

1994

Alabama

Performance

Comparison of

Peanut

Varieties



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1994 ALABAMA PERFORMANCE COMPARISON PEANUT VARIETIES

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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

In 1994 the test was conducted at the Wiregrass Substation at Headland, Alabama. The experimental design for the test was a randomized complete block consisting of two row plots, 20 feet long replicated four times. The test was planted on May 5, 1994 with a cone planter at a rate of six seed/ft. Recommended agronomic procedures were followed regarding fertility, disease, and insect control. The test was conducted under irrigation.

Entries considered to be earlier than Florunner in maturity were dug on September 7, 1994. These entries included Marc 1, AgraTech 127, and Andru 93. All other entries except Southern Runner and Georgia Browne were dug on September 13, 1994. Southern Runner and Georgia Browne, considered to be later in maturity, were dug on September 29, 1994. Information concerning relative maturity was provided by the plant breeder responsible for developing the variety.

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DISCUSSION

The information presented here represents data for three years, but only one location. Performance comparisons between varieties should be drawn judiciously under these circumstances. Tomato spotted wilt virus occurrence and yield data have been subjected to an analysis of variance and means separated by using Duncan's Multiple Range Test. Means followed by the same letter (A-F) are not significantly different from each other at the 0.05 level of probability. Data is not presented for white mold or limb diseases since visual evaluation revealed none or only slight occurrence.

SIZE AND GRADE DATA TERMS

Data were collected and averaged on samples from replication II, III, and IV for size and grade. The derivation of grade factors followed Federal-State Inspection Service procedures for grading farmer-stock peanuts.

Terms Used:

g/100 SMKRS (Grams per 100 sound mature kernels riding screen)-Weight in grams of 100 sound whole mature kernels from the shelled sample riding a 15/64 x one-inch slotted screen or a 16/64 x one-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 one-inch slotted screen or 16/64 x one-inch slotted screen for Virginia or Runner varieties respectively.

Pct. DK (*damaged kernels*)-Kernels which 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, DK.

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

TABLE 1. YIELD OF PEANUT VARIETIES AT THE WIREGRASS SUBSTATION,
HEADLAND, ALABAMA, 1994.

Variety or Line	Yield	Duncan grouping		
		Lb./ac.		
(R) So.Runner.....	6,083	A		
(R) Ga. Browne.....	6,011	A		
(R) Andru 93.....	5,375		B	
(R) AgraTech 108....	5,351		B	
(R) GK 7.....	5,332		B	
(R) Sunrunner.....	5,328		B	
(R) Marc I.....	5,286		B	
(V) NC V11.....	4,977		B	C
(R) Florunner.....	4,941		B	C
(R) Tamrun 88.....	4,887		B	C D
(R) AgraTech 127....	4,858		B	C D
(R) Okrun.....	4,833		B	C D
(R) Ga. Runner.....	4,798		B	C D
(R) Exp. 51-3538....	4,727		B	C D
(V) VC 1.....	4,501			C D
(V) NC 9.....	4,479			C D
(V) NC 7.....	4,436			C D
(V) NC 10C.....	4,336			C D
(V) VA C92R.....	4,319			C D
(V) Florigiant.....	4,195			D

(R) Runner Type
(V) Virginia Type

TABLE 2. TWO-YEAR AVERAGE YIELD OF PEANUT VARIETIES AT THE WIREGRASS SUBSTATION, HEADLAND, ALABAMA, 1993-94.

Variety or Line	1993	1994	Average Yield	Duncan grouping	
	<i>Lb./ac.</i>	<i>Lb./ac.</i>	<i>Lb./ac.</i>		
So. Runner.....	4,627	6,083	5,355	A	
Andru 93.....	4,628	5,375	5,002	A	
GK 7.....	4,664	5,332	4,998	A	B
Marc I.....	4,398	5,286	4,842	A	B
Sunrunner.....	4,220	5,328	4,774	A	B
Florunner.....	4,558	4,941	4,749	A	B
NC V11.....	4,505	4,977	4,741	A	B
VC 1.....	4,806	4,501	4,654		B
AgraTech 127..	4,361	4,858	4,610		B
NC 7.....	4,752	4,436	4,594		B
NC 9.....	4,699	4,479	4,889		B
NC 10C.....	4,822	4,336	4,579		B
Okrun.....	4,238	4,833	4,536		B
Ga. Runner....	4,204	4,798	4,501		B
Florigiant....	4,753	4,195	4,474		B
Tamrun 88.....	3,973	4,887	4,430		B
Exp. 51-3538..	4,079	4,727	4,403		B

TABLE 3. THREE-YEAR AVERAGE YIELD OF PEANUT VARIETIES AT THE WIREGRASS SUBSTATION, HEADLAND, ALABAMA, 1993-94.

Variety or Line	1992	1993	1994	Average Yield	Duncan grouping
	<i>Lbs./ac.</i>	<i>Lbs./ac.</i>	<i>Lbs./ac.</i>	<i>Lbs./ac.</i>	
GK 7	4,223	4,664	5,332	4,740	A
Marc I.....	4,492	4,398	5,286	4,725	A
NC VII.....	4,349	4,505	4,977	4,610	A B
So.Runner.....	2,841	4,627	6,083	4,517	A B C
AgraTech 127..	4,259	4,361	4,858	4,493	A B C
Florunner.....	3,862	4,558	4,941	4,454	A B C
VC 1.....	3,902	4,806	4,501	4,403	A B C
Sunrunner.....	3,613	4,220	5,328	4,387	A B C
NC 7.....	3,863	4,752	4,436	4,350	A B C
Ga. Runner....	3,683	4,204	4,798	4,228	A B C
NC 9.....	3,467	4,699	4,479	4,215	A B C
Okrun.....	3,520	4,238	4,833	4,197	A B C
NC 10C.....	3,253	4,822	4,336	4,137	B C
Florigiant....	3,415	4,753	4,195	4,121	B C
Tamrun 88.....	3,253	3,973	4,887	4,038	C

TABLE 4. AVERAGE SIZE AND GRADE OF PEANUT VARIETIES AT THE WIREGRASS SUBSTATION, HEADLAND, ALABAMA, 1994.

Variety or Line	SMKRS	SMKRS	SS	TSMK	OK	DK	TK
	<i>g/100</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
So. Runner....	54	70	2	72	5	1	78
Ga. Browne....	48	68	2	70	6	1	77
Andru 93.....	59	70	2	72	5	0	77
AgraTech 108..	67	70	3	73	3	1	77
GK 7.....	64	74	2	76	3	1	80
Marc 1.....	63	69	2	71	5	1	77
Sunrunner....	65	72	2	74	4	1	79
NC V11.....	85	68	2	70	2	2	74
Florunner....	66	74	1	75	3	1	79
AgraTech 127..	64	66	2	68	6	2	76
Okrun.....	64	74	1	75	3	1	79
Ga. Runner....	63	76	1	77	2	1	80
Exp. 51-3538..	79	72	3	75	3	2	80
NC 9.....	90	67	3	70	1	3	74
VC 1.....	79	68	1	69	2	2	73
NC 7.....	96	67	2	69	3	2	74
NC 10C.....	81	68	2	70	2	1	73
VA C92R.....	82	68	3	71	2	2	75
Florigiant....	82	67	3	70	2	2	74
Tamrun 88....	59	75	2	77	2	1	80

TABLE 5. TWO-YEAR AVERAGE SIZE AND GRADE OF PEANUT VARIETIES AT THE WIREGRASS SUBSTATION, HEADLAND, ALABAMA, 1994.

Variety or Line	SMKRS	SMKRS	SS	TSMK	OK	DK	TK
	<i>g/100</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
So. Runner....	66	70	2	72	5	1	78
Andru 93.....	67	68	2	70	6	1	77
AgraTech 108..	68	69	3	72	4	1	77
GK 7.....	65	72	2	74	4	1	79
Marc 1.....	61	68	2	70	6	2	77
Sunrunner.....	63	71	2	73	5	1	79
NC V11.....	83	68	2	70	2	3	74
Florunner.....	63	72	1	73	4	1	77
AgraTech 127..	65	67	3	70	5	2	76
Okrun.....	62	72	1	73	4	2	78
Ga. Runner....	62	72	2	74	3	2	79
Exp. 51-3538..	78	71	3	74	4	2	80
NC 9.....	92	67	3	70	2	3	74
VC 1.....	77	68	1	69	3	2	73
NC 7.....	100	67	3	70	2	3	75
NC 10C.....	81	69	2	69	2	2	73
Florigiant....	83	66	3	69	2	3	74
Tamrun 88.....	61	72	3	75	4	2	81

**TABLE 6. THREE-YEAR AVERAGE SIZE AND GRADE OF PEANUT
VARIETIES AT THE WIREGRASS SUBSTATION,
HEADLAND, ALABAMA, 1994.**

Variety or Line	SMKRS	SS	TSMK	OK	TK
	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
So. Runner.....	69	3	72	5	77
GK 7.....	71	2	73	5	78
Marc 1.....	67	2	68	6	74
Sunrunner.....	71	2	73	4	77
NC V11.....	67	2	69	2	71
Florunner.....	70	2	71	4	75
AgraTech 127....	67	3	70	5	75
Okrun.....	71	1	72	5	77
Ga. Runner.....	71	2	73	4	77
NC 9.....	67	2	69	2	71
VC 1.....	67	1	68	4	72
NC 7.....	66	2	69	3	72
NC 10C.....	67	1	68	3	71
Florigiant.....	67	2	68	2	70
Tamrun 88.....	70	3	74	4	78

TABLE 7. OCCURRENCE OF TOMATO SPOTTED WILT VIRUS HITS IN THE PEANUT VARIETY TEST AT THE WIREGRASS SUBSTATION, HEADLAND, ALABAMA, 1994.

Variety or Line	Hits				Total	Avg.	Duncan grouping
	Rep I	Rep II	Rep III	Rep IV			
Ga. Brown....	0	1	18	5	24	6.00	A
Okrun.....	0	7	9	1	17	4.25	A B
NC 7.....	0	1	8	6	15	3.75	A B
NC VII.....	1	6	0	8	15	3.75	A B
Florunner....	1	1	4	6	12	3.00	A B
Sunrunner....	0	3	1	7	11	2.75	A B
AT 108.....	4	2	1	2	9	2.25	A B
Tamrun 88....	0	4	5	0	9	2.25	A B
Marc I.....	3	1	2	1	7	1.75	A B
GK 7.....	2	0	4	0	6	1.50	A B
NC 10C.....	5	0	0	1	6	1.50	A B
Andru 93....	1	0	2	3	6	1.50	A B
VC 1.....	0	4	0	2	6	1.50	A B
Florigiant...	2	1	3	0	6	1.50	A B
NC 9.....	0	0	0	5	5	1.25	A B
So. Runner...	1	0	0	4	5	1.25	A B
VA C92R.....	0	3	0	1	4	1.00	A B
Exp. 51-3538..	0	4	0	0	4	1.00	A B
Ga. Runner...	0	0	4	0	4	1.00	A B
AgraTech 127..	0	0	0	1	1	0.25	B

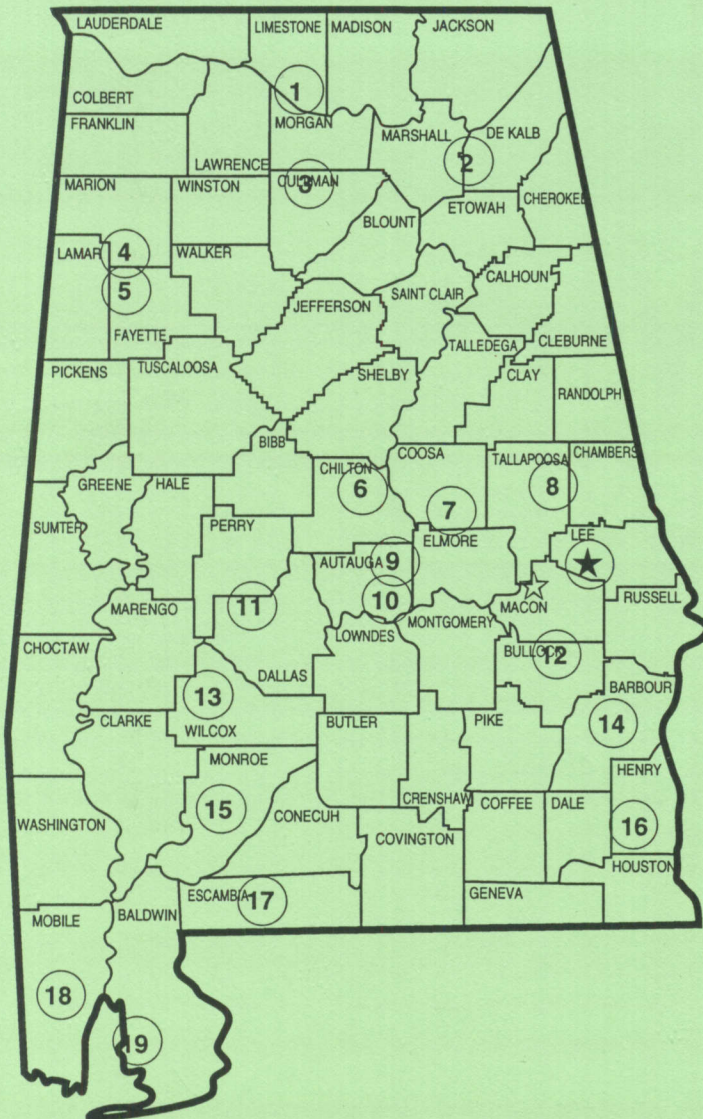
TABLE 8. TWO-YEAR AVERAGE OCCURRENCE OF TOMATO SPOTTED WILT VIRUS HITS IN THE PEANUT VARIETY TEST AT THE WIREGRASS SUBSTATION, HEADLAND, ALABAMA, 1993-94.

Variety or Line	1993 average	1994 average	Two year average	Duncan grouping	
Tamrun 88.....	13.00	2.25	7.63	A	
Okrun.....	7.50	4.25	5.88	A	B
Sunrunner.....	8.75	2.75	5.75	A	B
Florunner.....	8.50	3.00	5.75	A	B
Ga. Runner.....	9.50	1.00	5.25	A	B
Andru 93.....	8.25	1.50	4.88	A	B
NC 9.....	8.75	1.25	5.00	A	B
VC 1.....	8.25	1.50	4.88	A	B
NC 10C.....	8.25	1.50	4.88	A	B
Florigiant.....	7.25	1.50	4.38	A	B
AgraTech 127.....	8.00	0.25	4.13	A	B
NC 7.....	2.75	3.75	3.25	A	B
Marc I.....	4.25	1.75	3.00	A	B
GK 7.....	3.75	1.50	2.63	A	B
NC V11.....	1.25	3.75	2.50	A	B
EXP. 51-3538.....	2.00	1.00	1.50		B
So. Runner.....	1.00	1.25	1.13		B

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