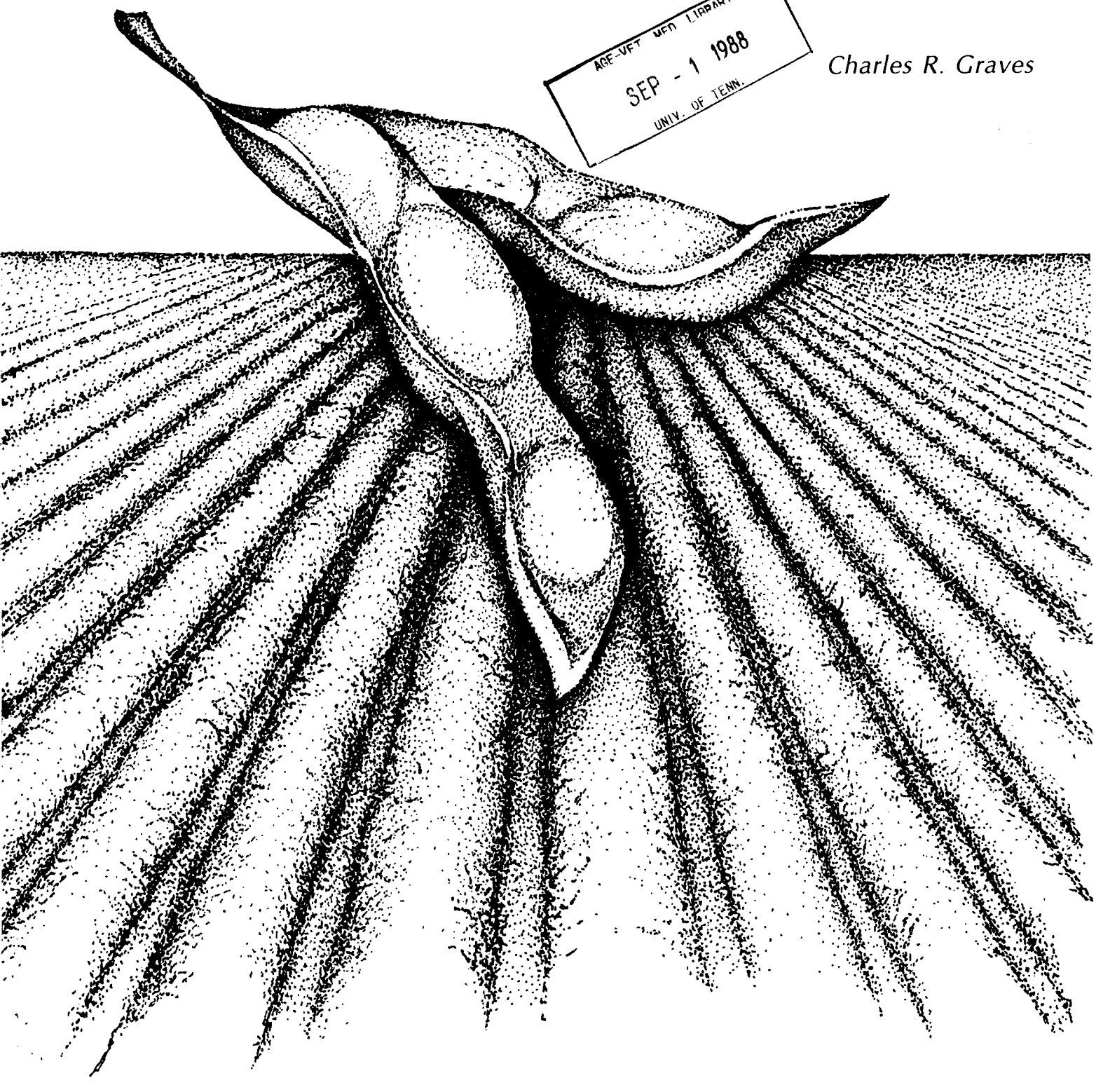
The University of Tennessee
Agricultural Experiment Station
Department of Plant and Soil Science

Research Report 87-02
January 1987

Performance of Soybean Varieties Evaluated in 1986 and Previous Years

AGR-VET MED LIBRARY
SEP - 1 1988
UNIV. OF TENN.

Charles R. Graves



CONTENTS

Performance of Sobean Varieties in 1986 and Previous Years 1

Performance of Maturity Group V:

Yield - 1986 4
Yield and Other Characteristics - 1986 5
Yield - 1985-86 6
Yield and Other Characteristics - 1985-86 7
Yield - 1984-86 8
Yield and Other Characteristics - 1984-86 9

Performance of Maturity Groups VI & VII:

Yield - 1986 10
Yield and Other Characteristics - 1986 11
Yield - 1985-86 12
Yield and Other Characteristics - 1985-86 12
Yield - 1984-86 13
Yield and Other Characteristics - 1984-86 13

Performance of Maturity Group IV or Less:

Yield - 1986 14
Yield and Other Characteristics - 1986 14
Yield - 1985-86 15
Yield and Other Characteristics - 1985-86 15

Yield and Other Characteristics of Soybean Strains Evaluated at Jackson in 1986:

Maturity Group V 16
Maturity Group VI & VII 16

Soybean Cyst Nematode Susceptibility Ratings Made at Jackson in 1986:

Maturity Group V 17
Maturity Group VI & VII 18
Maturity Group IV or Less 19
Strains Maturity Groups V, VI & VII 20

delayed and second growth occurred under these conditions. Several varieties were stunted at Knoxville where Temik had been used, especially if emergence was delayed due to crusting or slow germinating seed. The worst stunting occurred where the beans were covered with some soil from rotary hoeing to break the crust. Most varieties recovered and grew normally. TN 83-26 (an experimental) showed the most symptoms of Temik injury primarily of leaf crinkling. Forrest has shown the same symptoms under similar conditions where Temik has been used. Excellent soybean cyst nematode control was obtained at this location in 1986. In 1985 at Knoxville, where Furadan had been used, very little cyst nematode control was noted especially in some "hot" spots in the field.

In 1986 at Knoxville, Terra Vig 515, Pioneer brand 9591, Yield King 577, Hartz 5252, Hartz 5370, TN 5-85, and Forrest produced sixty or more bushels of beans.

Coker 425 is a high yielding, lodging resistant variety that seems to do better under good growing conditions. Due to its short growth habit without much lateral branching, it might respond to close row spacing. However, in wide rows under drought conditions, this variety's yields may be reduced more than other varieties due to its growth habit. At Greeneville in 1985 this variety grew taller and branched more than normal when compared with other locations in Tennessee.

The leading varieties in yield of Maturity group V were Terra Vig 515, Pioneer brand 9591, Deltapine 415, Deltapine 105, Coker 485, FFR 561 and Essex. Using a three-year average for this maturity group (V), Coker 485, Coker 425, Essex, FFR 561, Pioneer brand 5482, and Deltapine 105 were the highest yielding varieties (Table 5).

Thirty-two late-maturing varieties (Maturity group VI & VII) were evaluated at four locations in 1986 (Tables 7 and 8). No yield data are reported for Spring Hill due to late harvest; results will be published in another report.

The highest yielding varieties in this late group in 1986 were Coker 686, Coker 156, Asgrow A6520, Leflore, and Yield King 707. Jeff, Spartan, Yield King 707, Hartz 6383R and Yield King 757 had a tendency to lodge. The remaining varieties stood well in these studies in 1986. Using a two-year average (Tables 9 and 10), Asgrow A6242, Asgrow A6520, Leflore, Hartz 7126, and Shiloh yielded as well as or better than Centennial.

The early-maturing varieties of Maturity group IV or less were evaluated at five locations in 1986 (Tables 13 and 14). Yields at Springfield and Ames Plantation were reduced due to dry weather. RA 452, Pershing, and Bailey 469 produced the highest average yield for 1986.

Two strains tests were conducted at Jackson with 12 strains being evaluated in Maturity group V (Table 17) and 13 strains being evaluated in the late-maturity groups of VI & VII (Table 18). In Maturity group V at Jackson, TN 84-51 and TN 84-147 yielded as well as or better than Essex. In the late strain test, Hartz H81-9548 produced the highest average yield.

In 1986, Lawrence D. Young evaluated all varieties at Jackson in the greenhouse for susceptibility to soybean cyst nematodes (Tables 19 to 22). The susceptibility rating was based on a scale of 0, 1, 2, 3, and 4, with 4 being susceptible. A mean severity index was obtained by multiplying the rating times the number of plants with that rating, divided by the total number of plants.

Example 1: 8 plants with a rating of 4 = 32/8 = 4.0 mean severity index.

Example 2: (3 plants x 2 rating = 6) + (2 plants x 1 rating = 2) + (3 plants x 0 rating = 0) = 6 + 2 + 0 = 8 divided by 8 total plants = 1.0 mean severity index.

A letter rating was also given with R being resistant, S being susceptible, MR being moderately resistant and Seg. being a variety segregating for nematode resistance. A "+" was given when a variety had a rating greater than the worst rating of 4.

Table 1. Soybeans: Yield of varieties (Maturity Group V) evaluated at six locations in 1986.

Variety	Avg.	1/ Greene-ville	2/ Knox-ville	3/ Spring-field	4/ Ames Plantation	5/ Milan	6/ Martin
				Bushels per acre			
Terra Vig 515	41	35	61	19	24	57	52
Pioneer brand 9591	41	39	60	17	26	59	46
Deltapine 415	41	42	58	19	26	57	42
Deltapine 105	41	41	53	24	26	54	45
Coker 485	40	41	55	16	22	60	50
FFR 561	40	37	51	18	29	56	49
Essex	40	42	52	16	25	56	47
Yield King 577	39	31	64	12	24	56	49
Coker 425	39	32	52	19	22	63	47
Hartz 5252	39	36	62	20	21	50	44
Hartz 5370	39	40	60	19	24	48	42
Pioneer brand 5482	39	38	57	18	25	50	46
TN 5-85	38	35	60	15	26	50	44
FFR 562	38	40	52	17	24	51	46
Pioneer brand 9581	38	38	56	14	24	51	45
Coker 355	37	39	52	23	23	41	45
Hartz 5171	37	37	58	17	19	50	43
Hartz X5164	37	38	51	14	22	54	53
Coker 80-R-49	37	37	57	14	22	50	42
Shenandoah	36	43	58	15	18	44	41
Forrest	36	32	62	18	20	43	41
Asgrow A5474	36	34	56	16	20	50	39
Asgrow A5980	36	36	54	19	18	49	39
Pioneer brand 9571	36	30	52	17	20	47	46
Terra Vig 553	36	33	54	15	22	47	42
FFR 560	36	35	52	14	23	45	43
Epps	35	38	49	16	26	42	41
Bedford	35	34	48	18	25	42	44
N.K. S59-19	35	34	47	10	26	51	40
Yield King 503	34	40	54	13	24	43	33
DeKalb-Pfizer EX655	34	32	52	10	19	45	48
Asgrow A5149	34	30	47	19	20	54	36
TN 83-26	34	32	50	13	19	47	42
Deltapine 675	34	34	57	18	19	44	32
RA 480	34	36	52	16	21	44	33
L.S.D. (.05)	3.5	7.3	7.5	5.9	4.2	6.5	9.2
C.V. %	13.5	14.4	9.8	25.5	13.3	9.2	15.1
Avg.	37.2	36.4	54.7	16.5	22.7	50.0	43.1

1/Waynesboro loam (2% to 5% slopes).
2/Sequatchie silt loam (2% to 5% slopes).
3/Dickson silt loam (2% to 5% slopes).
4/Loring silt loam (2% to 5% slopes).
5/Collins silt loam (2% to 5% slopes).
6/Collins silt loam (2% to 5% slopes).

Table 2. Soybeans: Yield and other characteristics of varieties (Maturity Group V) evaluated at six locations in 1986.

Variety	Avg. Yield	Moisture at Harvest	Date Full Bloom	Date Mature	Plant Height	Lodging
	Bu/A	%			In.	%
Terra Vig 515	41	15.8	7-15	10-12	34.3	8.6
Pioneer brand 9591	41	14.4	7-12	10-12	28.4	0.0
Deltapine 415	41	14.8	7-12	9-30	34.8	3.9
Deltapine 105	41	14.7	7-16	10-6	38.4	18.4
Coker 485	40	15.1	7-15	10-15	33.9	15.4
FFR 561	40	15.0	7-14	10-7	34.1	0.4
Essex	40	14.7	7-7	9-28	38.4	18.4
Yield King 577	39	14.0	7-14	10-1	37.7	30.8
Coker 425	39	14.0	7-6	9-28	25.5	0.0
Hartz 5252	39	14.1	7-14	10-1	37.4	4.6
Hartz 5370	39	14.6	7-14	10-6	37.6	2.7
Pioneer brand 5482	39	14.0	7-10	10-6	38.7	9.1
TN 5-85	38	14.5	7-9	9-29	36.4	7.0
FFR 562	38	14.7	7-17	10-9	41.4	3.1
Pioneer brand 9581	38	13.7	7-10	9-30	36.7	9.1
Coker 355	37	14.0	7-13	10-4	37.1	5.5
Hartz 5171	37	15.1	7-14	10-8	39.6	13.2
Hartz X5164	37	14.7	7-14	10-12	36.8	4.2
Coker 80-R-49	37	14.0	7-9	9-27	30.1	3.2
Shenandoah	36	14.5	7-13	10-2	36.9	10.4
Forrest	36	14.3	7-10	9-29	36.4	3.6
Asgrow A5474	36	14.3	7-12	9-27	36.4	3.6
Asgrow A5980	36	15.0	7-15	10-5	39.4	24.8
Pioneer brand 9571	36	13.9	7-13	10-2	39.2	11.6
Terra Vig 553	36	14.1	7-15	10-4	35.8	5.4
FFR 560	36	14.1	7-18	10-5	42.1	23.4
Epps	35	15.2	7-12	9-29	36.0	19.4
Bedford	35	14.4	7-19	10-2	40.8	22.9
N.K. S59-19	35	14.0	7-14	9-26	31.0	3.4
Yield King 503	34	13.3	7-10	9-27	39.4	10.2
DeKalb-Pfizer EX655	34	13.8	7-16	10-7	34.2	1.0
Asgrow A5149	34	14.2	7-9	10-2	31.1	0.0
TN 83-26	34	13.5	7-9	9-26	40.4	0.9
Deltapine 675	34	14.5	7-17	10-4	39.0	5.0
RA 480	34	13.6	7-10	9-27	41.2	14.5
L.S.D. (.05)	3.5					
C.V. %	13.5					
Avg.	37.2					

Table 3. Soybeans: Yield of varieties (Maturity Group V) evaluated at six locations for two years (1985-86).

Variety	Avg.	Greene-ville	Knox-ville	Spring-field	Ames Plantation	Milan	Martin
				Bushels per acre			
Coker 485	45	38	53	26	38	62	50
Terra Vig 515	45	35	56	26	42	58	50
Deltapine 105	44	44	52	28	41	47	47
Essex	44	44	48	27	43	54	48
FFR 561	44	42	46	27	45	54	48
TN 5-85	43	36	53	25	42	56	46
Pioneer brand 5482	43	41	50	26	41	52	48
Coker 425	43	39	50	28	38	57	46
Hartz 5252	43	38	54	27	39	53	46
Asgrow A5980	42	38	53	27	36	52	45
FFR 562	42	42	50	23	42	51	45
Asgrow A5474	42	39	50	25	38	53	47
Hartz 5370	42	36	52	27	39	52	44
Coker 355	42	37	52	30	37	48	46
Hartz 5171	42	36	51	26	38	52	45
Forrest	42	35	56	28	38	49	43
Pioneer brand 9571	42	35	49	26	37	52	49
Bedford	41	36	47	24	40	51	50
Terra Vig 553	41	36	50	25	40	52	42
FFR 560	41	36	51	24	37	51	44
Epps	40	38	48	23	38	48	45
Asgrow A5149	40	36	49	29	36	50	38
Yield King 503	39	40	52	23	40	40	36
RA 480	37	36	49	25	37	37	34

Table 4. Soybeans: Yield and other characteristics of varieties (Maturity Group V) evaluated at six locations for two years (1985-86).

Variety	Avg. Yield	Moisture at Harvest	Date Full Bloom	Date Mature	Plant Height	Lodging
	Bu/A	%			In.	%
Coker 485	45	14.6	7-13	10-12	34	18.0
Terra Vig 515	45	15.0	7-15	10-9	34	11.0
Deltapine 105	44	14.7	7-14	10-5	38	20.0
Essex	44	14.4	7-5	9-27	28	4.0
FFR 561	44	14.7	7-9	10-3	34	3.0
TN 5-85	43	14.1	7-8	9-29	36	13.0
Pioneer brand 5482	43	13.9	7-9	10-6	39	12.0
Coker 425	43	14.0	7-5	9-27	26	2.0
Hartz 5252	43	14.2	7-11	10-1	36	13.0
Asgrow A5980	42	14.8	7-12	10-4	41	28.0
FFR 562	42	14.5	7-14	10-6	40	7.0
Asgrow A5474	42	14.2	7-10	9-27	36	7.0
Hartz 5370	42	14.6	7-12	10-5	38	13.0
Coker 355	42	14.0	7-11	10-4	37	14.0
Hartz 5171	42	14.6	7-12	10-5	39	19.0
Forrest	42	14.0	7-9	9-29	37	8.0
Pioneer brand 9571	42	14.0	7-11	10-4	38	20.0
Bedford	41	14.3	7-19	10-3	43	30.0
Terra Vig 553	41	14.2	7-12	10-2	36	12.0
FFR 560	41	14.1	7-15	10-4	43	30.0
Epps	40	14.6	7-10	9-30	36	37.0
Asgrow A5149	40	14.1	7-7	9-30	30	0.4
Yield King 503	39	13.2	7-7	9-27	40	14.0
RA 480	37	13.8	7-9	9-27	41	22.7

Table 5. Soybeans: Yield of varieties (Maturity Group V) evaluated at six locations for three years (1984-86).

Variety	Avg.	Greene-ville	Knox-ville	Spring-field	Ames Plantation	Milan	Martin
			Bushels per acre				
Coker 485	46	40	50	32	44	60	49
Coker 425	46	43	50	33	44	58	46
Essex	45	46	48	32	46	52	46
FFR 561	45	43	49	32	48	52	45
Pioneer brand 5482	45	42	50	32	46	51	46
Deltapine 105	45	44	49	32	47	50	46
Hartz 5252	44	41	50	40	43	51	45
TN 5-85	43	39	50	28	44	54	45
Asgrow A5980	43	42	47	31	40	52	46
Asgrow A5474	43	41	46	29	42	52	46
Hartz 5171	42	38	49	30	42	52	43
Hartz 5370	42	40	46	30	44	51	42
Pioneer brand 9571	42	39	44	29	42	51	48
FFR 562	42	43	47	26	44	48	44
Coker 355	42	39	46	32	42	48	45
Forrest	42	38	50	31	41	48	43
Bedford	41	37	45	27	41	50	46
FFR 560	41	37	46	26	39	51	44
Epps	40	38	44	27	41	47	43
Yield King 503	40	41	46	28	45	41	38
RA 480	37	39	44	28	40	38	36

Table 6. Soybeans: Yield and other characteristis of varieties (Maturity Group V) evaluated at six locations for three years (1984-86).

Variety	Yield	Plant Height	Lodging	Date Mature
	Bu/A	In.	%	
Coker 485	46	35	20	10-10
Coker 425	46	27	2	9-28
Essex	45	33	11	9-27
FFR 561	45	34	4	10-3
Pioneer brand 5482	45	38	10	10-5
Deltapine 105	45	38	24	10-6
Hartz 5252	44	37	19	10-5
TN 5-85	43	37	16	9-29
Asgrow A5980	43	41	32	10-5
Asgrow A5474	43	37	7	9-30
Hartz 5171	42	40	23	10-6
Hartz 5370	42	39	20	10-6
Pioneer brand 9571	42	39	18	10-5
FFR 562	42	37	10	10-4
Coker 355	42	38	12	10-5
Forrest	42	38	12	10-1
Bedford	41	43	35	10-6
FFR 560	41	43	34	10-6
Epps	40	36	41	10-1
Yield King 503	40	39	22	10-3
RA 480	37	42	28	9-30

Table 7. Soybeans: Yield of varieties (Maturity group VI & VII) evaluated at three locations in 1986.

Variety	Avg.	Knoxville	Ames Plantation	Milan
			Bushels per acre	
Coker 686	48	60	26	58
Coker 156	46	59	26	53
Asgrow A6520	46	58	24	55
Leflore	46	56	28	52
Yield King 757	45	57	29	50
Asgrow A6242	44	58	25	50
Sampson	44	56	30	46
FFR 668	44	57	28	47
Centennial	43	52	27	51
Asgrow A6787	43	59	18	52
Hartz 7126	43	55	28	47
Deltapine 566	43	55	26	47
Hartz X6385	43	57	24	48
N.K. S69-96	42	56	23	48
Hartz 6383R	42	56	26	44
Yield King 696	42	57	25	44
Yield King 707	42	52	28	45
Shiloh	42	53	22	50
Yield King 593	41	61	20	42
Funk G-1409	41	51	23	48
Yield King 613	40	55	20	47
RA 606	40	50	23	46
Deltapine 497	40	48	24	47
Hartz 7110	40	54	25	39
Coker 6716	39	53	21	43
Funk G-Exp 3305	39	54	18	44
Terra Vig 616	39	53	21	42
Deltapine 417	38	46	25	44
Spartan	38	46	23	45
Jeff	38	52	26	35
Sanalona	36	49	20	39
McNair 500	36	51	14	43
L.S.D. (.05)	3.6			
C.V. %	11.4			
Avg.	41.6			

Table 8. Soybeans: Yield and other characteristics of varieties (Maturity Group VI & VII) evaluated at three locations in 1986.

Variety	Avg. Yield	Moisture at Harvest	Date Full Bloom	Date Mature	Plant Height	Lodging
	Bu/A	%			In.	%
Coker 686	48	16.7	7-27	10-26	36	3
Coker 156	46	16.8	7-26	10-24	36	2
Asgrow A6520	46	17.3	7-26	10-19	34	8
Leflore	46	17.3	7-26	10-24	38	10
Yield King 757	45	17.4	7-29	10-29	42	24
Asgrow A6242	44	16.6	7-24	10-20	35	8
Sampson	44	16.4	7-28	10-28	34	8
FFR 668	44	17.6	7-29	10-26	38	2
Centennial	43	17.0	7-28	10-24	40	3
Asgrow A6787	43	16.4	7-29	10-25	36	7
Hartz 7126	43	17.4	7-26	10-28	41	5
Deltapine 566	43	16.4	7-27	10-26	36	2
Hartz X6385	43	17.4	7-28	10-23	36	4
N.K. S69-96	42	16.8	7-29	10-27	36	8
Hartz 6383R	42	16.9	7-27	10-27	39	22
Yield King 696	42	16.6	7-27	10-22	35	4
Yield King 707	42	16.8	8-3	10-28	49	28
Shiloh	42	15.8	7-26	10-12	33	2
Yield King 593	41	16.2	7-25	10-19	39	4
Funk G-1409	41	16.8	7-26	10-20	37	2
Yield King 613	40	16.0	7-28	10-22	40	7
RA 606	40	16.7	7-26	10-28	41	9
Deltapine 497	40	17.4	8-2	10-27	47	6
Hartz 7110	40	17.8	7-28	10-23	40	11
Coker 6716	39	16.2	7-25	10-16	36	2
Funk G-Exp 3305	39	16.3	7-26	10-17	34	3
Terra Vig 616	39	16.7	7-26	10-25	42	10
Deltapine 417	38	18.9	7-27	10-28	49	10
Spartan	38	18.9	7-28	10-28	39	31
Jeff	38	17.0	7-25	10-24	36	32
Sanalona	36	16.6	7-29	10-18	35	8
McNair 500	36	16.5	7-24	10-12	32	2
L.S.D. (.05)	3.6					
C.V. %	11.4					
Avg.	41.6					

Table 9. Soybeans: Yield of varieties (Maturity group VI & VII) evaluated at three locations for two years (1985-86).

Variety	Avg.	Knoxville	Ames Plantation	Milan
			Bushels per acre	
Asgrow A6242	47	54	38	50
Asgrow A6520	46	52	35	52
Leflore	46	48	38	52
Hartz 7126	45	49	36	49
Shiloh	45	49	36	49
Centennial	45	49	37	48
Yield King 593	44	55	33	43
Deltapine 566	43	49	34	47
Hartz 6383R	43	49	34	46
Hartz 7110	42	49	32	46
Yield King 613	40	46	31	45
RA 606	40	45	31	44
Terra Vig 616	40	47	31	42
FFR 668	40	49	30	40
Deltapine 417	39	45	29	42

Table 10. Soybeans: Yield and other characteristics of varieties (Maturity Group VI & VII) evaluated at three locations for two years (1985-86).

Variety	Avg. Yield	Moisture at Harvest	Date Full Bloom	Date Mature	Plant Height	Lodging
	Bu/A	%			In.	%
Asgrow A6242	47	16.0	7-18	10-14	37	4.0
Asgrow A6520	46	16.5	7-30	10-15	35	4.0
Leflore	46	16.2	7-20	10-19	41	5.0
Hartz 7126	45	16.4	7-22	10-21	42	3.0
Shiloh	45	15.4	7-19	10-10	36	0.7
Centennial	45	16.2	7-22	10-19	40	2.0
Yield King 593	44	15.6	7-19	10-15	42	3.0
Deltapine 566	43	15.8	7-21	10-20	38	1.0
Hartz 6383R	43	16.4	7-21	10-22	40	9.0
Hartz 7110	42	16.8	7-24	10-21	42	5.0
Yield King 613	40	15.7	7-26	10-16	46	5.0
RA 606	40	16.2	7-22	10-22	41	4.0
Terra Vig 616	40	16.3	7-22	10-22	44	6.0
FFR 668	40	16.4	7-24	10-21	39	1.0
Deltapine 417	39	17.4	7-25	10-27	49	6.0

Table 11. Soybeans: Yield of varieties (Maturity group VI & VII) evaluated at three locations for three years (1984-86).

Variety	Avg.	Knoxville	Ames Plantation	Milan
			Bushels per acre	
Asgrow A6242	45	45	42	48
Asgrow A6520	45	45	39	50
Hartz 7126	44	42	41	50
Centennial	43	44	40	45
Yield King 593	43	46	39	43
Hartz 6383R	43	45	38	45
Deltapine 566	42	41	37	48
Yield King 613	40	40	36	44
FFR 668	39	42	34	42
RA 606	39	39	35	43
Deltapine 417	39	39	35	42

Table 12. Soybeans: Yield and other characteristis of varieties (Maturity Groups VI & VII) evaluated at three locations for three years (1984-86).

Variety	Yield	Plant Height	Lodging	Date Mature
	Bu/A	In.	%	
Asgrow A6242	45	38	13	10-14
Asgrow A6520	45	37	14	10-16
Hartz 7126	44	42	16	10-22
Centennial	43	41	13	10-20
Yield King 593	43	43	17	10-17
Hartz 6383R	43	40	26	10-21
Deltapine 566	42	40	11	10-22
Yield King 613	40	45	20	10-17
FFR 668	39	41	8	10-21
RA 606	39	41	13	10-21
Deltapine 417	39	49	19	10-26

Table 13. Soybeans: Yield of varieties (Maturity Group IV) evaluated at five locations in 1986.

Variety	Avg.	1/ Knox-ville	2/ Cross-ville	3/ Spring-field	4/ Milan	5/ Ames Plantation
			Bushels per acre			
RA 452	40	44	41	22	61	31
Pershing	39	39	38	26	64	28
Bailey 469	36	39	35	17	57	29
TN 83-7	35	38	31	22	58	28
RA 451	34	31	32	18	59	34
Pioneer brand 9471	34	34	29	17	59	30
Stevens	32	34	31	16	51	26
DeKalb-Pfizer CX415	30	31	30	20	50	22
Coker 393	30	36	30	18	48	17
DeKalb-Pfizer CX380	28	24	28	16	55	18
L.S.D. (.05)	2.8	7.4	4.5	4.7	6.9	7.0
C.V. %	13.7	14.6	9.6	17.0	8.5	18.6
Avg.	33.7	35.0	32.4	19.2	56.2	25.8

1/Sequatchie silt loam (2% to 5% slopes).
2/Hartsells loam (2% to 5% slopes).
3/Dickson silt loam (2% to 5% slopes).
4/Collins silt loam (2% to 5% slopes).
5/Loring silt loam (2% to 5% slopes).

Table 14. Soybeans: Yield and other characteristics of varieties (Maturity Group IV) evaluated at five locations in 1986.

Variety	Avg. Yield	Moisture at Harvest	Date First Flower	Date Mature	Plant Ht.	Flower Color	Pubes-cence Color	Date Last Flower
	Bu/A	%			In.			
RA 452	40	14.6	6-14	9-18	38	W	G	7-23
Pershing	39	15.4	6-14	9-22	28	W	G	7-20
Bailey 469	36	16.6	6-12	9-15	36	P & W	G	7-23
TN 83-7	35	16.7	6-12	9-13	38	P	T	7-19
RA 451	34	16.8	6-13	9-24	40	P	T	7-24
Pioneer brand 9471	34	15.6	6-12	9-11	35	P	T	7-22
Stevens	32	16.4	6-13	9-15	39	P	G	7-22
DeKalb-Pfizer CX415	30	15.8	6-11	9-3	32	W	T	7-18
Coker 393	30	15.7	6-11	9-3	28	P	T	7-15
DeKalb-Pfizer CX380	28	18.0	6-8	8-31	30	W	T	7-15
L.S.D. (.05)	2.8							
C.V. %	13.7							
Avg.	33.7							

Table 15. Soybeans: Yield of varieties (Maturity Group IV) evaluated at five locations for two years (1985-86).

Variety	Avg.	1/ Knox-ville	2/ Cross-ville	3/ Spring-field	4/ Milan	5/ Ames Plantation
			Bushels per acre			
Pershing	44	48	41	39	58	34
RA 452	44	49	44	39	47	38
Pioneer brand 9471	41	44	34	37	56	35
RA 451	41	42	38	35	55	34
TN 83-7	40	47	32	36	58	29
Stevens	38	40	34	34	52	31

Table 16. Soybeans: Yield and other characteristics of varieties (Maturity Group IV) evaluated at five locations for two years (1985-86).

Variety	Avg. Yield	Moisture at Harvest	Date First Flower	Date Mature	Plant Ht.	Date Last Flower
	Bu/A	%			In.	
Pershing	44	15.1	6-21	9-22	29	7-21
RA 452	44	15.4	6-20	9-20	39	7-26
Pioneer brand 9471	41	14.8	6-12	9-11	37	7-22
RA 451	41	16.4	6-15	9-25	41	7-23
TN 83-7	40	16.4	6-13	9-14	41	7-19
Stevens	38	16.1	6-14	9-13	42	7-21

Table 17. Soybeans: Yield and other characteristics of strains (Maturity Group V) evaluated at Jackson in 1986.

Strain	Avg. Yield	Moisture at Harvest	Date First Flower	Date Mature	Plant Ht.	Flower Color	Pubescence Color
	Bu/A	%			In.		
TN 84-51	36	12.1	7-15	9-14	28	P	T
TN 84-147	34	13.0	7-15	9-22	32	P	G
Essex	33	12.6	7-16	9-22	26	P	G
M82-570127	32	12.7	7-19	9-28	35	P	T
TN 82-94	32	12.8	7-15	9-22	28	P	G
FFR 565	32	12.8	7-16	9-22	32	W	T
M82-572403	30	12.6	7-19	9-22	32	W	G
M82-540103	29	13.6	7-15	9-22	29	W	G
M82-572509	29	13.6	7-16	9-22	29	P	G
DeKalb EX 655	29	17.8	7-20	10-8	31	W	T
TN 84-147	29	13.3	7-18	9-23	40	P	G
82-824[1/]	28	13.1	7-18	9-23	32	W	T
Forrest	28	12.1	7-18	9-22	32	W	T
TN 84-147	27	12.4	7-15	9-13	28	P	G
L.S.D. (.05)	5.2						
C.V. %	11.8						
Avg.	30.5						

[1/] Coker/Rohm and Haas Co.

Table 18. Soybeans: Yield and other characteristics of strains (Maturity groups VI and VII) evaluated at Jackson in 1986.

Strain	Yield	Moisture at Harvest	Date Full Bloom	Date Mature	Plant Ht.	Lodging	Flower Color	Pubescence Color
	Bu/A	%			In.	%		
1/								
H81-9548	44	17.4	7-28	10-30	44	20	Purple	Tawny
Centennial	37	18.0	7-29	10-30	46	10	Purple	Tawny
H81-2173	36	12.9	7-18	9-22	34	14	White	Tawny
Deltapine 726	36	19.9	8-3	11-5	46	18	Purple	Tawny
M82-571206	36	18.9	7-28	11-5	41	2	Purple	Tawny
H81-1587	34	19.2	8-4	11-8	44	19	White	Grey
M82-581908	32	20.4	7-28	11-2	35	1	Purple	Tawny
M82-722611	32	20.0	8-1	11-5	40	2	White	Grey
HB-15578-E4-6	31	19.6	7-28	10-31	47	8	Purple	Tawny
H79-17006	31	13.2	7-18	9-29	38	4	White	Tawny
Leflore	30	20.2	7-28	11-3	47	14	Purple	Tawny
H81-851	29	19.5	7-18	10-31	41	8	White	Tawny
HB-2J-E4-6	27	14.9	7-19	10-12	42	7	Purple	Tawny
CO82M-128	27	19.1	7-28	10-23	46	21	Purple	Grey
H81-860	26	20.7	7-31	11-1	43	7	White	Tawny
L.S.D. (.05)	8.4							
C.V. %	18.2							
Avg.	32.4							

1/ H = Hartz; M = Funk G; CO = C/R Seed Co.; and HB = Hy-Performer.

Table 19. Soybeans: Soybean Cyst Nematode ratings made by Lawrence D. Young on Maturity Group V varieties grown in the greenhouse at Jackson in 1986.

Variety	Soybean Cyst Nematode Race 3	Race 4	Resistance Rating Race 3	Race 4
	Mean Severity Index[1/]		(R or S)[2/]	
Forrest	0.8	3.7	R	S
Essex	4.0	4.0	S	S
Bedford	0.0	1.0	R	R
Epps	0.8	2.1	R	R
Asgrow A5474	0.4	1.2	R	R
Asgrow A5980	1.2	2.8	R	S
Asgrow A5149	3.7	3.9	S	S
Deltapine 415	1.3	4.0	R	S
Deltapine 675	3.2	3.4	S	S
Deltapine 105	3.9	3.8	S	S
Pioneer brand 5482	2.6	1.5	?	R
Pioneer brand 9571	0.6	2.0	R	Seg.
Pioneer brand 9581	1.2	2.2	R	R
Pioneer brand 9591	3.7	4.0	S	S
FFR 560	0.6	1.0	R	R
FFR 561	4.0	4.5	S	S
FFR 562	4.0	3.8	S	S
Hartz 5171	0.6	3.4	R	S
Hartz 5370	0.1	4.0	R	S
Hartz 5252	0.2	4.0	R	S
Hartz X5164	1.8	2.2	R	R
TN 5-85	0.6	3.7	R	S
TN 83-26	2.8	3.2	Seg.	MR
Coker 355	0.0	1.2	R	R
Coker 485	0.0	3.9	R	S
Coker 425	4.0	3.9	S	S
Coker 80R-419 (check)	1.1	4.0	R	S+
RA 480	2.7	3.7	?	S
Y.K. 577	0.2	4.0	R	S
Y.K. 503	3.8	3.4	S	S
Terra Vig 515	0.0	4.0	R	S
Terra Vig 553	1.2	4.0	R	S
Shenandoah	3.8	4.0	S	S
N.K. S59-19	0.5	2.0	R	S
DeKalb-Pfizer EX655	2.0	3.0	Seg.	MR

1/ The mean severity index is the sum of the values obtained by multiplying the rating times the number of plants with that rating, divided by the total number of plants. Rating was based on a scale of 0 through 4 with 4 being the most susceptible.

2/ R = resistant and S = susceptible.

Table 20. Soybeans: Soybean Cyst Nematode ratings made by Lawrence D. Young on Maturity Groups VI & VII varieties grown in the greenhouse at Jackson in 1986.

Variety	Soybean Cyst Nematode Race 3	Soybean Cyst Nematode Race 4	Resistance Rating Race 3	Resistance Rating Race 4
	Mean Severity Index[1/]		(R or S)[2/]	
Deltapine 417	4.0	4.0	S	S
Deltapine 566	4.0	4.0	S	S
Deltapine 497	4.0	4.0	S	S
Y.K. 696	0.1	4.0	R	S
Y.K. 593	0.4	4.0	R	S
Y.K. 707	0.2	3.8	R	MR
Y.K. 613	0.3	4.0	R	S
Y.K. 757	0.5	2.8	R	MR
Hartz X6385	0.2	4.0	R	S
Hartz 6383R	0.3	4.0	R	S
Hartz 7126	0.2	4.0	R	S
Hartz H 79-21046	0.0	4.0+	R	S+
N.K. S69-96	4.0	4.0	S	S
Terra Vig 616	3.5	4.0	S	S
Leflore	0.8	1.7	R	R
Centennial	0.7	4.0	R	S
Coker 6716	0.2	4.0	R	S
Coker 156	4.0	4.0	S	S
Coker 686	0.0	4.0	R	S
Jeff	0.7	3.2	R	MR
RA 606	1.1	4.0	R	S
Asgrow A6785	3.8	3.9	S	S
Asgrow A6520	0.4	2.9	R	MR
Asgrow A6242	0.6	2.4	R	R or Seg.
FFR 668	4.0	4.0	S	S
Shiloh	1.8	2.3	Seg.	R
Sanalona	4.0	3.8	S	S
Sampson	4.0+	4.0	S	S
Funk G-Exp. 3305	4.0+	4.0	S	S
Funk G-1409	4.0	4.0	S	S
Spartan	4.0	4.0	S	S
McNair 500	4.0	3.8	S	S

1/ The mean severity index is the sum of the values obtained by multiplying the rating times the number of plants with that rating, divided by the total number of plants.

2/ R = resistant and S = susceptible.

Table 21. Soybeans: Soybean Cyst Nematode ratings made by Lawrence D. Young on early-maturing varieties grown in the greenhouse at Jackson in 1986.

Variety	Soybean Cyst Nematode Race 3	Soybean Cyst Nematode Race 4	Resistance Rating Race 3	Resistance Rating Race 4
	Mean Severity Index[1/]		(R or S)	
Essex[2/]	3.8	-	S	-
RA 452	3.4	3.8	S	S
TN 83-7	0.3	1.2	R	R
Stevens	4.0	3.9	S	S
RA 451	4.0	4.0	S	S
Pershing	4.0	4.0	S	S
Pioneer brand 9471	4.0	4.0	S	S
Coker 393	3.7	4.0	S	S
DeKalb-Pfizer CX380	3.8	3.5	S	S
DeKalb-Pfizer CX415	3.0	3.8	S	S
Bailey 467	4.0	3.0	S	S
Bedford[3/]	-	1.0	-	R

[1/]The mean severity index is the sum of the values obtained by multiplying the rating times the number of plants with that rating, divided by the total number of plants.
[2/]Essex used as a check in race 3 infested soil.
[3/]Bedford used as a check in race 4 infested soil.

Table 22. Soybeans: Soybean Cyst Nematode ratings made by Lawrence D. Young on experimental strains grown in the greenhouse at Jackson in 1986.

Strain	Soybean Cyst Nematode Race 3	Soybean Cyst Nematode Race 4	Resistance Rating Race 3	Resistance Rating Race 4
	Mean Severity Index[1/]		(R or S)	
Essex (check)	4.0+	-	S	-
M 540103	4.0	3.0	S	S
M 572509	4.0	3.8	S	S
M 572403	1.2	3.3	R	S
CO 82-824	0.3	3.0	R	S
Exp 655	2.7	2.9	S	S
FFR 565	2.0	3.4	R	S
TN 82-94	4.0	4.0	S	S
TN 84-51	4.0	3.8	S	S
TN 84-129	1.8	4.0	Seg.	S
TN 84-146	1.4	3.8	Seg.	S
TN 84-147	0.5	4.0	R	S
H 81-860	0.3	3.5	R	S
Bedford (check)	-	2.6	-	R
H 81-9448	0.7	2.0	R	R
H 79-17006	0.5	3.7	R	S
H 81-851	0.1	3.9	R	S
H 81-1587	0.4	3.4	R	S
M 82-1571206	4.0	3.5	S	S
M 82-722611	3.8	3.8	S	S
CO 82M-128	0.5	1.8	R	R
HB-2J-E4-6	0.3	3.7	R	S
Deltapine 726	0.3	3.7	R	S

1/ The mean severity index is the sum of the values obtained by multiplying the rating times the number of plants with that rating, divided by the total number of plants.

2/ Essex used as a check in race 3 infested soil.

3/ Bedford used as a check in race 4 infested soil.