



January 2001 Agronomy and Soils Departmental Series 232 Alabama Agricultural Experiment Station Luther Waters, Director Auburn University Auburn, Alabama

Table of Contents

Introduction	3
Production	.5
Discussion	3
Size and Grade Data Terms	4
Acknowledgments	4
Wiregrass Research and Extension Center, Headland, Alabama	
Yield of Irrigated Peanut Varieties, 2000	5
Two-Year Average Yield of Irrigated Peanut Varieties, 1999-2000	5
Three-Year Average Yield of Irrigated Peanut Varieties, 1998-2000	6
Average Size and Grade on Irrigated Peanut Varieties, 2000	6
Two-Year Average Size and Grade on Irrigated Peanut Varieties, 1999-2000	7
Three-Year Average Size and Grade on Irrigated Peanut Varieties, 1998-2000	7
Average Shelled Seed Size Distribution of Irrigated Peanut Varieties, 1998-2000	8
Occurrence of Tomato Spotted Wilt Virus Hits in the Irrigated Peanut Variety Test, 2000	9
Occurrence of White Mold Hits in the Irrigated Peanut Variety Test, 2000	10
Occurrence of Leafspot in the Irrigated Peanut Variety Test, 2000	11
Yield of Dryland Peanut Varieties, 2000	12
Average Size and Grade on Dryland Peanut Varieties, 2000	12
Yield of Late-planted Dryland Peanut Varieties, 2000	12
Average Size and Grade on Late-planted Dryland Peanut Varieties, 2000	12
Planting Rate Chart	13
Tests Duration Daily Rainfall Data Recorded, 2000	14
Tests Duration Daily Maximum Temperatures Recorded, 2000	15
Descriptions of 2000 Peanut Variety Test Entries	16
Sources of Seed	19

Information contained herein is available to all persons regardless of race, color, sex, or national origin.

The 2000 Alabama Performance Comparison of Peanut Varieties

James P. Bostick, Larry W. Wells, and Brian E. Gamble¹

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

The 2000 tests were conducted at the Wiregrass Research and Extension Center in Headland, AL. Prior to 2000, comparisons were made only under irrigation. During 2000, 21 entries were evaluated under irrigation, 10 entries were evaluated dryland, and 4 entries were evaluated late-planted dryland. The late-planted dryland test was conducted as a result of the unseasonably hot, dry conditions that prevailed across the Southeast. Stand establishment in many dryland commercial production fields did not occur until after mid-June rainfall.

The experimental design for each test was a randomized complete block consisting of two-row plots, 20 feet long, replicated four times. The irrigated test was planted on May 3, the dryland test was planted on May 17, and the lateplanted dryland test was planted on June 16. 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, 2000. These entries included AgraTech 1-1, AgraTech VC-2, Andru 93, NC 7, VA 93B, VA-C92, and ViruGard. All other entries except C99R, Florida MDR 98, and Southern Runner were dug on September 12, 2000. C99R, Florida MDR 98, and Southern Runner, considered to be later in maturity, were dug on September 28, 2000.

The dryland test entries considered to be earlier than Florunner were dug on October 17, 2000. These entries included AgraTech 1-1 and ViruGard. All other entries except C99R, Florida MDR 98, and Southern Runner were dug on October 23, 2000. C99R, Florida MDR 98, and Southern Runner, considered to be later in maturity, were dug on November 2, 2000.

In the late-planted dryland test, late fall weather conditions were not favorable for varietal maturity differences. All entries were dug on November 15, 2000. Information concerning relative maturity for all test entries was provided by the plant breeder responsible for developing the variety.

DISCUSSION

The information presented here represents data from three years at a single location. Performance comparisons among varieties should be drawn judiciously under these circumstances. 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 re-

¹Bostick is an adjunct professor of the Auburn University Department of Agronomy and Soils and executive secretary of the Alabama Crop Improvement Association; Wells is superintendent and Gamble is assistant superintendent of the Wiregrass Research and Extension Center.

quired 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 $21/64 \times 3/4$ -inch slotted screen and riding a $18/64 \times 3/4$ -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 Entomology and 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 Sara Casey and Larry Savelle, Wiregrass Research and Extension Center, for their cooperation.

AT THE WIREGRASS RESEARCH AND LATENSION CENTER, HEADLAND, HEADLAND, 2000						
Variety Yield <i>lb/a</i>	Variety or line Yield <i>lb/a</i>					
(R) ViruGard 5,037 (R) Georgia Hi-O/L 4,783 (V) Gregory 4,737 (R) AgraTech 1-1 4,565 (R) Georgia Green 4,538 (V) VA-C 92R 4,483 (R) C99R 4,447 (V) NC-V11 4,420 (R) AgraTech 201 4,283 (V) AgraTech VC2 4,175 (R) Florida MDR 98 4,075	(V) NC 7 3,920 (V) VA 93B 3,920 (R) Georgia Bold 3,911 (R) Southern Runner 3,866 (V) VA 98R 3,802 (V) NC 12C 3,721 (R) Andru 93 3,594 (R) GK 7 High Oleic 3,312 (R) Florunner 2,523					
Overall Average CV (%) LSD (.05)						

TABLE 1. YIELD OF IRRIGATED PEANUT VARIETIESAT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2000

TABLE 2. TWO-YEAR AVERAGE YIELD OF IRRIGATED PEANUT VARIETIESAT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 1999-2000

Variety	1999	2000	Avg. yield
·	lb/a	lb/a	lb/a
ViruGard	4,701	5,037	4,869
C99R	5,155	4,447	4,801
Georgia Green	4,910	4,538	4,724
Gregory	4,710	4,737	4,724
VA-C 92R	4,774	4,483	4,629
AgraTech VC-2	4,901	4,175	4,538
AgraTech 1-1	4,374	4,565	4,470
NČ-V11		4,420	4,252
NC 7		3,920	4,184
AgraTech 201	4,048	4,283	4,166
VĂ 93B		3,920	4,075
VA 98R	4,338	3,802	4,070
Southern Runner	4,129	3,866	3,998
Andru 93		3,594	3,930
Georgia Bold		3,911	3,916
GK 7 High Oleic		3,312	3,857
NC 12C		3,721	3,685
SunOleic 97R	4,066	3,194	3,630
Florunner		2,523	3,104
Overall Average			4,187
CV (%)			
LSD (.05)			

AT THE WIREGR	ASS K ESEARCH AND	EXTENSION CENTER,	neadland, Alaban	IA, 1998-2000
Variety	1998	1999	2000	Avg. yield
	lb/a	lb/a	lb/a	lb/a
ViruGard	6,089	4,701	5,037	5,276
Georgia Green	5,990	4,910	4,538	5,146
AgraTech VC-2	6,171	4,901	4,175	5,082
VA-C 92R	5,082	4,774	4,483	4,780
AgraTech 1-1	5,200	4,374	4,565	4,713
NC 7	5,527	4,447	3,920	4,631
VA 93B	5,717	4,229	3,920	4,622
4,622NC-V11	5,064	4,084	4,420	4,523
Andru 93	5,545	4,265	3,594	4,468
Georgia Bold	5,427	3,920	3,911	4,419
Southern Runner	5,055	4,129	3,866	4,350
GK 7 High Oleic	5,028	4,401	3,312	4,247
NC 12C	5,019	3,648	3,721	4,129
SunOleic 97R		4,066	3,194	3,917
Florunner	4,601	3,685	2,523	3,603
Overall Average				4,527
CV (%)				
LSD (.05)				

TABLE 3. T	HREE-YEAR A	Average Y	ield of Irr	RIGATED PEA	NUT VARIETI	ES
AT THE WIREGRASS	R ESEARCH AN	ND EXTENSIO	ON CENTER.	. HEADLAND	ALABAMA.	1998-2000

TABLE 4. AVERAGE SIZE AND GRADE ON IRRIGATED PEANUT VARIETIES	
AT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 200	0

Variety	SMKRS count/lb	SMKRS pct	SS pct	TSMK pct	OK pct	DK pct	TK pct	Hulls pct
AgraTech 1-1	783	68	2	70	4	1	75	25
AgraTech 201	721	71	1	72	3	1	76	24
AgraTech VC 2	528	64	1	66	5	1	71	29
Andru 93	744	65	2	67	6	2	75	25
C99R	658	67	6	73	3	1	77	23
Florida MDR 98	678	68	6	74	3	1	78	22
Florunner	797	66	2	68	5	2	75	25
Georgia Bold	668	70	3	73	2	1	76	24
Georgia Green	811	73	2	75	3	0	78	22
Georgia Hi-O/L	522	68	4	72	1	1	74	26
GK 7 High Oleic	744	67	2	69	5	1	75	25
Gregory	420	66	2	68	2	1	71	29
NC 7	445	65	2	67	2	1	70	30
NC 12C	510	66	3	69	2	1	72	28
NC-V11	499	67	2	69	1	1	71	29
Southern Runner	841	70	4	74	3	0	77	23
SunOleic 97R	770	68	3	71	4	1	76	24
VA 93B	534	65	1	66	2	1	69	31
VA 98R	504	64	3	67	2	2	71	29
VA-C 92R	504	66	3	69	2	1	72	28
ViruGard	575	72	2	74	2	1	77	23

AT THE WIREGR	ASS RESEAR	CH AND EX	TENSION	CENTER, H	LEADLAND	, Alabama	, 1999-20	000
Variety	SMKRS count/lb	SMKRS pct	SS pct	TSMK pct	OK pct	DK pct	TK pct	Hulls pct
AgraTech 1-1	769	66	2	69	5	1	75	25
AgraTech 201	732	68	2	70	4	2	76	24
AgraTech VC-2	554	64	1	65	5	1	71	29
Andru 93	721	65	2	67	6	2	75	25
C99R	631	69	4	73	3	1	77	23
Florunner	769	66	2	68	5	2	75	25
Georgia Bold	668	70	3	73	2	1	76	24
Georgia Green	783	72	2	74	3	1	78	22
GK 7 High Oleic	658	68	2	70	5	1	76	24
Gregory		65	2	67	2	2	71	29
NC 7	468	65	2	67	2	1	70	30
NC 12C	504	66	3	68	2	1	72	28
NC-V11	499	67	2	69	3	1	73	27
Southern Runner	811	70	2	72	3	2	76	24
SunOleic 97R	732	69	3	72	3	1	76	24
VA 93B	522	63	2	64	3	1	68	32
VA 98R	522	65	2	67	2	2	71	29
VA-C 92R	488	66	3	69	2	1	72	28
ViruGard	590	70	3	73	3	1	77	23

TABLE 5. TWO-	YEAR AVERAGE	SIZE AND C	FRADE ON	IRRIGATED	Peanut Va	RIETIES
AT THE WIREGRASS	R ESEARCH AND	EXTENSION	CENTER,	HEADLAND,	Alabama,	1999-2000

TABLE 6. THREE-YEAR AVERAGE SIZE AND GRADE ON IRRIGATED PEANUT VARIETIESAT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 1998-2000

Variety	SMKRS count/lb	SMKRS pct	SS pct	TSMK pct	OK pct	DK pct	TK pct	Hulls pct
AgraTech 1-1	757	67	2	69	5	1	75	25
AgraTech VC-2	516	65	2	67	4	1	72	28
Andru 93	721	66	1	67	6	2	75	25
Florunner	744	67	2	69	4	2	75	25
Georgia Bold	668	70	3	73	2	1	76	24
Georgia Green	744	72	2	74	3	1	78	22
GK 7 High Oleic	631	68	3	72	4	1	77	23
NC 7	445	66	1	67	3	1	71	29
NC 12C	473	67	2	69	2	2	73	27
NC-V11	478	67	2	69	3	2	74	26
Southern Runner	796	70	2	72	3	1	76	24
SunOleic 97R	709	69	2	71	4	1	76	24
VA 93B	493	64	2	66	3	1	70	30
VA-C 92R	454	67	2	69	2	2	73	27
ViruGard	590	70	3	73	3	1	77	23

			—SMKRS	S Size Di	stribution			
Variety	+21.0		-2	21.0 + 1	8.0	-	18.0 + 10	6.0
	–Jumbo–			-Mediun	n		–No. 1–	
	pct			pct			pct	
-1998-	—1999—	—2000—	-1998—	—1999—	—2000—	-1998-	—1999—	2000_
AgraTech 1-1	28.1	30.8	49.0	60.5	58.6	9.5	11.4	10.6
AgraTech 201	27.3	27.1	—	60.4	58.6		12.3	14.3
AgraTech VC 2 59.3	45.7	38.3	35.0	45.2	50.5	5.7	9.1	11.2
Andru 93 36.8	20.8	26.7	50.8	64.5	57.1	12.4	14.7	16.2
C99R —	52.3	59.7		41.8	34.0	—	5.9	6.3
Florida MDR 98 —	_	61.4	_		32.4			6.2
Florunner 27.1	24.9	21.3	61.6	62.6	64.2	11.3	12.5	14.5
Georgia Bold 55.8	42.8	49.1	38.5	50.4	44.1	5.7	6.8	6.8
Georgia Green 39.8	24.6	37.8	54.1	65.1	54.5	6.1	10.3	7.7
Georgia Hi-O/L —	_	70.4			22.8			6.8
GK 7 High Oleic 49.1	34.8	26.9	43.1	54.9	58.8	7.8	10.3	14.3
Gregory	73.9	81.0		21.7	15.4		4.4	3.6
NC 7 82.3	65.9	72.7	14.3	28.1	24.0	3.4	6.0	3.3
NC 12C	74.5	74.8	10.4	21.8	21.0	3.6	3.7	4.1
NC-V11	61.1	57.7	23.1	33.3	36.3	4.8	5.6	6.1
Southern Runner	23.3	35.4	56.6	67.6	58.1	6.7	9.1	6.5
SunOleic 97R 36.0	35.0	29.7	56.5	56.2	57.1	7.5	8.8	13.2
VA 93B	60.2	60.7	21.9	32.4	33.3	5.9	7.4	6.0
VA 98R —	53.1	63.2		40.7	28.9	_	6.2	8.0
VA-C 92R	62.5	63.2	21.1	33.0	30.4	2.5	4.5	6.3
ViruGard 54.4	46.3	50.4	40.7	47.3	44.7	4.9	6.4	4.9

.

TABLE 7. AVERAGE SHELLED	SEED SIZE DISTRIBUTION	OF IRRIGATED PEANUT	VARIETIES
AT THE WIREGRASS RESEARCH	AND EXTENSION CENTER,	HEADLAND, ALABAMA,	1998-2000

¹ — Not tested.

·

			-Hits per plot-		
Variety	Rep	Rep	Rep	Rep	Avg.
	I	II	III	IV	0
Georgia Hi-O/L	12	9	15	12	12.00
ViruGard	18	10	10	16	13.50
C99R	14	13	15	17	14.75
Gregory	20	10	14	18	15.50
Southern Runner	21	19	27	14	20.25
Georgia Green	9	26	24	25	21.00
AgraTech 201	22	23	15	25	21.25
GK 7 High Oleic	16	25	30	22	23.25
VA 93B	27	18	25	23	23.25
VA 98R	21	21	28	23	23.25
NC-V11	28	19	26	21	23.50
NC 12C	32	18	22	22	23.50
AgraTech 1-1	19	24	29	24	24.00
VA-C 92R	21	24	30	21	24.00
AgraTech VC-2	27	18	24	29	24.50
Florida MDR 98	17	30	29	27	25.75
NC 7	33	21	31	25	27.50
Florunner	24	28	31	30	28.25
SunOleic 97R	33	31	27	30	30.25
Georgia Bold	31	31	25	39	31.50
Andru 93	34	39	36	34	35.75
Overall Average					23.17
CV (%)					19.83
LSD (.05)					6.49

TABLE 8. OCCURRENCE OF TOMATO SPOTTED	WILT VIRUS HITS ¹ I	n the Irrigated Peanu	T VARIETY
Test at the Wiregrass Research and	EXTENSION CENTER	, HEADLAND, ALABAMA,	2000

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

			—Hits per plot—		
Variety	Rep	Rep	Rep	Rep	Avg.
	I	II	III	IV	0
VA 93B	0	0	1	0	0.25
ViruGard	0	0	0	3	0.75
AgraTech 1-1	1	2	1	2	1.50
Georgia Hi-O/L	2	1	2	1	1.50
NC 7	3	1	1	1	1.50
NC 12C	2	1	3	1	1.75
Florida MDR 98	1	2	2	4	2.25
AgraTech VC-2	1	1	5	4	2.75
VA-C 92R	2	1	3	5	2.75
Andru 93	4	3	3	3	3.25
C99R	4	7	4	3	4.50
Georgia Bold		1	1	6	4.50
Gregory		3	1	4	4.50
Southern Runner	2	8	2	7	4.75
NC-V11	6	8	0	7	5.25
Georgia Green	1	2	9	14	6.50
GK 7 High Oleic	8	3	10	8	7.25
VA 98R	8	11	8	2	7.25
SunOleic 97R	4	8	6	15	8.25
AgraTech 201	9	8	10	11	9.50
Florunner	16	13	9	15	13.25
Overall Average					4 87
CV (%)			•••••••••••••••••••••••••••••	•••••••••••••••••••••••••••••	72 11
LSD (.05)					

TABLE 9. OCCURRENCE OF WHITE MOLD HITS IN THE IRRIGATED PEANUT VARIETY TESTAT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2000

				. /	
			-Rating per plot ¹ —		
Variety	Rep	Rep	Rep	Rep	Avg.
	Ι	II	III	IV	
NC-V11	2	3	2	4	2.75
VA-C 92R	3	3	3	3	2.75
Andru 93	3	3	2	4	3.00
SunOleic 97R	5	2	3	2	3.00
Georgia Hi-O/L	5	4	2	2	3.25
AgraTech 1-1	4	3	4	3	3.50
GK 7 High Oleic	4	4	2	4	3.50
Gregory	4	3	3	4	3.50
VA 98R	3	4	4	3	3.50
Florunner	4	5	3	3	3.75
NC 7	4	4	3	4	3.75
VA 93B	4	4	3	4	3.75
Georgia Bold	3	4	5	4	4.00
Georgia Green	4	4	3	5	4.00
AgraTech 201	5	4	4	4	4.25
NC 12C	6	3	3	5	4.25
Southern Runner	4	4	4	5	4.25
AgraTech VC-2	6	4	4	4	4.50
Florida MDR 98	5	5	4	4	4.50
ViruGard	4	4	5	5	4.50
C99R	6	5	3	5	4.75
Overall Average					3.76
CV (%)					22.20
LSD (.05)					1.81
. ,					

TABLE 10. OCCURRENCE OF LEAFSPOT IN THE IRRIGATED PEANUT VARIETY TESTAT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2000

¹ Rating 1 (lowest) to 10 (highest).

			E I D I I I I I I I I I I
Variety	Yield <i>lb/a</i>	Variety	Yield <i>lb/a</i>
ViruGard Georgia Green AgraTech 1-1 Southern Runner Georgia Bold	2966 2705 2505 2477 2459	C99R Florida MDR 98 GK 7 High Oleic AgraTech 201 Florunner	
Overall Average CV (%) LSD (.05)			

TABLE 11. YIELD OF DRYLAND PEANUT VARIETIESAT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2000

TABLE 12. AVERAGE SIZE AND GRADE ON DRYLAND PEANUT VARIETIESAT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2000

Variety	SMKRS count/lb	SMKRS pct	SS pct	TSMK pct	OK pct	DK pct	TK pct	Hulls pct
AgraTech 1-1	1107	52	2	54	14	0	68	32
AgraTech 201	1297	49	2	51	16	0	67	33
C99R	744	65	6	71	2	0	73	27
Florida MDR 98	811	65	3	68	5	0	73	27
Florunner	1056	56	2	58	12	0	70	30
Georgia Bold	1335	61	2	63	7	0	70	30
Georgia Green	1056	59	4	63	10	0	73	27
GK 7 High Oleic	1135	53	2	55	12	0	67	33
Southern Runner	873	66	1	67	6	0	73	27
ViruGard	825	61	4	65	5	0	70	30

TABLE 13. YIELD OF LATE-PLANTED DRYLAND PEANUT VARIETIESAT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2000

Variety	Yield <i>lb/a</i>	Variety	Yield <i>lb/a</i>
Georgia Green ViruGard	1162 1109	AgraTech 1-1 AgraTech 201	
Overall Average			
LSD (.05)			

TABLE 14. AVERAGE SIZE AND GRADE ON LATE-PLANTEDDRYLAND PEANUT VARIETIESAT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2000

Variety	SMKRS count/lb	SMKRS pct	SS pct	TSMK pct	OK pct	DK pct	TK pct	Hulls pct
AgraTech 1-1	987	53	19	72	1	0	73	27
AgraTech 201	1032	49	20	69	1	0	70	30
Georgia Green	1032	56	18	74	1	0	75	25
ViruGard	927	57	16	73	1	1	75	25

PLANTING RATE CHART ¹									
Seed	Seed	Lbs.	Seed	Lbs.	Seed	Lbs.			
per	per	per	per	per	per	per			
pound	foot	acre	foot	acre	foot	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			

¹Pounds 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) <u>Seed per foot x linear feet in 1 acre</u> = pounds per acre

Seed count per pound

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

<u>43,560 square feet per acre</u> = 14,520 linear feet in 1 acre

3 square feet

(C) Example:

<u>6 seed per foot x 14,520 linear feet</u> = 109 pounds per acre 800 seed per pound

	AT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2000								
DATE	APR in	MAY in	JUNE in	JULY in	AUG in	SEPT in	OCT in	NOV in	
1		_		_	0.08	_	_	_	
2					0.97	0.02			
3	_			0.12	0.78	0.31			
4	0.17		_			0.25			
5	_				0.10				
6			0.08			0.83			
7			_			0.60	0.25	0.02	
8			_		0.13	0.02		0.21	
9			_					0.36	
10			_		0.12			1.22	
11									
12		_	_	0.10	_	_	_		
13				0.11				—	
14		0.11		0.35				0.81	
15	0.07		0.05			1.20		—	
16			0.27						
17			0.24					0.65	
18								0.05	
19							—	1.90	
20					0.17		—	0.05	
21									
22							1.45		
23			0.13			0.88			
24				0.10					
25	0.22			—	—	—	—	1.93	
26	—		0.05	—	0.21	0.58	—		
27			0.24						
28	0.03		0.10	0.25	0.04	—	—		
29			0.32	0.20				—	
30			0.17	0.08				—	
31				0.06				_	
Totals ¹	0.49	0.11	1.75	1.27	2.60	6.14	0.25	7.20	

TESTS DURATION DAILY RAINFALL DATA RECORDED

¹Total daily rainfall from April through November, 2000 = 19.81 in; 1999 = 28.15 in; 1998 = 37.41 in.

	AT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, 2000								
DATE	APR °F	$\mathop{\rm MAY}\limits_{{}^oF}$	JUNE °F	$JULY_{^{o}F}$	AUG °F	SEPT °F	$\operatorname{OCT}_{^{o}F}$	$\mathop{\rm NOV}_{^oF}$	
1	79	85	92	93	90	93	83	86	
2	80	86	96	96	91	92	83	85	
3	80	87	102	95	85	93	83	84	
4	81	89	101	92	88	92	84	1	
5	65	88	100	95	94	93	88		
6	70	87	92	100	95	93	90	85	
7	77	88	92	101	95	70	87	80	
8	80	90	90	105	95	75	66	80	
9	70	90	95	98	95	84	75	83	
10	70	90	95	100	96	89	62	75	
11	77	92	96	102	92	91	66	64	
12	80	95	96	99	94	90	75	66	
13	83	95	96	100	93	92	78	69	
14	81	98	97	101	93	93	80	69	
15	81	90	99	99	95	91	81	59	
16	79	90	95	104	98	92	82	60	
17	85	89	88	104	101	88	83	58	
18	87	91	93	102	104	84	85	58	
19	81	92	97	106	106	85	86	45	
20	87	92	97	105	98	87	85	45	
21	87	91	98	108	100	90	85	58	
22	80	85	98	101	93	87	85	48	
23	82	92	99	101	93	82	82	49	
24	76	97	97	101	96	88	83	55	
25	80	96	98	97	98	90	80	62	
26	68	97	96	93	99	90	82	65	
27	78	99	88	92	97	73	81	63	
28	80	98	93	96	98	77	85	64	
29	81	98	92	96	99	79	86	65	
30	83	96	91	95	97	81	87	70	
31		89		91	95		84		

TESTS DURATION DAILY MAXIMUM TEMPERATURES RECORDED	
AT THE WIREGRASS RESEARCH AND EXTENSION CENTER, HEADLAND, ALABAMA, Z	2

¹ Not recorded.

DESCRIPTIONS OF 2000 PEANUT VARIETY TEST ENTRIES

1. AgraTech 1-1

Developed by Dr. Kim Moore, AgraTech Seeds Inc. Released in 1999 with variety protection applied for under the 1994 Amendment of the Plant Variety Protection Act. Maturity is approximately 15 days earlier than Florunner. Seed and pod size slightly larger than Florunner, with high oleic/linoleic fatty acid ratio and typical runner growth habit. Has shown tolerance to tomato spotted wilt virus.

2. AgraTech 201

Developed by Dr. Kim Moore, AgraTech Seeds Inc. Released in 1999 with variety protection applied for under the 1994 Amendment of the Plant Variety Protection Act. Maturity range is same as Florunner with similar seed and pod size. The oleic/linoleic fatty acid ratio is high with typical runner growth habit with erect mainstem. Carries tolerance to tomato spotted wilt virus with thin hulls and dark green foliage.

3. AgraTech VC 2

Developed by Dr. Kim Moore, AgraTech Seeds Inc. Released in 1999 with variety protection applied for under the 1994 Amendment of the Plant Variety Protection Act. Maturity is about the same as NC 7 and has smaller seed and pod size than NC 7. The oleic/linoleic fatty acid ratio is high with runner type growth habit. No known insect resistance, but has shown some tolerance to tomato spotted wilt virus. Has slightly less vine growth than NC 7.

4. Andru 93

Developed by Dr. Dan Gorbet, University of Florida Agricultural Experiment Station. Released in 1993 and a protected variety to be sold only as a class of certified seed. Earlier in maturity by seven to ten days than Florunner. Has slightly larger seed and pod size than Florunner, normal oleic/linoleic fatty acid ratio, and typical runner growth habit. Has no known disease or insect resistance. Released primarily due to earliness and high yields. Has prominent center stem and more jumbo kernels than Florunner.

5. C99R

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 14 to 21 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%) with somewhat darker green foliage.

6. Florida MDR 98

Developed by Dr. Dan Gorbet, University of Florida Agricultural Experiment Station. Released in 1998. Variety Protection has been applied for under the 1994 Amendment of the Plant Variety Protection Act. (MDR stands for Multiple Disease Resistance.) Later in maturity than Florunner by approximately 15 days. Larger seed and pod size than Florunner and has mid-level oleic/linoleic fatty acid ratio. Has better resistance than Southern Runner to late leafspot, white mold, rust, tomato spotted wilt virus, and web blotch. No known insect resistance. Released due to significantly larger seed, better yields and grade than Southern Runner. Has larger leaves than Southern Runner, but similar pod venation and seed coat color.

7. Florunner

Developed by Dr. Al Norden, University of Florida Agricultural Experiment Station. Released in 1969. Matures in approximately 135 days and has normal oleic/linoleic fatty acid ratio. Until the occurrence of tomato spotted wilt virus, Florunner had been the industry standard of comparison with respect to yield for runner varieties. It is still the standard of comparison for many milling characteristics for runner varieties. No known disease or insect resistance.

8. Georgia Bold

Developed by Dr. Bill Branch, University of Georgia Agricultural Experiment Station. Released in 1997 and protected under the 1994 Amendment of the Plant Variety Protection Act. Same maturity range as Florunner with larger seed and pod size with slightly higher oleic/linoleic fatty acid ratio. No known insect resistance, but has moderate tolerance to tomato spotted wilt virus. Georgia Bold has excellent yield and grade combination with significantly larger seed size than Florunner for both seed weight and percentage of extra large kernels.

9. 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.

10. 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.

11. GK 7 High Oleic

Developed by Dr. Kim Moore, AgraTech Seeds Inc. Released in 1997 and protected under the 1994 Amendment of the Plant Variety Protection Act. Maturity range similar to Florunner with seed and pod size slightly larger. High oleic/linoleic fatty acid ratio and some tolerance to tomato spotted wilt virus. No other known disease or insect resistance. Typical runner growth habit with erect mainstem.

12. Gregory

Developed by Dr. T. G. 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% infection rate compared with 9.2% for NC-V11). Like NC 7 and NC 12C, Gregory is extremely susceptible to sclerotinia blight. Gregory has a pink seed coat.

13. NC 7

Developed by North Carolina Agricultural Research Service. Released in 1978 and protected under the 1994 Amendment of the Plant Variety Protection Act. Has become the industry standard for Virginia variety development comparisons as Florunner has for Runner varieties. Maturity range is early compared with other Virginia varieties. Has normal oleic/linoleic fatty acid ratio and intermediate growth habit. Highly susceptible to early leafspot, CBR, and sclerotinia blight but has moderate tolerance to tomato spotted wilt virus. No known insect resistance. It is preferred for the in-shell export market due to its large pod and size.

14. NC 12C

Developed by North Carolina Agricultural Research Service. Released in 1996 and protected under the 1994 Amendment of the Plant Variety Protection Act. Same maturity group as NC 7 with about the same seed and pod size, normal oleic/ linoleic fatty acid ratio, and intermediate growth habit. Intermediate resistance to CBR (similar to NC 10C), low level of resistance to early leafspot (similar to NC 6), low level of tolerance to tomato spotted wilt virus, and highly susceptible to sclerotinia blight. No known insect resistance. Pod and seed characteristics similar to NC 7.

15. 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).

16. Southern Runner

Developed by Dr. Dan Gorbet, University of Florida Agricultural Experiment Station. Released in 1986 and protected under the Plant Variety Protection Act. Matures 15 to 20 days later than Florunner with smaller seed and pod size. Has normal oleic/linoleic fatty acid ratio with runner growth habit. Has resistance to late leafspot, white mold, rust, and tomato spotted wilt virus. Possibly has some resistance to Southern corn rootworm, possibly more drought tolerant and usually lower LSK and less alfatoxin than Florunner. Tan seedcoat and prominent exterior hull venation.

17. SunOleic 97R

Developed by Dr. Dan Gorbet, University of Florida Agricultural Experiment Station. Released in 1997 and protected under the 1994 Amendment of the Plant Variety Protection Act. Same maturity group as Florunner, with about the same seed and pod size. High oleic/linoleic fatty acid ratio with typical runner growth habit. No known disease or insect resistance. Generally very similar to Sunrunner, but with high oleic oil chemistry.

18. VA 93B

Developed by Virginia Agricultural Experiment Station and USDA-ARS. Released in 1993 and protected under the Plant Variety Protection Act. Maturity range is earlier than NC 7 by about seven days in the VC area. Has smaller seed and pod size than NC 7, normal oleic/linoleic fatty acid ratio, and bunch growth habit. No known insect resistance and has a moderate resistance to sclerotinia blight. Bright, shapely, fancy pods made VA 93B the most preferred variety for in-shell products in the VC shelling industry.

19. VA 98R

Developed by Virginia Agricultural Experiment Station and USDA-ARS. Released in 1998 with plant variety protection applied for under the 1994 Amendment of the Plant Variety Protection Act. Maturity range is early, similar to NC 7 with smaller seed and pod size, normal oleic/linoleic fatty acid ratio, and runner growth habit. No known insect or disease resistance. However, early data indicate that it might be less susceptible to sclerotinia blight than some Virginia type varieties (NC 7, NC 10C, Gregory, and NC 12C). Other characteristics are high yield potential with excellent pod characteristics for in-shell processing (bright pod color and typical peanut shape). Its runner growth habit and prominent erect mainstem makes for easier digging with rows being easily determined.

20. VA-C 92R

Developed by Virginia Agricultural Experiment Station, North Carolina Agricultural Research Service, and USDA-ARS. Released in 1992 and protected under the Plant Variety Protection Act. Maturity range same as NC 7 with smaller seed and pod size and normal oleic/linoleic fatty acid ratio. Has intermediate growth habit with moderate field tolerance to tomato spotted wilt virus, susceptible to early leafspot. Has uniform pink seed. Its high yield potential made it very popular in the VC area until area shellers voiced concerns over its relatively dark hulls.

21. ViruGard

Developed by Dr. Ernest Harvey, AgraTech Seeds Inc. Released in 1997 under the 1994 Amendment of the Plant Variety Protection Act. Maturity range is earlier than Florunner with larger seed and pod size, mid-level oleic/linoleic fatty acid ratio, and intermediate growth habit. Generally smaller leaflet size than Florunner. No known insect resistance. Resistant to tomato spotted wilt virus. Seedcoat color lighter than Florunner.

SOURCES OF SEED

Dr. W. D. Branch University of Georgia Department of Crop and Soil Sciences Coastal Plain Experiment Station Tifton, Georgia 31793 Georgia Bold 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 93 C99R Florida MDR 98 Florumer Southern Runner SunOleic 97R

Dr. Thomas G. Isleib North Carolina State University Department of Crop Science Unit 3: 840 Method Road Raleigh, North Carolina 27695 Gregory NC 7 NC 12C NC-V11 Mr. Fabian Watts AgraTech Seeds Incorporated Peanut Seed Research Center P.O. Box 644 Ashburn, Georgia 31714 AgraTech 1-1 AgraTech 201 AgraTech VC 2 GK 7 High Oleic ViruGard

Mr. Walton Mozingo Virginia Poly. Ins. & St. Univ. Tidewater Ag. Res. & Ext. Ct. 6321 Holland Road Suffolk, VA 23437 VA 93B VA 93B VA 98R VA-C 92R

Alabama's Agricultural Experiment Station System AUBURN UNIVERSITY



- Main Agricultural Experiment Station, Auburn.
- 🖈 Alabama A&M University
- ☆ E. V. Smith Research Center, Shorter.
 - Tennessee Valley Research and Extension Center, Belle Mina.
 - Sand Mountain Research and Extension Center, Crossville.
 - North Alabama Horticulture Station, Cullman.
 - 4. Upper Coastal Planins Station, Winfield
 - Chilton Area Horticulture Station, Clanton.
 - 6. Piedmont Research Station, Camp Hill.
 - 7. Prattville Experiment Field, Prattville.
 - Black Belt Research and Extension Center, Marion Junction.
 - Lower Coastal Plain Research Station, Camden.
 - Monroeville Experiment Field, Monroeville.
 - Wiregrass Research and Extension Center, Headland.
 - 12. Brewton Experiment Field, Brewton
 - Ornamental Horticulture Station, Spring Hill.
 - Gulf Coast Research and Extension Center, Fairhope.