, Randolph County, 2010

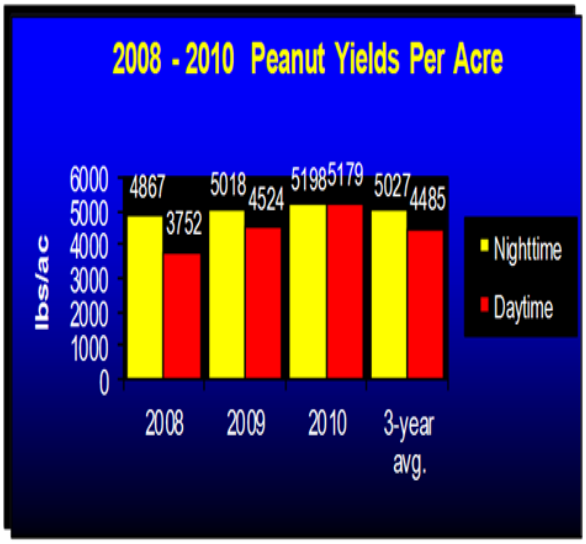
PLOTS	6/20/10	7/05/10	7/15/10	7/21/10*	8/05/10*	8/27/10*	9/14/10*	9/17/10
Daytime #1	Tilt/Bravo 1.5 pt.	Bravo 1.5 pt Boron ¼ lb/A	Bravo 1.5 pt	Provost 10 oz.	Provost 10 oz	Provost 10 oz	Provost 10 oz	Bravo 1.5 pt
Nighttime #1	Tilt/Bravo 1.5 pt.	Bravo 1.5 pt Boron ¼ lb/A	Bravo 1.5 pt	Provost 10 oz	Provost 10 oz	Provost 10 oz	Provost 10 oz	Bravo 1.5 pt
Daytime #2	Tilt/Bravo 1.5 pt.	Bravo 1.5 pt Boron ¼ lb/A	Bravo 1.5 pt	Provost 10 oz	Provost 10 oz	Provost 10 oz	Provost 10 oz	Bravo 1.5 pt
Nighttime #2	Tilt/Bravo 1.5 pt.	Bravo 1.5 pt Boron ¼ lb/A	Bravo 1.5 pt	Provost 10 oz	Provost 10 oz	Provost 10 oz	Provost 10 oz	Bravo 1.5 pt
Daytime #3	Tilt/Bravo 1.5 pt.	Bravo 1.5 pt Boron ¼ lb/A	Bravo 1.5 pt	Provost 10 oz	Provost 10 oz	Provost 10 oz	Provost 10 oz	Bravo 1.5 pt
Nighttime #3	Tilt/Bravo 1.5 pt.	Bravo 1.5 pt Boron ¼ lb/A	Bravo 1.5 pt	Provost 10 oz	Provost 10 oz	Provost 10 oz	Provost 10 oz	Bravo 1.5 pt

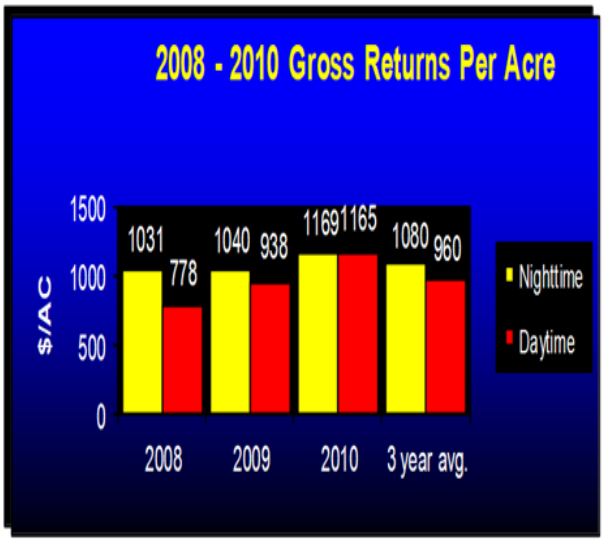
Table 1. * Night Spray Dates for nighttime plots only ~ plot s treated from 5 – 6:00 A.M.; fungicide products used were Bravo (chlorothalonil), Tilt/Bravo (propiconazole/chlorothalonil), and Provost (prothioconazole/tebuconazole).

Disease Ratings for Nighttime & Daytime Applied Fungicides
John Rigsby Farm, Cuthbert, GA 2010

PLOTS	Leaf Spot % Defoliation	Disease: Avg. Hits Per 100 ft/row
Daytime #1	negligible	17 WM
Nighttime #1	negligible	22 WM
Daytime #2	negligible	19 WM
Nighttime #2	negligible	9 WM
Daytime #3	negligible	14 WM
Nighttime #3	negligible	11 WM

Table 2. * Disease ratings were performed by Dr. Tim Brenneman on October 6, 2010. All Disease recorded was white mold.





COTTON

2010 Randolph County Non-irrigated Cotton Variety Test Plot

Buster Haddock

Over the last few years we have had to reduce our use of DP 555 and now we find ourselves in "unchartered waters" with new cotton varieties. Fortunately, we have had the opportunity to replace DP 555 as far as irrigated cotton is concerned with several varieties showing equivalent yields. However, the problems have been with non-irrigated scenarios. Over the last decade DP 555 has been unmatched in it's ability to yield in a dryland situation. The other issue facing a replacement of DP 555 in non-irrigated production is we unfortunately have had a void in research data. Therefore, it has made choosing a good variety for non-irrigated acreage a gamble at best.

This year I chose to participate in gathering research data for this dilemma. Ted Milliron graciously agreed to have the plot and work with me to produce the cotton. As on-farm research goes this was much more of a task than we both realized. To begin, chasing down some varieties was a hassle as was planting due to cleaning the planter boxes out after each replication. Of course, once the crop was in the ground normal day to day applications for the crop were no problem. Throughout the growing season data was collected on the plot and it was monitored for pests. Harvest with Dr. Murphy (the one that made that law) was extremely difficult and slow and as you can see from the picture below luck was also not on our side, but we rallied and had a strong finish.

Fig. 1 boll buggies should have necessary counter weights to be effective

The cotton looked great early in the season with good vigor. Shortly after the cotton was planted the plot received a great deal of rainfall which made for a good stand. However, as most of you well know, once we entered June we received little beneficial rainfall and the heat was oppressive. I think one of the most astonishing facts regarding this cotton test plot was it received a total of 10.11 inches of rainfall after planting which should be enough precipitation to make a decent dryland cotton crop. However, this season really reflects how important the timing of rainfall is. Very little timely rainfall coupled with record heat, for both day and nighttime, resulted in the type of dryland yields we experienced in our test plot and throughout the county. A precious few producers received some small but timely showers in areas of the county and had some very respectable non-irrigated yields in the ranges of 1000 – 1200 lbs/A . . . you know who you are! In fact, I think the most influential factor for the plot was the lack of rainfall and high heat after first bloom. First bloom for the majority of the plot was around June 12.

Cotton water requirement is the highest after first bloom and in an ideal situation the crop needs to receive roughly 2" per week for the 9 week bloom period. The plot only received **2.25" after first bloom.** The lack of rainfall and high heat after first bloom forced the cotton into an early shutdown. As you can see in fig. 3 below on the day of harvest that the plants had shut down in July and then subsequent rainfall late in August rejuvenated plants to put on a second crop. Unfortunately, new growth would never have an opportunity to come to fruition as it was put on too late to receive enough heat units to reach full maturity thus causing hardships for harvesting and defoliation.

Some other interesting observations I made working the plot was that DP 555 ranked 7th out of 10 varieties. I thought this showed promise, but I have noticed that in comparison with other county trials the information is a little inconsistent. There are some interesting things that I notice when comparing the trials. The trials that received little precipitation resulting in low yields had similar results with different top producing varieties than the higher yielding trials. The information tends to implicate that a few varieties perform better under extreme circumstances. Also, I have noticed that DP 555 performed much better in the trials that received some decent rainfall thus supporting the belief that it is still the most versatile cotton variety. However, there are some other very comparable varieties such as DP 1050, PHY 375 and ST 5458. I think the most important thing we get from the plot is how these varieties compare under such drastic circumstances. I implore you to open the attachment and view all of the cotton data Dr. Collins has shared with us. I think some very good information is there that can aid us in making good choices on varieties. We need to be very shrewd this year and choose the best varieties for your particular situation, especially since prices are the best they have been in 134 years. Also, I believe it is important to compare multiple years worth of data when making a variety choice, so go to this link http://www.swvt.uga.edu/pct-tests.html for that information. We have yield information from several locations: Tifton, Plains, Midville and Bainbridge. For heavy soils look at Plains data and for lighter soils look at Tifton and Bainbridge. Good Luck!

Cotton Plot Pictures

Fig. 2 Plot on June 17, 2010

Fig. 3 Plot on day of harvest

2010 Randolph County Non-irrigated Cotton Variety Trial Practices

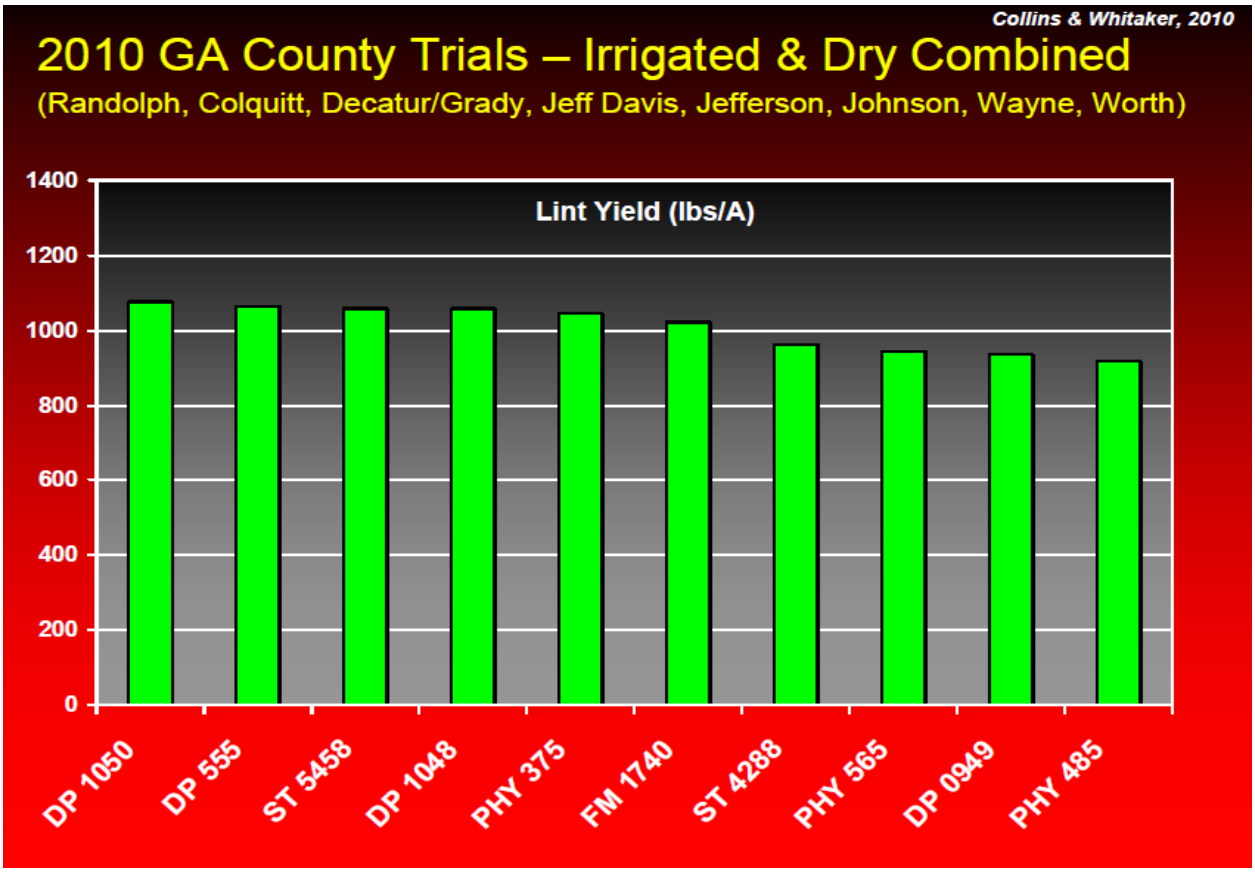
Common Agronomic Practices & Pesticides	Rate	Date
Disking	1 time	22-Mar
Trifluralin + Disk (PPI)	1.25 pt/A & 1 time	10-Apr
Strip Till	1 time	12-Apr
Plant	N/A	23-Apr
Reflex Herbicide + Diuron (at planting)	1 pint each/A	23-Apr
Temik (at planting)	4.5 lbs/A	23-Apr
Gramoxone Inteon	10 oz/A	23-Apr
Round-up	1 qt.	12-May

Common Agronomic Practices & Pesticides	Rate	Date
Staple	2 oz.	12-May
Orthene 97	1/4 lb/A	4-Jun
Layby Diuron + MSMA	1 qt each/A	11-Jun
Leverage + Topside (boron)	3 oz/A; 1 pt/A	24-Jun
Bidrin + Topside + Pix	6oz/A; 1pt/A; 12 oz/A	6-Jul
Defoliation ~ Dropp + Prep	6 oz/A; 1 qt/A	21-Aug
Harvested		14-Sep

Plot Rainfall – <u>June 12 FIRST BLOOM</u> – 2.25" after first bloom

Rainfall	Date
0.18	24-Apr
0.2"	25-Apr
0.18"	30-Apr
3.83"	3-May
0.4"	16-May
1"	25-May
1"	29-May
1.10"	3-Jun
.5"	29-Jun
.75"	7-Aug
1.0	28-Aug

Total: 10.11 inches



2010 GA County Variety Trials (including DP 555)

Stability & Consistency

Collins & Whitaker, 2010

Variety	Randolph Dry	Jefferson Dry	Johnson Dry	Wayne Dry	Decatur Grady Dry	Jeff Davis Irr.	Worth Dry	Colquitt Irr.	Combined Average
DP 1050	421	705	1062	1045	1378	1209	1369	1407	1075
DP 555	369	535	1122	1087	1080	1361	1502	1448	1063
ST 5458	452	695	965	1014	1400	1324	1327	1352	1059
DP 1048	383	662	1038	956	1246	1323	1425	1367	1058
PHY 375	472	684	1064	940	1423	1147	1236	1391	1045
FM 1740	389	605	964	948	1364	1197	1248	1455	1021
ST 4288	490	680	784	894	1052	1163	1387	1256	964
PHY 565	352	623	787	909	1176	1158	1292	1261	945
DP 0949	452	468	878	1012	767	1209	1390	1304	935
PHY 485	357	583	824	924	1170	1105	1203	1150	914
Loc. Average	414	624	949	973	1206	1220	1338	1339	

2010 GA County Variety Trials (including DP 555)

Stability & Consistency

Collins & Whitaker, 2010

Variety Ranking	414 - 624 lbs/A 2 trials	949 – 973 lbs/A 2 trials	1206 – 1339 lbs/A 4 trials
1	ST 4288	DP 555	DP 1048
2	PHY 375	DP 1050	DP 555
3	DP 1050	PHY 375	DP 1050
4	ST 5458	ST 5458	ST 5458
5	DP 1048	DP 1048	FM 1740
6	FM 1740	FM 1740	PHY 375
7	PHY 565	DP 0949	PHY 565
8	PHY 485	PHY 485	ST 4288
9	DP 0949	PHY 565	DP 0949
10	DP 555	ST 4288	PHY 485

Sincerely,

Buster Haddock
ANR Agent
Randolph County

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