

Alabama Performance Comparison of Peanut Varieties 2017

Auburn University

Department of Crop, Soil and
Environmental Sciences

In cooperation with the Alabama Cooperative Extension System
(Alabama A&M University and Auburn University)



Table of Contents

Introduction	3
Production and Discussion.....	3
Size and Grade Data Terms	4
Terms Used	4
Acknowledgments	5
Three-Year Average Yield of Irrigated Peanut Varieties, 2015-2017	6
Average Size and Grade on Irrigated Peanut Varieties, 2017	7
Two-Year Average Size and Grade on Irrigated Peanut Varieties, 2016-2017	8
Three-Year Average Size and Grade on Irrigated Peanut Varieties, 2015-2017.....	9
Average Shelled Seed Size Distribution of Irrigated Peanut Varieties, 2015-2017	10
Occurrence of Tomato Spotted Wilt Virus Hits, White Mold Hits, and Leaf spot in the Irrigated Peanut Variety Test, 2017.....	11
Three-Year Average Yield of Dryland Peanut Varieties, 2015-2017	12
Average Size and Grade on Dryland Peanut Varieties, 2017.....	13
Two-Year Average Size and Grade on Dryland Peanut Varieties, 2016-2017.....	14
Three-year Average Size and Grade on Dryland Peanut Varieties, 2015-2017	14
Occurrence of Tomato Spotted Wilt Virus Hits, White Mold Hits, and Leaf spot in the Dryland Peanut Variety Test, 2017	15
Planting Rate Chart	16
Tests Duration Daily Rainfall Data Recorded, 2017.....	17
Tests Duration Daily Maximum Temperatures Recorded, 2017.....	18
Tests Duration Daily Minimum Temperatures Recorded, 2017	19
Descriptions of 2017 Peanut Variety Test Entries	20
Seed Sources	23

Information contained herein is available to all persons regardless of 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.

The 2017 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 and Discussion

The 2017 tests were conducted at the Wiregrass Research and Extension Center in Headland, Ala. During 2017, 18 entries were evaluated under irrigation and dryland conditions.

The experimental design for each test was a randomized complete block consisting of two-row plots, 20 feet long, replicated four times. Between row spacing was 36 inches. The dryland tests were planted on May 4. The irrigated tests were planted May 11. Both 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 similar to Georgia Green in maturity were dug on September 22. These entries were ACI 789, AU-NPL 17, Flo-Run™‘157’, Georgia Greener, Georgia-06G, Georgia-07W, Georgia-09B, Georgia 16 HO, Tifguard, and TIF NV-High O/L. Entries moderately later than Georgia Green, ACI 3321, Flo-Run™‘107’, Flo-Run™‘331’, Georgia-13M, Georgia-14N, TUFRunner™‘297’ and TUFRunner™‘511’ were dug on September 27. The entry with maturity considerably later than Georgia Green was Georgia-12Y dug **October 5**.

The dryland test entries with maturity near the same as Georgia Green were dug on September 22. These entries were ACI 789, AU-NPL 17, Flo-Run™‘157’, Georgia Greener, Georgia-06G, Georgia-07W, Georgia-09B, Georgia 16 HO, Tifguard, and TIF NV-High O/L. Entries moderately later than Georgia Green, ACI 3321, Flo-Run™‘107’, Flo-Run™‘331’, Georgia-13M, Georgia-14N, TUFRunner™‘297’ and TUFRunner™‘511’ were dug on September 29. The entry with maturity considerably later than Georgia Green was Georgia-12Y dug October 5.

The information presented here represents data from three years at one

¹Bostick is an adjunct professor of the Auburn University Department of Crop, Soil and Environmental Sciences, and Executive Vice President of Alabama Crop Improvement Association; Wells is Director and Gamble is Associate Director of the Wiregrass Research and Extension Center.

PEANUT TRIAL

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 (0.05) following the LSD value indicates that the LSD was calculated at the 95% level of confidence.

Size and Grade Data Terms

Data was 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 one 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.

Acknowledgements

The authors express appreciation to Austin K. Hagan, Professor of Plant Pathology, for providing the disease evaluation data and to Glenn Wehtje, Professor of Crop, Soil, and Environmental Sciences, for the statistical analysis. Appreciation is also expressed to Susan Morrisette for her contributions.

PEANUT TRIAL

Table 1

Three-Year Average Yield of Irrigated Peanut Varieties (lbs/acre) at the Wiregrass Research and Extension Center, Headland, Ala., 2015-2017.

Variety or Line	2017 (lbs/acre)	2 Year Average (lbs/acre)	3 Year Average (lbs/acre)
Georgia 12Y	6026	5577	6029
ACI 3321	5708	---- ¹	----
Georgia-06G	5572	5872	6370
AU-NPL 17	5218	5305	----
Georgia Greener	5137	5300	----
Georgia 16 HO	5127	----	----
FloRun™ '157'	5091	4787	----
TUFRunner™ '297'	5082	5318	6074
Flo Run™ '331'	4973	----	----
Georgia 13M	4955	5264	5639
TUFRunner™ '511'	4882	5155	5814
Tifguard	4864	4628	----
Georgia-07W	4792	4592	----
ACI 789	4774	5083	----
TIF NV-High O/L	4774	----	----
Georgia-09B	4674	4896	5515
FloRun™ '107'	4365	4542	5291
Georgia-14N	3984	3871	4492
<i>Overall Average</i>	<i>5167</i>	<i>5990</i>	<i>5214</i>
CV (%)	8.1	11.67	18.33
LSD (0.05)	575	587	839

¹ Not Tested

Table 2
Average Size and Grade of Irrigated Peanut Varieties at the Wiregrass Research and Extension Center, Headland, Ala., 2017.

Variety or Line	SMKRS ¹ (count/lb)	SMKRS ² (%)	SS ³ (%)	TSMK ⁴ (%)	OK ⁵ (%)	DK ⁶ (%)	TK ⁷ (%)	Hulls ⁸ (%)
ACI 789	603	65	4	69	4	1	74	26
ACI 3321	558	66	2	68	4	1	73	27
AU-NPL 17	632	66	2	68	4	1	73	27
Flo-Run™'107'	743	61	4	65	7	2	74	26
Flo-Run™'157'	721	61	5	66	6	2	74	26
Flo-Run™'331'	649	64	4	68	6	1	75	25
Georgia-06G	645	67	1	68	5	2	75	25
Georgia 07W	665	60	3	63	6	2	71	29
Georgia-09B	645	67	3	70	4	2	76	24
Georgia-12Y	737	62	3	65	4	3	72	28
Georgia-13M	856	69	3	72	4	1	77	23
Georgia-14N	792	61	2	63	8	3	74	26
Georgia-16 HO	578	71	3	74	3	1	78	22
Georgia Greener	710	63	3	66	5	4	75	25
Tifguard	578	65	2	67	4	1	72	28
TIF NV-High O/L	600	66	3	69	4	1	74	26
TUFRunner™'297'	614	65	1	66	4	4	74	26
TUFRunner™'511'	655	64	2	66	4	2	72	28

¹SMKRS count/lb. (number per pound of sound mature kernels riding screen)—Number of sound whole mature kernels from 1 lb 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.

²SMKRS % (sound mature kernels riding screen)—Percentage of the shelled sample as described above.

³SS % (sound splits)—Percentage of the shelled sample that are split or broken but not damaged.

⁴TSMK % (total sound mature kernels)—Percentage of the shelled sample comprised of sound mature kernels plus sound splits.

⁵OK % (other kernels)—Percentage of kernels that pass through a 15/64 x 1-inch slotted screen or 16/64x3/4-inch slotted screen for Virginia or Runner varieties, respectively.

⁶DK % (damaged kernels)—Percentage of kernels that are moldy, decayed, affected by insects or weather conditions resulting in seed coat or cotyledon discoloration or deterioration.

⁷TK % (total kernels)—Percentage kernels in the shelled sample, including TSMK, OK, and DK.

⁸Hulls %—Percentage of hulls from the shelled sample.

PEANUT TRIAL

Table 3

Two-Year Average Size and Grade of Irrigated Peanut Varieties at the Wiregrass Research and Extension Center, Headland, Ala., 2016-2017.

Variety or Line	SMKRS ¹ (count/lb)	SMKRS ² (%)	SS ³ (%)	TSMK ⁴ (%)	OK ⁵ (%)	DK ⁶ (%)	TK ⁷ (%)	Hulls ⁸ (%)
Flo-Run™'107'	726	64	4	68	6	2	76	24
Flo-Run™'157'	701	62	6	68	6	1	75	25
Georgia-06G	613	69	3	72	4	1	77	23
Georgia-09B	628	68	4	72	4	1	77	23
Georgia-12Y	701	64	3	67	5	2	74	26
Georgia-13M	812	67	4	71	5	1	77	23
Georgia-14N	748	64	3	66	7	2	75	25
TUFRunner™'297'	583	68	1	69	4	3	76	24
TUFRunner™'511'	604	68	2	70	4	2	76	24

¹SMKRS 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.

²SMKRS % (sound mature kernels riding screen)—Percentage of the shelled sample as described above.

³SS % (sound splits)—Percentage of the shelled sample that are split or broken but not damaged.

⁴TSMK % (total sound mature kernels)—Percentage of the shelled sample comprised of sound mature kernels plus sound splits.

⁵OK % (other kernels)—Percentage of kernels that pass through a 15/64 x 1-inch slotted screen or 16/64x3/4-inch slotted screen for Virginia or Runner varieties, respectively.

⁶DK % (damaged kernels)—Percentage of kernels that are moldy, decayed, affected by insects or weather conditions resulting in seed coat or cotyledon discoloration or deterioration.

⁷TK % (total kernels)—Percentage kernels in the shelled sample, including TSMK, OK, and DK.

⁸Hulls %—Percentage of hulls from the shelled sample.

Table 4
Three-Year Average Size and Grade of Irrigated Peanut Varieties at the Wiregrass Research and Extension Center, Headland, Ala., 2015-2017.

Variety or Line	SMKRS ¹ (count/lb)	SMKRS ² (%)	SS ³ (%)	TSMK ⁴ (%)	OK ⁵ (%)	DK ⁶ (%)	TK ⁷ (%)	Hulls ⁸ (%)
Flo-Run™'107'	728	66	3	69	5	1	75	25
Georgia-06G.	604	71	1	72	3	1	76	24
Georgia-09B	635	69	3	72	4	1	77	23
Georgia-12Y	703	65	2	67	5	1	73	27
Georgia-13M	820	69	3	72	4	1	77	23
Georgia-14N	802	66	2	68	6	2	76	24
TUFRunner™'511'	575	69	1	70	3	2	75	25
TUFRunner™'727'	602	69	2	71	3	1	75	25

¹SMKRS 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.

²SMKRS % (sound mature kernels riding screen)—Percentage of the shelled sample as described above.

³SS % (sound splits)—Percentage of the shelled sample that are split or broken but not damaged.

⁴TSMK % (total sound mature kernels)—Percentage of the shelled sample comprised of sound mature kernels plus sound splits.

⁵OK % (other kernels)—Percentage of kernels that pass through a 15/64 x 1-inch slotted screen or 16/64x3/4-inch slotted screen for Virginia or Runner varieties, respectively.

⁶DK % (damaged kernels)—Percentage of kernels that are moldy, decayed, affected by insects or weather conditions resulting in seed coat or cotyledon discoloration or deterioration.

⁷TK % (total kernels)—Percentage kernels in the shelled sample, including TSMK, OK, and DK.

⁸Hulls %—Percentage of hulls from the shelled sample.

PEANUT TRIAL

Table 5
Average Shelled Seed Size Distribution of Irrigated Peanut Varieties at the Wiregrass Research and Extension Center, Headland, Ala., 2015-2017. TM

Variety or Line	SMKRS Size Distribution								
	+ 21.0 Jumbo (%)			-21.0 +18.0 Medium (%)			-18.0 +16.0 No. 1 (%)		
	2017	2016	2015	2017	2016	2015	2017	2016	2015
ACI 789	51.3	---- ¹	----	42.6	----	----	6.1	----	----
ACI 3321	54.3	----	----	39.6	----	----	6.1	----	----
AU-NPL 17	64.3	----	----	28.5	----	----	7.2	----	----
Flo-Run TM '107'	36.2	26.1	31.9	53.6	60.4	58.6	10.2	13.6	9.5
Flo-Run TM '157'	46.4	40.3	----	32.2	51.1	----	17	8.7	----
Flo-Run TM '331'	38.3	----	----	54	----	----	7.8	----	----
Georgia-06G	59.4	46.9	58.5	36.1	46.9	36.4	4.5	6.2	5.1
Georgia-07W	49.7	34.4	----	42.7	48.8	----	7.6	16.8	----
Georgia-09B	63.6	55.8	61.6	30.9	38.2	33.6	5.5	6	4.8
Georgia-12Y	55.4	43.6	54.4	37.4	50.4	40.2	7.2	6	5.4
Georgia-13M	33.2	18.8	28.9	57.2	71.5	62.5	9.5	9.7	8.7
Georgia-14N	34.3	33.5	40	45.9	53.8	51	8.6	12.7	9
Georgia-16 HO	57.2	----	----	37.7	----	----	5.2	----	----
Georgia Greener	41.4	37.9	----	50.9	54.3	----	7.7	7.8	----
Tifguard	54.8	----	55.5	39.1	----	39.3	6.1	----	5.2
TIF NV-High O/L	57.6	----	50.9	36.4	----	42	6	----	7.1
TUFRunner TM '297'	64.4	49.7	31.2	31.1	44.3	31.2	4.5	6	4.9
TUFRunner TM '511'	66	48.5	56.6	29.6	45.1	37.4	4.4	6.4	5.9

¹ Not tested

PEANUT TRIAL

Table 6

Occurrence of Tomato Spotted Wilt Virus (TSW) Hits, Leaf spot (LS) and White Mold (WM) Hits in the Irrigated Peanut Variety Test¹ at the Wiregrass Research and Extension Center, Headland, Ala., 2017.

Variety or Line	TSW ² (#loci/40 ft.)	Leaf spot ³ Intensity	White Mold (#loci/40 ft.)
ACI 789	1.3 ab	4.7 cde	0 b
ACI 3321	2.3 ab	5.1 bc	0 b
AU-NPL 17	1.8 ab	4.7 cde	0 b
Flo-Run™'107'	0.8 b	5.8 a	0 b
Flo-Run™'157'	4.5 a	4.4 ef	0 b
Flo-Run™'331'	1.3 ab	5.0 bc	0 b
Georgia-06G	0.3 b	4.4 ef	0 b
Georgia-07W	1.5 ab	4.7 cde	0 b
Georgia-09B	1.3 ab	4.5 ef	0 b
Georgia-12Y	1.3 b	5.1 bc	0 b
Georgia-13M	0.3 c	6.1 a	0 b
Georgia-14N	2.0 ab	5.0 bc	0 b
Georgia-16 HO	1.5 ab	4.7 cde	0 b
Georgia Greener	2.0 ab	4.2 f	0 b
Tifguard	0.8 b	4.5 ef	0 b
TIF NV-High O/L	1.0 ab	4.1 f	0 b
TUFRunner™'297'	1.0 b	6.3 a	0.3 a
TUFRunner™'511'	2.8 ab	6.3 a	0.3 a

¹ Data supplied by A.K. Hagan, H.L. Campbell, K.L. Bowen, Dept. of Entomology and Plant Pathology, Auburn University, Ala.

² Tomato Spotted Wilt (TSW) and stem rot incidence is expressed as the number of disease loci per 40 foot of row.

³ Leaf spot diseases were rated using the Florida 1 to 10 leaf spot rating scale.

PEANUT TRIAL

Table 7

Three-Year Yield of Dryland Peanut Varieties at the Wiregrass Research and Extension Center, Headland, Ala., 2015-2017.

Variety or Line	2017 Average Yield (lbs/acre)	2 Year Average Yield (lbs/acre)	3 Year Average Yield (lbs/acre)
ACI 3321	6661	---- ¹	----
Flo Run™ '331'	6570	----	----
Georgia 12Y	6389	6044	6299
TUFRunner™ '511'	6316	6044	6007
Georgia-06G	6316	6153	6314
Georgia 16 HO	6244	----	----
AU-NPL 17	6135	----	----
Georgia-09B	6135	5917	5844
TUFRunner™ '297'	6126	6030	6202
Georgia-07W	6044	5967	----
FloRun™ '157'	6008	----	----
ACI 789	5990	----	----
Georgia Greener	5881	5971	----
TIF NV-High O/L	5881	----	----
Tifguard	5754	----	----
FloRun™ '107'	5681	5155	5372
Georgia 13M	5472	5277	5628
Georgia-14N	5227	4678	5006
Overall Average	6040	5704	5834
CV (%)	7.8	10.4	11.4
LSD (0.05)	700	595	539

¹ Not tested

Table 8
Average Size and Grade of Dryland Peanut Varieties at the Wiregrass Research and Extension Center, Headland, Ala., 2017.

Variety or Line	SMKRS ¹ (count/lb)	SMKRS ² (%)	SS ³ (%)	TSMK ⁴ (%)	OK ⁵ (%)	DK ⁶ (%)	TK ⁷ (%)	Hulls ⁸ (%)
ACI 789	586	69	3	72	3	0	75	25
ACI 3321	564	66	3	68	4	2	74	26
AU-NPL 17	549	70	1	71	3	0	75	25
Flo-Run™'107'	667	64	4	68	7	2	77	23
Flo-Run™'157'	654	68	6	74	3	1	78	22
Flo-Run™'331'	573	67	2	69	6	1	76	24
Georgia-06G	539	74	2	76	1	1	78	22
Georgia 07W	531	70	3	73	3	1	77	23
Georgia-09B	580	74	2	76	2	1	79	21
Georgia-12Y	637	66	3	69	5	2	76	24
Georgia-13M	730	69	3	72	5	1	78	22
Georgia-14N	722	67	3	70	6	2	78	22
Georgia-16 HO	538	73	3	76	1	1	78	22
Georgia Greener	609	71	3	74	3	1	78	22
Tifguard	527	70	2	72	3	0	75	25
TIF NV-High O/L	523	69	2	71	3	1	75	25
TUFRunner™'297'	487	72	2	74	3	1	78	22
TUFRunner™'511'	516	71	2	73	3	1	77	23

¹SMKRS 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.

²SMKRS % (sound mature kernels riding screen)—Percentage of the shelled sample as described above.

³SS % (sound splits)—Percentage of the shelled sample that are split or broken but not damaged.

⁴TSMK % (total sound mature kernels)—Percentage of the shelled sample comprised of sound mature kernels plus sound splits.

⁵OK % (other kernels)—Percentage of kernels that pass through a 15/64 x 1-inch slotted screen or 16/64x3/4-inch slotted screen for Virginia or Runner varieties, respectively.

⁶DK % (damaged kernels)—Percentage of kernels that are moldy, decayed, affected by insects or weather conditions resulting in seed coat or cotyledon discoloration or deterioration.

⁷TK % (total kernels)—Percentage kernels in the shelled sample, including TSMK, OK, and DK.

⁸Hulls %—Percentage of hulls from the shelled sample.

PEANUT TRIAL

Table 9

A Two-Year Average Size and Grade of Dryland Peanut Varieties at the Wiregrass Research and Extension Center, Headland, Ala., 2016-2017.

Variety or Line	SMKRS ¹ (count/lb)	SMKRS ² (%)	SS ³ (%)	TSMK ⁴ (%)	OK ⁵ (%)	DK ⁶ (%)	TK ⁷ (%)	Hulls ⁸ (%)
Flo-Run™ '107'	706	66	3	69	6	2	77	23
Flo-Run™ '157'	756	66	4	71	4	3	78	22
Georgia-06G	586	74	1	75	2	1	78	22
Georgia-07W	605	71	3	74	3	1	77	23
Georgia-09B	632	73	2	75	3	1	79	21
Georgia-12Y	675	68	3	71	4	1	76	24
Georgia-13M	786	70	3	73	4	1	78	22
Georgia-14N	765	70	3	73	4	2	79	21
Georgia Greener	674	72	2	74	3	1	78	22
TUFRunner™ '297'	546	73	2	75	2	1	78	22
TUFRunner™ '511'	572	70	2	72	3	1	76	24

Table 10

Three-Year Average Size and Grade of Dryland Peanut Varieties at the Wiregrass Research and Extension Center, Headland, Ala., 2015-2017.

Variety or Line	SMKRS ¹ (count/lb)	SMKRS ² (%)	SS ³ (%)	TSMK ⁴ (%)	OK ⁵ (%)	DK ⁶ (%)	TK ⁷ (%)	Hulls ⁸ (%)
Flo-Run™ '107'	714	67	2	69	5	2	76	24
Georgia-06G	605	74	1	75	2	1	78	22
Georgia-09B	676	72	2	74	3	1	78	22
Georgia-12Y	683	68	2	70	4	1	75	25
Georgia-13M	814	69	3	72	4	1	77	23
Georgia-14N	783	70	3	73	4	1	78	22
TUFRunner™ '297'	559	72	2	74	2	1	77	23
TUFRunner™ '511'	597	70	2	72	3	1	76	24

¹SMKRS 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.

²SMKRS % (sound mature kernels riding screen)—Percentage of the shelled sample as described above.

³SS % (sound splits)—Percentage of the shelled sample that are split or broken but not damaged.

⁴TSMK % (total sound mature kernels)—Percentage of the shelled sample comprised of sound mature kernels plus sound splits.

⁵OK % (other kernels)—Percentage of kernels that pass through a 15/64 x 1-inch slotted screen or 16/64x3/4-inch slotted screen for Virginia or Runner varieties, respectively.

⁶DK % (damaged kernels)—Percentage of kernels that are moldy, decayed, affected by insects or weather conditions resulting in seed coat or cotyledon discoloration or deterioration.

⁷TK % (total kernels)—Percentage kernels in the shelled sample, including TSMK, OK, and DK.

⁸Hulls %—Percentage of hulls from the shelled sample.

PEANUT TRIAL

Table 11

Occurrence of Tomato Spotted Wilt Virus (TSW) Hits, Leaf spot (LS), White Mold (WM) Hits in the Dryland Peanut Variety Test¹ at the Wiregrass Research and Extension Center, Headland, Ala., 2017

Variety or Line	TSW ² (#loci/40 ft.)	Leaf spot ³ Intensity	White Mold (#loci/40 ft.)
ACI 789	3.5 ab	3.8 cde	0.8 a
ACI 3321	1.3 abc	1.9 cde	0 b
AU-NPL 17	1.0 bc	0.4 g	0.5 a
Flo-Run™ '107'	2.3 abc	6.1 abc	0 b
Flo-Run™ '157'	4.5 a	1.3 de	0.3 ab
Flo-Run™ '331'	2.3 abc	2.5 bcd	0.3 ab
Georgia-06G	2.0 abc	0.4 g	0 b
Georgia-07W	0.8 bc	1.5 def	0.7 ab
Georgia-09B	2.5 abc	0.9 def	0 b
Georgia-12Y	0.5 bc	1.6 cde	0 b
Georgia-13M	0.3 c	11.6 a	0 b
Georgia-14N	2.3 abc	3.1 bcd	0 b
Georgia-16 HO	3.8 ab	1.5 fg	0 b
Georgia Greener	2.0 abc	0.5 fg	0 b
Tifguard	1.3 abc	1.3 efg	0 b
TIF NV-High O/L	1.3 bc	0.9 efg	0 b
TUFRunner™ '297'	1.5 abc	6.5 ab	0.3 ab
TUFRunner™ '511'	5.3 a	5.2 abc	0.3 ab

¹ Data supplied by A.K. Hagan, H.L. Campbell, K.L. Bowen, Dept. of Entomology and Plant Pathology, Auburn University, AL

² Tomato Spotted Wilt (TSW) and stem rot incidence is expressed as the number of disease loci per 40 ft. of row.

³ Leaf spot diseases were rated using the Florida 1 to 10 leaf spot rating scale.

PEANUT TRIAL

Planting Rate Chart for 36 Inch Rows¹

Seed Per Pound	Seed Per Foot	Lbs Per Acre	Seed Per Foot	Lbs Per Acre	Seed Per Foot	Lbs 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 one 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.)

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

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

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

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

(C) Example:

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

PEANUT TRIAL

Tests Duration Daily Rainfall Data Recorded at the Wiregrass Research and Extension Center, Headland, Ala., 2017.

DATE	APR (inches)	MAY (inches)	JUNE (inches)	JULY (inches)	AUG (inches)	SEPT (inches)	OCT (inches)
1						1.58	
2		0.28	0.21				
3							
4	0.80	0.22			0.07		
5		0.70	0.46	0.22			
6	0.41		0.10				
7			0.21		0.51		
8			0.05				
9							0.68
10				0.80	0.03		0.08
11					0.22		
12			0.10			2.98	
13			0.21				
14			0.07		0.05		
15		0.93			0.73		
16			0.25				
17				0.97			
18		0.15		0.16		1.13	
19			0.49				
20			0.39	0.10		0.08	
21			1.57				
22		1.18	0.29		0.13	0.08	
23		0.14	0.01				0.58
24	0.17	0.54					0.15
25		1.12					
26			1.40	0.80			
27							
28	0.07						
29			0.02				
30			0.41		0.18		0.28
31				1.20	0.23		
¹ TOTALS	1.45	5.26	6.24	4.25	2.15	5.85	1.49

¹Total daily rainfall from April through October, 2017 = 23.64 in; 2016 = 22.29 in; 2015 = 37.20 in.

PEANUT TRIAL

Tests Duration Daily Maximum Temperatures Recorded at the Wiregrass Research and Extension Center, Headland, Ala., 2017.

DATE	APR °F	MAY °F	JUNE °F	JULY °F	AUG °F	SEPT °F	OCT °F
1		91	87		87	86	
2		78	85		87		93
3	87	84			91		81
4	79	89			80		83
5		74	90	95		91	84
6	82		88	94		90	85
7	70		79	95	91	82	
8		82	77			81	
9		82	84		93		87
10	79	89		95	90		91
11	82	92		92	91		92
12	83	87	89	89		85	91
13	82		82	92		84	90
14	83		80	94	91	85	
15		86	85		94	87	
16		89	89		90		88
17	84	93		93	93		75
18	86	91		87	93	89	73
19		92	91	90		91	76
20	88		88	92		92	80
21	88		75	94	94	90	
22		90	79		91	91	
23		87	92		94		86
24	88	77		95	93		77
25	70	83		92	93	89	72
26	81	79	93	92		87	65
27	85		87	93		89	75
28	83		84	93	94	91	
29			87		88		
30		93	82		87		78
31		86		94	85		68

PEANUT TRIAL

Tests Duration Daily Minimum Temperatures Recorded at the Wiregrass Research and Extension Center, Headland, Ala., 2017.

DATE	APR °F	MAY °F	JUNE °F	JULY °F	AUG °F	SEPT °F	OCT °F
1		67	72		63	69	
2		55	70		67		63
3	54	55			69		64
4	59	61			73		63
5		50	69	71		69	62
6	51		71	75		69	62
7	46		70	75	70	56	
8		47	63			58	
9		55	64		74		66
10	44	61		71	72		74
11	54	63		74	71		73
12	57	64	65	72		58	71
13	56		70	71		60	71
14	57		71	72	73	62	
15		62	72		72	63	
16		65	66		72		70
17	60	67		71	74		56
18	60	69		72	75	68	49
19		70	68	71		71	51
20	62		72	73		69	52
21	63		71	75	72	69	
22		66	75		72	68	
23		70	74		73		54
24	52	70		71	74		51
25	54	57		73	69	68	45
26	56	57	64	72		66	43
27	59		66	73		67	43
28	71		70	74	70	68	
29			71		68		
30		59	73		70		38
31		72		67	73		39

PEANUT TRIAL

Descriptions Of 2017 Peanut Variety Test Entries

ACI 789

Developed by Dr. Kim Moore of AgResearch Consultants Incorporated. Released under the 1994 Amendment of the Plant Variety Protection Act and is medium in maturity and carries resistance to TSWV.

ACI 3321

Developed by Dr. Kim Moore of AgResearch Consultants Incorporated. Released in 2018 under the 1994 Amendment of the Plant Variety Protection Act. It has medium late maturity and is resistant to TSWV.

AU-NPL 17

Developed by Dr. Charles Chen of Auburn University in cooperation with the National Peanut Research Lab, Dawson, Georgia. The variety was released in 2017. Plant Variety Protection will be applied for under Title V. The variety has high oleic chemistry and is medium in maturity with seed size similar to Georgia 06G. It carries resistance to tomato spotted wilt virus with some tolerance to late leaf spot. Foundation seed are scheduled for distribution for 2018 planting.

FloRun™'107'

Developed by Dr. Barry Tillman, University of Florida Agricultural Experiment Station. Released in 2010 and protected under the 1994 Amendment of the Plant Variety Protection Act. It is a runner type variety with medium maturity and similar to Georgia Greener in seed size, and produces a high percentage of medium size kernels. The variety has demonstrated good resistance to tomato spotted wilt virus and moderate resistance to white mold.

FloRun™'157'

Developed by Dr. Barry Tillman, University of Florida Agricultural Experiment Station. It is a medium-late maturity, runner type with high oleic chemistry. This variety has small seed, similar to Georgia Green in size and produces a high percentage of medium kernels. It has moderate resistance to tomato spotted wilt virus and late leaf spot, and is susceptible to white mold.

FloRun™'331'

Developed by Dr. Barry Tillman, University of Florida Agricultural Experiment Station. Released in 2016 under the 1994 Amendment of the Plant Variety Protection Act. It carries high oleic chemistry and has some tolerance to leaf spot and white mold, and is resistant to TSWV. It has medium seed size and matures in 135-145 days.

Georgia Greener

Developed by Dr. Bill Branch, University of Georgia Agricultural Experiment Station. Released in 2006 under the 1994 Amendment of the Plant Variety Protection Act. Medium maturity, normal oleic/linoleic fatty acid ratio, with larger pod and seed

size than Georgia Green and resistant to tomato spotted wilt virus. Generally darker green foliage than Georgia Green.

Georgia-06G

Developed by Dr. Bill Branch, University of Georgia Agricultural Experiment Station. Released in 2006 under the 1994 Amendment of the Plant Variety Protection Act. Medium maturity, normal oleic/linoleic fatty acid ratio, with larger pod and seed size than Georgia Green and resistant to tomato spotted wilt virus.

Georgia-07W

Developed by Drs. Bill Branch and Tim Brenneman, University of Georgia Agricultural Experiment Station. Released in 2007 under the 1994 Amendment of the Plant Variety Protection Act. Medium maturity with resistance to white mold and tomato spotted wilt virus. It is a large-seeded runner type with normal oleic/linoleic oil chemistry.

Georgia-09B

Developed by Dr. Bill Branch, University of Georgia Agricultural Experiment Station. Released in 2009 and protected under the 1994 Amendment of the Plant Variety Protection Act. It is a Runner type that has medium seed size, medium maturity, is resistant to tomato spotted wilt virus and carries high oleic oil chemistry.

Georgia-12Y

A medium seed size runner developed by Dr. Bill Branch, University of Georgia Agricultural Experiment Station. It was released in 2012 under the 1994 Amendment of the Plant Variety Protection Act. It is not high oleic. It is resistant to tomato spotted wilt virus and tolerant to white mold. It is similar to Georgia-10T in late maturity.

Georgia-13M

Developed by Dr. Bill Branch, University of Georgia Agricultural Experiment Station. Released in 2013 and protected under the 1994 Amendment of the Plant Variety Protection Act. It is a Runner type with medium seed size and a large percentage of medium grade seed. It is medium in maturity, resistant to tomato spotted wilt virus and carries high oleic oil chemistry.

Georgia-14N

Developed by Drs. Bill Branch and Tim Brenneman of the University of Georgia Agricultural Experiment Station. It was released in 2014 under the 1994 Amendment of the Plant Variety Protection Act. It is resistant to root knot nematode and tomato spotted wilt virus. It is a small seeded runner type with medium maturity.

Georgia 16 HO

Developed by Dr. Bill Branch of the University of Georgia Agricultural Experiment Station. Released in 2016 under the 1994 Amendment of the Plant Variety

PEANUT TRIAL

Protection Act. It carries the high oleic trait and is resistant to TSWV. Seed size, maturity, and growth habits are similar to Georgia 06G.

Tifguard

Developed by Dr. Corley Holbrook, USDA-ARS, Tifton, Georgia and released in 2007. Has normal oil chemistry. Is mid-season in maturity and carries root-knot nematode and tomato spotted wilt virus resistance.

Tif NV-High O/L

Released in 2014 by Dr. Corley Holbrook, USDA-ARS, Tifton, Georgia. Carries the high oleic trait and resistance to root-knot nematode. It is similar to Tifguard in its growth characteristics and maturity. Carries resistance to TSWV.

TUFRunner™‘297’

Developed by Dr. Barry Tillman of the University of Florida Agricultural Experiment Station. Released in 2014 under the 1994 Amendment of the Plant Variety Protection Act. It carries high oleic oil chemistry and is an extra-large seeded runner type with medium maturity. It carries resistance to white mold, tomato spotted wilt virus, but is susceptible to leaf spots. It has a prominent center stem.

TUFRunner™ ‘511’

Developed by Dr. Barry Tillman, University of Florida Agricultural Experiment Station. Released in 2014 under the 1994 Amendment of the Plant Variety Protection Act. Large-seeded Runner type with approximately 140 days to maturity. Moderately susceptible to tomato spotted wilt virus and carries high oleic oil chemistry.

Seed Sources

Dr. W. D. Branch

University of Georgia
Department of Crop and Soil Sciences
Coastal Plain Experiment Station
Tifton, Georgia 31793

- Georgia Greener**
- Georgia-06G**
- Georgia-07W**
- Georgia-09B**
- Georgia-12Y**
- Georgia-13M**
- Georgia-14N**
- Georgia-16 HO**

Dr. B.L. Tillman

University of Florida
North Florida Research & Education Center
3925 Highway 71
Marianna, Florida 32446

- FloRun™‘107’**
- FloRun™‘157’**
- FloRun™‘311’**
- TUFRunner™‘297’**
- TUFRunner™‘511’**

Dr. C. C. Holbrook

USDA-ARS
Crop Genetics and Breeding Research
Unit
Coastal Plain Experiment Station
Tifton, Georgia 31793

- Tifguard**
- TIF NV-High O/L**

Dr. Charles Chen

Auburn University
201 Funchess Hall
Auburn University, Alabama 36849

- AU-NPL 17**

Dr. Kim Moore

AgResearch Consultants Inc.
1441 Shingler Little River Road
Sumner, Georgia 31789

- ACI 789**
- ACI 3321**