

**A Report to the Georgia Agricultural Commodity Commission for Peanuts
on
University of Georgia Agronomic Research and Extension Programs**

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Agronomic research was conducted in 2007 in the following areas: planting dates, row patterns, reduced tillage, seeding rate, inoculants, irrigation, and plant growth regulators. Due to limited space allowed for this report, yield and grade data from a few of these trials are presented below.

Cultivar Response to Planting Dates

The planting date trials were conducted at the Coastal Plain Experiment Station's RDC Pivot in Tifton, Attapulgus Research and Education Center in Decatur County, Southeast Georgia Research and Education Center near Midville in Burke County, and the Sunbelt Expo Farm in Colquitt County. At Tifton, we evaluated eight mid maturing cultivars at three planting dates. The planting dates were April 19, May 11 and May 31. The cultivars were: Georgia Green, AP-3, AP-4, Georgia-03L, AT 3081R, AT 3085RO, Georgia-06G, and Florida-07. At Attapulgus, the planting dates were April 10, May 9, and June 11. There were seven cultivars: Georgia Green, AP-3, Georgia-03L, Georgia-06G, AT 3081R, AT 3085RO, and AP-4. At Midville there were two planting dates, April 17 and May 17, and seven cultivars: Andru II, Georgia Green, AP-3, Georgia-03L, AT 3081R, AT 3085RO, and Georgia-06G. At the Sunbelt Expo Farm we evaluated nine mid maturing cultivars (Georgia Green, AP-3, Georgia-03L, AT 3081R, AT 3085RO, Georgia-06G, Carver, McCloud, and Florida-07) at two planting dates; April 18 and May 16. At all locations, all cultivars had higher yields at May planting dates compared to April planting. The trials were planted in a split plot design with planting date as the main plot and cultivar as the sub plot. There were four replications at each location. Plot size was two rows (six feet) wide and length varied with location. Yield, grade factors, plant stand, and tomato spotted wilt virus ratings data were collected and subjected to data analysis. The yield data are presented in Table 1 below.

Table 1. Yield (lbs/A) response of peanut cultivars to planting date

	Attapulgus			Tifton			Midville		Sunbelt Expo	
	April 10	May 9	June 11	April 19	May 11	May 30	April 17	May 17	April 18	May 16
Georgia Green	3561	4549	3744	3904	5388	4047	3576	4822	3540	3145
AP-3	3238	4716	3362	4580	5710	3662	2642	3953	3982	3779
Georgia-03L	3657	4556	4116	4317	5004	3960	3733	5380	4163	3709
Georgia-06G	3868	5424	4975	5418	6603	5436	4187	6253	4703	4778
AT 3081R	3939	4574	4096	4213	5655	4212	2803	4601	4143	4170
AT 3085RO	4101	4831	4179	4814	5830	4359	3494	5707	4538	4191
Florida-07				5413	6457	5029				4259
AP-4	4020	5215	4316	4558	5781	4092				
Andru II							3792	5117		
McCloud									3732	3982
Carver									5085	3818

Cultivar X Tillage X Row Pattern Trial

Eight peanut cultivars were planted on May 9 in single and twin row patterns under conservation (strip) and conventional tillage at the University of Georgia's Coastal Plain Experiment Station RDC Pivot in Tifton. The eight cultivars were: Georgia Green, Georgia-03L, AP-3, AT 3081R, AT 3085A, Georgia-06G, AP-4, and Georgia-02C. Plots were 6 feet wide by 40 feet long and there were four replications. Analysis of yield data indicated no significant interactions but a significant difference ($p \leq 0.05$) among cultivars when averaged over row patterns and tillage and a significant difference between tillage systems when averaged over cultivars and row patterns. Conventional tillage had a significantly higher yield than strip tillage.

There was a significant interaction between tillage and row pattern for percent total sound mature kernels (TSMK). The twin row pattern, when averaged over cultivars and tillage, had a significantly higher percent TSMK than the single row pattern. Yield data are presented in Table 2 below.

Table 2. Yield (lbs/A) and Grade (% total sound mature kernels) of eight runner-type cultivars planted in twin and single row on conventional and strip tillage, Tifton.

	Yield (lbs/A)	TSMK (%)
Georgia-06G	6512	78
AT 3085RO	5680	73
AT 3081R	5537	73
AP-4	5204	75
AP-3	5096	72
Georgia-03L	5080	73
Georgia Green	5036	75
Georgia-02C	4684	77
LSD (0.05)	324	1

Tillage (averaged over row pattern and cultivars)

Conventional – 5765

Strip Tillage – 4943

Twin Row Seeding Rate Trial

A trial was established at the UGA Coastal Plain Experiment Station’s Gibbs Farm in Tift County evaluating response to different seeding rates in the twin row pattern. The cultivar Georgia-03L was planted in the following seeding rates in each twin row: 2, 2.5, 3, 3.5, and 4 seed per foot of row. Data analysis indicated no significant difference in yield or percent TSMK. However, there was 400 pounds per acre advantage in yield of the 3 seed per foot of row rate compared to the 4 seed per foot of row rate. Yield and grade data are presented in Table 3.

Table 3. Yield and percent total sound mature kernels of Georgia-03L at five seeding rates in the twin row pattern

Seeding Rate (seed/foot of row)	Yield (lbs/acre)	Total Sound Mature Kernels (%)
2	4046	70
2.5	4113	71
3	4590	70
3.5	4513	70
4	4193	69
LSD (0.05)	1,042	3

Summary of Additional Trials

At the Stripling Irrigation Research Park in Mitchell County, Georgia Green, Georgia-02C, and AP-3 were compared under the following irrigation treatments: non-irrigated, 1.5 inches maximum per week, and 2.0 inches maximum per week irrigation. Data analysis indicated no difference among irrigation treatments and no irrigation by cultivar interaction. At the Attapulgus Research and Education Center, Georgia Green, Georgia-03L, and Georgia-02C were compared with and without the plant growth regulator Apogee. An inoculant trial was conducted at the ABAC Farm. The cultivar in that trial was Georgia-03L. The inoculant treatments were: Optimize LIFT, Soil Implant +, Vault liquid, and Vault granular. All of these were compared to an untreated check. This trial was conducted where there had been 25 years or more of continuous corn production. There was a numerical, but non-significant, yield increase for all four inoculants compared to the untreated check. Another inoculant trial was conducted on the ABAC Farm following continuous corn where we evaluated the response of the inoculants used in the previously mentioned trial with and without Proline, a new liquid in-furrow fungicide from Bayer Crop Bioscience. The objective was to determine if the Proline had a detrimental effect on the bacteria in the inoculant. The results indicated there was no effect of Proline on the activity of the *Rhizobium* bacteria.

**A Report to the Georgia Agricultural Commodity Commission for Peanuts
on
County Extension Agents Attend APRES**

Principal Investigators: John P. Beasley, Jr., Extension Peanut Agronomist, University of Georgia

Nine county extension agents representing peanut producing counties in Georgia were selected to attend the 2007 American Peanut Research and Education Society (APRES) annual meeting in Hoover, AL. The meeting was held July 10-13 at the Winfrey Hotel. The Georgia Peanut Commission provided funding to support the travel costs for four (4) of these nine agents.

The Georgia Peanut Commission has sponsored agents' attendance at this meeting since 1988. Membership and attendance at the annual meeting is comprised of all segments of the peanut industry, with the majority of the membership being research and extension scientists from universities and USDA in the USA peanut producing belt. The annual meeting is a forum for scientific paper presentations and poster sessions. Papers are presented in the areas of production and agronomics, plant pathology, weed science, entomology, economics, food science and utilization, breeding and genetics, physiology, and extension techniques. Symposia are held each year to focus on a specific problem that cuts across disciplines. Invited speakers from various segments of the peanut industry participate in these symposia or the general session.

The APRES meeting is an outstanding venue for county extension agents from Georgia to learn the latest in production technologies. The agents can then take the information that is presented and incorporate it into their local county's production system in order to increase profit potential. The APRES meeting also provides county extension agents an opportunity to present data from their own applied research trials and demonstrations. They can also highlight a successful extension program on peanuts in their county. The county agents also have the opportunity to interact with scientists and extension agents from other peanut producing states. Many times an idea shared among colleagues is what leads to a new and profitable production practice being incorporated into a county's production system.

All University of Georgia county extension agents are in the Public Service promotion system and are required to show participation (presenting papers or posters) at a professional society meeting. The APRES meeting is one of the few professional society meetings that gives agents that opportunity. The Georgia Peanut Commission is to be commended for their financial support of county extension agents for attending and participating in this meeting.

County Extension Agents from Georgia attending the 2007 APRES meeting in Hoover were:

Brian Cresswell – Early County (Peanut Education for Excellence winner from Georgia)

Rome Ethredge – Seminole County

Brian Tankersley – Tift County

Lanier Jordan – Baker County

Phillip Edwards – Irwin County

Scott Carlson – Ben Hill County

Mark von Waldner – Atkinson County

Eddie McGriff – Coffee County

Ronnie Barrentine – Pulaski County

Of the agents above, the following gave a presentation:

Brian Cresswell – the Georgia representative in the Peanut Education for Excellence session

Ronnie Barrentine

A Report to the Georgia Agricultural Commodity Commission for Peanuts
on
Annual Report of Emerging Peanut Production Issues to Georgia Peanut Producers
through the 2008 *Peanut Update* Publication

Principal Investigators: John P. Beasley, Jr., Scott Tubbs, Eric Prostko, Glen Harris, Bob Kemerait, Nathan Smith, Amanda Ziehl, Kerry Harrison, Joel Paz

Funds were provided by the Georgia Agricultural Commodity Commission for Peanuts to defray the costs of publishing the *2008 Peanut Update* which is currently being distributed to producers during the 2008 county peanut production meetings. This publication has been distributed to producers since the 1995 season. The University of Georgia Peanut Team is responsible for the content, editing, and distribution of the *Peanut Update*.

Peanut production information is developed and changes rapidly. It is critical that producers stay on the cutting edge of this information delivery. The *Peanut Update* provides the UGA Peanut Team the greatest opportunity to quickly update producers on new cultivars, pesticide recommendation changes, fertility recommendations, new products, new equipment options, marketing options, and industry updates. Everyone that attends a University of Georgia Peanut Production Meeting has the opportunity to receive a copy of the *Peanut Update*. UGA County Extension Agents organize and host these meetings. If a producer is unable to attend the meeting, they can go by the county extension office after the meeting and pick up their copy.

The cost to produce these updates is about \$2.00 per copy. The University of Georgia Peanut Team expresses their deepest appreciation to the Georgia Peanut Commission for their financial support of this critical publication. Putting this type information in the hands of the producers on a timely basis is very important in keeping them informed to make the best decisions for maximizing profit potential.