THE UNIFORM SOYBEAN TESTS SOUTHERN REGION 1988

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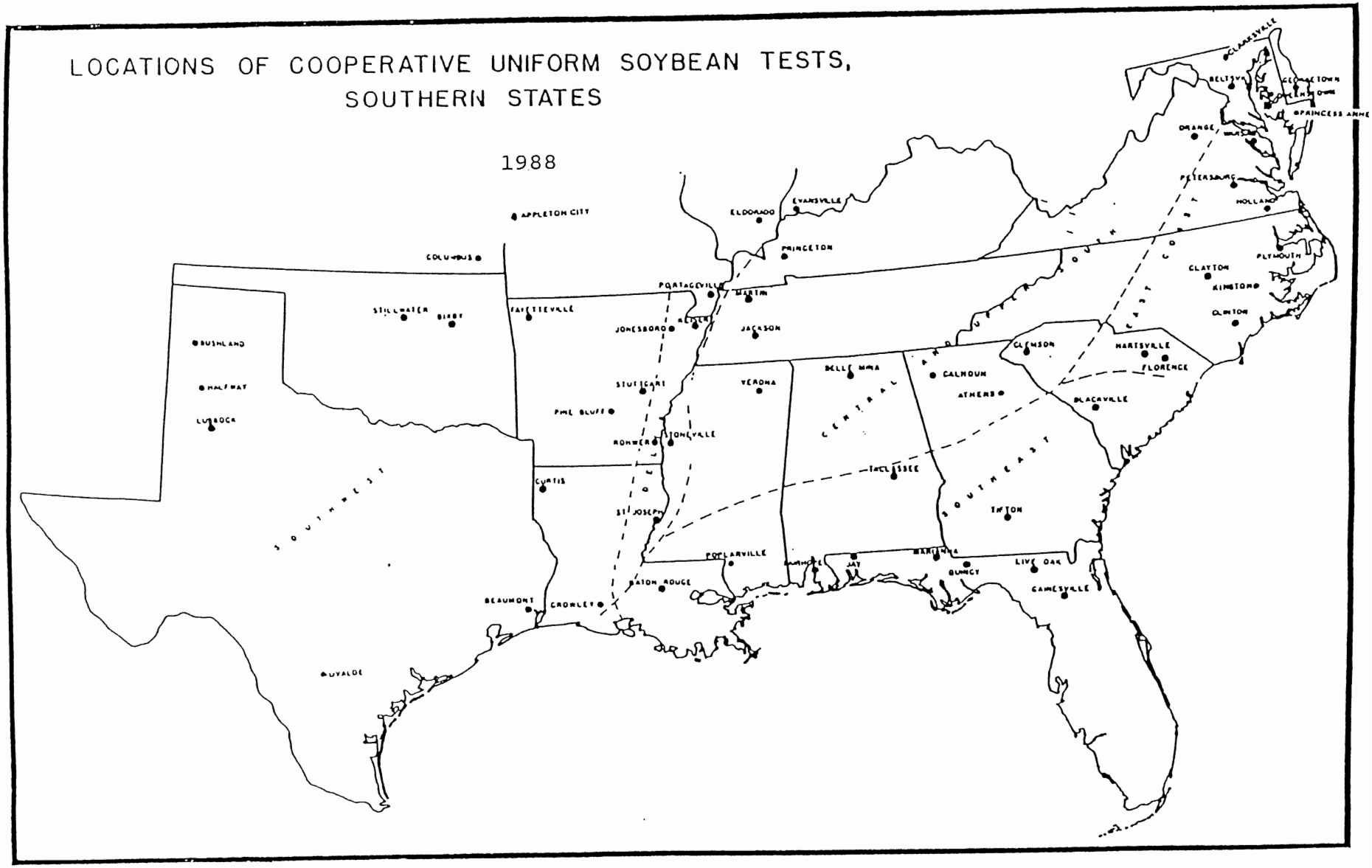
SOUTHERN REGION
STONEVILLE, MISSISSIPPI

LOCATIONS OF COOPERATIVE UNIFORM SOYBEAN TESTS, SOUTHERN STATES

1988



THE UNIFORM SOYBEAN TESTS

SOUTHERN STATES

1988

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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 southern uniform regional tests, conducted in cooperation with research workers in the southern 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 best 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, Stafford, Essex, Forrest, Leflore, Sharkey, Braxton, Thomas 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 and Stafford, September 7; Essex, September 25; Forrest, October 1; Leflore, October 16; Braxton, October 25; 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:

Au - Alabama Agricultural Experiment Station, Auburn
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
G - Georgia Agricultural Experiment Station
J - Delta Branch Experiment Stations, 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
LS - Souther Illinois University, Carbondale
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
SC - Clemson Agricultural Experiment Station
Tn - Tennessee Agricultural Experiment Station
Ts - Texas Agricultural Experiment Station
V - Virginia Agricultural Experiment Station

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

Location	IV	V	VI	VII	VIII	Soil type	P_2O_5	K_2O	pH	Fertilizer[1]	Yield	Highest yielding variety
East Coast												
Queenstown, MD	1*	1				Matapeake silt loam	H	VH	6.4	0-45-90	53	Essex
Warsaw, VA	1*	1*	1			Suffolk sandy loam	M	M	5.5	0-72-72	21	Essex
Holland, VA		1	1*	1		Rains f. s. loam	M	M	6.0	30-90-180	36	Essex
Plymouth, VA		1*	1*			Bladen f. s. loam	-	-	-	0-0-0	52	Forrest
Kinston, ND			1	1		Norfolk sandy loam	-	-	-	0-40-80	46	Lamar
Clinton, NC				1*	1	Norfolk sandy loam	-	-	-	0-40-80	39	Braxton
Florence, SC (A)			1	1	1	Goldsboro loamy sand	H	M	5.5	0-30-95	44	Stonewall
Florence, SC (B)				1	1	Goldsboro loamy sand	H	H	6.8	0-32-95	34	Braxton
Hartsville, SC (A)			1	1	1	Norfolk sandy loam	-	-	-	0-36-108	40	Leflore
Hartsville, SC (B)				1	1	Norfolk sandy loam	-	-		0-36-108	27	Stonewall
Southeast												
Blackville, SC			1	1*	1*	Norfolk loamy sand	M	M	5.7	0-36-72	47	Leflore
Tifton, GA			1	1	1	Tifton sandy loam	M	M	64.	20-40-60	61	Braxton
Tallahassee, AL			1*	1*	1	Cahaba f. s. loam	H	H	7.0	0-0-0	49	Lamar
Gainesville, FL				1	1	Arredonda f. sand	VH	M	5.7	0-0-100	25	Kirby
Marianna, FL				1	1	Chipola l. s.	H	H	6.2	12-36-72	48	Braxton
Quincy, FL			1	1	1*	Norfolk sandy loam	H	M	5.6	0-50-100	62	Stonewall
Jay, FL		1*	1*	1*		Red Bay sandy loam	-	-	-	0-75-38	40	Leflore
Fairhope, AL			1	1	1	Malbis f. s. l.	M	VH	6.8	0-42-42	45	Sharkey
Baton Rouge, LA			1	1	1	Olivier silt loam	-	-	-	0-72-72	40	Leflore
Upper & Central South												
Orange, VA	1	1				Davidson clay loam	M	H	6.2	12-72-72	44	Stafford
Clemson, SC		1	1	1		Cecil sandy loam	H	M	6.8	0-40-80	43	Lamar
Calhoun, GA		1	1	1		Waynesboro loam	VH	H	6.4	0-36-72	68	Stonewall
Athens, GA		1	1*	1*	1	Cecil sandy loam	VH	H	6.4	0-0-0	61	Stonewall
Knoxville, TN	1	1				Sequatchie silt loam	-	-	-	0-60-60	37	Forrest
Belle Mina, AL		1	1			Decatur clay loam	H	H	6.7	0-60-60	48	Leflore
Eldorado, IL	1						-	-	-	0-0-0	38	Douglas
Carbondale, IL	1*					Stoy silt loam	-	-	-	0-0-0	47	Stafford
Princeton, KY	1*	1				Crider silt loam	H	H	6.3	0-0-0	55	Stafford
Tiptonville, TN	1*	1*				Morganfield silt loam	H	L	6.8	0-80-80	39	Forrest
Jackson, TN		1	1			Lexington silt loam	H	H	6.5	0-0-0	61	Leflore

Location	IV	V	VI	VII	VIII	Soil type	P_2O_5	K_2O	pH	Fertilizer[1]	Yield	Highest yielding variety
Delta												
Portageville, MO (A)	1*	1*	1			Tiptonville s. l.	VH	H	6.4	0-0-0	47	Forrest
Portageville, MO (B)	1	1	1			Sharkey clay	VH	VH	6.7	0-0-0	42	Sharkey
Keiser, AR	1*	1*	1*			Sharkey silty clay	H	H	6.9	0-0-0	61	Sharkey
Jonesboro, AR	1	1	1			Calloway silt loam	M	H	6.8	0-0-0	31	Sharkey
Pine Tree, AR	1	1	1			Calloway silt loam	L	H	6.5	0-37-75	40	Sharkey
Stoneville, MS (A)		1*	1*	1*		Bosket f. s. l.	H	H	6.7	0-0-0	48	Forrest
Stoneville, MS (B)	1	1*	1*	1*	1*	Sharkey clay	H	H	6.6	0-0-0	41	Sharkey
Rohwer, AR			1	1*		Perry clay	H	H	7.3	0-0-0	44	Sharkey
St. Joseph, IA		1	1	1		Sharkey clay	H	H	6.2	0-0-0	52	Braxton
West												
Ottowa, KS	1*	1				Woodson s. loam	H	H	6.2	0-0-0	25	Stafford
Pittsburg, KS	1	1				Parsons silt loam	M	M	6.9	0-0-0	49	Forrest
Chanute, KS	1	1				Parson silt loam	L	M	6.2	0-200-0	36	Forrest
Bixby, OK	1	1	1			Reinach silt loam	MH	MH	6.5	0-0-0	61	Forrest
Stuttgart, AR		1	1	1		Crowley silt loam	L	M	6.7	0-40-80	47	Sharkey
Bossier City, IA		1	1	1		Norwood VFSL	-	-	-	0-0-0	45	Braxton
Beaumont, TX		1	1	1*	1*	Beranard-Morey s.c.l	-	-	-	0-0-90	43	Stonewall
Lubbock TX	1	1				Acuff loam	H	VH	8.2	0-0-0	51	Stafford
Clovis, NM	1					Pullman s. c. l.	-	-	-	18-36-0	42	Stafford
Bushland, TX	1					Acuff loam	-	-	-	0-0-0	51	Stafford

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

Planting rate - all strains were packeted for planting at the rate of 9 seeds per foot, in 36-inch rows.

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, Leflore; 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; 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 1987.

Plantings were made in the greenhouse at Athens, Georgia for Meloidogyne incognita and M. arenaria ratings and in the field near Blackville, South Carolina for M. arenaria ratings.

Plantings were made in the greenhouse at Jackson, Tennessee in soil infested with the soybean cyst nematode. Separate plantings were made to evaluate strains for reaction to SCN race 3 and 4.

Plantings were made in the field cage at Stoneville to evaluate for feeding by soybean looper. Plantings were made in single hills spaced 18 inches in the row with rows spaced 30 inches. Two replications were grown. A heavy population of moths were released at the time plants were in about the fourth to fifth trifoliolate state.

Statistical analyses - yield data are analyzed by analysis of variance. Differences necessary to indicate difference among strains (odds 19:1) are reported for each locations. 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

1988

	Variety or strain	Parentage	Generation composited
1.	Douglas	Williams X Calland	F_5
2.	Stafford	V66-318 X V68-2331	F_5
3.	D83-3349	Bedford X sel {Forrest X sel (Peking X Centennial)}	F_5
4.	K1130	Forrest X Hobbit	F_5
5.	K1133	V75-345 X S76-2120	F_5
6.	Md83-5008	L70L-3048 X D74-7824	F_5
7.	K1154	V76-482 X Essex	F_5
8.	Ky84-1616	K1044 X Williams	F_5
9.	LS83-3800	Franklin X J74-5	F_7
10.	S85-1163	L77-443 X L77-906	F_5
11.	S85-11081	Fayette X Pella	F_6
12.	V83-1357	Essex(3) X L73-811	F_4

Background of lines used as parents:

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.
V75-345 is a selection from Essex X Shore.
S76-2120 is a selection from D67-3297 X Essex. D67-3297 is a selection from Hill(2) X PI 171442.
L70L-3048 is a selection from L15 (Wayne Rps) X D64-3146. D64-3146 is a selection from D49-2491(5) X Hawkeye.
D74-7824 is a selection from Forrest X D70-3001. D70-3001 is of the same parentage as Centennial.
V76-462 is a selection from Essex X SRF400.
K1044 is a selection from Tracy X Williams.
J74-5 is a selection from Forrest X a selection from D68-18 X PI88788.
L77-443 is a selection from Union X L75-8020. L75-8020 is a Corsoy type resistant to phytophthora rot.
L75-8020 is a Corsoy type resistant to phytophthora rot.
L77-906
L73-811

Uniform IV-S nurseries were grown at 22 locations. Results from these plantings are reported in tables 1-7. Table 1 gives a general summary of performance which includes one, two and three year means for seed yield, protein percentage and oil percentage, along with information on agronomic characteristics, and reaction to diseases and nematodes. Results from individual locations are summarized in Tables 2-7.

Strains were evaluated for reaction to the two root-knot nematode species M. incognita and M. arenaria in the greenhouse at the University of Georgia, Athens. Strains were rated for reaction to soybean cyst nematode races 3 and 4 in the greenhouse at Jackson, Tennessee. Nematode ratings are reported in Table 1. Plantings were made in the field cage at Stoneville and infested with soybean looper. All strains were uniformly susceptible to feeding by the soybean looper.

Seed yield for the check variety Douglas was somewhat low at some locations because of thin stands. Low seed quality is a characteristic of this variety. The other check variety, Stafford, averaged six days later in maturity than Douglas. This was in agreement with the difference in maturity measured in 1987. All strains included averaged later in maturity than Douglas.

One strain D83-3349 has been evaluated three years. This strain averages three days later in maturity than Douglas and three days earlier in maturity than Stafford. The three year mean seed yield was very good in the upper and central South region, but slightly lower than the seed yield for Stafford in other regions. D83-3349 has good resistance to the two root-knot nematodes and to races 3 and 5 of the soybean cyst nematode. It is rated susceptible to SCN race 4 in greenhouse tests, but it would develop a lower population of SCN race 4 in the field than fully susceptible varieties. KY84-1616 averaged three days later in maturity than Stafford, which makes it rather late to be included as IV-S maturity.

Differences were observed in percentage of seed showing mottling, which was assumed to be the result of infection by soybean mosaic virus. Three strains received zero ratings, while MD83-5008 showed 43% of the seed with mottling.

Table 1 - General summary of performance for the strains grown in Uniform Group IV-S, 1988

	No. of locations	Douglas	Stafford	D83-3349	K1130	K1133
Seed Yield - 1988						
East Coast	2	33.2	35.7	32.8	35.5	37.5
Upper and Central South	6	34.9	39.5	42.2	41.0	39.6
Delta	6	34.7	45.2	43.2	40.9	42.3
West	6	39.5	42.7	38.5	44.0	41.9
1987-88						
East Coast		31.9	34.6	32.4	37.2	36.9
Upper & Central South		31.3	38.8	40.0	37.5	38.1
Delta		38.6	45.0	43.3	39.6	43.0
West		43.5	46.0	40.8	48.5	43.6
1986-88						
East Coast		37.5	38.4	37.0		
Upper & Central South		32.7	38.7	40.6		
Delta		36.0	42.4	40.8		
West		45.0	46.4	42.4		
Oil Content - 1988		21.8	22.2	20.9	22.6	21.7
1987-88		21.7	21.8	20.5	22.2	21.4
1986-88		21.5	21.5	20.3		
Protein Content - 1988		40.7	38.9	39.1	36.6	37.4
1987-88		41.1	39.5	40.1	37.5	38.3
1986-88		41.0	39.5	40.0		
Seed size		17.9	14.0	13.6	11.9	13.5
Maturity index		9.29	+6	+3	+5	+6
Height		34	32	35	30	31
Seed quality		2.9	1.8	2.1	1.8	1.7
Shattering						
M. incognita		3.7	4.2	2.0	4.4	4.5
M. arenaria		2.0	3.8	1.2	1.5	3.0
SCN race 3		S	S	R	S	S
SCN race 4		S	S	S[1]	S	S
% Mottled Seed		2	2	23	2	0
Flower color		W	P	W	W	P
Pubescence color		T	G	T	T	G
Pod wall color		Br	Tn	Tn	Tn	Tn

[1]Resistant to SCN race 5

[2]Intermediate resistance

Table 1 - (continued)

	Md83-5008	K1154	Ky84-1616	LS83-3800	S85-1163	S85-11081	V83-1357
Seed Yield - 1988							
East Coast	36.8	37.7	33.3	33.5	33.6	31.5	36.2
Upper and Central South	40.0	38.2	39.1	39.2	37.9	35.5	40.8
Delta	50.0	40.3	40.7	40.5	40.7	40.5	45.1
West	43.4	43.4	42.3	38.0	40.1	41.0	39.0
1987-88							
East Coast	36.3						
Upper & Central South	40.6						
Delta	48.0						
West	46.2						
1986-88							
East Coast							
Upper & Central South							
Delta							
West							
Oil Content - 1988	21.9	21.1	21.3	20.9	21.7	21.7	20.4
1987-88	21.6						
1986-88							
Protein Content - 1988	37.8	40.5	40.0	38.3	38.5	39.2	41.7
1987-88	38.5						
1986-88							
Seed size	13.6	13.4	13.8	13.3	16.3	16.5	14.4
Maturity index	+7	+3	+8	+6	+1	+5	+6
Height	33	27	36	34	40	42	29
Seed quality	1.7	1.8	1.9	2.0	2.6	2.3	1.6
Shattering							
M. incognita	1.8	4.2	4.4	4.2	3.5	5.0	4.0
M. arenaria	2.0	3.5	3.0	2.2	1.5	4.5	3.0
SCN race 3	R	S	S	R	R	R	S
SCN race 4	S	S	S	I[2]	R	R	S
%Mottled seed	43	0	12	25	10	19	0
Flower color	W	P	W	P	P	W	P
Pubescence color	T	G	G	T	T	T	G
Pod wall color	Tn	Tn	Tn	Tn	Tn	Tn	Tn

[1]Resistant to SCN race 5

[2]Intermediate resistance

Table 2 - Seed yield, in bushels per acre, for the strains in Uniform Group IV-S, 1988

Location	Douglas	Stafford	D83-3349	K1130	K1133	Md83-5008	K1154
			EAST COAST				
Queenstown, MD	50.0	50.9	48.9	51.8	50.8	48.7	53.8
Warsaw,VA	16.4	20.4	16.6	19.2	24.1+	24.9+	21.5+
Mean	33.2	35.7	32.8	35.5	37.5	36.8	37.7
			UPPER AND CENTRAL SOUTH				
Orange, VA	37.0	44.2	40.8	47.2	36.5	31.3	34.3
Knoxville, TN	23.2	24.2	29.2+	26.1	30.2+	31.9+	28.2
Eldorado, IL	38.0	38.2	52.9+	41.8	41.2	47.2	42.3
Carbondale, IL	35.4	46.5	43.8	48.7	46.1	45.5	45.7
Princeton, KY	53.8	55.3	53.5	59.2	54.1	51.7	60.0
Tiptonville, TN	22.5	28.7+	33.0+	23.2	29.5+	32.5+	18.7
Mean	34.9	39.5	42.2	41.0	39.6	40.0	38.2
			DELTA				
Portageville, MO (A)	35.7	45.3+	52.0+	44.1+	41.1+	54.8+	43.6+
Portageville, MO (B)	23.2	38.4+	35.4+	31.2+	32.0+	44.3+	26.5
Keiser, AR	40.0	55.4+	48.6+	47.3+	52.6+	56.0+	48.0+
Jonesboro, AR	32.8	35.1	37.0	34.8	35.4	42.4+	33.7
Pine Tree, AR	39.7	45.3	30.7	37.6	41.8	51.8+	42.3
Stoneville, MS (A)	36.5	51.6+	55.3+	50.2+	51.1+	50.9+	47.9+
Mean	34.7	45.2	43.2	40.9	42.3	50.0	40.3
			WEST				
Ottawa, KS	20.0	24.8+	24.5+	27.1+	23.2+	25.2+	26.8+
Pittsburg, KS	39.6	43.3	41.2	43.2	45.9+	47.1+	44.4+
Bixby, OK	41.2	58.6	53.0	59.5	58.9	58.0	53.2
Bushland,TX	46.0	37.6	30.1	37.8	36.7	37.7	45.1
Lubbock, TX	48.6	50.5	49.5	51.9	54.7+	53.9+	49.2
Clovis,NM	41.4	41.5	32.7	44.7	31.7	38.5	41.4
Mean	39.5	42.7	38.5	44.0	41.9	43.4	43.4

(+) - 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	Ky84-1616	LS83-3800	S85-1163	S85-11081	V83 1357	L.S.D. (.05)	C.V. (%)
			EAST COAST				
Queenstown, MD	47.3	46.6	49.6	45.1	51.6	N.S.	7
Warsaw, VA	19.3	20.3	17.6	17.9	20.8	5.0	14
Mean	33.3	33.5	33.6	31.5	36.2		
			UPPER AND CENTRAL SOUTH				
Orange, VA	38.5	38.4	34.6	37.6	39.0	N.S.	7
Knoxville, TN	28.8+	32.5+	30.3+	27.2	31.1+	5.5	11
Eldorado, IL	40.1	41.6	40.0	34.9	41.7	6.5	9
Carbondale, IL	44.3	39.2	42.3	35.5	49.0	6.0	8
Princeton, KY	52.3	48.0	49.6	45.1	51.0	5.3	6
Tiptonville, TN	30.5+	35.4+	30.4+	32.4+	33.3+	6.0	12
Mean	39.1	39.2	37.9	35.5	40.8		
			DELTA				
Portageville, MO (A)	44.0+	50.7+	48.2+	45.0+	44.8+	4.9	6
Portageville, MO (B)	41.5+	32.7+	38.1+	37.0+	37.5+	6.3	11
Keiser, AR	38.2	39.8	43.1	44.0	54.7+	6.9	9
Jonesboro, AR	32.6	33.8	35.4	33.3	41.1+	6.5	8
Pine Tree, AR	36.1	35.1	35.8	35.5	43.0	10.1	15
Stoneville, MS (A)	51.5+	51.1+	43.6+	48.1+	49.7+	4.7	6
Mean	40.7	40.5	40.7	40.5	45.1		
			WEST				
Ottawa, KS	30.1+	21.0	20.0	20.3	24.2+	2.8	7
Pittsburg, KS	45.2+	39.2	41.3	42.3	40.7	4.2	6
Bixby, OK	55.4	49.0	48.0	53.1	59.4	5.0	6
Bushland,TX	35.5	32.9	39.8	37.7	31.4		
Lubbock, TX	51.3	48.1	51.8	52.1	48.1	4.9	6
Clovis,NM	36.1	37.5	39.5	40.4	40.1	3.7	6
Mean	42.3	38.0	40.1	41.0	39.0		

Table 3 - Chemical composition and seed size for the strains in Uniform Group IV-S, 1988

Location	Douglas	Stafford	D83-3349	K1130	K1133	Md83-5008
			OIL PERCENTAGE			
Queenstown, MD	20.9	20.4	19.9	20.9	20.9	20.1
Warsaw, VA	21.1	22.8	21.1	23.8	21.9	23.1
Orange, VA	22.0	21.5	20.5	22.6	21.1	21.1
Knoxville, TN	24.3	22.4	21.6	22.6	22.0	23.8
Eldorado, IL	20.8	20.5	19.6	21.0	20.8	21.8
Carbondale, IL	22.6	22.2	21.5	22.3	21.9	21.7
Portageville, MO (A)	20.3	21.8	20.7	21.6	21.1	21.7
Keiser, AR	22.1	24.9	21.6	24.6	22.0	22.2
Lubbock, TX	21.7	22.3	20.4	22.6	21.6	20.0
Bixby, OK	22.4	23.4	22.2	23.6	23.9	23.2
Mean	21.8	22.2	20.9	22.6	21.7	21.9
			PROTEIN PERCENTAGE			
Queenstown, MD	41.3	40.2	40.3	38.5	38.7	39.9
Warsaw, VA	40.9	38.2	37.7	33.5	35.8	34.9
Orange, VA	39.4	39.0	38.9	35.5	37.8	38.1
Knoxville, TN	41.5	39.8	39.6	39.4	39.1	37.4
Eldorado, IL	41.8	39.9	39.9	38.2	38.8	38.1
Carbondale, IL	39.1	39.8	38.9	37.0	35.0	36.4
Portageville,MO (A)	42.6	39.1	39.1	37.2	38.4	37.6
Keiser, AR	38.8	35.3	37.9	34.4	36.7	38.0
Lubbock, TX	40.3	39.3	40.4	36.4	36.8	40.3
Bixby, OK	40.9	38.7	38.6	35.6	36.8	38.0
Mean	40.7	38.9	39.1	36.6	37.4	37.8
			GRAMS PER 100 SEED			
Queenstown, MD	21.1	15.0	14.8	12.5	15.3	14.8
Warsaw, VA	19.6	13.8	13.3	12.4	13.3	14.0
Orange, VA	18.5	14.8	13.6	12.1	12.0	12.7
Knoxville, TN	17.0	14.0	14.0	12.0	14.0	13.0
Eldorado, IL	15.0	11.0	11.0	9.1	10.4	10.2
Carbondale, IL	17.6	13.6	13.6	12.4	13.1	13.6
Portageville, MO(A)	16.4	13.5	13.0	10.6	13.3	13.0
Keiser, AR	15.0	13.1	12.7	11.9	13.7	13.7
Lubbock, TX	20.9	16.3	15.7	13.9	14.9	15.9
Bixby, OK	17.4	14.6	14.4	12.3	14.7	15.2
Mean	17.9	14.0	13.6	11.9	13.5	13.6

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

Table 3 - (continued)

Location	K1154	Ky84-1616	LS83-3800	S85-1163	S85-11081	V83-1357
			OIL PERCENTAGE			
Queenstown, MD	20.3	19.9	19.0	20.4	20.8	20.5
Warsaw, VA	22.0	22.4	21.6	21.8	22.4	21.0
Orange, VA	20.9	21.2	20.3	22.6	21.9	20.5
Knoxville, TN	22.1	21.0	21.4	21.8	22.8	21.0
Eldorado, IL	20.2	20.1	19.4	20.4	21.1	19.1
Carbondale, IL	2.4	21.3	20.5	21.8	20.8	20.2
Portageville, MO (A)	20.6	20.4	20.2	21.7	21.1	19.6
Keiser, AR	21.4	21.6	23.0	22.8	22.8	20.5
Lubbock, TX	20.6	22.0	21.4	21.5	20.4	20.5
Bixby, OK	22.0	23.1	21.9	22.3	23.3	21.0
Mean	21.1	21.3	20.9	21.7	21.7	20.4
			PROTEIN PERCENTAGE			
Queenstown, MD	41.1	41.5	41.1	40.1	40.3	41.2
Warsaw, VA	38.6	37.5	35.0	38.2	36.6	38.9
Orange, VA	40.0	39.4	37.7	35.7	38.3	41.0
Knoxville, TN	41.1	42.2	39.3	39.1	39.2	42.7
Eldorado, IL	42.3	42.2	39.3	40.9	41.3	44.0
Carbondale, IL	39.0	40.0	38.2	38.4	40.8	41.5
Portageville,MO (A)	40.5	40.5	39.5	38.1	39.9	43.5
Keiser, AR	41.5	39.6	34.0	35.9	38.0	41.5
Lubbock, TX	40.1	38.0	40.4	40.6	40.0	41.4
Bixby, OK	41.0	38.9	38.7	38.3	38.3	41.4
Mean	40.5	40.0	38.3	38.5	39.2	41.7
			GRAMS PER 100 SEED			
Queenstown, MD	14.5	19.1	14.0	18.2	17.3	15.6
Warsaw, VA	13.8	16.9	12.4	17.1	15.2	13.4
Orange, VA	12.9	15.8	12.4	15.4	16.0	12.7
Knoxville, TN	12.0	18.0	15.0	17.0	17.0	15.0
Eldorado, IL	10.8	13.4	10.9	13.8	14.3	11.2
Carbondale, IL	13.8	16.3	14.8	16.6	17.1	14.5
Portageville, MO	12.4	15.2	11.5	15.1	15.7	13.6
Keiser, AR	13.0	16.4	10.7	14.6	13.6	14.2
Lubbock, TX	17.1	19.5	16.6	17.7	18.7	16.5
Bixby, OK	13.5	19.5	14.2	17.4	19.8	17.2
Mean	13.4	13.8	13.3	16.3	16.5	14.4

Table 4 - Relative maturity data, days earlier (-) or later (+) than Douglas, for the strains in Uniform Group IV-S, 1988

Location	Date Planted	Douglas matured	Stafford	D83 3349	K1130	K1133
			EAST COAST			
Queenstown, MD	6.1	10-11	+8	+6	+2	+6
Warsaw, VA	6-1	10-9	+1	-4	-1	0
Mean	6-1	10-10	+5	-1	+1	+3
			UPPER AND CENTRAL SOUTH			
Orange, VA	5-31	10-5	+8	+2	+6	+3
Knoxville, TN	5-3	9-17	+6	+9	+8	+9
Eldorado, IL	5-10	9-23	+12	+11	+14	+13
Carbondale, IL	5-14	9-29	+15	+16	+17	+12
Princeton, KY	5-26	9-28	+8	+7	+5	+9
Mean	5-17	9-26	+10	+9	+10	+8
			DELTA			
Portageville, MO (A)	6-1	10-9	+1	+2	+2	+1
Portageville, MO (B)	5-6	9-29	+2	+6	+7	+9
Keiser, AR	5-19	9-24	+6	+5	+7	+7
Jonesboro, AR	6-2	9-19	+7	+8	+8	+5
Pine Tree, AR	5-20	9-24	-1	-4	-2	-4
Stoneville, MS (A)	5-23	9-23	+3	+3	+4	+4
Mean	5-22	9-26	+3	+3	+4	+4
			WEST			
Bushland, TX	4-20	9-19	+6	+2	+15	+14
Lubbock, TX	5-12	9-27	+7	+1	+5	+6
Clovis, NM	6-15	9-29	+1	+1	+2	+7
Mean	5-16	9-25	+5	+1	+7	+9

Table 4 - (continued)

Location	Md83-5008	K1154	Ky84-1616	Ls83-3800	S85-1163	S85-11081	V83-1357
			EAST COAST				
Queenstown, MD	+6	0	+6	+2	+4	+3	+4
Warsaw, VA	+1	-2	+2	+2	-3	+3	+2
Mean	+4	-1	+4	+2	0	0	+1
			UPPER AND CENTRAL SOUTH				
Orange, VA	+3	+2	+7	+5	0	+8	+7
Knoxville, TN	+8	+5	+17	+10	+5	+10	+6
Eldorado, IL	+14	+6	+17	+14	+5	+14	+11
Carbondale, IL	+16	+11	F	+17	+5	F	+14
Princeton, KY	+9	+5	+11	+7	+4	+11	+9
Mean	+10	+6	+14	+11	+4	+11	+9
			DELTA				
Portageville, MO (A)	+2	0	+10	+1	+2	+3	+3
Portageville, MO (B)	+12	+8	+17	+6	+5	+9	+14
Keiser, AR	+9	+4	+12	+4	+6	+10	+9
Jonesboro, AR	+7	0	+16	+5	+7	+10	+6
Pine Tree, AR	-3	-6	0	0	-4	0	0
Stoneville, MS (A)	+3	+1	+15	+1	-2	+5	+6
Mean	+5	+1	+12	+3	+2	+6	+6
			WEST				
Bushland, TX	+16	+9	+5	+13	0	+5	+7
Lubbock, TX	+6	+4	+1	+9	-2	0	+9
Clovis, NM	+2	+1	+3	+3	0	0	+8
Mean	+8	+5	+3	+8	-1	+2	+8

Table 5 - Plant height for the strains in Uniform Group IV-S, 1988

Location	Douglas	Stafford	D83 3349	K1130	K1133	Md83-5008
			EAST COAST			
Queenstown, MD	38	36	36	32	32	33
Warsaw, VA	19	21	27	20	24	31
Mean	29	29	32	26	28	32
			UPPER AND CENTRAL SOUTH			
Orange, VA	34	33	34	31	32	29
Knoxville, TN	29	28	35	27	31	30
Eldorado, IL	47	40	48	43	42	40
Carbondale, IL	36	34	38	35	35	31
Princeton, KY	43	37	40	34	36	36
Mean	38	34	39	34	35	33
			DELTA			
Portageville, MO (A)	41	27	40	23	36	43
Portageville, MO (B)	19	17	21	15	16	17
Keiser, AR	25	21	25	19	21	20
Jonesboro, AR	48	43	43	37	41	42
Pine Tree, AR	37	33	37	33	31	34
Stoneville, MS (A)	41	27	24	21	23	26
Mean	35	30	34	27	30	32
			WEST			
Ottawa, KS	41	40	41	37	38	41
Pittsburg, KS	35	28	35	30	30	32
Bixby, OK	38	33	34	31	35	37
Bushland, TX	29	35	33	34	33	33
Lubbock, TX	26	26	25	24	29	27
Clovis, NM	25	34	29	28	27	31
Mean	32	33	33	31	32	34

Table 5 - (continued)

Location	K1154	KY84-1616	LS83-3800	S85-1163	S85-11081	V83-1357
			EAST COAST			
Queenstown, MD	29	41	33	39	43	28
Warsaw,VA	20	23	26	24	27	22
Mean	25	32	20	32	35	25
			UPPER AND CENTRAL SOUTH			
Orange, VA	29	37	34	39	44	29
Knoxville, TN	25	31	32	33	37	27
Eldorado, IL	39	49	44	55	55	39
Carbondale, IL	29	40	40	45	44	31
Princeton, KY	30	45	42	46	46	33
Mean	30	40	38	44	45	32
			DELTA			
Portageville, MO (A)	26	40	41	52	50	30
Portageville, MO (B)	17	28	21	27	30	16
Keiser, AR	21	31	23	33	36	22
Jonesboro, AR	33	47	45	62	62	36
Pine Tree, AR	28	42	32	44	55	28
Stoneville, MS (A)	31	43	37	44	46	33
Mean	26	39	33	44	47	28
			WEST			
Ottawa, KS	34	36	41	44	43	36
Pittsburg, KS	27	36	36	40	41	27
Bixby, OK	26	42	35	45	45	32
Bushland,TX	31	29	35	34	37	33
Lubbock, TX	22	31	25	37	36	28
Clovis,NM	25	24	33	26	30	28
Mean	28	33	34	38	39	31

Table 6 - Lodging scores for the strains in Uniform Group IV-S, 1988

Location	Douglas	Stafford	D83-3349	K1130	K1133	Md83-5008
			EAST COAST			
Queenstown, MD	3.0	3.0	3.2	2.2	3.0	3.2
Warsaw,VA	1.0	1.0	1.0	1.0	1.0	1.2
			UPPER AND CENTRAL SOUTH			
Orange, VA	1.3	2.3	2.7	1.3	2.7	4.3
Knoxville, TN	1.0	1.0	.3	1.2	1.5	1.5
Eldorado, IL	1.4	1.7	3.5	1.7	2.1	3.3
Carbondale, IL	1.0	1.0	2.0	1.0	1.0	4.0
Princeton, KY	1.0	1.0	1.7	1.0	1.0	1.3
			DELTA			
Portageville, MO (A)	1.0	1.0	1.5	1.0	1.0	1.5
Portageville, MO (B)	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
Jonesboro, AR	1.3	1.0	1.3	1.0	1.0	1.7
Pine Tree, AR	1.3	1.0	1.3	1.0	1.0	1.0
Stoneville, MS (A)	2.0	2.3	3.0	2.0	2.3	2.7
			WEST			
Ottawa, KS	1.0	1.7	2.0	1.3	2.3	2.7
Pittsburg, KS	1.3	1.0	2.0	1.0	2.7	2.3
Bixby, OK	1.0	1.0	3.0	1.0	3.0	3.0
Bushland,TX	1.0	2.5	3.7	1.8	2.7	4.2
Lubbock, TX	2.0	1.5	2.0	1.5	2.0	2.0
Clovis,NM	1.0	4.0	4.0	2.0	4.0	4.0

Table 6 - (continued)

Location	K1154	Ky84-1616	LS83-3800	S85-1163	S85-11081	V83-1357
			EAST COAST			
Queenstown, MD	2.7	2.0	2.3	3.0	2.8	2.3
Warsaw,VA	1.0	1.0	1.0	1.0	1.0	1.0
			UPPER AND CENTRAL SOUTH			
Orange, VA	2.3	1.0	2.0	1.7	3.0	2.7
Knoxville, TN	1.7	1.0	1.2	1.3	1.0	1.0
Eldorado, IL	2.0	1.5	2.4	2.0	1.7	1.9
Carbondale, IL	1.0	1.0	2.0	1.0	1.0	1.0
Princeton, KY	1.0	1.0	1.0	2.3	1.7	1.0
			DELTA			
Portageville, MO (A)	1.0	1.0	1.5	1.5	1.5	1.0
Portageville, MO (B)	1.0	1.0	1.0	1.0	1.5	1.0
Keiser, AR	1.0	1.0	1.0	1.0	1.0	1.0
Jonesboro, AR	1.0	1.7	1.0	3.7	2.0	1.3
Pine Tree, AR	1.0	1.0	1.0	1.0	1.3	1.0
Stoneville, MS (A)	2.0	2.3	2.7	2.7	3.0	2.0
			WEST			
Ottawa, KS	1.0	1.0	2.0	1.0	2.0	1.3
Pittsburg, KS	1.0	2.0	2.0	2.0	2.3	1.0
Bixby, OK	1.0	1.0	1.0	1.0	2.0	1.0
Bushland,TX	1.7	1.3	3.0	1.5	1.5	2.0
Lubbock, TX	1.7	1.3	1.3	1.5	1.5	1.3
Clovis,NM	1.0	1.0	3.0	1.0	1.0	2.0

Table 7 - Seed quality score for the strains in Uniform Group IV-S, 1988

Location	Douglas	Stafford	D83 3349	K1130	K1133	Md83-5008
			EAST COAST			
Queenstown, MD	4.0	1.2	1.5	1.0	1.0	1.2
Warsaw, VA	3.0	1.3	2.0	1.2	1.0	1.8
			UPPER AND CENTRAL SOUTH			
Orange, VA	1.0	1.0	1.0	1.0	1.0	1.0
Knoxville, TN	3.0	1.7	3.7	2.3	1.0	2.3
Eldorado, IL	3.3	2.2	2.2	2.0	1.8	1.8
Carbondale, IL	3.0	1.0	2.0	2.0	2.0	1.0
Princeton, KY	4.0	1.0	2.0	2.0	1.0	1.0
			DELTA			
Portageville, MO (A)	4.0	3.0	2.5	2.0	2.5	2.5
Portageville, MO (B)	3.5	2.0	2.0	2.0	2.0	2.0
Keiser, AR	2.5	1.5	1.0	1.5	2.0	2.5
Jonesboro, AR	4.0	2.3	2.7	2.7	2.0	2.7
Pine Tree, AR	3.7	2.7	3.3	3.7	2.0	2.3
Stoneville, MS (A)	3.0	2.0	2.0	2.0	2.0	2.0
			WEST			
Ottawa, KS	2.0	3.0	3.0	1.0	2.0	2.0
Pittsburg, KS	3.0	1.0	1.0	1.0	1.0	1.0
Bushland, TX	2.5	1.5	1.7	1.5	1.5	2.0
Lubbock, TX	3.0	2.0	1.7	1.3	1.5	1.5

Table 7 - (continued)

Location	K1154	Ky84-1616	LS83-3800	S85-1163	S85-11081	V83-1357
			EAST COAST			
Queenstown, MD	1.0	1.7	1.3	2.8	1.5	1.0
Warsaw, VA	1.0	1.5	1.2	2.0	2.2	1.5
			UPPER AND CENTRAL SOUTH			
Orange, VA	1.0	1.0	1.0	1.0	1.0	1.0
Knoxville, TN	2.0	2.0	2.0	3.3	2.0	1.3
Eldorado, IL	2.2	2.3	3.0	3.7	2.8	2.2
Carbondale, IL	2.0	2.0	2.0	2.0	3.0	1.0
Princeton, KY	1.0	2.0	3.0	4.0	4.0	1.0
			DELTA			
Portageville, MO (A)	3.0	2.0	3.0	3.5	3.0	2.5
Portageville, MO (B)	2.5	2.0	2.5	3.5	2.5	2.5
Keiser, AR	2.0	2.0	1.5	2.5	2.0	1.0
Jonesboro, AR	2.0	2.7	2.7	3.0	3.0	2.0
Pine Tree AR	2.0	3.0	2.7	3.0	3.0	2.7
Stoneville, MS (A)	2.0	2.0	2.0	2.7	2.0	2.0
			WEST			
Ottawa, KS	3.0	2.0	3.0	3.0	3.0	3.0
Pittsburg, KS	1.0	1.0	2.0	1.0	1.0	1.0
Bushland, TX	1.5	1.5	2.3	2.0	1.7	1.3
Lubbock, TX	1.7	1.3	2.0	2.0	2.0	1.3

PRELIMINARY IV-S

1988

Preliminary Group IV-S nurseries which included Douglas, Stafford and Hill, along with 27 experimental strains, were grown at eight locations. The parentage for each of the strains is reported in Table 8. A general summary of performance is reported in Table 9. Included in this summary are mean seed yield, agronomic qualities, mean protein and oil percentages and reaction to root-knot and cyst nematodes. Data from individual locations are reported in Tables 10-14.

The mean seed yields for Douglas was only 70% of that for Stafford. The low mean seed yield is attributed to poor stands in several of the plantings. Stafford averaged six days later in maturity than Douglas in these nurseries, just as it did in the Uniform IV-S nursery. For many years Hill was considered the breaking point between classifying strains as four maturity or five maturity. Hill averaged two days earlier in maturity than Stafford. There were six strains which averaged later in maturity than Stafford, and would be considered to be too late to be classified as four maturity.

Stafford had a mean seed yield of 42.1 bushels per acre. There were no strains having a higher mean seed yield than Stafford. There were eleven strains that had mean seed yields significantly lower than that for Stafford. There were 11 strains that were rated resistant to soybean cyst nematode races 3 and 4 in the evaluation in the greenhouse at Jackson, Tennessee. Two additional strains were rated resistant to SCN race 3. There were no strains having a high mean seed yield and resistance to root-knot nematodes and both races of SCN.

TABLE 8 - PARENTAGE OF THE STRAINS GROWN IN PRELIMINARY GROUP IV-S, 1988

	VARIETY OR STRAIN	PARENTAGE	GENERATION COMPOSITED
1.	DOUGLAS	WILLIAMS X CALLAND	F5
2.	STAFFORD	V66-318 X V68-2331	F5
3.	HILL	D632-15 X D49-2525	F5
4.	J82-125	ESSEX X L77-906	F5
5.	J84-139	ESSEX X L77-906	F5
6.	KY85-64	PENNYRILE X J-130	F5
7.	K81-22-114	ESSEX X CUMBERLAND	F5
8.	K81-25-70	V76-482 X ESSEX	F5
9.	K81-27-219	FORREST X ESSEX	F5
10.	K82-7-83	DOUGLAS X A5618	F5
11.	K82-9-18	DOUGLAS X SPARKS	F5
12.	LS82-3646	FORREST X (DORMAN X SRF 400)	F5
13.	LS84-2130	BEDFORD X UNION	F5
14.	LS84-2308	PYRAMID X LS79-W220	F5
15.	LS84-2616	PYRAMID X LS78-W124	F5
16.	S85-1101	FAYETTE X DOUGLAS	F5
17.	S85-1157	L77-443 X L77-906	F5
18.	S85-1387	S79-4296 X CUMBERLAND	F5
19.	S85-1552	DOUGLAS X PEKING	F5
20.	S85-1725	PEKING X ELF	F5
21.	S85-10972	FAYETTE X DOUGLAS	F5
22.	S86-4499	L77-443 X L77-906	F5
23.	TN82-292	MITCHELL X (FORREST X OK963)	F5
24.	V83-1454	ESSEX(4) X L73-811	F5
25.	V83-2441	V68-1171 X SRF 400	F5
26.	V84-484	MD71-1643-82 X WILL	F5
27.	V84-550	WILL X MD71-583	F5
28.	V84-574	WILL X MD71-583	F5
29.	V84-1797	EPPS X L77-994	F5
30.	V84-2002	V76-89 X ESSEX	F5

TABLE 9 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN PRELIMINARY GROUP IV-S, 1988

STRAIN	Seed yield	Mat. index	Percent Ht.	Percent Oil	Percent Protein	M. incognita	M. arenari	SCN 3	SCN 4	shatter score
DOUGLAS	29.1	10-3	31	20.8	42.7	3.7	3.2	S	S	2
STAFFORD	42.1+	+6	30	22.4+	38.2-	5.0	2.8	S	S	1
HILL	33.8	+4	36	21.1	38.2-	3.6	3.1	S	S	1
J82-125	34.2+	+5	35	20.1	38.1-	2.3	2.0	R	R	2
J84-139	39.1+	+9	34	21.7+	37.8-	4.0	1.4	R	R	2
KY85-64	35.1+	+5	42	22.2+	38.6-	4.0	5.0	S	S	2
K81-22-114	38.6+	+2	34	21.2	40.7	3.7	3.3	S	S	4
K81-25-70	38.0+	+2	28	21.0	40.2-	5.0	3.3	S	S	2
K81-27-219	41.3+	+9	35	21.6+	37.2-	2.0	1.0	S	S	1
K82-7-83	34.3+	-1	36	20.7+	41.1	4.4	3.0	S	S	4
K82-9-18	35.1+	+4	38	21.3	39.6-	5.0	2.3	S	S	2
LS82-3646	41.3+	+5	35	21.3	39.0-	4.7	3.3	R	S	2
LS84-2130	38.2+	+5	35	19.9	38.5-	4.3	1.0	S	S	2
LS84-2308	39.0+	+8	31	21.7+	37.4-	5.0	2.3	R	h	1
LS84-2616	34.9+	+7	34	21.4	36.1-	2.0	2.0	R	R	2
S85-1101	32.8	-1	40	20.9	42.4	5.0	3.3	R	R	4
S85-1157	30.7	+4	37	21.8+	37.6-	5.0	1.0	R	R	2
S85-1387	30.8	+2	40	21.3	39.9-	5.0	2.2	R	R	2
S85-1552	33.9	-4	36	21.5	41.1	5.0	4.0	R	R	2
S85-1725	37.8+	-1	39	20.2	40.2-	2.5	4.1	R	R	2
S85-10972	35.1+	-4	39	22.2+	39.4-	3.0	2.0	R	R	3
S86-4499	37.8+	+1	39	21.5	38.5-	5.0	2.3	R	R	3
TN82-292	35.0+	+4	36	22.1+	36.9-	5.0	3.0	S	S	2
V83-1454	36.2+	+9	39	20.9	41.3	5.0	4.3	S	S	2
V83-2441	37.5+	+2	44	21.9+	38.8-	4.7	3.7	S	S	2
V84-484	39.1+	0	36	21.9+	38.9-	5.0	2.0	S	S	2
V84-550	38.3+	+6	35	21.9+	38.2-	5.0	3.3	S	S	1
V84-574	34.6+	-3	37	20.9	40.1	5.0	2.0	S	S	2
V84-1797	41.8+	+7	33	21.6+	37.6-	4.0	1.7	R	R	1
V84-2002	40.9+	+6	30	22.0+	37.0-	1.8	1.4	S	S	1
LSD (.05)	5.1			0.8	2.0					
C.V.	14%			3%	4%					

+ or - designations refer to differences from Douglas.

TABLE 10 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN PRELIMINARY GROUP IV-S, 1988

STRAIN	QUEENS-TOWN, MD	PORTAGE-VILLE, MO	KEISER, AR	CARBON-DALE, IL	WARSAW, VA	OTTAWA, KS	PRINCE-TON, KY	TIPTON-VILLE TN
DOUGLAS	56.0	30.0	45.0	22.2	10.6	20.3	41.3	7.7
STAFFORD	57.9	46.3+	59.0+	47.5+	17.6+	24.2	53.8+	30.1+
HILL	45.3-	38.8+	43.6	34.7+	15.8	19.4	45.5	27.5+
J82-125	46.3-	45.4+	50.4	33.1+	16.4	13.6-	44.0	24.0+
J84-139	48.5-	48.2+	59.6+	38.9+	16.7	16.0	47.9	36.8+
KY85-64	49.4-	40.1+	49.0	35.1+	12.8	19.8	48.5	26.4+
K81-22-1	48.1-	45.9+	53.4	37.2+	15.0	19.4	57.2+	32.5+
K81-25-7	53.2	42.9+	41.1	45.1+	18.6+	21.3	51.7	29.9+
K81-27-2	52.3	43.6+	56.2	46.4+	23.0+	25.7	53.4+	29.6+
K82-7-83	50.0-	38.1+	50.5	30.5+	11.8	19.4	46.5	27.2+
K82-9-18	53.6	41.8+	50.0	36.0+	9.6	19.8	47.8	22.4+
LS82-364	48.4-	46.9+	57.1	49.5+	16.4	21.8	50.1	39.8+
LS84-213	50.1	43.0+	59.3+	42.5+	17.4+	24.2	39.5	29.8+
LS84-230	55.7	48.5+	45.1	39.3+	18.1+	21.8	52.1	31.0+
LS84-261	45.5-	45.4+	42.5	39.6+	13.5	18.4	48.2	26.0+
S85-1101	43.7-	41.4+	41.8	28.4	11.5	17.4	48.3	30.0+
S85-1157	47.6-	47.3+	37.0	33.2+	16.0	19.8	52.2+	25.8+
S85-1387	44.8-	42.2+	45.8	37.1+	10.2	22.7	44.6	28.8+
S85-1552	48.6-	42.3+	44.2	28.9	12.9	20.3	42.6	31.0+
S85-1725	43.3-	44.5+	52.9	40.0+	14.4	19.4	52.0	35.9+
S85-1097	48.9-	43.2+	42.6	31.1+	15.8	17.4	52.3+	29.4+
S86-4499	51.3	51.2+	42.8	36.5+	15.8	20.8	52.7+	31.6+
TN82-292	50.9	41.2+	42.3	37.7+	15.1	16.9	50.9	24.9+
V83-1454	50.9	42.7+	51.3	39.5+	14.0	23.2	41.4	26.7+
V83-2441	54.1	43.3+	49.7	43.9+	15.0	19.8	48.6	25.5+
V84-484	52.9	44.7+	58.0	41.0+	11.4	21.3	57.8+	25.4+
V84-550	50.0-	40.1+	61.0+	39.8+	15.0	21.3	51.6	27.2+
V84-574	49.6-	39.0+	48.5	30.5+	11.9	16.9	50.1	30.0+
V84-1797	53.2	52.9+	53.1	45.2+	19.3+	22.3	52.5+	35.6+
V84-2002	55.7	47.4+	63.9+	47.1+	15.0	21.8	51.8	24.8+
LSD (.05)	6.0	6.3	13.8	7.7	6.7	5.6	10.9	8.0
C.V.	6%	7%	13%	10%	21%	14%	9%	14%

TABLE 11 - OIL PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP IV-S, 1988

STRAIN	QUEENS-TOWN, MD	PORTAGE-VILLE, MO	KEISER, AR	CARBONDALE, IL	WARSAW, VA
DOUGLAS	20.9	21.2	18.0	21.9	21.8
STAFFORD	21.0	22.1	23.8	22.2	23.0
HILL	19.6	21.4	22.0	20.8	21.5
J82-125	19.6	20.2	20.7	19.8	20.4
J84-139	21.0	21.6	23.1	20.8	22.2
KY85-64	21.8	21.4	23.2	22.1	22.7
K81-22-114	20.9	19.8	22.0	21.6	21.8
K81-25-70	19.9	20.3	21.5	21.6	21.7
K81-27-219	20.8	21.1	22.4	21.4	22.5
K82-7-83	19.7	20.5	22.1	20.7	20.7
K82-9-18	21.5	20.6	21.6	20.9	21.8
LS82-3646	20.6	21.2	21.9	21.1	22.1
LS84-2130	19.2	19.9	20.1	19.3	21.1
LS84-2308	20.3	21.9	23.7	20.7	21.7
LS84-2616	19.9	21.2	22.6	21.6	21.8
S85-1101	20.4	20.3	21.3	21.3	21.4
S85-1157	21.4	22.0	21.9	21.5	22.0
S85-1387	20.2	21.0	22.1	21.5	21.9
S85-1552	20.6	21.2	22.6	21.1	22.0
S85-1725	19.4	19.9	21.2	20.1	20.6
S85-10972	20.9	21.4	24.0	22.1	22.5
S86-4499	20.7	21.1	22.8	21.2	21.6
TN82-292	21.9	22.0	21.9	21.0	23.6
V83-1454	20.1	20.9	20.2	21.2	22.2
V83-2441	21.5	20.3	24.0	22.0	21.8
V84-484	21.0	21.5	23.7	21.1	22.1
V84-550	20.9	22.0	23.2	20.5	23.1
V84-574	21.1	20.3	22.1	19.9	21.1
V84-1797	20.4	20.8	22.7	22.0	22.2
V84-2002	21.1	21.7	24.1	21.2	22.1

TABLE 12 - PROTEIN PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP IV-S, 1988

STRAIN	QUEENS-TOWN, MD	PORTAGE-VILLE, MO	KEISER, AR	CARBONDALE, IL	WARSAW, VA
DOUGLAS	40.8	42.0	48.3	40.4	40.3
STAFFORD	39.8	37.9	36.6	39.2	37.6
HILL	40.5	38.3	36.8	38.7	36.5
J82-125	41.6	40.3	39.8	40.3	38.5
J84-139	39.8	38.6	36.1	39.1	35.5
KY85-64	39.3	40.6	36.8	38.6	37.7
K81-22-114	40.9	43.0	39.4	39.6	40.7
K81-25-70	41.9	41.2	40.0	39.6	38.2
K81-27-219	39.0	37.8	36.9	37.1	35.2
K82-7-83	41.8	42.1	39.1	41.4	41.0
K82-9-18	39.3	41.7	39.8	39.4	37.9
LS82-3646	40.7	40.1	38.8	39.2	36.3
LS84-2130	40.4	38.9	38.4	39.0	35.8
LS84-2308	39.8	37.9	34.8	38.4	36.2
LS84-2616	38.4	36.6	34.6	37.0	33.8
S85-1101	43.2	43.3	42.1	41.4	42.1
S85-1157	38.2	37.8	37.2	37.6	37.0
S85-1387	41.2	41.7	38.5	39.6	38.6
S85-1552	42.5	42.0	38.8	41.7	40.5
S85-1725	42.0	41.4	38.8	38.7	40.0
S85-10972	41.3	40.9	35.7	40.6	38.5
S86-4499	39.5	38.9	35.5	40.1	38.6
TN82-292	36.8	37.5	37.5	38.8	33.9
V83-1454	43.3	42.2	41.9	41.0	38.3
V83-2441	39.4	41.8	35.7	38.5	38.5
V84-484	39.5	40.3	35.2	40.8	38.9
V84-550	40.5	38.4	36.3	40.5	35.5
V84-574	39.9	40.1	38.8	41.8	39.8
V84-1797	39.5	39.2	36.0	38.5	34.7
V84-2002	38.5	38.5	34.5	36.3	37.4

TABLE 13 - PLANT HEIGHT PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP IV-S, 1988

STRAIN	QUEENS-TOWN, MD	PORTAGE-VILLE, MO	KEISER, AR	CARBON-DALE, IL	WARSAW, VA	OTTAWA, KS	PRINCE-TON, KY
DOUGLAS	34	31	31	33	18	39	33
STAFFORD	35	28	23	33	22	37	30
HILL	37	43	30	37	22	42	39
J82-125	35	42	27	37	24	43	38
J84-139	35	36	28	39	24	38	35
KY85-64	44	52	36	44	21	49	49
K81-22-114	35	39	31	37	22	35	39
K81-25-70	27	33	23	31	18	33	30
K81-27-219	32	39	24	37	28	45	42
K82-7-83	41	45	30	39	17	36	42
K82-9-18	34	51	37	41	18	39	44
LS82-364	38	37	26	43	30	36	36
LS84-2130	40	36	26	41	26	39	36
LS84-2308	34	31	22	32	27	36	33
LS84-2616	36	41	24	36	22	42	38
S85-1101	40	49	36	46	23	41	46
S85-1157	40	49	28	40	20	36	46
S85-1387	42	52	35	44	20	43	47
S85-1552	39	45	30	36	24	34	42
S85-1725	43	48	34	41	24	39	43
S85-10972	40	51	29	41	28	40	42
S86-4499	42	51	34	42	24	40	43
TN82-292	37	45	30	41	20	35	41
V83-1454	38	44	38	45	23	41	43
V83-2441	43	51	38	48	29	46	50
V84-484	38	49	38	43	18	42	44
V84-550	35	44	36	43	22	40	25
V84-574	37	46	32	38	21	41	41
V84-1797	33	35	30	36	26	32	39
V84-2002	31	30	23	34	20	39	30

TABLE 14 - SEED QUALITY SCORES FOR THE STRAINS IN PRELIMINARY GROUP IV-S, 1988

STRAIN	QUEENS-TOWN, MD	PORTAGE-VILLE, MO	KEISER, AR	CARBON-DALE, IL	WARSAW, VA	OTTAWA, KS	PRINCE-TON, KY
DOUGLAS	4.0	3.0	2.8	2.0	1.8	3.0	3.0
STAFFORD	2.0	2.0	2.0	2.0	1.5	2.0	2.0
HILL	1.5	2.5	1.5	3.0	1.0	3.0	3.0
J82-125	1.0	2.0	2.5	2.0	1.0	2.0	2.0
J84-139	1.3	3.0	2.0	4.0	1.0	3.0	3.0
KY85-64	2.3	3.5	2.5	2.0	1.0	2.0	1.0
K81-22-114	2.0	3.0	3.0	3.0	1.5	2.0	3.0
K81-25-70	1.5	3.0	2.0	1.0	1.2	2.0	3.0
K81-27-219	1.3	2.5	2.0	2.0	1.2	2.0	2.0
K82-7-83	4.0	3.5	3.0	3.0	2.0	3.0	4.0
K82-9-18	4.0	4.0	3.0	4.0	2.0	3.0	4.0
LS82-3646	1.5	2.0	2.0	2.0	1.3	2.0	2.0
LS84-2130	1.5	2.0	2.0	1.0	1.0	2.0	1.0
LS84-2308	1.3	2.5	2.5	2.0	1.5	2.0	4.0
LS84-2616	2.0	3.0	1.5	3.0	1.5	2.0	3.0
S85-1101	4.0	3.5	3.0	3.0	2.2	3.0	3.0
S85-1157	1.8	3.0	3.0	2.0	1.5	2.0	5.0
S85-1387	1.8	3.0	3.0	2.0	1.5	2.0	3.0
S85-1552	3.0	2.0	3.0	2.0	2.5	3.0	4.0
S85-1725	2.3	2.5	3.0	2.0	1.5	2.0	3.0
S85-10972	3.8	2.5	3.5	2.0	1.5	2.0	4.0
S86-4499	2.8	2.0	3.0	3.0	1.8	3.0	3.0
TN82-292	2.0	2.5	3.0	3.0	1.3	3.0	4.0
V83-1454	1.0	2.0	3.0	4.0	1.2	3.0	4.0
V83-2441	2.8	2.5	3.0	3.0	1.0	3.0	4.0
V84-484	2.0	2.5	3.0	3.0	1.8	2.0	2.4
V84-550	1.5	2.5	2.0	3.0	1.2	3.0	1.0
V84-574	2.3	2.0	2.0	1.0	1.8	2.0	2.0
V84-1797	1.0	2.0	2.0	2.0	1.5	2.0	2.0
V84-2002	1.0	1.5	2.0	2.0	1.5	1.0	2.0

UNIFORM GROUP V

1988

	Variety or strain	Parentage	Generation composited
1.	Essex	Lee X S5-7075	F_5
2.	Forrest	Dyer X Bragg	F_5
3.	N83-375	N76-098 X N76-683	F_6
4.	R83-310	R77-236 X Narow	F_5
5.	D82-2896	Forrest X D78-5089	F_5
6.	Md83-5078	D74-7824 X Miles	F_5
7.	N84-507	N77-114 X N77-907	F_6
8.	R83-1342	Forrest X Narow	F_6
9.	N85-578	N77-179 X Johnston	F_6
10.	R85-164	Davis X Bedford	F_5
11.	R85-3280	Narow X R75-579	F_5
12.	S85-1706	Bedford X Essex	F_5

Background of 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.

N76-098 is a selection from N70-1741 X Essex, which was grown in Uniform Group V in 1979.

N76-683 is a selection from N70-1501 X N70-2173 which was grown in Uniform Group V in 1979.

R77-236 is a selection from Forest X Lee 74.

D78-5089 is a selection from Tracy X (Hill X PI 159925) which has the character for delayed flowering under short-day conditions.

D74-7824 has the same parentage as D74-7741.

N77-114 is a selection from Essex X N70-2173 which was grown in Uniform Group VI in 1980.

N77-907 is a selection from N70-1549 X Centennial.

N77-179 was grown in Uniform Group V in 1980.

R75-579 is a selection from Forrest and Mack.

UNIFORM GROUP V

Plantings of the strains in Uniform Group V were made at 32 locations. Results from these plantings are summarized in Tables 15-21. Table 15 gives a general summary of performance, including one, two and three year data for seed yield, protein percentage and oil percentage. Information is also included relative to agronomic characteristics and reaction to the two root-knot species M. incognita and M. arenaria and soybean cyst nematode races 3 and 4. Data from individual locations are summarized in Tables 16-21.

Ratings for the two root-knot nematode species M. incognita and M. arenaria were made in the greenhouse at the University of Georgia at Athens. Ratings for reaction to SCN races 3 and 4 were made in the greenhouse at Jackson, Tenn. Results from these ratings are reported in Table 15. Plantings were also made in the field cage at Stoneville to evaluate for feeding by soybean looper. All strains were uniformly fed upon by the soybean looper. Ratings for seed coat mottling assumed to be result of infection by soybean mosaic virus were made at Orange, Virginia. Seven strains received zero ratings, while MD83-5078 showed 27% of the seed having mottled seed. Plantings were made at the Verona station in Mississippi to evaluate for reaction to stem canker. Disease development was insufficient for ratings. In 1987 stem canker development was severe at Beaumont, Texas. In 1988 disease development was insufficient for making ratings.

Two strains, N83-375 and R83-310, have been evaluated three years. Both of these strains have yielded very well. Four strains, D82-2896, MD83-5078, M84-507 and R83-1432, have been evaluated two years. It does not appear that D82-2896 or MD83-5078 merit further testing on a regional basis. In 1987 D82-2896 demonstrated a high level of resistance to stem canker.

Table 15 - General summary of performance for the strains grown in Uniform Group V, 1988

	No. of locations	Essex	Forrest	N83-375	R83-310	D82-2896
Seed Yield - 1988						
East Coast	5	37.8	36.7	40.8	37.3	35.7
Upper and Central South	9	41.0	40.8	39.2	43.8	40.3
Delta	8	44.2	43.5	46.2	45.8	45.6
West	8	39.6	41.1	39.6	39.1	39.4
1987-88						
East Coast		38.4	38.1	40.7	38.5	36.2
Upper & Central South		36.4	36.4	34.8	36.6	35.8
Delta		40.1	39.8	41.6	38.1	41.1
West		40.0	41.0	41.9	38.2	40.9
1986-88						
East Coast		41.0	40.3	43.5	40.4	
Upper & Central South		36.1	36.4	35.6	39.0	
Delta		40.2	39.9	41.4	41.7	
West		40.2	41.2	41.9	41.2	
Oil Content - 1988		20.9	21.4	21.5	20.8	20.1
1987-88		20.7	21.2	21.4	20.6	20.1
1986-88		20.7	21.3	21.3	20.4	
Protein Content - 1988		41.0	38.3	40.4	39.9	39.8
1987-88		41.7	39.0	41.2	40.6	40.4
1986-88		41.9	39.4	41.6	40.9	
Seed size		13.9	12.8	16.7	14.0	15.1
Maturity index		10.5	+1	+3	+1	-1
Height		30	35	34	35	32
Seed quality		1.9	1.9	2.1	2.0	1.7
M. incognita		4.3	1.0	3.8	3.3	1.5
M. arenaria		1.8	1.2	3.0	1.5	2.8
SCN race 3		S	R	S	R	R
SCN race 4		S	S	S	S	S
% Mottled Seed		0	2	2	3	0
Flower color		P	W	W	P	W
Pubescence color		G	T	T	T	G
Pod wall color		Tn	Tn	Tn	Tn	Tn

Table 15 - (continued)

	Md83-5078	N84-507	R83-1342	N85-578	R85-164	R85-3280	S85-1706
Seed Yield - 1988							
East Coast	38.2	41.7	37.3	43.6	39.5	38.0	40.0
Upper and Central South	42.3	44.9	44.2	43.5	38.9	44.8	42.1
Delta	45.4	49.1	48.0	50.4	46.3	49.1	48.2
West	41.4	45.1	42.2	44.0	40.3	43.2	40.4
1987-88							
East Coast	38.8	42.9	39.9				
Upper & Central South	35.9	39.9	37.9				
Delta	41.3	44.6	44.6				
West	42.3	45.8	42.4				
1986-88							
East Coast							
Upper & Central South							
Delta							
West							
Oil Content - 1988	21.1	21.9	21.4	21.8	20.5	21.0	20.7
1987-88	20.6	21.5	21.1				
1986-88							
Protein Content - 1988	38.6	38.5	38.5	37.7	38.4	38.8	37.5
1987-88	39.8	39.6	39.7				
1986-88							
Seed size	11.6	17.0	13.1	14.6	13.5	11.7	15.0
Maturity index	-1	+5	+2	-2	+4	+1	-2
Height	31	31	34	27	39	33	35
Seed quality	1.9	1.8	1.9	2.0	1.9	1.8	1.9
M. incognita	3.2	4.8	1.0	5.0	1.7	1.0	1.8
M. arenaria	1.6	2.6	1.2	4.4	1.0	1.2	1.2
SCN race 3	S	S	R	S	R	R	R
SCN race 4	S	S	S	S	R	S	R
% Mottled Seed	27	0	0	0	0	3	0
Flower color	P	P	P	P	W	P	W
Pubescence color	T	G	T	G	T	T	G
Pod wall color	Tn	Br	Tn	Tn	Tn	Tn	Tn

Table 16 - Seed yield, in bushels per acre, for the strains in Uniform Group V, 1988

Location	Essex	Forrest	N83-375	R83-310	D82-2896	Md83-5078	N84-507
			EAST COAST				
Queenstown, MD	53.1	44.1	50.1	40.9	45.6	52.8	54.5
Georgetown, DE	27.6	36.7	35.7	34.6	27.6	28.2	30.9
Warsaw,VA	20.8	20.4	20.4	21.4	19.9	17.8-	22.3
Holland, VA	36.1	29.9	43.6+	36.5	33.5	40.0	44.8+
Plymouth, NC	51.3	52.3	54.1	53.2	52.0	52.0	56.0
Mean	37.8	36.7	40.8	37.3	35.7	38.2	41.7
			UPPER AND CENTRAL SOUTH				
Orange, VA	38.2	28.6-	33.3	33.7	35.6	41.8	46.0+
Knoxville, TN	34.4	37.2	35.2	37.7	34.5	32.5	33.4
Clemson, SC	31.0	34.9	35.9+	35.8+	28.3	29.5	34.6
Calhoun, GA	44.7	42.7	46.6	57.8	49.0	54.1	63.8+
Athens, GA	49.0	53.1	39.7	52.0	31.5-	43.3	49.6
Belle Mina, AL	38.3	38.5	37.2	39.5	36.7	36.4	33.8
Princeton, KY	48.9	47.9	47.8	47.7	49.9	52.6	53.3
Tiptonville, TN	35.3	38.7	34.5	33.5	37.6	41.5+	41.2+
Jackson, TN	49.6	45.2	42.6	56.4	59.8	48.8	48.7
Mean	41.0	40.8	39.2	43.8	40.3	42.3	44.9
			DELTA				
Portageville, MO (A)	43.2	46.7+	42.8	47.6+	47.6+	41.9	49.0+
Portageville, MO (B)	38.3	39.8	45.5+	43.7+	41.9	41.0	41.2
Keiser, AR	63.0	55.7	59.1	63.5	61.9	59.7	69.9
Jonesboro, AR	30.5	30.2	30.0	32.7	35.0	34.4	33.3
Pine Tree, AR	32.4	34.6	35.3	37.4	37.7	41.7+	43.6+
Stoneville, MS (A)	51.9	48.3	51.1	47.3	48.2	51.3	49.7
Stoneville, MS (B)	42.3	43.0	47.8+	43.5	38.8	40.9	47.9+
St. Joseph, LA	52.0	49.7	58.1	50.6	53.8	52.0	58.4
Mean	44.2	43.5	46.2	45.8	45.6	45.4	49.1
			WEST				
Ottawa, KS	20.3	22.3	20.7	23.9+	18.7	20.7	24.2+
Pittsburg, KS	44.8	48.7	46.9	44.1	47.3	47.3	46.8
Chanute, KS	37.2	36.2	34.8	33.7	35.5	39.2	38.0
Stuttgart, AR	48.7	46.3	37.1-	40.8-	45.5	42.0-	51.5
Bossier City, LA	25.6	25.2	34.9	33.8	29.9	33.2	49.0+
Bixby, OK	60.6	60.6	56.4	59.4	53.4-	59.3	60.1
Lubbock, TX	50.2	54.4+	51.9	47.7	50.5	56.1+	56.4+
Beaumont, TX	29.3	35.0	33.7	29.3	34.8	33.2	35.1
Mean	39.6	41.1	39.6	39.1	39.4	41.4	45.1

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

Table 16 - (continued)

Location	R83-1342	N85-578	R85-164	R85-3280	S85-1706	L.S.D. (.05)	C.V. (%)
			EAST COAST				
Queenstown, MD	46.4	58.9	49.6	45.8	52.9	NS	13
Georgetown, DE	26.7	34.4	38.6	36.0	30.0	NS	17
Warsaw,VA	21.9	19.9	21.1	18.3-	22.5	2.2	6
Holland, VA	37.7	46.4+	41.9	39.0	38.3	5.9	10
Plymouth, NC	53.8	58.2	46.5	51.0	56.3	NS	10
Mean	37.3	43.6	39.5	38.0	40.0		
			UPPER AND CENTRAL SOUTH				
Orange, VA	31.1-	51.1+	35.8	35.2	43.5	6.4	10
Knoxville, TN	35.3	34.0	32.8	36.3	36.2	5.6	9
Clemson, SC	37.8+	22.6-	30.3	32.5	32.4	4.8	9
Calhoun, GA	62.0+	55.4	54.1	58.1	43.0	15.7	18
Athens, GA	52.3	52.8	53.5	52.5	55.0	13.6	13
Belle Mina, AL	47.4	29.7	37.7	40.4	40.2	NS	19
Princeton, KY	46.0	59.5+	49.4	52.1	44.8	4.9	6
Tiptonville, TN	39.0	40.2	36.9	44.8+	37.2	6.2	10
Jackson, TN	47.0	46.2	50.3	51.0	47.0	NS	12
Mean	44.2	43.5	38.9	44.8	42.1		
			DELTA				
Portageville, MO (A)	52.7+	49.8+	46.3	48.5+	47.5+	3.2	4
Portageville, MO (B)	40.8	44.2+	45.4+	44.1+	47.8+	5.0	7
Keiser, AR	65.9	66.1	62.6	66.1	62.7	8.6	12
Jonesboro, AR	34.8	38.9+	30.3	35.1	33.1	5.8	8
Pine Tree, AR	41.4+	41.9+	32.8	39.4+	35.6	6.8	11
Stoneville, MS (A)	47.7	56.1	49.4	47.7	50.0	5.3	6
Stoneville, MS (B)	46.7	53.2+	46.9	49.0+	45.5	5.1	7
St. Joseph, LA	54.3	52.6	56.6	62.6+	63.2+	7.9	8
Mean	48.0	50.4	46.3	49.1	48.2		
			WEST				
Ottawa, KS	22.6	25.2+	19.0	21.3	18.1	3.5	10
Pittsburg, KS	42.0	50.4	44.6	50.9+	46.9	5.9	7
Chanute, KS	35.2	43.1+	33.2	38.9	38.3	4.7	8
Stuttgart, AR	44.3	46.8	50.8	46.8	44.6	4.6	6
Bossier City, LA	46.3+	25.2	36.7	46.5+	38.4	14.0	23
Bixby, OK	56.9	65.0	49.7-	58.6	54.1-	5.9	6
Lubbock, TX	53.2	59.1+	51.1	46.8	48.0	3.6	4
Beaumont, TX	37.3+	37.1+	37.3+	36.1	34.9	7.0	12
Mean	42.2	44.0	40.3	43.2	40.4		

Table 17 - Chemical composition and seed size for the strains in Uniform Group V, 1988

Location	Essex	Forrest	N83-375	R83-310	D82-2896	MD83-5078
			OIL PERCENTAGE			
Queenstown, MD	20.3	20.5	20.4	19.5	18.9	21.3
Warsaw, VA	21.8	22.8	21.6	21.2	20.3	22.4
Plymouth, NC	20.4	21.2	21.1	20.6	19.1	20.8
Orange, VA	20.6	20.9	21.8	20.9	19.9	21.0
Calhoun, GA	22.5	22.4	23.0	21.9	21.1	21.8
Jackson, TN	21.9	22.0	22.0	21.4	20.8	20.9
Portageville, MO (A)	20.3	21.9	21.2	20.7	20.1	21.3
Keiser, AR	19.7	21.6	20.8	20.4	20.2	20.5
Stoneville, MS (A)	20.9	21.4	22.4	20.4	20.3	20.9
Stuttgart, AR	20.4	19.3	20.5	20.9	20.4	20.2
Mean	20.9	21.4	21.5	20.8	20.1	21.1
			PROTEIN PERCENTAGE			
Queenstown, MD	41.7	38.3	41.6	41.1	41.2	37.3
Warsaw, VA	38.3	34.1	37.4	36.1	38.2	33.9
Plymouth, NC	42.7	39.2	41.9	41.8	42.0	39.8
Orange, VA	39.3	34.6	37.0	35.6	36.5	35.6
Calhoun, GA	38.1	40.5	41.2	40.9	40.3	40.2
Jackson, TN	42.5	40.4	41.5	41.6	41.6	41.7
Portageville,MO (A)	41.9	36.3	40.6	39.0	38.8	37.8
Keiser, AR	41.0	37.6	41.3	39.9	38.5	39.1
Stoneville, MS (A)	42.4	39.4	41.0	41.4	40.2	40.2
Stuttgart, AR	41.8	42.6	40.7	41.7	40.2	40.6
Mean	41.0	38.3	40.4	39.9	39.8	38.6
			GRAMS PER 100 SEED			
Queenstown, MD	14.5	14.3	19.8	15.8	16.1	12.9
Warsaw, VA	14.4	13.3	17.0	15.5	15.4	13.0
Plymouth, NC	15.1	13.2	17.3	14.6	15.6	11.3
Orange, VA	12.2	12.0	16.2	13.3	14.1	10.9
Portageville, MO (A)	13.5	12.0	15.6	13.1	13.8	10.8
Keiser,AR	12.9	12.1	14.9	13.2	14.4	11.6
Stoneville,MS (A)	14.9	12.9	17.0	14.0	16.0	11.3
Stuttgart, AR	13.3	12.5	15.7	12.5	15.2	10.6
Mean	13.9	12.8	16.7	14.0	15.1	11.6

Table 17 - (continued)

Location	N84-507	R83-1342	N85-578	R85-164	R85-3280	S85-1706
			OIL PERCENTAGE			
Queenstown, MD	20.9	20.3	20.5	19.7	20.5	19.6
Warsaw, VA	21.8	22.3	21.6	21.3	21.9	20.9
Plymouth, NC	22.1	21.0	21.5	19.9	20.4	20.4
Orange, VA	21.8	20.7	20.9	20.1	20.9	19.5
Calhoun, GA	23.1	22.5	23.6	21.8	22.2	21.6
Jackson, TN	22.0	22.0	22.1	21.4	21.9	21.8
Portageville, MO (A)	21.9	21.2	21.3	20.2	20.2	20.7
Keiser, AR	21.4	21.4	21.6	20.4	20.4	20.1
Stoneville, MS (A)	22.2	21.4	22.4	20.2	20.2	21.0
Stuttgart, AR	21.6	21.5	22.1	20.4	21.4	21.3
Mean	21.9	21.4	21.8	20.5	21.0	20.7
			PROTEIN PERCENTAGE			
Queenstown, MD	38.8	39.0	39.4	38.6	37.6	38.2
Warsaw, VA	36.0	35.2	36.2	36.1	35.0	34.8
Plymouth, NC	39.1	40.3	37.9	40.3	40.6	38.5
Orange, VA	35.8	35.7	36.9	35.0	35.5	34.7
Calhoun, GA	38.0	39.0	36.3	38.8	40.3	38.6
Jackson, TN	41.5	40.9	40.4	40.4	41.2	39.7
Portageville,MO (A)	37.4	37.3	36.5	37.3	37.3	36.0
Keiser, AR	37.5	37.0	36.6	37.7	38.7	37.3
Stoneville,MS	39.9	39.4	38.4	40.7	40.8	38.2
Stuttgart, AR	40.8	40.9	38.2	39.5	40.7	38.9
Mean	38.5	38.5	37.7	38.4	38.8	37.5
			GRAMS PER 100 SEED			
Queenstown, MD	19.1	15.6	16.0	14.8	14.8	17.5
Warsaw, VA	17.6	13.8	14.1	13.7	14.1	15.0
Plymouth, NC	17.5	13.6	15.3	13.4	14.2	15.1
Orange, VA	16.7	11.7	12.9	13.1	12.6	15.0
Portageville, MO (A)	15.3	12.7	12.5	12.7	11.6	13.7
Keiser, AR	14.9	12.3	14.3	13.4	12.8	14.3
Stoneville, MS (A)	17.4	12.5	16.4	13.4	12.8	15.3
Stuttgart, AR	18.3	12.7	15.0	13.1	13.1	14.0
Mean	17.0	13.1	14.6	13.5	11.7	15.0

Table 18 - Relative maturity data, days earlier (-) or later (+) than Essex, for the strains in Uniform Group V, 1988

Location	Date Planted	Essex	Forrest	N83 375	R83- 310	D82- 2896	Md83- 5078
			EAST COAST				
Queenstown, MD	6-1	F	F	F	F	F	F
Georgetown, DE		10-14	-2	0	-1	-1	+3
Warsaw, VA	6-1	10-15	+1	+3	+3	-1	+1
Holland, VA	5-27	10-10	0	+4	+2	-1	+1
Plymouth, NC	5-27	10-16	+4	+6	0	0	-6
Mean	5-29	10-14	+1	+3	+1	-1	0
			UPPER AND CENTRAL SOUTH				
Orange, VA	5-31	10-18	+1	+2	+1	-1	0
Knoxville, TN	5-13	10-8	+6	+4	+3	+5	-2
Clemson, SC	5-19	10-9	+7	+7	+8	+2	+2
Calhoun, GA	5-17	10-9	-1	0	-1	0	-2
Athens, GA	5-17	9-30	+6	+8	+7	-2	+4
Belle Mina, AL	5-27	9-20	0	-1	-2	+1	-2
Princeton, KY	5-26	10-13	0	0	0	0	0
Jackson, TN	5-12	10-8	+5	+9	0	0	-4
Mean	5-20	10-7	+3	+4	+2	+1	-1
			DELTA				
Portageville, MO (A)	6-1	10-16	+4	+5	+2	+1	-2
Portageville, MO (B)	5-6	10-19	-4	+3	0	-5	-7
Keiser, AR	5-19	10-10	-2	0	-6	-3	-3
Jonesboro, AR	6-2	10-2	+3	+3	+3	+2	+3
Pinee Tree, AR	5-20	10-4	0	+2	-1	0	-1
Stoneville, MS (A)	5-23	10-1	+1	+4	+2	+1	-1
Stoneville, MS (B)	6-9	10-8	-2	+4	-1	-1	-1
St. Joseph, LA	5-26	10-3	-3	0	-1	-3	-4
Mean	5-25	10-8	0	+3	0	-1	-2
			WEST				
Stuttgart, AR	5-18	10-5	-3	+3	-1	-1	-3
Bossier City, LA	5-12	9-22	0	+6	+3	0	0
Lubbock, TX	5-12	10-14	+3	-2	0	-5	-1
Beaumont, TX	5-19	9-21	-2	+1	+1	0	-1
Mean	5-15	9-22	-1	+2	+1	-2	-1

Table 18 - (continued)

Location	N84-507	R83-1342	N85 578	R85-164	R85-3280	S85-1706
			EAST COAST			
Queenstown, MD	F	F	F	F	F	F
Georgetown, DE	+4	+1	+1	0	-3	+4
Warsaw, VA	+2	+1	-1	+2	+1	0
Holland, VA	+6	+2	-6	+1	+3	-2
Plymouth, NC	+6	+2	-2	+6	+2	0
Mean	+5	+2	-2	+2	+1	-1
			UPPER AND CENTRAL SOUTH			
Orange, VA	+2	+1	-3	+1	+2	0
Knoxville, TN	+7	+1	-3	+6	+3	-2
Clemson, SC	+9	+6	-4	+16	+6	-2
Calhoun, GA	+4	0	0	+2	-1	-2
Athens, GA	+8	+6	0	+6	+9	+1
Belle Mina, AL	-1	-2	+1	0	-2	-1
Princeton, KY	-1	0	-3	0	0	0
Jackson, TN	+9	+9	-4	+9	+9	-4
Mean	+5	+3	-2	+5	+3	-1
			DELTA			
Portageville, MO (A)	+6	+5	-4	+6	+2	-1
Portageville, MO (B)	+1	-1	-4	+6	-6	-8
Keiser, AR	-4	-2	-2	0	-2	0
Jonesboro, AR	+4	+4	-3	+4	+3	0
Pine Tree, AR	+2	0	-5	0	-1	-5
Stoneville, MS (A)	+5	+1	0	+3	-1	-2
Stoneville, MS (B)	+5	0	+2	+4	0	-2
St. Joseph, LA	+5	-3	-2	+3	-5	-5
Mean	+3	+1	-2	+3	-1	-3
			WEST			
Stuttgart, AR	+10	+3	+6	+6	+2	0
Bossier City, LA	+6	+6	+4	+5	+6	-1
Lubbock, TX	+2	0	-11	+3	+2	-7
Beaumont, TX	+5	0	+2	+5	+1	-2
Mean	+6	+2	0	+5	+2	-3

Table 19 - Plant height for the strains in Uniform Group V, 1988

Location	Essex	Forrest	N83-375	R83-310	D82-2896	Md83-5078
			EAST COAST			
Queenstown, MD	33	38	33	36	35	34
Georgetown, DE	28	26	40	30	29	35
Warsaw,VA	22	28	25	26	25	22
Holland, VA	33	40	39	40	35	39
Plymouth, NC	35	39	39	40	36	37
Mean	30	34	35	34	32	33
			UPPER AND CENTRAL SOUTH			
Orange, VA	30	38	37	37	33	34
Knoxville, TN	33	40	37	41	35	34
Clemson, SC	26	32	31	34	28	29
Calhoun, GA	26	26	29	29	23	23
Athens, GA	25	30	26	30	24	23
Belle Mina, AL	28	36	33	35	31	30
Princeton, KY	37	44	39	42	36	36
Jackson, TN	38	41	40	37	37	41
Mean	30	36	34	36	31	31
			DELTA			
Portageville, MO (A)	40	43	41	51	43	44
Portageville, MO (B)	18	20	26	24	21	19
Keiser, AR	30	31	38	35	31	31
Jonesboro, AR	43	44	41	48	42	41
Pine Tree, AR	31	37	35	38	30	32
Stoneville, MS (A)	35	37	39	37	37	37
Stoneville, MS (B)	24	27	27	27	25	23
St. Joseph, LA	30	30	30	28	30	24
Mean	31	34	35	36	32	31
			WEST			
Ottawa, KS	36	41	32	40	36	38
Pittsburg, KS	33	36	34	37	36	35
Chanute, KS	35	40	37	42	37	39
Stuttgart, AR	27	33	29	33	30	26
Bossier City,LA	20	25	24	24	24	22
Bixby, OK	33	39	33	39	37	36
Lubbock, TX	28	31	28	29	29	27
Beaumont, TX	25	25	24	29	25	24
Mean	30	34	30	34	32	31

Table 19 - (continued)

Location	N84-507	R83-1342	N85-578	R85-164	R85-3280	S85-1706
			EAST COAST			
Queenstown, MD	34	37	28	42	34	36
Georgetown, DE	32	38	35	34	33	33
Warsaw,VA	23	27	20	27	21	28
Holland, VA	37	38	30	41	41	40
Plymouth, NC	36	40	36	41	41	41
Mean	32	36	30	37	34	36
			UPPER AND CENTRAL SOUTH			
Orange, VA	35	37	29	42	36	36
Knoxville, TN	34	39	33	48	36	40
Clemson, SC	29	33	23	42	30	32
Calhoun, GA	22	28	19	31	29	26
Athens, GA	27	25	22	34	27	32
Belle Mina, AL	31	35	26	37	29	35
Princeton, KY	36	40	31	46	39	38
Jackson, TN	37	37	32	44	37	40
Mean	31	34	27	41	33	35
			DELTA			
Portageville, MO (A)	41	44	39	51	46	42
Portageville, MO (B)	19	20	17	26	21	26
Keiser, AR	29	30	25	39	33	31
Jonesboro, AR	41	41	35	52	43	46
Pine Tree, AR	35	37	29	45	33	35
Stoneville, MS (A)	38	37	33	41	37	38
Stoneville, MS (B)	27	27	21	29	23	26
St. Joseph, LA	27	31	21	36	27	28
Mean	32	33	25	40	33	34
			WEST			
Ottawa, KS	34	39	32	42	39	41
Pittsburg, KS	33	35	29	42	34	38
Chanute, KS	35	41	32	46	38	40
Stuttgart, AR	25	34	20	35	29	35
Bossier City, LA	21	24	24	23	24	24
Bixby, OK	32	32	30	46	35	38
Lubbock, TX	29	31	23	34	33	32
Beaumont, TX	23	26	17	34	23	27
Mean	29	33	26	38	32	34

Table 20 - Lodging scores for the strains in Uniform Group V, 1988

Location	Essex	Forrest	N83-375	R83-310	D82-2896	Md83-5078
			EAST COAST			
Queenstown, MD	3.3	3.0	2.7	3.2	3.2	2.5
Georgetown, DE	3.7	1.3	2.7	3.0	2.0	3.0
Warsaw,VA	1.0	1.0	1.0	1.0	1.0	1.0
Holland, VA	3.0	4.3	2.0	3.3	4.3	2.0
Plymouth, NC	3.6	3.6	2.7	4.0	3.6	2.3
			UPPER AND CENTRAL SOUTH			
Orange, VA	2.7	2.3	2.0	2.3	2.0	2.0
Knoxville, TN	1.3	2.0	1.0	1.7	1.7	1.5
Calhoun, GA	1.0	1.0	1.0	1.0	1.0	1.0
Athens, GA	1.2	1.5	1.5	1.7	1.8	1.5
Belle Mina, AL	1.0	1.0	1.0	1.0	1.0	1.0
Princeton, KY	1.7	2.0	1.0	2.0	1.0	1.0
Jackson, TN	2.0	3.0	1.0	3.0	2.0	2.0
			DELTA			
Portageville, MO (A)	2.0	2.0	2.0	3.0	2.0	2.0
Portageville, MO (B)	1.0	1.5	1.0	1.0	1.0	1.5
Keiser, AR	1.0	1.0	1.0	1.0	1.0	1.0
Jonesboro, AR	1.7	2.3	2.3	3.0	1.7	1.3
Pine Tree, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, MS (A)	2.0	2.0	2.0	2.7	2.7	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.3	2.0
St. Joseph, LA	1.3	1.7	1.3	1.4	1.4	1.2
			WEST			
Ottawa, KS	2.0	2.7	1.0	2.3	3.0	2.0
Pittsburg, KS	2.3	3.0	2.3	4.0	3.0	2.7
Chanute, KS	1.7	2.0	1.0	2.0	2.3	1.7
Stuttgart, AR	1.3	1.3	1.0	1.2	1.1	1.0
Bossier City, LA	1.0	1.0	1.2	1.2	1.2	1.0
Bixby, OK	1.0	2.0	1.0	4.0	4.0	1.0
Lubbock, TX	2.0	2.5	1.3	1.7	2.0	2.0
Beaumont,TX	1.3	1.0	1.0	1.0	1.3	1.0

Table 20 - (continued)

Location	N84-507	R83-1342	N85-578	R85-164	R85-3280	S85-1706
			EAST COAST			
Queenstown, MD	3.2	3.2	2.5	3.2	2.8	3.0
Georgetown, DE	2.7	3.0	2.3	2.3	2.0	1.0
Warsaw, VA	1.0	1.0	1.0	1.0	1.0	1.0
Holland, VA	2.7	4.0	1.0	2.7	3.7	4.7
Plymouth, NC	2.7	4.0	2.3	3.3	3.3	3.3
			UPPER AND CENTRAL SOUTH			
Orange, VA	2.0	3.0	1.0	3.0	2.7	3.3
Knoxville, TN	1.0	1.7	1.2	1.5	1.7	2.2
Calhoun, GA	1.0	1.0	1.0	1.0	1.0	1.0
Athens, GA	1.5	1.5	1.5	1.5	1.5	1.8
Belle Mina, AL	1.0	1.0	1.0	1.0	1.0	1.0
Princeton, KY	1.0	2.0	1.0	1.3	1.7	1.7
Jackson, TN	2.0	3.0	2.0	2.0	2.0	3.0
			DELTA			
Portageville, MO (A)	2.0	2.0	1.0	2.5	2.5	2.0
Portageville, MO (B)	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
Jonesboro, AR	1.7	2.7	1.0	3.0	2.7	3.3
Pine Tree, AR	1.0	1.0	1.0	1.0	1.0	1.3
Stoneville, MS (A)	2.0	3.0	2.0	3.0	2.0	3.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	1.2	1.8	1.0	1.6	1.3	1.7
			WEST			
Ottawa, KS	2.0	2.0	1.0	2.0	2.0	2.7
Pittsburg, KS	3.0	3.3	2.0	3.0	3.7	3.3
Chanute, KS	1.7	2.0	1.0	2.0	1.7	2.0
Stuttgart, AR	1.2	2.0	1.1	1.4	1.1	1.2
Bossier City, LA	1.0	1.0	1.0	1.0	1.2	1.0
Bixby, OK	2.0	2.0	1.0	2.0	1.0	2.0
Lubbock, TX	1.7	2.3	1.3	1.5	1.8	1.3
Beaumont,TX	1.0	1.3	1.0	1.3	1.0	1.5

Table 21 - Seed quality scores for the strains in Uniform Group V, 1988

Location	Essex	Forrest	N83-375	R83-310	D82-2896	Md83-5078
		EAST COAST				
Queenstown, MD	1.0	1.8	1.7	1.3	1.0	1.0
Georgetown, DE	2.5	2.0	1.5	1.5	1.5	1.5
Warsaw,VA	1.0	1.2	1.0	1.0	1.2	1.0
Holland, VA	1.0	1.0	1.0	1.0	1.0	1.0
Plymouth, NC	2.0	1.5	2.0	2.0	2.0	2.0
		UPPER AND CENTRAL SOUTH				
Orange, VA	1.0	1.0	1.0	1.0	1.0	1.0
Knoxville, TN	1.5	2.5	1.8	2.0	1.2	3.0
Calhoun, GA	2.3	2.0	2.0	1.7	1.7	1.7
Athens, GA	1.8	2.0	1.8	2.0	2.0	2.0
Princeton, KY	1.0	2.0	2.0	2.0	1.0	2.0
Jackson, TN	2.0	2.0	2.5	2.0	1.5	2.0
		DELTA				
Portageville, MO (A)	2.5	2.0	2.5	2.0	2.0	2.0
Portageville, MO (B)	3.0	1.5	2.0	1.5	2.0	1.5
Keiser, AR	2.0	1.0	2.5	2.5	1.5	2.0
Jonesboro, AR	3.0	2.3	2.7	2.3	2.0	2.3
Pine Tree, AR	2.7	3.0	2.7	2.7	2.3	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	2.4	2.5	2.8	2.5	2.3	2.2
		WEST				
Ottawa, KS	2.0	2.0	3.0	2.0	2.0	2.0
Pittsburg, KS	2.0	2.0	2.0	2.0	2.0	2.0
Stuttgart, AR	2.5	2.5	2.5	2.3	2.5	2.2
Lubbock, TX	1.3	1.5	2.0	1.5	1.5	1.5
Beaumont,TX	2.2	3.2	1.7	2.0	2.2	2.7

Table 21 - (continued)

Location	N84-507	R83-1342	N85-578	R85-164	R85-3280	S85-1706
			EAST COAST			
Queenstown, MD	1.0	1.5	1.2	1.2	1.0	1.3
Georgetown, DE	1.5	1.5	1.5	1.5	1.5	1.0
Warsaw,VA	1.0	1.2	1.3	1.2	1.0	1.5
Holland, VA	1.0	1.0	1.0	1.0	1.0	1.0
Plymouth, NC	1.5	2.0	2.0	1.5	1.5	2.0
			UPPER AND CENTRAL SOUTH			
Orange, VA	1.0	1.0	1.0	1.0	1.0	1.0
Knoxville, TN	2.0	1.7	1.7	1.5	2.0	1.2
Calhoun, GA	2.0	2.0	2.3	1.7	1.3	2.0
Athens, GA	2.0	1.8	2.2	1.8	1.5	2.2
Princeton, KY	1.0	2.0	1.0	2.0	1.0	1.0
Jackson, TN	2.5	2.0	1.5	2.0	2.0	1.5
			DELTA			
Portageville, MO (A)	2.5	2.5	2.5	2.5	2.5	2.5
Portageville, MO (B)	2.0	1.5	2.5	2.0	2.0	2.5
Keiser, AR	2.5	2.0	2.5	2.5	2.5	2.0
Jonesboro, AR	2.0	2.7	2.3	2.7	2.3	2.3
Pine Tree, AR	2.0	2.0	2.7	2.3	2.3	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	2.6	2.5	2.8	2.7	2.6	2.3
			WEST			
Ottawa, KS	2.0	2.0	2.0	2.0	1.0	3.0
Pittsburg, KS	2.0	2.0	2.0	2.0	2.0	2.0
Stuttgart, AR	2.7	2.0	3.0	2.2	2.0	2.5
Lubbock, TX	1.7	1.5	2.0	1.5	1.3	2.0
Beaumont,TX	2.0	2.5	2.8	3.3	3.0	3.0

PRELIMINARY GROUP V

1988

Preliminary Group V nurseries, which included Forrest and Stafford along with 34 experimental strains were grown at 8 locations. The parentage for each of the strains is recorded in Table 22. A general summary of performance is reported in Table 23. This includes the mean seed yield, maturity index, plant height, percent protein, percent oil and reaction to the two root-knot nematodes species M. incognita and M. arenaria and to the SCN races 3 and 4. Data from individual locations are recorded in Tables 24 - 28.

Stafford averaged 10 days earlier in maturity than Forrest. There were no strains earlier in maturity than Stafford, and the latest maturing line was only two days later than Forrest.

Differences among strains for seed yield was significant at the 5% level of confidence in 7 of the 8 plantings. Forrest had a mean seed yield of 44.7 bushels per acre. There were no strains having a mean seed yield significantly greater than that for Forrest at the 5% level of confidence. There were 3 strains that had seed yields significantly lower than that for Forrest. There were 7 strains that had seed yields slightly above that for Forrest.

There were 12 strains which were rated resistant to SCN races 3 and 4. Four of these, D86-8030, R86-209, S86-2567 and S86-2571 were also rated resistant to both root-knot species.

Strains which appear to merit advance to Uniform Group V are D85-7762, D85-7985, K81-27-278, RJ84-1862 and S85-1009.

TABLE 22 - PARENTAGE OF THE STRAINS GROWN IN PRELIMINARY GROUP V, 1988

	VARIETY OR STRAIN	PARENTAGE	GENERATION COMPOSITED
1.	FORREST	DYER X BRAGG	F5
2.	STAFFORD	V66-318 X V68-2331	F5
3.	D85-5891	FORREST(2) X D79-5304	F5
4.	D85-7762	EPPS X D77-5169	F5
5.	D85-7985	EPPS X D77-5169	F5
6.	D86-102	BEDFORD X D77-5769	F5
7.	D86-7721	EPPS X D82-9621	F5
8.	D86-7948	EPPS X D77-5169	F5
9.	D86-8093	LEFLORE X D82-9528	F5
10.	K81-9-395	ESSEX X K1061	F5
11.	K81-27-92	FORREST X ESSEX	F5
12.	K81-27-178	FORREST X ESSEX	F5
13.	K81-27-201	FORREST X ESSEX	F5
14.	K81-27-247	FORREST X ESSEX	F5
15.	K81-27-278	FORREST X ESSEX	F5
16.	N86-820	N80-50075 X N80-50343	F5
17.	N86-7682	N77-114 X PIXIE	F5
18.	N86-7687	N77-114 X PIXIE	F5
19.	N86-7727	N77-114 X PIXIE	F5
20.	R86-209	JEFF X D77-5064	F5
21.	R86-549	A5474 X JEFF	F5
22.	R86-772	(CENTENNIAL X JEFF) X (NAROW X R75-579)	F4
23.	R86-2100	JEFF X A5618	F6
24.	R86-5289	(R76-717 X R75-579) X (JEFF X DAVIS)	F6
25.	RJ84-1822	(R70-580 X FORREST) X BEDFORD	
26.	S84-1588	EPPS X D77-5169	
27.	S85-1009	BRADLEY X ESSEX	
28.	S86-2567	BEDFORD X ESSEX	
29.	S86-2571	BEDFORD X ESSEX	
30.	TN82-268	ESSEX X (BAY X N73-520)	F5
31.	TN86-58	TN5-85 X TN80-70	F6
32.	V84-12	ESSEX X A5618	F5
33.	V84-334	N76-098 X V75-35	F5
34.	V84-440	N76-098 X V75-35	F5
35.	V84-667	ESSEX X MD71-583	F5
36.	V84-1787	EPPS X L77-994	F5

TABLE 23 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN PRELIMINARY GROUP V, 1988

STRAIN	Seed yield	Mat. index	Percent Ht.	Percent Oil	Percent Protein	M. incognita	M. arenaria	SCN 3	SCN 4
FORREST	44.7	10-22	36	21.7	37.3	1.0	2.0	R	S
STAFFORD	41.4	-10	28	22.0	39.2+	5.0	2.1	S	S
D85-5891	42.7	0	38	21.2	38.1	1.0	4.7	R	S[1]
D85-7762	45.2	-5	34	20.6-	39.9	1.3	3.2	R	R
D85-7985	47.8	-4	36	21.2	40.0+	5.0	2.5	R	R
D86-102	37.0-	+1	44	18.2	43.7+	1.0	2.7	S	S
D86-7721	41.1	-5	33	20.3-	39.3+	3.0	1.4	R	R
D86-7948	42.7	-4	35	20.4-	39.0+	5.0	2.0	R	R
D86-8093	42.4	-6	41	20.3-	39.8+	1.5	1.0	R	R
K81-9-395	44.1	-2	38	21.2	40.0+	5.0	2.1	S	S
K81-27-92	44.4	-1	32	21.9	39.5+	1.7	4.1	R	S
K81-27-178	42.3	-5	31	21.5	40.6+	1.3	1.0	S	S
K81-27-201	43.6	-1	35	21.4	39.2+	5.0	1.7	S	S
K81-27-247	43.6	+1	33	21.4	39.9+	4.7	2.1	S	S
K81-27-278	45.3	-1	32	21.9	38.6+	1.7	2.0	h	S
N86-820	42.1	-2	36	21.4	38.2	1.3	1.7	h	S
N86-7682	46.0	-3	35	21.2	39.1+	5.0	2.3	S	S
N86-7687	46.7	0	33	22.4+	38.7+	5.0	4.2	S	S
N86-7727	46.2	+2	33	21.6	39.1+	5.0	4.0	S	S
R86-209	40.4-	-10	40	20.9-	38.0	2.0	1.4	R	R
R86-549	41.6	-6	39	20.0-	40.9+	5.0	4.7	R	R
R86-772	42.7	-5	37	20.8-	39.8+	1.0	5.0	R	S
R86-2100	41.2	+3	37	21.3	37.3	1.3	1.3	S	S
R86-5289	42.0	+1	35	20.5-	38.8+	5.0	1.3	S	S
RJ84-1822	44.9	-2	41	21.0	36.7	1.0	2.0	h	h
S84-1588	44.2	-1	36	20.4-	40.1+	5.0	4.7	R	R
S85-1009	48.5	-2	33	20.5-	40.5+	4.7	2.3	R	R
S86-2567	44.4	0	36	21.0	37.3	1.0	1.3	R	R
S86-2571	44.1	-1	35	21.3	36.0+	1.3	1.7	R	R
Tn82-268	42.5	-8	30	21.2	40.0+	4.7	2.4	S	S
Tn86-58	42.8	-8	36	22.0	39.2+	4.3		S	S
V84-12	44.2	-7	34	20.6-	40.5+	5.0	3.4	S	S
V84-334	38.9-	-3	31	22.0	40.2+	5.0	3.4	S	S
V84-440	43.1	+2	29	22.2	37.8	5.0	3.3	S	S
V84-667	42.6	+2	33	21.6	38.2	5.0	1.3	S	S
V84-1787	41.1	+1	37	20.7-	40.8+	4.7	2.6	R	R
LSD (.05)	4.0			0.7	1.3				
C.V.	9%			2.5%	2.5%				

+ or - designations refer to differences from Forrest.
[1] resistant to SCN Race 5.

TABLE 24 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN PRELIMINARY GROUP V, 1988

STRAIN	WARSAW, VA	PLY-MOUTH, NC	PORTAGE-VILLE, MO (A)	TIPTON-VILLE, TN	KEISER, AR	STONE-VILLE, MS (A)	STONE-VILLE, MS (B)	PITTS-BURG KS
FORREST	20.5	49.2	43.4	39.6	60.5	51.8	45.8	46.9
STAFFORD	16.5	51.9	41.1	32.9	56.3	48.7	35.2-	48.2
D85-5891	23.1	50.0	41.7	35.5	59.5	48.4	41.8	41.8
D85-7762	26.1	44.4	44.1	35.3	70.0	54.2	43.1	44.1
D85-7985	18.5	53.1	43.6	43.1	73.1+	54.8	49.4	46.6
D86-102	15.6	39.8	42.6	27.8-	52.6	45.1	36.9-	35.5-
D86-7721	20.3	45.7	40.4	38.2	56.0	47.1	36.3-	44.6
D86-7948	17.3	46.7	42.8	40.9	62.0	44.2-	42.7	44.6
D86-8093	19.6	51.1	39.7	39.4	60.1	48.3	40.4	40.7-
K81-9-395	21.3	49.9	42.4	39.8	61.7	46.9	41.5	49.2
K81-27-92	17.9	56.9	46.6	38.1	52.9	53.7	40.2	48.8
K81-27-178	18.5	52.0	40.1	34.6	62.3	49.4	37.3-	44.3
K81-27-201	21.5	54.7	43.9	36.7	59.8	47.8	41.2	43.4
K81-27-247	15.6	50.9	41.2	31.0	65.9	57.9	44.0	42.1
K81-27-278	16.6	62.0	45.4	34.0	58.7	62.0+	40.5	42.8
N86-820	21.4	46.2	36.6-	45.4	51.9	48.2	38.1	48.6
N86-7682	19.4	52.5	41.8	44.2	69.2	48.9	47.5	44.3
N86-7687	17.3	55.8	40.2	41.0	63.5	56.3	47.8	52.0
N86-7727	20.9	56.6	43.1	39.4	65.2	54.3	45.2	44.8
R86-209	19.4	49.3	37.8	37.9	52.4	51.8	35.8-	38.9-
R86-549	20.3	46.0	41.3	35.9	57.8	48.1	40.4	43.0
R86-772	19.2	46.0	41.1	37.9	60.5	51.4	40.9	44.9
R86-2100	22.9	43.3	38.7	40.4	34.1-	51.2	47.7	50.9
R86-5289	18.2	47.8	41.1	42.6	58.3	39.6-	39.6	48.7
RJ84-1822	22.0	51.8	39.2	37.6	70.2	48.9	49.0	40.5-
S84-1588	20.2	52.7	44.4	42.0	63.1	49.7	36.6-	44.6
S85-1009	21.2	60.8	47.3	39.6	70.2	58.9	45.6	44.3
S86-2567	19.2	54.6	42.4	38.7	62.3	49.1	43.3	45.8
S86-2571	17.4	49.6	40.3	37.7	67.3	51.1	46.2	43.5
TN82-268	11.7-	45.2	45.2	32.1	68.5	51.3	38.8	47.4
TN86-58	17.9	49.1	38.5	32.9	60.3	61.0+	42.8	39.8-
V84-12	20.9	58.5	40.0	39.7	53.9	52.0	45.0	43.3
V84-334	15.3	52.1	37.5	32.6	47.7-	47.1	39.1	39.8-
V84-440	15.7	57.4	38.1	36.9	59.2	47.9	45.0	44.7
V84-667	17.4	53.8	37.6	34.2	63.2	48.3	41.4	44.5
V84-1787	16.3	50.3	38.7	36.8	59.7	48.3	38.9	40.1-
LSD (.05)	5.9	N.S.	6.3	9.0	11.6	7.2	7.7	5.8
C.V.	15%	11%	8%	12%	9%	7%	9%	6%

TABLE 25 - OIL PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP V, 1988

STRAIN	WARSAW, VA	PLY-MOUTH, NC	PORTAGE-VILLE, MO (A)	KEISER, AR	STONE-VILLE, MS (A)
FORREST	22.4	21.5	21.5	22.0	21.1
STAFFORD	22.5	20.9	21.3	23.4	22.1
D85-5891	22.3	20.5	20.5	21.5	21.2
D85-7762	21.1	20.4	20.7	20.0	21.1
D85-7985	21.6	21.3	20.6	21.3	21.1
D86-102	19.9	17.4	18.3	18.1	17.1
D86-7721	21.1	19.3	20.6	20.2	20.3
D86-7948	21.3	19.9	19.6	20.6	20.4
D86-8093	20.4	20.0	20.6	20.3	20.4
K81-9-395	21.9	20.8	20.9	21.0	21.2
K81-27-92	22.9	21.3	21.2	22.5	21.5
K81-27-178	22.5	21.6	21.1	21.4	20.8
K81-27-201	21.9	21.4	21.3	20.9	21.7
K81-27-247	22.2	21.2	21.2	21.0	21.3
K81-27-278	22.7	21.5	21.6	22.0	21.6
N86-820	22.1	21.1	20.8	22.2	20.9
N86-7682	21.5	21.0	20.5	22.4	20.7
N86-7687	22.4	22.2	20.9	21.6	21.8
N86-7727	23.1	21.3	20.7	21.2	21.6
R86-209	21.0	19.9	21.1	21.2	21.4
R86-549	20.4	19.1	20.4	20.5	19.4
R86-772	21.6	20.1	20.5	21.0	21.0
R86-2100	21.0	21.2	21.5	21.3	21.7
R86-5289	21.7	20.1	20.2	20.8	19.8
RJ84-1822	21.2	20.9	20.9	21.5	20.7
S84-1588	21.5	19.4	20.2	20.9	19.8
S85-1009	21.9	20.0	19.9	20.7	20.1
S86-2567	21.6	20.4	20.7	20.9	21.3
S86-2571	21.9	20.3	21.2	21.6	21.3
TN82-268	21.0	21.5	21.0	21.5	21.0
TN86-58	22.4	20.9	22.5	22.5	21.6
V84-12	20.5	20.5	19.9	21.0	20.9
V84-334	22.9	21.6	21.1	21.9	22.3
V84-440	21.9	21.9	22.1	23.1	21.8
V84-667	22.4	20.7	21.3	22.1	21.3
V84-1787	21.3	19.8	20.7	20.9	20.8

TABLE 26 - PROTEIN PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP V, 1988

STRAIN	WARSAW, VA	PLY-MOUTH, NC	PORTAGE-VILLE, MO(A)	KEISER, AR	STONE-VILLE, MS(A)
FORREST	35.0	38.8	36.8	36.2	39.9
STAFFORD	37.9	41.7	38.7	37.4	40.1
D85-5891	34.0	40.1	39.4	36.8	40.4
D85-7762	36.8	40.9	39.6	40.9	41.4
D85-7985	36.0	40.9	40.8	40.2	42.0
D86-102	39.8	45.7	43.8	43.4	45.5
D86-7721	35.2	41.4	39.1	39.5	41.2
D86-7948	35.4	41.1	40.0	38.0	40.6
D86-8093	35.9	41.3	40.0	39.8	41.8
K81-9-395	36.3	41.4	40.6	39.0	42.5
K81-27-92	36.4	41.0	40.2	38.3	41.5
K81-27-178	36.9	41.8	41.2	40.1	42.9
K81-27-201	36.4	40.8	39.0	39.8	40.2
K81-27-247	37.4	41.4	40.0	38.9	41.8
K81-27-278	35.8	41.0	36.3	38.8	41.3
N86-820	34.0	38.7	41.1	36.6	40.5
N86-7682	37.4	40.3	40.2	37.4	40.0
N86-7687	37.0	39.2	40.1	37.2	39.8
N86-7727	37.0	40.0	40.7	37.9	40.0
R86-209	34.7	40.5	37.9	36.8	39.9
R86-549	36.5	43.5	41.2	40.0	43.6
R86-772	34.0	43.4	40.6	39.9	41.2
R86-2100	31.4	40.5	38.0	37.1	39.5
R86-5289	33.1	41.1	39.5	38.1	42.3
RJ84-1822	32.8	39.0	37.1	35.5	39.2
S84-1588	35.9	42.8	39.7	39.1	43.1
S85-1009	36.5	42.5	41.2	39.4	42.7
S86-2567	33.7	39.7	36.9	37.6	38.4
S86-2571	31.9	38.8	35.8	35.1	38.3
TN82-268	37.8	40.7	39.7	38.0	42.0
TN86-58	37.8	41.0	37.2	37.8	42.1
V84-12	36.4	42.2	41.5	39.4	42.8
V84-334	35.5	41.5	41.3	39.5	43.0
V84-440	36.4	38.9	37.9	35.9	39.8
V84-667	35.7	40.2	38.7	36.3	40.0
V84-1787	37.1	42.9	40.4	41.0	42.6

TABLE 27 - PLANT HEIGHT PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP V, 1988

STRAIN	WARSAW, VA	PLY-MOUTH, NC	PORTAGE-VILLE, MO (A)	TIPTON-VILLE, TN	KEISER, AR	STONE-VILLE, MS (A)	STONE-VILLE, MS (B)	PITTS-BURG, KS
FORREST	27	37	47	37	30	40	30	37
STAFFORD	18	33	23	33	23	39	19	33
D85-5891	30	42	45	42	32	43	28	43
D85-7762	26	35	40	35	27	36	26	42
D85-7985	26	40	44	40	34	35	29	38
D86-102	28	45	53	45	46	49	34	49
D86-7721	24	34	39	34	35	37	25	37
D86-7948	25	39	43	39	31	37	28	38
D86-8093	29	43	50	43	41	49	30	47
K81-9-395	22	41	41	41	38	49	30	44
K81-27-92	22	40	33	40	24	37	21	35
K81-27-178	24	36	36	36	27	34	22	36
K81-27-201	28	40	39	40	30	38	25	37
K81-27-247	25	38	33	38	31	38	22	37
K81-27-278	24	41	33	41	23	38	20	34
N86-820	28	39	45	39	30	41	26	37
N86-7682	24	39	43	39	28	40	27	39
N86-7687	22	39	38	39	28	37	24	36
N86-7727	24	37	41	37	26	38	25	37
R86-209	28	44	47	44	39	41	28	47
R86-549	30	43	47	43	37	40	30	42
R86-772	23	42	42	42	37	41	26	41
R86-2100	28	43	46	43	30	42	27	40
R86-5289	23	40	44	40	32	40	23	40
RJ84-1822	28	42	50	42	44	47	33	45
S84-1588	28	39	45	39	35	35	29	39
S85-1009	23	38	41	38	32	38	28	34
S86-2567	28	40	41	40	30	39	27	40
S86-2571	26	40	38	40	33	38	26	40
TN82-268	21	35	33	35	27	34	22	32
TN86-58	22	45	42	45	30	38	25	38
V84-12	25	37	41	37	29	38	25	37
V84-334	22	35	34	35	27	35	25	37
V84-440	19	33	28	33	20	37	23	35
V84-667	22	38	37	38	31	37	23	38
V84-1787	24	39	43	39	36	41	29	43

TABLE 28 - SEED QUALITY SCORES FOR THE STRAINS IN PRELIMINARY GROUP V, 1988

STRAIN	WARSAW, VA	PLY-MOUTH, NC	PORTAGE-VILLE, MO (A)	KEISER, AR	STONE-VILLE, MS (A)	STONE-VILLE, MS (B)	PITTS-BURG, KS
FORREST	1.0	2.0	2.0	2.0	2.0	2.0	2.0
STAFFORD	1.5	2.0	2.0	3.5	2.0	2.0	1.0
D85-5891	1.5	2.0	2.0	1.0	2.0	2.0	2.0
D85-7762	1.8	1.5	2.0	2.5	2.0	2.0	2.0
D85-7985	1.0	2.0	2.0	3.5	2.0	2.0	2.0
D86-102	1.2	2.0	2.0	2.0	2.0	2.0	1.0
D86-7721	1.0	2.5	2.5	2.5	2.0	2.0	2.0
D86-7948	1.0	1.5	2.0	1.5	2.0	2.0	2.0
D86-8093	1.0	2.0	2.0	2.5	2.0	2.0	2.0
K81-9-395	1.0	1.5	2.0	2.0	2.0	2.0	2.0
K81-27-92	1.5	1.5	2.0	1.5	2.0	2.0	2.0
K81-27-178	1.5	2.0	2.0	2.5	2.0	2.0	2.0
K81-27-201	1.2	1.5	2.0	2.0	2.0	2.0	1.0
K81-27-247	1.5	2.0	2.5	2.0	2.0	2.0	2.0
K81-27-278	1.2	1.5	2.0	1.5	2.0	2.0	2.0
N86-820	1.2	1.5	2.5	2.0	2.0	2.0	3.0
N86-7682	1.2	2.0	2.5	3.5	2.0	2.0	2.0
N86-7687	1.0	2.0	2.5	2.5	2.0	2.0	2.0
N86-7727	1.0	2.0	2.5	2.5	2.0	2.0	2.0
R86-209	1.3	2.0	2.0	2.0	2.5	2.0	2.0
R86-549	1.3	2.0	2.0	2.0	2.0	2.0	2.0
R86-772	1.0	2.0	2.0	2.0	2.0	2.0	2.0
R86-2100	1.0	2.0	2.0	3.0	2.0	2.0	2.0
R86-5289	1.0	2.0	2.0	2.0	2.0	2.0	1.0
RJ84-1822	1.0	2.0	2.5	3.0	2.0	2.0	3.0
S84-1588	1.2	2.0	2.5	2.0	2.0	2.0	1.0
S85-1009	1.2	2.0	2.5	2.5	2.0	2.0	2.0
S86-2567	1.0	2.0	2.5	2.0	2.0	2.0	2.0
S86-2571	1.0	2.0	2.0	1.5	2.0	2.0	1.0
TN82-268	1.5	2.0	2.5	3.0	2.0	2.0	2.0
TN86-58	1.2	2.0	2.5	2.0	2.0	2.0	1.0
V84-12	1.0	2.0	2.5	3.0	2.0	2.0	2.0
V84-334	1.0	1.5	2.0	1.5	2.0	2.0	1.0
V84-440	1.0	2.0	2.5	2.0	2.0	2.0	2.0
V84-667	1.0	2.0	2.5	1.5	2.0	2.0	1.0
V84-1787	1.0	2.0	2.5	2.5	2.0	2.0	1.0

UNIFORM GROUP VI

1988

	Variety or strain	Parentage	Generation composited
1.	Leflore	Centennial X J74-47	F_5
2.	Sharkey	Tracy X Centennial	F_5
3.	Lamar (D82-3885)	Tracy-M X sel (Centennial X D75-10169)	F_5
4.	G81-234	Centennial X Bedford	F_6
5.	Au82-589	N74-1572 X F76-8846	F_6
6.	G82-481	D74-7741 X F76-8846	F_6
7.	D84-7174	D77-12 X D77-6057	F_5
8.	G83-198	D74-7741 X Young	F_6
9.	G83-1243	D77-6103 X F77-6790	F_6
10.	N85-492	N77-179 X Johnston	F_6
11.	S84-1876	Bedford X Essex	F_5
12.	SC84-1531	Braxton X Young	F_5

Background of lines used as parents:

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

D75-10169 is a foliar-feeding insect resistant strain from Govan X sel (Bragg X PI 229358).

N74-1572 is a selection from Govan X Davis.

F76-8846 is a selection from Centennial X {Forrest X (Cobb X D68-216)}.

D74-7741 is a selection from Forrest X D70-3001 which was grown in Uniform Group VI 1977-1979. D77-3001 is of the same parentage as Centennial.

D77-12 is a selection from Forest (2) X Tracy.

D77-6057 is a selection from Centennial X J74-47. J74-47 is a SCN race 4 selection. Parentage same as Bedford.

F77-6790 is a selection from Forret X (Cobb X D68-216).

N77-179 was grown in Uniform Group V in 1980.

UNIFORM GROUP VI

Plantings of Uniform Group VI were made at 32 locations. A general summary of performance of these lines is reported in Table 29. Included are one-, two- and three-year mean seed yields reported by production regions, one-, two- and three-year mean protein percentage and mean oil percentage, ratings for reaction to the two root-knot species M. incognita and M. arenaria, races 3 and 4 of SCN, ratings for feeding by soybean looper, and information on general plant characteristics. Data from individual locations are presented in Tables 30-35.

Ratings for reaction to the root-knot species were made in the greenhouse at the University of Georgia at Athens. Ratings for reaction to cyst nematode races 3 and 4 were made in the greenhouse at Jackson, Tn. Ratings for feeding by soybean looper were made in the field cage at Stoneville, MS.

Two strains, D82-3885 and G81-234 have been evaluated 3 years. D82-3885 is being released for production and has been given the name Lamar. D82-3885 is being released primarily because of its high level of resistance to feeding by foliar feeding insects. Primary evaluation has been with soybean looper and velvet bean caterpillar, but it has also show good resistance to feeding by corn ear worm and beet army worm. It has good resistance to bacterial pustule, phytophthora rot, stem canker and the common root-knot nematode M. incognita. In some evaluations it has appeared resistant to SCN race 3. It appears to have a partial complement of the genes necessary to give resistance to SCN race 3, as, in crosses with SCN recognized race 3 resistant material, the percentage of lines obtained that are resistant to SCN race 3 is much higher than would be expected if it were completely susceptible.

G82-234 is also being increased for release. It has yielded well in all areas and has good resistance to both species of root knot nematodes and to SCN race 3.

Table 29 - General summary of performance for the strains grown in Uniform Group VI, 1988

	No.of locations	Leflore	Sharkey	Lamar (D82-3885)	G81-234	Au82-589
Seed Yield - 1988						
East Coast	6	36.5	34.8	37.2	37.1	35.6
Southeast	6	45.4	41.5	41.1	44.5	44.9
Upper and Central South	6	50.2	48.2	49.0	49.2	50.1
Delta	9	39.8	42.0	37.5	45.1	40.6
West	4	34.1	35.1	34.7	40.3	41.7
1987-88						
East Coast		37.0	35.5	37.0	37.4	36.3
Southeast		42.1	41.2	38.8	43.2	42.3
Upper & Central South		42.9	41.1	43.1	42.3	44.0
Delta		37.0	38.2	35.6	43.1	38.9
West		38.0	40.7	39.2	40.0	44.4
1986-88						
East Coast		38.5	37.7	38.1	39.3	
Southeast		42.2	40.1	38.5	42.8	
Upper & Central South		43.7	41.5	42.5	43.0	
Delta		38.7	39.4	36.0	43.2	
West		38.7	40.9	39.0	42.9	
Oil Content - 1988		19.8	19.2	20.0	20.9	20.0
1987-88		19.2	18.6	19.4	20.0	19.4
1986-88		19.1	19.1	19.2	20.0	
Protein Content - 1988		41.3	42.8	43.0	39.4	41.4
1987-88		41.5	42.6	42.6	39.6	41.7
1986-88		41.7	42.6	42.7	40.0	
Seed size		13.3	15.3	14.1	13.5	11.2
Maturity index		10-20	+1	+1	+2	+2 +3
Height		38	41	36	38	35
Seed quality		1.9	2.0	1.9	1.9	1.7
M.incognita		2.1	4.0	1.2	1.2	1.8
M. arenaria		2.2	3.2	4.0	1.2	2.5
SCN race 3		R	R	S	R	S
SCN race 4		R	S	S	S	S
Soybean looper		4	4	1.5	4	4
Flower color		P	W	W	P	P
Pubescence color		T	T	T	T	G
Pod wall color		Tn	Tn	Tn	Tn	Tn
Frogeye		2.3	1.7	2.7	1.0	1.0

Table 29 - (continued)

	G82-481	D84-7174	G83-198	G83-1243	N85-492	S84-1876	SC84-1531
Seed Yield - 1988							
East Coast	36.3	36.8	40.9	34.5	39.0	35.5	37.8
Southeast	45.2	46.8	45.3	43.7	42.7	42.6	43.6
Upper & Central South	47.9	50.8	53.1	48.5	50.9	48.3	50.8
Delta	40.0	43.4	48.4	41.8	48.3	48.6	49.8
West	34.2	38.3	38.2	38.1	43.0	39.6	41.3
1987-88							
East Coast	37.2						
Southeast	42.4						
Upper & Central South	42.7						
Delta	38.8						
West	38.7						
1986-88							
East Coast							
Southeast							
Upper & Central South							
Delta							
West							
Oil Content - 1988	20.6	19.8	21.7	20.6	22.7	21.1	19.8
1987-88	20.0						
1986-88							
Protein Content - 1988	40.9	41.3	41.3	40.1	39.4	39.8	41.3
1987-88	41.2						
1986-88							
Seed size	12.2	12.5	12.4	13.0	15.3	12.7	15.0
Maturity index	-1	+3	0	+1	-3	-6	+3
Height	38	36	33	38	29	34	38
Seed quality	1.8	2.0	1.9	1.9	2.2	1.9	1.9
M. incognita	1.0	1.0	1.6	1.0	3.0	1.0	4.2
M. arenaria	1.2	2.2	2.2	1.8	4.0	1.5	2.2
SCN race 3	R	R	R	R	S	R	S
SCN race 4	S	R	S	S	S	R	S
Soybean looper	4	4	4	4	4	4	5
Flower color	P	W	W	P	P	W	P
Pubescence color	T	T	T	T	T	G	G
Pod wall color	Br	Tn	Tn	Tn	Br	Tn	Tn
Frogeye	3.0	2.3	1.0	1.0	1.7	1.0	1.0

Table 30 - Seed yield, in bushels per acre, for the strains in Uniform Group VI, 1988

Location	Leflore	Sharkey	Lamar	G81-234	Au82-589	G82-481	D84-7174
			EAST COAST				
Warsaw, VA	19.1	20.4	17.2	17.2	17.9	18.1	16.6
Holland, VA	34.2	36.2	36.3	34.8	35.1	36.7	35.4
Plymouth, NC	45.6	40.7	49.5	48.1	43.8	45.5	46.8
Kinston, NC	40.6	33.5	46.0	40.2	36.8	35.8	39.4
Florence, SC	39.1	38.7	38.6	39.0	44.4+	41.4	39.0
Hartsville, SC	40.3	39.3	35.6	43.0	35.4-	40.3	43.3
Mean	36.5	34.8	37.2	37.1	35.6	36.3	36.8
			SOUTHEAST				
Blackville, SC	47.1	39.1-	43.7	42.9	44.0	42.6	44.4
Tifton, GA *	55.7	54.5	52.7	54.0	57.6	61.9	58.2
Quincy, FL	53.4	49.4	49.4	55.3	60.5+	53.1	56.4
Jay, FL	40.3	40.0	29.3-	39.0	32.3-	40.0	38.1
Fairhope, AL	44.2	45.4	38.7	53.5+	39.3	41.4	55.4
Baton Rouge, LA	39.8	38.2	36.5	44.1	49.6+	44.4	39.6
Tallassee, AL	47.5	36.8	48.8	32.0-	43.5	49.4	46.8
Mean	45.4	41.5	41.1	44.5	44.9	45.2	46.8
			UPPER AND CENTRAL SOUTH				
Athens, GA	55.0	53.4	53.0	59.9	57.2	55.0	56.6
Calhoun, GA	54.8	60.8	65.3	58.4	66.2	60.5	62.6
Belle Mina, AL	47.6	37.9	38.0	41.1	42.6	42.5	43.5
Clemson, SC	42.0	35.2-	42.8	40.4	45.8	43.5	44.3
Jackson, TN	60.8	58.1	54.5	53.6	48.7	47.8	58.1
Verona, MS	41.1	43.8	40.1	41.5	39.9	37.8	39.4
Mean	50.2	48.2	49.0	49.2	50.1	47.9	50.8
			DELTA				
Portageville, MO (A)	35.7	44.3+	32.2	37.1	28.4-	38.6	39.6
Portageville, MO (B)	35.6	41.5+	35.3	41.1+	35.7	40.7+	40.0
Keiser, AR	59.0	60.9	55.1	62.8	56.9	54.8	62.3
Jonesboro, AR	29.0	30.7	28.1	34.2	32.9	28.8	26.6
Pine Tree, AR	36.8	40.2	33.1	45.8+	47.9+	35.3	43.8+
Stoneville, MS (A)	37.8	33.1	34.5	41.5	32.4-	36.6	43.3+
Stoneville, MS (B)	39.3	40.9	38.1	44.4	41.2	40.3	39.4
St. Joseph, LA	48.8	42.4	43.8	50.9	45.0	44.3	53.4
Rohwer, AR	36.3	44.2+	36.9	48.5+	44.9+	40.8+	41.6+
Mean	39.8	42.0	37.5	45.1	40.6	40.0	43.4
			WEST				
Stuttgart, AR	39.2	46.8+	35.7	49.4+	44.7+	39.6	44.4+
Bossier City, LA	28.0	29.4	30.1	34.3	38.9	22.5	33.9
Beaumont, TX	35.5	35.4	33.8	39.7+	41.3+	41.0+	41.2
Bixby, OK	33.5	28.8-	39.1+	37.7+	41.7+	41.9	33.5
Mean	34.1	35.1	34.7	40.3	41.7	34.2	38.3

*Not included in mean

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

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

Table 30 (continued)

Location	G83-198	G83-1243	N85-492	S84-1876	SC84-1531	L.S.D, (.05)	C.V. (%)
			EAST COAST				
Warsaw, VA	20.8	18.4	22.3+	23.5+	17.7	2.8	8
Holland, VA	35.4	32.9	40.0	37.8	37.4	8.7	14
Plymouth, NC	51.4	42.8	54.2	55.3	46.9	NS	12
Kinston, NC	47.5	33.4	45.3	29.5-	38.0	10.2	16
Florence, SC	45.8+	39.6	40.3	33.4-	48.6+	4.7	7
Hartsville, SC	44.4	39.6	32.2-	33.6-	38.4	4.9	7
Mean	40.9	34.5	39.0	35.5	37.8		
			SOUTHEAST				
Blackville, SC	39.9-	40.2-	37.8-	39.2-	40.6	6.7	9
Tifton, GA *	56.4	54.2	58.5	40.8-	60.5	6.8	7
Quincy, FL	58.0	57.0	58.4	53.5	55.4	7.6	8
Jay, FL	37.8	38.1	29.7-	28.6-	40.7	6.2	10
Fairhope, AL	43.3	43.9	43.3	51.4+	43.6	6.5	8
Baton Rouge, LA	43.6	41.5	38.2	44.5	35.3	5.2	7
Tallassee, AL	49.3	41.3	48.9	38.6+	46.0	12.3	13
Mean	45.3	43.7	42.7	42.6	43.6		
			UPPER AND CENTRAL SOUTH				
Athens, GA	59.9	56.0	63.3	55.8	59.3	8.4	
Calhoun, GA	69.0	55.1	60.2	61.4	61.1	13.3	13
Belle Mina, AL	44.6	42.8	41.5	42.4	39.4	NS	11
Clemson, SC	41.9	41.3	42.1	39.4	48.3+	5.5	8
Jackson, TN	59.0	55.1	54.1	56.4	52.3	NS	11
Verona, MS	44.0	40.5	44.2	34.2	44.5	9.3	18
Mean	53.1	48.5	50.9	48.3	50.8		
			DELTA				
Portageville, MO (A)	43.9+	31.7	39.7	37.3	40.7	7.1	11
Portageville, MO (B)	45.5+	37.7	46.1+	45.5+	46.2+	4.7	7
Keiser, AR	67.4+	59.9	65.2+	67.0+	66.7+	5.9	6
Jonesboro, AR	34.2	27.7	38.0+	39.8+	33.6	7.8	14
Pine Tree, AR	50.4+	42.5	46.9+	48.1+	49.2+	6.6	7
Stoneville, MS (A)	44.2+	36.5	47.9+	53.2+	45.5+	4.0	6
Stoneville, MS (B)	44.7	44.8	46.1+	46.2+	50.1+	6.3	9
St. Joseph, LA	57.1+	52.7	61.4+	50.2	63.3+	7.9	9
Rohwer, AR	48.6+	43.0+	43.6+	50.1+	51.3+	4.3	6
Mean	48.4	41.8	48.3	48.6	49.6		
			WEST				
Stuttgart,AR	49.1+	46.8+	52.4+	47.6+	49.5+	4.0	5
Bossier City, LA	25.8	21.8	34.3	40.3	35.3	13.1	25
Beaumont, TX	38.8	43.3+	37.9	32.7	39.6+	3.7	6
Bixby, OK	39.1+	40.5+	47.3+	37.9+	40.9+	4.2	6
Mean	38.2	38.1	43.0	39.6	41.3		

Table 31 - Chemical composition and seed size for the strains in Uniform Group VI, 1988

Location	Leflore	Sharkey	Lamar	G81-234	Au82-589	G82-481
			OIL PERCENTAGE			
Holland, VA	19.5	18.1	19.8	19.6	19.2	20.2
Plymouth, NC	19.2	18.0	19.1	20.8	19.9	20.2
Kinston, NC	19.2	18.4	19.4	20.6	20.0	20.3
Tallassee, AL	20.6	20.1	21.1	22.5	20.5	21.4
Jay, FL	20.8	21.4	20.8	22.4	20.9	22.3
Jackson, TN	20.6	19.9	20.9	21.8	20.4	20.9
Portageville, MO (A)	19.1	18.2	19.3	19.2	19.5	19.6
Keiser, AR	19.0	18.4	19.8	20.7	19.6	20.2
Stoneville,MS (B)	19.5	20.3	19.9	20.5	19.7	20.0
Stuttgart, AR	20.3	19.9	19.4	21.1	19.9	20.7
Mean	19.8	19.3	20.0	20.9	20.0	20.6
			PROTEIN PERCENTAGE			
Holland, VA	40.4	43.0	42.3	39.6	42.2	40.4
Plymouth, NC	41.5	43.4	42.2	39.2	41.3	41.7
Kinston, NC	41.0	43.1	43.0	39.6	41.7	40.6
Tallassee, AL	44.8	44.9	44.7	42.2	43.5	43.7
Jay, FL	41.2	41.8	43.0	39.9	41.7	40.7
Jackson, TN	42.0	43.5	41.5	39.3	41.3	41.0
Portageville,MO (A)	39.5	41.1	40.6	37.4	38.6	39.0
Keiser, AR	40.1	42.5	40.7	37.3	40.5	38.9
Stoneville, MS (B)	40.8	41.6	41.3	39.1	40.6	41.3
Stuttgart, AR	41.9	43.4	43.6	40.0	42.2	41.2
Mean	41.3	42.8	43.0	39.4	41.4	40.9
			GRAMS PER 100 SEED			
Plymouth, NC	13.5	15.5	14.3	13.0	10.6	11.8
Kinston, NC	14.0	15.4	15.0	13.9	11.9	14.1
Tallassee, AL	16.2	17.3	16.5	14.7	13.6	14.7
Jay, FL	12.0	15.0	13.0	13.0	11.0	14.0
Portageville, MO (A)	12.9	14.9	13.6	14.4	10.7	11.3
Keiser, AR	12.2	14.2	13.1	13.0	11.0	10.8
Stoneville, MS (B)	12.4	14.4	13.8	12.3	10.1	10.0
Stuttgart, AR	13.0	15.9	13.2	13.9	10.8	11.1
Mean	13.3	15.3	14.1	13.5	11.2	12.2

Table 31 - (continued)

Location	D84-7174	G83-198	G83-1243	N85-492	S84-1876	SC84-1531
			OIL PERCENTAGE			
Holland, VA	18.7	22.1	20.0	22.9	20.5	19.2
Plymouth, NC	19.2	21.5	19.9	22.4	20.9	19.2
Kinston, NC	19.4	22.0	21.1	22.7	21.5	18.8
Tallassee, AL	20.2	22.5	21.3	23.8	22.9	20.4
Jay, FL	21.1	22.1	21.2	23.0	21.3	21.5
Jackson, TN	20.8	21.8	20.6	22.4	21.0	19.6
Portageville, MO (A)	19.0	21.4	20.1	22.5	20.7	18.6
Keiser, AR	19.4	21.5	21.3	22.7	21.6	19.0
Stoneville, MS (B)	19.7	20.6	20.3	22.3	19.7	21.5
Stuttgart, AR	20.0	21.4	20.5	22.4	21.3	20.1
Mean	19.8	21.7	20.6	22.7	21.1	19.8
			PROTEIN PERCENTAGE			
Holland, VA	41.7	41.6	40.6	39.2	40.9	42.4
Plymouth, NC	42.2	41.6	41.0	40.0	40.1	41.8
Kinston, NC	41.6	41.1	37.7	39.9	39.8	42.7
Tallassee, AL	44.3	45.9	42.9	40.9	40.6	44.2
Jay, FL	40.8	39.5	41.4	39.7	40.5	39.4
Jackson, TN	40.1	41.6	40.1	39.2	39.5	42.5
Portageville, MO (A)	39.1	39.3	37.6	37.4	38.6	39.9
Keiser, AR	40.3	39.3	37.4	38.2	36.8	41.3
Stoneville, MS (B)	40.8	41.7	40.9	39.1	41.3	38.0
Stuttgart, AR	42.0	41.8	41.2	40.2	39.9	40.4
Mean	41.3	41.3	40.1	39.4	39.8	41.3
			GRAMS PER 100 SEED			
Plymouth, NC	12.1	11.6	12.8	14.4	13.0	14.3
Kinston, NC	13.9	12.8	12.6	10.1	14.5	16.3
Tallassee, AL	13.9	15.9	16.5	18.4	12.8	17.6
Jay, FL	12.0	12.0	13.0	13.0	10.0	14.0
Portageville, MO (A)	11.8	11.8	12.6	14.4	12.9	13.9
Keiser, AR	11.7	11.8	11.0	14.0	12.8	14.4
Stoneville, MS (B)	12.0	10.9	11.6	16.2	12.9	14.9
Stuttgart, AR	12.9	12.6	13.5	15.7	13.0	14.5
Mean	12.5	12.4	13.0	15.3	12.7	15.0

Table 32 - Relative maturity data, days earlier (-) or later (+) than Leflore, for the strains in Uniform Group VI-S, 1988

Location	Date Planted	Leflore	Sharkey	Lamar	G81-234	Au82-589
			EAST COAST			
Holland, VA	5-27	F	F	F	F	F
Plymouth, NC	5-27	10-28	+2	+2	+2	+2
Florence, SC	5-26	10-25	+1	+3	+1	+2
Mean	5-27	10-27	+2	+3	+2	+2
			SOUTHEAST			
Blackville, SC	5-31	10-19	+4	+3	+4	+1
Tifton, GA *	5-27	10-14	-1	0	+2	+1
Quincy, FL	6-13	10-12	+2	+4	+5	+5
Jay, FL	6-3	10-14	0	-3	+3	-1
Fairhope, AL	6-14	10-13	+4	+1	+4	+1
Tallassee, AL	5-26	10-23	+1	0	+3	+3
Mean	6-5	10-16	+2	+1	+4	+2
			UPPER AND CENTRAL SOUTH			
Athens, GA	5-17	10-16	0	+2	+3	+4
Calhoun, GA	5-17	F	F	F	F	F
Belle Mina, AL	5-27	10-23	+2	+1	+2	+2
Clemson, SC	5-19	10-26	+4	+1	+4	+2
Jackson, TN	5-12	10-24	+2	+2	0	0
Mean	5-18	10-22	+2	+2	+2	+2
			DELTA			
Portageville, MO (A)	6-1	10-30	+1	0	-6	-2
Portageville, MO (B)	5-6	10-30	-1	+1	-3	-2
Keiser, AR	5-19	10-29	-4	-5	-3	+1
Jonesboro, AR	6-2	10-18	+2	+2	+2	+2
Pine Tree, AR	5-20	10-17	0	0	+1	+3
Stoneville, MS (A)	5-24	10-16	+1	0	+1	-4
Stoneville, MS (B)	6-9	10-20	+1	+1	+1	+1
St. Joseph, LA	5-26	10-14	-3	+1	-3	-1
Rohwer, AR	5-27	10-15	-1	-1	+2	0
Mean	5-25	10-21	0	0	-1	0
			WEST			
Stuttgart, AR	5-18	10-20	-2	+3	+2	+2
Bossier City, LA	5-12	10-11	-1	-1	+3	+4
Beaumont, TX	5-19	10-10	+4	0	+1	0
Mean	5-16	10-14	0	+1	+2	+2

* Not included in mean.

Table 32 - (continued)

Location	G82-481	D84-7174	G83-198	G83-1243	N85-492	S84-1876	SC84-1531
			EAST COAST				
Holland, VA	F	F	F	F	F	F	F
Plymouth, NC	0	+2	+2	+2	0	-2	0
Florence, SC	-2	+3	0	+1	-1	-1	+3
Mean	-1	+3	+1	+2	-1	-1	+2
			SOUTHEAST				
Blackville, SC	0	+5	+2	+1	-1	-2	+7
Tifton, GA *	+1	+3	+1	+3	+1	-8	+4
Quincy, FL	+4	+5	+6	+4	+3	-3	+8
Jay, FL	+2	+1	+3	+1	+2	-5	+3
Fairhope, AL	+4	+5	+3	+3	-5	-6	+5
Tallassee, AL	+3	+3	+3	-3	-3	-14	-1
Mean	+3	+4	+3	+1	-1	-6	+4
			UPPER AND CENTRAL SOUTH				
Athens, GA	+1	+5	+1	0	-1	-6	+6
Calhoun, GA	F	F	F	F	F	F	F
Belle Mina, AL	+1	+2	+2	+2	-2	-3	+2
Clemson, SC	+1	+3	+2	+3	-2	-1	+6
Jackson, TN	-2	+5	0	0	-7	-7	+7
Mean	0	+4	+1	+1	-3	-4	+5
			DELTA				
Portageville, MO (A)	+1	+2	+1	+2	-6	-9	+2
Portageville, MO (B)	0	-1	-2	+1	-4	-11	+1
Keiser, AR	+1	+1	-3	+3	-10	-11	0
Jonesboro, AR	+2	+1	-1	0	-9	-10	+2
Pine Tree, AR	+1	+1	+2	+1	-3	-6	+5
Stoneville, MS (A)	+2	+5	+1	+1	+6	-13	+6
Stoneville, MS (B)	+1	+1	+1	+1	+3	-7	+4
St. Joseph, LA	-4	+4	-3	+1	-1	-7	+2
Rohwer, AR	0	+2	0	+2	-8	-12	+2
Mean	0	+2	-1	+1	-4	-10	+3
			WEST				
Stuttgart, AR	-2	+4	+4	+4	-6	-13	+2
Bossier City, LA	-2	+3	-5	+1	-5	-8	+4
Beaumont, TX	-11	+3	-11	+2	-13	-11	+2
Mean	-5	+3	-4	+2	-8	-11	+3

Table 33 - Plant height for the strains in Uniform Group VI, 1988

Location	Leflore	Sharkey	Lamar	G81-234	Au82-589	G82-481
			EAST COAST			
Warsaw, VA	27	32	28	27	24	25
Holland, VA	46	46	40	43	38	42
Plymouth, NC	40	42	43	42	40	44
Kinston, NC	36	38	36	36	32	34
Florence, SC	36	42	32	39	34	38
Mean	37	40	36	37	34	37
			SOUTHEAST			
Blackville, SC	35	39	30	37	29	31
Tifton, GA *	37	37	30	34	34	36
Quincy, FL	35	43	30	34	31	38
Jay, FL	32	33	29	33	27	35
Fairhope, AL	35	39	33	34	32	36
Baton Rouge, LA	34	42	30	32	37	37
Tallassee, AL	41	39	34	32	37	36
Mean	35	39	31	34	32	36
			UPPER AND CENTRAL SOUTH			
Athens, GA	32	34	32	33	30	33
Calhoun, GA	32	42	36	35	36	35
Belle Mina, AL	41	46	40	44	41	43
Clemson, SC	40	45	39	42	42	40
Jackson, TN	38	41	40	37	37	41
Verona, MS	39	43	39	39	31	37
Mean	37	42	38	38	36	38
			DELTA			
Portageville, MO (A)	52	52	47	35	44	42
Portageville, MO (B)	32	41	35	29	34	27
Keiser, AR	44	44	39	40	35	38
Jonesboro, AR	58	49	50	59	51	54
Pine Tree, AR	46	48	41	49	38	44
Stoneville, MS (A)	47	49	41	41	41	43
Stoneville, MS (B)	33	38	33	34	33	35
St. Joseph, LA	37	46	36	40	35	39
Rohwer, AR	45	44	39	47	39	43
Mean	44	46	40	42	39	41
			WEST			
Stuttgart, AR	40	46	41	38	37	36
Bossier City, LA	28	33	28	30	30	34
Beaumont, TX	31	34	26	33	33	36
Bixby, OK	43	45	39	46	43	41
Mean	36	40	34	37	36	37

*Not included in mean

Table 33 - (continued)

Location	D84-7174	G83-198	G83-1243	N85-492	S84-1876	SC84-1531-
			EAST COAST			
Warsaw, VA	28	23	28	22	28	27
Holland, VA	44	37	46	38	41	40
Plymouth, NC	40	38	41	38	43	43
Kinston, NC	30	30	38	29	28	37
Florence, SC	35	32	38	27	30	38
Mean	35	32	38	31	30	37
			SOUTHEAST			
Blackville, SC	31	29	31	23	32	34
Tifton, GA *	34	35	37	33	34	34
Quincy, FL	34	32	35	24	30	39
Jay, FL	32	29	34	25	25	31
Fairhope, AL	35	33	36	26	35	36
Baton Rouge, LA	32	30	37	34	36	35
Tallassee, AL	36	34	35	25	35	37
Mean	33	31	35	26	32	35
			UPPER AND CENTRAL SOUTH			
Athens, GA	33	28	36	24	34	33
Calhoun, GA	37	36	37	25	30	38
Belle Mina, AL	39	35	44	33	37	43
Clemson, SC	40	37	41	30	36	44
Jackson, TN	37	37	32	44	37	40
Verona, MS	36	31	40	28	35	41
Mean	37	34	38	31	35	40
			DELTA			
Portageville, MO (A)	44	43	48	35	38	48
Portageville, MO (B)	35	23	38	23	28	38
Keiser, AR	39	36	41	26	36	39
Jonesboro, AR	54	47	54	42	49	56
Pine Tree, AR	41	38	46	29	35	46
Stoneville, MS (A)	43	41	45	36	41	44
Stoneville, MS (B)	33	33	34	24	30	37
St. Joseph, LA	34	32	39	26	28	37
Rohwer, AR	40	34	42	30	33	40
Mean	40	36	43	30	38	43
			WEST			
Stuttgart, AR	38	36	47	30	40	44
Bossier City, LA	29	27	28	24	28	28
Beaumont, TX	35	29	31	23	29	35
Bixby, OK	43	38	41	30	37	42
Mean	36	33	37	27	34	37

Table 34 - Lodging scores for the strains in Uniform Group VI, 1988

Location	Leflore	Sharkey	Lamar	G81-234	Au82-589	G82-481
			EAST COAST			
Warsaw, VA	1.0	1.0	1.0	1.0	1.0	1.0
Holland, VA	3.7	4.3	4.0	3.0	3.0	3.3
Plymouth, NC	3.6	4.6	3.6	3.0	3.0	4.0
Kinston, NC	3.0	3.0	3.0	3.0	2.0	3.0
Florence, SC	1.0	1.5	1.7	1.2	1.2	1.3
Hartsville, SC	2.0	2.5	2.2	2.3	1.2	2.8
			SOUTHEAST			
Blackville, SC	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, GA	1.4	2.1	1.4	1.3	1.2	1.5
Quincy, FL	1.0	1.6	1.3	1.0	1.0	1.0
Jay, FL	2.3	3.0	2.0	1.7	2.0	2.7
Fairhope, AL	1.3	2.7	1.3	1.3	1.3	3.0
Baton Rouge, LA	3.0	3.5	3.0	2.5	2.2	3.0
Tallassee, AL	1.0	2.3	1.0	1.0	1.0	1.5
			UPPER AND CENTRAL SOUTH			
Athens, GA	1.5	2.2	2.0	1.5	1.8	1.8
Calhoun, GA	2.0	2.0	1.7	1.3	1.7	1.3
Belle Mina, AL	1.3	2.7	2.0	1.7	1.0	2.0
Clemson, SC	1.2	2.3	1.2	1.3	1.2	1.2
Jackson, TN	2.0	3.0	1.0	3.0	2.0	2.0
Verona, MS	2.0	3.0	3.0	2.3	2.3	2.7
			DELTA			
Portageville, MO (A)	2.0	2.5	1.5	1.0	1.5	2.0
Portageville, MO (B)	1.5	2.5	2.0	1.0	1.5	1.5
Keiser, AR	1.6	2.7	1.3	1.0	1.0	1.0
Jonesboro, AR	3.7	3.3	2.7	3.0	2.0	3.7
Pine Tree, AR	2.0	2.3	2.0	1.7	1.7	2.0
Stoneville, MS (A)	3.3	3.7	3.0	3.0	3.0	4.0
Stoneville, MS (B)	2.0	3.0	2.0	2.0	2.0	2.7
St. Joseph, LA	1.4	3.0	2.3	1.5	1.5	1.9
Rohwer, AR	1.7	3.3	1.7	1.7	1.0	1.7
			WEST			
Stuttgart, AR	2.8	4.2	3.4	2.1	2.6	2.0
Bossier City, LA	1.3	2.2	1.5	1.0	1.0	1.8
Beaumont, TX	1.0	2.2	1.0	1.0	1.0	1.7
Bixby, OK	1.0	2.0	1.0	1.0	1.0	2.0

Table 34 - (continued)

Location	D84-7174	G83-198	G83-1243	N85-492	S84-1876	SC84-1531-
			EAST COAST			
Warsaw, VA	1.0	1.0	1.0	1.0	1.0	1.0
Holland, VA	3.7	3.3	4.0	2.7	2.3	3.0
Plymouth, NC	4.0	3.0	3.0	2.6	3.0	3.0
Kinston, NC	3.0	3.0	3.0	3.0	2.0	2.0
Florence, SC	1.5	1.3	1.0	1.0	1.3	1.5
Hartsville, SC	2.5	1.8	2.2	1.0	1.7	1.5
			SOUTHEAST			
Blackville, SC	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, GA	1.4	1.6	1.5	1.2	1.3	1.3
Quincy, FL	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	2.0	2.3	2.0	1.0	1.3	1.7
Fairhope, AL	2.3	1.7	3.0	1.0	1.3	1.3
Baton Rouge, LA	2.5	3.0	3.0	2.5	2.5	1.5
Tallassee, AL	1.0	1.0	1.0	1.0	1.0	1.0
			UPPER AND CENTRAL SOUTH			
Athens, GA	1.7	1.5	1.7	1.2	1.4	1.5
Calhoun, GA	1.3	1.7	2.0	1.3	1.0	1.3
Belle Mina, AL	2.0	1.0	3.0	1.0	1.3	1.0
Clemson, SC	1.5	1.0	1.2	1.0	1.0	1.5
Jackson, TN	2.0	3.0	2.0	2.0	2.0	3.0
Verona, MS	2.3	2.0	2.3	1.3	2.0	2.3
			DELTA			
Portageville, MO (A)	2.0	1.5	2.0	1.0	1.5	1.5
Portageville, MO (B)	2.0	1.0	1.5	1.0	1.0	1.5
Keiser, AR	1.0	1.0	1.3	1.0	1.0	1.0
Jonesboro, AR	3.0	2.0	3.0	2.3	2.7	1.7
Pine Tree, AR	2.0	1.3	2.7	1.0	1.0	2.0
Stoneville, MS (A)	3.0	3.0	3.7	2.0	3.0	3.0
Stoneville, MS (B)	2.3	2.7	2.3	1.0	2.0	2.0
St. Joseph, LA	1.5	2.0	2.0	1.0	1.2	2.0
Rohwer, AR	2.0	2.3	2.0	1.0	1.0	1.3
			WEST			
Stuttgart, AR	3.0	2.3	3.5	1.7	2.0	2.7
Bossier City, LA	1.0	1.0	1.0	1.0	1.5	1.0
Beaumont, TX	1.2	1.0	1.2	1.0	1.0	1.0
Bixby, OK	1.0	1.0	2.0	1.0	1.0	1.0

Table 35 - Seed quality scores for the strains in Uniform Group VI, 1988

Location	Leflore	Sharkey	Lamar	G81-234	Au82-589	G82-481
			EAST COAST			
Warsaw, VA	1.0	1.0	1.3	1.3	1.0	1.0
Holland, VA	1.0	1.0	1.0	1.0	1.0	1.0
Plymouth, NC	1.5	1.5	1.5	1.5	1.5	1.5
Kinston, NC	1.5	1.5	1.5	1.5	2.0	1.5
			SOUTHEAST			
Blackville, SC	1.5	2.0	3.0	1.5	1.5	2.0
Tifton, GA *	2.0	2.0	2.5	1.3	2.0	2.0
Quincy, FL	2.0	2.0	2.0	2.0	1.7	2.0
Jay, FL	3.0	3.0	3.0	4.0	3.0	3.0
Baton Rouge, LA	1.4	1.5	1.4	1.2	1.5	1.5
Tallahassee, AL	1.5	2.5	1.0	1.5	1.5	1.5
			UPPER AND CENTRAL SOUTH			
Athens, GA	1.5	1.5	1.5	1.5	1.5	1.5
Calhoun, GA	2.0	2.0	1.7	1.3	1.7	1.3
Jackson, TN	2.0	2.0	2.5	2.0	1.5	2.0
			DELTA			
Portageville, MO (A)	2.5	2.0	2.5	2.0	2.0	2.5
Portageville, MO (B)	2.5	1.5	1.5	2.5	1.5	2.5
Keiser, AR	1.5	1.5	1.0	1.0	2.0	1.5
Jonesboro, AR	2.7	3.0	3.0	3.7	3.0	2.7
Pine Tree, AR	2.7	1.7	2.0	2.0	1.3	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	2.6	2.5	2.5	2.5	2.4	2.5
Rohwer, AR	2.5	2.5	2.7	2.2	1.7	1.8
			WEST.			
Stuttgart, AR	2.3	2.2	2.5	1.5	1.5	1.8
Beaumont, TX	1.2	3.3	1.5	1.8	1.3	1.2

Table 35 - (continued)

Location	D84-7174	G83-198	G83-1243	N85-492	S84-1876	SC84-1531
			EAST COAST			
Warsaw, VA	1.2	1.0	1.2	1.2	1.0	1.0
Holland, VA	1.0	1.0	1.0	1.0	1.0	1.0
Plymouth, NC	1.5	1.5	1.5	1.5	1.5	1.5
Kinston, NC	2.0	1.5	1.5	1.5	2.0	2.0
			SOUTHEAST			
Blackville, SC	2.5	3.0	1.5	3.0	2.0	2.5
Tifton, GA	1.8	2.0	2.0	3.2	2.5	2.2
Quincy, FL	2.0	1.7	2.0	2.3	1.3	2.0
Jay, FL	3.0	3.0	3.0	3.0	4.0	4.0
Baton Rouge, LA	1.1	1.2	1.8	2.0	1.5	1.3
Tallahassee, AL	1.5	1.5	1.5	2.5	2.0	1.5
			UPPER AND CENTRAL SOUTH			
Athens, GA	1.5	1.5	1.5	2.2	1.5	1.5
Calhoun, GA	1.3	1.7	2.0	1.3	2.0	1.3
Jackson, TN	2.5	2.0	1.5	2.0	2.0	1.5
			DELTA			
Portageville, MO (A)	2.5	2.5	2.0	2.0	2.5	2.5
Portageville, MO (B)	2.0	2.5	2.0	2.5	2.0	2.0
Keiser, AR	2.0	1.5	2.0	2.5	2.5	2.5
Jonesboro, AR	3.0	2.3	3.7	3.0	2.3	3.0
Pine Tree, AR	2.7	2.7	2.7	2.0	2.3	1.7
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	2.6	2.3	2.5	2.4	2.2
Rohwer, AR	1.8	2.2	2.2	2.3	2.3	2.3
			WEST			
Stuttgart, AR	2.0	2.0	1.7	3.0	2.5	1.7
Beaumont, TX	1.3	1.0	1.7	2.5	2.3	1.7

PRELIMINARY GROUP VI

1988

Preliminary Group VI nurseries, which included Leflore and Bedford, along with 34 experimental strains were grown at 8 locations. The parentage for each of the strains is reported in Table 36. A general summary of performance is reported in Table 37. Information is included on mean seed yields, maturity index, plant height, percent oil, percent protein, along with ratings for the two species of root-knot nematode, races 3 and 4 of the soybean cyst nematode, and for feeding by soybean looper. Data from individual locations are reported in Tables 38 to 42.

Bedford averaged 10 days earlier in maturity than Leflore. There were no strains earlier in maturity than Bedford, but one strain equalled Bedford in maturity. The latest maturing line was 3 days later in maturity that Lefore, but still satisfactory for classification as Group VI.

Differences among strains for seed yield were significant at the 5% level of confidence at 7 of the 8 locations. The mean seed yield for Leflore was 41.6 bushels per acre. One line had a mean seed yield significantly greater than that for Lefore, and three strains had a mean seed yield significantly lower than that for Lefore. There were 16 lines which had mean seed yields ranking above that for Lefore.

There were 9 lines rated resistant to SCN 3 and 4. Two of these, S83-1205 and S85-1627, were also resistant to both species of root-knot nematode. There were 6 lines resistant to SCN race 3 and also resistant to both root-knot species. There were 3 lines which received low ratings for feeding by soybean looper.

Among the lines which appear to merit further evaluation in Uniform Group VI are D86-8670, N86-397, N86-491, S83-1205 and SC84-921.

TABLE 36 - PARENTAGE OF THE STRAINS GROWN IN PRELIMINARY GROUP VI, 1988

	VARIETY OR STRAIN	PARENTAGE	GENERATION COMPOSITED
1.	LEFLORE	CENTENNIAL X J74-47	F5
2.	BEDFORD	FORREST X (D68-18 X PI 88788)	F5
3.	AU85-863	LEFLORE X KIRBY	F6
4.	AU85-1006	WRIGHT X CO79-501	F6
5.	AU85-1104	WRIGHT X CO79-501	F6
6.	AU85-1230	WRIGHT X CO79-501	F6
7.	D86-8405	SHARKEY X D79-10158	F5
8.	D86-8668	TRACY-M X D81-4072	F5
9.	D86-8676	TRACY-M X D81-4072	F5
10.	D86-8870	SHARKEY X LEFLORE	F5
11.	D86-8872	SHARKEY X LEFLORE	F5
12.	D86-9047	LEFLORE X D82-9623	F5
13.	D86-9335	D79-6058 X D82-9943	F5
14.	D86-9569	D81-701 X TRACY BR.	F5
15.	G84-72	KIRBY X J74-87	F6
16.	G84-81	KIRBY X J74-87	F6
17.	G84-169	KIRBY X J74-87	F6
18.	G84-2309	CO237 X BRAXTON	F6
19.	G84-3046	JOHNSTON X BRAXTON	F6
20.	N86-352	N77-114(2) X D76-9665	F5
21.	N86-397	YOUNG(2) X D76-9665	F5
22.	N86-403	YOUNG(2) X D76-9665	F5
23.	N86-491	N77-1602 X F77-1797	F5
24.	N86-1233	RS2YC4 X RS3YC3 (SEL)	F5
25.	R86-79	(R76-238S X R78-781) X BEDFORD	F5
26.	R86-81	(R76-238S X R78-781) X BEDFORD	F5
27.	R86-93S	(NAROW X CO 317) X (JEFF X WRIGHT)	F5
28.	R86-158	JEFF X D77-5064	F5
29.	R86-208	JEFF X D77-5064	F5
30.	S83-1205	BEDFORD X N77-347	
31.	S83-1355	BRADLEY X D74-7741	
32.	S85-1697	BEDFORD X RANSOM	
33.	SC84-921	CENTENNIAL X YOUNG	F5
34.	SC84-2245	FOSTER X D76-9665	F5
35.	SC84-2477	FOSTER X D76-9665	F5
36.	SC84-2536	FOSTER X JEFF	F5

TABLE 37 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN PRELIMINARY GROUP VI, 1988

STRAIN	Seed yield	Mat. index	Percent			M. incognita	M. arenaria	SCN 3	SCN 4	soybean looper
			Ht.	Oil	Protein					
LEFLORE	41.6	10-22	37	19.6	41.2	2.0	3.7	R	R	4.0
BEDFORD	38.3	-10	38	20.7+	39.7	1.5	1.5	R	R	4.0
Au85-863	38.6	0	36	20.2+	42.8+	1.7	4.7	R	S	4.0
Au85-1006	42.8	-5	36	20.5+	40.9	1.0	3.5	S	S	3.5
Au85-1104	39.1	-4	35	21.5+	40.7	3.5	2.5	S	S	4.0
Au85-1230	42.0	+1	35	20.5+	40.8	5.0	4.5	S	S	4.0
D86-8405	39.8	-5	38	20.2+	42.2+	1.0	1.7	R	S	2.5
D86-8668	35.0-	-4	35	18.0-	43.8+	5.0	5.0	S	S	4.0
D86-8676	40.4	-6	37	19.4	42.4+	5.0	4.7	S	S	5.0
D86-8870	45.0	-2	35	19.4	42.2+	5.0	5.0	R	R	5.0
D86-8872	43.4	-1	33	19.2	42.6+	3.7	5.0	R	R	4.0
D86-9047	37.9	-5	38	20.1	39.5-	4.7	5.0	R	R	5.0
D86-9335	39.8	-1	41	19.5	42.6+	2.7	3.3	R	S	5.0
D86-9569	34.0-	+1	31	19.4	42.7+	3.9	4.0	R	S	2.5
G84-72	36.7	-1	35	19.9	41.9	1.0	1.3	R	S	4.0
G84-81	38.0	-2	32	20.0	40.9	1.0	1.0	R	S	4.0
G84-169	37.1	-3	35	20.2+	39.7-	1.4	2.0	R	S	4.0
G84-2309	43.2	0	34	20.1	41.4	2.7	4.3	S	S	4.0
G84-3046	42.7	+2	37	20.4+	40.5	1.0	3.0	S	S	4.0
N86-352	36.5	-10	32	22.5+	39.8-	4.5	4.5	S	S	4.0
N86-397	45.7	-6	34	20.4+	42.3+	4.3	5.0	S	S	4.0
N86-403	43.4	-5	37	21.4+	40.6	5.0	5.0	S	S	4.0
N86-491	47.5+	+3	40	19.9	40.1-	1.0	2.3	S	S	4.0
N86-1233	40.7	+1	38	21.1+	42.0	5.0	5.0	S	S	2.5
R86-79	41.6	-2	31	19.5	40.5	1.6	4.0	R	S	4.0
R86-81	40.7	-1	34	19.6	40.8	2.5	2.7	R	S	3.5
R86-93S	42.3	-2	32	21.5+	39.9-	2.0	3.3	R	R	4.0
R86-158	43.9	0	36	20.9+	39.5-	4.3	4.7	R	R	3.0
R86-208	39.8	-1	35	19.9	41.0	3.4	4.0	R	R	4.0
S83-1205	45.9	-8	33	21.0+	41.0	1.1	2.0	R	R	5.0
S83-1355	42.2	-8	32	21.0+	41.9	1.7	3.0	R	R	4.0
S85-1697	42.7	-7	31	21.6+	40.1-	1.0	1.7	R	R	4.0
SC84-921	44.2	-3	33	21.2+	40.5	4.5	5.0	S	S	4.0
SC84-2245	36.2-	+2	37	20.3+	39.6-	1.3	3.0	R	S	4.0
SC84-2477	37.9	+2	38	21.1+	40.0-	1.0	2.0	R	S	4.0
SC84-2536	40.1	+1	36	20.4+	42.0	1.0	1.3	R	S	4.0
LSD (.05)	5.2			0.6	1.0	1.2	1.2			
C. V.	14%			2%	2%					

+ or - designations refer to differences from Leflore.

TABLE 38 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN PRELIMINARY GROUP VI, 1988

STRAIN	HOLLAND, VA	PLY-MOUTH, NC	ATHENS, GA	TALLAS-SEE, AL	JAY, FL	KEISER, AR	STONE-VILLE, MS (A)	STONE-VILLE MS (B)
LEFLORE	36.2	46.6	41.1	27.6	42.4	54.4	41.7	42.8
BEDFORD	35.4	42.9	39.6	21.3	33.6-	52.0	41.9	40.0
AU85-863	34.9	40.7	38.4	37.5	32.5-	50.8	35.9	38.6
AU85-1006	35.6	45.1	45.4	32.3	33.0-	61.3	48.3	41.5
AU85-1104	38.0	45.1	46.9	22.1	22.0-	59.7	38.7	40.3
AU85-1230	32.4	47.6	43.6	32.4	30.8-	61.9+	43.9	43.4
D86-8405	31.5	42.0	42.6	27.0	38.5	54.3	38.1	44.2
D86-8668	31.7	43.0	35.6	23.1	28.1-	53.5	33.4-	31.3-
D86-8676	40.5	49.3	40.4	30.5	30.8-	58.0	36.5	37.0
D86-8870	38.0	49.8	46.2	41.2	39.6	55.7	50.1+	39.7
D86-8872	36.7	47.2	36.6	41.5	43.5	55.4	44.6	41.3
D86-9047	33.9	44.8	33.5	24.1	36.3	53.9	37.6	38.9
D86-9335	36.0	40.1	41.4	38.4	42.4	45.7-	35.3	38.8
D86-9569	34.9	42.0	39.7	15.9	33.6-	41.3-	35.0	29.3-
G84-72	34.5	45.5	39.6	9.4-	46.2	51.2	28.5-	38.4
G84-81	35.6	44.1	40.6	33.0	25.3-	57.9	29.9-	37.4
G84-169	38.0	39.4	41.9	33.5	28.1-	52.4	30.3-	33.5-
G84-2309	40.1	45.5	40.1	43.0+	41.3	52.1	41.4	42.2
G84-3046	31.9	43.2	46.8	47.1+	41.8	56.5	35.8	38.6
N86-352	30.9	51.2	41.7	26.3	29.7-	54.4	51.0-	37.0
N86-397	41.4	49.3	44.8	40.5	37.4	60.7	42.2	48.9
N86-403	34.0	47.8	45.3	30.2	38.5	61.8+	46.6	42.9
N86-491	38.9	39.7	54.9+	44.5+	52.8+	63.9+	45.9	39.1
N86-1233	37.2	41.6	46.4	32.3	40.2	52.3	30.2-	41.2
R86-79	38.7	46.2	42.7	36.0	28.6-	56.7	37.5	46.1
R86-81	35.2	43.4	41.1	42.6+	30.3-	53.6	34.8	44.7
R86-93S	40.9	47.5	41.5	33.8	30.8-	56.8	43.8	43.6
R86-158	39.0	42.8	46.4	24.6	36.3	53,2	40.8	40.9
R86-208	39.4	47.4	39.1	39.0	34.7	51.0	34.3-	33.6-
S83-1205	40.1	50.9	49.8+	29.6	40.7	63.9+	45.4	46.6
S83-1355	39.5	50.5	37.2	26.7	30.3-	65.7+	46.2	41.6
S85-1697	36.2	52.3	40.3	31.8	30.3-	60.1	44.5	46.3
SC84-921	39.7	46.4	45.3	22.1	42.4	63.7+	50.8+	42.9
SC84-2245	31.0	41.8	40.6	28.5	34.7	48.0	26.5-	38.7
SC84-2477	37.2	48.3	41.5	8.7-	39.1	50.8	36.4	40.9
SC84-2536	38.3	44.4	39.3	27.0	36.3	57.2	34.5-	43.5
LSD (.05)	9.3	N.S.	7.6	14.3	8.6	7.0	7.0	6.9
C.V.	13%	9%	9%	23%	12%	6%	10%	8%

TABLE 39 - OIL PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VI, 1988

STRAIN	HOLLAND, VA	PLY-MOUTH, MO	JAY, FL	KEISER, AR	STONE-VILLE, MS (B)
LEFLORE	19.4	19.3	20.7	19.4	19.3
BEDFORD	20.9	20.6	20.9	20.6	20.5
AU85-863	19.9	19.6	21.4	19.0	21.0
AU85-1006	20.4	19.7	20.2	21.3	21.1
AU85-1104	21.2	20.9	21.8	22.1	21.6
AU85-1230	21.0	20.1	20.8	20.5	20.3
D86-8405	19.5	19.4	20.9	20.3	20.9
D86-8668	17.9	18.1	18.2	18.0	18.0
D86-8676	18.2	19.0	21.0	19.0	19.6
D86-8870	18.2	19.1	19.6	20.4	19.5
D86-8872	19.0	18.9	19.6	19.4	19.2
D86-9047	20.2	19.0	21.6	19.8	20.2
D86-9335	19.4	19.0	20.6	19.0	19.5
D86-9569	19.0	18.9	20.6	18.9	19.7
G84-72	20.2	19.6	19.9	20.6	19.6
G84-81	19.9	20.1	19.7	20.9	19.5
G84-169	20.2	20.1	20.9	20.8	19.3
G84-2309	19.9	19.4	21.0	19.6	20.8
G84-3046	20.0	20.3	21.5	20.0	20.3
N86-352	21.5	22.3	23.8	21.6	23.2
N86-397	20.5	20.0	20.2	20.6	20.5
N86-403	21.9	20.9	21.4	21.1	21.6
N86-491	20.5	19.6	20.6	18.7	20.5
N86-1233	21.5	20.2	21.9	20.9	20.9
R86-79	18.6	19.6	20.1	19.2	19.8
R86-81	19.6	19.4	20.0	19.5	19.6
R86-93S	21.3	21.1	21.6	21.8	21.6
R86-158	21.0	20.0	21.9	20.7	20.9
R86-208	19.2	19.8	20.5	19.7	20.4
S83-1205	20.3	20.6	22.0	21.4	20.9
S83-1355	20.5	20.6	21.6	20.6	21.6
S85-1697	20.8	21.2	22.4	22.2	21.4
SC84-921	20.5	20.4	21.8	21.8	21.4
SC84-2245	19.6	20.4	21.0	20.2	20.5
SC84-2477	21.0	20.7	22.0	20.4	21.3

TABLE 40 - PROTEIN PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VI, 1988

STRAIN	HOLLAND, VA	PLY-MOUTH, MO	JAY, FL	KEISER, AR	STONE-VILLE, MS (B)
LEFLORE	40.9	42.3	41.4	39.9	41.6
BEDFORD	39.2	40.2	40.8	38.3	39.9
AU85-863	43.2	43.0	42.4	42.5	42.7
AU85-1006	41.8	41.0	43.2	38.7	39.1
AU85-1104	40.6	41.7	42.1	39.1	40.2
AU85-1230	41.5	42.2	41.5	38.9	40.1
D86-8405	42.3	43.3	42.4	40.8	42.4
D86-8668	43.9	44.6	45.5	42.1	43.0
D86-8676	43.6	43.0	41.6	41.4	42.3
D86-8870	41.6	43.9	42.9	40.3	42.5
D86-8872	42.6	43.4	42.6	42.0	42.3
D86-9047	39.6	40.0	39.2	38.4	40.2
D86-9335	42.3	43.8	42.4	41.6	43.0
D86-9569	42.2	43.8	42.8	42.0	42.9
G84-72	40.7	42.3	41.6	39.3	42.5
G84-81	41.4	41.3	42.1	38.8	40.9
G84-169	40.5	40.6	39.7	37.8	40.0
G84-2309	41.5	42.6	42.3	39.6	40.8
G84-3046	40.3	41.0	40.3	39.8	41.3
N86-352	40.0	38.8	41.6	39.0	39.8
N86-397	43.3	42.8	44.0	39.9	41.4
N86-403	40.7	41.5	41.7	38.6	40.3
N86-491	40.4	39.4	41.3	39.9	39.5
N86-1233	42.2	43.6	41.6	41.2	41.5
R86-79	42.1	39.2	41.8	39.2	40.2
R86-81	40.7	39.9	42.5	39.8	41.2
R86-93S	40.0	40.3	41.5	38.0	39.8
R86-158	38.9	39.9	40.2	38.3	40.0
R86-208	42.5	41.4	41.6	39.2	40.1
S83-1205	41.4	41.0	42.7	38.2	41.6
S83-1355	41.6	42.6	43.3	40.8	41.1
S85-1697	41.0	40.2	41.8	36.6	41.0
SC84-921	41.4	40.9	42.8	37.1	40.4
SC84-2245	40.5	39.3	40.0	38.3	40.1
SC84-2477	40.5	40.2	41.2	38.7	39.5

TABLE 41 - PLANT HEIGHT PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VI, 1988

STRAIN	HOLLAND, VA	PLY-MOUTH, NC	ATHENS, GA	TALLAS-SEE, AL	JAY, FL	KEISER, AR	STONE-VILLE, MS (A)	STONE-VILLE, MS (B)
LEFLORE	43	39	24	36	32	43	47	35
BEDFORD	45	47	28	31	28	42	45	35
AU85-863	41	40	24	29	35	36	45	35
AU85-1006	39	43	29	36	30	35	43	32
AU85-1104	38	40	34	29	34	39	41	28
AU85-1230	42	42	23	29	29	37	45	30
D86-8405	39	45	28	32	31	41	51	37
D86-8668	37	42	30	33	25	38	41	30
D86-8676	43	40	24	32	35	39	46	35
D86-8870	47	38	26	29	32	34	44	31
D86-8872	37	38	22	28	29	36	44	30
D86-9047	46	42	26	31	33	40	49	34
D86-9335	50	46	30	36	37	42	50	37
D86-9569	34	35	32	27	32	29	36	22
G84-72	39	43	26	22	34	35	46	32
G84-81	40	39	23	25	24	30	41	30
G84-169	39	42	30	30	30	37	42	30
G84-2309	39	41	22	30	32	36	44	31
G84-3046	41	43	28	30	32	39	46	35
N86-352	38	45	23	26	27	29	40	30
N86-397	37	40	24	30	30	36	42	34
N86-403	42	45	28	32	34	36	46	34
N86-491	42	44	40	32	35	41	46	37
N86-1233	45	42	28	34	34	37	46	34
R86-79	37	38	25	28	23	31	39	30
R86-81	36	41	24	26	26	37	52	30
R86-93S	40	38	24	24	28	30	40	31
R86-158	41	40	29	27	31	41	46	34
R86-208	37	39	25	29	29	41	40	36
S83-1205	38	39	26	25	25	35	43	32
S83-1355	36	41	18	27	28	36	40	28
S85-1697	40	41	24	24	25	29	39	26
SC84-921	37	41	28	27	31	31	40	28
SC84-2245	45	46	26	28	34	34	48	37
SC84-2477	44	46	28	28	32	39	51	38
SC84-2536	43	41	24	27	34	41	44	35

TABLE 42 - SEED QUALITY SCORES FOR THE STRAINS IN PRELIMINARY GROUP VI, 1988

STRAIN	HOLLAND, VA	PLY-MOUTH, NC	ATHENS, GA	JAY, FL	KEISER, AR	STONE-VILLE, MS (A)	STONE-VILLE MS (B)
LEFLORE	1.0	1.5	1.5	3.0	2.0	2.0	2.0
BEDFORD	1.0	1.5	1.5	4.0	2.0	2.0	2.0
AU85-863	1.0	1.5	1.5	2.0	2.0	2.0	2.0
AU85-1006	1.0	1.5	1.5	2.0	2.0	2.0	2.0
AU85-1104	1.0	1.5	1.5	3.0	2.0	2.0	2.0
AU85-1230	1.0	1.5	1.5	3.0	2.0	2.0	2.0
D86-8405	1.0	1.5	1.5	3.0	1.5	2.0	2.0
D86-8668	1.0	1.5	1.5	3.0	2.0	2.0	2.0
D86-8676	1.0	1.5	1.5	2.0	1.5	2.0	2.0
D86-8870	1.0	1.5	1.5	2.0	2.0	2.0	2.0
D86-8872	1.0	1.5	1.5	3.0	1.5	2.0	2.0
D86-9047	1.0	1.5	1.5	3.0	2.0	2.0	2.0
D86-9335	1.0	1.5	1.5	2.0	2.0	2.0	2.0
D86-9569	1.0	1.5	1.5	2.0	2.0	2.0	2.0
G84-72	1.0	1.5	1.5	4.0	2.0	2.0	2.0
G84-81	1.0	1.5	1.5	3.0	2.0	2.0	2.0
G84-169	1.0	1.5	1.5	3.0	2.0	2.0	2.0
G84-2309	1.0	1.5	1.5	3.0	2.0	2.0	2.0
G84-3046	1.0	1.5	1.5	2.0	1.5	2.0	2.0
N86-352	1.0	2.0	1.5	3.0	2.0	2.0	2.0
N86-397	1.0	1.5	1.5	2.0	1.5	2.0	2.0
N86-403	1.0	1.5	1.5	2.0	1.0	2.0	2.0
N86-491	1.0	1.5	1.5	2.0	2.0	2.0	2.0
N86-1233	1.0	1.5	1.5	2.0	1.5	2.0	2.0
R86-79	1.0	1.5	1.5	4.0	2.0	2.0	2.0
R86-81	1.0	1.5	1.5	2.0	2.0	2.0	2.0
R86-93S	1.0	1.5	1.5	2.0	2.0	2.0	2.0
R86-158	1.0	1.5	1.5	2.0	2.0	2.0	2.0
R86-208	1.0	1.5	1.5	2.0	2.5	2.0	2.0
S83-1205	1.0	1.5	1.5	4.0	2.5	2.0	2.0
S83-1355	1.0	1.5	1.5	4.0	2.5	2.0	2.0
S85-1697	1.0	1.5	1.5	4.0	1.5	2.0	2.0
SC84-921	1.0	1.5	1.5	2.0	2.0	2.0	2.0
SC84-2245	1.0	1.5	1.5	3.0	2.0	2.0	2.0
SC84-2477	1.0	1.5	1.5	2.0	2.0	2.0	2.0
SC84-2536	1.0	1.5	1.5	3.0	2.0	2.0	2.0

UNIFORM GROUP VII

1988

	Variety or strain	Parentage	Generation composited
1.	Braxton	F59-1501 X [Bragg(3) X D60-7965]	F_5
2.	Thomas	Centennial X F71-1138	F_6
3.	Stonewall (Au82-204)	N73-693 X F76-8757	F_6
4.	F83-1918	Bedford X Kirby	F_6
5.	G81-1949	D74-7741 X Braxton	F_6
6.	Au82-211	N73-693 X F76-8757	F_6
7.	Au83-1018	Wright X F76-8846	F_6
8.	G83-559	D77-6103 X F77-6903	F_6
9.	G83-969	Young X F77-6903	F_6
10.	N85-574	N77-179 X Johnston	F_6
11.	R85-140S	Wright X Jeff	F_5
12.	SC84-818	Centennial X Young	F_5

Background of 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 Odgen X CNS with an F_5 line from Odgen X Biloxi.

F71-1138 is a selection from the same cross as Braxton and was grown in Uniform Group VII 1975-1978.

N73-693 is a selection from D68-216 X Ransom which was grown in Uniform Group VI in 1977. D68-216 is a SCN race 3 resistant selection of the same parentage as Forrest.

F76-8757 is a SCN race 3 resistant line from Centennial X [Forrest X (Cobb X D68-216)].

D74-7741 is a selection from Forrest X D70-3001 grown in Uniform Group VI 1977-1979.

F76-8846 is a selection from Centennial X [Forrest X (Cobb X D68-216)].

D77-6103 is a selection from Centennial X J74-49.

F77-6903 is a selection from Forrest X (Cobb X D68-216).

UNIFORM GROUP VII

Uniform Group VII nurseries were grown at 26 locations. A general summary of performance is given in Table 43. Included are 1, 2 and 3 year mean seed yields by production regions, 1, 2 and 3 year mean protein and oil percentages, information on plant characteristics and reaction to the two root-knot nematode species M. incognita and M. arenaria and two races of SCN and reaction to feeding by soybean looper. Data from individual locations are recorded in Tables 44-49.

Plantings were made in the greenhouse at the University of Georgia, Athens for evaluating for reaction to the two root-knot species M. incognita and M. arenaria. Plantings were made in the greenhouse in Jackson, Tennessee to evaluate for races 3 and 4 for SCN. Plantings were made in the field cage at Stoneville for evaluation for feeding by soybean looper. Plantings were made at Verona, Mississippi to evaluate for reaction to stem canker, but insufficient disease developed for making ratings. Severe stem canker had developed in the nurseries at Beaumont, Texas in 1987, but there was insufficient disease development in 1988 for making ratings. Material was rated for frog-eye leaf spot development in the nursery at Quincy, Florida. Results of all of these ratings are reported in Table 43.

Three strains have been evaluated for three years. Au82-204 has been released for production and given the name Stonewall. It has produced well in all areas. Au82-204 has produced very well in the presence of lance nematode at Hartsville, S.C. It has been well nodulated in the presence of lance nematode, whereas other lines, such as Braxton, will have essentially no nodule development. The interrelationship between nodulation and lance nematode are not understood. F83-1918 has also been evaluated three years and is being considered for release by Florida. The significant feature for this strain is resistance to M. incognita, M. arenaria and SCN races 3 and 4.

Eight of the 12 lines in this group have moderately good resistance to both M. incognita and M. arenaria. G83-969 and R85-140S also have resistance to both species of root-knot nematode and resistance to SCN races 3 and 4.

Table 43 - General summary of performance for the strains grown in Uniform Group VII, 1988

	No. of locations	Braxton	Thomas	Stonewall (Au82-204)	F83-1918	G81-1949
Seed Yield - 1988						
East Coast	7	34.1	30.8	34.6	30.8	32.0
Southeast	7	45.4	45.0	45.2	44.5	48.2
Upper and Central South	3	51.2	51.7	56.4	54.0	48.7
Delta & West	7	39.7	37.4	44.8	39.3	41.4
1987-88						
East Coast		32.4	31.8	35.5	30.9	32.4
Southeast		41.2	41.3	42.9	39.7	42.2
Upper and Central South		40.9	38.9	38.9	43.6	38.8
Delta & West		36.0	37.3	42.8	37.2	38.2
1986-88						
East Coast		33.5	34.1	36.9	33.9	34.2
Southeast		39.3	41.5	42.7	41.3	43.6
Upper & Central South		43.6	42.2	43.8	45.5	44.1
Delta & West		37.3	37.8	42.7	38.5	39.7
Oil Content - 1988		20.2	19.6	21.4	20.3	20.7
1987-88		19.7	19.0	21.2	19.8	20.3
1986-88		19.8	19.4	21.4	20.2	20.5
Protein Content - 1988		41.9	40.9	40.8	40.6	40.5
1987-88		41.8	41.4	41.0	41.3	40.9
1986-88		41.8	41.4	41.1	41.1	40.8
Seed size		17.6	16.6	16.7	13.2	13.5
Maturity index		10-27	-1	-2	-1	0
Height		38	35	35	37	37
Seed quality		1.8	1.8	1.8	1.8	1.8
M. incognita		1.0	1.8	5.0	1.0	1.0
M. arenaria		1.8	2.2	2.2	1.5	1.8
SCN race 3		S	R	R	R	R
SCN race 4		S	S	S	R	S
Soybean looper		3.5	4.0	3.5	4.0	5.0
Flower color		P	P	W	P	W
Pubescence color		T	T	T	T	T
Pod wall color		Tn	Tn	Tn	Tn	Tn
Frogeye		3.0	3.0	1.0	3.0	3.7

Table 43 - (continued)

	Au82-211	Au83-1018	G83-559	G83-969	N85-574	R85-140S	SC84-818S
Seed Yield - 1988							
East Coast	35.0	29.8	28.9	32.3	31.9	32.8	34.2
Southeast	47.0	42.6	45.0	46.5	45.5	45.3	47.6
Upper and Central South	48.5	47.6	52.5	47.6	55.7	48.7	49.4
Delta & West	45.5	44.7	40.9	41.1	48.0	40.1	41.1
1987-88							
East Coast	35.4						
Southeast	44.0						
Upper and Central South	38.9						
Delta & West	45.0						
1986-88							
East Coast							
Southeast							
Upper & Central South							
Delta & West							
Oil Content - 1988	22.8	20.9	20.4	20.9	21.9	21.2	20.6
1987-88	21.8						
1986-88							
Protein Content - 1988	41.1	40.9	40.7	38.9	40.4	39.8	42.1
1987-88	41.2						
1986-88							
Seed size	17.6	13.5	12.7	12.7	16.0	14.9	14.9
Maturity index	-3	-5	-2	0	-1	-3	-1
Height	35	29	37	43	34	38	39
Seed quality	1.7	1.7	1.8	1.7	1.7	1.7	1.7
M. incognita	5.0	1.0	1.2	1.8	5.0	1.0	3.0
M. arenaria	2.2	1.2	1.5	1.6	3.2	1.5	3.0
SCN race 3	R	R	R	R	S	R	R
SCN race 4	S	S	R	S	S	R	S
Soybean looper	4.6	5.0	3.5	4.0	4.0	4.0	4
Flower color	W	P	W	W	P	P	W
Pubescence color	T	G	T	G	G	T	G
Pod wall color	Tn	Tn	Tn	Tn	Tn	Tn	Tn
Frogeye	1.3	1.0	3.3	2.7	1.0	1.0	1.0

Table 44 - Seed yield, in bushels per acre, for the strains in Uniform Group VII, 1988

Location	Braxton	Thomas	Stonewall (Au82-204)	F83-1918	G81-1949	Au82-211	Au83-1018
			EAST COAST				
Holland, VA	30.3	29.6	31.9	23.5	24.7	32.1	32.6
Kinston, NC	39.8	31.9	34.2	39.0	39.7	38.0	33.2
Clinton, NC	39.4	26.8	33.7	35.7	35.9	36.9	34.1
Florence, SC (A)	38.9	39.0	44.3	36.5	40.2	39.9	35.8
Florence, SC (B)	33.7	28.7	30.0	28.2	29.1	27.1	27.2
Hartsville, SC (A)	37.1	41.9	41.4	41.1	37.8	43.1+	33.3
Hartsville, SC (B)	19.8	17.4	26.6+	11.4-	16.6	28.0+	12.1-
Mean	34.1	30.8	34.6	30.8	32.0	35.0	29.8
			SOUTHEAST				
Blackville, SC (A)	45.9	37.4-	41.7	39.9	40.0	37.4-	38.8-
Tallassee, AL	50.3	54.6	51.3	54.3	52.7	55.2	51.9
Tifton, GA *	60.7	59.5	57.3	57.4	57.6	55.5-	60.1
Gainesville, FL *	19.6	15.6	15.6	17.1	18.5	20.2	16.6
Marianna, FL	48.4	46.7	45.0	44.2	48.5	48.4	52.3
Quincy, FL	52.5	54.6	61.5+	56.3	54.4	58.8	54.1
Jay, FL	43.6	34.5-	34.5-	30.8-	40.0	33.0-	33.7+
Fairhope, AL	35.4	41.1	45.7+	45.7+	43.3	47.2+	32.1
Baton Rouge, LA	41.8	45.9	36.6-	40.3	58.7+	49.3+	35.5-
Mean	45.4	45.0	45.2	44.5	48.2	47.0	42.6
			UPPER AND CENTRAL SOUTH				
Athens, GA	51.3	59.6+	60.8+	59.0+	57.9	56.8	45.2
Calhoun, GA	62.3	55.1	67.8	62.3	53.2-	45.7-	55.4
Clemson, SC	40.0	40.4	40.5	40.8	35.1-	42.9	42.1
Mean	51.2	51.7	56.4	54.0	48.7	48.5	47.6
			DELTA & WEST				
Stoneville, MS (A)	34.4	33.3	38.0	36.4	37.9	39.3	38.1
Stoneville, MS (B)	39.7	37.7	45.0+	39.5	39.4	45.6+	46.8+
Stuttgart, AR	32.9	35.1	51.4+	42.4+	34.0	48.8+	46.6+
Rohwer, AR	37.2	34.0	48.9+	38.6	39.0	47.2+	46.9+
St. Joseph, LA	52.1	42.6-	46.3	41.4-	50.2	50.0	52.6
Bossier City, LA	45.0	38.9	41.5	41.9	45.4	39.0	44.5
Beaumont, TX	36.8	40.1	42.5	35.1	43.8+	48.8+	37.4
Mean	39.7	37.4	44.8	39.3	41.4	45.5	44.7

*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 44 - (continued)

Location	G83-559	G83-969	N85-574	R85-140S	SC84-818	L.S.D. (.05)	C.V. %
			EAST COAST				
Holland, VA	24.5	21.1-	30.8	32.9	26.1	7.2	15
Kinston, NC	31.9	39.3	39.7	34.6	38.3	NS	11
Clinton, NC	33.5	39.0	41.2	41.0	38.3	NS	14
Florence, SC (A)	32.3	35.1	35.5	35.2	39.7	NS	12
Florence, SC (B)	26.3	30.2	24.0	27.5	29.1	NS	11
Hartsville, SC (A)	37.6	39.6	34.5	37.1	40.0	4.9	7
Hartsville, SC (B)	16.2	22.1	17.5	21.0	28.0+	6.6	20
Mean	28.9	32.3	31.9	32.8	34.2		
			SOUTHEAST				
Blackville, SC (A)	39.0-	45.3	41.4	39.4	41.8	6.8	10
Tallassee, AL	50.4	51.2	56.8	52.9	45.0	7.7	8
Tifton, GA *	55.0-	55.8	51.8-	53.0-	58.9	5.1	5
Gainesville, FL *	17.6	26.7	12.0	14.3	16.4	NS	35
Marianna, FL	43.9	50.0	45.9	42.1-	47.6	5.1	7
Quincy, FL	50.3	49.6	63.8+	55.7	60.8+	6.6	5
Jay, FL	36.3	37.8	31.9-	31.5-	44.4	8.0	13
Fairhope, AL	45.7+	46.6+	32.4	43.0	45.7+	6.0	8
Baton Rouge, LA	49.2+	45.1	46.3+	52.6+	48.1+	4.3	6
Mean	45.0	46.5	45.5	45.3	47.6		
			UPPER AND CENTRAL SOUTH				
Athens, GA	57.9	53.7	50.5	51.7	53.8	7.7	8
Calhoun, GA	57.5	47.8-	69.0	55.4	51.1-	9.1	9
Clemson, SC	42.1	41.3	47.5+	39.1	43.4	4.2	6
Mean	52.5	47.6	55.7	48.7	49.4		
			DELTA & WEST				
Stoneville, MS (A)	40.1	39.3	44.3+	34.7	33.1	6.4	10
Stoneville, MS (B)	39.6	37.6	51.7+	38.1	42.0	3.9	6
Stuttgart, AR	41.0+	40.7+	48.7+	39.8+	44.5+	4.3	7
Rohwer, AR	39.9	42.5	46.6+	41.4	42.8	6.4	9
St. Joseph, LA	40.1-	41.4-	52.6	42.6-	47.0	7.1	9
Bossier City, LA	43.0	41.6	49.9	43.4	42.5	8.3	11
Beaumont, TX	42.3	44.5+	42.1	40.9	36.0	6.7	10
Mean	40.9	41.1	48.0	40.1	41.1		

*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 45 - Chemical composition and seed size for the strains in Uniform Group VII, 1988

	Braxton	Thomas	Stonewall (Au82-204)	F83-1918	G81-1949	Au82-211
			OIL PERCENTAGE			
Clinton, NC	19.4	18.6	20.4	19.3	19.8	20.4
Hartsville, SC (A)	20.6	19.3	21.3	21.0	20.1	21.6
Blackville, SC (A)	21.1	21.9	20.6	21.6	22.2	23.1
Tallassee,AL	20.3	20.0	22.3	20.0	21.4	22.5
Athens, GA	19.6	19.3	21.9	20.3	20.6	21.8
Clemson, SC	19.7	18.8	20.5	19.6	20.0	21.1
Jay, FL	21.6	20.8	22.4	20.8	21.9	22.7
Stoneville, MS (B)	19.7	18.7	20.9	19.4	20.1	21.4
Stuttgart, AR	20.5	20.1	22.2	20.5	20.7	22.2
Rohwer, AR	19.2	18.5	21.1	20.1	20.0	20.3
Mean	20.2	19.6	21.4	20.3	20.7	22.8
			PROTEIN PERCENTAGE			
Clinton, NC	41.8	42.2	42.0	41.7	40.5	42.0
Hartsville, SC (A)	39.9	39.5	41.1	39.5	41.2	40.8
Blackville, SC (A)	40.6	37.7	40.2	38.8	39.9	39.2
Tallassee, AL	43.8	43.2	43.4	43.1	42.7	43.4
Athens, GA	41.3	41.0	41.2	40.2	39.5	40.3
Clemson, SC	41.3	39.7	39.8	39.6	40.0	41.1
Jay, FL	40.1	40.2	39.2	40.7	39.5	40.4
Stoneville, MS (B)	40.7	42.6	40.9	40.6	40.8	40.5
Stuttgart, AR	39.3	40.0	39.4	39.8	39.5	40.6
Rohwer, AR	42.2	43.3	40.6	42.0	41.0	43.1
Mean	41.1	40.9	40.8	40.6	40.5	41.1
			GRAMS PER 100 SEED			
Clinton, NC	19.1	18.7	18.9	14.0	14.0	18.1
Hartsville, SC (A)	19.2	18.1	18.6	14.3	16.4	20.5
Blackville, SC (A)	17.5	18.7	16.5	17.8	13.5	17.7
Tallassee, AL	18.3	19.1	18.7	14.9	15.4	20.6
Athens, GA	17.9	16.5	16.5	13.2	15.1	18.3
Clemson, SC	18.0	18.0	17.0	13.0	13.7	18.0
Jay, FL	18.0	16.0	15.0	10.0	14.0	16.0
Stoneville, MS (B)	14.4	13.1	14.0	11.5	10.8	15.0
Stuttgart, AR	15.2	13.4	16.1	11.8	11.3	15.9
Rohwer, AR	15.1	13.9	15.5	11.0	11.1	15.7
Mean	17.6	16.6	16.7	13.2	13.5	17.6

Table 45 - (continued)

	Au83-1018	G83-559	G83-969	N85-574	R85-140S	SC84-818
			OIL PERCENTAGE			
Clinton, NC	18.5	19.6	19.6	20.4	20.1	19.5
Hartsville, SC (A)	20.8	20.8	20.9	23.1	21.5	20.9
Blackville, SC (A)	21.8	22.1	22.0	21.5	23.0	21.8
Tallassee,AL	21.4	20.6	21.7	22.3	21.9	20.9
Athens, GA	21.1	20.1	20.6	21.9	20.9	20.7
Clemson, SC	19.8	18.9	20.6	21.9	20.3	19.9
Jay, FL	22.3	21.0	21.7	23.0	22.6	21.7
Stoneville, MS (B)	21.6	19.6	19.9	21.3	20.3	19.4
Stuttgart, AR	21.3	20.7	21.6	23.6	21.2	20.4
Rohwer, AR	20.8	20.2	20.3	20.0	20.6	20.3
Mean	20.9	20.4	20.9	21.9	21.2	20.6
			PROTEIN PERCENTAGE			
Clinton, NC	43.4	40.8	39.8	42.5	40.9	42.7
Hartsville, SC (A)	40.1	38.7	37.6	39.0	38.1	40.3
Blackville, SC (A)	38.1	38.7	41.1	40.2	39.9	38.7
Tallassee, AL	43.1	44.1	40.6	43.0	42.6	44.9
Athens, GA	40.5	40.7	38.6	39.3	38.4	41.6
Clemson, SC	40.7	40.9	39.0	40.6	39.5	41.4
Jay, FL	39.4	40.5	38.3	39.8	39.7	42.5
Stoneville, MS (B)	41.7	41.8	39.5	40.2	40.5	43.1
Stuttgart, AR	39.8	40.1	35.7	37.3	38.3	42.4
Rohwer, AR	42.4	40.8	40.1	42.0	40.4	43.3
Mean	40.9	40.7	38.9	40.4	39.8	42.1
			GRAMS PER 100 SEED			
Clinton, NC	13.9	12.8	11.1	15.1	16.0	14.4
Hartsville, SC (A)	14.9	13.6	12.9	17.3	16.5	15.8
Blackville, SC (A)	14.3	13.1	16.8	14.4	13.5	15.8
Tallassee, AL	15.6	15.6.	15.3	20.1	17.3	15.9
Athens, GA	13.0	13.4	13.4	14.9	16.3	15.5
Clemson, SC	14.7	13.3	14.0	17.3	16.0	16.7
Jay, FL	12.0	11.0	12.0	15.0	14.0	15.0
Stoneville, MS (B)	12.1	10.6	9.7	14.8	12.4	12.4
Stuttgart, AR	12.5	12.5	11.3	16.0	13.2	14.5
Rohwer, AR	12.2	11.5	10.5	14.8	13.4	13.3
Mean	13.5	12.7	12.7	16.0	14.9	14.9

Table 46 - Relative maturity data, days earlier (-) or later (+) than Braxton, for the strains in Uniform Group VII, 1988

Location	Date planted	Braxton	Thomas	Stonewall (Au82-204)	F83-1918	G81-1949	Au82-211
			EAST COAST				
Kinston, NC	5-23	11-6	F	F	F	F	F
Clinton, NC	5-31	11-6	0	-1	-1	-1	-3
Florence, SC (A)	5-26	10-28	0	0	+1	+2	+1
Florence, SC(B)	6-23	10-30	-2	-2	0	-1	-4
Mean	6-3	11-2	-1	-1	0	0	-2
			SOUTHEAST				
Blackville, SC (A)	5-31	10-23	0	+2	+3	+4	+1
Tallassee, AL	5-26	10-27	0	-2	0	+1	0
Tifton, GA *	5-27	10-20	-2	-2	-1	+1	-2
Gainesville, FL	6-23	10-19	-2	-3	0	+1	-3
Marianna, FL	5-24	10-24	-3	-2	-2	-1	-4
Quincy, FL	6-13	10-22	+1	0	-2	-1	-2
Jay, FL	6-3	10-23	-2	-4	-4	-1	-6
Fairhope, AL	6-14	10-24	-4	-6	0	0	-6
Mean	6-6	10-23	-2	-2	-1	0	
			UPPER AND CENTRAL SOUTH				
Athens, GA	5-17	10-25	0	-1	-2	0	-3
Calhoun, GA	5-17	F	F	F	F	F	F
Clemson, SC	5-19	11-1	+1	0	0	0	-1
Mean	5-19	10-29	+1	-1	-1	0	-2
			DELTA & WEST				
Stoneville, MS (A)	5-24	10-28	+7	-12	-6	-1	-11
Stoneville, MS (B)	6-9	10-28	-5	0	0	+1	-1
Stuttgart, AR	5-18	10-23	-1	-1	0	-1	-1
Rohwer, AR	5-27	10-21	-3	-3	-1	-1	-3
St. Joseph, LA	5-26	10-19	-2	-3	-1	+1	-3
Bossier City, LA	5-12	10-15	+1	-2	+1	+3	-1
Beaumont, TX	5-19	10-21	-3	-5	-3	-2	-7
Mean	5-24	10-22	-1	-4	-2	0	-4

* Not included in mean.

Table 46 - (continued)

Location	Au83-1018	G83-559	G83-969	N85-574	R85-140S	SC84-818
			EAST COAST			
Kinston, NC	F	F	F	F	F	F
Clinton, NC	-2	-4	0	-2	-4	-2
Florence, SC (A)	0	-1	0	+2	-1	+2
Florence, SC(B)	-4	-3	0	-2	-3	+1
Mean	-2	-2	0	-1	-2	0
			SOUTHEAST			
Blackville, SC (A)	0	0	+2	+2	0	+3
Tallassee, AL	0	-1	-1	-1	-1	0
Tifton, GA *	-3	-1	-2	+1	-1	+2
Gainesville, FL	-4	-2	+3	-4	-4	-1
Marianna, FL	-4	-3	-3	+1	-2	-1
Quincy, FL	-5	-3	+3	+1	-2	-1
Jay, FL	-6	-5	0	-1	-3	0
Fairhope, AL	-6	-6	0	-6	-6	0
Mean	-4	-3	+1	-1	-3	0
			UPPER AND CENTRAL SOUTH			
Athens, GA	-10	-1	-1	-6	-6	-3
Calhoun, GA	F	F	F	F	F	F
Clemson, SC	-3	-2	+1	-1	-2	+1
Mean	-7	-2	0	-4	-4	-1
			DELTA & WEST			
Stoneville, MS (A)	-9	+5	0	+1	-10	-7
Stoneville, MS (B)	-8	0	+2	+2	+1	0
Stuttgart, AR	+1	+1	+4	+6	0	+6
Rohwer, AR	-3	0	0	-2	-3	0
St. Joseph, LA	-3	0	+1	0	-3	-3
Bossier City, LA	-4	-2	+1	+3	+1	+1
Beaumont, TX	-9	-3	-5	-3	-4	-2
Mean	-5	0	0	+1	-3	-1

Table 47 - Plant height for the strains in Uniform Group VII, 1988.

Location	Braxton	Thomas	Stonewall (Au82-204)	F83-1918	G81-1949	Au82-211
			EAST COAST			
Holland, VA	44	43	42	45	39	43
Kinston, NC	40	40	42	46	42	43
Clinton, NC	36	30	31	34	30	38
Florence, SC (A)	39	37	35	40	36	37
Florence, SC (B)	31	27	27	28	30	28
Mean	38	35	35	39	35	38
			SOUTHEAST			
Blackville, SC (A)	29	28	29	30	27	25
Tallassee, AL	39	34	31	37	37	35
Tifton, GA *	35	34	32	32	30	30
Gainesville, FL	21	19	17	18	18	18
Marianna, FL	43	40	41	43	41	37
Quincy, FL	37	37	31	35	37	33
Jay, FL	30	30	31	32	31	31
Fairhope, AL	41	35	32	37	41	35
Baton Rouge, LA	40	39	36	35	35	33
Mean	35	33	31	33	33	31
			UPPER AND CENTRAL SOUTH			
Athens, GA	37	30	33	35	35	33
Calhoun, GA	38	34	37	40	41	30
Clemson, SC	43	40	40	40	40	38
Mean	39	35	37	38	39	34
			DELTA & WEST			
Stoneville, MS (A)	47	45	41	45	47	47
Stoneville, MS (B)	41	35	35	37	37	35
Stuttgart, AR	45	39	43	46	41	37
Rohwer, AR	41	41	41	43	44	41
St. Joseph, LA	40	37	34	38	37	36
Bossier City, LA	36	31	30	33	34	28
Beaumont, TX	35	30	32	32	33	27
Mean	41	37	37	39	39	36

* Not included in mean.

Table 47 - (continued)

Location	Au83-1018	G83-559	G83-969	N85-574	R85-140S	SC84-818
			EAST COAST			
Holland, VA	36	40	48	42	44	47
Kinston, NC	34	46	38	40	41	44
Clinton, NC	22	29	40	30	36	32
Florence, SC (A)	28	36	41	31	36	40
Florence, SC (B)	22	29	37	25	30	31
Mean	28	36	41	34	37	39
			SOUTHEAST			
Blackville, SC (A)	23	31	31	27	34	31
Tallassee, AL	27	38	44	36	39	33
Tifton, GA *	24	37	45	34	33	36
Gainesville, FL	13	21	30	16	19	17
Marianna, FL	39	40	46	42	42	41
Quincy, FL	28	37	44	34	38	38
Jay, FL	28	33	34	30	34	32
Fairhope, AL	28	39	43	32	39	37
Baton Rouge, LA	38	39	49	34	36	40
Mean	28	35	40	31	35	34
			UPPER AND CENTRAL SOUTH			
Athens, GA	25	36	39	31	37	39
Calhoun, GA	28	38	46	33	35	37
Clemson, SC	32	41	46	34	41	39
Mean	28	38	44	33	38	39
			DELTA & WEST			
Stoneville, MS (A)	38	47	53	44	48	52
Stoneville, MS (B)	35	35	43	35	37	35
Stuttgart, AR	34	36	51	38	41	46
Rohwer, AR	39	39	47	42	47	42
St. Joseph, LA	27	35	45	36	45	40
Bossier City, LA	28	34	38	33	33	40
Beaumont, TX	24	35	42	30	34	36
Mean	32	37	46	37	41	42

Table 48 - Lodging scores for the strains in Uniform Group VII, 1988.

Location	Braxton	Thomas	Stonewall (Au82-204)	F83-1918	G81-1949	Au82-211
			EAST COAST			
Holland, VA	2.7	2.7	3.3	3.3	3.3	4.0
Kinston, NC	3.0	3.0	3.0	3.0	3.0	3.0
Clinton, NC	3.0	3.0	3.0	3.0	3.0	2.0
Florence, SC (A)	1.2	1.2	1.0	1.2	1.5	1.0
Florence, SC(B)	1.2	1.0	1.0	1.0	1.8	1.2
Hartsville, SC (A)	1.7	2.2	1.8	2.3	3.2	1.5
Hartsville, SC (B)	1.3	1.2	1.0	1.0	1.2	1.2
			SOUTHEAST			
Blackville, SC (A)	1.0	1.0	1.0	1.0	1.0	1.0
Tallassee, AL	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, GA	1.3	1.3	1.4	1.2	1.3	1.2
Gainesville, FL	1.0	1.0	1.0	1.0	1.0	1.0
Marianna, FL	2.3	2.3	2.3	2.0	2.8	2.0
Quincy, FL	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	2.7	2.0	1.3	1.3	2.0	2.0
Fairhope, AL	1.3	1.3	1.3	1.3	2.3	1.7
Baton Rouge, LA	2.8	3.0	3.0	3.5	4.3	2.5
			UPPER AND CENTRAL SOUTH			
Athens, GA	1.5	1.5	1.5	1.7	1.8	1.5
Calhoun, GA	1.3	1.0	1.3	1.0	1.7	1.7
Clemson, SC	1.2	1.3	1.0	1.3	2.2	1.0
			DELTA & WEST			
Stoneville, MS (A)	3.0	3.0	3.0	3.0	3.3	3.0
Stoneville, MS (B)	3.0	2.3	2.7	2.7	3.0	2.3
Stuttgart, AR	2.7	2.0	2.0	2.4	2.1	2.0
Rohwer, AR	1.7	1.0	2.0	1.0	1.3	3.0
St. Joseph, LA	2.0	1.4	1.6	1.7	1.4	1.4
Bossier City, LA	1.0	1.0	1.3	1.0	1.0	1.2
Beaumont, TX	1.0	1.0	1.0	1.0	1.0	1.0

Table 48 - (continued)

Location	Au83-1018	G83-559	G83-969	N85-574	R85-140S	SC84-818
			EAST COAST			
Holland, VA	2.3	3.7	4.0	3.7	3.7	3.0
Kinston, NC	3.0	3.0	3.0	3.0	3.0	3.0
Clinton, NC	2.0	3.0	3.0	3.0	3.0	3.0
Florence, SC (A)	1.2	1.2	1.5	1.0	1.5	1.3
Florence, SC(B)	1.0	1.0	1.7	1.0	1.3	1.2
Hartsville, SC (A)	1.2	2.0	2.3	1.3	2.3	1.8
Hartsville, SC (B)	1.0	1.2	1.5	1.0	1.0	1.5
			SOUTHEAST			
Blackville, SC (A)	1.0	1.0	1.0	1.0	1.0	1.0
Tallassee, AL	1.0	1.0	1.3	1.0	1.3	1.2
Tifton, GA	1.6	1.5	1.8	1.4	1.6	1.6
Gainesville, FL	1.0	1.0	1.0	1.0	1.0	1.0
Marianna, FL	1.8	2.5	3.0	2.8	3.0	2.8
Quincy, FL	1.0	1.7	2.7	1.0	1.0	1.0
Jay, FL	1.3	1.7	2.7	2.0	2.0	2.0
Fairhope, AL	1.0	2.0	2.3	1.3	2.0	1.0
Baton Rouge, LA	2.5	3.5	5.0	3.3	3.5	4.0
			UPPER AND CENTRAL SOUTH			
Athens, GA	1.5	1.7	2.2	1.5	1.8	1.8
Calhoun, GA	1.3	1.3	1.7	1.7	2.0	1.7
Clemson, SC	1.0	1.2	2.3	1.3	1.8	2.2
			DELTA & WEST			
Stoneville, MS (A)	3.0	3.3	3.7	3.0	3.7	3.7
Stoneville, MS (B)	2.0	3.0	3.0	3.0	2.3	3.0
Stuttgart, AR	2.0	2.0	3.4	4.0	2.6	2.2
Rohwer, AR	1.7	2.3	3.0	2.7	1.7	3.7
St. Joseph, LA	1.3	1.6	3.1	2.2	2.1	1.8
Bossier City, LA	1.0	1.0	1.5	1.0	1.2	1.5
Beaumont, TX	1.0	1.2	1.3	1.0	1.0	1.2

Table 49 - Seed quality scores for the strains in Uniform Group VII, 1988

Location	Braxton	Thomas	Stonewall (Au82-204)	F83-1918	G81-1949	Au82-211
			EAST COAST			
Kinston, NC	1.5	1.5	1.5	1.5	1.5	1.5
Clinton, NC	1.5	1.5	1.5	1.5	1.5	1.5
			SOUTHEAST			
Blackville, SC (A)	1.5	2.0	2.0	1.5	2.0	2.0
Tallassee, AL	1.0	1.0	1.5	1.0	1.0	1.0
Tifton, GA	1.7	2.2	2.2	2.0	1.5	1.8
Quincy, FL	2.0	2.0	2.0	2.0	2.0	2.0
Jay, FL	2.0	2.0	2.0	3.0	3.0	2.0
Baton Rouge, LA	1.8	2.0	2.1	2.1	1.6	1.2
			UPPER AND CENTRAL SOUTH			
Athens, GA	1.5	1.5	1.5	1.5	1.5	1.5
Calhoun, GA	1.0	1.0	1.0	1.0	1.0	1.0
			DELTA & 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
Stuttgart, AR	2.5	2.5	2.2	2.0	1.8	2.5
Rohwer, AR	2.3	2.5	2.5	2.2	2.2	2.5
St. Joseph, LA	2.5	2.4	2.3	2.4	2.5	2.3
Beaumont, TX	1.5	1.0	1.0	1.0	1.0	1.0

Table 49 - (continued)

Location	Au83-1018	G83-559	G83-969	N85-574	R85-140S	SC84-818
			EAST COAST			
Kinston, NC	1.5	1.5	1.5	1.5	1.5	1.5
Clinton, NC	1.5	1.5	1.5	1.5	1.5	1.5
			SOUTHEAST			
Blackville, SC (A)	1.5	2.0	2.0	1.0	1.0	2.0
Tallassee, AL	1.0	1.5	1.0	1.5	1.0	1.0
Tifton, GA	2.0	1.7	2.2	2.7	2.0	1.7
Quincy, FL	1.0	2.0	1.0	1.7	2.0	1.0
Jay, FL	2.0	3.0	2.0	2.0	2.0	2.0
Baton Rouge	1.8	1.0	1.8	2.0	1.8	1.0
			UPPER AND CENTRAL SOUTH			
Athens, GA	1.5	1.5	1.5	1.5	1.5	1.5
Calhoun, GA	1.0	1.0	1.0	1.0	1.0	1.0
			DELTA & 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
Stuttgart, AR	2.3	1.8	2.0	2.0	2.2	2.3
Rohwer, AR	2.0	2.2	2.2	2.0	2.2	2.2
St. Joseph, LA	2.5	2.3	2.5	2.4	2.5	2.4
Beaumont, TX	1.3	1.0	1.0	1.3	1.0	1.0

PRELIMINARY GROUP VII

1988

Preliminary Group VII nurseries, which included Braxton and Sharkey along with 34 experimental strains were grown at nine locations. The parentage of each of the strains is reported in Table 50. A general summary of performance is reported in Table 51. This includes mean seed yield, maturity index, plant height, protein percentage, oil percentage, reaction to the two root-knot species M. incognita and M. arenaria, races 3 and 4 of soybean cyst nematode and reaction to soybean looper. Performance data from individual locations is reported in Tables 52-56.

Sharkey, which was included as a Group VI maturity check, averaged 8 days earlier in maturity than Braxton. There were no strains averaging earlier in maturity than Sharkey. The latest maturing strain averaged 3 days later in maturity than Braxton. Therefore, we would consider all strains to be of satisfactory maturity for this group.

Braxton had a mean seed yield of 39.4 bushels per acre. One strain had a mean seed yield significantly higher than Braxton at the 5% level of confidence. Three strains had mean seed yields significantly lower than that for Braxton. There were 11 strains having mean seed yields which ranked above that for Braxton. Five strains were rated resistant to SCN races 3 and 4. There were 9 strains rated resistant to both root-knot nematode species and resistant to SCN race 3. D86-9845 ranked above Braxton in seed yield and was rated resistant to both root-knot nematode species and SCN races 3 and 4. Au88-1088 also ranked above Braxton in mean seed yield and was rated resistant to both root-knot nematode species and to SCN race 3. Five strains had moderately low ratinnigs for feeding by soybean looper. All of the strains which were rated low for feeding by soybean looper had mean seed yields below that for Braxton.

TABLE 50 - PARENTAGE OF THE STRAINS GROWN IN PRELIMINARY GROUP VII, 1988

	VARIETY OR STRAIN	PARENTAGE	GENERATION COMPOSITED
1.	BRAXTON	F59-1505 X (BRAGG(3) X D60-7965)	F5
2.	SHARKEY	TRACY X CENTENNIAL	F5
3.	AU85-821	LEFLORE X KIRBY	F6
4.	AU85-1088	WRIGHT X CO79-501	F6
5.	AU85-1132	WRIGHT X CO79-501	F6
6.	AU85-1814	D77-6103 X BRAXTON	F6
7.	AU85-1828	D77-6103 X BRAXTON	F6
8.	AU85-2837	BRAXTON X GORDON	F6
9.	D86-3429	TRACY-M X SEL (D71-9241 X D73-10169)	F8
10.	D86-8386	SHARKEY X D79-10158	F5
11.	D86-8473	SHARKEY X D79-10158	F5
12.	D86-8484	SHARKEY X D79-10158	F5
13.	D86-9365	D79-6058 X D82-9943	F5
14.	D86-9845	KIRBY X D82-9973	F5
15.	F86-1619	KIRBY(2) X TRACY-M	F5
16.	F86-1682	KIRBY(2) X TRACY-M	F5
17.	F86-4079	BEDFORD X KIRBY	F7
18.	G84-28	KIRBY X J74-87	F6
19.	G84-211	KIRBY X WRIGHT	F6
20.	G84-215	KIRBY X WRIGHT	F6
21.	G84-3185	JOHNSTON X BRAXTON	F6
22.	G84-803	F76-8757 X D74-7741	F6
23.	G84-2100	CO237 X WRIGHT	F6
24.	N86-452	N77-940 X N79-856	F5
25.	N86-463	N77-940 X N79-856	F5
26.	N86-502	N77-1602 X F77-1797	F5
27.	N86-716	N80-5055 X TS74-3495	F5
28.	N86-748	N79-2282 X TS74-3495	F5
29.	N86-782	N77-8106 X N77-8472	F5
30.	R86-34S	(NAROW X CO317) X (JEFF X WRIGHT)	F5
31.	R86-74S	(NAROW X CO317) X (JEFF X WRIGHT)	F5
32.	R86-365S	CENTENNIAL X JEFF	F5
33.	SC84-583	D76-9665 X JOHNSTON	F5
34.	SC84-1045	BRAXTON X JEFF	F5
35.	SC84-1550	BRAXTON X YOUNG	F5
36.	SC84-2548	FOSTER X JEFF	F5

TABLE 51 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN PRELIMINARY GROUP VII, 1988

STRAIN	Seed yield	Mat. index	Percent Ht.	Percent Oil	Percent Protein	M. incognita	M. arenaria	SCN 3	SCN 4	soybean looper
BRAXTON	39.4	10-27	37	20.1	41.3	1.0	2.0	S	S	4.0
SHARKEY	38.7	-8	38	20.2	41.4	5.0	4.3	R	S	4.5
Au85-821	39.8	-4	32	20.6	39.8-	1.0	1.7	R	S	4.0
Au85-1088	40.0	-1	32	20.9+	39.4-	1.0	1.8	R	S	4.0
Au85-1132	40.3	0	37	20.9+	39.7-	1.3	4.0	R	S	4.0
Au85-1814	39.7	+1	36	20.3	41.6	1.0	3.1	R	R	4.5
Au85-1828	37.8	-2	35	21.0+	39.0-	1.0	3.8	R	R	4.0
Au85-2837	37.8	-3	35	21.7+	37.5-	1.0	2.3	R	S	4.0
D86-3429	34.0	-3	33	19.6	43.4+	5.0	4.3	S	S	1.0
D86-8386	38.0	-3	35	20.5	41.1	5.0	5.0	R	S	3.5
D86-8473	33.5-	-2	40	20.3	41.4	4.3	4.3	R	S	2.5
D86-8484	33.5-	0	40	20.7	41.2	1.3	4.0	R	S	2.5
D86-9365	34.8-	+3	36	19.0-	42.6+	1.0	3.0	R	S	1.5
D86-9845	41.0	-1	37	20.8+	41.6	1.0	2.0	R	R	4.0
F86-1619	36.4	-2	33	20.9+	40.3	1.0	1.3	R	S	4.0
F86-1682	35.8	-2	41	19.2-	42.3	4.0	2.7	R	S	4.0
F86-4079	35.4	+1	41	19.6	40.8	1.0	1.7	R	S	4.0
G84-28	35.1	-1	36	20.0	40.6	1.0	2.0	R	R	4.0
G84-211	39.2	-2	36	20.5	40.7	1.0	2.0	R	S	4.0
G84-215	37.9	-1	36	19.7	41.1	1.0	2.3	R	S	4.0
G84-3185	44.4+	0	34	21.4+	39.4-	1.7	3.7	S	S	3.5
G84-803	36.3	-5	40	20.3	39.2-	1.0	2.3	R	R	4.0
G84-2100	39.6	-3	34	21.0+	41.5	2.0	2.6	h	S	4.0
N86-452	43.3	-1	33	19.8	41.6	4.7	3.0	S	S	3.5
N86-463	41.1	-5	34	21.1+	39.6-	5.0	4.0	R	S	4.0
N86-502	38.8	-3	36	20.7	40.6	1.3	2.0	R	S	3.5
N86-716	37.5	0	34	21.2+	39.8-	4.5	3.6	R	S	3.5
N86-748	35.0	0	36	18.7-	43.7+	1.0	1.7	R	S	1.5
N86-782	36.3	-3	40	20.3	40.9	1.0	1.7	R	S	3.0
R86-34S	40.0	-1	35	20.4	40.1-	4.3	4.3	I	S	4.0
R86-74S	38.3	-6	35	20.7	41.9	2.7	4.7	I	S	4.0
R86-365S	36.4	+2	34	20.7	40.4	1.0	2.3	R	S	4.0
SC84-583	40.5	+2	36	21.7	38.1-	1.0	4.6	R	S	4.0
SC84-1045	37.3	+1	36	20.7	40.8	1.5	1.7	R	S	4.0
SC84-1550	39.6	0	3.5	19.8	41.9	1.3	4.3	R	S	4.0
SC84-2548	32.3	-2	34	20.1	41.3	2.3	3.0	R	S	4.0
LSD (.05)	4.5			0.7	1.2					
C.V.	13%			2%	2%					

+ or - designations refer to differences from Braxton.

TABLE 52 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN PRELIMINARY GROUP VII, 1988

STRAIN	CLINTON, NC	BLACK-VILLE, SC	TALLAS-SEE, ATHENS, GA	AL	JAY, FL	ROHWER, AR	STONE-VILLE, MS (A)	STONE-VILLE, MS (B)	BEAU-MONT, TX
BRAXTON	49.8	38.9	43.6	47.8	37.4	33.6	41.3	38.0	23.8
SHARKEY	36.6-	36.4	39.4	42.7	35.8	46.0+	41.2	44.4+	25.7
AU85-821	45.0	34.0	52.1	39.5	38.0	38.8	37.9	39.4	33.1+
AU85-1088	43.6	44.2+	52.7	33.6	47.3+	38.1	31.5-	36.8	31.3+
AU85-1132	42.6	41.9	50.1	49.0	41.3	34.6	30.2-	40.3	32.7+
AU85-1814	41.4	41.6	41.7	46.1	39.1	36.5	36.8	43.0	31.2+
AU85-1828	39.4	38.8	38.7	42.7	31.9	39.5	39.0	41.4	28.7
AU85-2837	40.8	39.2	41.2	41.9	38.0	36.7	36.0	36.6	29.5
D86-3429	36.8-	31.6-	37.8	34.6	20.4-	38.2	41.9	36.8	27.7
D86-8386	39.3	38.2	42.3	42.0	34.7	40.7	37.8	38.3	28.9
D86-8473	32.1-	33.6-	31.9-	36.3	34.1	34.6	36.1	40.3	22.7
D86-8484	36.2-	33.7-	38.7	24.7-	33.6	32.8	36.6	36.9	28.3
D86-9365	38.8	35.1	34.2	41.0	28.1-	36.1	35.1	36.6	28.2
D86-9845	43.4	42.9	45.2	52.0	37.4	33.8	41.2	41.4	31.5+
F86-1619	40.9	37.5	39.0	33.8	34.7	41.6	37.9	38.3	23.6
F86-1682	35.5-	37.1	42.5	45.4	30.3-	35.2	31.5-	35.0	29.8
F86-4079	41.7	37.7	33.6	49.7	33.0	30.1	30.4-	32.2	29.8
G84-28	26.4-	40.4	37.4	35.8	28.6-	38.9	39.2	39.1	29.9
G84-211	34.8-	36.1	48.4	38.5	36.9	35.9	42.9	45.5+	34.2+
G84-215	33.4-	40.0	42.9	52.1	31.4	38.0	36.4	36.8	29.8
G84-3185	49.9	43.4	56.9+	38.7	42.9	47.0+	44.8	45.6+	30.8
G84-803	44.6	35.7	43.8	42.0	30.8-	34.6	32.0-	38.8	25.1
G84-2100	39.3	44.7+	40.1	55.8	29.2-	44.4+	36.0	40.9	25.6
N86-452	50.3	39.2	46.8	45.1	38.5	50.2+	41.3	47.6+	30.5
N86-463	48.5	44.3+	47.7	48.4	31.9	43.4+	37.2	43.9	24.5
N86-502	40.7	41.3	45.2	41.9	34.1	37.9	39.4	41.8	27.1
N86-716	39.4	37.9	42.1	55.4	35.8	30.8	32.4-	37.1	26.6
N86-748	32.9-	38.3	35.7	36.0	30.8-	37.1	39.5	40.1	24.8
N86-782	43.1	37.9	41.5	26.2-	31.9	39.6	39.9	40.4	26.6
R86-34S	47.5	40.1	48.4	41.7	33.6	33.8	39.0	42.7	33.1+
R86-74S	36.8-	35.8	37.5	44.8	31.4	40.3	39.8	44.3+	34.2+
R86-365S	40.2	39.7	38.5	38.9	35.8	39.3	32.9-	36.6	25.4
SC84-583	51.7	48.5+	49.3	16.3-	43.5	42.8+	37.2	47.4+	27.5
SC84-1045	37.9	42.5	33.2-	41.7	44.0+	31.4	37.7	39.0	28.3
SC84-1550	48.0	43.7	41.5	39.1	40.2	41.3	37.4	40.3	25.3
SC84-2548	39.0	41.4	40.0	22.2-	34.1	30.7	24.5-	31.9-	26.5
LSD (.05)	12.2	5.1	10.1	18.6	6.4	8.8	6.5	6.0	7.4
C.V.	15%	6%	12%	23%	9%	11%	9%	7%	13%

TABLE 53 - OIL PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VII, 1988

STRAIN	CLINTON, NC	BLACK-VILLE, SC	JAY, FL	STONE-VILLE, MS(B)
BRAXTON	19.4	19.7	22.1	19.2
SHARKEY	18.5	21.1	21.5	19.5
AU85-821	19.0	22.2	21.7	19.4
AU85-1088	19.9	22.4	22.1	19.3
AU85-1132	19.4	21.2	22.6	20.5
AU85-1814	18.7	22.4	20.8	19.1
AU85-1828	20.4	22.1	22.0	19.6
AU85-2837	20.3	23.2	22.9	20.3
D86-3429	18.6	20.9	20.9	18.1
D86-8386	19.0	21.6	22.0	19.4
D86-8473	18.6	21.3	21.7	19.5
D86-8484	19.4	21.4	21.8	20.3
D86-9365	18.1	19.8	20.1	18.0
D86-9845	20.4	21.8	21.8	19.3
F86-1619	20.6	22.3	21.7	18.9
F86-1682	18.2	20.6	20.1	18.0
F86-4079	18.7	20.6	20.9	18.3
G84-28	18.3	21.2	20.5	19.8
G84-211	18.9	21.9	22.1	19.1
G84-215	18.0	21.0	20.8	18.8
G84-3185	20.4	22.3	22.3	20.4
G84-803	19.2	21.6	21.4	19.1
G84-2100	20.0	22.7	21.6	19.7
N86-452	19.0	20.9	20.8	18.5
N86-463	20.6	22.3	21.4	19.9
N86-502	19.6	21.8	21.5	19.8
N86-716	19.8	23.0	22.3	19.6
N86-748	18.3	20.5	19.1	17.0
N86-782	19.4	21.6	21.5	18.7
R86-34S	19.0	22.3	21.0	19.2
R86-74S	19.5	22.1	21.8	19.2
R86-365S	20.0	21.8	21.1	19.8
SC84-583	20.3	23.4	23.5	19.9
SC84-1045	19.4	22.0	21.9	19.3
SC84-1550	19.1	20.9	20.5	18.6
SC84-2548	19.0	21.9	21.3	18.2

TABLE 53 - PROTEIN PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VII, 1988

STRAIN	CLINTON, NC	BLACK-VILLE, SC	JAY, FL	STONE-VILLE, MS(B)
BRAXTON	41.5	41.6	40.3	41.9
SHARKEY	43.0	39.1	41.5	42.1
AU85-821	40.0	39.1	39.7	40.4
AU85-1088	40.0	37.3	40.4	40.2
AU85-1132	39.9	41.9	38.0	38.8
AU85-1814	42.7	37.7	43.5	42.6
AU85-1828	37.8	37.3	40.3	40.5
AU85-2837	38.1	36.1	37.4	38.5
D86-3429	43.4	42.4	43.4	44.4
D86-8386	42.7	40.0	40.4	41.1
D86-8473	41.5	40.8	41.5	41.9
D86-8484	41.2	40.5	41.5	41.5
D86-9365	41.6	42.0	43.3	43.4
D86-9845	41.5	41.2	41.2	42.6
F86-1619	40.3	37.9	41.1	42.2
F86-1682	42.6	41.8	42.6	42.3
F86-4079	40.2	40.2	41.0	41.9
G84-28	41.6	40.0	41.2	39.5
G84-211	40.8	39.6	41.0	41.5
G84-215	42.2	40.1	41.0	40.9
G84-3185	40.0	39.2	39.0	39.5
G84-803	39.6	38.4	39.6	39.4
G84-2100	42.3	40.3	41.6	41.8
N86-452	42.1	41.1	40.9	42.4
N86-463	39.4	38.7	40.1	40.2
N86-502	42.4	40.2	40.4	39.3
N86-716	40.8	37.8	39.7	40.8
N86-748	44.1	42.5	44.2	43.9
N86-782	40.7	40.1	41.1	41.5
R86-34S	40.7	38.3	40.7	40.5
R86-74S	42.5	41.2	42.0	41.7
R86-365S	41.6	39.6	40.7	39.7
SC84-583	38.8	37.0	37.3	39.1
SC84-1045	41.1	39.8	40.6	41.6
SC84-1550	43.0	41.7	41.0	41.9
SC84-2548	42.0	39.7	40.9	42.6

TABLE 55 - PLANT HEIGHT PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VII, 1988

STRAIN	CLINTON, NC	BLACK-VILLE, SC	ATHENS, GA	TALLAS-SEE, AL	JAY, FL	ROHWER, AR	STONE-VILLE, MS (A)	STONE-VILLE, MS (B)	BEAU-MONT, TX
BRAXTON	42	29	34	33	32	42	47	43	33
SHARKEY	34	34	32	35	35	44	48	39	37
AU85-821	32	27	32	25	28	40	42	35	28
AU85-1088	28	27	32	27	33	38	43	34	28
AU85-1132	34	33	36	35	34	43	46	41	31
AU85-1814	36	35	33	35	36	36	46	37	32
AU85-1828	38	31	30	34	33	42	42	38	31
AU85-2837	34	29	32	29	32	39	48	40	31
D86-3429	36	33	31	30	24	37	41	33	31
D86-8386	36	31	34	31	30	38	46	37	32
D86-8473	34	36	35	39	38	49	51	40	38
D86-8484	36	32	37	40	31	45	49	48	43
D86-9365	34	32	32	37	31	45	44	37	34
D86-9845	34	33	35	32	34	43	47	37	37
F86-1619	30	27	29	30	32	41	42	38	26
F86-1682	44	33	36	47	38	50	40	43	42
F86-4079	34	33	36	40	38	48	54	44	45
G84-28	34	32	32	32	29	39	47	40	38
G84-211	32	30	41	28	35	42	43	42	30
G84-215	38	30	37	32	31	40	46	40	30
G84-3185	34	30	36	25	34	38	40	37	30
G84-803	36	32	39	38	36	47	51	41	36
G84-2100	34	30	26	31	33	44	45	37	29
N86-452	32	27	30	25	35	40	42	39	23
N86-463	33	31	32	26	32	45	44	38	27
N86-502	36	33	33	27	34	43	48	39	31
N86-716	34	30	30	30	31	39	43	35	31
N86-748	40	33	34	31	30	36	42	40	37
N86-782	42	33	41	31	36	41	52	43	41
R86-34S	36	31	34	27	32	43	46	37	28
R86-74S	36	29	29	28	33	44	47	38	32
R86-365S	36	27	31	32	30	44	44	34	30
SC84-583	34	30	39	22	37	43	48	39	36
SC84-1045	34	32	28	35	35	40	49	40	35
SC84-1550	34	31	24	33	33	42	47	37	29
SC84-2548	32	32	32	25	37	42	44	35	30

TABLE 56 - SEED QUALITY SCORES FOR THE STRAINS IN PRELIMINARY GROUP VII, 1988

STRAIN	CLINTON, NC	BLACK-VILLE, SC	ATHENS, GA	JAY, FL	ROHWER, AR	STONE-VILLE, MS (A)	STONE-VILLE MS (B)	BEAU-MONT TX
BRAXTON	2.0	1.5	1.5	3.0	2.5	2.0	2.0	2.3
SHARKEY	2.0	2.5	1.5	2.0	2.0	2.0	2.0	3.5
AU85-821	2.0	2.0	1.5	2.0	2.5	2.0	2.0	1.0
AU85-1088	2.0	1.5	1.5	2.0	2.0	2.0	2.0	1.0
AU85-1132	2.0	1.0	1.5	2.0	2.3	2.0	2.0	1.3
AU85-1814	2.0	1.5	1.5	3.0	2.5	2.0	2.0	1.0
AU85-1828	2.0	1.5	1.5	3.0	2.3	2.0	2.0	1.3
AU85-2837	2.0	1.0	1.5	3.0	2.5	2.0	2.0	2.5
D86-3429	2.0	2.0	1.5	3.0	2.0	2.0	2.0	1.8
D86-8386	2.0	2.5	1.5	3.0	2.0	2.0	2.0	2.5
D86-8473	2.0	2.0	1.5	3.0	2.5	2.0	2.0	3.0
D86-8484	2.0	2.0	1.5	2.0	2.5	2.0	2.0	2.3
D86-9365	2.0	1.5	1.5	3.0	2.5	2.0	2.0	1.0
D86-9845	2.0	1.5	1.5	3.0	2.3	2.0	2.0	1.0
F86-1619	1.5	2.0	1.5	2.0	2.3	2.0	2.0	1.3
F86-1682	1.5	1.0	1.5	2.0	2.3	2.0	2.0	1.5
F86-4079	2.0	2.0	1.5	3.0	2.5	2.0	2.0	1.0
G84-28	2.0	1.5	1.5	3.0	2.0	2.0	2.0	2.3
G84-211	1.5	1.0	1.5	2.0	2.3	2.0	2.0	1.0
G84-215	2.0	1.0	1.5	2.0	2.5	2.0	2.0	1.0
G84-3185	1.5	1.0	1.5	2.0	2.0	2.0	2.0	1.5
G84-803	1.5	1.5	1.5	2.0	1.8	2.0	2.0	1.5
G84-2100	1.5	2.0	1.5	2.0	2.0	2.0	2.0	1.0
N86-452	1.5	1.0	1.5	2.0	2.0	2.0	2.0	1.5
N86-463	1.5	2.0	1.5	2.0	2.0	2.0	2.0	1.3
N86-502	1.5	1.5	1.5	2.0	3.0	2.0	2.0	1.3
N86-716	2.0	2.0	1.5	3.0	2.3	2.0	2.0	1.0
N86-748	2.0	2.0	1.5	3.0	2.3	2.0	2.0	1.5
N86-782	1.5	1.5	1.5	3.0	2.0	2.0	2.0	1.8
R86-34S	1.5	1.0	1.5	2.0	2.5	2.0	2.0	1.8
R86-74S	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0
R86-365S	1.5	2.0	1.5	3.0	2.0	2.0	2.0	1.8
SC84-583	1.5	1.5	1.5	2.0	2.5	2.0	2.0	1.3
SC84-1045	1.5	1.0	1.5	2.0	2.5	2.0	2.0	1.3
SC84-1550	1.5	1.0	1.5	2.0	2.0	2.0	2.0	1.0
SC84-2548	1.5	1.5	1.5	2.0	2.0	2.0	2.0	1.5

UNIFORM GROUP VIII

1988

	Variety or strain	Parentage	Generation composited
1.	Kirby	Centennial X [Forrest X (Cobb X D68-216)]	F_6
2.	Co6738	Braxton X Co368	F_5
3.	Crockett	PI 171451 X Hampton 266	F_{14}
4.	Co82-622	Braxton X Co368	F_5
5.	F83-2048	Bedford X Kirby	F_6
6.	F83-1648	Bedford X Kirby	F_5
7.	G82-2820	D74-7741 X F76-8757	F_6
8.	G82-3458	Braxton X Dowling	F_6
9.	SC83-1810	Foster X Ransom	F_5
10.	Co85-483	Co368 X (Co317 X D77-6103)	F_5
11.	G83-266	Braxton X Young	F_6
12.	G83-644	D77-6103 X F77-6903	F_6

Background of breeding lines used as parents

D68-216 is a selection from Dyer X Bragg.

Co368 is a selection from Co71-211 X Centennial evaluated in Uniform Group VIII in 1982.

D74-7741 is a selection from Forrest X D70-3001 grown in Uniform Group VI in 1977-1979.

F77-8757 is a SCN race 3 resistant line from Centennial X [Forrest X Cobb X D68-216)].

D77-6103 is a selection from Centennial X J74-57.

F77-6903 is a selection from Forrest X Cobb X D68-216).

UNIFORM GROUP VIII

Uniform Group VIII nurseries were evaluated at 18 locations. Results are summarized in Tables 57-63. Table 57 gives a general summary of performance. Included are 1, 2 and 3 year means for seed yield, oil percentage and protein percentage along with information on reaction to root-knot nematodes, soybean cyst nematodes, and feeding by soybean looper along with some agronomic characteristics. Results from individual locations are summarized in Tables 58-63.

Ratings for reaction to the two root-knot nematode species M. incognita and M. arenaria were made in the greenhouse at the University of Georgia, Athens. Ratings for reaction to SCN races 3 and 4 were made in the greenhouse at Jackson, Tennessee. Ratings for feeding by soybean looper were made in the field cage at Stoneville. Ratings for reaction to frog-eye leaf spot were made in the field at Quincy, Florida. Although there had been heavy development of stem canker in the nursery at Beaumont, Texas the two previous years, there was very little disease development in 1988.

Crockett, developed in the breeding program at Beaumont, Texas, was released as an insect resistant variety. It has shown excellent resistance to feeding by soybean looper in the field cage at Stoneville. In addition, it has good resistance to frog-eye leaf spot and stem canker.
It is susceptible to root-knot and soybean cyst nematodes. In 1988 it had a mean seed yield 5 bushels below that of Kirby and 8 bushels below that of CO6738. Seed yield has been good at Beaumont.

F83-2048 has been evaluated 3 years. It has good resistance to both root-knot and soybean cyst nematode. It appeared resistant to frog-eye leaf spot in 1988 but, in 1987, when Kirby received a higher rating, it was rated moderately susceptible. The 3 year mean seed yield was slightly below that for Kirby.

Table 57 - General summary of performance for the strains grown in Uniform Group VIII, 1988

	No.of locations	Kirby	Co 6738	Crockett	C082-622	F83-2048	F83-1648
Seed Yield - 1988	17	37.7	40.9	32.6	42.6	35.5	37.6
1987-88		33.5	38.1		40.5	33.6	35.1
1986-88		35.5	39.3		41.4	35.4	
Oil Content - 1988		21.1	22.3	20.1	21.4	20.6	21.1
1987-88		20.0	21.6		20.2	20.0	20.7
1986-88		20.7	21.8		21.0	20.3	
Protein Content - 1988		40.8	38.9	41.4	40.0	41.6	42.1
1987-88		41.0	39.5		40.2	41.7	42.0
1986-88		41.3	39.7		40.4	42.0	
Seed size		12.4	14.2	11.3	13.9	12.4	12.9
Maturity index		10-27	-1	+4	-1	-1	-1
Height		35	36	37	36	37	37
Seed quality		1.6	1.5	1.7	1.6	1.9	2.0
M. incognita		1.2	1.0	4.8	1.0	1.0	1.2
M. arenaria		1.9	1.6	4.0	3.8	2.0	2.0
SCN race 3		R	R	S	R	R	R
SCN race 4		S	S	S	S	R	R
Soybean looper		4.0	4.0	1.0	4.0	4.0	4.0
Flower color		P	P	P	W	P	P
Pubescence color		T	T	T	G	T	T
Pod wall color		Tn	Tn	Br	Tn	Tn	Tn
Frogeye 2		3.7	4.0	1.0	2.7	1.0	1.7

Table 57 - (continued)

	G82-2820	G82-3458	SC83-1810	Co85-483	G83-266	G83-644
Seed Yield - 1988	36.7	38.3	39.2	40.4	44.2	38.9
1987-88	35.3	36.1	37.0			
1986-88						
Oil Content - 1988	20.9	20.9	21.6	21.6	20.7	20.7
1987-88	20.6	20.6	21.1			
1986-88						
Protein Content - 1988	42.3	40.8	41.0	40.3	41.8	41.8
1987-88	42.0	40.9	41.2			
1986-88						
Seed size	13.7	15.5	13.4	12.7	15.0	12.8
Maturity index	-1	+1	+1	0	-1	-2
Height	36	35	36	38	36	33
Seed quality	1.7	1.6	1.6	1.5	1.5	1.7
M. incognita	1.2	1.8	5.0	1.0	2.2	1.0
M. arenaria	2.8	2.2	3.6	2.4	3.5	1.5
SCN race 3	R	S	R	R	R	R
SCN race 4	h	S	S	R	S	S
Soybean looper	4.0	4.0	4.0	4.0	4.0	4.0
Flower color	P	P	P	W	P	W
Pubescence color	T	G	T	G	T	T
Pod wall color	Tn	Tn	Tn	Tn	Tn	Tn
Frogeye 2	3.0	2.7	1.0	1.0	1.0	3.0

Table 58 - Seed yield, in bushels per acre, for the strains in Uniform Group VIII, 1988

Location	Kirby	Co 6738	Crockett	Co82 622	F83- 2048	F83- 1648	G82- 2820
Clinton, NC	44.6	49.9	31.7-	48.0	36.8	43.4	41.7
Florence, SC (A)	40.9	40.9	28.9-	42.6	39.2	41.2	34.1
Florence, SC (B)	22.2	25.5	19.4	26.6	17.3	19.6	26.2
Hartsville, SC (A)	42.4	49.8+	29.4-	52.0+	40.5	38.2	39.1
Hartsville, SC (B)	20.9	22.6	12.5-	24.0	17.4	15.6-	18.1
Blackville, SC (A)	36.9	41.2	37.0	43.4	35.7	38.0	36.3
Athens, GA	49.9	52.7	36.8-	56.0+	49.4	47.4	45.7
Tallassee, AL	49.8	54.2	43.3	46.5	45.9	48.0	45.8
Tifton, GA *	58.7	58.2	44.3-	57.9	51.5-	52.2-	48.5-
Gainesville, FL	24.5	21.9	22.2	18.1	17.5	20.0	20.9
Marianna, FL	42.3	47.2	32.9+	55.9+	39.7	42.4	41.2
Quincy, FL	48.7	54.4	41.3	51.9	46.8	52.6	50.6
Jay, FL	35.6	42.5	31.2	45.8+	30.4	35.6	32.3
Fairhope, AL	41.4	43.0	39.0	49.9+	42.3	41.7	44.7
Baton Rouge, LA	37.6	36.7	49.3	40.1	40.6	48.5+	42.2+
Stoneville, MS	33.2	38.1	33.6	41.3+	31.5	34.6	32.8
Beaumont, TX	27.5	34.1	32.8	39.7+	36.5+	35.0+	35.5+
Mean	37.7	40.9	32.6	42.6	35.5	37.6	36.7

* Not included in mean.

Table 58 - (continued)

Location	G82-3458	SC83-1810	Co85-483	G83-266	G83-644	L.S.D. (.05)	C.V. %
Clinton, NC	43.5	43.2	44.5	46.2	42.1	5.5	8
Florence, SC (A)	40.5	38.4	40.5	45.1	35.8	7.0	11
Florence, SC (B)	18.8	23.3	23.9	30.7	28.7	NS	22
Hartsville, SC (A)	37.5-	33.8-	47.0	42.0	43.1	4.8	7
Hartsville, SC (B)	9.4-	22.0	17.3	21.3	25.7+	4.0	12
Blackville, SC (A)	43.1	41.3	33.4	44.0	36.7	7.3	11
Athens, GA	54.5+	52.4	52.6	58.1+	55.2+	47.7	5
Tallassee, AL	45.2	51.1	48.9	50.9	50.2	NS	12
Tifton, GA *	60.4	52.1-	53.8-	61.1	51.3-	4.8	5
Gainesville, FL	20.6	20.6	22.4	25.1	17.8	NS	25
Marianna, FL	49.0+	45.9	43.3	53.5	40.8	6.0	8
Quincy, FL	54.5	55.5	58.1+	61.7+	52.9	8.3	7
Jay, FL	34.5	33.7	38.9	49.9+	30.8	8.3	13
Fairhope, AL	44.8	49.0+	42.0	48.1+	46.0	5.3	7
Baton Rouge, LA	43.7	37.9	49.7+	49.2+	45.3+	4.1	6
Stoneville, MS	34.0	44.8+	42.8+	43.6+	35.8	5.3	8
Beaumont, TX	39.2+	34.6	40.8+	38.3+	34.7	7.5	12
Mean	38.3	39.2	40.4	44.2	48.9		

Table 59 - Chemical composition and seed size for the strains in Uniform Group VIII, 1988

Location	Kirby	Co 6738	Crockett	Co82-622	F83-2048	F83-1648
			OIL PERCENTAGE			
Hartsville, SC (A)	21.4	22.7	20.4	21.7	20.4	21.7
Blackville, SC (A)	22.3	21.5	21.9	21.6	22.3	21.1
Tifton, GA *	21.9	24.2	21.5	22.6	21.5	22.1
Tallassee, AL	20.9	21.3	19.4	20.9	19.9	20.3
Gainesville, FL	21.5	23.2	20.1	22.9	21.1	21.8
Jay, FL	20.5	22.6	18.9	21.3	20.6	20.7
Beaumont, TX	20.5	21.8	20.5	20.9	20.5	20.9
Stoneville, MS	19.6	20.9	18.4	19.6	18.8	19.8
Mean	21.1	22.3	20.1	21.4	20.6	21.1
			PROTEIN PERCENTAGE			
Hartsville, SC (A)	35.7	33.2	37.3	36.9	38.2	38.6
Blackville, SC (A)	38.4	39.6	38.5	39.1	39.3	39.8
Tifton, GA *	41.0	37.9	40.7	40.3	42.0	42.8
Tallassee, AL	42.2	41.2	44.4	41.3	43.8	44.7
Gainesville, FL	41.9	40.0	43.3	40.0	42.4	42.4
Jay, FL	43.0	39.1	42.9	40.5	41.9	42.8
Beaumont, TX	42.0	40.4	42.3	40.7	42.7	43.1
Stoneville, MS	42.4	39.9	41.5	41.4	41.8	42.5
Mean	40.8	38.9	41.4	40.0	41.6	42.1
			GRAMS PER 100 SEED			
Hartsville, SC (A)	13.3	15.5	10.0	13.7	14.1	13.8
Blackville, SC (A)	14.7	15.2	13.5	17.1	14.3	12.8
Tifton, GA *	15.6	16.8	12.5	17.0	13.9	15.5
Tallassee, AL	14.4	15.8	10.6	15.2	13.2	14.4
Gainesville, FL	12.9	14.2	11.4	12.6	11.2	13.2
Jay, FL	10.0	14.0	10.0	14.0	11.0	12.0
Beaumont, TX	11.2	12.5	13.2	12.3	11.6	12.2
Stoneville, MS	10.1	12.5	10.6	12.5	11.6	12.2
Mean	12.4	14.2	11.3	13.9	12.4	12.9

* Not included in mean.

Table 59 - (continued)

Location	G82-2820	G82-3458	SC83-1810	C085-483	G83-266	G83-644
			OIL PERCENTAGE			
Hartsville, SC (A)	21.0	21.3	21.9	21.8	21.5	21.3
Blackville, SC (A)	21.5	21.0	21.3	20.2	20.9	22.1
Tifton, GA	21.5	21.8	22.1	22.6	21.2	21.3
Tallassee, AL	20.7	20.3	22.0	20.7	20.2	20.5
Gainesville, FL	21.3	21.8	23.2	23.5	21.0	21.8
Jay, FL	20.6	20.5	21.0	21.8	21.1	19.4
Beaumont, TX	21.0	20.7	21.7	21.8	20.1	20.1
Stoneville, MS	19.5	19.5	19.8	20.1	19.9	19.4
Mean	20.9	20.9	21.6	21.6	20.7	20.7
			PROTEIN PERCENTAGE			
Hartsville, SC (A)	38.7	37.4	36.1	35.4	38.0	38.4
Blackville, SC (A)	40.2	41.0	41.3	41.0	41.3	39.8
Tifton, GA	43.0	40.0	41.1	41.1	41.3	42.0
Tallassee, AL	44.7	43.1	43.7	42.6	44.6	44.6
Gainesville, FL	43.1	41.6	40.5	40.6	43.4	42.5
Jay, FL	42.7	40.8	42.1	40.1	40.8	42.8
Beaumont, TX	43.3	41.4	41.0	40.1	43.0	42.5
Stoneville, MS	42.7	41.2	42.1	41.3	41.6	41.7
Mean	42.3	40.8	41.0	40.3	41.8	41.8
			GRAMS PER 100 SEED			
Hartsville, SC (A)	14.4	16.4	13.2	14.1	16.0	14.5
Blackville, SC (A)	17.1	13.2	14.2	10.1	12.0	13.6
Tifton, GA *	17.1	21.1	16.3	15.6	17.7	15.8
Tallassee, AL	15.1	18.1	15.7	15.0	18.5	16.0
Gainesville, FL	13.2	16.3	12.6	13.3	14.9	12.9
Jay, FL	12.0	15.0	11.0	12.0	16.0	12.0
Beaumont, TX	12.2	14.8	13.0	13.0	13.4	11.2
Stoneville, MS	12.1	15.0	13.8	11.6	14.1	9.1
Mean	13.7	15.5	13.4	12.7	15.0	12.8

Table 60 - Relative maturity, days earlier, (-) or later (+) than Kirby, for the strains in Uniform Group VIII, 1988.

Location	Date planted	Kirby	Co 6738	Crockett	Co820 622	F83-2048	F83-1648
Clinton, NC	5-31	F	F	F	F	F	F
Florence, SC (A)	5-26	11-5	-3	+1	-3	-2	-2
Florence, SC (B)	6-23	11-2	-3	+4	-3	-2	-1
Hartsville, SC (A)	5-30	10-30	0	+8	+1	+1	-1
Blackville, SC (A)	5-31	10-29	-1	+3	-2	-1	-2
Athens, GA	5-17	10-30	-1	+4	-2	-1	+2
Tallassee, AL	5-26	10-31	-2	+1	-2	-2	-4
Tifton, GA *	5-27	10-23	-2	+2	-2	-2	-1
Gainesville, FL	6-23	10-25	-2	+4	-6	-4	-2
Marianna, FL	5-24	10-27	0	+3	0	+2	+1
Quincy, FL	6-13	10-25	-1	+2	0	0	0
Jay, FL	6-3	10-27	0	+9	+1	-1	0
Fairhope, AL	6-14	10-24	0	+4	+2	+1	0
Stoneville, MS	6-9	10-30	-1	+4	-1	0	0
Beaumont, TX	5-19	10-25	0	+5	+1	0	-3
Mean	6-3	10-27	-1	+4	-1	-1	-1

* Not included in mean.

Table 60 - (continued)

Location	G82-2820	G82-3458	SC83-1810	Co85-483	G83-266	G83-644
Clinton, NC	F	F	F	F	F	F
Florence, SC (A)	-4	0	-2	0	-5	-4
Florence, SC (B)	-4	+1	-3	-1	-3	-4
Hartsville, SC (A)	-1	+2	-1	+1	-1	-3
Blackville, SC (A)	-1	0	-1	-2	-1	-5
Athens, GA	-1	+4	+2	-2	-2	-2
Tallassee, AL	-1	-1	-1	-2	-1	-1
Tifton, GA *	-1	-1	+1	-1	-3	-4
Gainesville, FL	-1	0	-1	-4	-4	-5
Marianna, FL	+1	+1	+4	+2	+4	-1
Quincy, FL	+1	+1	+2	0	+1	0
Jay, FL	0	+7	+8	+3	+2	-1
Fairhope, AL	0	+2	+4	+2	0	0
Stoneville, MS	-1	0	+4	+1	-1	-1
Beaumont, TX	-1	+1	+1	+1	+2	-7
Mean	-1	+1	+1	0	-1	-2

Table 61 - Plant height for the strains in Uniform Group VIII, 1988

Location	Kirby	Co 6738	Crockett	Co820 622	F83-2048	F83-1648
Clinton, NC	36	40	40	39	40	40
Florence, SC (A)	41	35	38	32	40	36
Florence, SC (B)	30	27	35	29	28	28
Blackville, SC (A)	30	28	28	27	31	30
Athens, GA	37	35	41	36	40	38
Tallassee, AL	36	39	37	40	44	43
Tifton, GA *	36	37	40	38	39	36
Gainesville, FL	24	21	29	21	24	23
Marianna, FL	38	42	40	40	40	44
Quincy, FL	36	37	33	42	40	38
Jay, FL	34	34	33	35	34	36
Fairhope, AL	35	41	38	40	41	38
Baton Rouge, LA	38	40	42	39	37	38
Stoneville, MS	41	41	39	39	38	45
Beaumont, TX	38	37	43	40	43	42
Mean	35	36	37	36	37	37

* Not included in mean.

Table 61 - (continued)

Location	G82-2820	G82-3458	SC83-1810	C085-483	G83-266	G83-644
Clinton, NC	42	35	36	40	36	38
Florence, SC (A)	36	38	33	42	39	33
Florence, SC (B)	32	26	30	28	30	29
Blackville, SC (A)	29	32	29	30	30	25
Athens, GA	37	37	39	37	35	33
Tallassee, AL	34	40	38	43	38	36
Tifton, GA *	35	38	40	39	37	33
Gainesville, FL	25	22	21	22	25	18
Marianna, FL	41	41	41	46	41	38
Quincy, FL	36	39	42	40	37	36
Jay, FL	30	32	36	35	31	31
Fairhope, AL	41	38	42	38	38	34
Baton Rouge, LA	40	39	43	45	41	38
Stoneville, MS	42	43	40	43	46	39
Beaumont, TX	40	42	40	38	38	33
Mean	36	35	36	38	36	33

Table 62 - Lodging scores for the strains in Uniform Group VIII, 1988

Location	Kirby	Co 6738	Crockett	C082-622	F83-2048	F83-1648
Clinton, NC	3.0	3.0	3.0	3.0	3.0	3.0
Florence, SC (A)	1.3	1.0	1.8	1.0	1.3	1.0
Florence, SC (B)	1.0	1.0	2.8	1.0	1.0	1.0
Hartsville, SC (A)	2.3	1.7	3.7	1.8	2.2	1.8
Hartsville, SC (B)	1.0	1.0	2.0	1.0	1.2	1.0
Blackville, SC (A)	1.0	1.0	1.0	1.0	1.0	1.0
Athens, GA	1.7	1.5	2.0	1.5	2.0	1.5
Tallassee, AL	1.0	1.0	2.3	1.0	1.2	1.2
Tifton, GA	1.3	1.2	1.4	1.3	1.4	1.3
Gainesville, FL	1.0	1.0	2.6	1.0	1.0	1.0
Marianna, FL	2.3	2.2	3.2	2.2	2.2	2.3
Quincy, FL	1.0	1.0	2.0	1.0	1.7	1.3
Jay, FL	2.0	1.0	2.3	1.7	2.3	2.7
Fairhope, AL	2.0	2.0	4.0	1.7	1.3	2.7
Baton Rouge, LA	3.0	2.3	3.8	3.0	2.5	2.8
Stoneville, MS	3.0	2.7	3.0	2.7	3.0	3.0
Beaumont, TX	1.0	1.0	2.0	1.0	1.0	1.0

Table 62 - (continued)

Location	G82-2820	G82-3458	SC83-1810	C085-483	G83-266	G83-644
Clinton, NC	3.0	3.0	4.0	4.0	3.0	3.0
Florence, SC (A)	1.5	1.4	1.0	1.5	1.3	1.0
Florence, SC (B)	1.7	1.0	1.0	1.0	1.0	1.0
Hartsville, SC (A)	2.8	2.2	1.5	2.3	2.0	1.7
Hartsville, SC (B)	1.5	1.0	1.0	1.3	1.0	1.2
Blackville, SC (A)	1.0	1.0	1.0	1.0	1.0	1.0
Athens, GA	2.3	1.5	1.7	1.5	1.5	1.5
Tallassee, AL	1.8	1.0	1.0	1.0	1.0	1.0
Tifton, GA	1.5	1.6	1.4	1.4	1.7	1.4
Gainesville, FL	1.3	1.0	1.0	1.0	1.3	1.0
Marianna, FL	3.3	2.0	2.7	2.7	2.3	2.3
Quincy, FL	3.0	1.7	1.0	1.0	1.7	1.0
Jay, FL	3.0	2.0	1.7	1.0	2.7	1.3
Fairhope, AL	4.7	2.7	1.7	3.0	2.7	2.0
Baton Rouge, LA	5.0	2.8	2.4	2.9	2.8	3.0
Stoneville, MS	3.7	4.0	2.3	3.0	3.3	3.0
Beaumont, TX	2.5	1.0	1.0	1.0	1.0	1.0

Table 63 - Seed quality scores for the strains in Uniform Group VIII
1988

Location	Kirby	Co 6738	Crockett	C082-622	F83-2048	F83-1648
Clinton, NC	1.0	1.0	1.0	1.0	1.0	1.0
Blackville, SC (A)	1.5	1.5	2.5	2.0	2.0	2.5
Athens, GA	1.5	1.5	1.5	1.5	1.5	2.0
Tallassee,AL	1.0	1.0	1.0	1.0	1.5	1.0
Tifton, GA	1.8	1.7	2.2	2.2	2.3	2.5
Gainesville, FL	1.2	1.2	1.3	1.5	1.0	1.6
Quincy, FL	2.0	3.0	1.3	1.0	3.0	2.3
Jay, FL	3.0	2.0	3.0	3.0	4.0	4.0
Baton Rouge, FL	1.9	1.5	2.1	1.8	1.9	2.3
Stoneville, MS	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, TX	1.0	1.2	1.2	1.0	1.0	1.0

Table 63 - (continued)

Location	G82-2820	G82-3458	SC83-1810	Co85-483	G83-266	G83-644
Clinton, NC	1.0	1.0	1.0	1.0	1.0	1.0
Blackville, SC (A)	2.0	2.0	1.0	1.5	2.0	1.5
Athens, GA	1.5	1.5	1.5	1.5	1.5	1.5
Tallassee, AL	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, GA	2.4	2.3	2.0	1.7	2.5	2.5
Gainesville, FL	1.3	1.8	1.5	1.3	1.5	1.5
Quincy, FL	2.0	1.3	2.0	1.3	1.7	2.0
Jay, FL	3.0	2.0	3.0	3.0	1.0	3.0
Baton Rouge, LA	1.8	2.2	1.5	1.7	2.1	2.2
Stoneville, MS	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, TX	1.0	1.2	1.0	1.0	1.5	1.0

PRELIMINARY GROUP VIII

1988

Preliminary Group VIII nurseries, which included Kirby and Braxton, along with 34 breeding lines, were grown at 6 locations. Parentage of these lines is reported in Table 64. A general summary of performance is given in Table 65. Included are mean seed yields, maturity index, plant height, protein and oil percentages, and reaction to the two root-knot species M. incognita and M. arenaria, the SCN races 3 and 4 and reactions to frog-eye leaf spot. Results from individual locations are summarized in Tables 66-70.

Braxton averaged only 2 days earlier maturity than Kirby. Only one strain was more than one day earlier than Braxton. The latest maturing strain averaged 8 days later in maturity than Kirby. Kirby had a mean seed yield of 34.7 bushels per acre, and Braxton a mean yield of 36.4 bushels per acre. Twenty-two strains ranked above Kirby in seed yield.

Fifteen of the breeding lines received low ratings for both species of the root-knot nematode, along with a resistant rating for SCN race 3. There were only two lines that were rated resistant to both SCN race 3 and 4. Ten of the lines received a score of 1 for frog-eye leaf spot, but Kirby had only a score of 2.5. In 1987 Kirby had received a score of 4.7.

Among the lines that appear to merit evaluation in Uniform Group VIII are Au85-1086, Au85-1797, F86-1456, G84-234, N86-532 and SC84-679.

TABLE 64 - PARENTAGE OF THE STRAINS GROWN IN PRELIMINARY GROUP VIII, 1988

	VARIETY OR STRAIN	PARENTAGE	GENERATION COMPOSITED
1.	KIRBY	CENTENNIAL X (FORREST X (COBB X D68-216))	F6
2.	BRAXTON	F59-1505 X (BRAGG(3) X D60-7965)	F5
3.	CO6738	BRAXTON X CO368	F5
4.	AU85-1086	WRIGHT X CO79-501	F6
5.	AU85-1149	WRIGHT X CO79-501	F6
6.	AU85-1521	F76-8757 X BRAXTON	F6
7.	AU85-1653	F76-8757 X BRAXTON	F6
8.	AU85-1797	F76-8757 X BRAXTON	F6
9.	AU85-2589	BRAXTON X F77-1576	F6
10.	CO85-5802	BRAXTON X CO368	
11.	CO87-1676	CO6738(2) X P9571	
12.	CO87-1775	BRAXTON X CO368	
13.	CO87-1820	BRAXTON X CO368	
14.	D86-9800	KIRBY X D82-9973	F5
15.	D86-9854	KIRBY X D82-9973	F5
16.	F86-1364	KIRBY(2) X TRACY-M	F5
17.	F86-1456	KIRBY(2) X TRACY-M	F5
18.	F86-1469	KIRBY(2) X TRACY-M	F5
19.	F86-1661	KIRBY(2) X TRACY-M	F5
20.	F86-1704	KIRBY(2) X TRACY-M	F5
21.	F86-1840	KIRBY(2) X TRACY-M	F5
22.	F86-2112	COBB X (F76-6549 X D74-10301)	F9
23.	F86-3874	F77-6790 X KIRBY	F6
24.	F86-3916	F77-6790 X KIRBY	F6
25.	G84-234	KIRBY X WRIGHT	F6
26.	G84-332	KIRBY X CO237	F6
27.	G84-337	KIRBY X CO237	F6
28.	G84-826	F76-8757 X D74-7741	F6
29.	G84-5007	JOHNSTON X KIRBY	F6
30.	N86-532	N77-1602 X F77-1797	F5
31.	SC84-617	D76-9665 X JOHNSTON	F5
32.	SC84-679	D76-9665 X JOHNSTON	F5
33.	SC84-735	D76-9665 X JOHNSTON	F5
34.	SC84-960	CENTENNIAL X YOUNG	F5
35.	SC84-2225	FOSTER X D76-9665	F5
36.	SC84-2300	FOSTER X D76-9665	F5

TABLE 65 - GENERAL SUMMARY OF PERFORMANCE FOR THE STRAINS GROWN IN PRELIMINARY GROUP VIII, 1988

STRAIN	Seed yield	Mat. index	Percent Ht.	Oil	Protein	M. incognita	M. arenaria	SCN 3	SCN 4	frogeye
KIRBY	34.7	10-26	33	21.2	41.5	1.0	2.3	R	S	2.5
BRAXTON	36.4	-2	32	21.6	41.3	2.3	1.0	S	S	2.0
Co6738	36.1	-1	32	22.8	38.9-	1.4	1.0	R	S	3.5
Au85-1086	38.7	+2	34	21.9+	40.1-	1.7	2.3	R	S	1.5
Au85-1149	34.9	0	32	20.8	41.5	1.7	1.7	S	S	2.0
Au85-1521	36.9	-1	33	22.2+	40.5	1.3	2.3	S	S	2.0
Au85-1653	36.4	-1	33	21.7	40.9	2.0	2.0	S	S	1.5
Au85-1797	37.8	-1	30	21.9+	40.4	1.7	2.5	S	S	1.0
Au85-2589	35.4	0	31	20.6	41.4	1.0	2.0	R	S	2.0
Co85-5802	38.8	0	34	22.9+	38.5-	1.3	2.0	R	S	3.5
Co87-1676	36.2	0	32	22.5+	40.4	2.0	1.0	R	R	3.0
Co87-1775	38.0	-5	30	21.5	41.2	1.0	1.0	R	S	2.5
Co87-1820	36.2	-1	31	21.4	40.3-	1.7	1.7	R	S	2.0
D86-9800	31.6	+3	35	21.1	43.1+	1.0	1.7	I	S	2.0
D86-9854	33.1	+3	36	20.0	42.9+	1.0	1.3	R	R	1.5
F86-1364	33.3	0	33	20.8	42.4	1.0	1.0	R	S	1.0
F86-1456	36.5	-2	35	21.2	42.0	2.0	1.3	R	S	1.5
F86-1469	34.8	+1	32	20.1-	44.5+	1.7	1.3	R	S	1.0
F86-1661	34.8	-1	30	21.0	40.9	1.3	1.3	h	S	2.0
F86-1704	31.9	-1	36	20.8	42.5	1.0	1.0	R	S	1.5
F86-1840	33.4	+1	32	22.2-	42.8+	3.0	1.0	R	S	1.0
F86-2112	32.7	+8	38	19.3	41.8	2.3	1.3	S	S	1.0
F86-3874	32.8	0	33	21.1	40.7	1.3	1.0	R	S	1.0
F86-3916	31.6	0	33	21.0	39.9-	1.4	1.3	R	S	1.0
G84-234	36.8	-2	31	20.9	41.3	2.0	1.5	R	S	2.5
G84-332	36.2	-1	30	21.6	41.3	2.9	1.0	R	S	1.5
G84-337	35.3	0	29	20.9	42.7+	1.7	1.3	R	S	1.0
G84-826	32.2	-1	33	21.9+	41.4	1.3	3.0	R	S	2.0
G84-5007	32.8	0	31	20.7	40.9	1.3	1.0	R	S	1.5
N86-532	37.6	0	34	2.1	42.3	1.7	2.3	S	S	3.0
SC84-617	35.8	0	30	21.5	41.6	2.4	1.7	S	S	2.5
SC84-679	37.9	0	30	21.8	40.3-	2.3	1.7	R	S	1.0
SC84-735	34.7	0	34	22.2+	40.4	4.0	2.4	R	S	1.0
SC84-960	36.9	-3	35	21.7	41.0	5.0	3.0	R	S	2.0
SC84-2225	31.7	-1	33	21.1	39.6-	1.3	1.7	R	S	2.5
SC84-2300	31.5	-3	32	20.9	39.7-	1.0	1.3	R	S	3.5
LSD (.05)	4.2			0.7	1.2					
C.V.	10%			2%	2%					

+ or - designations refer to differences from Kirby.

TABLE 66 - SEED YIELD, IN BUSHELS PER ACRE, FOR THE STRAINS IN PRELIMINARY GROUP VIII, 1988

STRAIN	BLACK-VILLE, SC	GAINES-VILLE, FL	QUINCY, FL	JAY, FL	BEAU-MONT, TX	STONE-VILLE, MS
KIRBY	32.0	35.2	49.4	37.4	16.9	37.3
BRAXTON	36.4	27.6	57.4	38.5	21.2	37.2
CO6738	40.5+	23.6	53.5	42.9	19.6	36.6
AU85-1086	36.7	37.2	56.2	35.8	27.3+	39.2
AU85-1149	38.8	21.3	53.0	35.2	24.9	36.2
AU85-1521	41.0+	31.9	47.6	34.1	28.4+	38.6
AU85-1653	34.7	28.8	52.8	40.2	24.9	37.1
AU85-1797	37.8	28.3	56.9	36.3	28.2+	39.4
AU85-2589	32.2	29.8	54.7	39.1	22.7	34.3
CO85-5802	41.4+	36.2	54.8	38.0	24.7	38.0
CO87-1676	41.0+	20.9	53.4	39.1	27.7+	35.1
CO87-1775	39.1+	30.0	52.3	45.7+	21.2	40.1
CO87-1820	33.5	30.4	51.9	39.6	22.6	38.9
D86-9800	36.4	20.7	45.9	34.1	19.8	32.9
D86-9854	35.6	24.2	49.0	35.8	19.8	33.9
F86-1364	35.0	21.0	50.9	35.8	19.0	38.4
F86-1456	33.8	31.6	47.6	36.9	26.9+	42.1
F86-1469	38.2	25.0	51.2	38.0	21.7	34.4
F86-1661	30.0	29.9	55.3	34.1	19.8	39.6
F86-1704	29.7	27.5	47.4	30.8	21.0	34.8
F86-1840	25.6	27.7	55.1	36.9	18.8	36.4
F86-2112	25.3	24.3	46.1	39.6	23.7	37.3
F86-3874	29.5	33.5	49.0	34.7	17.4	32.6
F86-3916	33.4	15.6	50.3	33.6	15.4	41.1
G84-234	32.7	25.4	50.2	38.0	31.6+	43.0
G84-332	36.1	26.8	48.8	38.5	26.6+	40.1
G84-337	27.0	33.5	52.1	35.8	24.1	39.5
G84-826	33.7	23.2	48.6	30.3	22.6	35.0
G84-5007	37.4	24.9	48.4	33.0	15.0	37.9
N86-532	38.2	29.8	56.4	46.2+	15.5	39.3
SC84-617	37.0	32.2	56.3	33.6	22.0	33.6
SC84-679	36.5	24.5	59.5+	39.1	21.3	46.3+
SC84-735	33.4	19.1	56.7	39.6	21.1	38.3
SC84-960	38.0	24.5	55.6	35.8	26.3+	41.0
SC84-2225	38.9+	18.9	51.5	31.9	16.5	32.6
SC84-2300	35.1	23.2	46.6	33.0	17.6	33.2
LSD (.05)	6.8		9.0	7.6	8.8	5.8
C.V.	9%		7%	10%	20%	8%

TABLE 67 - OIL PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VIII, 1988

STRAIN	GAINES-, VILLE, FL	JAY, FL	BEAU-MONT, TX
KIRBY	21.7	21.3	20.7
BRAXTON	21.9	21.8	21.1
CO6738	23.1	23.1	22.3
AU85-1086	22.3	21.8	21.6
AU85-1149	21.2	21.1	20.2
AU85-1521	23.1	22.1	21.5
AU85-1653	21.7	21.5	21.9
AU85-1797	22.5	21.5	21.6
AU85-2589	20.7	20.7	20.5
CO85-5802	23.0	23.0	22.8
CO87-1676	22.6	22.5	22.3
CO87-1775	22.8	20.7	21.0
CO87-1820	21.9	21.2	21.1
D86-9800	21.3	20.8	21.3
D86-9854	20.7	19.9	19.3
F86-1364	21.7	21.1	19.6
F86-1456	21.9	21.1	20.7
F86-1469	20.5	20.4	19.3
F86-1661	22.0	20.9	20.1
F86-1704	21.8	20.0	20.6
F86-1840	20.2	21.3	19.0
F86-2112	19.7	19.4	18.9
F86-3874	22.3	20.4	20.6
F86-3916	21.5	20.9	20.6
G84-234	21.4	20.8	20.5
G84-332	22.3	21.2	21.3
G84-337	21.6	20.6	20.6
G84-826	22.4	21.4	21.8
G84-5007	21.9	20.3	20.0
N86-532	22.1	21.5	19.9
SC84-617	22.2	21.1	21.2
SC84-679	22.9	21.8	20.7
SC84-735	22.9	21.9	21.8
SC84-960	21.7	22.2	21.3
SC84-2225	22.1	21.2	20.3
SC84-2300	21.8	20.1	20.7

TABLE 68 - PROTEIN PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VIII, 1988

STRAIN	GAINES-VILLE, FL	JAY, FL	BEAU, MONT, TX
KIRBY	41.2	40.7	42.5
BRAXTON	41.3	40.3	42.4
CO6738	39.2	38.1	39.3
AU85-1086	39.6	40.1	40.5
AU85-1149	41.6	40.9	42.0
AU85-1521	39.7	40.6	41.1
AU85-1653	41.3	41.2	40.2
AU85-1797	41.2	39.7	40.4
AU85-2589	41.7	40.9	41.8
CO85-5802	37.8	38.6	39.2
CO87-1676	41.7	39.5	40.0
CO87-1775	40.9	40.5	42.2
CO87-1820	40.3	40.5	40.1
D86-9800	44.0	42.8	42.5
D86-9854	42.5	42.8	43.5
F86-1364	41.3	42.1	43.9
F86-1456	42.0	41.6	42.5
F86-1469	44.5	43.5	45.6
F86-1661	40.0	40.8	42.0
F86-1704	42.8	42.8	41.8
F86-1840	42.8	41.2	44.3
F86-2112	41.7	41.6	42.0
F86-3874	40.5	41.1	40.4
F86-3916	40.5	39.5	39.8
G84-234	41.7	40.9	41.2
G84-332	40.3	41.3	42.2
G84-337	42.2	43.5	42.4
G84-826	41.9	40.9	41.4
G84-5007	40.2	41.4	41.1
N86-532	43.0	41.3	42.5
SC84-617	40.3	42.5	41.9
SC84-679	39.5	40.1	41.4
SC84-735	41.2	40.3	39.8
SC84-960	42.5	39.6	40.8
SC84-2225	39.3	39.3	40.3
SC84-2300	39.3	39.6	40.3

TABLE 69 - PLANT HEIGHT PERCENTAGES FOR THE STRAINS IN PRELIMINARY GROUP VIII, 1988

STRAIN	BLACK-VILLE, SC	GAINES-VILLE, FL	QUINCY, FL	JAY, FL	BEAU-MONT, TX	STONE-VILLE, MS
KIRBY	27	28	34	36	29	41
BRAXTON	29	25	35	29	33	42
CO6738	30	21	34	37	28	40
AU85-1086	28	26	37	36	33	41
AU85-1149	26	23	38	35	31	38
AU85-1521	31	24	37	33	33	42
AU85-1653	29	25	38	36	28	41
AU85-1797	23	22	34	34	31	38
AU85-2589	24	22	34	35	31	39
CO85-5802	29	27	34	37	32	42
CO87-1676	26	21	35	36	30	41
CO87-1775	24	23	33	32	29	39
CO87-1820	27	23	33	33	28	39
D86-9800	30	26	39	33	39	42
D86-9854	30	27	39	37	39	43
F86-1364	28	25	37	34	33	42
F86-1456	28	29	38	37	34	44
F86-1469	26	25	36	32	33	40
F86-1661	26	23	33	31	28	40
F86-1704	25	27	42	37	36	47
F86-1840	25	27	33	36	31	41
F86-2112	26	33	45	36	43	44
F86-3874	25	28	39	34	34	40
F86-3916	26	24	34	36	34	42
G84-234	26	23	34	33	30	41
G84-332	23	21	32	34	30	40
G84-337	22	20	31	30	30	38
G84-826	25	23	37	35	34	42
G84-5007	25	24	34	32	30	40
N86-532	28	25	37	34	35	43
SC84-617	25	23	33	31	28	40
SC84-679	24	19	34	34	29	38
SC84-735	28	22	38	34	35	44
SC84-960	32	23	36	37	36	43
SC84-2225	28	18	38	35	35	41
SC84-2300	25	22	37	36	32	38

TABLE 70 - SEED QUALITY SCORES FOR THE STRAINS IN PRELIMINARY GROUP VIII, 1988

STRAIN	BLACK-VILLE, SC	GAINES-VILLE, FL	QUINCY, FL	JAY, FL	BEAU-MONT, TX	STONE-VILLE, MS
KIRBY	1.5	1.0	2.0	3.0	1.0	2.0
BRAXTON	1.0	1.5	2.0	2.0	2.0	2.0
CO6738	1.0	1.5	1.5	3.0	1.5	2.0
AU85-1086	2.0	1.0	1.0	2.0	1.0	2.0
AU85-1149	2.5	1.5	1.5	3.0	1.3	2.0
AU85-1521	1.5	1.3	2.0	2.0	1.5	2.0
AU85-1653	1.0	1.3	2.0	3.0	1.5	2.0
AU85-1797	3.0	1.3	2.0	3.0	1.0	2.0
AU85-2589	1.5	1.0	2.0	3.0	1.5	2.0
CO85-5802	1.5	1.0	1.0	2.0	1.0	2.0
CO87-1676	2.0	1.5	2.0	3.0	1.5	2.0
CO87-1775	1.5	1.0	2.0	3.0	2.0	2.0
CO87-1820	2.0	1.3	1.5	3.0	1.3	2.0
D86-9800	2.0	1.0	2.0	4.0	1.0	2.0
D86-9854	1.5	1.0	2.0	3.0	1.0	2.0
F86-1364	2.0	1.3	2.0	4.0	1.5	2.0
F86-1456	1.0	1.3	2.0	3.0	1.0	2.0
F86-1469	1.5	1.0	2.0	3.0	1.0	2.0
F86-1661	2.0	1.0	2.0	3.0	1.3	2.0
F86-1704	1.5	1.3	2.0	3.0	1.8	2.0
F86-1840	1.0	1.0	2.0	2.0	1.0	2.0
F86-2112	1.0	1.0	1.0	3.0	1.0	2.0
F86-3874	2.5	1.0	2.0	4.0	1.0	2.0
F86-3916	2.0	1.0	2.0	3.0	1.5	2.0
G84-234	1.5	1.0	2.0	3.0	1.0	2.0
G84-332	1.5	1.0	2.0	3.0	1.0	2.0
G84-337	1.5	1.0	2.0	3.0	1.3	2.0
G84-826	1.5	1.7	2.0	3.0	1.8	2.0
G84-5007	2.0	1.0	2.0	3.0	1.5	2.0
N86-532	1.0	1.3	2.0	3.0	1.3	2.0
SC84-617	1.0	1.5	1.5	3.0	1.0	2.0
SC84-679	1.0	2.0	1.0	3.0	1.8	2.0
SC84-735	2.0	1.5	2.0	3.0	1.5	2.0
SC84-960	1.0	1.3	1.5	2.0	1.0	2.0
SC84-2225	1.5	1.0	2.0	3.0	1.3	2.0
SC84-2300	1.0	1.0	2.0	3.0	1.3	2.0