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1997 ALABAMA PERFORMANCE COMPARISON OF 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

The 1997 test was conducted at the Wiregrass Substation in Headland. The experimental design was a randomized complete block consisting of two-row plots, 20 feet long, replicated four times. The test was planted on May 7, 1997, with a cone planter at a rate of six seed per feet. Recommended agronomic practices were followed regarding fertility, disease, insect, and weed control. The test was conducted under irrigation.

Entries considered to be earlier than Florunner in maturity were dug on September 12, 1997. These entries included AT 120, Andru 93, NC 7, and ViruGard. All other entries except Southern Runner and FLA MDR 98 were dug on September 19, 1997. Southern Runner and FLA MDR 98, considered to be later in maturity, were dug on October 3, 1997. Information concerning relative maturity 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. 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-E) are not significantly different 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 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:

g/100 SMKRS² (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 1-inch slotted screen or a 16/64 x 1-inch slotted screen for Virginia or Runner varieties, respectively.

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²One ounce equals 28.4 grams.

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 1-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.

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TABLE 1. YIELD OF PEANUT VARIETIES AT THE WIREGRASS SUBSTATION, HEADLAND, ALABAMA, 1997

Variety or line	Yield <i>lb./ac.</i>	Duncan grouping
(R) GA Green	5,118	A
(V) AT 50-1114	4,882	A-B
(R) So. Runner	4,837	A-B
(R) ViruGard	4,774	A-B
(R)*FLA MDR 98	4,538	A-C
(V) VA C92R	4,411	B-C
(R) AT 108	4,401	B-C
(R) Andru 93	4,365	B-D
(R)**GK 7 High Oleic	4,274	B-E
(R) GK 7	4,238	B-E
(R) Exp 59-4144	4,211	B-E
(R) GA Runner	4,211	B-E
(R) GA 921302	4,193	B-E
(R) AT 120	4,165	B-E
(R) SunOleic 97R	4,147	B-E
(R) Florunner	3,930	C-E
(R) Sunrunner	3,830	C-E
(R) Flavor Runner	3,630	D-E
(V) NC 7	3,603	E

(R) RUNNER TYPE (V) VIRGINIA TYPE

*Formerly tested as UF 91108

**Formerly tested as Exp 8-2122

TABLE 2. TWO-YEAR AVERAGE YIELD OF PEANUT VARIETIES AT THE WIREGRASS SUBSTATION, HEADLAND, ALABAMA, 1996-97

Variety or line	1996	1997	Avg. yield	Duncan grouping
	<i>lb./ac.</i>	<i>lb./ac.</i>	<i>lb./ac.</i>	
GA Green	6,598	5,123	5,861	A
So. Runner	5,409	4,892	5,126	B
Andru 93	5,853	4,367	5,110	B
GK 7	5,971	4,238	5,105	B
ViruGard	5,309	4,772	5,041	B
GA Runner	5,763	4,203	4,983	B
AT 120	5,690	4,156	4,923	B
Sunrunner	5,953	3,835	4,894	B
Florunner	5,772	3,923	4,848	B
GK 7 High Oleic	5,391	4,273	4,832	B
AT 108	4,973	4,396	4,685	B
VA C92R	4,937	4,405	4,671	B
Flavor Runner	5,590	3,634	4,612	B

TABLE 3. THREE-YEAR AVERAGE YIELD OF PEANUT VARIETIES AT THE WIREGRASS SUBSTATION, HEADLAND, ALABAMA, 1995-97

Variety or line	1995	1996	1997	Avg. yield	Duncan grouping
	<i>lb./ac.</i>	<i>lb./ac.</i>	<i>lb./ac.</i>	<i>lb./ac.</i>	
GA Green	6,244	6,598	5,123	5,988	A
ViruGard	6,089	5,309	4,772	5,390	B
GK 7	5,745	5,971	4,328	5,318	B
So. Runner	5,409	5,409	4,842	5,220	B
NC 7	5,309	6,643	3,594	5,182	B
AT 108	5,980	4,973	4,396	5,116	B
Florunner	5,518	5,772	3,923	5,071	B
GA Runner	5,245	5,763	4,203	5,070	B
Andru 93	4,982	5,853	4,367	5,067	B
VA C92R	5,708	4,937	4,405	5,017	B
AT 120	4,882	5,690	4,156	4,909	B

TABLE 4. AVERAGE SIZE AND GRADE ON PEANUT VARIETIES AT THE
WIREGRASS SUBSTATION, HEADLAND, ALABAMA 1997

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>
Andru 93	68	67	2	69	5	2	76
AT 108	71	69	1	70	3	1	74
AT 120	70	63	2	65	6	2	73
AT 50-1114	97	70	1	71	3	2	76
Exp 59-4144	70	69	3	72	4	2	78
FLA MDR 98	67	69	2	71	4	1	76
Flavor Runner	62	68	1	69	6	2	77
Florunner	62	67	1	68	5	2	75
GA 921302	68	67	2	69	4	2	75
GA Green	58	69	1	70	4	1	75
Ga Runner	63	70	1	71	4	2	77
GK 7	64	71	1	72	4	2	78
GK 7 High Oleic	69	70	1	71	4	2	77
NC 7	79	56	2	58	3	3	64
SunOleic 97R	63	72	2	74	3	1	78
Sunrunner	66	66	1	67	6	3	76
So. Runner	58	67	1	68	5	1	74
VA C92R	88	65	1	66	3	2	71
ViruGard	78	69	2	71	3	3	77

TABLE 5. TWO-YEAR AVERAGE SIZE AND GRADE OF PEANUT VARIETIES AT THE
WIREGRASS SUBSTATION, HEADLAND, ALABAMA, 1996-97

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>
Andru 93	67	68	2	70	5	1	75
AT 108	68	69	2	72	4	1	76
AT 120	67	66	2	69	6	1	74
Flavor Runner	62	70	2	72	6	1	77
Florunner	61	69	3	72	5	1	77
GA Green	59	71	2	73	4	1	77
GA Runner	64	70	3	72	5	1	77
GK 7	64	70	4	73	5	1	78
GK 7 High Oleic	68	70	3	73	5	1	77
NC 7	83	62	2	64	3	2	67
So. Runner	56	70	1	71	5	1	75
Sunrunner	63	68	3	71	6	2	76
VA C92R	88	66	2	68	3	2	71
ViruGard	77	70	3	73	4	2	77

TABLE 6. THREE-YEAR AVERAGE SIZE AND GRADE OF PEANUT VARIETIES AT THE WIREGRASS SUBSTATION, HEADLAND, ALABAMA, 1995-97

Variety or line	<i>SMKRS</i>	<i>SMKRS</i>	<i>SS</i>	<i>TSMK</i>	<i>OK</i>	<i>DK</i>	<i>TK</i>
	<i>g/100</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
Andru 93	64	68	3	70	5	1	77
AT 108	66	70	2	72	4	1	77
AT 120	66	66	3	68	6	1	75
Florunner	59	70	3	72	5	1	79
GA Green	60	71	2	73	4	1	77
GA Runner	62	69	3	72	5	2	78
GK 7	63	71	3	73	4	1	79
NC 7	87	64	2	66	2	2	70
So. Runner	56	71	1	72	4	1	77
VA C92R.....	91	67	2	69	3	2	73
ViruGard	75	70	4	73	4	1	78

TABLE 7. OCCURRENCE OF TOMATO SPOTTED WILT VIRUS "HITS" IN THE PEANUT VARIETY TEST AT THE WIREGRASS SUBSTATION, HEADLAND, ALABAMA, 1997

Variety or line	"Hits" per plot				Total	Avg.	Duncan grouping
	Rep I	Rep II	Rep III	Rep IV			
Sunrunner	56	33	21	25	135	33.75	A
GA 921302	24	36	17	45	122	30.50	A-B
GA Runner	38	34	22	27	121	30.25	A-B
Andru 93	14	27	42	29	112	28.00	A-C
Flavor Runner	15	40	31	24	110	27.50	A-C
GK 7	23	17	24	41	105	26.25	A-D
Florunner	22	36	16	15	89	22.25	A-E
NC 7	21	44	10	10	85	21.25	A-E
AT 108	14	11	36	11	72	18.00	A-E
SunOleic 97R	8	27	29	7	71	17.75	A-E
GK 7 High Oleic	14	24	13	14	65	16.25	B-E
AT 120	11	27	6	18	62	15.50	B-E
AT 50-1114	6	8	28	11	53	13.25	C-E
Exp 59-4144	14	20	9	9	52	13.00	C-E
FLA MDR 98	23	14	3	11	51	12.75	C-E
VA C92R.....	4	7	12	19	42	10.50	D-E
Ga Green	16	3	14	3	36	9.00	E
ViruGard	9	10	6	5	30	7.50	E
So. Runner	11	6	4	4	25	6.25	E

TABLE 8. TWO-YEAR AVERAGE OCCURENCE OF TOMATO SPOTTED WILT VIRUS "HITS" IN THE PEANUT VARIETY TEST AT THE WIREGRASS SUBSTATION, HEADLAND, ALABAMA, 1996-97

Variety or line	Average number of "hits" in four replications per variety per year			Duncan grouping
	1996 avg.	1997 avg.	Two-year avg.	
Sunrunner	16.25	33.75	25.00	A
Andru 93	12.25	28.00	20.13	A-B
Flavor Runner	12.25	27.50	19.88	A-C
GA Runner	9.25	30.25	19.75	A-C
Florunner	15.00	22.25	18.63	A-C
GK 7	8.25	26.25	17.25	A-D
NC 7	9.25	21.25	15.25	B-E
AT 120	14.50	15.50	15.00	B-E
AT 108	8.75	18.00	13.38	B-E
GK 7 High Oleic	7.00	16.25	11.63	B-E
VA C92R	9.75	10.50	10.13	C-E
So. Runner	9.00	6.25	7.63	D-E
VirusGard	6.00	7.50	6.75	E
GA Green	4.00	9.00	6.50	E

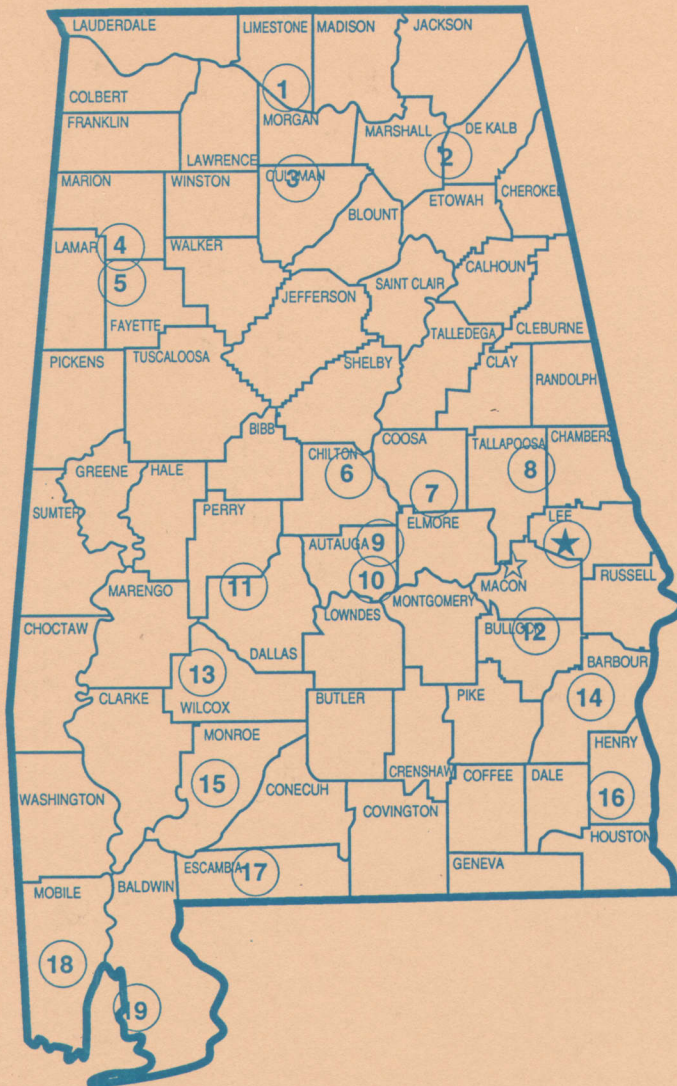
TABLE 9. THREE-YEAR AVERAGE OCCURENCE OF TOMATO SPOTTED WILT VIRUS "HITS" IN THE PEANUT VARIETY TEST AT THE WIREGRASS SUBSTATION, HEADLAND, ALABAMA, 1995-97

Variety or line	Average number of "hits" in four replications per variety per year				Duncan grouping
	1995 avg.	1996 avg.	1997 avg.	Three-yr. avg.	
GA Runner	10.75	9.25	30.25	16.75	A
Andru 93	8.50	12.25	28.00	16.25	A
Florunner	7.50	15.00	22.25	14.92	A-B
GK 7	6.50	8.25	26.25	13.67	A-B
AT 120	8.00	14.50	15.50	12.67	A-C
AT 108	10.75	8.75	18.00	12.50	A-C
NC 7	4.50	9.25	21.25	11.67	A-D
VA C92R	7.50	9.75	10.50	9.25	B-D
GA Green	5.75	4.00	9.00	6.25	C-D
So. Runner	2.25	9.00	6.25	5.83	D
VirusGard	2.75	6.00	7.50	5.42	D

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