

PERFORMANCE OF PEANUTS IN ALABAMA, 2020

DEPT. SERIES NO. CSES2020: PEANUT
HENRY G. JORDAN JR., VARIETY TESTING MANAGER
CROP, SOIL & ENVIRONMENTAL SCIENCES
AUBURN UNIVERSITY, AUBURN AL
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MISSION

The mission of the Alabama Variety Testing Program is to provide research-based, unbiased results on the performance of various crop hybrids, cultivars, and varieties to the agricultural community in our state. We are intent on conducting these trials in a manner that will result in maximum biological yield through methods common to the top-producing farms in Alabama. We are committed to providing this information in a rapid, timely manner for its use during the decision-making process. The success of the program rests upon our ability to help Alabama producers provide a safe, dependable source of food and fiber for all families as well as economic sustainability for theirs.

HOW TO INTERPRET RESULTS

The purpose of the variety trial data is to determine whether differences are due to genetic performance. These differences cannot be measured absolutely due to environmental field conditions (rainfall, temperatures, soil fertility, soil type, disease, insects, etc.). Yields may differ between plots of the same entry. This variation is accounted for using experimental design and statistics.

The least significant difference (LSD) is used to determine whether the observed differences between entries are real or are caused by random variation. When using the LSD, two entries may have numerically different values but the values are not statistically different. When two entries are compared and the observed difference is larger than the LSD, the entries are considered statistically different. An alpha level of 0.10 is used, meaning that the differences observed are expected to be real 90% of the time.

The coefficient of variation (CV) is a measure used to compare the amount of random variation within a data set. The lower the CV, the more precise the data set.

Each table is organized in a manner that it is easy to read. The data is sorted from highest yielding to lowest. The bolded values are not statistically different from the highest yielding value.

A dark line in the table visually represents the test average. Any value above the line is equal to or greater than the test average. The numeric value for the test average is at the bottom of the tables.

Test results do not imply endorsement or recommendation by the Auburn University Variety Testing Program.



ACKNOWLEDGEMENT

**DR. PAUL PATTERSON, DEAN AND DIRECTOR
ALABAMA AGRICULTURAL EXPERIMENT STATION**

**DR. HENRY FADAMIRO, ASSOCIATE DEAN FOR RESEARCH &
ASSOCIATE DIRECTOR, ALABAMA AGRICULTURAL EXPERIMENT STATION**

**GREG PATE, DIRECTOR OF RESEARCH OPERATIONS FOR OUTLYING UNITS
ALABAMA AGRICULTURAL EXPERIMENT STATION**

**DR. JOHN BEASLEY, DEPT. HEAD
CROP, SOIL & ENVIRONMENTAL SCIENCES**

**DR. AUSTIN HAGAN, VISITING PROFESSOR
CROP, SOIL & ENVIRONMENTAL SCIENCES**

**AUBURN UNIVERSITY VARIETY TESTING STUDENT WORKERS
LANE GALLOWAY
SAVANNA DURAN
JOSEPH BURCH
JAMES BURCH
JODIE SPIVEY
ISAAC EVANS**

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HEADLAND, AL

Larry Wells, Director

Chris Parker, Associate Director

Kris Balkcom, Assistant Extension Professor

YIELD/QUALITY – IRRIGATED
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YIELD/QUALITY – NON-IRRIGATED
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WEBSITE
FIELD DAY VIDEO

PERFORMANCE OF PEANUT VARIETIES IN ALABAMA 2019
“LAST YEAR’S DATA”

MATERIALS AND METHODS

Moisture is recorded at the time of harvest and yields are standardized to 7.0% moisture for head to head comparisons. Two subsamples from each research plot are obtained at harvest. One set of samples is sent to the Alabama Federal-State Inspection Service in Dothan, AL where they are graded. The other set of samples are shelled and used to obtain seed size.

TABLE 1 – MANAGEMENT

Research Center	Wiregrass Research and Extension Center
Location	Headland
Trial Type	Irrigated Non-Irrigated
Row Spacing	36 inches
Number of Replications	4
Plot Length	20 feet
Seeding Rate	6 seed per foot
Soil Type	Dothan Sandy Loam
Tillage	Conventional
Fertilization	600 lbs/acre gypsum 1pt/Acre Max-In Boron – 3X
Herbicides	Dual Magnum Sonalan Strongarm Valor
Insecticides	Dimilin – 4 applications
Fungicides	Bravo 720 – 4 applications Convoy – 2 applications Elatus - 2 applications
Test Conducted By	L. Wells C. Parker K. Balkcom

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TABLE 2 – HARVEST TIMING

	WGREC	Number of Days
Plant Date	Irrigated – May 12	0
	Non-Irr. – May 13	
Dig 1	September 23	134
		135
Harvest 1	September 28	.
Dig 2	October 2	143
		144
Harvest 2	October 5	.
Dig 3	October 6	147
		148
Harvest 3	October 8	.
Dig 4	October 12	153
		154
Harvest 4	October 16	.

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	Rainfall	Irrigation	Total
May	3.44	0.00	3.44
June	3.22	0.75	3.97
July	5.47	2.00	7.47
August	7.57	1.00	8.57
September	9.65	0.00	9.65
October (by last harvest)	0.16	0.00	0.16
Season Total	29.51	3.75	33.26

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SEED SOURCES

TABLE 4 – SEED SOURCE, VARIETY NAME, DIG NUMBER, AND MATURITY

Source	Source Location	Variety	Dig Number (1-4)	Maturity (days)
ACI Seeds	Sumner, Georgia	ACI 3321	3	145
		ACI 476	1	130
		ACIx 3F104	3	145
		ACIx 1D9069	4	150
Auburn University	Auburn, Alabama	AU-NPL-17	3	145
University of Florida	Marianna, Florida	FloRun 331	3	145
		Tuf 297	3	145
University of Georgia	Alabama Crop Improvement Association - Headland Alabama	Georgia - 06G	2	140
		Georgia Greener	2	140
		Georgia - 07W	2	140
		Georgia - 09B	2	140
		Georgia - 12Y	3	150
		Georgia - 16HO	2	140
University of Georgia	Georgia Seed Development Comission - Plains Georgia	Georgia - 14N	2	140
		Georgia - 18RU	2	140
USDA	Tifton, Georgia	Tifguard	3	145
		TifNV-High O/L	3	145
		13-1125	3	145
		13-3532	3	145
Dr. Jim Todd Dr. Dan Gorbet	Hartford, Alabama	TD-1	4	150
		TD-2	4	150
		TD-3	4	150
		TD-4	4	150

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PEANUT QUALITY TERMINOLOGY

TABLE 5 – GRADING DEFINITIONS

		Units	Definition
SMK	Sound Mature Kernels	Number of Seed per Pound	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.
SS	Sound Splits	%	Portion of shelled sample split or broken but not damaged.
TSMK	Total Sound Mature Kernels	%	Portion of the shelled sample comprised of sound mature kernels plus sound splits. Increase in TSMK = Increase in \$
OK	Other Kernels	%	Opposite of SMK. Kernels that pass through a 15/64 x 1-inch slotted screen or a 16/64 x 3/4-inch slotted screen for Virginia or Runner varieties respectively. Lower number of OK = Increase in TSMK
LSK	Loose Shelled Kernels	%	Kernels and parts of kernels which are free from the hull. LSK spoil faster and are more likely to have aflatoxin.
Hulls	Hulls	%	All hulls from the shelled sample. Lower hull weight = higher grade.
DK	Damaged Kernels	%	Kernels that are moldy, decayed, affected by insects or weather conditions resulting in seed coat or cotyledon discoloration or deterioration.

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**IRRIGATED
WIREGRASS RESEARCH AND EXTENSION CENTER
HEADLAND, AL**

TABLE 6 – YIELD AND QUALITY

Variety	Dig Number (1-4)	Yield pounds per acre	TSMK %	OK %	LSK %	Hulls %	DK %	Seed per Pound
ACI 3321	3	6244	68.8	4.0	1.5	26.3	0.0	615
TD-1	4	6136	69.8	3.5	1.3	25.8	0.0	648
AClx 1D9069	4	6100	70.3	3.5	1.5	25.8	0.0	631
Tuf 297	3	6009	72.3	3.7	2.3	24.0	0.0	632
AU-NPL-17	3	5958	69.0	3.8	3.0	26.5	0.3	637
Georgia - 16HO	2	5954	71.5	3.8	2.0	23.8	0.3	643
Georgia - 06G	2	5919	72.8	3.5	1.8	23.3	0.0	626
Georgia - 12Y	4	5884	72.0	3.3	1.3	24.8	0.0	723
13-1125	3	5816	72.5	2.8	2.8	24.3	0.3	573
Georgia - 18RU	2	5812	74.5	3.5	2.0	21.8	0.0	702
Tifguard	3	5721	69.5	4.0	3.0	26.5	0.0	612
Georgia - 09B	2	5706	71.3	4.3	1.5	23.8	0.0	703
13-3532	3	5526	67.8	4.5	2.5	27.5	0.0	540
Georgia - 07W	2	5493	71.5	4.3	1.8	24.0	0.0	663
Georgia Greener	2	5458	73.0	3.8	2.5	23.0	0.0	695
TifNV-High O/L	3	5350	69.0	4.7	3.3	25.3	0.0	650
AClx 3F104	3	5134	67.5	5.0	2.5	27.0	0.0	674
TD-3	4	5110	71.3	3.8	1.8	25.0	0.0	673
TD-4	4	4894	69.5	4.0	1.0	26.5	0.3	691
Georgia - 14N	2	4855	69.8	5.8	2.0	23.5	0.0	799
FloRun 331	3	4494	68.8	4.5	2.0	26.5	0.0	679
ACI 476	1	3775	66.0	6.3	2.3	27.3	0.0	953
TD-2	4	3437	69.7	3.3	2.3	26.0	0.0	619
Average	.	5516	70.4	4.1	2.1	25.1	0.0	669
LSD @ 10% Level	.	486	2.3	1.0	0.9	1.7	N.S.	36
CV	.	15	4	27	45	8	492	13

Bolded yields are NOT statistically different from the highest yielding entry.

Bolded line in table indicates test average.

N.S. –differences are statistically non-significant.

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IRRIGATED WIREGRASS RESEARCH AND EXTENSION CENTER HEADLAND, AL

TABLE 7 – DISEASE RATINGS

Disease ratings provided by:

Dr. Austin Hagan, Visiting Professor, Auburn University

Variety	Yield Pounds per Acre	Tomato Spotted Wilt # Infected Plants	Leaf Spot % Defoliation	White Mold # Infected Plants
ACI 3321	6244	4.75	9.1	0.75
TD-1	6136	1.50	10.1	1.3
ACIx 1D9069	6100	4.00	8.9	0.5
Tuf 297	6009	5.75	15.7	0.8
AU-NPL-17	5958	2.00	8.7	0.5
Georgia - 16HO	5954	9.75	11.8	0.3
Georgia - 06G	5919	8.00	7.6	0.5
Georgia - 12Y	5884	1.50	11.2	0.0
13-1125	5816	10.25	12.8	0.8
Georgia - 18RU	5812	7.00	13.1	0.3
Tifguard	5721	4.00	6.8	0.2
Georgia - 09B	5706	7.25	7.3	0.8
13-3532	5526	7.25	3.1	0.0
Georgia - 07W	5493	7.25	12.0	0.0
Georgia Greener	5458	7.75	7.9	0.3
TifNV-High O/L	5350	4.25	7.9	0.3
ACIx 3F104	5134	0.25	7.6	0.0
TD-3	5110	5.00	11.4	1.3
TD-4	4894	9.75	8.8	1.5
Georgia - 14N	4855	7.00	6.6	0.5
FloRun 331	4494	13.50	12.8	0.0
ACI 476	3775	19.50	16.8	0.0
TD-2	3437	8.25	6.6	1.0
Average	5516	6.69	9.9	0.5
LSD @ 10% Level	486	4.32	4.1	N.S.
CV	15	78	44.0	189

Bolded yields are NOT statistically different from the highest yielding entry.

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N.S. –differences are statistically non-significant.

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**NON-IRRIGATED
WIREGRASS RESEARCH AND EXTENSION CENTER
HEADLAND, AL**

TABLE 8 – YIELD AND QUALITY

Variety	Dig Number (1-4)	Yield pounds per acre	TSMK %	OK %	LSK %	Hulls %	DK %	Seed per Pound
ACI 3321	3	5989	70.3	4.0	1.3	25.0	0.0	623
TD-1	4	5848	71.5	3.0	1.8	25.0	0.0	655
13-1125	3	5828	73.3	2.8	2.3	23.8	0.0	615
Tifguard	3	5792	73.8	3.0	2.3	23.3	0.0	628
Georgia - 12Y	4	5758	71.0	4.0	2.0	24.8	0.0	704
AU-NPL-17	3	5685	72.3	3.3	1.8	24.3	0.0	650
ACIx 1D9069	4	5524	71.0	3.3	2.3	25.0	0.0	641
Georgia - 16HO	2	5476	72.8	3.0	2.5	23.8	0.0	695
13-3532	3	5470	69.5	3.8	3.3	26.3	0.3	573
Georgia - 09B	2	5441	72.5	3.3	2.5	23.5	0.3	763
Tuf 297	3	5399	72.3	3.3	1.7	23.7	0.3	651
Georgia - 06G	2	5333	73.8	3.0	3.0	22.8	0.0	630
TifNV-High O/L	3	5256	72.8	3.0	1.5	23.5	0.0	633
ACIx 3F104	3	5113	69.5	4.0	1.8	26.0	0.0	689
FloRun 331	3	5059	70.8	4.5	1.8	25.3	0.0	682
Georgia - 18RU	2	5048	74.0	2.5	2.0	23.0	0.0	717
Georgia - 14N	2	4995	72.5	3.5	1.8	23.5	0.0	784
Georgia Greener	2	4977	73.5	3.3	1.8	23.0	0.0	729
Georgia - 07W	2	4959	73.3	3.0	3.0	23.0	0.3	703
TD-4	4	4894	69.3	3.8	1.0	26.5	0.0	676
TD-3	4	4741	70.0	4.3	1.5	25.5	0.0	695
ACI 476	1	3725	68.0	6.0	2.3	25.5	0.0	931
TD-2	4	3545	69.3	3.3	1.5	27.3	0.3	623
Average	.	5211	71.6	3.5	2.0	24.3	0.0	682
LSD @ 10% Level	.	440	1.6	1.0	0.8	1.0	N.S.	32
CV	.	13	3	30	42	6	371	11

Bolded yields are NOT statistically different from the highest yielding entry.

Bolded line in table indicates test average.

N.S. –differences are statistically non-significant.

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NON-IRRIGATED WIREGRASS RESEARCH AND EXTENSION CENTER HEADLAND, AL

TABLE 8 – DISEASE RATINGS

Disease ratings provided by:
Dr. Austin Hagan, Visiting Professor, Auburn University

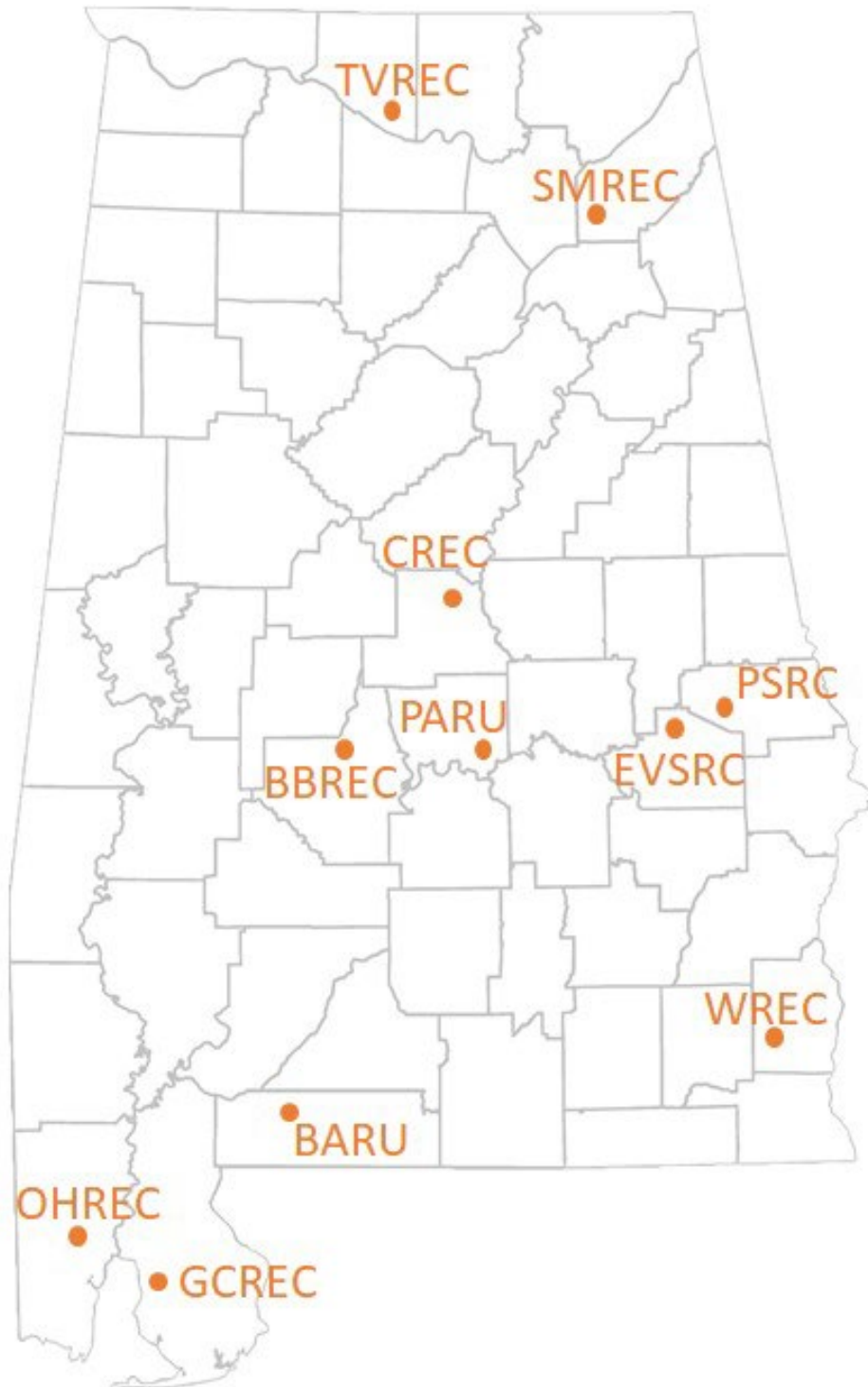
Variety	Yield Pounds per Acre	Tomato Spotted Wilt # Infected Plants	Leaf Spot % Defoliation	White Mold # Infected Plants
ACI 3321	5989	8.25	2.6	1.8
TD-1	5848	6.00	8.7	2.3
13-1125	5828	8.75	3.4	0.8
Tifguard	5792	3.50	1.0	0.3
Georgia - 12Y	5758	6.00	5.1	0.4
AU-NPL-17	5685	7.50	1.4	0.8
ACIx 1D9069	5524	12.00	8.1	1.3
Georgia - 16HO	5476	15.00	2.1	0.3
13-3532	5470	17.00	1.3	0.5
Georgia - 09B	5441	14.50	3.4	0.5
Tuf 297	5399	14.25	5.4	1.3
Georgia - 06G	5333	16.50	6.3	1.0
TifNV-High O/L	5256	5.50	4.6	0.5
ACIx 3F104	5113	5.75	2.1	0.8
FloRun 331	5059	16.75	6.9	0.5
Georgia - 18RU	5048	19.50	6.6	0.0
Georgia - 14N	4995	9.50	3.9	0.0
Georgia Greener	4977	19.75	5.1	1.5
Georgia - 07W	4959	17.50	2.9	2.0
TD-4	4894	15.25	4.5	1.8
TD-3	4741	7.25	4.8	0.5
ACI 476	3725	24.00	4.1	0.3
TD-2	3545	9.25	2.7	0.3
Average	5211	12.1	4.2	0.8
LSD @ 10% Level	440	6.5	3.6	1.2
CV	13	61	82	134

Bolded yields are NOT statistically different from the highest yielding entry.

Bolded line in table indicates test average.

N.S. –differences are statistically non-significant.

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CONTACT

HENRY JORDAN, VARIETY TESTING MANAGER,
CROP, SOIL & ENVIRONMENTAL SCIENCES
275 FUNCHESS HALL, AUBURN UNIVERSITY, 36849
MOBILE 770-468-0478 • HENRYJ@AUBURN.EDU
[AUBURN UNIVERSITY VARIETY TESTING WEBSITE](#)