THE UNIFORM SOYBEAN TESTS
SOUTHERN REGION
1983

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
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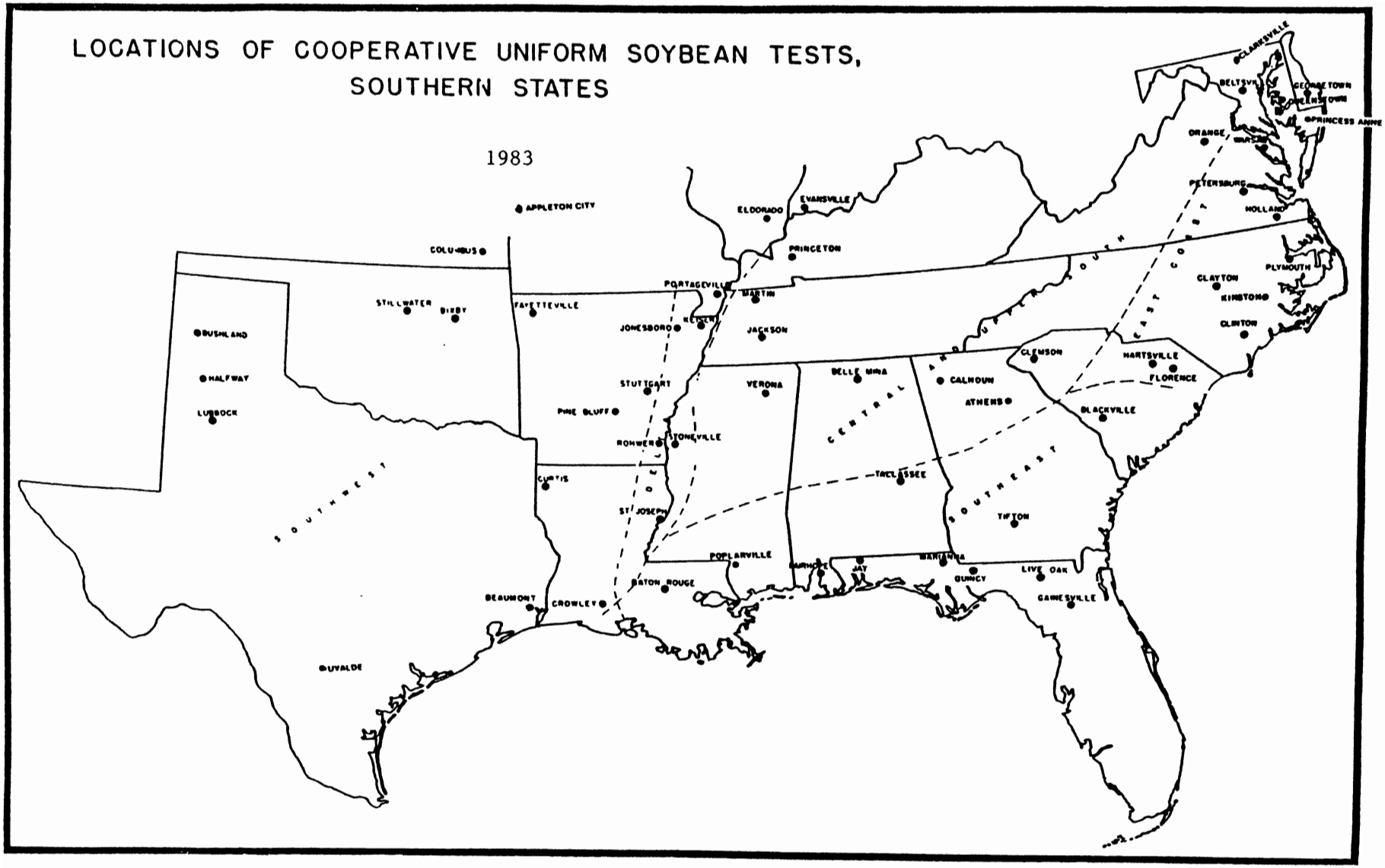
SOUTHERN REGION
STONEVILLE, MISSISSIPPI

LOCATIONS OF COOPERATIVE UNIFORM SOYBEAN TESTS, SOUTHERN STATES

1983



THE UNIFORM SOYBEAN TESTS

SOUTHERN STATES

1983

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INTRODUCTION

The Soybean Production Research Program has been directed toward the development of improved strains of soybeans and the obtaining of fundamental information necessary to the efficient breeding of strains to meet specific needs. Breeding lines are developed and evaluated in the several federal and state research programs. As breeding lines demonstrate specific qualities in the individual programs, they are advanced to the preliminary and uniform regional tests, conducted in cooperation with research workers in the southeastern states. This testing program enables breeders to evaluate new strains under a wide variety of conditions, and permits new strains to be put into production in a minimum amount of time.

Eleven uniform test groups have been established to evaluate the better strains developed in the breeding programs. The groups 00 through IV are adapted in the northern part of the United States, and the groups IV-S through VIII are grown in the southern part. Within their area of adaptation, there is a maturity range of 12 to 18 days within each maturity class. The best standard varieties available of each maturity class are used as check varieties with which to compare new strains as to seed yield, chemical composition, maturity, height, lodging, seed quality, and reaction to diseases and nematodes. For the groups grown in the southern area, the major check varieties are: Douglas, Essex, Forrest, Tracy-M, Centennial, Braxton, Wright, Hutton, and Kirby. At Stoneville, Mississippi, where all maturity classes will mature, the approximate maturity dates of these varieties when planted during the first half of May, are: Douglas, September 7; Essex, September 25; Forrest, October 1; Tracy-M, October 13; Centennial, October 16; Braxton, October 25; Hutton, November 1; and Kirby, November 4.

A wide range of soil and climatic conditions exists in the regions. As an aid in recognizing regional adaptation, the region has been subdivided into five rather broad areas which still represent a wide range of soil types. These are: (1) the East Coast, consisting of the Coastal Plain and Tidewater areas of the eastern shore of Maryland, Virginia, North Carolina, and the upper half of South Carolina; (2) the Southeast, consisting primarily of the Coastal Plain soils of the Gulf Coast area, but also including similar soil from South Carolina, southward; (3) the Upper and Central South, including the Piedmont and loessal hill soils east of the Mississippi River; (4) the Delta area, composed of the alluvial soils along the Mississippi River from southern Missouri, southward; and (5) the Southwest, comprising Arkansas and Louisiana (outside the Delta), and Oklahoma and Texas. In the Southwest area, the potential soybean-growing areas would include the alluvial soils, the Gulf Coast of Louisiana and Texas, and the high plains of Texas. In this area, several of the tests receive supplemental irrigation. A map is included to illustrate the five production areas.

On nearly all of the soils, other than the alluvial soils along the Mississippi River, fertilization is essential for satisfactory soybean production. In the Western area, irrigation is necessary for successful production. A table showing soil types, soil test information, and rate of fertilization is included.

The soil test information is based upon analyses run by laboratories with the states. Different methods are used for extraction and reporting by the various laboratories. An attempt is being made to report phosphorus and potash on a high, medium, and low basis, since pounds per acre may have different meanings in accordance with the methods used. In most cases, soil samples were taken after the soybeans were mature.

STRAIN IDENTIFICATION

The strains designated by number carry a letter prefix. This letter identifies where each strain was selected:

Co - Coker's Pedigreed Seed Company, Hartsville, South Carolina
D - Delta Branch Experiment Station and USDA-ARS
F - Florida Agricultural Experiment Station and USDA-ARS
Ga - Georgia Agricultural Experiment Station
J - Delta Branch Experiment Station, West Tennessee Experiment Station and USDA-ARS
K - Kansas Agricultural Experiment Station
Ky - Kentucky Agricultural Experiment Station
L - Illinois Agricultural Experiment Station and USDA-ARS
La - Louisiana Agricultural Experiment Station
Md - Maryland Agricultural Experiment Station and USDA-ARS
N - North Carolina Agricultural Experiment Station and USDA-ARS
R - Arkansas Agricultural Experiment Station
S - Missouri Agricultural Experiment Station and USDA-ARS
Tn - Tennessee Agricultural Experiment Station
Ts - Texas Agricultural Experiment Station
UD - Delaware Agricultural Experiment Station
V - Virginia Agricultural Experiment Station

NOTE: A T in a Ga number indicates selection made at Tifton.

A second L in an L number indicates selection made in southern Illinois at Eldorado.

An S following L identifies lines selected at Southern Illinois University, Carbondale.

Location of soybean nurseries along with soil type, soil analysis, and fertilization

Location	IV	V	VI	VII	VIII		P_2O_5	K_2O	pH	Fertilizer[1]	Yield-adapted variety[2]
East Coast											
Queenstown, MD	1*	1				Matapeake silt loam	H	H+	5.9	0-45-90	38.2 - B
Georgetown, DE		1				Lakeland loamy sand	M	M	6.1	0-0-60	45.2 - C
Warsaw, VA	1*	1*	1			Kempsville sandy loam	H	M	6.5	None	31.0 - C
Holland, VA		1	1*			Raines silt loam	-	-	-	None	49.0 - C
Plymouth, NC		1*	1*	1		Bladen f. s. loam	-	-	-	0-40-80	45.3 - F
Kinston, NC			1	1		Norfolk sandy loam	-	-	-	0-40-80	15.9 - G
Clinton, NC			1	1*	1	Norfolk sandy loam	-	-	-	0-40-80	33.5 - F
Florence, SC (A)			1	1	1	Norfolk f. s. l.	-	-	-	24-48-144	45.2 - I
Florence, SC (B)					1	Norfolk f. s. l.	-	-	-	24-48-144	30.1 - I
Hartsville, SC (A)			1	1	1	Norfolk sandy loam	-	-	-	0-36-108	46.3 - G
Hartsville, SC (B)					1	Norfolk sandy loam	-	-	-		
Southeast											
Blackville, SC (A)			1	1*	1*	Dothan loamy sand	-	-	-	0-40-80	32.7 - F
Blackville, SC (B)					1	Dothan loamy sand	-	-	-	0-40-80	32.2 - F
Tifton, GA			1	1*	1	Tifton sandy loam	H	M	-	0-50-100	49.1 - I
Tallassee, AL				1*	1	Cahaba l.f.s.	H	H	6.9	None	40.8 - G
Gainesville, FL				1	1*	Arredonda fine sand	H	M	6.3	18-45-90	36.0 - I
Quincy, FL			1	1	1*					None	39.7 - F
Marianna, FL				1	1	Chipola loamy sand	H+	M	6.5	15-45-90	47.9 - G
Jay, FL			1*	1*	1*	Red bay sandy loam	-	-	-	0-75-38	44.0 - F
Fairhope, AL			1	1	1	Malbis f. s. l.	M	M	6.3	0-42-42	49.9 - I
Poplarville, MS				1	1	Sawyer f. s. l.	-	-	-		41.9 - G
Baton Rouge, LA			1	1		Olivier silt loam	-	-	-	0-60-60	45.0 - F
Upper & Central South											
Orange, VA	1	1				Davidson clay loam	M	M	6.1	12-72-72	24.3 - B
Eldorado, IL	1						-	-	-		28.1 - A
Clemson, SC		1	1	1	1	Cecil sandy loam	H+	M+	6.2	0-26-26	32.2 - G
Calhoun, GA		1	1	1		Staser clay loam	H+	H	5.9	0-54-108	71.4 - G
Athens, GA		1	1*	1	1	Cecil sandy loam	H+	M	6.9	None	54.8 - H
Knoxville, TN	1	1				Sequatchie loam	-	-	-	0-60-60	31.5 - D
Belle Mina, AL		1	1			Decatur clay loam	H	H	5.9	None	15.4 - C
Princeton, KY	1	1				Crider silt loam	H	H+	6.8	None	24.7 - C
Tiptonville, TN	1*	1*				Morganfield s. l.	M	L	7.1	0-0-100	29.2 - D
Martin, TN	1	1				Henry silt loam	M	M	5.8	0-50-50	25.0 - C
Jackson, TN		1	1			Memphis silt loam	H	H	5.8	0-90-80	14.2 - C

Location	IV	V	VI	VII	VIII	Soil type	P_2O_5	K_2O	pH	Fertilizer[1]	Yield-adapted variety[2]
Delta											
Portageville, MO (A)	1	1*	1			Tiptonville silt loam	H	H	-	None	34.8 - D
Portageville, MO (B)	1	1	1			Sharkey clay	H	H	-	None	20.7 - C
Keiser, AR	1	1*	1*			Sharkey clay	M	H	6.7	None	44.9 - E
Jonesboro, AR		1	1			Calloway silt loam	H	H	6.5	None	15.8 - F
Pinetree, AR		1	1				M	M	6.5	0-20-30	18.4 - C
Stoneville, MS (A)	1*	1*	1*	1*		Bosket f. s. l.	H	M	7.2	None	46.9 - C
Stoneville, MS (B)		1*	1*	1*	1*	Sharkey clay	H+	H+	6.8	None	39.4 - F
Rohwer, AR			1	1*		Perry clay	M	H	7.2	None	49.8 - G
St. Joseph, LA		1	1	1		Sharkey clay	-	-	-	None	59.3 - G
West											
Manhattan, KS	1	1				Eudora silt loam	M	H	7.7	None	51.2 - A
Columbus, KS	1	1				Cherokee silt loam	M	M	6.7	12-24-24	25.8 - C
Parsons, KS	1	1				Cherokee silt loam	M	M	6.6	12-24-24	20.4 - C
Bixby, OK	1	1	1			Reinach silt loam	H	H	6.5	None	39.0 - C
Pine Bluff, AR		1	1	1		Calloway silt loam	M	H	7.1	46-48-108	56.2 - C
Stuttgart, AR		1	1	1		Crowley silt loam	L	M	6.0	0-26-70	55.5 - C
Bossier City, LA		1	1	1		Norwood silty c. l.	-	-	-	None	53.7 - F
Bushland, TX	1					Pullman clay	-	-	-	None	33.2 - A
Lubbock, TX	1	1				Amarillo loam	H	H+	8.0	None	39.2 - C
Beaumont, TX		1	1	1*	1*	Bernard/Morey s. l.	-	-	-	0-0-120	39.2 - F
Clovis, NM	1					Pullman s. c. l.	-	-	-	None	29.1 - A

[1]Fertilizer applied converted to pounds N, P_2O_5, K_2O. For example: 400# of 2-12-12 equals 8-48-48.

[2]Varieties: A = Douglas; B = Essex; C = Forrest; D = Epps; E = Tracy-M; F = Centennial; G = Braxton; H = Wright; I = Kirby.

*Preliminary nursery also grown.

METHODS

The uniform nurseries were planted in 4-row plots with 3 replications. All seed was packeted at Stoneville, Mississippi for planting 19-foot rows. In most cases a 16-foot section was harvested from each of the two center rows. Randomized block designs are used for groups. Row widths at the different locations vary from 30 to 40 inches. An attempt was made to follow the best cultural and management practices in conducting these strain comparisons.

The preliminary nurseries were planted in 4-row plots with 2 replications at each of 4 to 8 locations.

Planting rate - all strains were packeted for planting at the rate of 9 seeds per foot.

Yields are taken by harvesting a 16-foot length from the mid-section of each plot. Actual seed weights are recorded after the seed of strains have a uniform moisture content. A bushel weight of 60 pounds is used in determining bushels per acre.

Shattering notes, where taken, are on the border rows, 14 days after maturity. The estimates are recorded on a scale of 1 to 5 as follows:

1 - no shattering
2 - 1 to 3% shattered
3 - 4 to 8% shattered
4 - 9 to 19% shattered
5 - over 20% shattered

Chemical composition - oil percent and protein percent were determined from representative locations. Percentage composition of the seed is expressed on a moisture-free basis. All chemical analyses are made at Peoria, Illinois.

Seed size for each strain was determined from a composite sample from all replications at a location. Seed size is reported for the locations where seed was analyzed for chemical composition and is reported as weight in grams per 100 seeds.

Lodging notes are recorded on a scale of 1 to 5 according to the following criteria:

1 - almost all plants erect
2 - either all plants leaning slightly, or a few plants down
3 - either all plants leaning moderately, or 25 to 50% of the plants down
4 - either all plants leaning considerably, or 50 to 80% of the plants down
5 - all plants down badly

Height is determined as the average length of plants in a plot from the ground to the top extremity at time of maturity.

Maturity is taken as the date when the pods are dry and most of the leaves have dropped. Under most conditions, the stems are also dry. Maturity in all summaries is expressed as days earlier (-) or later (+) than a standard or reference variety. Reference varieties used from the different uniform tests are as follows: Group IV, Douglas; Group V, Essex; Group VI, Centennial; Group VII, Braxton; and Group VIII, Kirby.

Seed quality is rated from 1 to 5 according to the following scale:

1 - very good; 2 - good; 3 - fair; 4 - poor; and 5 - very poor

The factors considered in estimating seed quality are development of seed, wrinkling damage, and brightness. While the seed quality score indicates relative appearance of seed for the several varieties at one location, considerable difference can exist among factors responsible for the poorer grades in different locations.

Disease and nematode ratings: Ratings are made on a 1 to 5 basis with 1 being resistant and 5 very susceptible or in other cases rated R - resistant, M - moderate, and S - susceptible.

All strains of V maturity and later are resistant to bacterial pustule. Very little injury was observed from phytophthora rot in 1983.

Plantings were made at Jay, Florida, for Meloidogyne incognita ratings and at Blackville, South Carolina for M. arenaria ratings.

Plantings were made at Ames Plantation in Tennessee on SCN race 3 infested soil. Ratings were made on the basis of late season cyst counts. SCN race 4 ratings were based upon field plantings at Tiptonville.

Statistical analyses - yield data are analyzed by analysis of variance. Differences necessary to indicate difference among strains (odds 19:1) are reported for each location. Yield data from tests with extremely low yields or an extremely high coefficient of variability are not included in calculating averages.

UNIFORM GROUP IV-S

1983

	Variety or strain	Parentage	Generation composited
1.	Douglas	Williams X Calland	F_5
2.	Pershing (S76-2109)	D67-3297 X Essex	F_4
3.	V76-411	Essex X SRF-400	F_5
4.	LS78-248	L71L-436 X J74-5	F_5
5.	V78-444	Essex mutant	
6.	V78-713	Essex X V68-1171	F_5
7.	V78-727	Essex X V68-1171	F_5
8.	Ky79-0237	Williams X Essex	F_5
9.	S79-4259	Bedford X Crawford	F_5
10.	V79-1362	Essex X Williams	F_5
11.	V79-2856	Hodgson X V73-1899	F_5
12.	V74-315	V66-318 X V68-2331	F_5

Background of breeding lines used as parents:

D67-3297 is a selection from Hill(2) X PI 171450 which was tested in Uniform IV-S.

J74-5 is a SCN race 4 resistant line of the same parentage as Bedford.

V68-1171 is a selection from PI 80837 X V63-76 which was grown in Uniform V in 1974.

V66-318 is a selection from D53-184 X J22 which was grown in Preliminary Group IV-S in 1968.

V68-2331 is a selection from York X Clark which was grown in Uniform Group V in 1971.

Uniform IV-S nurseries were planted at 21 locations. Results from 17 locations are summarized in Tables 1-7. Table 1 gives a general summary of performance and characteristics including three-year means for seed yield and oil and protein content.

S76-2109 has been increased for release and named Pershing. It is of late IV-S maturity approximately of the same maturity as Hill. It has yielded well in all areas and has distinctly superior seed quality over Douglas. Shattering was severe in some of the areas in 1983. S76-2109 received the lowest shattering score for the strains in this group. V76-411 has also been evaluated three years. It is of late IV-S maturity. Seed yield and seed quality are only slightly below that for S76-2109.

Four strains have been evaluated 2 years. LS78-248 was selected for resistance to soybean cyst nematode. It has averaged lower in seed yield than Douglas, has similar seed quality, and shattered badly. It is being released as Egyptian. V78-444 is of mid-maturity for the group and has produced quite well. V78-713 and V78-727 are of similar maturity to S76-2109.

Five strains were evaluated for the first year. V79-1362 and V79-2856 have a slightly earlier maturity than Douglas. Seed quality was no better than that for Douglas and seed yields were slightly lower. S79-4259 was selected for resistance to soybean cyst nematode. Ky79-0237 and V74-315 both yielded well in all regions. V74-315 is being considered for possible release.

Plantings were made for evaluation against the root-knot nematode, M. incognita at Jay, Florida and M. arenaria near Blackville, South Carolina. No strain was resistant to both nematode species. Plantings were made in the field cage at Stoneville for evaluation against feeding by soybean looper. All strains were rated susceptible.

Table 1 - General summary of performance for the strains in Uniform Group IV-S, 1983

	No. of locations	Douglas	Pershing (S76-2109)	V76-411	LS78-248	V78-444
Seed Yield - 1983						
East Coast	2	35.8	42.6	41.4	34.5	39.0
Upper & Central South	4	24.4	27.0	24.9	23.2	25.3
Delta	3	32.5	35.6	32.9	30.0	32.7
West	6	29.6	30.5	30.3	23.4	25.9
1982-83						
East Coast		42.5	45.4	44.4	38.1	42.5
Upper & Central South		38.6	41.7	40.7	35.3	39.6
Delta		34.4	37.8	36.0	34.0	35.9
West		35.3	35.0	36.1	30.5	32.0
1981-83						
East Coast		43.2	44.7	43.6		
Upper & Central South		43.0	45.2	44.9		
Delta		36.7	39.4	38.5		
West		38.5	39.0	39.5		
Oil Content - 1983		21.9	20.6	21.9	21.1	21.4
1982-83		20.4	19.0	20.3	19.5	19.9
1981-83		20.3	18.9	20.1		
Protein Content - 1983		41.6	40.5	40.5	40.9	41.8
1982-83		41.4	40.6	40.2	40.5	41.7
1981-83		41.6	41.2	40.9		
Seed size		15.0	11.8	11.3	10.8	11.3
Maturity index		9-28	+11	+8	+4	+5
Height		31	27	27	33	26
Seed quality		3.2	2.0	2.1	3.1	2.3
Bacterial Pustule		1.0	1.0	1.0	1.0	1.0
M. incognita		5.0	1.0	4.0	5.0	1.5
M. arenaria		1.5	4.8	1.5	1.8	4.5
SCN race 3		S	S	S	R	S
SCN race 4		S	S	S	R	S
Soybean Looper		5.0	5.0	5.0	5.0	5.0
Shattering		4.0	2.5	3.3	5.0	5.0
Flower color		W	W	P	W	P
Pubescence color		T	G	W	T	G
Pod wall color		Br	T	Br	T	T

Table 1 - (continued)

	V78-713	V78-727	Ky79-0237	S79-4259	V79-1362	V79-2856	V74-315
Seed Yield - 1983							
East Coast	40.6	40.9	42.8	36.5	35.9	36.5	40.7
Upper & Central South	26.3	28.9	26.4	24.5	24.4	26.1	29.3
Delta	37.2	38.1	29.0	35.1	24.6	33.4	36.9
West	27.0	27.6	26.5	28.0	25.7	31.4	33.6
1982-83							
East Coast	44.1	44.8					
Upper & Central South	41.8	42.0					
Delta	41.0	40.5					
West	33.0	32.2					
1981-83							
East Coast							
Upper & Central South							
Delta							
West							
Oil Content - 1983	21.1	21.2	22.3	23.0	22.1	23.0	22.6
1982-83	19.7	19.8					
1981-83							
Protein Content -1983	42.0	41.8	41.4	37.6	42.1	39.6	39.4
1982-83	42.0	41.7					
1981-83							
Seed size	12.7	11.9	14.5	11.2	12.2	12.8	11.8
Maturity index	+12	+12	+3	+8	-2	-1	+6
Height	29	29	32	40	33	29	32
Seed quality	2.5	2.4	2.3	2.7	3.0	3.0	2.6
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	1.0	1.0
M. incognita	1.5	1.0	1.5	1.0	5.0	4.5	5.0
M. arenaria	5.0	4.5	4.5	3.5	1.8	2.0	1.3
SCN race 3	S	S	S	R	S	S	S
SCN race 4	S	S	S	R	S	S	S
Soybean looper	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Shattering	2.3	3.3	5.0	3.0	5.0	4.7	3.7
Flower color	P	P	W	W	P	P	P
Pubescence color	G	G	T	T	T	G	G
Pod wall color	T	T	T	Br	T	T	T

Table 2 - Seed yield, in bushels per acre, for the strains in Uniform Group IV-S, 1983

Location	Douglas	Pershing (S76-2109)	V76-411	LS78-248	V78-444	V78-713	V78-727
			EAST COAST				
Queenstown, MD	37.6	47.7	45.9	36.2	41.6	45.7	45.3
Warsaw, VA	33.9	37.4	36.9	32.7	36.4	35.4	36.5
Mean	35.8	42.6	41.4	34.5	39.0	40.6	40.9
			UPPER AND CENTRAL SOUTH				
Orange, VA	25.8	23.5	21.1	16.1-	25.3	20.7	29.3
Knoxville, TN *	37.6	37.1	37.6	28.3	29.4	36.3	33.9
Eldorado, IL	28.1	40.6+	34.5+	34.5	28.5	37.1	37.8
Princeton, KY	17.7	16.9	14.8	12.7-	20.1	19.6	18.5
Tiptonville, TN	25.8	27.0	29.0	29.4	27.1	27.7	29.9
Mean	24.4	27.0	24.9	23.2	25.3	26.3	28.9
			DELTA				
Portageville, MO (A)	20.5	25.4+	22.8	24.1	20.5	24.9	24.6
Portageville, MO (B) *	9.9	16.8+	13.1	13.7	11.4	19.4+	13.8
Martin, TN *	10.4	18.3	8.9	9.7	8.3	16.0	12.8
Keiser, AR	35.6	37.6	30.1	31.7	36.7	40.7	38.7
Stoneville, MS (A)	41.4	43.9	45.8	34.1	40.9	46.1	50.9+
Mean	32.5	35.6	32.9	30.0	32.7	37.2	38.1
			WEST				
Manhattan, KS	51.7	44.9	44.8	36.5-	44.3	44.6	44.4
Columbus, KS	9.7	26.2+	15.3+	21.3+	17.4+	20.3+	20.0+
Bixby, OK	19.6	35.4+	27.9+	20.6	20.1	31.5+	31.5+
Bushland, TX	33.2	24.1-	29.4	18.1-	19.1-	17.9-	20.0-
Lubbock, TX	34.3	31.5	37.3	24.1-	31.4	29.1	31.5
Clovis, NM	29.3	21.0-	26.8	19.9-	23.2	18.3-	18.1-
Mean	29.6	30.5	30.3	23.4	25.9	27.0	27.6

*Not included in mean.
(+) - Strains yielding significantly more (odds 19:1 or greater) than Douglas.
(-) - Strains yielding significantly less (odds 19:1 or greater) than Douglas.

Table 2 - (continued)

Location	Ky79-0237	S79-4259	V79-1362	V79-2856	V74-315	L.S.D. (.05)	C.V. (%)
			EAST COAST				
Queenstown, MD	45.6	37.0	37.0	41.0	43.8	NS	17
Warsaw, VA	40.0	35.9	34.8	31.9	37.5	NS	11
Mean	42.8	36.5	35.9	36.5	40.7		
			UPPER AND CENTRAL SOUTH				
Orange, VA	26.4	21.4	25.3	26.3	24.3	5.2	13
Knoxville, TN *	33.9	37.2	25.8	34.8	32.0	NS	15
Eldorado, IL	30.6	33.2+	30.1	33.9+	41.3+	4.6	8
Princeton, KY	21.4	13.2-	16.4	19.3	19.7	3.1	15
Tiptonville, TN	27.3	30.1	25.6	24.8	31.7	NS	13
Mean	26.4	24.5	24.4	26.1	29.3		
			DELTA				
Portageville, MO (A)	18.8	29.2+	15.3-	23.7	27.5+	4.9	12
Portageville, MO (B)*	13.7	19.3+	13.3	8.4	13.2	4.3	18
Martin, TN *	14.6	12.7	9.9	9.7	10.0	NS	35
Keiser, AR	35.5	32.9	25.4-	34.6	41.4+	5.7	10
Stoneville, MS (A)	32.6-	44.1	33.2-	42.0	41.8	7.7	11
Mean	29.0	35.1	24.6	33.4	36.9		
			WEST				
Manhattan, KS	39.3-	21.9-	46.7	53.5	45.6	8.6	12
Columbus, KS	19.9+	24.4+	21.9+	13.3	24.3+	5.3	16
Bixby, OK	27.4+	31.0+	13.1	27.6+	33.4+	7.9	16
Bushland, TX	24.1-	27.7-	25.4-	32.5	27.4-	3.9	9
Lubbock, TX	23.6-	36.1	19.1-	32.4	43.8+	5.3	10
Clovis, NM	24.9	26.8	27.8	29.3	26.8	5.6	14
Mean	26.5	28.0	25.7	31.4	33.6		

*Not included in mean.

Table 3 - Chemical composition and seed size for the strains in Uniform Group IV-S, 1983

Location	Douglas	Pershing (S76-2109)	V76-411	LS78-248	V78-444	V78-713
			OIL PERCENTAGES			
Queenstown, MD	21.9	21.1	22.3	21.9	21.8	21.0
Warsaw, VA	22.0	20.9	21.4	20.9	21.1	20.6
Orange, VA	21.3	19.1	20.7	18.2	20.1	20.3
Knoxville, TN	23.0	21.9	23.9	22.5	23.9	22.4
Eldorado, IL	20.6	19.6	20.2	21.1	20.3	19.2
Portageville, MO (A)	21.8	21.4	22.5	22.4	21.0	22.4
Keiser, AR	21.1	20.3	21.4	19.1	20.4	21.3
Stoneville, MS (A)	23.1	20.8	22.9	22.6	22.3	21.5
Mean	21.9	20.6	21.9	21.1	21.4	21.1
			PROTEIN PERCENTAGES			
Queenstown, MD	40.3	38.0	37.8	36.5	40.7	40.6
Warsaw, VA	41.3	40.5	39.6	40.4	41.6	42.9
Orange, VA	42.1	41.8	40.8	44.6	43.3	42.6
Knoxville, TN	39.2	38.0	37.5	39.6	38.0	39.9
Eldorado, IL	43.8	42.0	42.6	41.1	44.1	43.8
Portageville, MO (A)	40.3	39.4	38.8	39.5	41.2	40.7
Keiser, AR	41.8	41.0	39.8	42.9	42.3	41.9
Stoneville, MS (A)	44.1	43.3	41.5	42.4	42.9	43.6
Mean	41.6	40.5	40.5	40.9	41.8	42.0
			GRAMS PER 100 SEEDS			
Queenstown, MD	20.6	14.5	14.2	13.5	17.8	16.4
Warsaw, VA	20.9	14.0	14.2	13.5	14.8	16.5
Orange, VA	16.0	13.0	12.0	10.0	12.0	14.0
Eldorado, IL	11.4	10.1	9.3	9.3	8.8	10.2
Portageville, MO (A)	12.3	9.2	9.1	9.7	7.6	9.5
Keiser, AR	10.0	10.0	7.0	9.0	9.0	11.0
Stoneville, MS (A)	18.2	10.6	11.1	11.8	12.2	11.6
Columbus, KS	11.6	12.6	8.8	9.8	9.3	12.3
Bixby, OK	14.0	11.8	10.1	10.3	10.2	12.4
Mean	15.0	11.8	11.3	10.8	11.3	12.7

Table 3 - (continued)

Location	V78-727	Ky79-0237	S79-4259	V79-1362	V79-2856	V74-315
			OIL PERCENTAGES			
Queenstown, MD	21.4	22.0	22.7	22.0	23.6	22.3
Warsaw, VA	21.0	22.0	22.2	22.2	22.1	21.9
Orange, VA	20.3	20.8	22.1	21.3	22.1	20.8
Knoxville, TN	23.1	23.5	24.1	23.3	24.8	24.2
Eldorado, IL	20.1	21.5	21.8	21.1	21.5	21.5
Portageville, MO (A)	22.1	23.2	23.7	21.4	23.6	24.3
Keiser, AR	20.4	22.4	23.1	22.6	22.2	23.0
Stoneville, MS (A)	21.5	22.9	24.4	22.5	24.1	22.6
Mean	21.2	22.3	23.0	22.1	23.0	22.6
			PROTEIN PERCENTAGES			
Queenstown, MD	40.3	40.5	35.2	41.5	36.0	37.8
Warsaw, VA	42.2	41.8	37.7	42.2	40.7	39.7
Orange, VA	42.6	42.6	39.6	42.5	40.8	42.1
Knoxville, TN	38.6	39.6	34.9	40.8	35.9	37.3
Eldorado, IL	44.4	42.4	38.6	43.0	42.6	40.4
Portageville, MO (A)	40.3	40.7	36.1	41.6	38.2	37.0
Keiser, AR	42.1	40.9	39.3	41.5	40.5	39.3
Stoneville, MS (A)	43.8	42.8	39.3	43.8	42.1	41.2
Mean	41.8	41.4	37.6	42.1	39.6	39.4
			GRAMS PER 100 SEEDS			
Queenstown, MD	16.3	19.1	16.1	17.1	18.7	15.3
Warsaw, VA	15.1	19.0	16.7	15.8	16.3	15.7
Orange, VA	14.0	17.0	13.0	14.0	15.0	12.0
Eldorado, IL	10.0	11.5	11.1	10.8	10.4	10.2
Portageville, MO (A)	9.1	11.6	11.9	10.0	10.7	10.0
Keiser, AR	7.0	10.0	7.0	9.0	8.0	10.0
Stoneville, MS (A)	11.2	15.8	12.2	12.4	13.6	10.4
Columbus, KS	12.0	13.0	12.0	10.2	9.3	10.6
Bixby, OK	12.1	13.2	12.7	10.8	13.2	12.3
Mean	11.9	14.5	11.2	12.2	12.8	11.8

Table 4 - Relative maturity data, days earlier (-) or later (+) than Douglas, for the strains in Uniform Group IV-S, 1983

Location	Date planted	Douglas	Pershing (S76-2109)	V76-411	LS78-248	V78-444
			EAST COAST			
Queenstown, MD	6-8	10-14	+3	+1	-1	0
Warsaw, VA	6-2	10-9	+6	+5	-1	0
Mean		10-12	+5	+3	-1	0
			UPPER AND CENTRAL SOUTH			
Orange, VA	5-19	9-24	+15	+12	+8	+7
Eldorado, IL	6-1	9-14	+24	+20	+15	+16
Princeton, KY	6-1	9-28	+6	+3	+2	+2
Mean		9-22	+15	+12	+8	+8
			DELTA			
Portageville, MO(A)	5-24	9-14	+16	+12	+11	+1
Portageville, MO(B)	5-24	9-26	+12	+9	+9	+1
Martin, TN	5-30	9-30	+4	-3	-5	-3
Keiser, AR	5-27	9-20	+10	+9	+4	+7
Stoneville, MS (A)	5-11	9-11	+9	+7	+4	+1
Mean		9-20	+10	+7	+5	+1
			WEST			
Manhattan, KS *	5-9	10-10	F	+4	+2	+2
Columbus, KS	6-17	9-28	+16	+6	+8	+5
Bushland, TX	5-25	9-29	+16	+15	+6	+11
Lubbock, TX	5-17	9-24	+11	+9	+1	+10
Clovis, NM	6-2	9-26	+16	+9	+5	+9
Mean		9-27	+15	+10	+5	+9

*Not included in mean.

Table 4 - (continued)

Location	V78-713	V78-727	Ky79-0237	S79-4259	V79-1362	V79-2856	V74-315
			EAST COAST				
Queenstown, MD	+6	+8	-1	-1	-1	-1	+2
Warsaw, VA	+9	+7	+1	+5	-4	-5	+5
Mean	+8	+8	0	+2	-3	-3	+4
			UPPER AND CENTRAL SOUTH				
Orange, VA	+14	+14	+5	+5	-2	-5	+8
Eldorado, IL	+24	+24	+9	+22	+1	+6	+18
Princeton, KY	+5	+4	+1	+6	+2	0	+4
Mean	+14	+14	+5	+11	0	0	+10
			DELTA				
Portageville, MO(A)	+12	+11	+8	+16	+1	+2	+12
Portageville, MO(B)	+11	+10	+2	+9	-1	-1	+1
Martin, TN	+5	+4	-1	+4	-9	-5	-10
Keiser, AR	+9	+10	+6	+5	-1	0	+4
Stoneville, MS (A)	+7	+8	+2	+14	-3	-1	+2
Mean	+9	+9	+3	+10	-3	-1	+2
			WEST				
Manhattan, KS *	F	F	+4	F	0	+2	+6
Columbus, KS	+15	+14	+6	+13	-1	-2	+5
Bushland, TX	+16	+18	-2	+11	-6	-2	+11
Lubbock, TX	+14	+12	+4	+2	-1	+1	+9
Clovis, NM	+13	+14	+1	+6	-1	-2	+9
Mean	+15	+15	+2	+8	-2	-1	+9

Table 5 - Plant height for the strains in Uniform Group IV-S, 1983

Location	Douglas	Pershing (S76-2109)	V76-411	LS78-248	V78-444	V78-713
		EAST COAST				
Queenstown, MD	31	30	33	39	30	34
Warsaw, VA	32	28	31	37	30	31
Mean	32	29	32	38	30	33
		UPPER AND CENTRAL SOUTH				
Orange, VA	28	28	28	33	27	29
Eldorado, IL	36	32	32	43	32	35
Princeton, KY	27	24	22	29	22	24
Tiptonville, TN	36	24	18	30	20	22
Mean	32	27	25	34	25	28
		DELTA				
Portageville, MO(A)	36	29	30	40	26	33
Portageville, MO(B)	23	26	21	24	22	24
Martin, TN	27	21	16	27	18	18
Keiser, AR	28	22	19	22	21	24
Stoneville, MS (A)	33	24	25	22	24	25
Mean	29	24	22	27	22	25
		WEST				
Manhattan, KS	41	34	34	44	32	37
Columbus, KS	31	27	32	37	27	30
Bixby, OK	31	26	30	33	25	29
Bushland, TX	28	27	29	30	25	30
Lubbock, TX	27	27	21	25	23	24
Clovis, NM	28	32	35	34	30	36
Mean	29	28	29	32	26	30

Table 5 - (continued)

Location	V78-727	Ky79-0237	S79-4259	V79-1362	V79-2856	V74-315
		EAST COAST				
Queenstown, MD	32	32	41	33	31	33
Warsaw, VA	31	36	43	36	32	35
Mean	32	34	42	35	32	34
		UPPER AND CENTRAL SOUTH				
Orange, VA	30	29	39	29	25	31
Eldorado, IL	34	36	41	40	36	35
Princeton, KY	25	26	32	30	25	24
Tiptonville, TN	20	32	42	34	30	36
Mean	27	31	39	33	29	32
		DELTA				
Portageville, MO(A)	30	42	52	35	37	37
Portageville, MO(B)	24	27	38	31	23	18
Martin, TN	27	28	33	28	18	25
Keiser, AR	22	29	43	31	24	21
Stoneville, MS (A)	27	31	48	35	30	26
Mean	26	31	43	32	26	31
		WEST				
Manhattan, KS	36	49	52	48	44	41
Columbus, KS	30	32	39	35	32	35
Bixby, OK	29	33	41	34	31	32
Bushland, TX	30	34	37	32	27	29
Lubbock, TX	25	28	34	27	26	26
Clovis, NM	35	29	35	31	26	36
Mean	30	31	37	32	28	32

Table 6 - Lodging scores for the strains in Uniform Group IV-S, 1983

Location	Douglas	Pershing (S76-2109)	V76-411	LS78-248	V78-444	V78-713
		EAST COAST				
Queenstown, MD	2.0	2.0	2.5	2.8	2.8	2.8
Warsaw, VA	1.2	1.4	1.3	1.6	1.3	1.6
		UPPER AND CENTRAL SOUTH				
Orange, VA	1.0	1.0	1.0	1.0	1.0	1.0
Eldorado, IL	1.5	1.1	2.0	1.7	2.8	2.6
Princeton, KY	1.0	1.0	1.0	1.0	1.0	1.0
		DELTA				
Portageville, MO(A)	1.5	1.0	1.5	2.0	1.5	1.5
Portageville, MO(B)	1.0	1.0	1.0	1.0	1.0	1.0
Martin, TN	1.0	1.0	1.0	1.0	1.0	1.0
Keiser, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
		WEST				
Manhattan, KS	2.8	1.2	1.3	2.7	1.5	1.5
Columbus, KS	1.0	1.7	1.5	2.5	1.7	2.0
Bixby, OK	2.7	1.0	2.3	2.0	2.3	1.0
Bushland, TX	1.5	1.5	1.5	3.0	1.5	2.0
Lubbock, TX	2.2	1.5	1.7	1.8	2.0	2.5
Clovis, NM	1.0	2.0	1.3	2.7	1.7	2.3

Table 6 - (continued)

Location	V78-727	Ky79-0237	S79-4259	V79-1362	V79-2856	V74-315
		EAST COAST				
Queenstown, MD	2.8	2.2	2.5	2.2	2.0	2.0
Warsaw, VA	1.9	1.3	1.5	1.2	1.3	1.3
		UPPER AND CENTRAL SOUTH				
Orange, VA	1.7	1.0	1.0	1.0	1.0	1.0
Eldorado, IL	2.4	1.1	1.3	1.5	1.3	1.5
Princeton, KY	1.0	1.0	1.0	1.0	1.0	1.0
		DELTA				
Portageville, MO(A)	1.5	1.0	1.5	1.5	1.5	1.0
Portageville, MO(B)	1.0	1.0	1.5	1.0	1.0	1.0
Martin, TN	1.0	1.0	1.0	1.0	1.0	1.0
Keiser, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
		WEST				
Manhattan, KS	2.2	1.3	3.5	2.0	2.0	1.5
Columbus, KS	2.0	1.3	2.2	1.5	1.3	1.7
Bixby, OK	1.3	3.0	2.3	4.3	4.0	2.3
Bushland, TX	2.3	1.0	2.5	1.7	1.5	2.0
Lubbock, TX	3.5	2.7	3.2	3.3	1.7	1.7
Clovis, NM	2.7	1.0	1.7	1.0	1.0	2.3

Table 7 - Seed quality scores for the strains in Uniform Group IV-S, 1983

Location	Douglas	Pershing (S76-2109)	V76-411	LS78-248	V78-444	V78-713
		EAST COAST				
Queenstown, MD	3.2	1.7	1.7	2.8	3.0	2.0
Warsaw, VA	4.0	1.8	1.2	3.0	1.5	2.5
		UPPER AND CENTRAL SOUTH				
Orange, VA	2.2	3.0	2.3	2.3	1.8	2.7
Eldorado, IL	3.0	3.5	3.3	3.5	2.7	2.8
Princeton, KY	3.0	3.0	2.0	4.0	2.0	3.0
		DELTA				
Portageville, MO(A)	2.0	2.0	2.0	3.0	3.0	3.0
Portageville, MO(B)	4.0	2.0	3.0	3.0	3.0	3.0
Martin, TN	3.0	2.0	2.0	3.0	2.5	2.5
Keiser, AR	4.0	2.0	2.0	5.0	2.0	2.0
Stoneville, MS (A)	3.0	2.0	2.0	2.0	3.0	2.0
		WEST				
Manhattan, KS	2.5	2.0	1.5	2.0	1.5	2.0
Columbus, KS	3.8	2.3	2.5	3.5	2.7	2.3

Table 7 - (continued)

Location	V78-727	Ky79-0237	S79-4259	V79-1362	V79-2856	V74-315
		EAST COAST				
Queenstown, MD	1.7	2.5	2.2	3.2	2.7	2.2
Warsaw, VA	2.5	2.0	1.3	4.0	3.0	2.5
		UPPER AND CENTRAL SOUTH				
Orange, VA	2.3	2.0	2.8	2.7	2.0	2.7
Eldorado, IL	2.8	2.2	3.0	3.2	2.7	3.0
Princeton, KY	2.0	2.0	5.0	2.0	2.0	3.0
		DELTA				
Portageville, MO(A)	3.0	2.0	3.0	3.0	3.0	2.0
Portageville, MO(B)	3.0	3.0	3.0	3.0	4.0	3.0
Martin, TN	2.5	2.5	3.0	3.0	3.0	2.5
Keiser, AR	2.0	1.0	4.0	5.0	5.0	5.0
Stoneville, MS (A)	3.0	3.0	3.0	3.0	3.0	2.0
		WEST				
Manhattan, KS	2.0	3.0	2.0	1.5	2.0	1.5
Columbus, KS	2.5	2.0	2.0	3.5	4.5	2.5

PRELIMINARY GROUP IV-S

1983

The Preliminary Group IV-S nurseries, which included 21 experimental strains along with Douglas, Hill, and S76-2109, were planted at 7 locations. The parentage for each of the strains is reported in Table 8. Table 9 gives a general summary of performance and characteristics, while Tables 10 through 14 report additional data.

Data were reported from 5 locations. Differences among strains for seed yield were non-significant at five locations. Hill and S76-2109 were similar in maturity. Hill has been included in this group as a maturity indicator at the dividing point between IV-S and V maturity classes. Two strains included were too late for this group. Eleven of the strains were resistant to one or more races of soybean cyst nematode. Thirteen strains received low scores with the common root-knot nematode, M. incognita, and six strains had low scores for M. arenaria. All were rated susceptible to feeding by soybean looper.

Strains which appear to merit being advanced to Uniform IV-S for further evaluation are K1099, K1103, LS79-503, and LS79-506.

Table 8 - Parentage of the strains grown in Preliminary Group IV-S, 1983

Variety or strain		Parentage	Generation composited
1.	Douglas	Williams X Calland	F_5
2.	Hill	D632-15 X D49-2525	F_5
3.	S76-2109	D77-3297 X Essex	F_4
4.	D80-7869	Bedford X (J74-77 X J74-88)	F_5
5.	D80-8381	Bedford X (J74-77 X J74-88)	F_5
6.	J81-25	Bedford X D72-8927	F_5
7.	J81-53	Bedford X D72-8927	F_5
8.	K1097	K74-104-75-85 X L74D-674	F_5
9.	K1098	K74-115-75-405 X K1028	F_5
10.	K1099	K1022 X Essex	F_5
11.	K1103	Union X Essex	F_5
12.	Ky80-620	Essex X Elf	F_5
13.	LS79-220	Forrest X V71-480	F_5
14.	LS79-503	Forrest X V71-480	F_5
15.	LS79-506	Forrest X V71-480	F_5
16.	LS79-846	Forrest X V71-480	F_5
17.	LS79-1935	L71L-436 X J74-5	F_5
18.	Md80-6152	K1023 X Md71-1643-82	F_5
19.	S78-69	V71-807 X Franklin	F_5
20.	S80-261	Cutler X Essex	F_5
21.	Tn80-57	Bedford X Williams	F_4
22.	V79-1387	V68-183 X Williams	F_5
23.	V79-1393	V68-183 X Williams	F_5
24.	V80-239	V68-2331 X V68-183	F_5

Table 9 - General summary of performance for the strains grown in Preliminary Group IV-S, 1983

Strain	Seed yield	Mat. index	Ht.	Percent Oil	Percent Protein	M. incognita	M. arenaria	SCN race 3	Soybean looper	% mottled seed
Douglas	32.1	9-28	31	21.5	41.9	4.5	1.5	S	5	8.0
Hill	32.3	+7	33	20.9	39.6	2.0	4.0	S	5	0.5
S76-2109	37.2	+7	28	20.3	39.9	1.5	5.0	S	5	0
D80-7869	38.3	+12	43	20.1	38.5	2.0	1.5	R	5	0
D80-8381	28.1	+7	45	20.7	37.5	4.5	1.3	R	5	0
J81-25	31.5	+11	41	19.7	40.4	2.0	1.5	R	5	0
J81-53	32.9	+6	42	20.6	36.3	1.0	4.0	R	5	0
K1097	30.9	+3	31	21.2	42.3	2.0	5.0	S	5	1.0
K1098	32.6	+5	34	22.3	40.0	2.5	2.8	S	5	2.0
K1099	38.3	+7	27	21.3	40.4	1.5	3.0	S	5	0
K1103	36.7	+5	25	21.4	39.4	4.0	2.0	S	5	0
Ky80-620	35.7	+7	29	21.0	41.4	3.0	4.0	S	5	0
LS79-220	32.9	+2	33	22.0	37.9	2.0	2.5	R	5	1.0
LS79-503	35.6	+5	34	22.6	37.8	1.0	2.3	R	5	0.5
LS79-506	35.1	+6	37	22.0	38.8	2.0	2.5	R	5	0.5
LS79-846	33.4	+6	36	22.3	37.9	1.0	2.0	R	5	1.0
LS79-1935	31.9	+4	34	21.5	38.2	4.0	1.5	R	5	0
Md80-6152	34.3	+5	32	21.2	41.2	4.5	4.5	S	5	2.0
S78-69	33.3	+6	47	22.5	40.4	5.0	2.5	R	5	0
S80-261	32.5	+2	27	21.9	40.0	5.0	3.5	S	5	0.5
Tn80-57	31.6	+6	33	21.7	38.5	5.0	4.0	R	5	0
V79-1387	33.8	+2	32	22.5	38.5	5.0	3.0	S	5	0
V79-1393	33.5	+3	31	22.2	37.8	3.0	4.5	S	5	0
V80-239	36.5	+5	33	22.2	38.5	1.0	4.0	S	5	0.5

Table 10 - Seed yield, in bushels per acre, for the strains grown in Preliminary IV-S, 1983

Strain	Queens-town, MD	Warsaw, VA	Portage-ville, MO (A)	Stone-ville, MS(A)	Prince-ton, KY
Douglas	37.7	33.6	22.3	40.7	26.2
Hill	36.9	32.7	23.4	44.3	24.0
S76-2109	41.4	39.3	29.0	48.5	27.6
D80-7869	42.7	39.2	32.8+	50.9	26.1
D80-8381	35.0	29.5	14.5-	45.1	16.5
J81-25	38.2	33.1	22.0	42.1	22.0
J81-53	34.6	32.5	27.6	45.6	24.1
K1097	37.6	29.9	20.7	46.0	20.4
K1098	37.4	33.4	19.2	46.1	26.7
K1099	52.8	38.6	27.5	45.4	27.3
K1103	54.4	38.1	19.5	45.0	26.3
Ky80-620	43.4	35.8	23.9	44.2	31.4
LS79-220	39.9	37.6	18.8	39.8	28.4
LS79-503	45.4	33.9	29.5	41.1	28.1
LS79-506	39.6	33.1	27.4	46.7	28.6
LS79-846	35.2	36.4	22.2	46.8	26.2
LS79-1935	37.5	31.3	28.9	38.0	24.0
Md80-6152	48.4	36.1	25.0	39.1	22.8
S78-69	36.1	28.0	29.4	44.9	28.1
S80-261	43.8	36.7	19.6	38.8	23.4
Tn80-57	33.7	35.8	23.8	41.2	23.5
V79-1387	43.3	38.4	15.2	44.0	28.0
V79-1393	41.2	32.1	22.8	43.8	27.8
V80-239	48.2	37.1	27.8	42.7	26.5
L.S.D.(.05)	NS	NS	7.7	NS	NS
C.V.	16	11	15	14	12

Table 11 - Oil percentages for the strains in Preliminary Group IV-S, 1983

Strain	Queenstown, MD	Warsaw, VA
Douglas	21.3	21.6
Hill	21.2	20.6
S76-2109	20.5	20.0
D80-7869	20.1	20.0
D80-8381	21.1	20.3
J81-25	19.7	19.6
J81-53	21.1	20.0
K1097	21.3	21.1
K1098	23.4	21.1
K1099	21.7	20.9
K1103	21.6	21.2
Ky80-620	21.5	20.5
LS79-220	21.9	22.1
LS79-503	22.8	22.4
LS79-506	22.2	21.7
LS79-846	22.9	21.7
LS79-1935	22.0	20.9
Md80-6152	21.5	20.8
S78-69	23.3	21.6
S80-261	21.7	22.1
Tn80-57	21.9	21.4
V79-1387	22.9	22.0
V79-1393	22.9	21.4
V80-239	22.6	21.8

Table 12 - Protein percentages for the strains in Preliminary Group IV-S, 1983

Strain	Queenstown, MD	Warsaw, VA
Douglas	42.3	41.5
Hill	38.8	40.3
S76-2109	39.8	40.0
D80-7869	37.1	39.8
D80-8381	36.5	38.5
J81-25	38.9	41.8
J81-53	34.4	38.2
K1097	41.9	42.6
K1098	37.2	42.8
K1099	39.4	41.4
K1103	38.2	40.5
Ky80-620	40.0	42.8
LS79-220	37.4	38.4
LS79-503	36.0	39.5
LS79-506	37.1	40.5
LS79-846	36.4	39.4
LS79-1935	36.1	40.3
Md80-6152	40.1	42.2
S78-69	38.0	42.8
S80-261	39.2	40.7
Tn80-57	37.7	39.3
V79-1387	37.3	39.6
V79-1393	35.3	40.3
V80-239	37.2	39.8

Table 13 - Plant height for the strains in Preliminary Group IV-S, 1983

Strain	Queenstown, MD	Warsaw, VA	Portage-ville, MO (A)	Stoneville, MS(A)	Princeton, KY
Douglas	29	32	32	29	32
Hill	39	32	36	29	29
S76-2109	35	29	29	25	24
D80-7869	53	42	46	34	39
D80-8381	51	45	49	40	38
J81-25	52	43	36	33	40
J81-53	42	48	48	35	37
K1097	33	31	34	26	29
K1098	34	32	39	34	33
K1099	31	29	30	21	22
K1103	32	24	26	22	21
Ky80-620	37	32	33	21	24
LS79-220	37	35	37	29	28
LS79-503	41	36	39	26	29
LS79-506	45	38	42	33	29
LS79-846	41	41	41	33	26
LS79-1935	42	34	38	24	31
Md80-6152	36	31	38	33	24
S78-69	55	42	53	44	40
S80-261	34	28	28	21	23
Tn80-57	38	32	36	28	29
V79-1387	39	34	32	25	29
V79-1393	38	32	35	25	24
V80-239	41	36	34	27	27

Table 14 - Seed quality scores for the strains in Preliminary Group IV-S, 1983

Strain	Queenstown, MD	Warsaw, VA	Portage-ville, MO (A)	Stoneville, MS (A)	Princeton, KY
Douglas	4.0	4.0	2.0	3.0	3.0
Hill	1.5	1.5	2.0	2.0	2.0
S76-2109	1.5	1.8	2.0	2.0	1.0
D80-7869	1.8	1.5	3.0	2.0	4.0
D80-8381	1.8	2.5	2.0	2.0	3.0
J81-25	2.0	1.5	3.0	2.0	3.0
J81-53	2.0	1.5	3.0	3.0	2.0
K1097	2.5	3.5	3.0	2.0	4.0
K1098	2.3	2.0	3.0	2.0	2.0
K1099	1.8	1.3	3.0	2.0	2.0
K1103	1.5	1.3	3.0	2.0	1.0
Ky80-620	2.3	2.0	3.0	2.0	1.0
LS79-220	1.8	1.8	3.0	2.0	2.0
LS79-503	2.0	2.0	2.0	2.0	2.0
LS79-506	1.8	2.2	3.0	2.0	3.0
LS79-846	1.8	1.8	2.0	2.0	1.0
LS79-1935	2.3	2.0	3.0	2.5	2.0
Md80-6152	2.5	2.0	3.0	2.0	3.0
S78-69	2.0	2.5	3.0	3.0	3.0
S80-261	1.8	1.8	3.0	2.0	2.0
Tn80-57	2.5	2.2	3.0	3.0	3.0
V79-1387	2.3	1.8	3.0	2.0	1.0
V79-1393	2.0	1.8	3.0	2.0	1.0
V80-239	2.8	2.0	3.0	2.0	3.0

UNIFORM GROUP V

1983

	Variety or strain	Parentage	Generation composited
1.	Essex	Lee X S5-7075	F_5
2.	Forrest	Dyer X Bragg	F_5
3.	D77-5090 (Epps)	[Pickett 71(2) X (Dare(2) X PI 96983)] X J74-47	F_5
4.	D77-5169	Centennial X J74-47	F_5
5.	R74-511 (Narow)	R66-873 X Mack	F_{11}
6.	D77-6056	Centennial X J74-47	F_5
7.	S76-2425	D70-3115 X Essex	F_5
8.	LS79-330	Forrest X V71-480	F_5
9.	R76-479	Centennial X Forrest	F_5
10.	S79-4060	(D74-7636 X D70-3045) X (D68-18 X PI 88788)	F_5
11.	S79-4240	D70-3045 X Bedford	F_5
12.	Tn77-111	D68-127 (dwarf mutant) X Essex	F_5

Background of breeding lines used as parents:

S5-7075 is a selection from N48-1248 X Perry which was grown in Uniform Group VI. N48-1248 has the same parentage as Hood.

J74-47 is a SCN race 4 selection of the same parentage as Bedford.

R66-873 is a selection from Jackson X Semmes which was grown in Preliminary Group VI in 1970.

D70-3115 is of the same parentage as Centennial but of slightly earlier maturity.

V71-480 is a selection from V63-76 X V66-318 which was grown in Uniform V in 1974.

D74-7636 is a selection from Forrest X D70-3001. D70-3001 has the same parentage as Centennial.

D70-3045 is an earlier maturing line of the same parentage as Centennial.

D68-18 is of the same parentage as Forrest.

D68-127 is from the same F_4 line as Forrest.

UNIFORM GROUP V, 1983

Plantings of Uniform Group V strains were made at 32 locations to evaluate for seed yield. Plantings in single hills were made near Blackville, South Carolina to evaluate for reaction to the peanut root-knot nematode, M. arenaria, and at Jay, Florida to evaluate against the common root-knot nematode, M. incognita. Hill plantings were also made in the field cage at Stoneville to evaluate for feeding by the soybean looper. Field plantings were made at Ames Plantation in Tennessee to evaluate for reaction to race 3 of the soybean cyst nematode. Race 4 of the soybean cyst nematode was present in the field where plantings were made near Tiptonville, Tennessee. Data from 27 locations are summarized in Tables 15 through 21. Table 15 gives a general summary of performance, including reaction to nematodes and diseases.

Two strains have been increased for release as varieties. D77-5090 has been named 'Epps', and R74-511 has been named 'Narow'. The name is to indicate that it is a special purpose variety for narrow row plantings. Studies in Arkansas have shown that it has an advantage over Forrest when grown in row widths of 20 inches or less. Epps is resistant to Races 3 and 4 of the soybean cyst nematode, soybean mosaic virus, the root-knot nematode, M. incognita, and carries the gene Rps_1^c for reaction to phytophthora rot. D77-5169 has also been evaluated three years. This strain does not carry the SMV resistance which Epps has. It averages about three days later in maturity and has three-year mean yields slightly above that for Epps in all production areas. This strain has been used as a parent.

Two strains, D77-6056 and S76-2425, have been evaluated two years. Both are similar in maturity to D77-5169, are resistant to SCN, and have yielded well. D77-6056 also has good resistance to both M. incognita and M. arenaria.

Five strains were evaluated for one year. Two of these, LS79-330 and S79-4060, do not appear to merit further evaluation on a regional basis. S79-4240 has good resistance to both root-knot species as well as resistance to SCN races 3 and 4.

Table 15 - General summary of performance of the strains in Uniform Group V, 1983

	No. of locations	Essex	Forrest	Epps (D77-5090)	D77-6159	Narow (R74-511)	D77-6056
Seed Yield - 1983							
East Coast	5	37.9	40.1	36.8	39.7	38.4	40.4
Upper & Central South	7	27.7	30.2	28.0	28.2	29.8	31.1
Delta	6	30.3	37.0	35.2	39.0	38.0	41.8
West	7	38.0	39.1	37.4	38.1	39.3	37.5
1982-83							
East Coast		39.3	40.4	38.8	42.4	38.9	41.1
Upper & Central South		38.6	40.2	36.4	38.8	38.7	40.9
Delta		32.9	38.4	35.9	39.6	39.7	41.1
West		38.1	38.2	35.7	36.4	38.4	36.1
1981-83							
East Coast		40.3	41.9	40.0	42.3	40.0	
Upper & Central South		40.5	42.5	39.2	42.4	40.3	
Delta		35.9	39.6	37.6	40.6	40.3	
West		37.5	37.6	35.4	36.7	38.6	
Oil Content - 1983		21.1	21.5	20.7	20.6	21.2	20.8
1982-83		19.8	20.2	19.3	19.4	20.3	19.7
1981-83		19.7	19.9	19.1	19.2	20.0	
Protein Content - 1983		42.2	39.7	41.5	40.9	40.7	40.1
1982-83		41.7	35.6	41.1	40.5	39.7	39.4
1981-83		42.0	37.1	41.6	40.8	40.2	
Seed size		13.3	12.4	13.8	15.5	13.8	15.4
Maturity index		10-9	+3	+3	+6	+1	+6
Height		26	33	31	34	28	34
Seed quality		2.4	2.2	2.4	2.2	2.1	2.1
M. incognita		3.0	1.0	1.5	1.0	2.5	1.0
M. arenaria		5.0	1.2	4.0	2.8	1.5	1.5
SCN race 3		S	R	R*	R*	S	R*
Soybean Looper		5	5	5	5	5	5
Flower color		P	W	P	P	P	P
Pubescence color		G	T	G	T	G	T
Pod wall color		T	T	T	T	T	T

*Also resistant to SCN race 4.

Table 15 - (continued)

	S76-2425	LS79-330	R76-479	S79-4060	S79-4240	Tn77-111
Seed yield - 1983						
East Coast	40.4	38.2	40.3	35.5	36.5	38.8
Upper & Central South	29.1	24.1	28.0	25.5	29.0	27.1
Delta	39.8	30.8	37.4	31.6	34.8	35.4
West	36.7	33.6	39.6	32.0	36.6	37.0
1982-83						
East Coast	41.2					
Upper & Central South	39.8					
Delta	38.7					
West	37.4					
1981-83						
East Coast						
Upper & Central South						
Delta						
West						
Oil Content - 1983	20.8	21.8	21.7	20.7	20.5	21.4
1982-83	19.8					
1981-83						
Protein Content - 1983	41.1	40.1	39.2	40.5	40.8	40.6
1982-83	40.5					
1981-83						
Seed size	13.4	12.4	12.7	14.2	12.8	12.8
Maturity index	+6	+1	+3	+4	+5	+3
Height	32	30	31	38	33	31
Seed quality	2.1	2.7	2.2	2.5	2.2	2.1
M. incognita	1.0	1.0	1.0	1.0	1.0	3.0
M. arenaria	2.8	1.5	2.5	4.5	1.5	1.5
SCN race 3	S	R	R	R*	R*	R
Soybean Looper feeding	5	5	5	5	5	5
Flower color	W	P	W	W	W	W
Pubescence color	T	T	T	T	T	G
Pod wall color	T	T	T	T	T	T

*Also resistant to SCN race 4.

Table 16 - Seed yield, in bushels per acre, for the strains in Uniform Group V, 1983

Location	Essex	Forrest	Epps (D77-5090)	D77-5169	Narow (R74-511)	D77-5056	S76-2425
			EAST COAST				
Queenstown, MD	38.2	37.5	37.5	38.3	33.3	40.9	36.3
Georgetown, DE	40.5	45.2+	40.4	46.3+	41.3	45.4+	45.6+
Warsaw, VA	29.6	31.0	26.0-	30.3	29.0	29.4	27.2-
Holland, VA	52.3	49.0	44.4	44.9	51.0	47.9	49.5
Plymouth, NC	29.1	37.7	35.5	38.7	37.5	38.6	43.4
Mean	37.9	40.1	36.8	39.7	38.4	40.4	40.4
			UPPER AND CENTRAL SOUTH				
Orange, VA	24.3	22.4	22.9	26.8	25.6	29.0	28.5
Knoxville, TN *	30.5	27.5	31.5	33.9	32.9	27.6	31.4
Clemson, SC	21.1	23.3	24.2+	22.4	24.0	25.4+	25.2+
Calhoun, GA	45.3	55.3	43.6	43.5	44.5	51.9	33.8-
Athens, GA	32.4	34.4	32.3	31.0	40.5+	35.4	36.1
Belle Mina, AL *	13.1	15.4	16.9	16.5	15.2	16.5	14.6
Princeton, KY	23.3	24.7	20.1	19.7	22.6	17.6-	25.4
Tiptonville, TN	29.0	26.5	29.2	33.8	25.3	34.6	28.6
Martin, TN	18.7	25.0	23.7	20.5	26.4	23.8	25.9
Jackson, TN *	11.9	14.2	12.4	12.6	14.2	16.9	12.1
Mean	27.7	30.2	28.0	28.2	29.8	31.1	29.1
			DELTA				
Portageville, MO (A)	27.9	32.2	34.8	38.5+	38.9+	40.1+	34.2
Portageville, MO (B)	16.4	20.7+	20.0	24.1+	20.2	24.1+	17.0
Keiser, AR	43.3	38.9	36.2-	41.9	45.5	46.0	41.7
Jonesboro, AR *	6.9	8.8	11.4	11.7	9.5	11.6	8.5
Pine Tree, AR *	17.5	18.4	15.4	24.2	14.9	18.6	20.6
Stoneville, MS (A)	38.9	46.9	45.3	46.7	47.5	51.7	53.0
Stoneville, MS (B)	24.8	34.3+	30.8+	33.8+	36.7+	39.7+	43.0+
St. Joseph, LA	30.5	49.2	43.8+	49.2+	39.1+	48.9+	49.7+
Mean	30.3	37.0	35.2	39.0	38.0	41.8	39.8
			WEST				
Parsons, KS	16.2	20.4+	21.2+	19.5+	20.4+	18.5+	16.9
Columbus, KS	26.6	25.8	19.4	22.6	26.0	23.4	22.0
Pine Bluff, AR	62.8	56.2	63.8	56.6	62.9	52.1	54.7
Stuttgart, AR	52.6	55.5	50.7	53.9	56.3	55.0+	58.8+
Bossier City, LA	29.6	37.4	31.8	36.8	33.0	37.9	33.4
Bixby, OK	36.1	39.0	39.7	39.9	40.8	38.2	37.7
Lubbock, TX	42.3	39.2	34.9-	37.5	36.0-	37.1	33.7-
Beaumont, TX *	7.7	14.8	15.6	12.4	16.2	17.0	15.0
Mean	38.0	39.1	37.4	38.1	39.3	37.5	36.7

*Not included in mean.

Table 16 - (continued)

Location	LS79-330	R76-479	S79-4060	S79-4240	Tn77-111	L.S.D. (.05)	C.V. (%)
			EAST COAST				
Queenstown, MD	30.5	40.4	33.9	39.0	36.2	NS	15
Georgetown, DE	46.3+	46.0+	43.1	42.0	43.8	4.0	5
Warsaw, VA	27.3-	29.3	27.3-	28.5	30.1	2.1	4
Holland, VA	52.6	48.3	39.1-	36.6-	46.5	9.4	12
Plymouth, NC	34.2	37.6	34.3	36.2	37.5	NS	11
Mean	38.2	40.3	35.5	36.5	38.8		
			UPPER AND CENTRAL SOUTH				
Orange, VA	23.0	22.1	20.4	26.8	21.5	5.2	13
Knoxville, TN *	30.5	35.5	29.6	33.3	25.4	NS	14
Clemson, SC	20.8	23.5	20.3	21.7	21.9	3.1	8
Calhoun, GA	39.5	41.4	35.6	45.6	46.7	10.4	14
Athens, GA	25.5-	34.6	27.4	35.6	34.5	5.4	10
Belle Mina, AL *	13.1	20.5+	8.4-	15.7	14.2	4.2	17
Princeton, KY	20.6	23.7	21.3	17.7-	19.6	4.8	13
Tiptonville, TN	21.1	27.4	28.2	29.4	25.8	NS	16
Martin, TN	18.5	23.2	25.2	26.1	20.0	NS	21
Jackson, TN *	12.0	16.0	13.9	16.8	14.9	NS	19
Mean	24.1	28.0	25.5	29.0	27.1		
			DELTA				
Portageville, MO(A)	27.7	40.0+	28.6	34.6	35.5	7.8	13
Portageville, MO(B)	13.7	19.7	21.6+	22.8+	16.5	4.2	13
Keiser, AR	34.0-	44.6	40.9	40.4	39.9	5.2	8
Jonesboro, AR *	9.5	10.0	7.8	9.3	9.1	NS	16
Pine Tree, AR *	14.8	20.5	18.0	22.7	15.9	NS	21
Stoneville, MS (A)	46.5	51.0	38.8	42.6	47.3	NS	14
Stoneville, MS (B)	26.8	22.4	26.6	28.6	28.5	5.0	9
St. Joseph, LA	35.9	46.5+	33.3	39.9+	44.4+	6.0	8
Mean	30.8	37.4	31.6	34.8	35.4		
			WEST				
Parsons, KS	15.6	22.4+	17.3	19.2+	17.3	2.3	7
Columbus, KS	24.6	25.5	23.6	23.8	24.9	NS	10
Pine Bluff, AR	49.9	66.2	45.7	57.4	57.0	NS	13
Stuttgart, AR	53.1	54.0	48.5-	56.8+	55.1	3.8	4
Bossier City, LA	24.5	26.9	33.0	26.7	29.6	NS	20
Bixby, OK	30.7-	40.4	31.6	37.5	33.6	4.9	8
Lubbock, TX	36.8	42.1	24.4-	35.1-	41.7	5.9	9
Beaumont, TX *	6.8	18.6	7.3	14.3	10.6	NS	59
Mean	33.6	39.6	32.0	36.6	37.0		

*Not included in mean.

Table 17 - Chemical composition and seed size for the strains in Uniform Group V, 1983

Location	Essex	Forrest	Epps (D77-5090)	D77-5169	Narow (R74-511)	D77-6056
			OIL PERCENTAGES			
Queenstown, MD	21.3	21.8	21.6	21.4	21.8	20.6
Warsaw, VA	20.7	21.5	19.8	19.8	20.2	20.3
Plymouth, NC	20.6	22.2	20.2	20.6	20.4	21.6
Orange, VA	20.4	20.0	19.4	19.4	20.5	20.4
Calhoun, GA	21.1	21.5	21.0	20.0	20.9	20.1
Portageville, MO (A)	21.5	22.5	21.2	21.1	22.9	21.1
Keiser, AR	22.1	21.1	21.4	21.8	21.7	21.2
Stoneville, MS (A)	21.5	22.2	21.5	21.4	21.3	21.5
Stuttgart, AR	20.7	20.3	20.3	20.3	20.8	20.4
Mean	21.1	21.5	20.7	20.6	21.2	20.8
			PROTEIN PERCENTAGES			
Queenstown, MD	40.8	36.5	38.5	36.5	37.0	36.8
Warsaw, VA	42.4	38.4	41.7	40.8	40.2	40.1
Plymouth, NC	43.8	39.9	44.6	42.8	42.9	41.1
Orange, VA	42.9	39.9	42.5	41.0	41.3	39.9
Calhoun, GA	42.6	39.8	41.2	41.2	43.4	40.5
Portageville, MO (A)	41.7	39.3	41.0	41.5	38.0	40.7
Keiser, AR	38.0	41.4	38.3	38.9	38.2	38.9
Stoneville, MS (A)	43.5	40.3	42.0	42.5	42.8	40.7
Stuttgart, AR	43.7	41.8	43.3	43.3	42.6	41.8
Mean	42.2	39.7	41.5	40.9	40.7	40.1
			GRAMS PER 100 SEEDS			
Queenstown, MD	15.1	14.5	15.3	16.2	14.7	15.5
Warsaw, VA	16.0	14.8	17.0	18.7	17.3	16.8
Plymouth, NC	14.2	14.3	15.8	17.8	16.2	16.8
Orange, VA	13.0	12.0	14.0	16.0	13.0	16.0
Calhoun, GA	18.8	15.5	18.6	18.5	18.2	16.2
Jackson, TN	10.1	9.9	10.8	12.3	10.4	11.4
Portageville, MO (A)	12.1	11.4	13.6	14.3	12.6	13.5
Keiser, AR	9.0	8.0	9.0	14.0	10.0	11.0
Stoneville, MS (A)	12.4	11.6	11.0	12.8	11.8	10.6
Stuttgart, AR	12.7	12.0	13.3	14.0	13.3	12.3
Mean	13.3	12.4	13.8	15.5	13.8	15.4

Table 17 - (continued)

Location	S76-2425	LS79-330	R76-479	S79-4060	S79-4240	Tn77-111
			OIL PERCENTAGES			
Queenstown, MD	21.4	22.4	22.5	21.4	21.0	21.3
Warsaw, VA	20.2	21.9	21.4	21.1	19.4	21.5
Plymouth, NC	20.1	21.4	21.6	21.0	20.2	21.2
Orange, VA	19.7	20.4	21.2	20.2	19.7	21.1
Calhoun, GA	20.5	21.5	21.2	20.3	20.3	21.6
Portageville, MO (A)	21.5	22.0	21.9	20.8	21.4	22.2
Keiser, AR	21.3	21.9	22.6	20.9	21.4	21.5
Stoneville, MS (A)	22.0	22.9	22.1	20.4	21.6	22.1
Stuttgart, AR	20.1	21.9	20.6	20.3	19.9	19.7
Mean	20.8	21.8	21.7	20.7	20.5	21.4
			PROTEIN PERCENTAGES			
Queenstown, MD	38.9	35.5	36.0	38.0	38.1	38.2
Warsaw, VA	41.4	39.1	37.3	38.7	40.7	40.4
Plymouth, NC	43.3	41.3	40.8	41.2	43.3	41.4
Orange, VA	41.0	40.5	40.1	40.9	41.0	40.1
Calhoun, GA	42.3	41.8	40.3	42.1	42.2	40.9
Portageville, MO (A)	40.8	40.6	39.9	40.7	40.2	40.1
Keiser, AR	38.8	39.7	36.8	38.6	38.1	38.7
Stoneville, MS (A)	40.7	41.3	40.5	41.9	41.7	42.1
Stuttgart, AR	42.5	40.8	41.0	42.0	42.0	43.4
Mean	41.1	40.1	39.2	40.5	40.8	40.6
			GRAMS PER 100 SEEDS			
Queenstown, MD	13.9	13.7	14.3	15.5	13.9	12.7
Warsaw, VA	15.6	15.2	15.2	15.5	15.3	13.8
Plymouth, NC	14.7	14.9	14.4	17.1	14.6	14.4
Orange, VA	14.0	11.0	13.0	15.0	13.0	11.0
Calhoun, GA	17.7	16.3	16.3	18.5	15.0	14.6
Jackson, TN	10.4	9.8	9.8	11.1	9.7	8.7
Portageville, MO (A)	13.6	12.1	11.4	13.5	12.3	10.8
Keiser, AR	9.0	7.0	10.0	10.0	9.0	8.0
Stoneville, MS (A)	12.0	11.2	10.4	11.8	11.0	11.2
Stuttgart, AR	12.7	12.3	11.7	13.7	13.7	11.0
Mean	13.4	12.4	12.7	14.2	12.8	12.8

Table 18 - Relative maturity, days earlier (-) or later (+) than Essex, for the strains in Uniform Group V, 1983

Location	Date planted	Essex matured	Forrest	Epps (D77-5090)	D77-5169	Narow (R74-511)	D77-6056
			EAST COAST				
Georgetown, DE	6-8	10-21	+5	+9	+10	+1	+10
Warsaw, VA	6-2	10-22	+4	+5	+7	+3	+6
Holland, VA*	5-31	11-3	-14	-13	-14	-14	-13
Plymouth, NC	5-20	10-19	-6	-6	0	-6	0
Mean		10-21	+1	+1	+6	-1	+5
			UPPER AND CENTRAL SOUTH				
Orange, VA	5-19	10-7	+4	+8	+15	+3	+14
Knoxville, TN*	5-5	9-30	+2	+1	+3	+1	+4
Clemson, SC	5-11	10-18	-3	-1	-2	-4	+1
Calhoun, GA	6-1	10-21	-4	-4	0	-4	-2
Athens, GA	5-26	10-7	+1	-2	0	-4	+5
Belle Mina, AL	5-10	9-21	+3	+8	+9	+6	+9
Princeton, KY	6-1	10-5	+1	+2	+5	+2	+5
Martin, TN	5-30	10-3	+5	+2	+8	+7	+8
Jackson, TN	5-26	9-19	+9	+8	+11	+7	+12
Mean		10-6	+2	+3	+6	+2	+7
			DELTA				
Portageville, MO (A)	5-24	10-3	+2	+2	+5	0	+5
Portageville, MO (B)	5-31	10-7	+2	0	+6	0	+6
Keiser, AR	5-27	10-8	+1	+1	+5	-1	+3
Jonesboro, AR*	5-17	9-23	+10	+10	+10	0	+10
Pine Tree, AR *	5-19	10-3	+1	+3	+2	-1	+2
Stoneville, MS (A)	6-3	9-20	+9	+7	+11	+7	+12
Stoneville, MS (B)	6-3	10-4	+3	+1	+5	+1	+5
St. Joseph, LA	5-27	9-20	+5	+2	+7	+4	+6
Mean		9-30	+4	+2	+7	+2	+6
			WEST				
Parsons, KS	6-6	10-12	+14	+14	+18	+12	+20
Columbus, KS	6-6	10-13	+3	+12	+10	+2	+9
Pine Bluff, AR	6-2	10-3	+4	+4	+5	+1	+4
Stuttgart, AR	5-28	9-30	-2	0	-2	0	0
Bossier City, LA	5-31	10-1	0	0	+4	-1	+2
Lubbock, TX	5-17	10-16	+3	-2	-1	-3	+5
Beaumont, TX	5-30	10-17	-1	-1	-1	-1	-1
Mean		10-9	+3	+4	+5	+1	+6

* Not included in mean.

Table 18 - (continued)

Location	S76-2425	LS79-330	R76-479	S79-4060	S79-4240	Tn77-111
		EAST COAST				
Georgetown, DE	+10	+1	+5	+3	+9	+8
Warsaw, VA	+11	+4	+4	+6	+6	+5
Holland, VA*	—	-14	-14	-14	-13	-13
Plymouth, NC	+6	-6	-6	0	0	0
Mean	+9	0	+1	+3	+5	+4
		UPPER AND CENTRAL SOUTH				
Orange, VA	+11	-4	+2	+11	+8	+4
Knoxville, TN*	+2	-1	+4	0	+4	0
Clemson, SC	+7	+3	-4	+2	+6	+1
Calhoun, GA	-4	-4	-4	-4	-2	-4
Athens, GA	+2	+2	+4	+1	+4	0
Belle Mina, AL	+9	+6	+6	+3	+5	+5
Princeton, KY	+3	+2	+2	+2	+5	+1
Martin, TN	+4	+4	+4	+7	+4	+6
Jackson, TN	+7	+2	+7	+10	+10	+4
Mean	+5	+1	+2	+4	+5	+2
		DELTA				
Portageville, MO (A)	+3	+1	+2	+2	+4	+2
Portageville, MO (B)	+2	+1	+2	+4	+5	+1
Keiser, AR	-1	-6	+2	+2	+2	-4
Jonesboro, AR*	+10	0	+10	+10	+10	0
Pine Tree, AR *	+2	-3	+1	+2	+3	+1
Stoneville, MS (A)	+10	+5	+13	+10	+12	+10
Stoneville, MS (B)	+4	0	+4	+2	+3	+1
St. Joseph, LA	+6	-2	+6	+5	+6	+5
Mean	+4	0	+5	+4	+5	+3
		WEST				
Parsons, KS	+19	+16	+11	+15	+18	+11
Columbus, KS	+11	+6	+4	+8	+7	+5
Pine Bluff, AR	+3	-2	+5	+5	+3	+1
Stuttgart, AR	-2	0	-2	-2	-1	0
Bossier City, LA	-1	+2	+3	+6	+2	-1
Lubbock, TX	+10	-6	+1	0	+4	+4
Beaumont, TX	0	0	-2	0	0	-2
Mean	+6	+2	+3	+5	+5	+3

*Not included in mean.

Table 19 - Plant height for the strains in Uniform Group V, 1983

Location	Essex	Forrest	Epps (D77-5090)	D77-5169	Narow (R74-511)	D77-6056
			EAST COAST			
Queenstown, MD	29	42	39	44	34	44
Georgetown, DE	28	30	29	34	27	33
Warsaw, VA	28	42	36	40	33	41
Holland, VA	27	34	34	36	31	40
Plymouth, NC	31	38	40	41	37	38
Mean	29	37	36	39	32	39
			UPPER AND CENTRAL SOUTH			
Orange, VA	31	39	38	41	34	41
Knoxville, TN *	29	36	34	39	36	37
Clemson, SC	25	32	31	35	26	33
Calhoun, GA	25	30	29	24	20	34
Athens, GA	25	31	28	33	26	31
Belle Mina, AL	23	30	27	32	26	30
Princeton, KY	25	35	31	35	28	36
Tiptonville, TN	18	26	24	26	22	32
Martin, TN	21	34	32	34	28	36
Jackson, TN	28	39	37	40	29	40
Mean	28	33	31	33	27	35
			DELTA			
Portageville, MO (A)	32	42	40	42	34	43
Portageville, MO (B)	21	30	26	28	30	26
Keiser, AR	21	26	25	29	23	31
Jonesboro, AR *	21	21	27	27	34	23
Pine Tree, AR *	26	30	28	26	26	23
Stoneville, MS (A)	24	29	26	27	25	29
Stoneville, MS (B)	17	20	21	21	18	22
St. Joseph, LA	17	22	23	24	18	25
Mean	22	28	27	29	25	29
			WEST			
Parsons, KS	22	29	27	30	23	29
Columbus, KS	33	40	35	42	31	37
Pine Bluff, AR	27	33	33	33	29	35
Stuttgart, AR	27	36	31	31	32	38
Bossier City, LA	19	26	22	26	20	29
Bixby, OK	32	42	38	42	39	40
Lubbock, TX	25	33	35	31	30	35
Beaumont, TX	20	30	29	32	24	30
Mean	26	34	31	33	29	34

*Not included in mean.

Table 19 - (continued)

Location	S76-2425	LS79-330	R76-479	S79-4060	S79-4240	Tn77-111
			EAST COAST			
Queenstown, MD	37	34	41	45	46	40
Georgetown, DE	31	28	30	32	33	32
Warsaw, VA	37	34	38	45	41	39
Holland, VA	35	32	32	39	33	33
Plymouth, NC	42	40	39	41	44	40
Mean	36	34	36	40	39	37
			UPPER AND CENTRAL SOUTH			
Orange, VA	36	34	37	42	41	36
Knoxville, TN *	35	35	37	39	35	36
Clemson, SC	30	30	30	34	32	32
Calhoun, GA	22	25	20	22	22	25
Athens, GA	31	29	30	33	33	30
Belle Mina, AL	30	30	28	34	30	28
Princeton, KY	31	29	33	37	39	32
Tiptonville, TN	22	20	24	30	30	28
Martin, TN	30	31	28	36	34	32
Jackson, TN	37	33	38	45	41	39
Mean	30	29	30	35	30	28
			DELTA			
Portageville, MO (A)	42	41	39	49	41	41
Portageville, MO (B)	30	22	24	38	29	29
Keiser, AR	30	23	25	31	25	25
Jonesboro, AR *	24	22	25	32	23	26
Pine Tree, AR *	28	21	28	37	30	32
Stoneville, MS (A)	29	25	31	25	27	29
Stoneville, MS (B)	21	20	19	25	21	19
St. Joseph, LA	22	19	22	25	22	22
Mean	29	25	27	32	28	28
			WEST			
Parsons, KS	26	29	28	32	30	30
Columbus, KS	35	38	36	44	42	41
Pine Bluff, AR	32	30	34	35	32	34
Stuttgart, AR	33	33	32	36	36	33
Bossier City, LA	24	22	21	25	23	23
Bixby, OK	39	39	38	44	43	43
Lubbock, TX	33	27	34	33	33	31
Beaumont, TX	26	26	28	30	29	29
Mean	31	31	31	35	34	33

*Not included in mean.

Table 20 - Lodging scores for the strains in Uniform Group V, 1983

Location	Essex	Forrest	Epps (D77-5090)	D77-5169	Narow (R74-511)	D77-6056
			EAST COAST			
Queenstown, MD	2.8	3.4	4.2	3.7	3.0	3.9
Georgetown, DE	2.0	2.3	2.7	2.5	2.0	2.3
Warsaw, VA	1.3	2.4	3.2	3.0	1.3	3.2
Holland, VA	2.0	3.7	4.7	4.3	4.7	4.3
Plymouth, NC	2.3	2.3	3.3	3.0	3.0	2.7
			UPPER AND CENTRAL SOUTH			
Orange, VA	2.0	2.7	3.0	3.0	1.0	3.0
Knoxville, TN *	1.7	1.3	2.2	2.7	1.3	1.8
Clemson, SC	1.0	1.7	2.3	3.3	1.0	2.7
Calhoun, GA	1.0	1.0	2.0	1.5	1.0	1.0
Athens, GA	1.5	2.0	2.2	3.0	1.5	2.3
Belle Mina, AL	1.3	2.3	2.3	2.3	1.7	2.0
Princeton, KY	1.0	1.0	1.0	2.0	1.0	1.0
Tiptonville, TN	1.0	1.0	1.0	1.0	1.0	1.0
Martin, TN	1.0	1.0	2.0	1.0	1.0	2.0
Jackson, TN	1.0	1.0	2.0	2.0	1.0	1.0
			DELTA			
Portageville, MO (A)	1.0	1.0	2.5	2.0	1.5	2.0
Portageville, MO (B)	1.0	1.0	1.0	1.5	1.0	1.5
Keiser, AR	1.0	1.0	1.0	1.0	1.0	1.0
Jonesboro, AR *	1.0	1.0	1.0	1.0	1.0	1.0
Pine Tree, AR *	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	1.5	1.5	1.2	1.5	1.5	1.5
			WEST			
Parsons, KS	1.0	1.5	1.7	2.8	1.0	1.5
Columbus, KS	1.3	2.8	3.2	2.8	1.8	2.5
Pine Bluff, AR	1.0	1.0	2.0	1.0	1.0	1.0
Stuttgart, AR	1.0	1.8	4.2	2.8	1.5	3.0
Bossier City, LA	1.0	1.0	1.0	1.0	1.0	1.0
Bixby, OK	1.7	2.0	3.7	2.7	2.7	1.7
Lubbock, TX	2.5	2.5	4.2	2.3	3.7	2.8
Beaumont, TX	1.2	1.5	1.5	1.7	1.2	1.3

*Not included in mean.

Table 20 - (continued)

Location	S76-2425	LS79-330	R76-479	S79-4060	S79-4240	Tn77-111
		EAST COAST				
Queenstown, MD	3.2	2.8	3.6	3.8	4.0	3.4
Georgetown, DE	2.0	1.8	2.3	2.5	2.3	2.3
Warsaw, VA	2.0	1.3	1.8	3.8	3.6	2.3
Holland, VA	3.7	3.0	3.7	4.7	4.0	3.3
Plymouth, NC	3.0	3.0	3.0	3.0	3.0	2.7
		UPPER AND CENTRAL SOUTH				
Orange, VA	2.0	1.3	2.3	2.7	2.7	1.3
Knoxville, TN *	1.3	1.3	1.5	2.5	1.8	1.8
Clemson, SC	1.7	1.3	1.7	3.0	2.0	2.0
Calhoun, GA	1.0	1.0	1.0	2.0	1.0	1.0
Athens, GA	1.8	1.5	2.0	2.7	2.5	1.7
Belle Mina, AL	2.0	2.0	2.0	3.3	2.3	2.3
Princeton, KY	1.0	1.0	1.0	2.3	1.0	1.0
Tiptonville, TN	1.0	1.0	1.0	1.0	1.0	1.0
Martin, TN	1.0	1.0	1.0	1.0	1.0	1.0
Jackson, TN	1.0	1.0	2.0	2.0	2.0	2.0
		DELTA				
Portageville, MO (A)	1.5	1.5	1.5	2.0	2.0	1.0
Portageville, MO (B)	1.0	1.0	1.5	1.5	2.0	1.0
Keiser, AR	1.5	1.0	1.0	1.0	1.0	1.0
Jonesboro, AR*	1.0	1.0	1.0	1.0	1.0	1.0
Pine Tree, AR*	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	1.7	1.5	1.5	1.0	2.0	1.3
		WEST				
Parsons, KS	1.5	1.5	1.5	3.2	1.5	1.7
Columbus, KS	1.5	2.0	2.2	3.7	2.7	2.5
Pine Bluff, AR	1.0	1.0	1.0	2.0	2.0	1.0
Stuttgart, AR	1.1	1.2	1.7	3.7	3.3	1.7
Bossier City, LA	1.0	1.0	1.0	1.0	1.0	1.0
Bixby, OK	1.0	2.0	2.0	3.7	2.7	2.0
Lubbock, TX	2.7	2.2	2.3	3.3	3.0	2.5
Beaumont, TX	1.5	1.5	1.3	1.7	1.5	1.2

*Not included in mean.

Table 21 - Seed quality scores for the strains in Uniform Group V, 1983

Location	Essex	Forrest	D77-5090	D77-5169	R74-511	D77-6056
			EAST COAST			
Queenstown, MD	1.5	2.0	1.5	1.5	1.7	1.7
Georgetown, DE	1.5	2.0	1.8	1.8	1.5	1.8
Warsaw, VA	2.5	1.4	1.4	1.5	1.3	1.8
Holland, VA	4.0	2.0	2.7	1.3	3.7	1.3
Plymouth, NC	2.0	1.5	2.0	1.5	1.5	1.5
			UPPER AND CENTRAL SOUTH			
Orange, VA	2.7	2.2	2.7	2.5	2.5	2.7
Knoxville, TN *	1.0	1.0	1.0	1.0	1.0	1.0
Calhoun, GA	2.5	2.0	2.0	2.0	2.0	1.8
Athens, GA	3.0	2.2	2.3	2.0	2.0	2.0
Princeton, KY	3.0	3.0	4.0	5.0	2.0	5.0
Martin, TN	2.0	2.0	2.0	2.0	2.0	2.0
Jackson, TN	3.0	3.0	3.0	3.0	3.0	2.0
			DELTA			
Portageville, MO (A)	3.0	2.5	3.0	2.0	2.0	2.0
Portageville, MO (B)	2.5	2.5	2.5	2.5	2.5	2.0
Keiser, AR	3.0	2.0	4.0	2.0	2.0	1.0
Jonesboro, AR*	2.0	3.0	1.0	3.0	1.0	1.0
Pine Tree, AR *	1.0	2.0	2.0	2.0	1.0	2.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	2.7	3.2	2.7	2.7	2.8	2.5
			WEST			
Parsons, KS	2.7	3.0	2.0	2.5	2.5	2.0
Columbus, KS	2.2	2.0	2.2	2.2	1.5	2.0
Pine Bluff, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stuttgart, AR	2.5	1.8	2.7	2.7	1.8	2.3
Bossier City, LA	1.5	2.5	3.2	2.8	1.7	2.3
Beaumont, TX	3.5	3.7	3.3	3.0	3.7	3.0

*Not included in mean.

Table 21 - (continued)

Location	S76-2425	LS79-330	R76-479	S79-4060	S79-4240	Tn77-111
			EAST COAST			
Queenstown, MD	1.5	2.3	1.3	1.7	1.5	1.5
Georgetown, DE	1.5	1.8	2.0	2.0	2.0	1.5
Warsaw, VA	1.6	2.0	1.5	1.5	1.3	1.4
Holland, VA	3.7	1.7	1.7	2.0	1.0	2.3
Plymouth, NC	2.0	1.5	1.5	1.5	2.0	1.5
			UPPER AND CENTRAL SOUTH			
Orange, VA	2.0	3.5	2.3	3.0	1.8	1.8
Knoxville, TN *	1.0	1.0	1.0	1.0	1.0	1.0
Calhoun, GA	2.0	2.3	2.0	2.5	2.5	2.0
Athens, GA	2.5	3.0	2.3	2.5	2.2	2.0
Princeton, KY	2.0	5.0	2.0	5.0	5.0	2.0
Martin, TN	1.5	2.5	1.5	1.5	2.0	1.5
Jackson, TN	2.0	3.0	4.0	3.0	2.0	3.0
			DELTA			
Portageville, MO (A)	2.0	2.5	2.0	3.0	2.0	2.0
Portageville, MO (B)	2.5	2.5	2.5	2.5	2.0	2.5
Keiser, AR	2.0	3.0	3.0	2.0	4.0	2.0
Jonesboro, AR *	1.0	3.0	3.0	1.0	1.0	2.0
Pine Tree, AR *	1.0	3.0	2.0	2.0	2.0	2.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	2.3	2.7	3.3	3.5	1.8	2.5
			WEST			
Parsons, KS	2.2	4.0	2.7	2.5	2.5	2.8
Columbus, KS	1.8	2.0	1.8	2.2	1.7	1.8
Pine Bluff, AR	1.0	3.0	1.0	2.0	1.0	1.0
Stuttgart, AR	2.0	2.2	2.2	1.8	1.8	2.8
Bossier City, LA	1.2	3.2	3.3	3.7	2.2	1.7
Beaumont, TX	3.3	3.7	3.5	3.8	2.8	3.2

*Not included in mean.

PRELIMINARY GROUP V

1983

Plantings of the Preliminary Group V nurseries, which included Forrest and Hill along with 34 experimental strains, were made at 8 locations. The parentage of each strain is reported in Table 22. Table 23 gives a general summary of performance including reaction to root-knot nematode, soybean cyst nematode, and soybean looper. Additional performance data are summarized in Tables 24-28. Plantings at Tiptonville, Tennessee were on SCN race 4 infested soil; however, nematode populations were low in 1983.

Maturity of Group V lines should range from approximately Hill maturity to no more than 3 or 4 days later than Forrest. Eight of the strains included had an average maturity rating earlier than Hill and should be classed as of IV maturity and six strains were considerably later in maturity than Forrest and should have been classed as of Group VI maturity. The latest of these averaged 16 days later in maturity than Forrest.

Difference among strains for seed yield were significant at the 5% level of confidence at each of the locations where the nurseries were grown. Forrest had a mean seed yield of 33.7 bushels per acre. Of the strains considered to be of V maturity, seven ranked slightly above Forrest in seed yield, but none was significantly higher at the 5% level of confidence. Nineteen of the strains were resistant to one or more races of SCN and nine of these were also resistant to both species of root-knot nematodes. One strain was rated resistant to feeding by soybean looper.

Table 22 - Parentage of the strains grown in Preliminary Group V, 1983

	Strain or variety	Parentage	Generation composited
1.	Forrest	Dyer X Bragg	F_5
2.	Hill	D632-15 X D49-2525	F_5
3.	D79-5549	Bedford X sel[Forrest(2) X Tracy]	F_5
4.	D81-7857	Bedford X (J74-45 X D74-7445)	F_5
5.	D81-7927	D74-7445 X J74-45	F_5
6.	D81-7970	D74-7445 X J74-45	F_5
7.	K1100	A75-302005 X K74-108-75-169	F_5
8.	K1101	Union X Essex	F_5
9.	K1102	K1034 X Essex	F_5
10.	K1104	Union X Essex	F_5
11.	Ky80-2098	Williams X Essex	F_5
12.	Ky80-3315	Essex X Elf	F_5
13.	LS77-952	Essex X Clark 63	F_6
14.	LS79-238	Forrest X V71-480	F_5
15.	LS79-338	Forrest X V71-480	F_5
16.	LS79-339	Forrest X V71-480	F_5
17.	N79-2276	Forrest(2) X 4-74-6-3	F_4
18.	N80-50385	Forrest X 6-39-4-3	F_7
19.	N81-274	D74-7633 X N73-520-2	F_6
20.	N80-292	D74-7633 X N73-520-2	F_6
21.	NR82-1024	Forrest X Semmes	F_7
22.	R76-717	Mack X X-73-3	F_4
23.	R81-437	R75-12 X R75-195S	F_5
24.	R81-766	(R75-206S X R74-511) X (Centennial X R74-511)	F_4
25.	S80-2959	J74-123 X N73-520	F_5
26.	S80-7373	L71L-556 X J74-116	F_5
27.	S80-7374	L71L-556 X J74-116	F_5
28.	S81-4403	D70-3115 X J74-39	F_5
29.	Tn81-22	Essex X Bedford	F_6
30.	Tn81-28	Essex X Bedford	F_6
31.	Tn81-42	Forrest X Wayne	F_6
32.	Ts78-1099	Essex X Clark 63	F_{10}
33.	Ts79-1148	Essex X Clark 63	F_{11}
34.	V78-184	V68-1034 X Essex	F_5
35.	V79-882	Essex X Ransom	F_5
36.	V79-886	Essex X Ransom	F_5

Table 23 - General summary of performance for the strains in Preliminary Group V, 1983

Strain	Seed yield	Maturity index	Ht.	Percent Oil	Percent Protein	M. incognita	M. arenaria	SCN race 3	Soybean looper
Forrest	33.7	10-13	33	21.8	39.2	1.0	1.2	R	5.0
Hill	27.9	-7	29	21.6	40.2	1.5	2.5	S	5.0
D79-5549	30.0	+1	28	21.3	39.8	1.0	2.0	R*	5.0
D81-7857	35.0	+5	34	22.7	38.1	3.5	1.2	R*	5.0
D81-7927	33.9	+3	35	21.5	40.2	3.5	2.5	R*	5.0
D81-7970	34.5	+2	31	21.7	39.7	1.0	2.5	R*	5.0
K1100	31.2	0	32	20.9	43.0	4.5	2.0	S	5.0
K1101	28.4	-5	27	21.1	42.4	1.0	5.0	S	5.0
K1102	29.0	-9	26	21.4	41.7	1.0	4.5	S	5.0
K1104	25.3	-8	26	21.1	42.2	1.5	3.5	S	5.0
Ky80-2098	28.5	-10	25	22.1	40.7	2.5	3.8	S	4.5
Ky80-3315	27.5	-9	27	22.6	39.5	5.0	1.8	S	4.0
LS77-952	33.2	-3	27	21.7	40.6	4.5	2.5	S	5.0
LS79-238	24.1	-11	27	22.2	40.2	2.0	1.5	R	5.0
LS79-338	28.5	-9	30	22.3	40.3	1.0	1.8	R	5.0
LS79-339	26.7	-5	29	22.2	40.4	1.0	1.5	R	5.0
N79-2276	34.7	+16	34	20.1	40.3	1.5	2.3	R	4.0
N80-50385	31.8	+16	37	20.5	39.1	1.0	2.8	R	2.5
N81-274	36.2	+9	34	21.1	38.9	4.0	2.0	S	4.0
N80-292	35.6	+14	39	21.4	39.1	4.0	1.5	S	5.0
NR82-1024	31.5	+5	29	21.4	40.8	4.0	1.8	R	5.0
R76-717	25.2	-8	31	20.9	40.1	3.0	5.0	R	5.0
R81-437	29.0	+10	30	21.2	39.2	5.0	3.0	R	5.0
R81-766	32.0	0	30	22.6	39.1	3.0	4.0	S	4.0
S80-2959	37.1	+4	34	21.7	39.3	4.0	2.0	R*	5.0
S80-7373	31.2	+2	33	21.1	41.7	1.0	3.0	R*	4.0
S80-7374	30.7	0	34	21.3	41.0	1.0	5.0	R*	4.0
S81-4403	31.3	-1	28	21.8	39.5	1.0	1.5	R*	4.0
Tn81-22	33.1	+3	34	20.9	40.1	1.0	5.0	R	4.0
Tn81-28	33.0	-1	35	21.0	41.9	1.0	3.2	R	5.0
Tn81-42	26.6	-11	28	22.4	41.1	2.0	1.5	R	5.0
Ts78-1099	28.8	-6	23	22.3	40.1	5.0	1.5	S	5.0
Ts79-1148	29.8	-6	26	21.6	41.7	2.0	4.5	S	5.0
V78-184	38.1	+2	25	22.4	39.4	3.0	4.0	S	5.0
V79-882	36.6	+2	31	22.3	40.2	2.5	4.5	S	4.5
V79-886	34.1	+12	30	22.2	39.3	1.5	4.5	S	4.0
L.S.D (.05)	4.6								
C.V.	15%								

* Also resistant to SCN race 4.

Table 24 - Seed yield in bushels per acre, for the strains grown in Preliminary Group V, 1983

Strain	Warsaw, VA	Ply-mouth, NC	Portage-ville, MO (A)	Tipton-ville, TN	Keiser, AR	Stone-ville, MS(A)	Stone-ville, MS(B)	Columbus, KS
Forrest	31.9	32.3	31.7	24.1	47.9	48.5	23.2	30.0
Hill	26.5	30.7	24.4	16.9-	38.0-	39.6	22.3	24.5-
D79-5549	33.9	28.1	30.7	33.2+	41.5-	23.6-	21.9	27.0
D81-7857	34.6	36.1	36.7	31.0+	48.5	34.1-	29.7	29.1
D81-7927	32.7	29.7	27.5	31.4+	52.4	44.7	25.8	27.2
D81-7970	29.6	34.4	32.2	29.5	50.8	42.4	28.4	28.4
K1100	25.4-	32.2	26.5	18.9	40.9-	46.5	39.3+	20.2-
K1101	26.7	32.7	14.7-	20.3	43.3	46.5	26.5	16.5-
K1102	28.5	37.8	17.4-	18.1	42.4-	51.0	19.9	17.1-
K1104	24.5-	30.4	10.2-	19.1	37.9-	42.6	22.8	15.0-
Ky80-2098	32.6	27.8	18.6-	21.2	40.8-	44.8	22.3	20.2-
Ky80-3315	31.2	14.6-	23.0-	21.4	40.6-	44.4	24.0	20.5-
LS77-952	34.8	32.2	22.6	22.5	48.9	50.7	31.2	22.6-
LS79-238	28.8	28.4	16.9-	21.0	32.8-	28.1-	17.4	19.5-
LS79-338	29.7	26.7	22.3-	24.2	37.9-	44.1	20.1	22.9-
LS79-339	26.9	22.7	25.9	24.1	37.2-	36.6-	18.1	22.0-
N79-2276	31.8	35.8	31.5	24.7	46.9	39.6	41.5+	25.8
N80-50385	32.0	39.6	29.4	17.5-	49.5	35.7-	22.8	27.8
N81-274	31.5	36.8	27.6	27.8	52.2	43.7	41.0+	28.8
N80-292	33.0	36.7	36.0	27.5	52.3	36.3-	36.1+	26.8
NR82-1024	26.7	39.5	24.5	20.4	43.7	37.6	31.0	28.4
R76-717	29.4	24.6	21.9-	26.0	35.1-	19.4-	21.8	23.2-
R81-437	32.6	22.5	22.5-	25.0	33.5-	33.4-	34.7+	27.6
R81-766	32.2	32.3	29.9	27.1	40.9-	38.4	28.6	26.8
S80-2959	33.3	34.8	31.6	31.2+	51.8	46.5	39.0+	28.8
S80-7373	30.8	32.6	27.1	30.7+	44.8	37.7	25.5	20.0-
S80-7374	27.8	34.9	28.6	33.2+	44.6	33.1-	22.1	21.2-
S81-4403	29.5	33.2	26.9	29.3	45.6	44.4	18.2	23.2-
Tn81-22	32.5	32.7	27.3	23.6	48.9	43.4	29.8	26.5
Tn81-28	29.6	31.4	26.0	27.2	47.0	41.7	31.8+	28.9
Tn81-42	31.1	30.7	20.4-	20.8	34.7-	37.3-	14.9-	22.8-
Ts78-1099	28.6	23.7	20.1-	22.4	47.5	43.0	24.3	21.0-
Ts79-1148	27.8	32.9	19.7-	19.1	48.0	43.4	27.9	19.4-
V78-184	34.8	40.1	33.1	27.7	55.2+	49.8	32.2+	31.8
V79-882	35.5	29.4	31.7	25.4	51.3	49.6	36.5+	33.3
V79-886	32.2	22.3	29.8	28.1	46.9	42.5	41.8+	29.4
L.S.D.(.05)	5.9	10.8	7.5	6.4	5.1	11.0	8.1	5.2
C.V	9	17	14	27	6	13	14	11

Table 25 - Oil percentages for the strains in Preliminary Group V, 1983

Strain	Warsaw, VA	Plymouth, NC	Portageville, MO (A)	Keiser, AR	Stoneville, MS (B)
Forrest	21.5	21.1	22.7	21.8	22.1
Hill	20.3	20.9	22.5	21.3	23.0
D79-5549	21.4	20.5	21.9	21.4	21.5
D81-7857	22.0	21.4	23.1	23.6	23.2
D81-7927	21.3	20.3	21.7	22.3	21.7
D81-7970	21.5	20.4	22.4	21.9	22.3
K1100	20.5	20.3	21.8	20.3	21.5
K1101	21.0	20.3	21.4	21.5	21.3
K1102	20.6	21.0	21.1	21.5	22.6
K1104	21.1	20.1	20.3	21.1	21.8
Ky80-2098	21.8	22.0	22.2	21.8	22.7
Ky80-3315	21.7	22.6	22.4	22.7	23.4
LS77-952	22.0	21.5	21.5	21.0	22.6
LS79-238	21.5	22.8	22.0	21.5	23.2
LS79-338	21.4	22.5	22.6	22.1	23.1
LS79-339	22.0	22.4	22.5	21.6	22.6
N79-2276	20.4	19.1	20.5	20.5	19.8
N80-50385	20.2	20.4	20.4	20.7	20.8
N81-274	19.9	21.1	21.1	21.4	22.2
N80-292	21.3	21.1	22.0	21.6	21.2
NR82-1024	21.0	20.6	21.6	21.7	21.9
R76-717	20.7	20.5	21.3	20.5	21.6
R81-437	21.1	20.4	20.5	22.3	21.8
R81-766	22.0	21.9	23.2	22.7	23.1
S80-2959	21.3	21.0	21.8	22.4	21.8
S80-7373	20.1	20.6	21.9	20.5	22.4
S80-7374	20.4	21.3	21.5	20.5	22.6
S81-4403	21.6	21.2	22.7	21.9	21.7
Tn81-22	20.7	20.4	21.0	21.2	21.4
Tn81-28	20.2	20.6	21.2	21.3	21.6
Tn81-42	21.7	22.6	22.9	21.7	23.0
Ts78-1099	21.5	22.3	22.2	21.8	22.6
Ts79-1148	20.7	21.7	21.5	21.5	22.8
V78-184	21.8	22.1	23.3	22.0	22.6
V79-882	21.4	22.3	22.7	23.2	22.1
V79-886	21.8	22.2	22.8	22.2	22.0

Table 26 - Protein percentages for the strains in Preliminary Group V, 1983

Strain	Warsaw, VA	Plymouth, NC	Portageville, MO (A)	Keiser, AR	Stoneville, MS (B)
Forrest	37.5	40.9	38.5	38.4	40.9
Hill	39.2	41.2	39.7	39.7	41.4
D79-5549	36.9	42.0	39.6	38.8	41.7
D81-7857	35.7	41.0	37.5	35.9	40.2
D81-7927	37.5	42.9	41.4	37.4	41.6
D81-7970	39.2	42.3	38.8	38.0	40.2
K1100	43.2	45.1	41.1	41.5	44.2
K1101	42.5	42.7	42.6	40.7	43.4
K1102	42.1	42.0	41.6	40.0	42.9
K1104	41.6	42.6	42.9	40.8	43.2
Ky80-2098	40.2	40.1	40.7	40.5	42.0
Ky80-3315	40.3	39.2	39.4	38.2	40.6
LS77-952	39.4	40.0	40.7	40.7	42.1
LS79-238	39.5	38.6	41.8	40.0	41.0
LS79-338	39.2	40.6	39.6	39.8	42.5
LS79-339	38.3	41.1	40.7	39.9	42.1
N79-2276	38.5	43.0	39.4	38.1	42.3
N80-50385	38.2	40.6	38.1	37.7	41.1
N81-274	38.1	39.5	39.4	37.8	39.5
N80-292	36.5	41.6	37.0	38.6	41.8
NR82-1024	39.1	42.8	40.1	39.3	42.8
R76-717	39.0	42.4	38.9	39.0	41.4
R81-437	37.8	42.4	40.7	36.0	39.3
R81-766	38.2	41.8	37.8	36.5	41.1
S80-2959	36.6	42.5	38.0	37.1	42.2
S80-7373	41.3	43.8	41.3	41.2	41.1
S80-7374	40.0	42.3	41.2	40.5	41.0
S81-4403	38.1	41.5	37.6	37.5	43.0
Tn81-22	37.3	42.5	40.0	38.5	42.0
Tn81-28	41.3	43.6	41.8	39.9	43.1
Tn81-42	40.4	41.4	40.5	40.8	42.7
Ts78-1099	40.2	40.2	39.9	39.7	40.5
Ts79-1148	42.1	42.2	41.7	40.9	41.4
V78-184	39.1	40.7	38.1	38.0	40.9
V79-882	39.5	41.0	38.3	38.7	43.3
V79-886	39.7	40.3	38.3	37.7	40.7

Table 27 - Plant height for the strains in Preliminary Group V, 1983

Strain	Warsaw, VA	Ply-mouth, NC	Portage-ville, MO(A)	Tipton-ville, TN	Keiser, AR	Stone-ville, MS(A)	Stone-ville, MS(B)	Columbus, KS
Forrest	40	32	41	32	26	32	18	39
Hill	30	37	36	22	24	26	19	36
D79-5549	35	29	37	22	23	22	20	34
D81-7857	42	39	40	28	30	29	23	40
D81-7927	43	37	42	34	34	30	21	37
D81-7970	36	39	40	26	25	28	18	34
K1100	34	33	42	28	24	38	27	32
K1101	33	30	34	18	24	27	18	30
K1102	32	28	33	20	23	23	18	30
K1104	32	28	34	22	22	24	16	29
Ky80-2098	34	27	28	20	21	23	17	32
Ky80-3315	32	23	35	32	22	24	17	31
LS77-952	30	27	36	22	23	27	19	30
LS79-238	36	29	38	18	20	21	17	38
LS79-338	40	31	38	22	28	26	19	36
LS79-339	36	30	42	24	23	26	16	37
N79-2276	36	35	45	26	32	37	26	35
N80-50385	42	38	45	32	35	40	21	41
N81-274	42	41	48	34	37	37	26	40
N80-292	42	44	48	36	35	36	30	40
NR82-1024	32	37	38	26	22	29	21	30
R76-717	38	30	42	28	28	20	20	38
R81-437	30	30	44	26	23	30	23	32
R81-766	39	36	36	22	25	28	21	34
S80-2959	42	39	44	30	26	29	22	40
S80-7373	40	34	41	28	34	26	25	38
S80-7374	42	37	41	32	33	27	21	37
S81-4403	35	34	36	24	23	24	17	32
Tn81-22	43	39	40	26	32	31	25	36
Tn81-28	41	39	41	34	29	30	25	42
Tn81-42	36	34	37	22	24	25	16	33
Ts78-1099	26	21	30	20	21	22	15	28
Ts79-1148	30	31	33	18	22	24	16	34
V78-184	32	33	39	24	23	28	18	30
V79-882	37	31	41	34	26	28	20	34
V79-886	30	27	42	26	32	27	24	33

Table 28 - Seed quality scores for the strains in Preliminary Group V, 1983

Strain	Warsaw, VA	Ply-mouth, NC	Portage-ville, MO(A)	Keiser, AR	Stone-ville, MS(A)	Stone-ville, MS(B)	Columbus, KS
Forrest	1.8	1.5	2.0	3.0	2.0	2.0	2.2
Hill	2.5	1.5	2.5	5.0	2.0	2.0	2.2
D79-5549	2.4	1.5	2.0	3.0	2.0	2.0	2.0
D81-7857	1.0	1.5	2.0	2.0	2.0	2.0	2.2
D81-7927	1.4	1.5	2.0	1.0	2.0	2.0	2.5
D81-7970	1.4	1.5	2.0	3.0	2.0	2.0	2.0
K1100	2.8	2.0	2.0	2.0	2.0	2.0	3.5
K1101	2.5	2.0	2.5	4.0	2.0	2.0	2.2
K1102	1.8	2.5	2.5	5.0	2.0	2.0	2.5
K1104	3.0	1.5	2.5	3.0	2.0	2.0	2.0
Ky80-2098	2.0	1.5	2.5	3.0	2.0	2.0	2.0
Ky80-3315	3.2	2.0	2.5	4.0	2.0	2.0	2.0
LS77-952	1.8	1.5	2.0	4.0	2.0	2.0	2.0
LS79-238	2.7	1.5	2.0	2.0	2.0	2.0	2.0
LS79-338	2.2	1.5	3.0	5.0	2.0	2.0	2.5
LS79-339	2.0	1.5	3.0	5.0	2.0	2.0	2.8
N79-2276	1.4	1.5	3.0	5.0	2.0	2.0	2.0
N80-50385	1.3	1.5	2.5	5.0	2.0	2.0	2.5
N81-274	1.7	1.5	2.0	3.0	2.0	2.0	2.0
N80-292	1.3	1.5	2.5	5.0	2.0	2.0	2.0
NR82-1024	1.8	2.0	2.0	4.0	2.0	2.0	2.0
R76-717	1.8	1.5	2.5	5.0	3.0	2.0	2 0
R81-437	1.2	2.0	2.0	3.0	2.0	2.0	1.8
R81-766	1.5	1.5	2.0	2.0	2.0	2.0	1.8
S80-2959	1.5	1.5	2.0	2.0	2.0	2.0	2.5
S80-7373	2.0	1.5	2.5	3.0	2.0	2.0	3.5
S80-7374	2.5	1.5	3.0	4.0	2.0	2.0	3.2
S81-4403	1.7	1.5	2.0	3.0	2.0	2.0	2.2
Tn81-22	1.7	1.5	2.5	5.0	2.0	2.0	2.0
Tn81-28	2.2	1.5	2.0	3.0	2.0	2.0	2.0
Tn81-42	2.4	1.5	3.0	5.0	2.0	2.0	2.2
Ts78-1099	1.8	2.0	2.5	2.0	2.0	2.0	1.5
Ts79-1148	2.8	2.0	2.0	3.0	2.0	2.0	2.0
V78-184	2.0	1.5	2.0	2.0	2.0	2.0	1.5
V79-882	2.4	1.5	2.0	1.0	2.0	2.0	2.5
V79-886	1.6	2.0	2.0	5.0	2.0	2.0	2.0

UNIFORM GROUP VI

1983

	Variety or strain	Parentage	Generation composited
1.	Centennial	D64-4636 X tawny pubescent Pickett 71 type	F_5
2.	Tracy-M	Metribuzin tolerant sel. from Tracy X (D61-618 X D60-9647)	F_{10}
3.	D77-6166	Centennial X J74-47	F_5
4.	D78-5502	Forrest(2) X Tracy	F_5
5.	D79-6058	Tracy X Centennial	F_5
6.	N79-491	N70-1501 X Centennial	F_6
7.	R79-167S	R72-26 X Forrest	F_5
8.	D79-6162	Tracy X Centennial	F_5
9.	D80-7987	Bedford X (Tracy X D72-8707)	F5
10.	Ga79-402	Centennial X Forrest	F_5
11.	J80-293	J74-39 X Centennial	F_5
12.	R80-437	(Centennial X R75-12) X (Picket 71 X PI 90763R)	F_5

Background of breeding lines used as parents:

D64-4636 is a selection from Hill X D58-3311. D58-3311 is a bacterial pustule resistant strain selected from Jackson(4) X D49-2491.

J74-47 is a SCN race 4 selection of the same parentage as Bedford.

N70-1501 is a selection from Dare X D65-6765 which was grown in Uniform Group VI in 1974.

D72-8707 is a selection from Forrest X D65-3168. D65-3168 is a selection from Hill X PI 96983, resistant to phytophthora rot and soybean mosaic virus.

J74-39 is a SCN race 4 resistant line of the same parentage as Bedford.

R75-12 is a selection from R72-2647(3) X sel(D68-18 X PI 88788), which was grown in Uniform VI in 1977.

Plantings of Uniform Group VI nurseries were made at 34 locations for evaluating seed yield. Plantings were made near Blackville, South Carolina for evaluating strains for reaction to M. arenaria, and near Jay, Florida for reaction to M. incognita. Plantings were made at Ames Plantation to evaluate for reaction to SCN race 3, but nematode populations were very low. Plantings were also made in the field cage at Stoneville to evaluate for feeding by soybean looper. SCN race 3 was present in the area where the nursery was grown at Jay, Florida. Stem canker was present in the area where the nurseries were grown at Florence, South Carolina. Table 29 gives a general summary of performance, including three-year mean seed yields and reaction to nematodes, diseases, and insects. Data from individual locations are reported in Tables 30-35.

Data are reported from 29 locations. Differences among strains for seed yield were significant for 21 locations. Because of drought stress, seed yield at several locations was low.

Two strains, D77-6166 and D78-5502, have been evaluated three years. D77-6166 is being increased for release to provide a variety of Group VI maturity with resistance to SCN race 4 and a moderate resistance to stem canker. Three-year mean seed yields for D77-6166 are similar to means for Centennial. It is very similar to Centennial in growth characteristics. The variety 'Jeff' is also resistant to SCN race 4, but in areas where stem canker has been a problem, D77-6166 has had a definite yield advantage. D77-6166 also carries the gene Rps_1^c for reaction to phytophthora rot. Like Centennial, D77-6166 is resistant to M. incognita, but susceptible to M. arenaria. D78-5502 has averaged higher in seed yield than Centennial in all areas except the Southeast. It has good resistance to SCN race 3.

Three strains have been evaluated two years. N79-491 is of early Group VI maturity. Seed quality has been somewhat low, which has resulted in thin stands in some of the plantings. R79-167S has yielded very well in the West. D79-6058 is considered somewhat inferior to D79-6162 from the same parentage.

Five strains were evaluated one year. D79-6162 had a mean seed yield, in the Preliminary Group VI nursery in 1982, which was significantly greater than that for Centennial at the 1% level of confidence. It did not show this advantage over Centennial in 1983, although at several locations it did show good productivity. It has resistance to SCN race 3 and has demonstrated good productivity under severe stem canker conditions. D80-7987 carries resistance to SCN races 3 and 4 and to soybean mosaic virus.

In the field cage under heavy feeding pressure from soybean looper, Tracy-M demonstrated a moderate level of resistance. This moderate level of resistance to soybean looper feeding has been observed under other conditions.

Table 29 - General summary of the performance for the strains grown in Uniform Group VI, 1983

	No. of locations	Centennial	Tracy-M	D77-6166	D78-5502	D79-6058	N79-491
Seed yield - 1983							
East Coast	6	36.2	35.1	35.8	39.0	39.9	29.4
Southeast	5	39.0	30.6	32.3	36.2	33.4	16.3
Upper & Central South	4	39.8	35.9	38.1	39.5	38.5	31.7
Delta	6	43.4	40.3	39.9	41.5	43.8	32.2
West	3	47.5	48.8	42.7	48.4	46.7	41.4
1982-83							
East Coast		37.2	36.0	37.0	39.9	38.7	35.0
Southeast		42.5	36.0	39.2	40.0	39.7	28.5
Upper & Central South		41.5	39.9	41.1	43.1	42.3	40.4
Delta		40.5	39.3	38.6	41.5	43.5	37.5
West		42.1	43.7	40.9	43.8	44.4	43.1
1981-83							
East Coast		37.9	36.2	37.8	40.6		
Southeast		41.9	36.0	39.9	40.7		
Upper & Central South		39.4	38.3	40.5	41.1		
Delta		40.3	39.0	39.8	41.7		
West		41.4	42.6	41.4	43.8		
Oil Content - 1983		19.0	18.2	19.3	20.2	18.5	20.8
1982-83		18.3	17.6	18.3	19.3	17.9	19.8
1981-83		18.3	17.4	18.2	19.0		
Protein Content - 1983		43.7	45.0	42.4	41.9	44.5	42.1
1982-83		40.7	43.9	41.8	41.5	43.6	41.9
1981-83		41.8	44.1	42.1	41.8		
Seed size		13.4	15.4	12.3	14.5	14.4	12.6
Maturity index		10-23	-2	-2	-1	0	-13
Height		35	32	32	31	37	26
Seed quality		1.7	2.0	1.9	2.0	1.8	2.3
M. incognita		1.0	2.5	1.0	2.0	2.0	1.0
M. arenaria		4.5	4.5	4.5	4.0	4.0	2.5
SCN race 3		R	S	R[1]	R	R	R
Soybean looper		5.0	3.0	4.5	5.0	5.0	4.5
Stem canker		1.0	1.0	1.0	1.5	1.0	1.0
Flower color		P	W	P	W	W	P
Pubescence color		T	T	T	T	T	G

[1]Also resistant to SCN race 4.

Table 29 - (continued)

	R79-167S	D79-6162	D80-7987	Ga79-402	J80-293	R80-437
Seed yield - 1983						
East Coast	38.3	37.9	38.7	35.5	37.5	36.8
Southeast	34.7	39.8	31.1	27.0	35.3	33.2
Upper & Central South	40.0	37.2	40.3	35.7	40.6	42.3
Delta	35.5	42.8	41.4	38.0	43.3	43.1
West	51.1	46.2	50.2	46.4	51.5	46.1
1982-83						
East Coast	38.2					
Southeast	37.6					
Upper & Central South	41.5					
Delta	37.8					
West	44.3					
1981-83						
East Coast						
Southeast						
Upper & Central South						
Delta						
West						
Oil Content - 1983	19.7	18.1	20.1	20.8	19.8	19.3
1982-83	19.1					
1981-83						
Protein Content - 1983	41.6	44.5	40.0	41.3	43.4	42.6
1982-83	43.1					
1981-83						
Seed size	11.3	15.2	11.5	12.4	12.1	14.3
Maturity index	-1	0	-2	-10	-3	-1
Height	34	39	35	32	31	31
Seed quality	1.8	2.3	1.7	2.1	1.9	2.3
M. incognita	2.0	2.5	2.5	1.0	1.0	1.5
M. arenaria	1.5	5.0	1.8	4.0	2.0	5.0
SCN race 3	R	R	R[1]	R	R[1]	R[1]
Soybean looper	5.0	5.0	4.0	5.0	5.0	4.0
Stem canker	1.0	1.0	1.0	1.0	1.0	1.0
Flower color	P	W	W	P	W	P
Pubescence color	T	T	G	T	T	G

[1]Also resistant to SCN race 4.

Table 30 - Seed yield, in bushels per acre, for the strains in Uniform Group VI, 1983

Location	Centennial	Tracy-M	D77-6166	D78-5502	D79-6058	N79-491	R79-167S
			EAST COAST				
Warsaw, VA	21.4	23.3	26.3+	24.7+	25.3+	28.9+	24.8+
Holland, VA	51.1	53.6	38.4-	53.0	52.7	24.6-	57.6
Plymouth, NC	45.3	37.5-	40.1-	48.0	43.6	37.4-	42.3
Clinton, NC	33.5	28.2-	35.4	35.6	33.3	31.0	33.5
Kinston, NC *	11.6	15.0+	15.3+	19.7+	14.3	17.1+	16.7+
Florence, SC	21.9	27.8+	28.7+	24.0	36.3+	21.5	23.1
Hartsville, SC	43.9	40.4	45.6	47.8	48.1	32.8-	48.2
Mean	36.2	35.1	35.8	39.0	39.9	29.4	38.3
			SOUTHEAST				
Blackville, SC	32.7	27.1	28.8	31.4	29.8	20.1-	34.2
Tifton, GA	33.8	33.5	37.4	42.2	33.8	28.0	37.4
Quincy, FL	39.7	32.5-	26.1-	34.0	33.4-	4.2-	36.8
Jay, FL	44.0	35.6	40.5	36.1	36.6	24.6-	39.8
Fairhope, AL *	46.1	42.4	—	40.8	40.8	—	49.2
Baton Rouge, LA	45.0	24.1-	28.5-	37.3-	33.4-	4.7-	25.1-
Mean	39.0	30.6	32.3	36.2	33.4	16.3	34.7
			UPPER AND CENTRAL SOUTH				
Athens, GA	47.3	43.3	49.7	46.9	46.9	36.4	49.9
Calhoun, GA	67.6	59.7	56.8	62.7	58.8	50.9-	60.5
Belle Mina, AL	16.3	16.4	18.3	18.1	20.7	19.1	18.5
Clemson, SC	28.1	24.1-	27.6	30.3	27.6	20.5-	31.0
Jackson, TN(A)*	11.1	15.0	13.8	21.4	17.8	16.1	17.6
Mean	39.8	35.9	38.1	39.5	38.5	31.7	40.0
			DELTA				
Portageville, MO(A)	37.0	34.0	39.4	35.8	36.7	39.3	36.8
Keiser, AR	43.4	44.9	42.4	47.5	45.0	39.7	44.4
Jonesboro, AR *	15.8	12.1	6.5	13.0	11.8	11.7	9.2
Pine Tree, AR *	14.7	16.3	17.4	19.2	20.3	13.5	18.2
Stoneville, MS(A)	46.7	45.9	43.0	44.6	47.4	25.9-	44.8
Stoneville, MS(B)	39.4	30.5	26.2-	25.5-	40.2	22.6-	33.2
St. Joseph, LA	52.2	50.1	51.6	53.4	51.7	34.2-	54.7
Rohwer, AR	41.4	36.3	36.5	41.9	41.6	31.3-	38.8
Mean	43.4	40.3	39.9	41.5	43.8	32.2	35.5
			WEST				
Pine Bluff, AR	49.4	60.7	54.0	55.4	54.0	59.1	59.0
Stuttgart, AR	55.2	55.3	50.6	54.0	54.2	46.3	54.9
Bossier City, LA	53.7	49.6	34.5-	47.4	46.5	23.8-	52.1
Beaumont, TX	39.2	35.2	39.2	41.9	36.6	30.8	40.6
Bixby, OK	39.8	43.2	35.1	43.7	42.3	46.8+	48.8+
Mean	47.5	48.8	42.7	48.4	46.7	41.4	51.1

* Not included in mean.

Table 30 - (continued)

Location	D79-6162	D80-7987	Ga79-402	J80-293	R80-437	L.S.D. (.05)	C.V. %
			EAST COAST				
Warsaw, VA	19.3	26.6+	25.0+	28.0+	22.9	2.3	6
Holland, VA	51.6	46.9	49.2	55.4	55.4	11.9	14
Plymouth, NC	44.1	46.5	39.4-	42.5	45.7	4.9	7
Clinton, NC	29.0	36.7	31.0	28.4-	29.6	4.5	8
Kinston, NC *	13.0	14.9+	16.6+	14.8+	14.1	2.9	11
Florence, SC	35.3+	28.2+	24.2	23.8	23.8	5.3	12
Hartsville, SC	48.1	47.2	44.0	46.8	43.6	8.6	11
Mean	37.9	38.7	35.5	37.5	36.8		
			SOUTHEAST				
Blackville, SC	28.5	34.1	27.1	33.4	32.2	6.8	10
Tifton, GA	31.5	21.2-	32.7	40.1	25.5	8.6	15
Quincy, FL	45.5	32.0-	19.4-	32.8-	37.8	6.2	12
Jay, FL	54.4	42.0	39.0	42.0	38.4	11.3	17
Fairhope, AL *	48.4	40.1	33.3	40.8	40.8		
Baton Rouge, LA	39.3	26.4-	17.0-	28.3-	32.0-	6.1	13
Mean	39.8	31.1	27.0	35.3	33.2		
			UPPER AND CENTRAL SOUTH				
Athens, GA	46.6	47.2	42.1	44.4	43.8	NS	11
Calhoun, GA	56.1	68.8	58.0	67.0	72.8	11.8	11
Belle Mina, AL	17.0	17.3	16.9	18.4	21.3	NS	16
Clemson, SC	29.2	27.7	25.7	32.4	31.4	3.6	8
Jackson, TN(A) *	12.0	14.3	11.6	11.7	13.1	NS	28
Mean	37.2	40.3	35.7	40.6	42.3		
			DELTA				
Portageville, MO(A)	34.6	31.0	36.4	39.1	32.5	NS	12
Keiser, AR	43.4	46.0	45.8	49.8+	47.3	4.2	6
Jonesboro, AR *	16.0	9.4	12.9	9.2	17.7	NS	34
Pine Tree, AR *	17.8	20.6	14.7	15.4	18.5	NS	24
Stoneville, MS(A)	44.7	50.5	38.1-	49.1	44.7	5.3	7
Stoneville, MS(B)	38.1	24.7-	23.1-	34.6	37.3	9.4	18
St. Joseph, LA	54.4	54.5	45.7	48.7	53.4	7.4	9
Rohwer, AR	41.3	41.7	38.6	38.2	43.7	5.9	9
Mean	42.8	41.4	38.0	43.3	43.1		
			WEST				
Pine Bluff, AR	54.6	59.1	57.4	61.0	56.3	NS	13
Stuttgart, AR	57.6	56.3	52.7	53.8	50.0	NS	7
Bossier City, LA	45.9	58.4	43.6-	56.8	48.3	8.8	11
Beaumont, TX	35.8	36.4	36.5	37.4	34.7	NS	11
Bixby, OK	37.1	40.8	41.9	48.3+	41.2	5.6	8
Mean	46.2	50.2	46.4	51.5	46.1		

Table 31 - Chemical composition and seed size for the strains in Uniform Group VI, 1983

Location	Centennial	Tracy-M	D77-6166	D78-5502	D79-6058	N79-491
			OIL PERCENTAGES			
Holland, VA	18.8	17.9	19.0	19.6	17.8	20.2
Plymouth, NC	19.0	17.8	18.5	20.1	18.1	20.5
Clinton, NC	18.3	18.2	19.0	20.2	17.6	22.0
Jay, FL	20.2	18.8	20.4	20.9	20.5	21.2
Portageville, MO(A)	18.6	18.5	19.4	20.5	17.9	21.3
Keiser, AR	19.3	17.7	19.5	20.8	18.3	20.8
Stoneville, MS(B)	18.3	18.3	19.4	19.8	18.3	20.5
Stuttgart, AR	19.0	18.0	18.9	19.6	18.8	20.1
Beaumont, TX	19.2	18.9	19.9	20.1	18.9	20.4
Mean	19.0	18.2	19.3	20.2	18.5	20.8
			PROTEIN PERCENTAGES			
Holland, VA	44.2	46.2	43.2	43.4	45.3	44.1
Plymouth, NC	43.8	45.1	43.4	41.8	44.9	42.4
Clinton, NC	43.6	45.4	42.4	41.9	45.0	40.3
Jay, FL	44.1	44.8	41.5	41.6	43.0	44.1
Portageville, MO(A)	41.2	43.0	40.3	40.1	43.3	40.3
Keiser, AR	42.3	44.7	39.8	39.2	43.4	39.3
Stoneville, MS(B)	43.9	46.0	42.1	42.2	44.1	41.2
Stuttgart, AR	44.8	44.9	43.7	42.4	44.6	41.6
Beaumont, TX	45.6	45.0	45.2	44.2	46.6	45.5
Mean	43.7	45.0	42.4	41.9	44.5	42.1
			GRAMS PER 100 SEEDS			
Holland, VA	16.1	16.7	14.0	16.9	17.2	14.1
Plymouth, NC	13.2	15.3	13.2	15.6	15.1	11.9
Clinton, NC	13.1	15.2	13.1	15.4	15.1	12.1
Jay, FL	13.0	17.0	13.0	14.0	15.0	16.0
Jackson, TN *	14.0	14.6	13.5	16.9	15.8	9.3
Portageville, MO(A)	15.6	14.2	12.4	15.3	16.3	12.2
Keiser, AR	11.0	12.0	8.0	11.0	11.0	10.0
Stoneville, MS(B)	11.0	14.4	11.0	12.4	12.2	10.6
Stuttgart, AR	12.7	16.0	11.6	14.0	12.3	11.6
Beaumont, TX	14.7	18.1	14.4	16.2	15.7	14.7
Mean	13.4	15.4	12.3	14.5	14.4	12.6

*Not included in mean.

Table 31 - (continued)

Location	R79-167S	D79-6162	D80-7987	Ga79-402	J80-293	R80-437
			OIL PERCENTAGES			
Holland, VA	19.3	17.6	19.8	20.0	19.5	21.4
Plymouth, NC	19.8	17.9	19.6	20.4	19.8	18.9
Clinton, NC	17.7	17.3	19.5	21.0	20.0	18.5
Jay, FL	20.8	19.9	20.8	21.7	20.3	19.9
Portageville, MO(A)	20.2	18.4	19.9	21.0	20.0	18.9
Keiser, AR	21.2	17.8	20.8	21.5	19.8	19.6
Stoneville, MS(B)	19.5	17.8	20.6	21.4	20.1	18.6
Stuttgart, AR	19.1	18.1	20.2	20.0	18.9	18.7
Beaumont, TX	19.5	18.5	19.9	20.1	19.7	19.4
Mean	19.7	18.1	20.1	20.8	19.8	19.3
			PROTEIN PERCENTAGES			
Holland, VA	42.7	46.8	41.5	42.9	44.0	38.6
Plymouth, NC	40.8	44.9	40.0	41.3	42.7	44.4
Clinton, NC	44.8	44.7	40.4	41.6	42.9	44.2
Jay, FL	41.3	43.5	41.3	40.2	43.8	42.6
Portageville, MO(A)	39.5	42.5	38.7	39.9	40.6	41.9
Keiser, AR	37.5	43.6	36.6	38.8	42.2	40.3
Stoneville, MS(B)	40.3	45.1	38.0	40.3	42.7	42.0
Stuttgart, AR	42.8	44.1	40.7	41.9	45.3	44.8
Beaumont, TX	44.8	45.3	43.2	44.9	46.5	44.3
Mean	41.6	44.5	40.0	41.3	43.4	42.6
			GRAMS PER 100 SEEDS			
Holland, VA	13.4	18.6	13.0	14.7	15.3	17.1
Plymouth, NC	11.2	15.5	11.8	13.2	12.3	15.3
Clinton, NC	11.2	15.9	12.2	13.3	12.1	15.6
Jay, FL	12.0	16.0	14.0	14.0	12.0	16.0
Jackson, TN *	13.2	14.9	12.8	11.4	13.1	14.7
Portageville, MO(A)	11.5	15.0	11.7	13.4	12.8	14.8
Keiser, AR	9.0	11.0	7.0	8.0	10.0	10.0
Stoneville, MS(B)	9.8	14.4	9.4	10.8	10.0	11.2
Stuttgart, AR	11.3	14.3	12.0	11.3	11.0	13.3
Beaumont, TX	12.1	16.1	12.3	13.0	13.8	15.2
Mean	11.3	15.2	11.5	12.4	12.1	14.3

*Not included in mean.

Table 32 - Relative maturity data, days earlier (-) or later (+) than Centennial, for the strains in Uniform VI, 1983

Location	Date planted	Centennial	Tracy-M	D77-6166	D78-5502	D79-6058	N79-491
			EAST COAST				
Warsaw, VA	6-2	11-15	-9	-3	-2	+4	-18
Holland, VA		11-3	-1	-1	-1	0	-12
Plymouth, NC	5-20	10-25	-5	-5	0	0	-12
Clinton, NC	5-25	11-2	0	-7	0	0	-21
Kinston, NC	5-24	11-21	-4	-4	-4	-4	-10
Florence, SC	5-16	10-30	0	0	-1	+2	+2
Hartsville, SC	6-10	10-30	-5	-3	-3	-3	-17
Mean		11-5	-3	-3	-2	0	-13
			SOUTHEAST				
Blackville, SC	5-18	10-21	0	-2	-1	+2	-18
Tifton, GA	5-11	10-9	-5	-3	+4	-2	-23
Quincy, FL	5-26	10-16	+4	-4	-3	+4	+2
Jay, FL	5-26	10-11	-4	0	-1	0	-2
Baton Rouge, LA	5-18	10-26	-2	+1	-3	-5	+1
Mean		10-17	-1	-1	-1	0	-8
			UPPER AND CENTRAL SOUTH				
Athens, GA	5-26	10-21	-2	-3	-1	-2	-11
Calhoun, GA	6-1	10-24	-7	0	+2	+4	-7
Belle Mina, AL	5-10	10-8	-5	-4	-5	-1	-13
Clemson, SC	5-11	10-27	-3	-6	-2	+1	-10
Jackson, TN(A)	5-26	11-15	-2	0	-2	0	-39
Mean		10-25	-4	-2	-1	0	-16
			DELTA				
Portageville, MO(A)	5-24	10-28	-1	-1	+1	0	-18
Keiser, AR	5-27	10-30	+2	0	0	+2	-14
Jonesboro, AR *	5-17	11-3	+5	+6	+8	+4	-5
Pine Tree, AR *	5-19	11-9	-1	-2	-1	-2	-16
Stoneville, MS(A)	5-11	10-16	+3	0	-1	+2	-15
Stoneville, MS(B)	6-3	10-18	-2	0	0	0	-10
St. Joseph, LA	5-27	10-14	-6	+1	+2	0	-16
Rohwer, AR	6-2	10-19	-2	-1	+1	+1	-16
Mean		10-21	-1	0	+1	+1	-15
			WEST				
Pine Bluff, AR	6-2	10-25	-1	-1	+1	+1	-18
Stuttgart, AR	5-28	10-18	0	0	0	0	-18
Bossier City, LA	5-31	10-19	-8	-3	-4	-1	-17
Beaumont, TX	5-30	10-17	0	-3	0	+1	-7
Mean		10-20	-2	-2	-1	0	-15

*Not included in mean.

Table 32 - (continued)

Location	R79-167S	D79-6162	D80-7987	Ga79-402	J80-293	R80-437
			EAST COAST			
Warsaw, VA	-1	-2	-2	-11	-6	0
Holland, VA	0	0	0	-12	-2	-1
Plymouth, NC	0	0	-5	-5	-5	0
Clinton, NC	-7	0	-7	-21	0	+2
Kinston, NC	-4	-4	0	-18	-4	-4
Florence, SC	+2	+2	+2	+2	0	+2
Hartsville, SC	-3	-3	-5	-15	-5	-4
Mean	-2	-1	-2	-9	-3	-1
			SOUTHEAST			
Blackville, SC	-2	+2	-2	-11	-3	-2
Tifton, GA	+3	+4	-2	-21	-1	+2
Quincy, FL	-1	-2	0	+10	-4	-5
Jay, FL	0	-1	-1	-6	-1	-1
Baton Rouge, LA	-5	+2	-2	+1	-4	+6
Mean	-1	+1	-1	-5	-3	0
			UPPER AND CENTRAL SOUTH			
Athens, GA	-1	-1	-2	-9	-3	-3
Calhoun, GA	+2	+4	0	0	0	0
Belle Mina, AL	-4	-1	-4	-9	-5	-1
Clemson, SC	-1	-3	-8	-10	-6	-4
Jackson, TN(A)	0	0	0	-33	0	0
Mean	-1	0	-2	-12	-2	-1
			DELTA			
Portageville, MO(A)	+1	-1	-2	-19	-1	0
Keiser, AR	0	+3	-3	-16	-3	0
Jonesboro, AR *	+6	+6	+7	-4	+6	+3
Pine Tree, AR *	-2	0	-1	-2	-2	+1
Stoneville, MS(A)	0	0	+1	-11	-1	-1
Stoneville, MS(B)	0	0	-3	-9	-2	-2
St. Joseph, LA	+2	-2	-2	-11	-1	-1
Rohwer, AR	0	-1	-2	-9	-1	-2
Mean	+1	0	-2	-13	-1	-1
			WEST			
Pine Bluff, AR	0	0	-1	-12	-2	-2
Stuttgart, AR	0	0	0	-18	0	0
Bossier City, LA	-2	-4	-9	-2	-8	-5
Beaumont, TX	-2	+7	-2	-4	0	-3
Mean	-1	+1	-3	-9	-3	-3

*Not included in mean

Table 33 - Plant height for the strains in Uniform Group VI, 1983

Location	Centennial	Tracy-M	D77-6166	D78-5502	D79-6058	N79-491
			EAST COAST			
Warsaw, VA	39	38	41	41	40	33
Holland, VA	42	40	34	38	44	25
Plymouth, NC	46	37	40	42	44	32
Clinton, NC	36	36	32	34	36	26
Kinston, NC	30	26	26	28	30	22
Florence, SC	42	36	36	31	44	48
Hartsville, SC	30	31	31	31	35	22
Mean	38	35	34	35	39	30
			SOUTHEAST			
Blackville, SC	35	32	32	34	38	22
Tifton, GA	30	25	28	22	31	21
Quincy, FL	25	22	20	20	26	15
Jay, FL	27	21	22	18	26	23
Fairhope, AL	33	26	23	19	33	14
Baton Rouge, LA	35	28	26	31	36	19
Mean	31	26	25	24	32	19
			UPPER AND CENTRAL SOUTH			
Athens, GA	34	31	33	33	33	26
Calhoun, GA	33	31	31	32	40	28
Belle Mina, AL	30	28	30	29	31	24
Clemson, SC	32	31	30	32	32	26
Jackson, TN(A)	38	40	38	37	39	35
Mean	33	32	32	33	35	28
			DELTA			
Portageville, MO(A)	46	45	44	32	44	39
Keiser, AR	36	41	35	37	40	25
Jonesboro, AR	34	31	31	27	40	24
Pine Tree, AR	32	30	29	26	38	22
Stoneville, MS(A)	35	29	33	29	35	23
Stoneville, MS(B)	29	27	25	25	31	19
St. Joseph, LA	29	25	25	25	34	18
Rohwer, AR	36	36	34	34	38	22
Mean	35	33	32	29	38	24
			WEST			
Pine Bluff, AR	43	40	37	38	44	28
Stuttgart, AR	42	33	35	34	39	26
Bossier City, LA	30	32	30	28	35	25
Beaumont, TX	32	31	32	31	36	25
Bixby, OK	40	39	39	40	42	34
Mean	37	35	35	34	39	28

Table 33 - (continued)

Location	R79-167S	D79-6162	D80-7987	Ga79-402	J80-293	R80-437
			EAST COAST			
Warsaw, VA	38	43	41	39	37	38
Holland, VA	47	48	43	35	38	37
Plymouth, NC	46	47	44	43	39	43
Clinton, NC	36	38	36	34	32	36
Kinston, NC	30	36	28	28	24	24
Florence, SC	38	48	38	40	38	34
Hartsville, SC	34	41	31	32	29	28
Mean	38	43	37	36	34	34
			SOUTHEAST			
Blackville, SC	36	41	38	32	34	35
Tifton, GA	26	38	27	29	23	22
Quincy, FL	20	32	21	22	22	18
Jay, FL	24	28	21	23	19	21
Fairhope, AL	29	35	37	22	26	19
Baton Rouge, LA	34	40	31	27	32	29
Mean	28	36	29	26	26	24
			UPPER AND CENTRAL SOUTH			
Athens, GA	32	37	36	35	31	33
Calhoun, GA	36	31	34	31	31	24
Belle Mina, AL	30	33	26	31	28	31
Clemson, SC	33	36	33	33	30	31
Jackson, TN(A)	42	39	43	41	35	36
Mean	34	35	34	34	31	31
			DELTA			
Portageville, MO(A)	37	48	47	48	40	42
Keiser, AR	38	42	37	29	33	38
Jonesboro, AR	30	40	41	26	30	30
Pine Tree, AR	29	41	41	25	29	30
Stoneville, MS(A)	33	35	34	27	33	33
Stoneville, MS(B)	26	32	25	23	25	25
St. Joseph, LA	27	40	29	22	23	21
Rohwer, AR	36	40	36	24	31	32
Mean	32	40	36	28	31	31
			WEST			
Pine Bluff, AR	41	45	43	34	38	38
Stuttgart, AR	39	42	33	37	36	36
Bossier City, LA	30	36	37	29	30	26
Beaumont, TX	34	38	34	33	32	27
Bixby, OK	42	45	44	39	38	40
Mean	37	41	38	34	35	33

Table 34 - Lodging scores for the strains in Uniform Group VI, 1983

Location	Centennial	Tracy-M	D77-6166	D78-5502	D79-6058	N79-491
			EAST COAST			
Warsaw, VA	3.5	2.5	2.3	3.7	4.0	1.4
Holland, VA	4.0	4.0	3.7	5.0	3.3	1.3
Plymouth, NC	3.0	3.0	3.0	3.0	3.0	3.0
Clinton, NC	2.0	2.0	2.0	2.0	2.0	2.0
Kinston, NC	2.0	2.0	2.0	2.0	2.0	2.0
Florence, SC	1.0	1.0	1.0	1.0	1.0	1.0
Hartsville, SC	1.8	2.0	1.7	2.2	1.7	1.0
			SOUTHEAST			
Blackville, SC	1.0	1.0	1.0	2.0	1.0	1.0
Tifton, GA	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, LA	1.3	1.0	1.0	1.2	1.0	1.0
			UPPER AND CENTRAL SOUTH			
Athens, GA	2.2	2.2	1.8	2.3	1.8	1.5
Calhoun, GA	1.5	1.5	1.5	1.5	1.5	1.0
Belle Mina, AL	1.3	2.0	1.7	2.0	1.7	1.7
Clemson, SC	2.0	2.7	1.7	3.3	1.7	1.0
Jackson, TN(A)	1.0	2.0	1.0	1.0	1.0	1.0
			DELTA			
Portageville, MO(A)	2.5	2.5	1.5	1.5	2.0	1.5
Keiser, AR	1.0	2.0	1.0	2.0	1.0	1.0
Jonesboro, AR	2.0	2.0	2.0	2.0	2.0	2.0
Pine Tree, AR	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS(A)	2.0	2.0	2.0	2.0	3.0	2.0
Stoneville, MS(B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	1.5	1.5	1.3	1.3	2.0	1.0
Rohwer, AR	1.0	2.0	1.0	2.0	2.0	1.0
			WEST			
Pine Bluff, AR	3.0	4.0	2.0	3.0	3.0	1.0
Stuttgart, AR	3.4	3.1	3.3	4.2	3.8	1.0
Bossier City, LA	1.0	1.5	1.0	1.0	1.3	1.0
Beaumont, TX	1.6	2.2	1.7	2.0	2.0	1.5
Bixby, OK	2.3	3.0	2.3	3.3	3.0	2.3

Table 34 - (continued)

Location	R79-167S	D79-6162	D80-7987	Ga79-402	J80-293	R80-437
			EAST COAST			
Warsaw, VA	2.9	2.7	3.2	1.8	1.8	3.7
Holland, VA	4.7	4.7	4.3	3.7	3.7	4.7
Plymouth, NC	2.3	3.0	3.0	2.7	3.0	3.0
Clinton, NC	2.0	3.0	2.0	2.0	2.0	2.0
Kinston, NC	2.0	2.0	2.0	2.0	2.0	2.0
Florence, SC	1.0	1.0	1.0	1.0	1.0	1.0
Hartsville, SC	2.2	2.5	1.5	2.2	1.8	1.8
			SOUTHEAST			
Blackville, SC	1.0	2.0	1.0	1.0	1.0	1.0
Tifton, GA	1.0	1.5	1.0	1.0	1.0	1.0
Jay, FL	1.0	1.0	1.0	1.0	2.0	1.0
Baton Rouge, LA	1.2	1.7	1.0	1.0	1.0	1.0
			UPPER AND CENTRAL SOUTH			
Athens, GA	1.8	3.2	2.2	1.8	1.5	2.3
Calhoun, GA	1.5	2.0	1.5	1.5	1.5	1.5
Belle Mina, AL	2.0	2.3	2.0	2.0	2.0	2.3
Clemson, SC	3.7	3.3	2.3	2.0	2.0	3.0
Jackson, TN(A)	2.0	1.0	1.0	1.0	1.0	1.0
			DELTA			
Portageville, MO(A)	1.5	3.5	2.5	1.5	2.0	1.5
Keiser, AR	2.0	2.0	1.0	1.0	1.0	1.0
Jonesboro, AR	2.0	2.0	2.0	2.0	2.0	2.0
Pine Tree, AR	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS(A)	3.0	3.0	2.0	2.0	2.0	2.0
Stoneville, MS(B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	1.5	2.0	1.5	1.5	1.2	1.0
Rohwer, AR	1.7	3.0	1.3	1.0	1.3	1.0
			WEST			
Pine Bluff, AR	3.0	3.0	2.0	2.0	2.0	2.0
Stuttgart, AR	3.8	4.9	3.9	2.0	3.2	3.9
Bossier City, LA	1.0	1.3	1.7	1.0	1.0	1.0
Beaumont, TX	2.5	2.5	2.8	2.0	1.4	1.3
Bixby, OK	3.0	3.3	2.7	2.0	2.0	3.0

Table 35 - Seed quality scores for the strains in Uniform Group VI, 1983

Location	Centennial	Tracy-M	D77-6166	D78-5502	D79-6058	N79-491
			EAST COAST			
Warsaw, VA	1.0	1.6	1.5	1.3	1.2	1.3
Holland, VA	1.3	1.3	1.0	1.7	1.0	2.3
Plymouth, NC	1.5	1.0	1.5	1.5	1.0	1.5
Clinton, NC	2.0	2.0	2.0	2.0	2.0	2.0
Kinston, NC	2.0	2.0	2.0	2.0	2.0	2.0
			SOUTHEAST			
Tifton, GA	2.5	2.5	2.0	3.0	1.5	3.0
Quincy, FL	2.0	2.0	2.0	2.0	2.0	5.0
Jay, FL	2.0	3.0	2.0	2.0	2.0	2.0
Baton Rouge, LA	1.0	2.0	1.0	2.0	1.0	4.0
			UPPER AND CENTRAL SOUTH			
Athens, GA	1.7	1.8	1.7	1.7	1.5	2.5
Calhoun, GA	1.8	2.0	2.0	2.2	1.8	2.5
Jackson, TN (A)	3.0	3.0	3.0	2.0	3.0	2.0
			DELTA			
Portageville, MO(A)	2.5	2.5	2.5	2.5	2.5	2.5
Keiser, AR	1.0	2.0	4.0	3.0	2.0	2.0
Jonesboro, AR*	3.0	2.0	2.0	2.0	2.0	2.0
Pine Tree, AR*	3.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS(A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS(B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	1.7	2.7	2.0	2.2	2.0	1.5
Rohwer, AR	1.8	2.5	2.5	2.0	2.3	2.5
			WEST			
Pine Bluff, AR	1.0	1.0	1.0	2.0	1.0	1.0
Stuttgart, AR	1.7	1.8	2.0	2.0	1.8	2.0
Bossier City, LA	1.2	1.2	1.5	1.7	2.0	3.0
Beaumont, TX	1.7	2.0	1.8	1.5	1.7	2.0

* Not included in mean.

Table 35 - (continued)

Location	R79-167S	D79-6162	D80-7987	Ga79-402	J80-293	R80-437
			EAST COAST			
Warsaw, VA	1.2	1.3	1.2	1.3	1.4	1.8
Holland, VA	1.3	1.3	1.7	1.3	1.0	1.7
Plymouth, NC	1.5	1.5	1.5	1.5	1.5	1.5
Clinton, NC	1.5	2.0	2.0	2.0	2.0	2.5
Kinston, NC	2.0	2.0	2.0	2.0	2.0	2.0
			SOUTHEAST			
Tifton, GA	2.0	3.5	2.0	3.0	2.0	3.0
Quincy, FL	2.0	2.0	2.0	3.0	2.0	2.0
Jay, FL	2.0	2.0	2.0	2.0	2.0	2.0
Baton Rouge, LA	1.3	2.2	1.3	2.8	1.3	2.0
			UPPER AND CENTRAL SOUTH			
Athens, GA	1.5	2.2	1.5	1.8	1.7	1.7
Calhoun, GA	2.0	2.5	1.5	2.2	2.3	2.2
Jackson, TN (A)	3.0	3.0	3.0	3.0	3.0	3.0
			DELTA			
Portageville, MO(A)	2.7	2.0	2.5	2.5	2.0	3.5
Keiser, AR	2.0	4.0	1.0	2.0	4.0	6.0
Jonesboro, AR *	2.0	2.0	2.0	2.0	3.0	3.0
Pine Tree, AR *	2.0	2.0	2.0	2.0	3.0	3.0
Stoneville, MS(A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS(B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	1.5	3.0	1.5	2.0	1.8	2.3
Rohwer, AR	2.3	2.2	1.8	2.0	2.3	2.7
			WEST			
Pine Bluff, AR	1.0	2.0	1.0	1.0	1.0	2.0
Stuttgart, AR	1.8	2.1	2.1	2.2	2.2	2.0
Bossier City, LA	1.0	3.3	1.0	1.5	1.5	1.5
Beaumont, TX	1.5	2.2	1.5	2.2	2.2	1.5

*Not included in mean.

PRELIMINARY GROUP VI

1983

Preliminary Group VI, which included Centennial and Bedford along with 34 experimental strains, was grown at 8 locations for seed yield evaluation and at additional locations for evaluation against root-knot nematodes, soybean cyst nematode, and soybean looper feeding. The parentage for each of the strains is reported in Table 36. Table 37 gives a general summary of performance including reaction to nematodes and insect feeding. Data from individual locations are recorded in Tables 38-42.

Difference among strains in seed yield were significant at the 5% level of confidence at 7 of the locations. Centennial had an overall mean seed yield of 40.2 bushels. One strain ranked above Centennial in mean seed yield and nine strains had seed yields significantly lower than that for Centennial.

D80-5847 provides an interesting plant type. It has the character described as brachytic. It averaged 11 inches shorter than Centennial. It yielded significantly less than Centennial, but the results demonstrate that this character might be used where it is desired to reduce plant height. It should be possible to increase seed yield capacity with further crossing to productive types and selecting for the brachytic character.

Three strains were given low scores for soybean looper feeding in a field cage at Stoneville. Five strains received low scores for both species of root-knot nematodes.

Strains which appear to merit further evaluation on a regional basis are: J80-312, N81-320, N81-1121, R81-1239, and V79-881.

Table 36 - Parentage of the strains in Preliminary Group VI, 1983

	Strain or variety	Parentage	Generation composited
1.	Centennial	D64-4636 X t.p. Pickett 71 type	F_5
2.	Bedford	Forrest(2) X (D68-18 X PI 88788)	F_5
3.	D79-3459	D75-11085 X D75-15000	F_5
4.	D79-6110	Tracy X Centennial	F_5
5.	D80-5847	Tracy(br) X D51-5091	F_5
6.	D80-6017	Tracy X D72-8707	F_5
7.	D81-10477	Forrest(2) X Tracy	F_7
8.	D81-10578	Forrest X D77-12480	F_5
9.	Ga79-515	Tracy X Hutton	F_7
10.	Ga79-1135	Essex X Ga70-519	F_7
11.	Ga79-1312	McNair 500 X Ga70-276	F_7
12.	Ga80-1316	Centennial X R75-12	F_6
13.	Ga80-1344	Centennial X R75-12	F_6
14.	GaT79-34	GaT72-354 X Braxton	F_5
15.	GaT79-150	N68-358 X Forrest	F_5
16.	GaT79-739	GaT72-358 X Forrest	F_5
17.	J80-312	Bedford X sel [Forrest(2) X Tracy]	F_5
18.	N81-34	D74-7633 X N73-520-2	F_6
19.	N81-320	N73-40 X N73-520-4	F_6
20.	N81-802	N72-3148 X N77-2710	F_6
21.	N81-1103	N72-3058 X N73-1102	F_6
22.	N81-1121	N72-3058 X N73-1102	F_6
23.	N81-1699	N72-3058 X N72-3148	F_6
24.	R81-133	Lancer X R74-683	F_5
25.	R81-364	R75-206S X R74-511	F_5
26.	R81-424	Davis X R75-12	F_5
27.	R81-1239	Centennial X R74-511	F_5
28.	R81-3611	(Forrest X PI 90763-R) X Centennial(3)	F_4
29.	R81-4232	(R75-206S X R74-511) X (R75-12 X R75-195S)	F_5
30.	S80-5949	Bedford X R75-112	F_5
31.	S80-7432	J74-67 X D70-3115	F_5
32.	S81-4401	D70-3115 X J74-39	F_5
33.	SC80-0227	Centennial X Govan	F_5
34.	V79-881	Essex X Ransom	F_5
35.	V79-1031	D66-5566 X Ransom	F_5
36.	V79-1434	Essex X Columbus	F_5

Table 37 - General summary of performance for the strains in Preliminary Group VI, 1983

Strain	Seed yield	Maturity index	Ht.	Percent Oil	Percent Protein	M. incognita	M. arenaria	SCN race 3	Soybean looper
Centennial	40.5	10-20	34	19.1	43.0	1.0	4.5	R[1]	5.0
Bedford	32.6	-11	33	21.2	40.0	1.5	1.8	R[1]	5.0
D79-3459	31.6	-2	31	19.0	43.9	5.0	1.5	S	1.0
D79-6110	36.9	0	34	19.0	44.3	1.5	4.5	S	4.5
D80-5847	33.0	-5	23	19.6	42.7	2.0	4.5	S	4.5
D80-6017	36.6	-2	27	18.7	44.1	2.0	5.0	R	2.0
D81-10477	37.0	0	29	20.3	41.3	1.0	4.0	R	5.0
D81-10578	29.1	-3	36	19.6	41.7	1.0	1.5	S	5.0
Ga79-515	33.6	-2	28	19.7	42.0	1.5	5.0	S	4.0
Ga79-1135	35.2	0	30	20.4	41.5	2.5	5.0	S	4.0
Ga79-1312	37.1	-1	32	19.4	42.3	2.0	4.5	S	4.0
Ga80-1316	35.7	-2	31	19.8	41.6	1.0	2.8	R	5.0
Ga80-1344	35.0	-2	31	20.2	40.9	1.0	3.2	R	5.0
GaT79-34	37.5	+4	36	19.7	42.8	1.0	1.5	S	4.0
GaT79-150	37.0	-1	34	19.5	41.3	1.0	4.5	R	4.5
GaT79-739	35.4	+3	33	20.0	41.2	1.0	1.8	S[1]	4.5
J80-312	38.5	0	33	19.1	42.9	1.0	5.0	R[1]	5.0
N81-34	38.0	-4	33	20.9	40.7	3.0	4.0	S	4.0
N81-320	42.3	-2	38	19.8	42.4	4.0	1.8	R	4.5
N81-802	38.0	-4	29	20.2	42.3	3.5	4.0	S	3.5
N81-1103	40.0	-3	27	21.2	41.2	3.0	5.0	S	3.5
N81-1121	39.1	-2	29	20.6	43.0	2.0	5.0	R	3.0
N81-1699	37.7	-3	28	21.5	41.5	3.0	5.0	S	5.0
R81-133	38.5	-2	32	19.7	41.6	5.0	1.8	S	4.0
R81-364	39.6	-3	28	21.4	39.5	3.0	5.0	S	3.5
R81-424	39.7	+2	35	20.0	42.6	4.5	5.0	S	2.5
R81-1239	40.0	-1	34	20.1	41.8	1.5	5.0	R	5.0
R81-3611	34.6	0	34	18.9	43.5	1.0	4.5	R	4.5
R81-4232	39.7	-2	30	21.0	41.7	5.0	2.0	R[1]	3.0
S80-5949	35.1	-11	33	21.8	41.1	2.0	2.5	R[1]	3.5
S80-7432	34.8	-9	30	21.0	41.2	5.0	1.0	R[1]	5.0
S81-4401	32.7	-8	26	21.1	42.2	1.5	1.8	R[1]	4.0
SC80-0227	39.4	0	33	18.8	43.5	1.0	4.5	S	5.0
V79-881	40.0	-2	29	20.1	44.1	1.0	4.5	S	4.5
V79-1031	38.5	0	29	21.6	40.0	5.0	1.8	S	5.0
V79-1434	32.1	-11	22	21.2	41.8	5.0	1.8	S	4.5
L.S.D.(.05)	5.1								
C.V.	14%								

[1]Also resistant to SCN race 4.

Table 38 - Seed yield, in bushels per acre, for the strains in Preliminary Group VI, 1983

Strain	Holland, VA	Ply-mouth, NC	Belle Mina, AL	Jay, FL	Keiser, AR	Athens, GA	Stone-ville, MS(A)	Stone-ville, MS(B)
Centennial	46.0	42.0	21.2	45.4	45.3	40.0	47.6	36.6
Bedford	39.2	34.3	17.3	43.6	37.0-	32.6-	44.5	12.4-
D79-3459	42.3	35.7	16.2-	20.2-	45.3	—	40.9	14.9-
D79-6110	41.4	38.0	18.0	45.9	41.7	37.8	44.9	27.2-
D80-5847	51.1	38.1	13.7-	27.0-	44.4	38.9	25.6-	24.8-
D80-6017	50.3	40.7	16.7	26.7-	44.6	39.0	44.2	30.3
D81-10477	46.9	41.8	15.8-	34.0	47.2	—	49.2	21.0-
D81-10578	24.6-	36.4	16.3	32.9-	36.2-	36.2	33.4-	17.0-
Ga79-515	42.1	41.3	15.3-	24.4-	41.5	36.0	45.1	22.9-
Ga79-1135	48.3	43.5	11.4-	40.2	42.2	42.0	38.5-	15.5-
Ga79-1312	48.0	39.6	17.2	37.4	37.1-	37.9	47.9	31.4
Ga80-1316	40.3	43.6	16.3	40.3	40.4	38.2	36.1-	30.2
Ga80-1344	39.6	42.3	20.5	40.7	37.0-	34.3-	43.2	22.7-
GaT79-34	55.7	44.4	17.7	29.8-	40.3	—	45.3	26.6-
GaT79-150	44.8	38.0	20.7	43.7	38.9-	40.5	41.3	27.8
GaT79-739	50.2	40.4	18.3	33.8	43.7	36.2	43.1	17.7-
J80-312	47.9	39.6	19.2	39.5	40.0	—	45.3	36.7
N81-34	49.0	44.4	14.3-	35.3	46.0	41.4	47.0	26.6-
N81-320	60.6+	44.5	14.9-	45.9	40.4	42.8	52.9	36.5
N81-802	52.7	42.9	15.5-	33.0-	40.1	37.6	44.3	37.5
N81-1103	57.9+	41.5	10.6-	38.9	50.2	43.7	42.1	35.3
N81-1121	54.8	31.8	13.5-	40.3	39.2	42.3	54.1	37.1
N81-1699	52.8	38.1	15.9-	34.0	45.2	42.2	47.3	26.3-
R81-133	49.7	43.1	14.3-	38.6	46.3	36.2	44.5	35.5
R81-364	55.6	38.2	21.2	35.4	44.3	42.2	47.3	32.9
R81-424	55.2	43.4	20.1	47.7	38.0-	40.5	40.5	31.9
R81-1239	50.3	42.2	19.4	46.9	41.9	36.1	44.1	39.2
R81-3611	23.0-	40.1	18.8	37.9	45.2	33.9-	49.3	28.3
R81-4232	62.5+	28.9	16.0-	45.7	40.1	38.2	48.5	38.0
S80-5949	46.7	30.3	14.4-	38.3	38.8-	35.4	49.8	27.4-
S80-7432	44.4	37.4	16.6	38.1	43.0	34.4-	48.7	15.7-
S81-4401	43.0	30.1	14.9-	27.7-	44.9	31.6-	42.4	26.8-
SC80-0227	52.5	45.8	21.1	35.6	43.7	42.4	41.8	32.1
V79-881	59.3+	46.1	18.9	32.3	42.4	35.7	46.7	38.3
V79-1031	56.8+	43.0	12.2-	41.6	43.3	39.2	42.9	29.1
V79-1434	47.9	41.4	10.4-	25.2-	39.7	28.3-	42.6	21.6-
L.S.D.(.05)	10.5	NS	4.9	11.8	6.4	5.4	7.4	9.1
C.V.	11	14	15	16	8	7	8	16

Table 39 - Oil percentages for the strains in Preliminary Group VI, 1983

Strain	Holland, VA	Plymouth, NC	Jay, FL	Keiser, AR	Stoneville, MS (B)
Centennial	18.1	18.9	20.5	18.9	19.2
Bedford	20.0	21.2	21.9	21.6	21.3
D79-3459	17.7	18.9	20.4	19.4	18.5
D79-6110	18.3	18.5	20.8	18.4	19.0
D80-5847	18.7	19.2	20.7	20.4	18.9
D80-6017	17.5	18.5	20.4	18.5	18.7
D81-10477	19.5	19.6	21.3	20.9	20.0
D81-10578	17.4	20.1	20.4	19.9	20.0
Ga79-515	18.8	19.5	20.9	19.9	19.5
Ga79-1135	18.9	19.6	21.2	20.9	21.3
Ga79-1312	18.3	19.1	19.9	20.3	19.3
Ga80-1316	18.5	19.8	20.9	19.6	20.1
Ga80-1344	18.9	20.0	20.8	20.6	20.5
GaT79-34	18.7	19.7	20.6	20.0	19.7
GaT79-150	18.1	18.9	20.2	20.4	19.8
GaT79-739	18.8	19.4	21.1	20.4	20.2
J80-312	18.3	18.8	21.1	18.5	18.6
N81-34	19.4	21.1	22.6	20.7	20.8
N81-320	18.8	19.6	21.0	20.4	19.3
N81-802	19.4	20.0	21.1	20.8	19.7
N81-1103	20.6	21.8	22.5	20.9	20.4
N81-1121	19.5	21.3	21.6	20.4	20.1
N81-1699	20.5	21.5	22.2	21.6	21.6
R81-133	19.4	19.5	20.4	19.5	19.8
R81-364	21.0	20.9	22.4	21.9	21.0
R81-424	18.9	20.2	20.8	20.2	20.0
R81-1239	19.0	20.1	21.4	20.6	19.5
R81-3611	17.6	19.1	20.0	19.1	18.9
R81-4232	20.1	20.9	21.9	21.1	21.1
S80-5949	20.7	21.9	22.0	22.0	22.3
S80-7432	20.2	20.9	20.7	21.7	21.7
S81-4401	19.8	21.2	21.9	21.6	21.0
SC80-0227	18.3	18.7	19.8	18.9	18.1
V79-881	19.4	19.9	20.9	20.1	20.0
V79-1031	20.9	21.7	22.5	21.3	21.6
V79-1434	20.0	20.1	22.2	21.7	22.1

Table 40 - Protein percentages for the strains in Preliminary Group VI, 1983

Strain	Holland, VA	Plymouth, NC	Jay, FL	Keiser, AR	Stoneville, MS (B)
Centennial	44.1	43.7	43.0	40.8	43.6
Bedford	40.8	40.9	41.7	37.2	39.6
D79-3459	45.5	42.9	44.3	42.3	44.4
D79-6110	45.3	45.2	43.3	43.0	44.5
D80-5847	43.1	43.0	42.7	40.8	43.9
D80-6017	45.2	44.4	43.5	43.0	44.6
D81-10477	42.1	42.4	41.6	39.0	41.4
D81-10578	44.0	41.6	41.3	40.8	41.0
Ga79-515	42.7	42.0	42.0	40.1	43.0
Ga79-1135	44.1	42.0	40.7	39.2	41.5
Ga79-1312	44.0	42.9	43.7	38.6	42.4
Ga80-1316	43.3	42.8	40.7	40.6	40.5
Ga80-1344	44.0	41.0	40.5	39.5	39.3
GaT79-34	44.5	42.3	43.1	41.3	42.9
GaT79-150	43.1	43.0	41.7	38.6	40.2
GaT79-739	43.4	42.3	41.5	37.3	41.6
J80-312	44.4	43.2	41.1	42.4	43.5
N81-34	43.2	39.3	40.3	38.9	41.8
N81-320	43.9	42.7	41.8	39.9	43.9
N81-802	43.3	42.5	42.6	39.8	43.1
N81-1103	42.1	39.6	40.9	40.7	42.6
N81-1121	44.0	41.5	43.1	42.4	44.0
N81-1699	42.8	41.1	42.3	39.8	41.3
R81-133	42.2	42.0	42.1	40.0	41.5
R81-364	40.4	39.9	40.0	37.2	40.2
R81-424	43.7	42.7	43.4	40.3	42.8
R81-1239	43.5	41.7	41.4	40.5	41.8
R81-3611	42.8	44.5	44.2	42.3	43.8
R81-4232	43.5	40.8	41.8	40.9	41.5
S80-5949	42.1	41.0	42.7	39.5	40.0
S80-7432	41.8	42.0	43.3	39.3	39.6
S81-4401	42.9	42.4	43.6	38.6	43.6
SC80-0227	43.8	44.2	43.8	41.5	44.3
V79-881	44.8	43.7	44.2	42.7	45.0
V79-1031	40.5	39.0	40.4	39.5	40.5
V79-1434	42.9	43.1	42.5	39.6	41.1

Table 41 - Plant height for the strains in Preliminary Group VI, 1983

Strain	Holland, VA	Ply-mouth, NC	Belle Mina, AL	Jay, FL	Keiser, AR	Athens, GA	Stone-ville, MS(A)	Stone-ville, MS(B)
Centennial	40	43	31	27	39	31	33	29
Bedford	37	44	34	24	38	32	32	23
D79-3459	40	39	29	19	31	—	33	25
D79-6110	38	39	34	25	38	34	35	26
D80-5847	30	20	31	15	24	24	18	19
D80-6017	32	36	25	18	34	26	27	21
D81-10477	33	41	31	23	26	—	30	22
D81-10578	39	42	35		39	32	34	27
Ga79-515	38	32	28	15	35	24	32	21
Ga79-1135	35	40	31	21	26	30	34	21
Ga79-1312	39	39	34	22	38	29	28	26
Ga80-1316	37	40	31	24	33	30	31	25
Ga80-1344	35	36	31	24	37	30	32	24
GaT79-34	43	42	32	27	43	—	36	28
GaT79-150	40	42	34	25	38	30	37	23
GaT79-739	39	36	32	21	40	32	38	25
J80-312	36	43	29	24	37	—	34	27
N81-34	38	42	35	20	40	29	35	28
N81-320	42	50	35	33	38	36	39	32
N81-802	35	35	29	19	34	25	26	25
N81-1103	35	34	26	19	29	25	24	22
N81-1121	34	33	25	21	35	26	33	25
N81-1699	32	32	29	19	27	28	29	24
R81-133	34	39	34	27	35	28	38	23
R81-364	36	32	28	18	33	26	28	23
R81-424	44	43	31	23	43	32	35	26
R81-1239	42	40	36	23	37	30	37	27
R81-3611	35	45	33	24	39	30	35	27
R81-4232	38	31	29	19	38	26	32	23
S80-5949	44	42	35	24	36	32	27	24
S80-7432	34	38	31	23	34	26	33	21
S81-4401	32	31	33	18	25	24	26	18
SC80-0227	38	40	34	23	37	32	34	26
V79-881	33	38	27	22	34	24	32	24
V79-1031	36	35	30	20	31	26	39	18
V79-1434	27	27	24	15	22	18	23	16

Table 42 - Seed quality scores for the strains in Preliminary Group VI, 1983

Strain	Holland, VA	Plymouth, NC	Jay, FL	Keiser, AR	Athens, GA	Stone-ville, MS(A)	Stone-ville, MS(B)
Centennial	1.0	1.5	2.0	3.0	1.5	2.0	2.0
Bedford	1.0	1.5	4.0	3.0	2.0	2.0	2.0
D79-3459	1.0	1.5	2.0	2.0	—	2.0	2.0
D79-6110	1.0	1.5	2.0	5.0	2.2	2.0	2.0
D80-5847	1.0	1.5	3.0	2.0	1.5	2.0	2.0
D80-6017	1.0	1.5	3.0	1.0	1.5	2.0	2.0
D81-10477	1.5	1.5	2.0	2.0	—	2.0	2.0
D81-10578	1.0	1.5	2.0	2.0	1.5	2.0	2.0
Ga79-515	1.0	1.5	2.0	2.0	1.5	2.0	2.0
Ga79-1135	1.5	1.5	2.0	3.0	1.8	2.0	2.0
Ga79-1312	1.0	1.5	2.0	4.0	1.5	2.0	2.0
Ga80-1316	1.0	1.5	2.0	3.0	1.5	2.0	2.0
Ga80-1344	1.0	1.5	2.0	3.0	1.5	2.0	2.0
GaT79-34	1.5	1.5	2.0	5.0	—	2.0	2.0
GaT79-150	1.0	1.5	2.0	1.0	1.5	2.0	2.0
GaT79-739	1.0	2.0	2.0	4.0	1.5	2.0	2.0
J80-312	1.0	1.5	2.0	4.0	—	2.0	2.0
N81-34	2.0	1.5	2.0	3.0	1.5	2.0	2.0
N81-320	1.5	1.5	2.0	2.0	1.5	2.0	2.0
N81-802	1.0	1.5	2.0	2.0	1.5	2.0	2.0
N81-1103	1.0	1.5	2.0	2.0	1.5	2.0	2.0
N81-1121	1.0	1.5	1.0	2.0	1.5	2.0	2.0
N81-1699	1.5	1.5	2.0	2.0	1.5	2.0	2.0
R81-133	1.0	1.5	2.0	2.0	1.8	2.0	2.0
R81-364	1.0	1.5	2.0	1.0	1.5	2.0	2.0
R81-424	1.5	1.5	2.0	4.0	1.5	2.0	2.0
R81-1239	1.0	1.5	2.0	3.0	1.5	2.0	2.0
R81-3611	2.0	1.5	2.0	5.0	2.0	2.0	2.0
R81-4232	1.5	1.5	2.0	2.0	1.5	2.0	2.0
S80-5949	1.0	1.5	3.0	2.0	2.2	2.0	2.0
S80-7432	2.0	1.5	4.0	2.0	1.8	2.0	2.0
S81-4401	1.0	1.5	5.0	3.0	2.0	2.0	2.0
SC80-0227	1.0	1.5	2.0	4.0	1.5	2.0	2.0
V79-881	2.0	2.0	2.0	4.0	1.8	2.0	2.0
V79-1031	1.5	1.5	2.0	3.0	2.0	2.0	2.0
V79-1434	1.0	2.0	2.0	2.0	2.0	2.0	2.0

UNIFORM GROUP VII

1983

	Variety or strain	Parentage	Generation composited
1.	Braxton	F59-1505 X [Bragg(3) X D60-7965]	F_5
2.	Wright	Bragg X Lee	F_5
3.	D76-9454	Forrest X Centennial	F_5
4.	F77-1880	Centennial X [Forrest X (Cobb X D68-216)]	F_5
5.	F77-7142	Centennial X [Forrest X (Cobb X D68-216)]	F_5
6.	Ga78-2708	Forrest X Pickett 71	F_4
7.	F77-2122	Centennial X [Forrest X (Cobb X D68-216)]	F_5
8.	F79-4696	Centennial X [Forrest X (Cobb X D68-216)]	F_5
9.	F80-3508	Forrest(2) X (Cobb X D68-216)	F_5
10.	Gregg (La74-4656)	Bragg X Pickett 71	F_{11}
11.	N80-777	N70-1501 X (N72-40 X N73-538)	F_6
12.	N80-2282	Forrest(2) X 4-74-6-3	F_6

Background of breeding lines used as parents:

F59-1505 is a selection from Jackson X D49-2491.

D60-7965 is a high protein selection from a cross of an F_5 line from Ogden X CNS with an F_5 line from Ogden X Biloxi.

D68-216 is a later maturing selection resistant to CN race 3 from the same cross from which Forrest was selected, Dyer X Bragg.

N70-1501 is a selection from Dare X D65-6765 which was evaluated in Uniform Group VI in 1974.

N72-40 is a selection from D64-3253 X D65-3168 evaluated in Preliminary Group V in 1974.

N73-538 is a selection from Tracy X Ransom evaluated in Preliminary Group V in 1975.

4-74-6-3 is an insect resistant selection from Forrest(2) X a selection from Govan X sel. (Bragg X PI 229358).

Uniform Group VII nurseries were planted at 29 locations to evaluate for seed yield. Additional plantings were made at Blackville, South Carolina to evaluate for reaction to the root-knot nematode, M. arenaria, at Jay, Florida to evaluate for reaction to the root-knot nematode, M. incognita, at Ames Plantation in Tennessee to evaluate for reaction to SCN race 3, and in the field cage at Stoneville to evaluate for feeding by soybean looper. The SCN population at Ames Plantation was too low for satisfactory strain evaluation. Data were reported from 27 locations. Table 43 gives a general summary of performance including three-year seed yield means along with data on reaction to nematodes, foliar-feeding insects, and diseases. Data from individual locations are reported in Tables 44-49. The planting at Jay, Florida was on soil infested with SCN race 3. Stem canker reduced seed yields of susceptible strains at Florence and Tallassee. Stem canker and aerial blight appear to have influenced seed yield at Baton Rouge.

Three strains, D76-9454, F77-1880, and F77-7142, have been evaluated 3 years. Each of these strains has yielded well in all areas and is resistant to SCN race 3. D76-9454 and F77-7142 have good resistance to both species of root-knot nematodes.

Two strains, Ga78-2708 and F77-2122, have been grown two years. Ga78-2708 is being increased for release. This strain was selected to give resistance to the two root-knot species, M. incognita and M. arenaria, and to SCN race 3. It has demonstrated a moderate level of resistance to stem canker. F77-2122 has also yielded well and is resistant to M. incognita and SCN race 3.

Five strains were evaluated for the first year. F80-3508 showed a high level of susceptibility to stem canker in plantings at Florence, South Carolina and Tallassee, Alabama. La74-4656 was released as Gregg. Its release was based largely on performance in local tests. This strain had been in Preliminary Group VII two years. In 1981 it had appeared to be susceptible to stem canker in the nursery at Tallassee, Alabama. On the basis of the 1983 plantings, it would have been rated moderately susceptible. N80-777 received a somewhat lower rating for soybean looper feeding in the field cage at Stoneville than the other strains. N80-2282 has been released as a breeding line having a moderate level of resistance to foliar-feeding by Mexican bean beetle and corn earworm.

Table 43 - General summary of performance for the strains in Uniform Group VII, 1983

	No. of loc.	Braxton	Wright	D76-9454	F77-1880	F77-7142	Ga78-2708
Seed yield - 1983							
East Coast	5	31.8	31.3	33.9	35.1	35.3	35.6
Southeast	10	37.4	39.6	34.3	36.7	38.2	36.8
Upper & Central South	3	52.2	47.4	47.3	52.4	47.3	51.4
Delta & West	8	45.5	45.9	45.4	46.1	45.0	43.6
1982-83							
East Coast		31.6	29.8	33.6	34.8	33.5	35.0
Southeast		39.5	39.4	36.7	39.9	40.3	37.7
Upper & Central South		47.7	45.6	44.9	46.8	47.3	46.8
Delta & West		44.4	44.8	44.5	43.4	42.7	43.7
1981-83							
East Coast		34.6	32.1	36.0	36.3	36.6	
Southeast		37.5	37.3	35.8	38.5	38.7	
Upper & Central South		44.1	41.8	42.0	41.9	43.8	
Delta & West		41.6	43.0	42.9	42.4	41.0	
Oil Content - 1983		19.5	20.2	20.4	19.5	19.9	20.5
1982-83		19.1	19.8	20.2	18.9	19.2	19.6
1981-83		19.0	19.6	19.9	18.8	19.2	
Protein Content - 1983		42.5	41.9	41.2	43.3	41.9	40.1
1982-83		42.2	41.4	41.2	42.9	41.8	40.2
1981-83		42.5	41.9	41.7	43.3	42.2	
Seed size		16.2	14.7	14.8	13.8	13.7	12.5
Maturity index		10-28	-1	-1	+2	0	-2
Height		35	35	35	35	42	35
Seed quality		1.9	1.8	2.1	2.0	2.0	1.9
M. incognita		2.0	3.0	1.0	1.0	1.0	1.0
M. arenaria		2.0	2.3	2.0	5.0	2.0	1.5
SCN - 3		S	S	R	R	R	R
Soybean looper		4.5	4.0	4.5	4.5	5.0	4.5
Stem canker		1.0	2.0	3.2	1.5	2.8	2.5
Flower Color		P	P	W	P	W	W
Pubescence color		T	T	T	T	G	G

Table 43 - (continued)

	F77-2122	F79-4696	F80-3508	Gregg (La74-4656)	N80-777	N80-2282
Seed yield - 1983						
East Coast	33.4	34.0	31.9	32.8	30.6	35.6
Southeast	37.4	40.1	34.2	35.0	36.7	34.8
Upper & Central South	48.2	48.5	45.4	46.2	46.2	43.0
Delta & West	43.4	45.7	43.9	44.0	43.8	42.6
1982-83						
East Coast	32.8					
Southeast	39.6					
Upper & Central South	44.8					
Delta & West	43.1					
1981-83						
East Coast						
Southeast						
Upper & Central South						
Delta & West						
Oil Content - 1983	19.5	19.2	21.0	19.6	20.6	19.5
1982-83	19.0					
1981-83						
Protein Content - 1983	42.0	42.7	39.0	43.2	41.9	42.6
1982-83	41.7					
1981-83						
Seed size	12.7	14.2	12.2	13.5	14.2	12.6
Maturity index	-1	+2	+2	-1	-5	-2
Height	35	37	39	33	32	33
Seed quality	1.9	1.9	1.9	2.0	2.0	2.1
M. incognita	1.0	1.0	1.0	2.5	2.5	1.0
M. arenaria	4.0	4.2	1.8	1.5	4.5	2.3
SCN - 3	R	R	R	R	S	S
Soybean looper	4.5	3.5	4.0	4.5	3.5	4.0
Stem canker	1.3	2.3	4.5	2.5	1.5	1.0
Flower Color	W	P	W	P	P	W
Pubescence color	T	T	T	G	T	T

Table 44 - Seed yield, in bushels per acre, for the strains in Uniform Group VII, 1983

Location	Braxton	Wright	D76-9454	F77-1880	F77-7142	Ga78-2708	F77-2122
			EAST COAST				
Plymouth, NC	44.9	41.3	47.7	48.6	46.6	45.5	41.0
Kinston, NC	15.9	16.0	19.3+	17.3	20.0+	21.8+	19.4+
Clinton, NC	21.1	21.7	23.8	27.9+	23.4	25.8+	25.7+
Florence, SC (A)	30.8	34.1	29.8	31.6	33.9	36.7+	32.9
Hartsville, SC (A)	46.3	43.2	49.0	50.1	52.4	48.0	47.9
Mean	31.8	31.3	33.9	35.1	35.3	35.6	33.4
			SOUTHEAST				
Blackville, SC	29.4	31.8	27.9	33.3	26.9	29.1	28.7
Tallassee, AL	40.8	36.8	34.3-	35.3	37.4	35.6-	38.7
Tifton, GA	43.9	45.3	36.1	36.7	43.0	41.0	36.5
Gainesville, FL	25.2	27.0	14.9-	30.3+	31.2+	22.6	28.4
Marianna, FL	47.9	43.6	42.8-	44.8	40.9-	42.0-	42.3-
Quincy, FL	33.5	38.9	35.5	33.5	36.1	37.6	37.1
Jay, FL	29.8	41.1+	43.7+	37.6	43.8+	42.1+	37.4
Fairhope, AL	45.4	52.2	38.6	50.7	50.7	44.6	45.4
Poplarville, MS	41.7	42.6	36.3	45.3	38.6	34.5-	36.7
Baton Rouge, LA	36.0	36.3	32.8	49.8+	33.9	40.3	43.0
Mean	37.4	39.6	34.3	36.7	38.2	36.8	37.4
			UPPER AND CENTRAL SOUTH				
Athens, GA	52.9	54.8	52.1	54.3	57.2	55.5	47.9
Calhoun, GA	71.4	58.2-	57.9-	71.4	54.5-	63.6	65.3
Clemson, SC	32.2	29.1	32.0	31.4	30.2	35.0	31.4
Mean	52.2	47.4	47.3	52.4	47.3	51.4	48.2
			DELTA AND WEST				
Stoneville, MS (A)	43.3	48.5+	50.7+	48.2+	46.1	44.3	47.1
Stoneville, MS (B)	38.1	40.4	39.9	43.0+	40.6	32.4-	32.4-
Pine Bluff, AR	49.8	41.6	47.0	45.6	42.6	49.0	49.1
Stuttgart, AR	49.8	47.9	52.0	49.3	51.1	47.7	51.2
Rowher, AR	39.6	41.4	39.2	40.2	34.4	37.0	39.9
St. Joseph, LA	59.3	59.6	54.2	56.4	58.7	53.2-	50.6-
Bossier City, LA	54.1	53.5	52.3	53.7	57.9	56.1	48.8
Beaumont, Tx	29.6	34.0	27.6	32.1	28.2	29.4	28.4
Mean	45.5	45.9	45.4	46.1	45.0	43.6	43.4

(+) - Strains yielding significantly more (odds 19:1 or greater) than Braxton.
(-) - Strains yielding significantly less (odds 19:1 or greater) than Braxton.

Table 44 - (cont.)

Location	F79-4696	F80-3508	Gregg (La74-4656)	N80-777	N80-2282	L.S.D. (.05)	C.V. (%)
			EAST COAST				
Plymouth, NC	47.2	44.0	44.2	45.2	41.9	N.S.	10
Kinston, NC	21.4	17.4	19.5+	17.3	21.5+	3.1	10
Clinton, NC	23.7	25.7+	22.8	21.9	26.3+	2.9	7
Florence, SC (A)	28.2	21.0-	29.5	23.3-	39.7+	3.9	8
Hartsville, SC (A)	49.3	51.5	48.1	45.2	48.6	N.S.	8
Mean	34.0	31.9	32.8	30.6	34.6		
			SOUTHEAST				
Blackville, SC	31.4	30.6	31.0	28.3	25.6	N.S.	10
Tallassee, AL	38.4	17.9-	37.0	46.6+	37.2	5.0	8
Tifton, GA	52.0	43.6	37.0	27.8-	29.1-	13.4	20
Gainesville, FL	28.9	31.0+	20.8	19.1-	18.2-	5.0	12
Marianna, FL	43.1-	37.2-	43.6	46.8	42.9-	4.3	6
Quincy, FL	38.4	32.2	34.0	36.8	33.8	N.S.	8
Jay, FL	34.5	32.0	35.0	40.9+	38.2+	8.0	12
Fairhope, AL	47.6	50.7	41.6	52.0	41.6		
Poplarville, MS	44.5	39.0	39.9	41.7	36.3	6.1	9
Baton Rouge, LA	43.9	27.9	29.6	26.8	44.6	9.3	15
Mean	40.1	34.2	35.0	36.7	34.8		
			UPPER AND CENTRAL SOUTH				
Athens, GA	49.4	48.8	51.2	54.7	46.7-	6.1	7
Calhoun, GA	65.7	60.2	55.1-	51.4-	49.6-	12.4	12
Clemson, SC	30.4	27.9	29.9	32.6	32.6	N.S.	9
Mean	48.5	45.6	45.4	46.2	43.0		
			DELTA AND WEST				
Stoneville, MS (A)	47.1	42.6	48.8+	45.7	46.2	4.1	5
Stoneville, MS (B)	41.9	36.6	37.9	32.5-	31.1	4.5	7
Pine Bluff, AR	47.3	48.7	44.3	46.1	47.2	N.S.	13
Stuttgart, AR	49.8	38.7-	45.6	51.4	47.3	6.8	8
Rowher, AR	39.8	39.8	37.2	35.4	34.5	N.S	8
St. Joseph, LA	54.6	53.5-	54.1	57.2	51.9	5.5	6
Bossier City, LA	55.0	59.5	51.2	51.2	53.7	N.S.	10
Beaumont, Tx	29.8	32.0	33.1	31.2	28.6	N.S.	11
Mean	45.7	43.9	44.0	43.8	42.6		

(+) - Strains yielding significantly more (odds 19:1 or greater) than Braxton.
(-) - Strains yielding significantly less (odds 19:1 or greater) than Braxton.

Table 45 - Chemical composition and seed size for the strains in Uniform Group VII, 1983

Location	Braxton	Wright	D76-9454	F77-1880	F77-7142	Ga78-2708
			OIL PERCENTAGES			
Clinton, NC	17.9	18.1	17.8	18.1	19.5	19.8
Blackville, SC	18.8	20.1	20.6	19.8	20.0	20.1
Athens, GA	19.2	19.4	19.3	18.4	19.5	20.8
Tifton, GA	20.9	23.0	21.5	21.8	21.2	22.4
Jay, FL	20.5	21.6	21.1	20.1	20.2	21.1
Stoneville, MS (B)	18.8	19.4	19.9	18.3	18.4	20.2
Stuttgart, AR	18.9	18.7	20.0	18.9	18.6	18.3
Rohwer, AR	20.3	21.4	22.4	19.6	21.1	21.6
Beaumont, TX	20.4	20.1	20.8	20.3	20.5	20.1
Mean	19.5	20.2	20.4	19.5	19.9	20.5
			PROTEIN PERCENTAGES			
Clinton, NC	44.1	44.1	43.7	43.4	41.5	40.1
Blackville, SC	43.6	42.3	40.6	43.3	41.2	40.6
Athens, GA	41.4	41.5	40.8	44.1	41.2	39.6
Tifton, GA	42.0	40.5	42.2	41.8	42.3	40.0
Jay, FL	41.8	41.2	42.0	43.4	41.5	40.5
Stoneville, MS (B)	43.6	42.6	41.1	43.7	43.4	39.2
Stuttgart, AR	43.3	43.4	42.0	46.0	44.0	43.0
Rohwer, AR	39.6	37.9	35.7	40.5	37.4	35.1
Beaumont, TX	43.4	43.5	42.6	43.6	44.2	43.0
Mean	42.5	41.9	41.2	43.3	41.9	40.1
			GRAMS PER 100 SEEDS			
Clinton, NC	19.6	15.5	16.0	15.0	16.5	14.1
Blackville, SC	18.0	15.6	16.2	13.8	13.2	13.5
Athens, GA	15.5	15.4	15.4	14.9	15.2	13.1
Tifton, GA	17.1	17.0	14.6	15.3	15.7	14.2
Jay, FL	16.0	14.0	16.0	13.0	13.0	12.0
Stuttgart, AR	14.7	13.3	13.6	13.0	12.3	11.0
Rohwer, AR	13.3	12.0	12.3	11.7	10.0	10.0
Beaumont, TX	15.5	14.6	14.4	13.6	13.7	12.4
Mean	16.2	14.7	14.8	13.8	13.7	12.5

Table 45 - (continued)

Location	F77-2122	F79-4696	F80-3508	Gregg (La74-4656)	N80-777	N80-2282
			OIL PERCENTAGES			
Clinton, NC	18.8	17.5	19.4	18.9	19.6	18.9
Blackville, SC	19.2	19.5	20.6	19.3	20.6	19.7
Athens, GA	19.1	18.4	20.8	18.9	19.9	19.3
Tifton, GA	20.8	21.7	23.0	21.7	21.9	20.7
Jay, FL	19.9	19.9	20.7	20.2	21.4	19.9
Stoneville, MS (B)	19.4	18.2	20.4	19.0	20.0	19.1
Stuttgart, AR	18.2	18.2	20.3	18.1	19.9	18.1
Rohwer, AR	20.7	19.8	22.2	20.5	21.6	20.2
Beaumont, TX	19.4	19.9	21.2	20.0	20.6	19.3
Mean	19.5	19.2	21.0	19.6	20.6	19.5
			PROTEIN PERCENTAGES			
Clinton, NC	42.3	44.0	40.6	44.1	43.5	43.2
Blackville, SC	42.5	42.6	39.4	44.2	42.9	43.8
Athens, GA	42.2	42.6	37.2	43.4	41.8	40.3
Tifton, GA	41.7	41.9	38.8	42.3	41.7	44.1
Jay, FL	42.0	42.7	39.6	43.0	42.0	44.2
Stoneville, MS (B)	41.3	43.0	38.0	42.8	41.0	41.3
Stuttgart, AR	44.4	43.8	43.2	44.8	42.7	44.1
Rohwer, AR	37.6	40.3	34.2	39.4	37.1	37.8
Beaumont, TX	43.8	43.2	40.0	44.4	44.2	44.8
Mean	42.0	42.7	39.0	43.2	41.9	42.6
			GRAMS PER 100 SEEDS			
Clinton, NC	13.6	14.9	13.4	15.8	15.9	14.0
Blackville, SC	12.2	13.4	13.1	14.3	14.9	12.9
Athens, GA	12.9	15.1	13.3	13.5	14.5	12.7
Tifton, GA	17.8	16.3	14.6	15.4	15.8	14.1
Jay, FL	12.0	14.0	11.0	13.0	14.0	14.0
Stuttgart, AR	12.0	13.7	10.3	12.3	13.3	11.0
Rohwer, AR	10.3	12.3	11.0	11.0	11.7	10.0
Beaumont, TX	11.1	13.8	11.0	13.0	13.8	11.9
Mean	12.7	14.2	12.2	13.5	14.2	12.6

Table 46 - Relative maturity data, days earlier (-) or later (+) than Braxton, for the strains in Uniform Group VII, 1983

Location	Date planted	Braxton matured	Wright	D76-9454	F77-1880	F77-7142	Ga78-2708
			EAST COAST				
Plymouth, NC	5-20	11-2	0	0	+6	+6	0
Kinston, NC	5-24	11-17	0	0	+4	0	0
Clinton, NC	5-25	11-11	-2	-2	-2	-2	-2
Florence, SC (A)	5-16	11-2	-1	-1	-1	0	0
Hartsville, SC (A)	6-10	10-30	-3	+4	+5	+1	0
Mean		11-7	-1	0	+2	+1	0
			SOUTHEAST				
Blackville, SC	5-11	10-26	-4	-2	0	-1	-2
Tallassee, AL	5-23	10-16	-1	0	+4	+3	0
Tifton, GA	5-11	10-18	-2	0	0	+1	-4
Gainesville, FL	5-18	10-26	-2	+2	-1	-3	0
Marianna, FL	6-16	10-20	-4	-6	-1	-3	-7
Quincy, FL	5-26	10-20	-1	0	0	0	-6
Jay, FL	5-26	10-17	+1	-1	0	-7	-7
Poplarville, MS	5-20	10-24	-7	-3	-5	-6	-7
Baton Rouge, LA	5-18	10-27	+1	0	0	-2	+2
Mean		10-22	-2	-1	0	-2	-3
			UPPER AND CENTRAL SOUTH				
Athens, GA	5-26	10-21	0	+1	+6	+5	+1
Calhoun, GA	6-1	10-31	0	0	+2	0	0
Clemson, SC	5-11	10-28	-1	-1	+6	-1	-2
Mean		10-27	0	0	+5	+1	0
			DELTA AND WEST				
Stoneville, MS (A)	5-11	10-26	0	-1	+1	0	-8
Stoneville, MS (B)	6-3	10-25	-2	-2	+1	0	-3
Pine Bluff, AR	6-2	10-31	-1	0	+4	+2	0
Stuttgart, AR	5-28	10-20	-1	-1	0	0	-2
Rowher, AR	6-2	10-26	0	-2	+5	+5	-1
St. Joseph, LA	5-27	10-21	-2	-2	0	0	-4
Beaumont, TX	5-30	10-25	-7	-6	-4	-4	-6
Mean		10-25	-2	-2	+1	0	-3

Table 46 - (continued)

Location	F77-2122	F79-4696	F80-3508	Gregg (La74-4656)	N80-777	N80-2282
			EAST COAST			
Plymouth, NC	0	+6	+6	0	-8	0
Kinston, NC	0	0	0	0	0	0
Clinton, NC	-2	-2	-2	-2	-2	-2
Florence, SC (A)	-1	+2	-1	0	-1	0
Hartsville, SC (A)	+1	+6	+4	0	-5	-3
Mean	0	+2	+1	0	-5	-1
			SOUTHEAST			
Blackville, SC	-3	+1	+1	0	-6	-3
Tallassee, AL	0	+4	+1	+1	-5	0
Tifton, GA	-1	0	+1	-3	-11	-1
Gainesville, FL	-2	0	-1	0	-2	0
Marianna, FL	-7	-2	-5	-3	-3	-4
Quincy, FL	-5	+1	+1	+1	-6	-4
Jay, FL	0	0	+1	0	-6	+1
Poplarville, MS	-7	-5	-4	-6	-7	-4
Baton Rouge, LA	0	+1	0	-1	-4	+1
Mean	-3	0	-1	-1	-6	-2
			UPPER AND CENTRAL SOUTH			
Athens, GA	0	+6	+6	0	-1	-1
Calhoun, GA	0	+2	0	0	0	0
Clemson, SC	-1	+6	+5	-1	-2	-1
Mean	0	+5	+4	0	-1	-1
			DELTA AND WEST			
Stoneville, MS (A)	+1	+1	+1	0	-11	0
Stoneville, MS (B)	0	+2	+1	-3	-3	-2
Pine Bluff, AR	-1	+4	+5	-1	-8	-1
Stuttgart, AR	0	0	+4	+4	-2	-2
Rowher, AR	+3	+6	+5	-1	-2	-2
St. Joseph, LA	-1	0	0	-3	-6	-3
Beaumont, TX	-9	-3	-2	-10	-15	-5
Mean	-1	+2	+2	-2	-8	-3

Table 47 - Plant height for the strains in Uniform Group VII, 1983

Location	Braxton	Wright	D76-9454	F77-1880	F77-7142	Ga78-2708
			EAST COAST			
Plymouth, NC	41	44	48	43	48	39
Kinston, NC	28	30	28	28	34	32
Clinton, NC	38	40	36	42	42	40
Florence, SC (A)	42	42	40	42	49	43
Hartsville, SC (A)	40	38	40	39	41	39
Mean	38	39	38	39	43	39
			SOUTHEAST			
Blackville, SC	37	40	38	37	45	37
Tallassee, AL	44	40	41	41	49	40
Tifton, GA	37	34	30	33	45	30
Gainesville, FL	33	33	30	33	43	32
Marianna, FL	33	30	31	32	36	31
Quincy, FL	25	27	19	25	33	20
Jay, FL	24	25	27	27	30	25
Fairhope, AL	31	29	29	31	36	31
Poplarville, MS	26	28	27	28	33	25
Baton Rouge, LA	34	33	35	36	38	37
Mean	32	32	31	30	39	31
			UPPER AND CENTRAL SOUTH			
Athens, GA	38	37	38	37	47	39
Calhoun, GA	34	34	34	34	36	38
Clemson, SC	33	35	31	30	40	33
Mean	35	34	34	34	41	37
			DELTA AND WEST			
Stoneville, MS (A)	32	35	36	33	42	33
Stoneville, MS (B)	29	31	33	30	34	28
Pine Bluff, AR	43	41	40	44	52	44
Stuttgart, AR	41	41	39	38	41	36
Rowher, AR	39	41	37	38	47	37
St. Joseph, LA	35	31	29	33	41	30
Bossier City, LA	34	32	34	33	41	34
Beaumont, Tx	32	34	34	32	42	32
Mean	36	36	35	35	43	34

Table 47 - (continued)

Location	F77-2122	F79-4696	F80-3508	Gregg (La74-4656)	N80-777	N80-2282
			EAST COAST			
Plymouth, NC	44	42	45	43	37	40
Kinston, NC	28	28	32	24	22	28
Clinton, NC	38	38	42	36	36	36
Florence, SC (A)	44	46	42	40	36	38
Hartsville, SC (A)	40	40	43	40	34	37
Mean	39	39	41	37	33	36
			SOUTHEAST			
Blackville, SC	39	40	39	37	35	36
Tallassee, AL	44	41	46	39	38	41
Tifton, GA	32	32	35	30	26	32
Gainesville, FL	34	33	37	28	24	27
Marianna, FL	32	35	34	29	29	29
Quincy, FL	29	26	33	20	24	23
Jay, FL	28	27	30	25	24	26
Fairhope, AL	31	31	37	27	29	25
Poplarville, MS	31	34	33	26	26	24
Baton Rouge, LA	36	38	43	33	30	32
Mean	34	34	37	29	29	30
			UPPER AND CENTRAL SOUTH			
Athens, GA	38	37	40	36	34	35
Calhoun, GA	38	37	39	33	34	31
Clemson, SC	34	34	37	32	29	29
Mean	37	36	39	34	32	32
			DELTA AND WEST			
Stoneville, MS (A)	34	37	39	34	31	33
Stoneville, MS (B)	29	32	34	27	25	29
Pine Bluff, AR	44	43	48	40	38	43
Stuttgart, AR	38	38	43	37	41	39
Rowher, AR	38	42	44	38	37	39
St. Joseph, LA	34	34	36	30	28	27
Bossier City, LA	34	35	36	30	30	28
Beaumont, Tx	35	33	39	30	29	32
Mean	31	37	40	33	32	33

Table 48 - Lodging scores for the strains in Uniform Group VII, 1983

Location	Braxton	Wright	D76-9454	F77-1880	F77-7142	Ga78-2708
			EAST COAST			
Kinston, NC	2.0	2.0	2.0	2.0	2.0	2.0
Clinton, NC	2.0	2.0	2.0	3.0	2.7	2.7
Florence, SC (A)	1.0	1.0	2.0	1.0	2.0	2.0
Hartsville, SC (A)	2.0	2.2	2.0	2.5	2.5	2.2
			SOUTHEAST			
Blackville, SC	1.0	1.0	1.0	1.0	1.0	1.0
Tallassee, AL	1.2	1.8	1.3	1.7	2.0	1.3
Tifton, GA	1.0	1.0	1.0	1.0	1.5	1.0
Gainesville, FL	1.0	1.0	1.0	1.0	2.0	1.0
Marianna, FL	1.7	1.8	1.7	1.7	2.5	1.5
Jay, FL	1.0	1.0	1.0	1.0	2.0	1.0
Baton Rouge, LA	1.2	1.0	1.3	1.3	1.3	1.3
			UPPER AND CENTRAL SOUTH			
Athens, GA	1.5	2.7	1.8	3.0	2.0	1.7
Calhoun, GA	1.5	2.0	1.5	2.5	2.0	1.5
Clemson, SC	1.7	3.0	2.0	3.7	3.3	2.0
			DELTA AND WEST			
Stoneville, MS (A)	2.0	3.0	2.0	2.0	3.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Pine Bluff, AR	3.0	4.0	2.0	4.0	3.0	3.0
Stuttgart, AR	3.8	3.9	3.2	3.4	4.2	3.2
Rowher, AR	1.7	3.0	1.0	2.0	1.0	1.0
St. Joseph, LA	1.5	1.5	1.5	1.5	1.5	1.2
Bossier City, LA	1.0	1.0	1.0	1.0	1.5	1.0
Beaumont, Tx	1.3	1.9	1.1	1.2	1.5	1.5

Table 48 - (continued)

Location	F77-2122	F79-4696	F80-3508	Gregg (La74-4656)	N80-777	N80-2282
			EAST COAST			
Kinston, NC	2.0	2.0	2.0	2.0	2.0	2.0
Clinton, NC	3.0	3.0	3.0	2.0	2.0	2.0
Florence, SC (A)	2.0	2.0	3.0	2.0	1.0	1.0
Hartsville, SC (A)	2.5	2.7	2.5	2.3	2.0	2.2
			SOUTHEAST			
Blackville, SC	2.0	1.0	1.0	2.0	1.0	1.0
Tallassee, AL	1.5	1.8	2.3	1.2	1.7	1.0
Tifton, GA	1.0	1.0	1.0	1.0	1.0	1.0
Gainesville, FL	1.3	1.0	1.0	1.0	1.0	1.0
Marianna, FL	1.8	2.0	2.3	1.7	1.7	1.3
Jay, FL	1.0	1.0	2.0	1.0	1.0	1.0
Baton Rouge, LA	1.2	1.3	1.2	1.0	1.2	1.0
			UPPER AND CENTRAL SOUTH			
Athens, GA	2.2	2.7	2.5	1.8	2.0	1.5
Calhoun, GA	2.0	1.5	1.5	1.5	1.5	1.5
Clemson, SC	3.0	3.0	4.0	2.3	2.0	2.0
			DELTA AND WEST			
Stoneville, MS (A)	2.0	2.0	3.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Pine Bluff, AR	3.0	3.0	4.0	3.0	4.0	3.0
Stuttgart, AR	3.8	3.7	4.3	3.2	3.9	3.4
Rowher, AR	2.0	2.0	1.7	1.3	2.7	1.0
St. Joseph, LA	2.0	1.7	1.5	1.5	1.0	1.3
Bossier City, LA	1.3	1.2	1.0	1.0	1.0	1.0
Beaumont, Tx	1.3	1.2	1.5	1.5	1.3	1.4

Table 49 - Seed quality scores for the strains in Uniform Group VII, 1983

Location	Braxton	Wright	D76-9454	F77-1880	F77-7142	Ga78-2708
			EAST COAST			
Kinston, NC	2.0	2.0	2.0	2.0	2.0	2.0
Clinton, NC	2.0	1.5	2.0	2.0	2.0	2.0
			SOUTHEAST			
Blackville, SC	2.0	2.0	2.0	1.0	1.0	2.0
Tifton, GA	2.0	2.0	2.5	2.0	2.5	1.5
Gainesville, FL	2.0	2.0	4.0	2.0	2.0	2.3
Quincy, FL	2.0	2.0	2.0	2.0	2.0	2.0
Jay, FL	2.0	2.0	2.0	2.0	3.0	2.0
Baton Rouge, LA	1.0	1.0	1.6	1.0	1.0	1.0
			UPPER AND CENTRAL SOUTH			
Athens, GA	1.5	1.5	1.8	1.5	1.7	1.5
Calhoun, GA	1.8	1.5	2.2	2.0	2.2	1.8
			DELTA AND WEST			
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Pine Bluff, AR	1.0	2.0	2.0	2.0	2.0	2.0
Stuttgart, AR	2.3	2.3	1.8	3.5	2.8	2.2
Rowher, AR	2.3	2.3	2.0	2.2	1.8	2.5
St. Joseph, LA	2.0	1.5	2.0	2.0	1.5	2.0
Bossier City, LA	1.7	1.5	2.0	1.5	1.3	1.3
Beaumont, Tx	1.7	1.7	2.2	1.5	2.3	1.7

Table 49 - (continued)

Location	F77-2122	F79-4696	F80-3508	Gregg (La74-4656)	N80-777	N80-2282
			EAST COAST			
Kinston, NC	2.0	2.0	2.0	2.0	2.0	2.0
Clinton, NC	2.0	2.0	1.5	2.0	2.0	2.0
			SOUTHEAST			
Blackville, SC	2.0	2.0	2.0	2.0	2.0	2.0
Tifton, GA	2.0	2.0	2.0	2.0	2.5	3.0
Gainesville, FL	2.0	1.7	1.3	2.7	3.0	2.7
Quincy, FL	2.0	2.0	2.0	2.0	2.0	2.0
Jay, FL	2.0	2.0	2.0	2.0	2.0	2.0
Baton Rouge, LA	1.0	1.0	1.0	1.0	1.0	1.0
			UPPER AND CENTRAL SOUTH			
Athens, GA	1.5	1.8	1.5	1.7	1.7	1.8
Calhoun, GA	1.5	1.5	2.0	2.2	2.2	2.5
			DELTA AND WEST			
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Pine Bluff, AR	2.0	1.0	2.0	2.0	2.0	2.0
Stuttgart, AR	2.2	2.2	5.0	2.3	1.7	1.8
Rowher, AR	2.5	2.0	2.3	2.0	2.2	2.5
St. Joseph, LA	2.0	2.0	2.0	1.8	1.7	1.8
Bossier City, LA	1.8	1.5	2.2	1.2	1.2	1.8
Beaumont, Tx	1.7	1.8	1.8	1.7	1.7	2.2

PRELIMINARY GROUP VII

1983

Nine Preliminary Group VII nurseries, which included Braxton and Centennial along with 34 experimental strains, were grown at 9 locations for evaluation for seed yield. Additional plantings were made to evaluate strains for reaction to root-knot nematode, soybean cyst nematode, and feeding by soybean looper. The parentage of the strains is reported in Table 50. Table 51 gives a general summary of performance including information on reaction to root-knot nematodes, stem canker, and foliar-feeding insects. Data from individual locations is reported in Tables 52-56.

Differences among strains for seed yield was significant at the 5% level of confidence at six of the nine locations. Braxton had an overall mean seed yield of 36.2 bushels and Centennial a mean yield of 38.2 bushels. Eleven strains had mean seed yields slightly above that for Braxton, but only one strain had a seed yield above that for Centennial. Five strains had seed yields significantly lower than that for Braxton.

Stem canker developed in the planting at Tallassee at a level to permit severely depressed seed yield on the more susceptible strains. Eleven strains received disease ratings of 3 or higher. Braxton was rated 1.5 and Centennial was given a score of 1. Fifteen strains received scores of 1.5 or lower.

The soybean cyst nematode population at Ames Plantation was at too low a level to give satisfactory strain evaluation. However, seed yield of SCN race 3 susceptible strains was depressed at Jay, Florida. Good differences were obtained for both M. arenaria and M. incognita. Ten strains were rated resistant to both species.

In a planting in a field cage at Stoneville, three strains received scores of 3 or lower for feeding by soybean looper. Most strains received scores of 5.

The seven strains having D77-12480 as a parent have the character for late flowering under short-day conditions. All will make excellent growth and produce good seed yield under short day conditions. All averaged lower in seed yield than Braxton in these plantings. Maturity ranged from 6 days later to 4 days earlier than Braxton. The results demonstrate that, with this character, lines can be developed which can be grown successfully under a wide range of environments.

Table 50 - Parentage of strains in Preliminary Group VII, 1983

	Variety or strain	Parentage	Generation composited
1.	Braxton		
2.	Centennial		
3.	D79-10515	J74-39 X D75-10169	F_5
4.	D80-7145	Forrest X D75-10169	F_5
5.	D81-709	Forrest X D75-10169	F_7
6.	D81-8814	Centennial X D75-11061	F_5
7.	D81-8847	Centennial X D75-11061	F_5
8.	D81-8912	Centennial X D75-10172	F_5
9.	F81-2815	Centennial X (Cobb X Hood)	F_7
10.	F81-4416	Forrest(2) X D77-12480	F_4
11.	F81-4501	Foster(3) X D77-12480	F_3
12.	F81-5336	Forrest(3) X D77-12480	F_3
13.	F81-5453	Forrest(3) X D77-12480	F_3
14.	F81-5487	Forrest(3) X D77-12480	F_3
15.	F81-5894	Forrest(3) X D77-12480	F_3
16.	F81-5923	Forrest(3) X D77-12480	F_3
17.	Ga79-551	Tracy X Hutton	F_7
18.	Ga79-588	Tracy X Hutton	F_7
19.	Ga79-945	Tracy X Hutton	F_7
20.	Ga80-1502	Pickett 71 X Bedford	F_6
21.	Ga80-1541	Pickett 71 X Bedford	F_6
22.	GaT78-14	Braxton X Centennial	F_5
23.	GaT79-209	GaT72-209 X Braxton	F_5
24.	GaT79-324	GaT72-209 X Braxton	F_5
25.	GaT79-424	GaT74-25 X GaSoy	F_5
26.	La74-923		
27.	La77-10807		
28.	N80-50232	Forrest X 6-39-4-3	F_7
29.	N81-465	N72-3058 X N77-2719	F_6
30.	N81-623	N72-3058 X N72-3148	F_6
31.	N81-1756	Ransom X N72-2703	F_6
32.	N81-1766	N72-3148 X N77-2710	F_6
33.	N81-1816	N73-520-2 X Ransom(2)	F_4
34.	R81-199	Bragg X Centennial	F_5
35.	R81-266	Bragg X Centennial	F_5
36.	SC80-1105	Braxton X N72-3189	F_3

Table 51 - General summary of performance for the strains in Preliminary Group VII, 1983

Strain	Seed yield	Maturity index	Ht.	Percent Oil	Percent Protein	M. incognita	M. arenaria	Soybean looper	Stem canker
Braxton	36.2	10-25	34	19.6	43.1	1.0	1.5	4.5	1.5
Centennial	38.2	-8	33	19.5	43.1	1.0	4.0	5.0	1.0
D79-10515	32.9	-7	37	19.5	46.0	1.0	3.0	5.0	1.0
D80-7145	31.9	-1	36	18.8	44.3	1.0	1.5	3.5	1.0
D81-709	31.9	-3	39	19.1	42.6	1.0	1.3	3.5	1.0
D81-8814	34.1	-2	31	18.9	45.0	1.0	4.5	3.0	1.0
D81-8847	34.3	-8	33	19.0	44.2	1.0	4.0	3.0	1.0
D81-8912	37.1	-2	32	19.2	43.3	1.0	3.5	5.0	1.0
F81-2815	38.5	+1	37	19.3	43.1	1.0	4.0	5.0	1.2
F81-4416	28.1	+5	41	19.4	42.0	1.0	4.5	5.0	4.0
F81-4501	29.9	+5	42	19.6	41.9	1.0	4.0	4.5	2.5
F81-5336	32.0	-5	46	21.1	39.2	5.0	1.5	5.0	3.5
F81-5453	30.9	+6	51	19.7	41.7	1.0	1.8	4.5	2.0
F81-5487	30.5	-3	43	21.1	39.3	1.0	1.8	4.0	4.0
F81-5894	35.6	-1	43	20.7	41.1	1.0	2.5	5.0	4.0
F81-5923	34.0	-4	45	20.7	41.2	3.5	2.0	5.0	3.0
Ga79-551	36.4	-5	30	18.7	43.6	1.0	3.5	4.0	1.0
Ga79-588	36.6	-4	31	18.3	45.7	1.5	5.0	4.0	1.0
Ga79-945	37.8	-6	28	20.3	41.9	1.5	3.0	4.0	1.0
Ga80-1502	33.3	-1	33	19.2	43.3	2.0	2.5	5.0	4.0
Ga80-1541	33.6	-5	36	20.1	42.6	1.5	2.5	5.0	3.0
GaT78-14	35.6	-2	37	19.6	43.1	1.0	—	4.5	1.0
GaT79-209	34.0	-1	39	20.9	41.2	1.0	5.0	4.5	2.0
GaT79-324	36.7	-1	40	20.9	41.3	2.0	2.3	4.5	2.0
GaT79-424	34.3	0	37	19.5	42.6	1.0	1.5	3.5	3.5
La74-923	38.1	-2	37	21.3	40.7	5.0	1.8	4.0	2.5
La77-10807	33.2	+1	25	19.7	42.4	1.0	—	5.0	3.0
N80-50232	30.4	-6	28	19.8	40.4	1.0	1.5	2.0	3.5
N81-465	36.7	-7	34	20.9	41.7	1.5	5.0	4.5	1.0
N81-623	36.3	-10	29	21.6	41.7	1.0	5.0	4.5	1.0
N81-1756	35.8	-8	29	21.8	40.9	1.0	5.0	3.5	1.0
N81-1766	32.9	-10	26	20.8	41.9	4.0	5.0	4.0	2.0
N81-1816	37.3	-8	31	21.8	43.9	3.0	5.0	4.0	2.0
R81-199	36.3	-3	35	19.3	43.2	1.5	3.0	4.0	3.0
R81-266	36.2	-1	30	20.0	42.8	1.0	4.0	5.0	1.0
SC80-1105	37.7	-2	35	19.5	42.8	1.0	1.8	5.0	1.0
L.S.D.(.05)	4.6								
C.V.	14								

Table 52 - Seed yield, in bushels per acre, for the strains in Preliminary Group VII, 1983

Strain	Clinton, NC	Black-ville, SC	Tifton, GA	Tallas-see, AL	Jay, FL	Rohwer, AR	Stone-ville, MS(A)	Stone-ville, MS(B)	Beau-mont, TX
Braxton	34.8	25.8	41.5	48.6	22.7	40.5	47.2	31.1	34.0
Centennial	36.0	26.4	37.5	41.2	44.4+	41.8	49.1	38.4	28.8
D79-10515	26.7	25.2	34.3	36.1-	33.5	35.4	54.1	29.3	21.5-
D80-7145	30.4	24.4	37.8	35.9-	21.1	34.2	45.3	26.0	31.8
D81-709	30.4	24.0	31.3	38.8-	28.0	34.4	45.1	29.1	26.3-
D81-8814	34.1	29.2	33.4	45.2	26.3	43.2	44.3	28.8	22.3-
D81-8847	31.4	25.9	29.3	42.1	29.1	38.7	50.0	32.7	29.5
D81-8912	37.7	27.7	32.1	41.6	42.2+	41.6	44.4	35.9	30.4
F81-2815	28.7	30.1	43.1	43.0	45.7+	39.9	46.6	36.0	33.2
F81-4416	29.1	23.5	40.9	21.3-	18.8	23.6-	44.3	20.8-	30.6
F81-4501	30.2	28.7	36.2	26.1-	29.8	30.5-	36.5-	24.9	25.9-
F81-5336	32.7	25.5	34.9	30.1-	33.8	28.6-	46.8	27.5	27.9
F81-5453	31.0	20.6	35.3	34.1-	33.3	29.8-	37.0-	28.4	28.2
F81-5487	33.9	24.0	33.3	25.0-	26.6	34.0	44.8	27.3	25.9-
F81-5894	37.4	28.1	37.9	29.8-	45.1+	36.1	47.9	30.0	27.8
F81-5923	32.4	24.3	37.3	33.6-	42.5+	36.2	47.0	33.4	19.5-
Ga79-551	26.3	24.1	41.7	47.9	29.5	48.7+	44.8	33.4	31.6
Ga79-588	36.9	22.7	35.9	49.2	34.4	41.2	47.6	29.4	32.5
Ga79-945	36.1	29.2	33.9	53.1	17.5	48.9+	46.8	35.5	39.2
Ga80-1502	31.8	28.1	35.1	27.1-	36.4	38.3	46.8	26.3	29.8
Ga80-1541	30.9	23.0	36.0	33.9-	31.5	39.4	44.8	35.5	27.0
GaT78-14	35.2	24.5	45.6	45.3	34.3	33.4	45.5	28.2	28.6
GaT79-209	28.4	23.9	33.4	45.0	28.1	36.6	46.2	31.5	32.6
GaT79-324	31.4	26.7	43.1	42.6	42.5+	34.7	43.2	37.3	29.0
GaT79-424	26.5	31.5	37.2	30.3-	36.7+	38.1	43.3	37.3	28.2
La74-923	35.8	25.4	46.4	46.5	45.1+	35.5	42.8	37.5	27.8
La77-10807	35.6	24.6	34.4	38.5-	22.7	34.8	46.5	32.1	29.4
N80-50232	28.1	28.0	37.4	27.0-	34.1	30.3-	38.9-	22.5-	26.9
N81-465	36.2	28.5	39.9	47.0	33.1	39.2	43.9	31.2	31.2
N81-623	30.1	21.2	34.2	53.1	40.2+	32.7	51.3	34.0	30.3
N81-1756	35.2	23.6	33.7	53.7	39.5+	45.1	43.4	24.4	23.5-
N81-1766	31.6	19.0	32.2	50.8	27.7	28.9-	41.6	28.2	36.3
N81-1816	32.5	24.9	37.6	52.7	39.0+	42.1	48.2	29.8	29.2
R81-199	30.3	26.9	37.1	31.4-	39.6+	41.3	50.5	36.9	33.0
R81-266	33.2	25.7	38.4	40.7-	37.0+	36.6	47.8	37.6	28.5
SC80-1105	32.2	26.7	45.8	47.1	33.5	42.2	46.2	35.1	30.6
L.S.D(.05)	N.S.	N.S.	N.S.	7.5	13.9	8.0	7.0	7.4	7.4
C.V.	18%	12%	15%	9%	20%	11%	8%	12%	13%

Table 53 - Oil percentages for the strains in Preliminary Group VII, 1983

Strain	Clinton, NC	Blackville, SC	Jay, FL	Stoneville, MS (B)	Beaumont, TX
Braxton	19.1	18.7	21.0	18.8	20.4
Centennial	19.2	19.5	20.1	18.5	20.3
D79-10515	20.5	20.1	19.7	18.4	18.6
D80-7145	19.2	19.3	19.7	17.0	19.0
D81-709	19.1	19.3	19.9	18.0	19.2
D81-8814	19.0	19.0	20.0	17.6	19.1
D81-8847	18.9	19.3	19.0	18.4	19.5
D81-8912	19.6	19.2	20.2	17.6	19.4
F81-2815	18.8	19.4	20.2	17.9	20.2
F81-4416	18.6	19.5	20.5	18.4	19.8
F81-4501	18.7	20.0	20.1	18.6	20.5
F81-5336	21.2	21.0	21.0	21.2	21.0
F81-5453	19.0	20.1	19.8	19.5	20.2
F81-5487	21.2	20.7	20.9	21.2	21.4
F81-5894	20.6	20.9	20.8	20.9	20.3
F81-5923	20.5	21.1	20.9	20.8	20.4
Ga79-551	17.7	18.0	19.8	18.3	19.7
Ga79-588	18.1	16.9	19.1	17.9	19.3
Ga79-945	19.8	19.6	21.6	19.8	20.5
Ga80-1502	19.6	18.7	19.7	19.0	19.1
Ga80-1541	20.1	19.4	20.8	19.6	20.8
GaT78-14	18.9	19.1	20.5	18.0	20.6
GaT79-209	19.6	21.4	22.5	19.9	21.3
GaT79-324	20.0	21.0	21.9	19.3	22.3
GaT79-424	18.7	19.8	19.8	18.8	20.3
La74-923	20.3	21.2	22.6	20.3	21.9
La77-10807	19.8	19.8	20.5	17.9	20.6
N80-50232	19.4	19.9	19.8	19.7	20.4
N81-465	20.5	21.0	22.0	19.6	21.5
N81-623	21.8	20.9	22.7	21.1	21.5
N81-1756	21.9	20.9	22.3	22.3	21.8
N81-1766	20.4	20.7	21.6	20.6	20.9
N81-1816	21.1	21.7	22.9	21.3	22.4
R81-199	18.3	19.6	20.1	18.5	19.9
R81-266	19.1	19.9	21.3	19.5	20.2
SC80-1105	18.8	19.4	20.7	18.5	19.9

Table 54 - Protein percentages for the strains in Preliminary Group VII, 1983

Strain	Clinton, NC	Blackville, SC	Jay, FL	Stoneville, MS (B)	Beaumont, TX
Braxton	44.2	43.4	40.4	44.1	43.6
Centennial	43.9	42.0	42.6	43.0	43.9
D79-10515	44.6	45.5	46.0	45.6	48.2
D80-7145	44.1	43.5	42.6	46.3	45.2
D81-709	42.3	41.8	41.0	42.8	45.0
D81-8814	45.5	45.2	42.9	45.8	45.4
D81-8847	43.4	43.2	43.5	45.4	45.6
D81-8912	42.2	42.5	42.4	45.0	44.2
F81-2815	43.8	42.3	42.3	44.4	42.8
F81-4416	44.0	41.2	40.1	42.0	42.7
F81-4501	43.7	40.3	40.2	43.4	41.7
F81-5336	40.1	39.6	38.1	37.5	40.8
F81-5453	42.2	39.8	41.9	42.1	42.4
F81-5487	39.8	40.2	38.3	37.7	40.6
F81-5894	41.9	41.0	40.5	39.0	43.3
F81-5923	41.8	41.1	39.5	40.1	43.6
Ga79-551	44.2	43.5	41.7	43.8	44.8
Ga79-588	45.7	46.2	44.8	46.4	45.5
Ga79-945	41.3	41.9	40.0	42.8	43.6
Ga80-1502	42.6	43.8	43.1	42.2	44.8
Ga80-1541	41.8	42.8	41.6	42.5	44.3
GaT78-14	44.2	43.5	42.0	43.5	42.3
GaT79-209	41.7	40.3	38.1	43.6	42.2
GaT79-324	42.1	41.1	39.6	43.3	40.3
GaT79-424	41.5	42.5	41.5	43.9	43.5
La74-923	41.7	41.3	39.1	40.5	40.9
La77-10807	41.6	42.5	41.0	44.2	42.5
N80-50232	40.8	40.3	40.7	39.5	40.8
N81-465	41.1	40.9	41.1	43.0	42.6
N81-623	41.8	42.9	40.4	41.1	42.1
N81-1756	39.4	41.9	41.2	39.5	42.7
N81-1766	42.9	42.6	40.1	41.5	42.6
N81-1816	40.8	40.3	39.7	39.7	41.0
R81-199	44.7	43.3	43.6	43.8	44.2
R81-266	43.6	43.1	42.5	43.1	43.8
SC80-1105	43.7	42.6	41.7	43.1	42.7

Table 55 - Plant height for the strains in Preliminary Group VII, 1983

Strain	Clinton, NC	Black-ville, SC	Tifton, GA	Tallas-see, AL	Jay, FL	Rohwer, AR	Stone-ville, MS(A)	Stone-ville, MS(B)	Beau-mont, TX
Braxton	44	38	24	43	27	39	39	25	31
Centennial	42	36	30	40	25	35	35	28	30
D79-10515	40	40	38	44	26	38	40	31	37
D80-7145	46	35	36	46	24	35	40	26	34
D81-709	46	41	38	46	25	40	40	33	40
D81-8814	38	34	26	39	25	34	32	26	28
D81-8847	38	36	32	40	23	34	34	27	30
D81-8912	36	33	29	36	23	37	34	25	31
F81-2815	42	42	38	46	31	44	37	28	38
F81-4416	46	47	38	50	26	37	43	29	50
F81-4501	46	42	42	48	41	39	43	32	41
F81-5336	54	51	50	50	39	45	43	36	45
F81-5453	62	53	48	55	43	47	60	38	53
F81-5487	52	42	44	47	43	40	48	30	43
F81-5894	48	46	45	48	39	42	42	36	42
F81-5923	54	49	43	51	40	44	45	35	46
Ga79-551	32	30	28	35	22	34	34	26	29
Ga79-588	36	34	26	35	25	35	33	27	32
Ga79-945	32	29	24	35	20	33	29	27	26
Ga80-1502	36	39	21	39	34	32	35	24	33
Ga80-1541	40	38	39	43	26	38	33	28	36
GaT78-14	42	38	38	45	29	38	38	25	37
GaT79-209	46	44	36	46	25	42	43	30	43
GaT79-324	44	44	41	46	34	41	42	31	40
GaT79-424	42	43	37	43	22	44	38	30	34
La74-923	46	42	25	47	29	39	41	28	35
La77-10807	24	23	16	34	19	24	33	24	24
N80-50232	36	32	31	42	23	34	34	26	28
N81-465	38	32	28	40	30	36	38	27	36
N81-623	38	25	24	36	24	27	33	25	29
N81-1756	36	27	28	32	23	32	37	21	27
N81-1766	30	23	24	32	24	27	24	21	27
N81-1816	36	26	24	38	26	34	37	27	29
R81-199	42	42	30	40	30	38	35	27	29
R81-266	40	39	29	39	23	41	34	30	34
SC80-1105	46	35	30	44	25	40	35	26	33

Table 56 - Seed quality scores for the strains in Preliminary Group VII, 1983

Strain	Clinton, NC	Black-ville, SC	Tifton GA	Jay FL	Rohwer, AR	Stone-ville, MS(A)	Stone-ville, MS(B)	Beau-mont, TX
Braxton	1.5	2.0	2.0	2.0	2.0	2.0	2.0	1.8
Centennial	1.5	2.0	2.5	2.0	2.0	2.0	2.0	1.5
D79-10515	1.5	2.0	2.5	2.0	2.5	2.0	2.0	1.8
D80-7145	1.5	2.0	2.0	2.0	2.5	2.0	2.0	1.5
D81-709	1.5	2.0	2.0	2.0	2.5	2.0	2.0	1.5
D81-8814	1.5	2.0	3.0	2.0	2.5	2.0	2.0	1.5
D81-8847	1.5	2.0	2.5	2.0	2.5	2.0	2.0	1.3
D81-8912	1.5	2.0	2.0	2.0	2.5	2.0	2.0	1.5
F81-2815	1.5	1.0	2.5	2.0	2.0	2.0	2.0	1.5
F81-4416	1.5	1.0	2.0	3.0	2.8	2.0	2.0	1.8
F81-4501	1.5	2.0	2.0	4.0	2.5	2.0	2.0	1.8
F81-5336	1.5	2.0	4.0	3.0	3.0	2.0	2.0	1.3
F81-5453	1.5	1.0	2.5	2.0	2.3	2.0	2.0	1.5
F81-5487	1.5	2.0	4.0	4.0	2.5	2.0	2.0	1.5
F81-5894	1.5	2.0	3.5	2.0	2.8	2.0	2.0	1.8
F81-5923	1.5	2.0	4.5	2.0	2.3	2.0	2.0	1.5
Ga79-551	1.5	2.0	2.5	2.0	2.3	2.0	2.0	1.3
Ga79-588	1.5	3.0	2.5	2.0	2.0	2.0	2.0	1.5
Ga79-945	1.5	2.0	2.0	2.0	1.7	2.0	2.0	1.0
Ga80-1502	1.5	2.0	2.0	2.0	2.3	2.0	2.0	1.5
Ga80-1541	1.5	2.0	2.0	2.0	2.5	2.0	2.0	1.3
GaT78-14	1.5	1.0	1.5	2.0	2.5	2.0	2.0	1.3
GaT79-209	1.5	2.0	1.5	2.0	2.5	2.0	2.0	1.5
GaT79-324	1.5	2.0	2.0	2.0	2.5	2.0	2.0	1.3
GaT79-424	1.5	2.0	3.0	2.0	2.5	2.0	2.0	1.5
La74-923	1.5	3.0	2.0	2.0	2.3	2.0	2.0	1.3
La77-10807	1.5	2.0	2.5	2.0	2.3	2.0	2.0	1.3
N80-50232	1.5	1.0	1.5	2.0	2.5	2.0	2.0	1.0
N81-465	1.5	2.0	2.0	2.0	2.3	2.0	2.0	1.3
N81-623	1.5	3.0	1.5	2.0	3.0	2.0	2.0	1.5
N81-1756	1.5	2.0	2.5	2.0	2.0	2.0	2.0	1.5
N81-1766	1.5	2.0	2.5	2.0	3.3	2.0	2.0	1.3
N81-1816	1.5	2.0	2.5	2.0	2.5	2.0	2.0	1.3
R81-199	1.5	1.0	2.0	2.0	2.0	2.0	2.0	1.0
R81-266	1.5	1.0	2.5	2.0	2.0	2.0	2.0	1.0
SC80-1105	1.5	2.0	2.5	2.0	2.3	2.0	2.0	1.8

UNIFORM GROUP VIII

1983

	Variety or strain	Parentage	Generation composited
1.	Kirby	Centennial X [Forrest X (Cobb X D68-216)]	F_6
2.	Hutton	F55-822 X (Roanoke X CNS-4)	F_6
3.	Coker 368	Co71-211 X Centennial	F_5
4.	F77-7450	Forrest X (Cobb X D68-216)	F_5
5.	Co79-760	Co73-473 X Centennial	F_5
6.	Ga78-2488	Hutton X Ga70-276	F_4
7.	Co80-917	Centennial X Co76-863	F_5
8.	F79-4299	Centennial X [Forrest X (Cobb X D68-216)]	F_8
9.	F79-4589	Centennial X [Forrest X (Cobb X D68-216)]	F_8
10.	F79-4860	Centennial X [Forrest X (Cobb X D68-216)]	F_8
11.	F80-3602	Forrest(2) X (Cobb X D68-216)	F_8
12.	Ga78-1011	Forrest X Hutton	F_7

Background of breeding lines used as parents:

D68-216 is a selection from Dyer X Bragg.

F55-822 is the parent line of Bragg.

Co71-211 is a selection from Hampton 266 X Bragg.

Co73-473 is a selection from Hampton 266 X Bragg.

Ga70-276 is a selection from Bragg X Hood which was grown in Preliminary Group VII in 1975.

Co76-863 is a selection from Coker Hampton 266A X Pickett 71.

Uniform Group VIII nurseries were planted at 19 locations. Additional plantings for root-knot evaluation were made at Blackville, South Carolina and Jay, Florida. Plantings for Race 3 soybean cyst nematode evaluation were made at Ames Plantation in Tennessee, but nematode population was too low for evaluation. Plantings were made in the field cage at Stoneville for evaluation for feeding by soybean looper. A general summary of performance of these strains is given in Table 57 along with information on reaction to diseases, nematodes, and soybean looper. Data from individual locations is reported in Tables 58-63. SCN race 3 was present in the area where plots were grown at Jay, Florida. Stem canker was present at a high enough level at Florence, South Carolina and Tallassee, Alabama to influence seed yield of susceptible strains. Stem canker and aerial blight appear to have influenced seed yield at Baton Rouge.

Data were reported from 18 of the locations. Differences among strains for seed yield were significant at the 5% level of confidence at 12 of the locations. The two strains, Coker 368 and F77-7450, have been evaluated three years. Both have higher three-year mean seed yields than Kirby. Both are resistant to SCN race 3 and M. incognita. F77-7450 is resistant to M. arenaria, but Coker 368 is susceptible. Coker 368 produced well at Florence, South Carolina and at Tallassee, Alabama where stem canker was a factor. Two strains, Co79-760 and Ga78-2488, have been evaluated two years. Ga78-2488 was very susceptible to stem canker at Florence and Tallassee and produced low seed yields at each of these locations. Six strains were evaluated one year. Three of these, F79-4589, F79-4860, and Ga78-1101, do not appear to merit further evaluation on a regional basis.

There was little difference among strains in degree of feeding by soybean looper in the field cage planting at Stoneville.

Table 57 - General summary of performance for the strains in Uniform Group VIII, 1983

	No. of locations	Kirby	Hutton	Coker 368	F77-7450	Co79-760	Ga78-2488
Seed yield - 1983	18	38.9	30.6	42.6	38.5	39.2	31.8
1982-83		36.1	32.2	41.3	37.4	40.6	34.2
1981-83		35.9	31.7	39.5	37.0		
Oil content - 1983		19.6	19.7	20.1	20.3	20.7	19.9
1982-83		19.2	18.8	19.9	19.5	20.5	19.4
1981-83		19.2	18.7	19.7	19.5		
Protein Content - 1983		42.7	44.0	41.6	41.4	41.7	42.9
1982-83		41.6	43.4	40.5	41.1	40.9	42.2
1981-83		42.0	43.9	41.0	41.6		
Seed size		13.4	16.9	14.7	13.4	16.3	15.5
Maturity index		10-29	-2	-1	-1	-1	-2
Height		36	33	36	35	34	36
Seed quality		1.5	1.7	1.6	1.8	2.0	1.9
M. incognita		1.0	1.0	1.0	1.0	1.0	1.0
M. arenaria		1.3	3.0	5.0	1.3	3.8	4.0
Soybean looper		5.0	5.0	5.0	4.5	4.5	4.5
Stem canker		2.0	5.0	1.5	3.0	1.3	4.2
Flower color		P	P	W	W	W	P
Pubescence color		T	T	G	T	G	T

Table 57 - (continued)

	Co80-917	F79-4299	F79-4589	F79-4860	F80-3602	Ga78-1011
Seed yield - 1983	39.0	38.7	35.0	36.4	38.4	34.3
1982-83						
1981-83						
Oil content - 1983	20.2	19.9	19.8	19.4	19.9	20.2
1982-83						
1981-83						
Protein Content - 1983	41.7	41.9	42.4	42.3	41.7	42.2
1982-83						
1981-83						
Seed size	13.2	14.1	13.5	11.5	12.4	12.6
Maturity index	-1	-1	0	-3	-1	-2
Height	35	37	35	35	35	34
Seed quality	1.8	1.8	1.7	1.6	1.8	1.6
M. incognita	1.0	1.0	1.0	1.0	1.0	1.0
M. arenaria	4.5	1.5	1.8	1.5	1.5	3.0
Soybean looper	5.0	5.0	5.0	5.0	4.5	4.5
Stem canker	2.8	1.3	2.6	3.5	3.5	3.5
Flower color	P	W	W	W	W	P
Pubescence color	T	T	T	G	T	T

Table 58 - Seed yield, in bushels per acre, for the strains in Uniform Group VIII, 1983

Location	Kirby	Hutton	Coker 368	F77-7450	Co79-760	Ga78-2488	Co80-917
Clinton, NC	25.4	15.2-	27.1	23.7	24.5	12.7-	24.4
Florence, SC (A)	45.2	7.9-	44.4	33.8-	47.5	13.5-	43.1
Florence, SC (B)	30.1	8.3-	31.8	32.1	35.4+	11.4-	30.1
Hartsville, SC (A)	50.9	41.9-	55.7+	51.6	50.1	42.0-	49.6
Blackville, SC (A)	33.6	28.6 -	36.6	34.5	31.7	30.2	31.6
Blackville, SC (B)	32.2	29.0	35.1	30.4	27.8	35.6	32.1
Athens, GA	62.8	62.6	67.4	60.3	57.9	52.7	59.6
Tallassee, AL	30.4	11.8-	35.9	27.5	42.9+	20.2-	32.0
Tifton, GA	49.1	42.4	53.5	37.3-	39.0	40.4	40.1
Gainesville, FL	36.0	24.4	32.9	30.2	23.6	23.8	33.2
Marianna, FL	40.4	47.9	43.3	50.4+	44.6	47.4	47.2
Quincy, FL	34.8	38.9	49.5+	46.9+	48.1+	42.4+	42.5+
Jay, FL	40.1	24.2-	45.9	40.0	48.8+	27.5	39.7
Fairhope, AL	49.9	44.6	52.2	52.2	52.2	47.6	49.1
Poplarville, MS	33.1	42.6	39.9	42.2	41.3	44.0	35.8
Baton Rouge, LA	29.1	9.1-	36.0	27.3	42.6+	8.9-	37.7
Stoneville, MS (B)	43.1	35.6-	41.2	35.2	43.0	40.3	37.9-
Beaumont, TX	34.4	35.5	37.9	36.6	33.2	32.3	35.8
Mean	38.9	30.6	42.6	38.5	39.2	31.8	39.0

(+) - Strains yielding significantly more (odds 19:1 or greater) than Kirby.

(-) - Strains yielding significantly less (odds 19:1 or greater) than Kirby.

Table 58 - (continued)

	F79-4299	F79-4589	F79-4860	F80-3602	Ga78-1011	L.S.D (.05)	C.V. %
Clinton, NC	22.4-	25.1	27.1	29.3+	26.6	2.9	7
Florence, SC (A)	44.1	38.4-	40.7-	36.9-	35.0-	3.8	6
Florence, SC (B)	29.9	26.1	29.9	32.9	19.5-	4.6	10
Hartsville, SC (A)	50.4	46.9	55.0	51.5	52.9	4.2	5
Blackville, SC (A)	32.0	31.3	34.2	35.7	34.6	4.2	8
Blackville, SC (B)	27.3	28.4	31.8	29.7	31.1	N.S.	13
Athens, GA	56.5	55.0	54.8	58.6	59.7	N.S.	10
Tallassee, AL	29.9	26.6	21.1-	23.6-	24.4	6.0	13
Tifton, GA	43.0	33.1-	40.4	50.8	48.0	10.5	14
Gainesville, FL	32.3	33.3	31.8	27.7	28.8	N.S.	18
Marianna, FL	41.5	37.6	42.0	47.0	36.2	7.9	11
Quincy, FL	36.4	35.4	30.0	43.6+	36.1	6.1	9
Jay, FL	38.8	31.6	35.1	38.7	36.1	6.6	10
Fairhope, AL	52.9	52.9	48.4	54.4	44.6		
Poplarville, MS	37.6	36.3	35.8	41.3	38.6	N.S.	12
Baton Rouge, LA	44.4+	20.3	26.2	21.9	5.6-	12.0	28
Stoneville, MS (B)	42.8	37.8-	34.4-	32.3-	27.7-	3.7	6
Beaumont, TX	34.0	34.3	37.1	35.9	31.5	N.S.	7
Mean	38.7	35.0	36.4	38.4	34.3		

Table 59 - Chemical composition and seed size for the strains in Uniform Group VIII, 1983

Location	Kirby	Hutton	Coker 368	F77-7450	Co79-760	Ga78-2488
			OIL PERCENTAGES			
Hartsville, SC (A)	19.1	19.9	18.5	20.8	19.8	19.0
Blackville, SC (A)	19.2	19.7	20.5	20.4	20.3	19.3
Tifton, GA	20.5	20.4	22.6	21.7	22.1	21.6
Gainesville, FL	19.2	19.5	18.7	19.4	20.6	20.2
Jay, FL	20.1	19.6	21.1	20.6	21.0	20.2
Beaumont, TX	19.9	19.9	20.7	20.1	20.8	20.1
Stoneville, MS (B)	19.1	18.6	18.9	19.4	20.2	19.1
Mean	19.6	19.7	20.1	20.3	20.7	19.9
			PROTEIN PERCENTAGES			
Hartsville, SC (A)	43.5	45.1	44.2	39.8	41.2	41.8
Blackville, SC (A)	41.5	44.4	40.3	42.1	41.1	44.0
Tifton, GA	42.2	44.5	39.6	41.6	40.8	43.0
Gainesville, FL	42.0	39.6	40.6	40.7	41.3	40.9
Jay, FL	42.0	43.6	40.5	40.8	42.0	41.8
Beaumont, TX	43.4	45.1	42.0	43.1	43.3	44.3
Stoneville, MS (B)	44.2	45.6	43.8	42.0	42.5	44.2
Mean	42.7	44.0	41.6	41.4	41.7	42.9
			GRAMS PER 100 SEEDS			
Blackville, SC (A)	14.5	20.1	17.3	14.5	17.8	19.1
Tifton, GA	15.3	18.0	16.5	16.8	17.4	18.2
Tallassee, AL	11.0	13.1	11.9	8.9	15.0	11.4
Gainesville, FL	15.4	19.4	18.8	16.5	18.5	17.8
Jay, FL	14.0	16.0	14.0	14.0	16.0	13.0
Beaumont, TX	12.3	16.7	12.8	13.1	16.1	15.1
Stoneville, MS (B)	11.0	13.8	11.4	10.2	13.2	14.0
Mean	13.4	16.9	14.7	13.4	16.3	15.5

Table 59 - (continued)

Location	Co80-917	F79-4299	F79-4589	F79-4860	F80-3602	Ga78-1011
			OIL PERCENTAGES			
Hartsville, SC (A)	20.2	20.8	18.0	17.6	18.1	19.1
Blackville, SC (A)	19.4	18.8	20.4	20.0	20.1	20.8
Tifton, GA	21.6	20.5	21.3	21.9	21.5	21.1
Gainesville, FL	20.2	21.4	20.1	18.7	18.9	20.3
Jay, FL	20.4	19.9	19.6	19.6	19.9	19.9
Beaumont, TX	20.5	19.9	20.2	20.0	20.3	20.5
Stoneville, MS (B)	18.9	18.1	18.8	18.3	20.2	19.6
Mean	20.2	19.9	19.8	19.4	19.9	20.2
			PROTEIN PERCENTAGES			
Hartsville, SC (A)	40.4	40.2	42.2	43.4	44.1	41.5
Blackville, SC (A)	42.2	43.3	41.0	40.9	40.8	43.1
Tifton, GA	40.7	43.5	41.2	40.3	40.4	44.0
Gainesville, FL	41.4	39.5	43.3	44.0	42.8	39.6
Jay, FL	41.4	41.5	42.3	41.6	40.6	42.2
Beaumont, TX	43.4	42.2	43.2	42.4	42.1	44.0
Stoneville, MS (B)	42.7	43.2	43.9	43.4	41.2	41.2
Mean	41.7	41.9	42.4	42.3	41.7	42.2
			GRAMS PER 100 SEEDS			
Blackville, SC (A)	15.0	16.0	14.7	13.1	14.7	13.7
Tifton, GA	15.8	17.4	16.0	13.6	14.2	14.9
Tallassee, AL	11.4	12.3	11.1	8.0	10.5	9.9
Gainesville, FL	14.9	16.3	15.6	15.1	14.6	14.8
Jay, FL	12.0	13.0	13.0	10.0	11.0	12.0
Beaumont, TX	13.4	13.2	12.9	11.0	11.6	12.2
Stoneville, MS (B)	10.2	10.4	11.2	9.4	10.0	10.4
Mean	13.2	14.1	13.5	11.5	12.4	12.6

Table 60 - Relative maturity, days earlier (-) or later (+) than Kirby, for the strains in Uniform Group VIII, 1983

Location	Date planted	Kirby matured	Hutton	Coker 368	F77-7450	Co79-760	Ga78-2488
Clinton, NC	5-25	11-9	0	0	0	0	0
Florence, SC (A)	6-16	11-11	-7	-1	-9	+3	-10
Florence, SC (B)	6-17	11-7		-1	-3	+1	
Hartsville, SC (A)	6-10	11-7	-2	+1	-2	0	-4
Blackville, SC (A)	5-11	10-29	0	0	-1	+1	-3
Blackville, SC (B)	7-6	11-7	0	+1	+2	-2	0
Athens, GA	5-26	10-30	-4	-1	-1	-2	-2
Tallassee, AL	5-20	10-21	-6	0	-1	+1	-3
Tifton, GA	5-11	10-21	-4	0	+1	-1	-2
Gainesville, FL	5-18	10-27	-1	+2	+1	+1	-2
Marianna, FL	6-16	10-24	-1	-2	+1	-4	-1
Quincy, FL	5-26	10-19	+2	+2	+5	+1	+2
Jay, FL	5-26	10-23	-6	-6	-2	-6	-3
Fairhope, AL	6-13	10-28	-2	-2	-1	-5	-4
Poplarville, MS	5-20	10-28	0	0	0	0	0
Baton Rouge, LA	5-18	10-28	-3	-7	-3	-1	-4
Stoneville, MS (B)	6-3	10-31	-2	-1	0	-2	0
Beaumont, TX	5-30	10-24	0	0	+2	0	-1
Mean		10-29	-2	-1	-1	-1	-2

Table 60 - (continued)

Location	Co80-917	F79-4299	F79-4589	F79-4860	F80-3602	Ga78-1011
Clinton, NC	0	0	+2	0	0	0
Florence, SC (A)	-5	-7	-1	-10	-8	-7
Florence, SC (B)	-1	-3	-1	-3	-2	-2
Hartsville, SC (A)	-2	0	0	-2	-1	-4
Blackville, SC (A)	-1	0	0	-4	0	-1
Blackville, SC (B)	-1	0	0	-2	+1	-1
Athens, GA	-3	0	-2	-2	0	-3
Tallassee, AL	-2	+2	-1	-3	+1	-1
Tifton, GA	0	-1	-2	-3	+1	-2
Gainesville, FL	-1	0	-2	-2	-2	-1
Marianna, FL	0	+1	0	-1	-3	0
Quincy, FL	+2	+1	+1	+1	0	+1
Jay, FL	-5	-1	-3	-6	-5	-5
Fairhope, AL	-4	-1	0	-3	-2	-2
Poplarville, MS	0	0	0	-5	0	0
Baton Rouge, LA	-2	-7	-3	-3	-2	-8
Stoneville, MS (B)	0	+1	+1	-1	+2	-1
Beaumont, TX	-1	+2	+1	+1	+1	0
Mean	-1	-1	0	-3	-1	-2

Table 61 - Plant height for the strains in Uniform Group VIII, 1983

Location	Kirby	Hutton	Coker 368	F77-7450	Co79-760	Ga78-2488
Clinton, NC	42	38	44	42	40	42
Florence, SC (A)	44	42	44	38	42	42
Florence, SC (B)	31	23	27	30	30	28
Hartsville, SC (A)	42	40	44	44	41	47
Blackville, SC (A)	39	39	40	42	39	42
Blackville, SC (B)	35	28	35	31	25	37
Athens, GA	39	38	42	42	40	39
Tallassee, AL	45	40	44	41	43	43
Tifton, GA	37	34	30	34	34	39
Gainesville, FL	35	35	32	33	26	34
Marianna, FL	31	30	30	31	31	35
Quincy, FL	31	26	29	30	28	30
Jay, FL	29	26	32	26	30	27
Fairhope, AL	33	32	34	32	35	34
Poplarville, MS	29	26	27	25	23	31
Baton Rouge, LA	40	32	39	38	38	35
Stoneville, MS (B)	35	33	34	33	30	35
Beaumont, TX	35	33	35	36	33	35
Mean	36	33	36	35	34	36

Table 61 - (continued)

Location	Co80-917	F79-4299	F79-4589	F79-4860	F80-3602	Ga78-1011
Clinton, NC	40	40	44	42	44	44
Florence, SC (A)	40	44	42	42	42	38
Florence, SC (B)	30	32	32	28	30	28
Hartsville, SC (A)	39	43	41	40	44	41
Blackville, SC (A)	39	43	38	43	42	38
Blackville, SC (B)	32	35	30	30	29	33
Athens, GA	39	40	39	38	41	38
Tallassee, AL	43	47	43	42	45	42
Tifton, GA	33	37	36	38	35	36
Gainesville, FL	35	34	35	37	29	33
Marianna, FL	31	33	31	28	31	32
Quincy, FL	31	32	30	30	28	28
Jay, FL	26	33	26	30	28	27
Fairhope, AL	33	34	36	35	32	33
Poplarville, MS	24	29	29	26	28	28
Baton Rouge, LA	42	42	38	38	36	35
Stoneville, MS (B)	32	35	33	30	32	31
Beaumont, TX	36	35	33	35	35	33
Mean	35	37	35	35	35	34

Table 62 - Lodging scores for the strains in Uniform Group VIII, 1983

Location	Kirby	Hutton	Coker 368	F77-7450	Co79-760	Ga78-2488
Clinton, NC	2.0	2.0	2.0	3.0	3.0	2.0
Florence, SC (A)	2.0	1.0	2.0	1.0	2.0	1.0
Florence, SC (B)	2.0	1.0	2.0	2.0	2.0	1.0
Hartsville, SC (A)	2.3	2.7	2.3	2.8	2.3	2.7
Blackville, SC (A)	1.0	2.0	1.0	2.0	1.0	1.0
Blackville, SC (B)	2.0	1.0	2.0	1.0	1.0	3.0
Athens, GA	2.2	2.8	2.5	2.7	2.0	2.8
Tallassee, AL	1.5	2.7	1.3	1.3	1.2	1.7
Tifton, GA	1.0	1.0	1.0	1.0	1.0	1.5
Gainesville, FL	1.0	1.0	1.0	1.0	1.0	1.0
Marianna, FL	1.7	1.3	1.3	2.2	1.5	1.5
Jay, FL	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, LA	1.3	1.0	1.0	1.7	1.0	1.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, TX	1.3	1.5	1.2	1.5	1.2	1.4

Table 62 - (continued)

Location	Co80-917	F79-4299	F79-4589	F79-4860	F80-3602	Ga78-1011
Clinton, NC	3.0	3.0	2.0	2.0	3.0	2.0
Florence, SC (A)	2.0	2.0	2.0	2.0	2.0	1.0
Florence, SC (B)	3.0	3.0	2.0	1.0	2.0	1.0
Hartsville, SC (A)	2.8	2.7	2.3	2.6	2.5	2.3
Blackville, SC (A)	2.0	2.0	1.0	2.0	1.0	1.0
Blackville, SC (B)	2.0	2.0	1.0	1.0	1.0	2.0
Athens, GA	2.8	3.3	2.2	2.2	1.8	2.5
Tallassee, AL	2.0	2.2	1.2	1.7	1.3	1.8
Tifton, GA	1.0	1.5	1.0	1.0	1.0	1.3
Gainesville, FL	1.0	1.0	1.0	1.3	1.0	1.0
Marianna, FL	2.0	1.8	1.2	1.5	1.3	1.7
Jay, FL	1.0	2.0	1.0	2.0	1.0	1.0
Baton Rouge, LA	1.2	1.3	1.3	1.0	1.2	1.2
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, TX	1.5	1.5	1.2	1.2	1.2	1.5

Table 63 - Seed quality for the strains in Uniform Group VIII, 1983

Location	Kirby	Hutton	Coker 368	F77-7450	Co79-760	Ga78-2488
Clinton, NC	1.5	1.5	1.5	1.5	1.5	1.5
Blackville, SC (A)	1.0	2.0	1.0	2.0	2.0	2.0
Blackville, SC (B)	2.0	1.0	1.0	1.0	1.0	2.0
Athens, GA	1.5	1.5	1.5	1.5	1.5	1.5
Tallassee, AL	2.3	3.7	1.7	3.0	2.3	3.0
Tifton, GA	2.0	1.5	1.5	2.0	3.5	1.5
Gainesville, FL	1.3	1.7	2.0	1.3	2.7	2.0
Quincy, FL	2.0	2.0	2.0	2.0	2.0	2.0
Jay, FL	2.0	2.0	2.0	2.0	2.0	2.0
Baton Rouge, LA	1.0	1.0	1.0	1.0	1.0	1.3
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, TX	1.8	1.8	1.5	2.0	2.5	1.5

Table 63 - (continued)

Location	Co80-917	F79-4299	F79-4589	F79-4860	F80-3602	Ga78-1011
Clinton, NC	1.5	1.5	1.5	1.5	1.5	1.5
Blackville, SC (A)	2.0	2.0	1.0	1.0	1.0	1.0
Blackville, SC (B)	1.0	2.0	1.0	1.0	1.0	1.0
Athens, GA	1.5	1.7	1.5	1.5	1.5	1.5
Tallassee, AL	2.3	2.0	2.3	2.3	3.3	2.3
Tifton, GA	2.5	2.5	2.0	1.5	2.0	1.5
Gainesville, FL	2.0	2.0	1.7	2.0	2.0	1.0
Quincy, FL	2.0	2.0	2.0	2.0	2.0	2.0
Jay, FL	2.0	2.0	2.0	2.0	2.0	2.0
Baton Rouge, LA	1.0	1.2	1.0	1.0	1.0	1.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, TX	1.5	1.8	2.0	1.5	1.8	1.8

PRELIMINARY GROUP VIII

1983

Preliminary Group VIII nurseries, which included Kirby and Braxton along with 34 experimental strains, were grown at 6 locations. Additional plantings were made near Blackville, South Carolina and at Jay, Florida for root-knot evaluation. Plantings were made at Ames Plantation in Tennessee for evaluation against SCN race 3, but nematode populations were too low for classification. Plantings were made in the field cage at Stoneville for evaluation against soybean looper feeding. Parentage of the strains included is reported in Table 64. A general summary of performance along with reaction to nematodes and soybean looper feeding are reported in Table 65. Data from individual locations are reported in Tables 65-70. SCN race 3 was present in the area where the plots were grown at Jay, Florida.

Differences in seed yield among strains were significant at the 5% level of confidence at four of the six locations. On the basis of the combined analysis for seed yield, there were no strains of VIII maturity having a mean seed yield significantly higher than that for Kirby. There were ten strains which ranked above Kirby in seed yield. Five strains were earlier in maturity than Braxton.

Seven strains received soybean looper feeding scores of 3 or less.

There appears to be a reaction to location in the maturity for selections from Foster X D77-12480. At some locations, strains were within the maturity range for Group VIII, while at a few locations they were definitely too late for this group.

Table 64 - Parentage of strains in Preliminary Group VIII, 1983

	Variety or strain	Parentage	Generation composited
1.	Kirby	Centennial X [Forrest X (Cobb X D68-216)]	F_6
2.	Braxton	F59-1505 X [Bragg(3) X D60-7965]	F_5
3.	Co81-34	Centennial X Coker 317	F_5
4.	Co81-61	Centennial X Coker 317	F_5
5.	Co81-191	Braxton X (Centennial X Co76-863)	F_5
6.	Co81-199	Braxton X (Centennial X Co76-863)	F_5
7.	Co81-219	Braxton X (Centennial X Co76-863)	F_5
8.	Co82-537	Coker 488 X D74-7741	F_5
9.	Co82-645	Braxton X Coker 368	F_5
10.	D79-10185	Forrest X D75-10169	F_5
11.	D79-10494	J74-39 X D75-10169	F_5
12.	D81-8875	Centennial X D75-10169	F_5
13.	D81-8882	Centennial X D75-10169	F_5
14.	D81-8889	Centennial X D75-10169	F_5
15.	D81-8950	D73-12032 X D77-12481	F_5
16.	F78-5989	Cobb X Bragg	F_6
17.	F78-6307	Cobb X Bragg	F_6
18.	F79-6439	Cobb X (Ransom X Davis)	F_8
19.	F80-3553	Forrest(2) X (Cobb X D68-216)	F_7
20.	F80-3567	Forrest(2) X (Cobb X D68-216)	F_7
21.	F80-4690	D71-9241 X D75-10169	F_5
22.	F80-8799	F64-2571 X (D60-7965 X F64-2862)	F_{11}
23.	F81-2845	Centennial X (Cobb X Hood)	F_7
24.	F81-2861	Cobb X Bragg	F_8
25.	F81-2866	Cobb X Bragg	F_8
26.	F81-4440	Forrest(2) X D77-12480	F_4
27.	F81-4509	Foster X D77-12480	F_4
28.	F81-4567	Foster X D77-12480	F_5
29.	F81-4601	Foster X D77-12480	F_5
30.	F81-5428	Foster X D77-12480	F_3
31.	F81-5502	Foster X D77-12480	F_3
32.	Ga79-1155	Essex X Ga70-579	F_7
33.	Ga80-510	F70-2060 X F71-1138	F_6
34.	Ga80-925	Hutton X F71-1138	F_6
35.	Ga80-1413	Centennial X F71-1138	F_6
36.	Ga80-1718	Centennial X F70-2060	F_6

Table 65 - General summary of performance for the strains in Preliminary Group VIII, 1983

Strain	Seed yield	Maturity index	Ht.	Percent Oil	Percent Protein	M. incognita	M. arenaria	Soybean looper
Kirby	32.3	10-26	32	19.7	42.9	1.0	1.5	5.0
Braxton	29.3	-3	28	19.8	41.7	1.0	1.8	4.5
Co80-34	37.7	-5	36	20.1	41.3	1.5	4.0	5.0
Co81-61	30.7	-4	34	20.3	41.0	1.0	4.5	5.0
Co81-191	34.0	-5	25	20.1	42.0	1.0	1.5	5.0
Co81-199	36.1	-4	34	20.1	41.0	1.0	4.0	4.0
Co81-219	32.7	-2	27	20.6	41.6	1.0	1.5	4.0
Co82-537	39.2+	-2	33	21.2	40.3	1.0	2.0	4.5
Co82-645	36.9	-2	32	21.0	40.8	1.0	1.8	3.5
D79-10185	30.3	-1	35	20.0	41.6	2.0	2.2	2.0
D79-10494	33.7	0	35	19.3	42.9	2.0	2.0	2.0
D81-8875	36.6	+1	33	19.2	43.5	2.0	5.0	2.0
D81-8882	31.7	-3	32	18.8	43.7	1.0	H	4.0
D81-8889	31.6	-2	31	18.9	44.2	1.5	H	2.0
D81-8950	32.3	0	36	18.6	44.3	1.5	1.5	2.5
F78-5989	30.8	+2	35	20.1	41.4	1.0	1.5	4.5
F78-6307	29.9	+2	38	20.0	41.6	1.0	5.0	5.0
F79-6439	35.2	+4	42	19.8	41.4	1.0	4.0	5.0
F80-3553	34.6	-2	30	20.2	40.8	1.0	3.5	4.5
F80-3567	34.6	-2	34	20.1	40.4	1.0	1.5	4.5
F80-4690	22.9	+1	33	18.7	43.0	1.0	1.8	3.0
F80-8799	27.5	+3	37	18.9	42.3	1.5	1.8	5.0
F81-2845	30.7	+1	37	20.4	40.2	1.0	3.0	5.0
F81-2861	33.8	0	35	19.6	42.2	1.0	4.5	5.0
F81-2866	32.9	+2	36	19.8	42.6	1.0	3.8	4.5
F81-4440	18.8-	+7	42	19.1	42.9	1.0	4.5	5.0
F81-4509	19.9-	+10	41	20.0	41.3	1.0	4.5	4.5
F81-4567	28.8	+6	43	19.7	42.4	1.0	3.5	3.5
F81-4601	28.1	+6	40	19.9	42.4	1.0	4.0	4.5
F81-5428	30.3	+3	40	19.6	42.2	1.0	3.8	5.0
F81-5502	30.7	+4	39	20.0	41.8	1.0	5.0	5.0
Ga79-1155	32.1	-2	29	20.8	40.5	1.0	4.5	3.5
Ga80-510	34.0	-3	30	20.2	42.6	1.0	3.0	3.0
Ga80-925	32.3	-2	30	19.9	42.2	1.0	2.8	4.0
Ga80-1413	36.6	-4	29	19.9	42.0	1.0	4.0	4.0
Ga80-1718	32.3	-4	31	20.2	41.6	1.0	3.8	5.0

Table 66 - Seed yield, in bushels per acre, for the strains in Preliminary Group VIII, 1983

Strain	Blackville, SC	Gainesville, FL	Quincy, FL	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Kirby	29.9	23.2	35.3	39.2	28.3	37.9
Braxton	29.6	17.5	37.7	29.4	26.8	34.6
Co81-34	28.2	26.5	49.6+	46.2	31.7	43.9
Co81-61	28.3	20.2	40.1	28.9	32.2	34.7
Co81-191	32.7	20.7	43.7+	35.5	32.1	39.2
Co81-199	33.7+	24.7	39.0	43.9	37.7	37.3
Co81-219	26.4-	18.4	42.7+	45.5	24.0	38.9
Co82-537	35.7+	28.7	53.5+	43.4	34.7	39.3
Co82-645	35.5+	18.4	41.8	42.4	40.2	42.8
D79-10185	29.3	24.0	30.9	34.7	29.5	33.3
D79-10494	33.4+	16.7	39.2	43.4	31.6	37.9
D81-8875	28.7	28.4	46.9+	44.3	32.2	39.0
D81-8882	32.1	12.8	40.4	36.6	26.9	41.2
D81-8889	28.3	18.0	36.0	29.1	37.6	40.5
D81-8950	31.1	24.4	41.8	34.7	32.6	29.1-
F78-5989	28.5	17.4	46.3+	26.1	31.7	34.6
F78-6307	27.9	32.3	33.4	21.0	33.7	31.2
F79-6439	28.3	33.5	37.7	29.9	38.1	43.5
F80-3553	35.7+	29.0	40.5	37.5	33.4	31.7
F80-3567	32.3	35.3	32.6	33.4	37.1	36.6
F80-4690	30.2	16.0	32.8	8.0	25.0	24.4-
F80-8799	28.8	24.0	35.3	24.3	22.3	30.2-
F81-2845	29.3	22.7	33.1	31.8	34.4	32.7
F81-2861	32.8	27.1	47.4+	26.5	33.6	35.4
F81-2866	31.0	24.2	42.0	28.3	34.9	36.8
F81-4440	17.6-	18.4	19.1-	14.7	25.7	17.4-
F81-4509	17.2-	16.5	24.1-	14.1	24.0	23.5-
F81-4567	26.0-	28.5	33.7	31.3	26.3	27.2-
F81-4601	28.1	20.8	32.6	27.1	31.0	28.9-
F81-5428	29.1	24.5	33.6	31.8	34.4	28.2-
F81-5502	29.9	26.6	30.5	33.4	38.2	25.6-
Ga79-1155	34.5+	15.7	38.0	30.6	36.8	37.0
Ga80-510	27.5	19.5	44.2+	37.7	34.2	41.1
Ga80-925	28.2	15.9	44.9+	33.8	33.9	37.1
Ga80-1413	31.0	26.9	44.4+	41.1	33.4	42.9
Ga80-1718	31.1	21.9	42.1	25.4	36.7	36.7
L.S.D.(.05)	3.4	N.S.	7.2	13.9	N.S.	7.6
C.V.	6%	30%	9%	20%	23%	11%

Table 67 - Oil percentages for the strains in Preliminary Group VIII, 1983

Strain	Blackville, SC	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Kirby	19.9	20.1	20.5	18.3
Braxton	19.3	20.1	20.8	18.8
Co81-34	20.4	20.7	19.9	19.3
Co81-61	20.7	21.3	20.4	18.8
Co81-191	21.1	20.8	20.1	18.3
Co81-199	20.0	20.3	20.7	19.5
Co81-219	20.8	21.0	21.0	19.7
Co82-537	21.9	21.2	21.9	19.8
Co82-645	20.1	22.7	21.6	19.7
D79-10185	19.6	22.1	19.1	19.1
D79-10494	19.6	20.4	18.6	18.4
D81-8875	20.9	19.8	19.0	17.1
D81-8882	19.5	19.1	18.9	17.8
D81-8889	19.0	19.4	19.3	17.9
D81-8950	19.5	19.1	18.3	17.5
F78-5989	19.6	19.3	21.5	19.9
F78-6307	19.3	21.4	19.9	19.4
F79-6439	19.6	19.7	20.6	19.3
F80-3553	19.4	20.3	20.8	20.3
F80-3567	18.6	20.6	20.8	20.5
F80-4690	20.2	19.3	18.3	16.8
F80-8799	19.4	19.4	19.0	17.6
F81-2845	20.2	20.8	20.6	20.0
F81-2861	20.0	19.9	20.0	18.4
F81-2866	21.4	19.9	19.1	18.6
F81-4440	20.6	18.5	19.2	17.9
F81-4509	21.3	20.3	18.9	19.4
F81-4567	21.6	19.6	18.9	18.5
F81-4601	21.7	20.3	18.2	19.3
F81-5428	20.7	19.6	19.6	18.5
F81-5502	20.9	20.1	19.7	19.1
Ga79-1155	21.0	21.8	20.6	19.9
Ga80-510	21.9	19.8	20.5	18.5
Ga80-925	21.5	19.9	19.8	18.3
Ga80-1413	21.9	19.5	19.1	18.9
Ga80-1718	21.3	22.3	17.5	19.8

Table 68 - Protein percentages for the strains in Preliminary Group VIII, 1983

Strain	Blackville, SC	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Kirby	42.0	42.0	42.5	45.0
Braxton	39.7	40.7	42.0	44.5
Co81-34	39.3	40.3	43.3	42.1
Co81-61	38.8	39.8	42.6	42.6
Co81-191	40.5	40.0	43.1	44.5
Co81-199	41.4	39.9	40.5	42.0
Co81-219	40.0	38.9	44.1	43.2
Co82-537	40.5	40.4	39.3	41.1
Co82-645	44.6	37.1	40.3	41.3
D79-10185	44.1	39.2	42.0	41.0
D79-10494	42.7	39.8	44.3	44.7
D81-8875	41.6	42.0	44.5	46.0
D81-8882	39.8	43.5	45.1	46.3
D81-8889	41.5	43.4	45.8	46.0
D81-8950	39.4	44.2	46.8	46.6
F78-5989	38.6	43.8	40.8	42.5
F78-6307	40.5	40.8	42.5	42.5
F79-6439	40.9	40.9	41.1	42.8
F80-3553	38.7	41.0	41.6	41.9
F80-3567	39.4	39.7	41.6	40.8
F80-4690	40.1	42.3	43.8	45.6
F80-8799	38.3	43.0	42.1	45.6
F81-2845	37.4	40.0	41.5	41.7
F81-2861	40.0	41.7	42.3	44.8
F81-2866	41.2	42.0	42.5	44.8
F81-4440	44.2	41.9	42.4	43.0
F81-4509	41.5	40.2	42.3	41.1
F81-4567	42.0	41.0	43.1	43.3
F81-4601	42.8	39.9	43.6	43.3
F81-5428	43.3	40.8	40.9	43.9
F81-5502	42.1	38.6	43.6	43.0
Ga79-1155	41.9	39.0	38.3	42.7
Ga80-510	41.7	42.9	40.0	45.9
Ga80-925	40.3	42.5	40.5	45.3
Ga80-1413	40.1	41.1	42.9	43.8
Ga80-1718	42.6	37.8	43.8	42.3

Table 69 - Plant height for the strains in Preliminary Group VIII, 1983

Strain	Blackville, SC	Gainesville, FL	Quincy, FL	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Kirby	40	33	28	29	29	33
Braxton	37	25	25	23	32	27
Co81-34	46	34	34	31	37	31
Co81-61	39	37	30	31	34	31
Co81-191	33	22	21	18	29	26
Co81-199	40	35	34	26	39	31
Co81-219	35	21	24	20	33	27
Co82-537	38	32	31	28	37	31
Co82-645	40	26	31	29	33	32
D79-10185	44	33	30	33	37	32
D79-10494	43	32	29	32	40	34
D81-8875	38	30	34	28	34	32
D81-8882	42	27	32	30	31	31
D81-8889	42	27	27	21	35	31
D81-8950	43	40	34	33	40	28
F78-5989	48	34	34	29	35	30
F78-6307	42	40	33	31	45	34
F79-6439	44	41	43	39	45	38
F80-3553	39	27	28	25	32	27
F80-3567	44	33	28	32	39	29
F80-4690	44	35	24	26	37	30
F80-8799	44	35	35	39	39	29
F81-2845	42	36	38	32	36	36
F81-2861	44	36	30	33	37	29
F81-2866	48	36	30	26	42	33
F81-4440	45	43	41	36	50	34
F81-4509	48	40	39	39	45	37
F81-4567	47	45	41	45	42	36
F81-4601	45	42	38	33	45	36
F81-5428	45	40	39	37	45	34
F81-5502	48	40	35	34	44	33
Ga79-1155	36	27	25	29	30	26
Ga80-510	37	29	25	24	35	28
Ga80-925	39	27	28	21	32	30
Ga80-1413	36	27	27	27	32	27
Ga80-1718	44	26	27	25	35	28

Table 70 - Seed quality scores for the strains in Preliminary Group VIII, 1983

Strain	Blackville, SC	Gainesville, FL	Quincy, FL	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Kirby	2.0	1.5	2.0	2.0	1.8	2.0
Braxton	2.0	2.5	2.0	2.0	1.8	2.0
Co81-34	2.0	2.5	2.0	2.0	1.3	2.0
Co81-61	2.0	2.5	2.0	2.0	1.5	2.0
Co81-191	3.0	2.5	2.0	2.0	1.5	2.0
Co81-199	2.0	2.5	2.0	2.0	1.5	2.0
Co81-219	3.0	3.0	2.0	2.0	2.3	2.0
Co82-537	2.0	3.0	2.0	2.0	1.3	2.0
Co82-645	2.0	2.5	2.0	2.0	1.5	2.0
D79-10185	1.0	1.0	2.0	2.0	1.8	2.0
D79-10494	1.0	2.0	2.0	2.0	1.3	2.0
D81-8875	3.0	1.5	2.0	2.0	2.0	2.0
D81-8882	2.0	2.5	2.0	2.0	1.5	2.0
D81-8889	2.0	1.5	2.0	2.0	1.5	2.0
D81-8950	2.0	1.0	2.0	2.0	1.0	2.0
F78-5989	2.0	1.5	2.0	2.0	1.5	2.0
F78-6307	2.0	1.0	2.0	2.0	1.0	2.0
F79-6439	2.0	1.0	2.0	2.0	1.0	2.0
F80-3553	2.0	1.5	2.0	2.0	1.5	2.0
F80-3567	2.0	1.0	3.0	3.0	1.5	2.0
F80-4690	2.0	1.5	2.0	3.0	1.8	2.0
F80-8799	3.0	1.5	2.0	2.0	1.0	2.0
F81-2845	2.0	2.0	2.0	2.0	1.3	2.0
F81-2861	2.0	1.0	2.0	2.0	1.3	2.0
F81-2866	2.0	1.0	2.0	2.0	1.5	2.0
F81-4440	2.0	1.5	2.0	3.0	1.8	2.0
F81-4509	3.0	1.5	3.0	2.0	2.0	2.0
F81-4567	2.0	2.5	2.0	2.0	1.5	2.0
F81-4601	3.0	2.5	3.0	2.0	1.5	2.0
F81-5428	1.0	1.5	2.0	2.0	1.5	2.0
F81-5502	1.0	2.5	2.0	3.0	1.5	2.0
Ga79-1155	1.0	2.5	2.0	2.0	1.0	2.0
Ga80-510	2.0	3.0	2.0	2.0	1.8	2.0
Ga80-925	2.0	2.5	2.0	2.0	2.0	2.0
Ga80-1413	2.0	1.5	2.0	2.0	1.5	2.0
Ga80-1718	2.0	2.5	2.0	2.0	1.5	2.0