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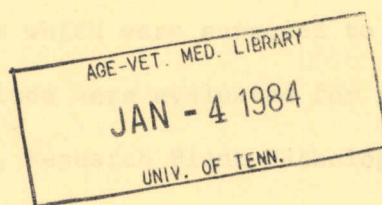
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Performance of Soybean Varieties in 1983

Research Report 83-15

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Agricultural Experiment Station
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PERFORMANCE OF SOYBEAN VARIETIES IN 1983^{1/}

Charles R. Graves^{2/}

Soybean varieties in maturity group V were evaluated at six locations, in maturity groups VI and VII at four locations, and in maturity groups IV or less at six locations. Growing conditions were poor at most locations due to severe dry weather. No data are reported for maturity group V at Ames Plantation due to poor stand.

The leading varieties in maturity group V in 1983 were Deltapine 105, Pioneer variety 5482, NAPB NS26-79, and FFR 561.

The leading varieties of maturity groups VI and VII for 1983 were Wilstar 790, NAPB NS-268-79, N. K. S69-96 and RA 604.

Three strain tests were conducted at Jackson and yields were poor for all maturity groups. The late-maturing strains (groups VI and VII) yields were reduced due to stem canker in some replications. The disease was not uniform over the entire test. All varieties which were supposed to have resistance to race 3 or 4 soybean cyst nematode were evaluated for resistance to these two races by Dr. Lawrence D. Young, Research Plant Pathologist, USDA-ARS, Jackson, Tennessee.

^{1/} These results will be included in the 1983 Bulletin, "Performance of Field Crop Varieties", which will be available in 1984.

^{2/} Professor of Plant and Soil Science.

Soybeans-Varieties Recommended for 1984.

Variety	Resistant to (Races)	Maturity Groups medium
Asgrow A5474	1,3+4	V
Bedford	1,3+4	V
Nathan	1,3+4	V
Forrest	1+3	V
		late
Centennial	1+3	VI
Jeff	1,3+4	VI
RA 604	1+3	VI
		medium
Asgrow A5618	None	V
Bay	None	V
Deltapine 105	None	V
Essex	None	V
Pioneer variety 5482	None	V
York	None	V
		early
Mitchell	None	IV

Table 3. Soybeans: Characteristics of varieties (maturity group V) evaluated in 1983. ^{1/}

Variety	Flower color <u>2/</u>	Pubescence color <u>3/</u>	Hilum color	Phytophthora rot resistance <u>4/</u>	Soybean cyst nematode resistance Races
Forrest	W	T	Black	MR	1,3
Essex	P	G	Buff	S	None
Bedford	W	T	Black	-	1,3,4
Nathan	W	Brown	Black	-	1,3,4
Bay	P	G	Buff	-	None
Asgrow A5939	P	T	Black	R	1,3,4
Asgrow A5474	W	T	Black	R	1,3,4
Deltapine 345	P	T	Black	R	None
FFR 559	W	G	Buff	-	None
Terra-vig 505	P	T	Gray to Black	R	None
Deltapine 105	P	G	Imp. Black	T	None
Asgrow A5618	P	G	Buff	S	None
RA 502	P	T	Black	T	1,3
Pioneer variety 5482	W	T	Black	S	None
Pioneer variety 9561	W	T	Black	S	1,3
FFR 560	W	Brown	Black	MR	1,3,4
FFR 561	W	G	Buff	-	None
Hartz 5171	W	G	Buff (Dark)	S	1,3
Hartz 5370	W	T	Black	R	1,3
Hartz 5252	P	T	Black	R	1,3
D77-5090 (Epps)	P	G	Black	R	1,3,4
NAPB NS-27-29	W	T	Black	Seg.	1,3
NAPB NS-26-79	W	T	Black	Seg.	1,3
TN 77-119	W	T	Black	S	1,3
TN 77-111	W	G	Buff	S	1,3
TN 80-69	P	G	Buff	S	None
Riverside/Terra 503	P	T	Black	R	1,4
Riverside/Terra 563	P	T	Black	R	1,3
Coker 355	P	T	Black	T	1,3,4
Riverside/Terra 593	P	T	Black	R	1,4

^{1/} Disease resistance reported by the company.

^{2/} P=Purple and W=White.

^{3/} T=Tawny and G=Gray.

^{4/} S=Susceptible, R=Resistant, MR=Moderately Resistant.

Table 1. Soybeans: Yields of varieties (maturity group V) evaluated at six locations in 1983.

Variety	Avg.	Greene- ^{1/} ville	Knox- ^{2/} ville	Spring- ^{3/} field	Spring- ^{4/} Hill	Martin ^{5/}	Milan ^{6/7/}
Bushels per acre							
Deltapine 105	38	52	52	16	47	26	34
Pioneer variety 5482	38	49	48	14	51	28	30
NAPB NS26-79	38	50	49	18	48	24	37
FFR 561	38	49	49	14	45	30	25
Riverside/Terra 503	37	52	48	16	45	26	29
NAPB NS27-29	37	48	47	18	47	26	30
TN 80-69	36	45	49	18	39	31	37
Hartz 5171	36	49	46	17	43	26	40
TN 77-119	36	44	48	16	44	27	29
Asgrow A5618	36	47	48	15	46	23	25
RA 502	35	52	49	16	37	21	37
Bay	35	47	50	14	40	24	28
Riverside/Terra 593	35	46	47	13	46	23	29
Essex	35	45	45	16	43	24	23
TN 77-111	34	49	45	15	41	21	37
Hartz 5370	34	40	45	17	41	28	35
Forrest	34	46	43	16	35	27	24
FFR 559	33	45	44	16	38	23	28
FFR 560	33	42	44	15	42	23	39
Hartz 5252	33	41	40	16	39	29	30
Deltapine 345	33	42	41	17	39	25	31
Terra-vig 505	33	38	48	17	40	20	34
Bedford	33	43	43	14	41	22	26
Asgrow A5474	32	43	43	16	39	21	31
Coker 355	32	39	46	15	38	22	24
Pioneer variety 9561	32	44	44	16	34	22	34
Asgrow A5939	32	47	41	14	40	17	35
Riverside/Terra 563	31	42	41	18	32	23	26
Nathan	31	39	38	13	34	31	24
D77-5090 (Epps)	31	41	42	13	37	19	27
L.S.D. (.05)	--	7.5	5.9	2.0	N.S.	N.S.	N.S.
C.V. %	--	11.8	9.2	7.4	19.7	21.1	30.2
Avg.	--	45.2	45.4	19.7	41.0	24.1	30.6

^{1/} Hermitage silt loam (2% to 5% slopes).

^{2/} Sequatchie loam (2% to 5% slopes).

^{3/} Dickson silt loam (2% to 5% slopes).

^{4/} Huntington silt loam (0% to 2% slopes).

^{5/} Palaya silt loam (0% to 2% slopes).

^{6/} Collins silt loam (2% to 5% slopes).

^{7/} Milan data not included in average due to high c.v.

Table 2. Soybeans: Yield and other characteristics of varieties (maturity group V) evaluated at six locations in 1983.

Variety	Yield Bu/A	Flower date	Date mature	Plant ht. in.	Lodging %
Deltapine 105	38	7-29	10-11	43	26
Pioneer variety 5482	38	7-22	10-4	41	23
NAPB NS26-79	38	7-27	10-8	41	32
FFR 561	38	7-24	10-5	40	6
Riverside/Terra 503	37	7-24	10-3	45	37
NAPB NS27-29	37	7-29	10-9	42	23
TN 80-69	36	7-27	10-5	38	8
Hartz 5171	36	7-27	10-10	46	44
TN 77-119	36	7-25	10-4	40	35
Asgrow A5618	36	7-28	10-6	41	4
RA 502	35	7-26	10-8	42	41
Bay	35	7-26	10-8	42	6
Riverside/Terra 593	35	8-1	10-15	44	28
Essex	35	7-22	10-1	33	28
TN 77-111	34	7-23	10-6	41	50
Hartz 5370	34	7-30	10-10	42	28
Forrest	34	7-25	10-7	40	10
FFR 559	33	7-26	10-7	38	46
FFR 560	33	7-31	10-8	47	40
Hartz 5252	33	7-27	10-6	41	18
Deltapine 345	33	8-1	10-9	42	19
Terra-vig 505	33	7-29	10-11	43	41
Bedford	33	7-22	10-1	33	28
Asgrow A5474	32	7-26	10-6	40	28
Coker 355	32	7-26	10-11	41	32
Pioneer variety 9561	32	7-26	10-6	41	12
Asgrow A5939	32	7-26	10-5	42	36
Riverside/Terra 563	31	7-26	10-10	41	54
Nathan	31	7-30	10-2	44	26
D77-5090 (Epps)	31	7-26	10-3	38	38

Table 4. Soybeans: Yields of varieties (maturity group V) evaluated at five locations for two years 1982-83.

Variety	2 Yr. Avg. 1982-83	Greene- ville	Knox- ville	Spring- field	Spring Hill	Martin
Bushels per acre						
Pioneer variety 5482	41	58	46	24	41	36
RA 502	40	59	46	29	31	34
Deltapine 105	39	53	45	28	38	34
Asgrow A5618	39	53	45	26	38	33
Essex	38	51	48	23	35	34
Asgrow A5474	38	49	39	25	38	37
Bay	38	53	43	28	33	31
Forrest	37	47	40	29	31	38
Pioneer variety 9561	37	52	39	29	30	34
FFR 560	36	45	39	25	35	38
Asgrow A5939	36	51	38	25	36	31
Deltapine 345	36	48	37	28	33	31
FFR 559	36	52	42	24	31	28
Bedford	36	47	40	23	33	36
Nathan	34	43	34	24	30	38
Terra-vig 505	34	42	40	27	32	30

Table 5. Soybeans: Yield and other characteristics of varieties (maturity group V) evaluated for two years 1982-83.

Variety	1982-83 yield Bu/A	Plant ht. in.	Lodging %	Date mature
Pioneer variety 5482	41	35	14	10-2
RA 502	40	38	36	10-7
Deltapine 105	39	39	33	10-10
Asgrow A5618	39	38	8	10-5
Essex	38	30	16	9-29
Asgrow A5474	38	37	22	10-5
Bay	38	38	11	10-6
Forrest	37	37	16	10-6
Pioneer variety 9561	37	37	12	10-5
FFR 560	36	43	48	10-9
Asgrow A5939	36	38	34	10-4
Deltapine 345	36	39	19	10-8
FFR 559	36	34	30	10-5
Bedford	36	42	45	10-6
Nathan	34	42	51	9-30
Terra-vig 505	34	39	40	10-10

Table 6. Soybeans: Yields of varieties (maturity group V) evaluated at five locations for three years 1981-83.

Variety	3 Yr. Avg. 1981-83	Greene- ville	Knox- ville	Spring- field	Spring Hill	Martin
Bushels per acre						
Pioneer variety 5482	46	61	52	35	39	43
Essex	45	54	52	38	35	44
Asgrow A5618	44	57	50	40	35	40
Deltapine 105	44	58	48	38	36	41
Bay	43	56	48	40	33	39
Asgrow A5474	43	53	43	34	37	45
Forrest	43	51	46	40	32	45
Asgrow A5939	40	53	39	33	34	39
Deltapine 345	39	50	40	38	31	38
Terra-vig 505	39	47	44	38	30	37
Nathan	38	47	38	34	29	44
Bedford	38	49	--1/	34	31	40

1/ No yield data in 1981 due to poor stand.

Table 7. Soybeans: Yield and other characteristics of varieties (maturity group V) evaluated for three years 1981-83.

Variety	1981-83 yield Bu/A	Plant ht. in.	Lodging %	Date mature
Pioneer variety 5482	46	34	10	10-6
Essex	45	29	12	10-1
Asgrow A5618	44	38	6	10-7
Deltapine 105	44	39	28	10-12
Bay	43	37	9	10-7
Asgrow A5474	43	37	17	10-7
Forrest	43	37	14	10-7
Asgrow A5939	40	39	37	10-6
Deltapine 345	39	39	26	10-10
Terra-vig 505	39	39	42	10-11
Nathan	38	42	44	10-2
Bedford	38	41	42	10-9

Table 8. Soybeans: Yield and other characteristics of thirteen selected varieties of maturity group V evaluated at Crossville in 1983.^{1/2/}

Variety	Yield Bu/A	Date 1st flower	Date last flower	Date mature	Plant ht. in.	Lodging %
Bay	31	8-1	8-20	10-6	40	5
Essex	30	7-31	8-15	10-4	36	5
Asgrow A5939	29	8-1	8-22	10-6	43	30
Asgrow A5474	28	8-2	8-21	10-6	38	20
TN 80-69	28	8-1	8-19	10-12	36	5
EPPS (D77-5090)	25	8-1	8-19	10-5	36	50
Pioneer variety 5482	25	7-31	8-17	10-4	38	10
FFR 559	25	8-1	8-20	10-4	38	50
TN 77-111	24	8-1	8-18	10-10	41	50
Forrest	24	8-1	8-20	10-10	40	20
FFR 560	24	8-5	8-24	10-10	44	20
TN 77-119	22	8-1	8-19	10-6	36	50
RA 502	20	8-1	8-19	10-6	40	50
L.S.D. (.05)	N.S.					
C.V.	19.1					
Avg.	26.4					

^{1/} Hartsells loam (2% to 5% slopes).

^{2/} The Crossville data was reported separate from the other locations because only thirteen of the thirty varieties of maturity group V were evaluated at this location.

Table 9 . Soybeans: Yield of varieties (maturity groups VI & VII) evaluated at four locations in 1983.

Variety	Avg.	Knox- ^{1/} ville	Spring- ^{2/} Hill	Milan ^{3/}	Ames Plantation ^{4/}
Bushels per acre					
Wilstar 790	36	48	30	32	37
NAPB NS-268-79	36	46	33	37	29
N. K. S69-96	35	47	28	34	33
RA 604	35	42	30	39	28
Riverside/Terra 713	34	45	30	31	31
Coker 156	34	44	30	30	30
Asgrow A7372	33	39	31	30	33
Deltapine 417	33	40	28	27	37
Terra-vig 606	32	42	28	29	31
NAPB NS-340-79	32	39	31	33	26
Hartz 7126	32	36	28	29	35
Deltapine 506	32	38	27	33	29
TN 80-83	32	44	30	34	17
Asgrow A6520	32	40	36	29	22
FFR 668	32	38	26	33	28
N. K. S72-60	31	41	28	29	28
NAPB NS-357-79	31	37	32	28	27
Jeff	31	35	28	30	28
Hartz 6383	30	38	28	28	27
Centennial	30	37	32	24	29
Deltapine 497	30	31	26	30	34
RA 606	29	36	27	26	28
Deltapine 246	29	40	30	25	23
Riverside/Terra 613	29	34	31	22	29
Bradley	28	34	28	23	28
L.S.D. (.05)	--	7.1	4.0	7.1	4.5
C.V. %	--	12.7	9.7	17.1	11.1
Avg.	--	39.5	29.4	29.6	28.8

^{1/} Sequatchie loam (2% to 5% slopes).

^{2/} Maury silt loam (2% to 5% slopes).

^{3/} Collins silt loam (0% to 2% slopes).

^{4/} Loring silt loam (2% to 5% slopes).

Table 10. Soybeans: Yield and other characteristics of varieties (maturity groups VI & VII) evaluated at four locations in 1983.

Variety	Yield Bu/A	Date 1st flower	Date ^{1/} full bloom	Date ^{2/} last flower	Plant ht. in.	Date mature	Lodging %
Wilstar 790	36	7-31	8-14	9-7	45	11-2	35
NAPB NS-268-79	36	7-30	8-11	9-1	39	11-2	50
N. K. S69-96	35	8-3	8-10	9-6	41	10-26	35
RA 604	35	7-28	8-6	8-27	42	10-14	35
Riverside/Terra 713	34	7-28	8-3	8-22	42	10-12	41
Coker 156	34	7-31	8-12	8-27	38	10-21	18
Asgrow A7372	33	8-3	8-16	8-30	39	10-26	32
Deltapine 417	33	8-4	8-17	9-7	46	11-2	44
Terra-vig 606	32	8-2	8-5	8-29	42	10-26	32
NAPB NS-340-79	32	7-30	8-10	9-2	41	10-26	32
Hartz 7126	32	7-30	8-12	8-28	49	10-28	42
Deltapine 506	32	7-31	8-12	8-29	44	10-26	52
TN 80-83	32	7-26	8-25	8-2	39	10-17	8
Asgrow A6520	32	7-29	8-8	8-27	35	10-22	35
FFR 668	32	8-1	8-14	8-27	44	10-28	29
N. K. S72-60	31	7-28	8-12	9-1	47	10-24	48
NAPB NS 357-79	31	7-30	8-9	9-4	43	10-25	11
Jeff	31	8-1	8-13	8-29	45	10-27	42
Hartz 6383	30	7-28	8-10	9-1	45	10-28	32
Centennial	30	7-30	8-11	8-29	42	10-23	20
Deltapine 497	30	8-4	8-22	9-6	44	10-30	15
RA 606	29	8-2	8-9	8-28	43	10-16	35
Deltapine 246	29	7-31	8-12	8-27	39	10-19	21
Riverside/Terra 613	29	7-31	8-11	8-27	44	10-11	15
Bradley	28	7-24	8-4	8-26	39	10-14	40

^{1/} Data from Spring Hill only.^{2/} Data from Knoxville only.

Table 11. Soybeans: Characteristics of varieties (maturity groups VI & VII) evaluated in 1983. ^{1/}

Variety	Flower color <u>2/</u>	Pubescence color <u>3/</u>	Hilum color	Phytophthora rot resistance <u>4/</u>	Soybean cyst nematode resistance Races
Centennial	P	T	Black	R	1,3
Coker 156	W	G	Buff	R	None
RA 606	W	G	Buff	R	1,3,4
Deltapine 506	W	T	Black	R	None
RA 604	P	T	Black	R	1,3,4
Jeff	P	T	Brown	MR	1,3,4
Terra-vig 606	W	G	Buff	R	None
Wilstar 790	W	T	Black	R	None
Deltapine 417	W	G	Buff	R	None
Deltapine 497	W	T	Black	R	None
N. K. S72-60	P	T	Buff	R	None
N. K. S69-96	P	G	Buff	R	None
Asgrow A6520	P	T	Black	R	1,3,4
Asgrow A7372	W	T	Black	S	None
Bradley	W	T	Black	R	1,3,4
Hartz 6383	P	G	Imp. Black	R	1,3
Hartz 7126	P	T	Black	S	1,3
FFR 668	P	G	Imp. Black	-	None
NAPB NS-340-79	P	T	Black	Seg.	1,3
NAPB NS-268-79	W	G	Buff	Seg.	1,3
NAPB NS-357-79	P	T	Black	S	1,3
TN 80-83	W	G	Buff	S	Seg. 3
Riverside/Terra 613	P	T	Brown	R	1,3,4
Riverside/Terra 713	P	T	Black	R	1,3
MO 80-602003	W	G	Brown	R	1,3
Deltapine 246	P	T	Black	R	None

^{1/} Disease resistance reported by the company.

^{2/} P=Purple and W=White.

^{3/} T=Tawny and G=Gray.

^{4/} S=Susceptible, R=Resistant, MR=Moderately Resistant.

Table 12. Soybeans: Yields of varieties (maturity groups VI & VII) evaluated at three locations for two years 1982-83.

Variety	1982-83 Avg.	Knox- ville	Spring Hill	Ames Plantation
Bushels per acre				
Wilstar 790	39	45	25	47
N. K. S69-96	38	46	26	43
N. K. S72-60	37	43	28	41
RA 604	37	42	26	42
Terra-vig 606	36	41	25	42
Coker 156	36	38	28	42
Centennial	36	38	28	42
Deltapine 417	36	39	23	45
Hartz 7126 <u>1/</u>	36	38	25	46
Asgrow A6520 <u>2/</u>	36	36	32	39
Jeff	34	36	25	41
Deltapine 506	34	38	24	40
Deltapine 246	34	37	27	37
RA 606	34	36	26	39
Deltapine 497	33	33	22	43

1/ Evaluated in 1982 as Hartz 672.

2/ Evaluated in 1982 as A6420.

Table 13. Soybeans: Yield and other characteristics of varieties (maturity groups VI & VII) evaluated for two years 1982-83.

Variety	1982-83 yield	Plant ht.	Lodging	Date mature
	Bu/A	in.	%	
Wilstar 790	39	43	25	10-30
N. K. S69-96	38	40	35	10-24
N. K. S72-60	37	44	49	10-23
RA 604	37	40	34	10-15
Terra-vig 606	36	43	35	10-22
Coker 156	36	37	26	10-18
Centennial	36	40	16	10-21
Deltapine 417	36	46	39	10-29
Hartz 7126 <u>1/</u>	36	45	39	10-25
Asgrow A6520 <u>2/</u>	36	35	28	10-19
Jeff	34	42	42	10-22
Deltapine 506	34	43	46	10-24
Deltapine 246	34	38	27	10-18
RA 606	34	41	33	10-17
Deltapine 497	33	44	16	10-28

1/ Evaluated in 1982 as Hartz 672.

2/ Evaluated in 1982 as A6420.

Table 14. Soybeans: Yield of varieties (maturity groups VI & VII) evaluated at three locations for three years (1981-83).

Variety	1981-83 Avg.	Knox- ville	Spring Hill	Ames Plantation
Bushels per acre				
Coker 156	37	40	28	44
Centennial	37	40	26	44
Deltapine 506	35	39	25	41
RA 606	35	38	26	40
Deltapine 246	35	39	27	39
Jeff	35	38	27	40

Table 15. Soybeans: Yield and other characteristics of varieties (maturity groups VI & VII) evaluated for the year 1982-83.

Variety	1981-83 yield Bu/A	Plant ht. in.	Lodging %	Date mature
Coker 156	37	37	23	10-21
Centennial	37	40	18	10-23
Deltapine 506	35	43	43	10-25
RA 606	35	40	26	10-20
Deltapine 246	35	38	27	10-19
Jeff	35	42	47	10-24

Table 16. Soybeans: Yields of early-maturing soybean varieties evaluated in 1983.

Variety	Avg. ^{1/}	Knox- ^{2/} ville	Cross- ^{3/} ville	Spring- ^{4/} field	Milan ^{5/}	Ames Plantation ^{6/}	Martin ^{7/}
Bushels per Acre							
RA 481	29	41	34	18	26	25	23
Mitchell	28	34	41	18	23	23	16
RA 480	28	35	33	16	26	27	25
Helena Brand 401	28	35	41	17	20	24	22
Asgrow A4997	28	36	34	17	23	<u>8/</u>	15
DeKalb CX482	27	35	42	16	19	22	18
Mitchell 450	27	38	40	15	21	21	21
N.K. S45-01	26	34	41	14	24	19	18
Lawrence	26	33	38	19	25	15	16
DeKalb CX380	26	30	39	20	22	19	13
GA Blend 8450	26	34	40	16	22	16	<u>8/</u>
Pioneer variety 3981	26	29	37	20	24	17	<u>17</u>
DeKalb CX453	25	32	41	14	23	17	15
Fayette	25	33	36	18	23	15	9
Union	24	29	35	19	22	16	16
GA Blend 8350	24	27	35	17	22	17	<u>8/</u>
Franklin	23	27	34	16	20	19	<u>13</u>
L.S.D. (.05)		4.8	4.7	2.7	N.S.	4.6	N.S.
C.V. %		10.2	8.7	11.2	16.6	16.6	44.7
Avg.		33.0	37.7	17.0	22.7	19.6	17.2

^{1/} Martin data not included in average due to high C.V.

^{2/} Sequatchie loam (2% to 5% slopes).

^{3/} Hartsells loam (2% to 5% slopes).

^{4/} Dickson silt loam (2% to 5% slopes).

^{5/} Collins silt loam (2% to 5% slopes).

^{6/} Loring silt loam (2% to 5% slopes).

^{7/} Grenada silt loam (0% to 2% slopes).

^{8/} Was not included at these locations.

Table 17. Soybeans: Yield and other characteristics of early-maturing varieties (maturity groups IV or less) evaluated in 1983.

Variety	Yield Bu/A	Date full bloom	Date mature	Plant ht. in.
RA 481	29	7-19	9-28	32
Mitchell	28	7-13	9-20	31
RA 480	28	7-21	10-2	34
Helena brand 401	28	7-12	9-19	36
Asgrow A4997	28	7-19	9-23	28
DeKalb CX482	27	7-14	9-15	33
Mitchell 450	27	7-16	10-1	33
N. K. S45-01	26	7-12	9-20	34
Lawrence	26	7-9	9-16	28
DeKalb CX380	26	7-10	9-10	29
GA Blend 8450	26	7-13	9-14	30
Pioneer variety 3981	26	7-10	9-13	26
DeKalb CX453	25	7-11	9-15	32
Fayette	25	7-9	9-11	29
Union	24	7-10	9-12	30
GA Blend 8350	24	7-14	9-5	30
Franklin	23	7-15	9-17	30

Table 18. Soybeans: Characteristics of early-maturing varieties (maturity group IV or less) evaluated in 1983. ^{1/}

Variety	Flower color	Pubescence color	Hilum color	Phytophthora rot resistance	Soybean cyst nematode resistance
RA 481	W ^{2/}	G ^{3/}	Brown	S ^{4/}	None
Mitchell	P	T	Brown	S	None
RA 480	P	T	Black	R	3,4 TR
Helena brand 401	P	G	Buff	S	None
Asgrow A4997	P	G	Grey	R	None
DeKalb CX482	P+W	G	Buff	S	None
Mitchell 450	P	T	Brown	R	None
N. K. S45-01	P	- ^{5/}	- ^{5/}	- ^{5/}	- ^{5/}
Lawrence	P	-	-	-	-
DeKalb CX380	W	Brown	Black	-	None
GA Blend 8450	W	T	Brown	R	None
Pioneer variety 3981	W	T	Black	S	None
DeKalb CX453	W+P	Brown	Brown	S	None
Fayette	W	-	Black	-	1,3,4
Union	W	-	-	-	-
GA Blend 8350	P+W	T	Black	S	None
Franklin	P	-	-	-	1,3

^{1/} Disease resistance reported by the company.

^{2/} P=Purple and W=White.

^{3/} T=Tawny and G=Gray.

^{4/} S=Susceptible, R=Resistant, MR=Moderately Resistant.

^{5/} Data not finished.

Table 19. Soybeans: Yield of early-maturing varieties evaluated at four locations for two years (1982-83).

Variety	Avg. yield 1982-83	Knox- ville	Cross- ville	Spring- field	Ames Plantation
Bushels per acre					
Mitchell	35	38	40	23	42
Mitchell 450	35	39	40	22	39
RA 480	34	35	29	27	46
GA Blend 8450	34	40	41	18	36
Franklin	29	32	30	20	35
GA Blend 8350	27	29	33	19	29

Table 20. Soybeans: Yield and other characteristics of early-maturing varieties evaluated for two years (1982-83).

Variety	2 yr. avg. yield 1982-83	Date ^{1/} full bloom	Date mature	Plant ht.
Bu/A				in.
Mitchell	35	7-13	9-14	35
Mitchell 450	35	7-16	9-24	39
RA 480	34	7-21	9-23	39
GA Blend 8450	34	7-13	9-12	34
Franklin	29	7-15	9-12	33
GA Blend 8350	27	7-14	9-2	32

^{1/} 1983 data only.

Table 21. Soybeans: Yield and other characteristics of strains (maturity group IV or less) evaluated at Jackson in 1983.

Company	Variety	Yield	Date 1st flower	Date mature	Plant ht.
		Bu/A			
			in.		
Callahan	CEI 444	20	7-7	9-2	33
Callahan	CEI 445	19	7-7	9-7	33
Callahan	CEI 432	17	7-6	9-2	34
Helena	Stevens	17	7-11	9-13	38
Ring Around	RA 480	16	7-21	9-21	44
L.S.D. (.05)		N.S.			
C.V. %		14.9			
Avg.		17.5			

Table 22. Soybeans: Yield and other characteristics of strains (maturity group V) evaluated at Jackson in 1983.

Company	Variety	Yield Bu/A	Plant ht. in.	Lodging	Seed quality Rating (1-5)	Date mature
Hartz	H79-5822	16	42	45	3	10-7
Callahan	CEI 156	13	34	60	2.2	9-29
Scientific Seeds	EXF 102	12	41	74	3	9-29
Coker	485 (80-764)	12	37	4	2.8	9-30
Funk	M81-511206	12	40	16	2.8	9-30
Funk	M81-521810	12	44	10	3	10-2
N. K.	KNX B501070	11	42	6	2.2	10-3
Coker	425 (79R-5)	11	30	1	3	9-16
Check	Forrest	11	41	31	2.2	9-23
Callahan	CEI 543	11	33	2	2.2	9-16
FFR	661X	11	36	2	2.8	9-22
NAPB	517	10	34	3	3	9-27
Jacques	J-83-140	10	33	1	3	9-21
Va	V-77-2016	10	37	3	2.8	9-16
Callahan	CEI 545	10	34	0.8	2.8	9-26
Helena	Wilstar 550	10	40	21	2.2	9-29
Hartz	H78-168	9	40	5	3.2	9-28
Helena	Shiloh	9	39	1	2.8	10-20
NAPB	N.S.-243-79	9	39	19	3.2	9-25
Helena	HB-007-B3-5	9	41	3	2.8	9-21
	L.S.D. (.05)	N.S.				
	C.V. %	27.7				
	Avg.	10.9				

Table 23. Soybeans: Yield and other characteristics of strains (maturity groups VI and VII) evaluated at Jackson in 1983.

Company	Variety	Yield Bu/A	Plant ht.	Lodging %	Seed quality	Date mature
			in.		Rating (1-5)	
Helena	HB507-D1-7	26	42	9	3	11-12
N. K.	KNX-M751111	23	37	1	3	11-14
Coker	80-817	22	46	21	2.8	11-14
N. K.	KNX-B50047 (X471)	22	42	39	2.5	11-14
N. K.	KNX-M780780	20	44	7	3.2	11-12
Check	Centennial	19	44	21	3	11-15
NAPB	NS-319-79	19	43	26	3	11-14
N. K.	KNX-M760815	18	44	4	3.2	11-14
Funk	M81-631104	18	39	2	3	11-14
Coker	80-846	18	42	9	3.2	11-15
Scientific Seeds	DX 6	18	46	68	2.8	10-8
NAPB	NS-65-79	18	42	6	3	11-14
Hartz	H79-7817	17	44	8	2.8	11-15
Coker	80-795	15	41	6	3.5	11-15
Helena	Sumter	14	46	6	2.8	10-3
Helena	HB468D1-6	13	42	3	3	11-12
Hartz	H78-160	11	38	16	3.2	10-3
Funk	M81-640605	11	39	2	2.8	11-14
L.S.D. (.05)		7.9	--	--	---	-
C.V. %		31.2	--	--	---	-
Avg.		17.9	--	--	---	-

Table 24. Soybeans: Reaction of selected varieties from all maturity groups when evaluated in the greenhouse for resistance to races 3 and 4 of the soybean cyst nematode. ^{2/}

Entry	Race 3	Race 4
Bedford	R ^{1/}	R
Bradley	R	R
Centennial	R	S
Epps	R	R
Essex	S	S
Forrest	R	S
Franklin	R	S
Jeff	R	R
Nathan	R	R
A5474	R	R
A5939	R	R
A6520	R	R
Coker 355	R	R
FFR 560	R	R
H-76-502	R	S
H-76-587	R	S
H-76-672-3A	R	S
H-78-143	R	S
H-78-766	R	S
MO 80-602003	S	S
NS 26-79	R	S
NS 27-29	R	S
NS 268-79	Seg.	S
NS 340-79	R	S
NS 357-79	R	S
P 9561	R	S
RA 502	S	S
RA 604	R	S
RA 606	R	S
Riverside 593	R	S
Terra 503	S	S
Terra 563	S	S
Terra 613	R	S
Terra 713	R	S
TN 77-111	R	S
TN 77-119	R	S

^{1/} R = resistant, S = susceptible, and Seg. = segregating.

^{2/} Ratings were made by Dr. Lawrence D. Young, Research Plant Pathologist, USDA, ARS, Jackson, Tenn.