

2005 Alabama Performance Comparison of Peanut Varieties



Agronomy and Soils Departmental Series No. 274
January 2006
Alabama Agricultural Experiment Station
Richard Guthrie, Director
Auburn University
Auburn, Alabama

Table of Contents

	page
Introduction.....	5
Production and Discussion	5
Size and Grade Data Terms	6
Terms Used	6
Acknowledgments	6
Wiregrass Research and Extension Center, Headland, Alabama	
1. Three-Year Average Yield of Irrigated Peanut Varieties, 2003-2005	7
2. Average Size and Grade on Irrigated Peanut Varieties, 2005	8
3. Two-Year Average Size and Grade on Irrigated Peanut Varieties, 2004-2005	8
4. Three-Year Average Size and Grade on Irrigated Peanut Varieties, 2003-2005	9
5. Average Shelled Seed Size Distribution of Irrigated Peanut Varieties, 2003-2005.....	9
6. Occurrence of Tomato Spotted Wilt Virus Hits, White Mold Hits, and Leafspot in the Irrigated Peanut Variety Test, 2005.....	10
7. Three-Year Average Yield of Dryland Peanut Varieties, 2003-2005	11
8. Average Size and Grade on Dryland Peanut Varieties, 2005	11
9. Two-Year Average Size and Grade on Dryland Peanut Varieties, 2004-2005	12
10. Three-year Average Size and Grade on Dryland Peanut Varieties, 2003- 2005	12
11. Occurrence of Tomato Spotted Wilt Virus Hits, White Mold Hits, and Leafspot in the Dryland Peanut Variety Test, 2005	13
Planting Rate Chart	14
Tests Duration Daily Rainfall Data Recorded, 2005	15
Tests Duration Daily Maximum Temperatures Recorded, 2005	16
Tests Duration Daily Minimum Temperatures Recorded, 2005	17
Descriptions of 2005 Peanut Variety Test Entries.....	18
Sources of Seed	22

*Auburn University is an equal opportunity educational institution/employee.
Information contained herein is available to all persons without regard to race, color, sex, or national origin.*

Issued in furtherance of Cooperative Extension work in agriculture and home economics Acts of May 8 and June 30, 1914, and other related acts, in cooperation with U. S. Department of Agriculture. The Alabama Cooperative Extension System (Alabama A&M University and Auburn University) offers educational programs, materials, and equal opportunity employment to all people without regard to race, color, national origin, sex, age, veteran status, or disability.

*<http://www.auburn.edu>
<http://www.ag.auburn.edu/aaes>*

THE 2005 ALABAMA PERFORMANCE COMPARISON OF PEANUT VARIETIES

James P. Bostick, Larry W. Wells, and Brian E. Gamble

Introduction

The number of peanut varieties available to Alabama growers has increased in recent years, thus placing greater need for unbiased performance data regarding varietal selection for production.

Production and Discussion

The 2005 tests were conducted at the Wiregrass Research and Extension Center in Headland, Alabama. Prior to 2000, comparisons were made only under irrigation. During 2005, 21 entries were evaluated under irrigation, and 18 entries were evaluated dryland.

The experimental design for each test was a randomized complete block consisting of two-row plots, 20 feet long, replicated four times. The irrigated and dryland tests were planted on May 10. All tests were planted with a cone planter at a rate of six seed per foot of row. Recommended agronomic practices were followed regarding fertility, disease, insect, and weed control in all tests.

The irrigated test entries considered to be earlier than Florunner in maturity were dug on September 15. These entries included Andru II and Exp 215. Entries with maturity dates near Florunner's were dug on September 22. These entries were ANorden, AT 3081R, Carver, Exp 3085A, Georgia-03L, Georgia Green, Georgia Hi-O/L, Gregory, and NC-V11. Entries moderately later than Florunner—AP-3, C-99 R, C 724-19-RB, CRSP 8, CRSP 14, Georgia-02C and Tifrunner—were dug on October 3. Entries C 12-3-114-58, DP-1, and Georgia-01R are considered later than Florunner and were dug on October 12.

The dryland test entries considered to be earlier in maturity than Florunner were dug on September 15. These entries were Andru II and Exp 215. Entries with maturity dates near Florunner's were dug on September 22. These entries were ANorden, AT 3081R, Carver, Exp 3085A, Georgia-03L, Georgia Green, and Georgia Hi-O/L. Entries moderately later than Florunner—AP-3, C-99 R, C 724-19-RB, CRSP 8, CRSP 14, Georgia-02C and Tifrunner—were dug on October 3. Entries C-12-1-114-58, DP-1, and Georgia-01R are considered later than Florunner and were dug on October 12.

Bostick is an adjunct professor of the Auburn University Department of Agronomy and Soils and executive Vice President of Alabama Crop Improvement Association; Wells is superintendent and Gamble is associate superintendent of the Wiregrass Research and Extension Center.

The information presented here represents data from three years at one location. Yield and disease occurrence data have been subjected to an analysis of variance. This statistical evaluation determined the overall averages for all varieties, coefficient of variation (CV), and the least significant differences (LSD). The LSD values represent the difference required for the averages of two varieties to be considered statistically different. The (.05) following the LSD value indicates that the LSD was calculated at the 95 percent level of confidence.

The CV, which is expressed as a percentage, is a relative measure of variation within a set of data. CV values of 8 to 12 percent are generally considered acceptable for yield data of agronomic crops. CV values in the disease data are considerably higher than this. However, this is expected due to random occurrence of disease in the field.

Size and Grade Data Terms

Data were collected and averaged on samples from replicates II, III, and IV for size and grade. The samples were graded following Federal-State Inspection Service procedures for grading farmer-stock peanuts.

Terms Used

SMKRS count/lb. (number per pound of sound mature kernels riding screen)—Number of sound whole mature kernels from 1 pound of the shelled sample riding a 15/64 x 1-inch slotted screen or a 16/64 x 3/4-inch slotted screen for Virginia or Runner varieties, respectively.

Pct. SMKRS (sound mature kernels riding screen)—Portion of shelled sample as described above.

Pct. SS (sound splits)—Portion of shelled sample split or broken but not damaged.

Pct. TSMK (total sound mature kernels)—Portion of the shelled sample comprised of sound mature kernels plus sound splits.

Pct. OK (other kernels)—Kernels that pass through a 15/64 x 1-inch slotted screen or 16/64 x 3/4-inch slotted screen for Virginia or Runner varieties, respectively.

Pct. DK (damaged kernels)—Kernels that are moldy, decayed, affected by insects or weather conditions resulting in seed coat or cotyledon discoloration or deterioration.

Pct. TK (total kernels)—All shelled sample kernels including TSMK, OK, and DK.

Pct. Hulls —All hulls from the shelled sample.

+21.0 (Generally considered as the Jumbo commercial grade)—Portion of SMKRS riding a 21/64 x 3/4-inch slotted screen.

-21.0 + 18.0 (Generally considered as the Medium commercial grade)—Portion of the SMKRS falling through a 21/64 x 3/4-inch slotted screen and riding a 18/64 x 3/4-inch slotted screen.

-18.0 + 16.0 (Generally considered as the No.1 commercial grade)—Portion of the SMKRS falling through a 18/64 x 3/4-inch slotted screen and riding a 16/64 x 3/4-inch slotted screen.

Acknowledgments

The authors express appreciation to Austin K. Hagan, professor of Plant Pathology, for providing the disease evaluation data and to Glenn Wehtje, professor of Agronomy and Soils, for the statistical analysis. Appreciation is also expressed to Amy Folger and Larry Savelle, Wiregrass Research and Extension Center, for their cooperation.

TABLE 1. THREE-YEAR AVERAGE YIELD OF IRRIGATED PEANUT VARIETIES AT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2003-2005

Variety or line	2005 <i>lb/a</i>	2-year avg. <i>lb/a</i>	3-year avg. <i>lb/a</i>
AP-3	4,338	4,760	4,693
DP 1	4,338	4,401	4,208
C-99R	4,320	4,810	4,739
C 724-19-RB	4,247	¹ ----	----
C 12-3-114-58	4,147	----	----
Exp 3085A	3,911	5,046	4,811
Andru II	3,648	4,356	4,138
Tifrunner	3,648	4,424	4,376
Georgia-01R	3,621	4,438	4,359
Georgia-02C	3,603	4,705	4,409
Georgia-03L	3,512	4,769	----
Exp 215	3,494	4,660	----
ANorden	3,385	4,315	4,171
Georgia Hi-O/L	3,312	4,633	4,366
AT 3081R*	3,294	4,696	4,554
Carver	3,240	4,270	4,145
Georgia Green	3,076	4,040	4,778
CRSP 8	2,968	----	----
CRSP 14	2,777	----	----
NC-V11	2,551	3,489	3,557
Gregory	2,105	3,498	3,617
Overall Average	3,487	4,442	4,272
CV (%)	15.97	27.90	25.00
LSD (.05)	788	1226	917

¹ Not tested.

* 2004 tested as Exp 3081B.

TABLE 2. AVERAGE SIZE AND GRADE ON IRRIGATED PEANUT VARIETIES AT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2005

Variety or line	SMKRS <i>count/lb</i>	SMKRS <i>pct</i>	SS <i>pct</i>	TSMK <i>pct</i>	OK <i>pct</i>	DK <i>pct</i>	TK <i>pct</i>	Hulls <i>pct</i>
Andru II	908	55	3	58	9	0	67	33
ANorden	857	61	3	63	8	1	72	28
AP- 3	857	64	2	66	5	0	72	28
AT 3081R	758	55	8	63	7	1	71	29
C-99R	668	66	3	69	4	1	74	26
C 12-3-114-58	688	66	4	70	5	1	76	24
C 724-19-RB	649	68	2	70	3	1	74	26
Carver	811	61	1	62	9	0	71	29
CRSP 8	709	67	1	68	5	0	73	27
CRSP 14	668	66	1	67	5	1	73	27
DP-1	744	63	3	66	7	1	74	26
Exp 215	732	63	3	66	6	1	73	27
Exp 3085A	770	65	2	67	6	0	72	28
Georgia-01R	757	61	8	69	4	0	72	28
Georgia-02C	825	67	3	70	4	0	74	26
Georgia-03L	769	63	1	64	7	0	71	29
Georgia Green	908	65	2	67	6	1	74	26
Georgia Hi-O/L	590	66	6	72	3	1	76	24
Gregory	560	56	1	57	4	4	65	35
NC-V11	605	58	1	59	4	3	66	34
Tifrunner	825	67	3	70	5	0	75	25

TABLE 3. TWO-YEAR AVERAGE SIZE AND GRADE ON IRRIGATED PEANUT VARIETIES AT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2004-2005

Variety or line	SMKRS <i>count/lb</i>	SMKRS <i>pct</i>	SS <i>pct</i>	TSMK <i>pct</i>	OK <i>pct</i>	DK <i>pct</i>	TK <i>pct</i>	Hulls <i>pct</i>
Andru II	852	60	3	63	8	0	71	29
ANorden	768	66	2	68	6	0	74	26
AT 3081R	825	62	2	64	6	0	71	29
C-99R	645	69	2	71	4	0	75	25
Carver	717	66	1	67	7	0	74	26
DP-1	721	67	4	71	5	0	76	24
Exp 215	646	67	3	70	5	0	75	25
Exp 3085A	684	69	1	70	4	0	74	26
Georgia-01R	673	65	7	72	3	0	75	25
Georgia-02C	752	71	2	73	3	0	76	24
Georgia-03L	692	67	1	68	5	0	73	27
Georgia Green	793	69	2	71	5	0	76	24
Georgia Hi-O/L	550	68	5	73	3	0	76	24
Gregory	448	63	1	64	2	2	68	32
NC-V11	542	63	2	65	3	1	69	31
Tifrunner	762	70	3	73	3	0	76	24

TABLE 4. THREE-YEAR AVERAGE SIZE AND GRADE ON IRRIGATED PEANUT VARIETIES AT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2003-2005

Variety or line	SMKRS <i>count/lb</i>	SMKRS <i>pct</i>	SS <i>pct</i>	TSMK <i>pct</i>	OK <i>pct</i>	DK <i>pct</i>	TK <i>pct</i>	Hulls <i>pct</i>
Andru II	892	60	3	63	8	0	71	29
ANorden	790	65	3	68	6	0	74	26
AP-3	821	65	2	68	5	0	72	28
AT 3081R	680	64	4	68	4	1	73	27
Carver	953	66	1	67	6	0	73	27
C-99R	669	69	2	71	4	0	75	25
DP-1	767	66	3	70	5	0	75	25
Exp 3085A	705	65	4	69	4	0	73	27
Georgia Green	953	67	2	69	6	1	76	24
Georgia-01R	673	66	7	73	3	0	75	25
Georgia-02C	829	69	3	72	4	0	76	24
Georgia Hi-O/L	597	65	6	71	3	1	75	25
Gregory	493	64	1	65	2	2	69	31
NC-V11	588	63	2	65	3	1	69	31
Tifrunner	816	69	3	72	3	0	75	25

TABLE 5. AVERAGE SHELLED SEED SIZE DISTRIBUTION OF IRRIGATED PEANUT VARIETIES AT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2003-2005

Variety or line	SMKRS Size Distribution								
	+21.0 Jumbo <i>pct</i>			-21.0 +18.0 Medium <i>pct</i>			-18.0 +16.0 No. 1 <i>pct</i>		
	2005	2004	2003	2005	2004	2003	2005	2004	2003
Andru II	11.8	22.9	16.7	62.2	62.2	62.7	26.0	14.9	20.7
ANorden	16.0	27.3	18.2	61.5	60.3	60.9	22.05	12.4	15.7
AP- 3	39.4	44.4	33.2	52.6	46.7	54.8	8.0	8.9	12.1
AT 3081R	31.8	48.4	30.5	54.6	45.4	56.1	13.6	5.6	13.4
C-99R	39.1	55.1	38.3	52.0	40.2	52.7	8.9	5.0	9.0
Carver	10.3	27.1	808	64.8	73.1	73.1	24.9	11.0	18.1
C 12-3-114-58	60.8	---	---	32.0	---	---	7.2	---	---
C 724-19-RB	49.0	---	---	45.2	---	---	5.8	---	---
CRSP 8	48.4	---	---	43.4	---	---	8.2	---	---
CRSP 14	51.4	---	---	40.8	---	---	7.8	---	---
DP-1	35.1	39.1	25.9	51.4	57.7	57.9	13.5	9.0	16.2
Exp 215	31.7	48.5	---	53.9	44.7	---	14.4	6.7	---
Exp 3085A	33.6	64.5	38.3	53.2	31.5	49.2	13.2	3.9	12.0
Georgia-01R	55.6	70.5	51.4	35.8	26.2	41.7	8.6	3.4	6.9
Georgia-02C	30.9	46.6	27.6	59.7	46.8	59.8	9.4	6.4	12.6
Georgia-03L	25.2	51.6	---	57.3	43.2	---	17.5	5.2	---
Georgia Green	12.5	30.6	8.5	69.5	61.4	72.9	18.0	8.8	18.6
Georgia Hi-O/L	62.3	72.8	52.7	29.3	22.3	34.2	8.4	7.8	13.1
Gregory	61.5	83.0	68.1	27.8	14.9	25.2	10.7	5.6	6.7
NC-V11	37.4	63.1	45.2	49.2	32.1	45.9	13.4	4.6	8.9
Tifrunner	39.8	58.1	38.5	50.8	37.5	54.3	9.4	5.0	7.2

TABLE 6. OCCURRENCE OF TOMATO SPOTTED WILT VIRUS (TSWV) HITS, WHITE MOLD (WM) HITS, AND LEAFSPOT (LS) IN THE IRRIGATED PEANUT VARIETY TEST AT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2005

Variety or line	Avg. TSWV	Variety or line	Avg. WM	Variety or line	Avg. LS
	¹ hits/plot		hits/plot		² ratings/plot
C 724-19-RB	7.25	Georgia Hi-O/L	0.00	Tifrunner	2.25
C 12-3-114-58	7.25	Andru II	0.00	NC-V11	2.38
AP- 3	9.00	Georgia-03L	0.00	Georgia-01R	2.38
Exp 3085A	9.50	AT 3081R	0.25	Exp 215	2.50
DP-1	10.50	Gregory	0.75	Georgia Hi-O/L	2.50
Georgia-03L	11.50	NC-V11	0.75	Andru II	2.50
Georgia-02C	11.75	Georgia-02C	0.75	Carver	2.63
Tifrunner	12.00	Exp 3085A	1.00	CRSP 8	2.63
C-99R	12.50	C 724-19-RB	1.25	C-99R	2.67
Georgia-01R	12.75	C-99R	1.25	CRSP 14	2.75
Georgia Hi-O/L	14.00	Tifrunner	1.75	Georgia-03L	2.75
CRSP 8	14.50	Exp 215	1.75	Gregory	2.88
ANorden	14.50	CRSP 8	2.00	ANorden	2.88
Andru II	15.25	CRSP 14	2.25	C 724-19-RB	2.88
CRSP 14	15.25	Georgia-01R	2.25	AT 3081R	3.13
NC-V11	19.50	Carver	2.25	DP-1	3.13
AT 3081R	21.00	AP-3	2.25	AP-3	3.25
Carver	21.75	C 12-3-114-58	2.50	Georgia-02C	3.38
Gregory	22.00	Georgia Green	2.75	C 12-3-144-58	3.63
Exp 215	22.00	DP-1	3.00	Exp 3085A	3.63
Georgia Green	22.50	ANorden	3.75	Georgia Green	3.88
Overall Average	14.58		1.55		2.87
CV (%)	26.45		103.08		24.89
LSD (.05)	5.46		2.26		1.125

¹ Hits equal length of row up to one linear foot with severely diseased plants.

² Rating 1 (lowest) to 10 (highest).

TABLE 7. THREE-YEAR AVERAGE YIELD OF DRYLAND PEANUT VARIETIES AT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2003-2005

Variety or line	2005 <i>lb/a</i>	2-year avg. <i>lb/a</i>	3-year avg. <i>lb/a</i>
AP-3	5,028	4,901	4,589
Exp 3085A	4,837	5,082	4,895
Georgia-03L	4,783	5,050	----
C 724-19-RB	4,692	----	----
C-99R	4,556	4,787	4,532
C 12-3-144-58	4,519	----	----
AT 3081R	4,438	4,751	4,770
Carver	4,165	4,442	4,277
Georgia Hi-O/L	4,165	4,606	3,984
Andru II	4,147	4,306	3,927
DP-1	3,984	4,116	4,162
Georgia-02C	3,830	4,383	----
CRSP 14	3,748	----	----
Georgia-01R	3,721	4,184	4,096
ANorden	3,657	3,884	3,830
CRSP 8	3,521	----	----
Exp 215	3,458	3,925	----
Georgia Green	3,322	4,188	3,775
Overall Average	4,143	4,467	4,258
CV (%)	12.9	13.9	18.0
LSD (.05)	759	615	621

TABLE 8. AVERAGE SIZE AND GRADE ON DRYLAND PEANUT VARIETIES AT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2005

Variety or line	SMKRS <i>count/lb</i>	SMKRS <i>pct</i>	SS <i>pct</i>	TSMK <i>pct</i>	OK <i>pct</i>	DK <i>pct</i>	TK <i>pct</i>	Hulls <i>pct</i>
Andru II	1053	58	5	63	6	0	69	31
ANorden	927	68	2	70	5	0	75	25
AP-3	825	67	2	69	5	0	74	26
AT 3081R	873	60	7	67	4	1	72	28
CRSP 8	678	70	1	71	4	0	75	25
CRSP 14	709	70	1	71	4	1	76	24
C 724-19-RB	631	73	1	74	3	1	78	22
Carver	873	66	1	67	6	1	74	26
C-99R	678	71	1	72	3	1	76	24
C 12-3-114-58	721	68	4	72	5	0	77	23
DP-1	783	65	5	70	4	0	74	26
Exp 215	908	65	3	68	5	1	74	26
Exp 3085A	811	70	1	71	4	0	75	25
Georgia-01R	678	63	8	71	2	1	74	26
Georgia-02C	857	69	2	71	5	1	77	23
Georgia-03L	744	68	2	70	3	0	73	27
Georgia Green	857	67	3	70	6	0	76	24
Georgia Hi-O/L	631	64	6	70	5	1	76	24

TABLE 9. TWO-YEAR AVERAGE SIZE AND GRADE ON DRYLAND PEANUT VARIETIES AT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2004-2005

Variety or line	SMKRS <i>count/lb</i>	SMKRS <i>pct</i>	SS <i>pct</i>	TSMK <i>pct</i>	OK <i>pct</i>	DK <i>pct</i>	TK <i>pct</i>	Hulls <i>pct</i>
Andru II	905	65	3	68	5	0	72	28
ANorden	807	69	2	71	5	0	76	24
AP-3	751	69	3	71	4	0	75	25
AT 3081R	756	66	4	70	3	1	74	26
Carver	743	69	2	70	5	0	75	25
C-99R	642	71	2	73	3	0	76	24
DP-1	752	67	4	71	5	0	75	25
Exp 215	745	70	3	73	3	0	76	24
Exp 3085A	704	70	1	71	4	0	75	25
Georgia-01R	646	66	7	73	2	1	76	24
Georgia-02C	762	72	2	74	4	0	78	22
Georgia-03L	679	70	2	72	2	0	74	26
Georgia Green	783	71	2	73	5	0	78	22
Georgia Hi-O/L	568	69	4	73	3	1	77	23

TABLE 10. THREE-YEAR AVERAGE SIZE AND GRADE ON DRYLAND PEANUT VARIETIES AT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2003-2005

Variety or line	SMKRS <i>count/lb</i>	SMKRS <i>pct</i>	SS <i>pct</i>	TSMK <i>pct</i>	OK <i>pct</i>	DK <i>pct</i>	TK <i>pct</i>	Hulls <i>pct</i>
Andru II	904	62	3	65	7	0	72	28
ANorden	860	66	3	69	5	0	74	26
AP-3	923	65	3	68	5	0	73	27
AT 3081R	757	62	6	68	4	0	72	28
Carver	772	66	3	69	5	0	74	26
C-99R	717	69	3	72	3	0	75	25
DP-1	767	67	3	70	5	0	75	25
Exp 3085A	714	66	3	68	5	0	73	27
Georgia-01R	683	66	7	73	3	0	76	24
Georgia-02C	818	69	2	71	6	0	77	23
Georgia Green	840	68	3	71	6	0	77	23
Georgia Hi-O/L	734	66	5	71	4	0	75	25

TABLE 11. OCCURRENCE OF TOMATO SPOTTED WILT VIRUS (TSWV) HITS, WHITE MOLD (WM) HITS, AND LEAFSPOT (LS) IN THE DRYLAND PEANUT VARIETY TEST AT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2005

Variety or line	Avg. TSWV		Avg. WM		Avg. LS	
		¹ hits/plot	Variety or line	hits/plot	Variety or line	² ratings/plot
C 724-19-RB	3.75	Georgia Hi-O/L	1.00	AP-3	3.00	
C 12-3-114-58	5.75	AT 3081R	1.25	CRSP 8	3.25	
AP- 3	5.75	Georgia-03L	1.25	Georgia-01R	3.25	
Exp 3085A	6.50	Carver	1.50	C-99R	3.38	
Georgia-03L	6.50	Exp 3085A	1.75	ANorden	3.50	
DP-1	9.00	Georgia Green	2.50	CRSP 14	3.50	
Georgia Hi-O/L	9.00	Andru II	2.50	C 12-3-144-58	3.75	
Georgia-02C	9.75	C 724-19-RB	3.00	C 724-19-RB	3.75	
Andru II	10.50	ANorden	3.25	Exp 215	3.75	
ANorden	10.75	CRSP 14	3.75	Georgia Green	3.75	
C-99R	10.75	C 12-3-114-58	3.75	Andru II	3.88	
CRSP 14	11.75	Georgia-01R	4.00	Georgia-02C	3.88	
Carver	13.25	Georgia-02C	4.00	AT 3081R	4.13	
Gorgia-01R	15.75	DP-1	4.25	DP-1	4.13	
Georgia Green	16.00	CRSP 8	4.50	Carver	4.13	
AT 3081R	16.25	AP-3	4.50	Georgia-03L	4.25	
CRSP 8	16.75	Exp 215	5.00	Exp 3085A	4.38	
Exp 215	21.00	C-99R	6.00	Georgia Hi-O/L	4.38	
Overall Average	11.04		3.21		3.78	
CV (%)	32.13		62.71		3.85	
LSD (.05)	5.04		2.86		0.88	

¹Hits equal length of row up to one linear foot with severely diseased plants.

² Rating 1 (lowest) to 10 (highest).

¹ PLANTING RATE CHART						
Seed per pound	Seed per foot	Pounds per acre	Seed per foot	Pounds per acre	Seed per foot	Pounds per acre
600	5	121	6	145	7	178
625	5	116	6	140	7	171
650	5	112	6	134	7	164
675	5	108	6	129	7	158
700	5	104	6	124	7	152
725	5	100	6	120	7	147
750	5	97	6	116	7	142
775	5	94	6	112	7	138
800	5	91	6	109	7	133
825	5	88	6	106	7	129
850	5	85	6	102	7	125
875	5	83	6	100	7	122
900	5	81	6	97	7	118
925	5	78	6	94	7	115
950	5	76	6	92	7	112
975	5	74	6	89	7	109
1000	5	73	6	87	7	107
1025	5	71	6	85	7	104
1050	5	69	6	83	7	102
1075	5	68	6	81	7	99
1100	5	66	6	79	7	97

¹ Pounds of peanut seed at various seed count per pound required to plant 1 acre at five, six or seven seed per foot of row with single row width spacing. (For twin-rows at 36-inch centers, divide seed per foot for single row by two to determine seed per foot for each twin-row.)

To determine pounds per acre at 36-inch row spacing, use the following formula:

(A) $\frac{\text{Seed per foot} \times \text{linear feet in 1 acre}}{\text{Seed count per pound}} = \text{pounds per acre}$

Seed count per pound

(B) To determine linear feet in one acre at 36-inch row spacing:

$\frac{43,560 \text{ square feet per acre}}{3 \text{ square feet}} = 14,520 \text{ linear feet in 1 acre}$

3 square feet

(C) Example:

$\frac{6 \text{ seed per foot} \times 14,520 \text{ linear feet}}{800 \text{ seed per pound}} = 109 \text{ pounds per acre}$

800 seed per pound

**TESTS DURATION DAILY RAINFALL DATA RECORDED AT THE WIREGRASS RESEARCH AND
EXTENSION CENTER, HEADLAND, ALABAMA 2005**

Date	APR <i>in</i>	MAY <i>in</i>	JUNE <i>in</i>	JULY <i>in</i>	AUG <i>in</i>	SEPT <i>in</i>	OCT <i>in</i>
1	2.99	2.49	3.08	—	0.02	1.12	—
2	1.68	—	0.13	—	0.60	—	—
3	—	—	0.79	0.06	—	—	—
4	—	—	0.02	—	0.22	—	—
5	—	—	0.43	—	1.05	—	—
6	—	—	—	—	0.88	—	—
7	2.42	—	1.08	0.67	0.19	—	0.10
8	—	—	—	—	0.03	—	—
9	—	—	0.05	—	—	—	—
10	—	—	0.51	1.60	—	—	—
11	—	—	0.64	1.70	0.80	—	—
12	0.57	0.10	1.40	0.13	—	—	—
13	0.03	—	0.16	0.27	1.00	—	—
14	—	—	—	0.20	0.05	—	—
15	—	—	—	0.05	0.25	—	—
16	—	0.13	—	0.67	1.05	—	—
17	—	—	—	0.10	0.06	—	—
18	—	—	0.05	—	—	—	—
19	—	—	0.28	—	—	—	—
20	—	—	—	0.30	0.05	—	—
21	—	0.41	—	0.05	—	—	—
22	—	—	—	—	—	—	—
23	0.80	—	—	0.08	—	0.02	—
24	—	—	—	0.03	—	0.09	—
25	—	—	—	—	—	—	—
26	0.30	—	—	—	—	—	—
27	0.45	—	—	—	—	0.23	—
28	—	—	—	¹ ---	—	0.73	—
29	—	—	2.16	—	0.39	—	—
30	—	—	0.33	0.19	1.59	—	—
31	—	—	—	—	0.64	—	—
TOTALS	9.24	3.13	11.11	6.10	8.78	2.19	0.10

¹ Data not collected.

Total daily rainfall from April through October, 2005 = 40.65 in; 2004 = 34.34 in; 2003 = 41.47 in.

TESTS DURATION DAILY MAXIMUM TEMPERATURES RECORDED AT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA 2005							
Date	APR °F	MAY °F	JUNE °F	JULY °F	AUG °F	SEPT °F	OCT °F
1	80	71	82	94	84	88	91
2	63	72	84	95	83	91	87
3	63	76	86	94	85	90	89
4	73	77	87	93	84	91	88
5	80	77	90	92	86	89	85
6	80	75	91	94	75	86	82
7	79	77	93	89	81	87	80
8	¹ ---	81	91	84	86	88	85
9	---	84	91	91	89	89	83
10	---	83	89	90	90	90	73
11	---	86	80	80	88	90	82
12	---	86	82	91	94	89	85
13	---	88	91	91	94	90	84
14	---	90	92	90	91	91	83
15	66	87	95	90	93	90	86
16	78	87	96	90	94	90	83
17	72	84	91	91	92	94	84
18	77	86	95	92	92	94	80
19	80	89	87	93	94	95	86
20	78	91	87	93	96	96	88
21	83	90	88	95	94	94	89
22	85	82	88	95	96	94	86
23	86	85	90	94	98	92	79
24	70	92	93	93	91	93	75
25	65	94	91	93	93	91	65
26	69	81	87	97	90	90	62
27	71	86	86	96	89	80	65
28	79	89	88	---	90	80	69
29	78	92	92	96	90	89	71
30	86	93	86	95	84	91	70
31		89		85	91		---

¹ Data not collected.

TESTS DURATION DAILY MINIMUM TEMPERATURES RECORDED AT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA 2005							
Date	APR °F	MAY °F	JUNE °F	JULY °F	AUG °F	SEPT °F	OCT °F
1	58	53	70	72	72	73	71
2	---	48	70	72	72	69	71
3	41	52	68	74	73	70	71
4	46	51	72	74	73	70	70
5	49	55	73	77	70	68	70
6	40	53	73	73	69	66	70
7	¹ ---	54	68	72	72	67	70
8	---	56	70	70	73	68	61
9	---	57	69	70	74	66	62
10	---	62	71	71	75	65	53
11	---	62	72	73	74	65	61
12	---	63	73	76	72	64	63
13	---	65	74	77	71	65	63
14	---	66	75	74	72	68	59
15	45	66	76	75	70	69	58
16	51	63	73	73	70	72	56
17	45	61	70	72	71	72	49
18	48	63	70	75	73	72	48
19	50	68	65	74	75	74	52
20	55	69	68	73	77	73	53
21	57	67	68	75	78	68	53
22	58	63	68	74	77	71	62
23	59	65	70	77	74	73	48
24	42	73	71	76	74	73	46
25	44	63	70	76	75	72	39
26	50	58	70	77	71	71	36
27	52	61	72	76	71	73	37
28	42	66	71	---	71	70	41
29	53	68	76	75	75	71	43
30	54	68	77	73	77	70	41
31		72		73	76		46

¹ Data not collected.

Description of 2005 Peanut Variety Test Entries

1. Andru II

Developed by Dr. Dan Gorbet, University of Florida Agricultural Experiment Station. Released in 2002 under the 1994 Amendment of the Plant Variety Protection Act. Also carries a patent on the high oleic trait prohibiting non-licensed parties from saving seed for replanting. Andru II has early maturity (130+ days) in Florida studies, but not quite as early as Andru 93 or ViruGard. It has excellent tomato spotted wilt virus resistance (equal to or better than Georgia Green), with excellent pod yields, good grades, and high oleic oil chemistry (80+ percent oleic fatty acid). Andru II has some white mold resistance equal to or better than Georgia Green. Its growth habit is intermediate to semi-runner with seed size similar to Georgia Green. Its pod yields have been equal to Georgia Green. Andru II should be an excellent choice for SE production, being the most productive early maturity high oleic cultivar currently available. Anderson's Peanut Company has the marketing contract on this variety.

2. ANorden

Developed by Dr. Dan Gorbet, University of Florida Agricultural Experiment Station. Released in 2002 under the 1994 Amendment of the Plant Variety Protection Act. Also carries a patent on the high oleic trait prohibiting non-licensed parties from saving seed for replanting. ANorden is a medium maturity (135 to 140 days) variety, with runner growth habit (prominent center stem), runner size pods and seed, very good tomato spotted wilt virus resistance, and high oleic oil chemistry. It is a replacement for SunOleic 97R in FFSP program. ANorden has shown pod yields and tomato spotted wilt virus resistance equal to or better than Georgia Green in Florida tests and a somewhat larger seed size. ANorden has been equal to Georgia Green in resistance to white mold, leaf spot, and rhizoctonia disease.

3. AP-3

Developed by Dr. Dan Gorbet, University of Florida Agricultural Experiment Station. Released in 2003 under the 1994 Amendment of the Plant Variety Protection Act. AP-3 does not carry the high oleic trait and is medium (135 to 140 days) in maturity. It is resistant to tomato spotted wilt virus and white mold with some resistance to cylindrocladium black rot. Seed and pod size are similar to Florunner. Growth habit is intermediate with lighter green foliage than most varieties.

4. AT 3081R

Developed by Dr. Ernest Harvey, Golden Peanut Company. Similar to GK7 in growth habit with medium (135 to 140 days) maturity. Seed and pod size are also similar to GK7. Carries resistance to tomato spotted wilt virus and normal oleic/linoleic fatty acid ratio.

5. C-99R

Developed by Dr. Dan Gorbet, Florida Agricultural Experiment Station. Released in 1999 with variety protection applied for under the 1994 Amendment of the Plant Variety Protection Act. The maturity range is 10 to 14 days later than Florunner with large seed and pod size and normal oleic/linoleic fatty acid ratio. Runner growth habit with resistance to late leafspot, white mold, and tomato spotted wilt virus. Other

characteristics include good yields and grades with multiple disease resistance (as noted); similar to Florida MDR 98 but more normal oleic fatty acid content (55 to 59 percent) with somewhat darker green foliage.

6. C 724-19-RB;

7. C 12-3-114-58

Both developed by Dr. Corley Holbrook, ARS-USDA, Tifton, Georgia. C 724-19-RB is mid-season in maturity and carries root-knot nematode and TSWV resistance. C 12-3-114-58 is a late maturing line and carries resistance to leaf spot and TSWV. Both lines carry normal oleic oil chemistry.

8. CRSP 8;

9. CRSP 14

Both are large seeded advanced breeding lines from USDA-ARS. Each were developed by Dr. R. N. Pittman for the runner-type market. Both are late-maturing with TSWV resistance.

10. Carver

Developed by Dr. Dan Gorbet, University of Florida Agricultural Experiment Station. Released in 2002 under the 1994 Amendment of the Plant Variety Protection Act. Carver has medium maturity (135 to 140 days), runner growth habit (prominent center stem), runner pod and seed size, with tomato spotted wilt virus and white mold resistance somewhat better than Georgia Green, and resistance to cylindrocladium black rot and Rhizoctonia limb rot. Carver has excellent yield potential with somewhat larger and elongated seed with normal oil chemistry.

11. DP-1

Developed by Dr. Dan Gorbet, University of Florida Agricultural Experiment Station. Released in 2002 under the 1994 Amendment of the Plant Variety Protection Act. DP-1 is a late maturity (150+ days) cultivar with excellent disease resistance. DP-1 has the highest level of resistance to late leaf spot, tomato spotted wilt virus, and white mold currently available in the U.S. peanut cultivar. Yields of 4800 pounds per acre have been recorded in Florida tests with no fungicide applied for leaf spot control. DP-1 has normal oil chemistry and seed size similar to GK7 and Florunner. It has somewhat less vine growth than C-99R. Seed will be marketed through Damascus Peanut Company.

12. Exp 215

An advanced breeding line developed by Dr. Ernest Harvey, Golden Peanut Co., Ashburn, Georgia. Similar to GK 7 in growth habit with early maturity. Similar to AT 108 in pod and seed size. This line carries the high oleic trait and resistance to tomato spotted wilt virus.

13. Exp 3085A

An advanced breeding line developed by Dr. Ernest Harvey, Golden Peanut Company. Similar to GK7 in growth habit with medium (135 to 140 days) maturity. Seed and pod size are also similar to GK7. Carries resistance to tomato spotted wilt virus and high oleic/linoleic fatty acid ratio.

14. Georgia –01R

Developed by Dr. Bill Branch, University of Georgia Agricultural Experiment Station. Released under the 1994 Amendment of the Plant Variety Protection Act. Late maturity range with mid-oleic oleic/linoleic fatty acid ratio with seed and pod size similar to C-99R. Is resistant to tomato spotted wilt virus and carries tolerance to leaf spot and white mold. Observations have indicated less occurrence of *cylindrocladium* black rot and leaf hopper damage than more susceptible varieties.

15. Georgia –02C

Developed by Dr. Bill Branch, University of Georgia Agricultural Experiment Station. Maturity range is 7 to 10 days later than Florunner with seed and pod size slightly larger than Florunner. High oleic/linoleic fatty acid ratio with runner growth habit and vine growth more consistent with Florunner than Georgia Green. Resistant to tomato spotted wilt virus and *cylindrocladium* black rot.

16. Georgia –03L

Developed by Dr. Bill Branch, University of Georgia Agricultural Experiment Station. Released under the 1994 Amendment of the Plant Variety Protection Act. Mid-maturity range with normal oleic/linoleic fatty acid ratio with significantly larger pod and seed size than Georgia Green. Resistant to tomato spotted wilt virus and *cylindrocladium* black rot.

17. Georgia Green

Developed by Dr. Bill Branch, University of Georgia Agricultural Experiment Station. Released in 1995 and protected under the 1994 Amendment of the Plant Variety Protection Act. Same maturity range as Florunner with seed and pod size similar to or slightly more round than Florunner. Normal oleic/linoleic fatty acid ratio with intermediate growth habit and considerable less vine growth than Florunner. Resistant to tomato spotted wilt virus, but carries no known insect resistance. Georgia Green has proven to have yield stability across a wide range of different environments under both irrigated and non-irrigated conditions and in both single and twin row patterns.

18. Georgia Hi-O/L

Developed by Dr. Bill Branch, University of Georgia Agricultural Experiment Station. Released in 1999 with plant variety protection applied for under the 1994 Amendment of the Plant Variety Protection Act. Same maturity range as Florunner with larger seed and pod size, high oleic/linoleic acid ratio, and intermediate growth habit. Resistant to tomato spotted wilt virus.

19. Gregory

Developed by Dr. Tom Isleib, North Carolina Agricultural Research Service. Released in 1997 with plant variety protection applied for under the 1994 Amendment of the Plant Variety Protection Act. Maturity range is earlier than NC 7 with larger seed and pod size. Has normal oleic/linoleic fatty acid ratio and intermediate growth habit. The only known resistances of Gregory are to CBR (this is very slight: i.e., it is less susceptible than NC 7) and to tomato spotted wilt virus (6.5 percent infection rate compared with 9.2 percent for NC-V11). Like NC 7 and NC 12C, Gregory is extremely susceptible to sclerotinia blight. Gregory has a pink seed coat.

20. NC-V11

Developed by North Carolina Agricultural Research Service, Virginia Agricultural Experiment Station, and USDA-ARS. Released in 1998 and protected under the Plant Variety Protection Act. Maturity range same as NC 7 with smaller seed and pod size, normal oleic/linoleic fatty acid ratio, and runner growth habit. Has field tolerance to tomato spotted wilt virus, low level of resistance to CBR, susceptible to early leafspot and sclerotinia blight. No known insect resistance. Bright shapely pods make NC-V11 one of the three varieties preferred by VC area shellers (VA 93B first, NC 10C second, NC-V11 third).

21. Tifrunner

Developed by Dr. Corley Holbrook, USDA-ARS, Tifton, Georgia. Late maturity range with slightly larger seed and pod size than Florunner and normal oleic/linoleic fatty acid ratio. Has runner growth habit with prominent main stem. Resistance to tomato spotted wilt virus and early and late leaf spot.

Sources of Seed

Dr. W. D. Branch
University of Georgia
Department of Crop and Soil Sciences
Coastal Plain Experiment Station
Tifton, Georgia 31793

Georgia-01R
Georgia-02C
Georgia-03L
Georgia Green
Georgia Hi-O/L

Dr. D.W. Gorbet
University of Florida
North Florida Research & Education Center
3925 Highway 71
Marianna, Florida 32446

Andru II
AP-3
C-99R
Carver
DP-1
ANorden

Dr. Ernest Harvey
Golden Peanut Co.
100 North Point Center East
Suite 400
Alpharetta, Georgia 30022

AT 3081R
Exp 215
Exp 3085A

Dr. C.C. Holbrook
USDA-ARS
Crop Genetics & Breeding Research Unit
Coastal Plain Experiment Station
Tifton, Georgia 31793

Tifrunner
C 12-3-114-58
C 724-19-RB

Dr. Thomas G. Isleib
North Carolina State University
Department of Crop Science
Unit 3: 840 Method Road
Raleigh, North Carolina 27695

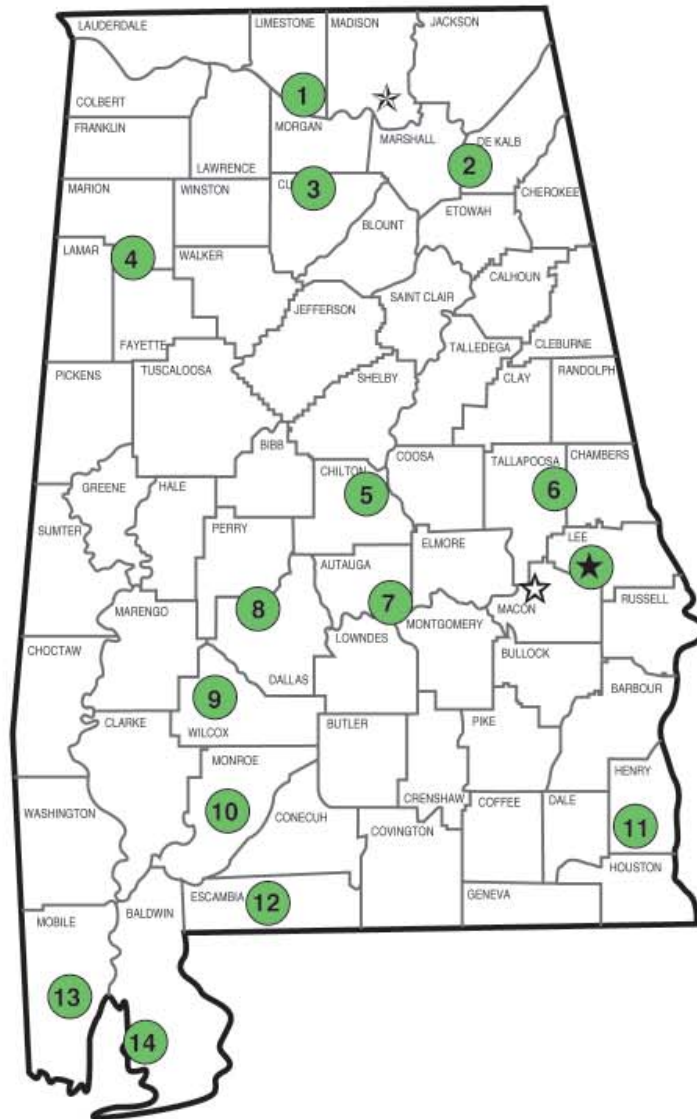
Gregory
NC-V11

Dr. R.N. Pittman
USDA-ARS, University of Georgia
Plant Genetic Resources
Conservation Unit
1109 Experiment Street
Griffin, Georgia 30223-1797

CRSP 8
CRSP 14

Alabama's Agricultural Experiment Station AUBURN UNIVERSITY

With an agricultural research unit in every major soil area, Auburn University serves the needs of field crop, livestock, forestry, and horticultural producers in each region in Alabama. Every citizen of the state has a stake in this research program, since any advantage from new and more economical ways of producing and handling farm products directly benefits the consuming public.



Research Unit Identification

- ★ Main Agricultural Experiment Station, Auburn.
- ☆ Alabama A&M University.
- ☆ E. V. Smith Research Center, Shorter.

1. Tennessee Valley Research and Extension Center, Belle Mina.
2. Sand Mountain Research and Extension Center, Crossville.
3. North Alabama Horticulture Research Center, Cullman.
4. Upper Coastal Plain Agricultural Research Center, Winfield.
5. Chilton Research and Extension Center, Clanton.
6. Piedmont Substation, Camp Hill.
7. Prattville Agricultural Research Unit, Prattville.
8. Black Belt Research and Extension Center, Marion Junction.
9. Lower Coastal Plain Substation, Camden.
10. Monroeville Agricultural Research Unit, Monroeville.
11. Wiregrass Research and Extension Center, Headland.
12. Brewton Agricultural Research Unit, Brewton.
13. Ornamental Horticulture Research Center, Spring Hill.
14. Gulf Coast Research and Extension Center, Fairhope.