THE UNIFORM SOYBEAN TESTS
SOUTHERN REGION
1987

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

THE UNIFORM SOYBEAN TESTS

SOUTHERN STATES

1987

COMPILED BY:

Edgar E. Hartwig and Calton J. Edwards, Jr.
P.O. Box 196
Stoneville, Mississippi 38776

From data supplied by:

P. B. Cregan, Beltsville, MD
W. J. Kenworthy, Maryland
R. Uniatowski, Georgetown, DE
David E. Starner, Orange, VA
E. G. Sagaral, Warsaw, VA
Paul Reese, Holland, VA
G. Buss, Blacksburg, VA
J. W. Burton, North Carolina
Glen Weiser, Blackville, SC
E. R. Shipe, Clemson, SC
J. J. Stanton, Jr., Hartsville, SC
C. D. Fisher, Blairsville, GA
H. R. Boerma, Athens, GA
P. L. Raymer, Griffin, GA
D. Weaver, Auburn, AL
E. Cardin, Fairhope, AL
Kuell Hinson, Gainesville, FL
D. W. Gorbet, Marianna, FL
R. D. Barnett, Quincy, FL
H. A. Peacock, Jay, FL
T. Pfeiffer, Kentucky
C. R. Tutt, Princeton, KY
R. L. Bernard, Urbana, IL
Oval Myers, Carbondale, IL
B. R. Hathcock, Martin, TN
F. L. Allen, Knoxville, TN
Gordon G. Percell, Jackson, TN
E. E. Hartwig, Stoneville, MS
S. C. Anand, Portageville, MO
C. E. Caviness, Arkansas
Ira Eldridge, Keiser, AR
D. Widick, Jonesboro, AR
D. Bouquet, St. Joseph, LA
B. G. Harville, Baton Rouge, LA
James L. Rabb, Bossier City, LA
W. T. Schapaugh, Jr., Kansas
L. H. Edwards, Oklahoma
R. D. Brigham, Lubbock, TX
G. Bowers, Beaumont, TX
N. B. Christensen, Clovis, NM
L. D. Young, Jackson, TN

TABLE OF CONTENTS

ACKNOWLEDGMENT: Oil and protein determinations were made at the Northern Regional Research Center, Peoria, Illinois, under the supervision of Dr. James Cavins.

Issued March 1988

INTRODUCTION

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

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

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

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

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

STRAIN IDENTIFICATION

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

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 Station, West Tennessee Experiment Station and USDA-ARS
K - Kansas Agricultural Experiment Station
Ky - Kentucky Agricultural Experiment Station
L - Illinois Agricultural Experiment Station and USDA-ARS
LS - Southern 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	12-37-75	38.2 - Stafford
Georgetown, DE		1				Norfolk loamy sand	H	MH	6.1	0-0-0	26.6 - Forrest
Warsaw, VA	1*	1*	1			Kempsville loam	H	M-	6.7	0-0-0	34.2 - Essex
Holland, VA		1	1*			Othello	H	H	6.1	0-0-0	45.9 - Forrest
Plymouth, NC		1*	1*			Bladen f. s. loam	-	-	-	0-40-80	57.6 - Forrest
Kinston, NC			1	1		Norfolk sandy loam	-	-	-	0-40-80	29.1 - Sharkey
Clinton, NC				1*	1	Norfolk sandy loam	-	-	-	0-40-80	32.1 - Braxton
Florence, SC (A)			1	1	1	Goldsboro loamy sand	H	M	5.4	24-48-144	32.2 - Leflore
Florence, SC (B)				1	1	Norfolk loamy sand	H-	M-	5.9	14-28-80	40.3 - Thomas
Hartsville, SC (A)			1	1	1	Sandy loam	-	-	-	0-36-108	43.7 - Leflore
Hartsville, SC (B)				1	1	Norfolk sandy loam	-	-	-	0-36-108	28.6 - Thomas
Southeast											
Blackville, SC (A)			1	1*	1*	Norfolk loamy sand	M	M	5.7	0-30-60	40.9 - Thomas
Tifton, GA			1	1	1	Tifton sandy loam	M	M	5.7	0-32-129	52.1 - Leflore
Tallassee, AL			1*	1*	1	Cahaba f. s. l.	H	H	6.6	0-0-0	43.3 - Sharkey
Marianna, FL				1	1	Chipola l. s.	H	H	6.4	0-40-80	40.0 - Braxton
Quincy, FL			1	1	1*	Norfolk sandy loam	H	M	5.6	0-50-100	37.8 - Leflore
Jay, FL			1*	1*	1*	Red Bay sandy loam	-	-	-	0-75-37	43.3 - Sharkey
Fairhope, AL			1	1	1	Malbis f. s. l.	M	M	6.1	0-42-42	39.0 - Sharkey
Baton Rouge, LA			1	1	1	Olivier silt loam	-	-	-	0-72-72	38.0 - Leflore
Upper & Central South											
Orange, VA	1	1				Davidson clay loam	H-	H	7.1	12-72-72	41.9 - Stafford
Clemson, SC		1	1	1		Cecil sandy loam	H	M	6.6	0-45-90	25.6 - Leflore
Calhoun, GA		1	1	1		Rome clay loam	VH	VH	6.3	0-54-108	36.5 - Braxton
Athens, GA		1	1*	1*	1	Appling coarse s. l.	M	M	6.4	0-0-120	35.4 - Sharkey
Knoxville, TN	1	1				Sequatchie silt loam	-	-	-	0-60-60	28.0 - Stafford
Belle Mina, AL		1	1			Decatur clay loam	H	H	6.6	0-0-0	20.1 - Leflore
Eldorado, IL	1						-	-	-	0-0-0	43.8 - Stafford
Carbondale, IL	1*					Stoy silt loam	-	-	-	0-0-0	36.2 - Stafford
Princeton, KY	1*	1				Crider silt loam	H	H	6.4	0-0-0	55.5 - Essex
Martin, TN	1	1				Grenada silt loam	M	M	7.0	0-60-60	29.1 - Essex
Tiptonville, TN	1*	1*				Morganfield silt loam	H	H	7.2	0-0-60	33.9 - Forrest
Jackson, TN		1	1			Lexington silt loam	H	M	6.5	0-0-0	49.1 - 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	39.3 - Forrest
Portageville, MO (B)	1	1	1			Sharkey clay	VH	VH	6.7	0-0-0	32.5 - Forrest
Keiser, AR	1*	1*	1*			Sharkey silty clay	H	H	6.2	0-0-0	55.7 - Tracy-M
Jonesboro, AR	1	1	1			Calloway silt loam	M	H	6.8	0-120-60	16.8 - Forrest
Pine Tree, AR	1	1	1			Calloway silt loam	M	H	6.8	0-40-80	20.9 - Forrest
Stoneville, MS (A)		1*	1*	1*		Bosket f. s. l.	H	H	6.8	0-0-0	45.9 - Forrest
Stoneville, MS (B)	1*	1*	1*	1*	1*	Sharkey clay	H+	H	6.6	0-0-0	33.5 - Sharkey
Rohwer, AR			1	1*		Perry clay	M	H	6.5	0-0-0	35.5 - Sharkey
St. Joseph, LA		1	1	1		Sharkey clay	H	H	6.2	0-0-0	41.3 - Leflore
West											
Manhattan, KS	1					Muir silt loam	M	M	7.3	0-0-0	50.7 - Stafford
Pittsburg, KS	1	1				Parsons silt loam	M	M	6.8	0-0-0	48.1 - Essex
Mound Valley, KS	1	1				Parsons silt loam	VH	H	7.0	0-0-0	34.8 - Essex
Bixby, OK	1	1	1			Reinach silt loam	MH	MH	6.5	0-0-0	51.8 - Forrest
Stuttgart, AR		1	1	1		Crowley silt loam	L	L	6.4	0-36-60	51.0 - Forrest
Bossier City, LA		1	1	1		Norwood VFSL	-	-	-	0-60-60	69.3 - Tracy-M
Beaumont, TX		1	1	1*	1*	Midland silty c. l.	-	-	-	0-30-90	28.1 - Sharkey
Lubbock, TX	1	1				Acuff loam	H	VH	8.2	0-0-0	61.4 - Douglas
Clovis, NM	1					Pullman s. c. l.	-	-	-	0-100-0	47.5 - Stafford
Bushland, TX	1					Pullman c. l.	-	-	-	0-0-0	61.4 - Douglas

[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; and 5 - very poor

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

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

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

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

UNIFORM GROUP IV-S

1987

	Variety or strain	Parentage	Generation composited
1.	Douglas	Williams X Calland	F_5
2.	Stafford	V66-318 X V68-2331	F_5
3.	S82-1443	A5424 X Mack	F_5
4.	D83-3349	Bedford X sel [Forrest X sel (Peking X Centennial)]	F_5
5.	LS82-W1206	Forrest X V71-480	F_5
6.	S81-2203	Crawford X J74-67-7	F_5
7.	K1130	Forrest X Hobbit	F_5
8.	K1133	V75-345 X S76-2120	F_5
9.	Md83-5008	L70L-3048 X D74-7824	F_5
10.	Md83-5198	Bedford X Miles	F_5
11.	S83-1014	Cumberland X Forrest	F_5
12.	V82-673	V68-1171 X SRF400	F_5

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.

A5424 is an Asgrow variety selected from Williams X York.

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

J74-67-7 is a SCN race 4 resistant selection from D70-3045 X an F_4 selection from D68-18 X PI 88788.

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.

V68-1171 is a selection from PI 80837 X V63-76, which is a selection from Hill X D53-354.

Uniform IV-S nurseries were planted at 21 locations. Results from these plantings are summarized in Tables 1-7. Table 1 gives a general summary of performance including seed yield, oil and protein percentages, general agronomic qualities, and reaction to nematodes and diseases. Results from individual locations are summarized in Tables 2-7.

Strains were evaluated for reaction to M. incognita and M. arenaria in the greenhouse at the University of Georgia. Four were rated resistant to M. incognita and two to both M. incognita and M. arenaria. Plantings were made in the greenhouse at Jackson, Tennessee to evaluate for reaction to SCN races 3 and 4. Seven were considered resistant to race 3 and three as resistant to both 3 and 4. D83-3349 is resistant to races 3 and 5.

S82-1443, which has been evaluated three years, averages one day later in maturity than Stafford. Seed yield averages slightly above that for Stafford in the East and Upper and Central South, but slightly below Stafford in the Delta and the West. Overall mean would be very similar. It is resistant to SCN race 3. The two-year mean seed yield for LS82-W1206 is somewhat below that for Stafford in all areas. The mean seed yields for the three strains Md83-5198, S83-1014, and V82-673 are below the mean yield of Stafford and therefore will be replaced by strains from Preliminary IV-S.

Table 1 - General summary of performance for the strains grown in Uniform Group IV-S, 1987

	No. of locations	Douglas	Stafford	S82-1443	D83-3349	LS82-W1206
Seed Yield - 1987						
East Coast	2	30.6	33.4	36.3	31.9	30.0
Upper & Central South	7	27.6	38.1	40.5	37.8	35.1
Delta	6	42.5	44.8	44.9	43.3	38.7
West	6	47.5	49.3	48.6	43.1	46.8
1986-87						
East Coast		41.7	41.0	46.7	41.2	39.6
Upper & Central South		30.5	37.8	39.6	38.9	36.9
Delta		37.3	39.6	39.1	38.4	33.9
West		50.5	50.0	48.8	46.2	48.2
1985-87						
East Coast		37.8	40.0	44.0		
Upper & Central South		31.3	39.8	41.4		
Delta		35.7	40.0	39.2		
West		46.2	46.9	45.3		
Oil Content - 1987		21.5	21.4	21.0	20.0	21.2
1986-87		21.3	21.1	21.1	20.0	21.1
1985-87		21.4	21.0	21.3		
Protein Content - 1987		41.4	40.1	40.4	41.1	41.0
1986-87		41.3	40.0	40.2	40.8	40.6
1985-87		41.7	40.5	40.4		
Seed size		18.7	13.9	18.3	14.3	13.7
Maturity index		9-23	+6	+7	+5	+3
Height		28	29	33	29	27
Seed quality		2.8	1.7	2.2	2.0	1.8
M. incognita		5.0	5.0	4.3	1.3	2.8
M. arenaria		2.3	3.0	4.3	2.9	2.8
SCN race 3		S	S	R	R	R
SCN race 4		S	S	S	S[1]	S
Flower color		P	P	P	W	P&W
Pubescence color		W	G	T	T	T
Pod wall color		Br	T	T	T	T

[1]Resistant to SCN race 5

Table 1 - (continued)

	S81-2203	K1130	K1133	Md83-5008	Md83-5198	S83-1014	V82-673
Seed Yield - 1987							
East Coast	25.4	38.8	36.3	35.8	32.3	35.8	32.4
Upper & Central South	34.1	33.9	36.6	41.1	36.7	39.3	33.1
Delta	53.4	38.3	43.7	46.0	41.5	38.8	34.3
West	43.9	52.9	45.3	48.9	41.5	42.6	42.4
1986-87							
East Coast	37.8						
Upper & Central South	34.4						
Delta	41.8						
West	46.3						
1985-87							
East Coast							
Upper & Central South							
Delta							
West							
Oil Content - 1987	21.6	21.8	21.1	21.3	20.2	20.3	20.3
1986-87	21.4						
1985-87							
Protein Content - 1987	41.1	38.3	39.2	39.1	41.4	41.6	40.7
1986-87	41.2						
1985-87							
Seed size	17.8	13.0	13.8	14.0	14.0	13.8	16.7
Maturity index	+2	+7	+7	+7	-2	+6	+3
Height	33	25	29	30	38	29	24
Seed quality	2.7	1.9	1.6	1.9	2.4	2.2	1.9
M. incognita	3.7	1.8	4.8	1.3	3.8	1.0	4.3
M. arenaria	3.7	4.0	4.0	3.0	3.8	4.3	4.3
SCN race 3	R	S	S	R	R	R	S
SCN race 4	R	S	S	S	R	S	S
Flower color	P	W	P	W&P	W&P	P	P
Pubescence color	T	T	G	T	T	T	G
Pod wall color	Br	Br	T	T	T	Br	T

Table 2 - Seed yield, in bushels per acre, for the strains in Uniform Group IV-S, 1987

Location	Douglas	Stafford	S82-1443	D83-3349	LS82-W1206	S81-2203	K1130
			EAST COAST				
Queenstown, MD	38.1	38.2	38.9	37.0	35.7	28.5	47.5
Warsaw, VA	23.0	28.5+	33.6+	26.8	24.2	22.3	30.1+
Mean	30.6	33.4	36.3	31.9	30.0	25.4	38.8
			UPPER AND CENTRAL SOUTH				
Orange, VA	32.2	41.9+	43.7+	35.9+	32.7	31.3	39.9+
Knoxville, TN	28.1	28.0	32.0	35.9+	22.6	26.4	23.3
Eldorado, IL	27.4	43.8+	47.6+	41.4+	43.5+	39.6+	44.2+
Carbondale, IL	31.5	36.2	42.6	43.9	30.5	34.4	35.8
Princeton, KY	45.1	47.9	51.1	44.0	45.4	47.6	44.6
Martin, TN	26.8	29.1	27.5	23.8	26.5	27.0	21.0
Tiptonville, TN	22.5	39.9+	39.3+	39.8+	44.8+	32.1+	28.3
Mean	27.6	38.1	40.5	37.8	35.1	34.1	33.9
			DELTA				
Portageville, MO (A)	41.7	38.5	47.9	41.0	36.0	39.8	39.4
Portageville, MO (B)	29.0	35.7+	28.5	34.5+	34.6+	28.5	27.9
Keiser, AR	56.9	60.1	58.4	54.5	45.4-	52.0	47.7-
*Jonesboro, AR	20.3	21.7	23.3	14.9	17.3	9.9-	19.3
*Pine Tree, AR	10.0	10.7	15.6	13.2	10.6	21.0	18.7
*Stoneville, MS (B)	13.2	11.2	11.7	6.7	9.6	16.6	12.9
Mean	42.5	44.8	44.9	43.3	38.7	53.4	38.3
			WEST				
Manhattan, KS	36.8	50.7+	48.7+	51.0+	65.5+	49.7+	56.1+
Pittsburg, KS	33.9	44.2	46.1	45.2	47.1	45.5	44.9
Bixby, OK	43.1	53.0	54.1	49.9	46.8	42.1	61.0
Bushland, TX	61.4	43.1	34.8	37.1	43.4	37.1	47.1
Lubbock, TX	61.4	58.8-	58.7-	52.7	49.9	51.7	59.0-
Clovis, NM	37.6	47.5	49.1	30.6	46.9	43.3	52.5
Mean	47.5	49.3	48.6	43.1	46.8	43.9	52.9

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

Table 2 - (continued)

Location	K1133	Md83-5008	Md83-5198	S83-1014	V82-673	L.S.D. (.05)	C.V. (%)
			EAST COAST				
Queenstown, MD	39.4	40.1	39.9	40.2	39.1	N.S.	13
Warsaw, VA	33.2+	31.4+	24.7	31.4+	25.7	5.4	11
Mean	36.3	35.8	32.3	35.8	32.4		
			UPPER AND CENTRAL SOUTH				
Orange, VA	41.2+	39.1+	32.1	34.5	32.3	3.2	5
Knoxville, TN	27.3	35.5+	32.2	29.3	26.0	6.5	13
Eldorado, IL	36.7+	43.0+	43.9+	39.8+	39.7+	7.8	11
Carbondale, IL	42.9	49.4	40.6	40.2	38.1	N.S.	17
Princeton, KY	45.4	43.6	46.3	44.0	44.8	N.S.	9
Martin, TN	28.4	34.7+	24.2	20.3-	23.5	6.1	14
Tiptonville, TN	34.4+	42.3+	37.3+	32.6+	28.3	8.1	14
Mean	36.6	41.1	36.7	39.3	33.1		
			DELTA				
Portageville, MO (A)	41.2	42.4	44.1	36.8	36.2	8.3	12
Portageville, MO (B)	34.0+	33.8+	30.4	28.9	28.4	4.3	8
Keiser, AR	55.9	61.7	50.0	50.8	38.3-	6.4	7
Jonesboro, AR	18.3	20.2	16.0	24.0	17.4	7.2	23
Pine Tree, AR	16.3	21.9	16.2	18.6	7.8	7.5	29
Stoneville, MS (B)	20.2	32.9+	13.6	10.6	10.6	8.0	33
Mean	43.7	46.0	41.5	38.8	34.3		
			WEST				
Manhattan, KS	63.2+	53.2+	53.2+	53.2+	55.5+	8.2	9
Pittsburg, KS	47.4	46.8	40.0	46.0	42.6	N.S.	19
Bixby, OK	54.2	57.6	41.9	50.3	42.7	4.6	5
Bushland, TX	32.8	35.8	39.0	33.8	40.9	8.7	13
Lubbock, TX	59.3-	59.2-	50.2	48.5	50.8	4.7	5
Clovis, NM	32.8	44.9	36.5	34.2	35.2	12.8	19
Mean	45.3	48.9	41.5	42.6	42.4		

Table 3 - Chemical composition and seed size for the strains in Uniform Group IV-S, 1987

Location	Douglas	Stafford	S82-1443	D83-3349	LS82-W1206	S81-2203
			OIL PERCENTAGE			
Queenstown, MD	21.2	19.9	18.6	19.4	20.8	21.0
Orange, VA	20.6	20.5	21.1	19.9	20.1	21.2
Knoxville, TN	22.4	22.9	22.3	20.2	21.7	22.4
Eldorado, IL	21.3	21.9	21.4	20.0	21.1	21.6
Portageville, MO (A)	20.9	20.4	20.4	18.5	21.2	21.3
Keiser, AR	22.1	23.4	21.9	21.0	21.7	22.3
Lubbock, TX	22.0	21.0	21.4	20.5	20.9	21.4
Bixby, OK	21.7	21.5	21.1	20.6	21.7	21.4
Mean	21.5	21.4	21.0	20.0	21.2	21.6
			PROTEIN PERCENTAGE			
Queenstown, MD	41.9	41.6	40.3	40.4	40.1	42.1
Orange, VA	42.8	41.1	40.7	41.6	42.2	41.8
Knoxville, TN	40.5	39.6	40.8	42.8	42.2	41.4
Eldorado, IL	40.6	39.1	40.9	41.5	40.1	39.4
Portageville, MO (A)	43.5	39.7	41.6	42.9	41.8	41.1
Keiser, AR	42.0	39.3	39.3	41.0	40.9	40.2
Lubbock, TX	40.6	40.4	39.8	39.0	40.6	41.6
Bixby, OK	39.2	39.6	39.6	39.9	40.3	41.2
Mean	41.4	40.1	40.4	41.1	41.0	41.1
			GRAMS PER 100 SEEDS			
Queenstown, MD	23.4	16.5	21.2	15.8	16.1	21.9
Warsaw, VA	20.9	15.6	20.8	15.0	15.0	20.4
Orange, VA	25.9	18.1	25.0	18.5	18.9	25.9
Knoxville, TN	15.6	12.3	17.2	12.7	10.8	14.4
Eldorado, IL	12.0	9.7	14.3	10.8	9.6	13.2
Portageville, MO (A)	14.6	9.7	14.7	10.9	10.3	13.6
Keiser, AR	16.0	13.1	12.5	12.0	12.2	12.7
Lubbock, TX	21.1	16.5	20.8	18.3	16.5	20.1
Mean	18.7	13.9	18.3	14.3	13.7	17.8

Table 3 - (continued)

Location	K1130	K1133	Md83-5008	Md83-5198	S83-1014	V82-673
			OIL PERCENTAGE			
Queenstown, MD	21.8	19.4	19.4	19.4	19.8	20.4
Orange, VA	21.7	19.8	20.4	19.9	18.9	19.5
Knoxville, TN	22.6	22.5	23.3	21.7	21.7	21.0
Eldorado, IL	21.4	21.0	21.4	20.3	20.2	19.7
Portageville, MO (A)	20.0	21.6	20.9	19.0	19.0	19.7
Keiser, AR	23.1	22.7	23.2	20.6	20.3	20.4
Lubbock, TX	21.4	21.0	20.3	20.7	20.9	20.9
Bixby, OK	22.0	20.8	21.5	20.2	21.3	21.0
Mean	21.8	21.1	21.3	20.2	20.3	20.3
			PROTEIN PERCENTAGE			
Queenstown, MD	37.4	39.3	39.2	41.5	40.6	39.7
Orange, VA	38.5	41.2	39.5	41.8	42.3	40.2
Knoxville, TN	39.5	39.1	39.0	41.5	42.2	41.4
Eldorado, IL	38.1	39.7	39.6	40.8	41.7	41.6
Portageville, MO (A)	40.7	39.4	39.9	43.8	42.9	41.2
Keiser, AR	38.3	38.4	38.5	41.6	41.8	42.4
Lubbock, TX	37.9	37.4	39.4	39.4	40.8	39.3
Bixby, OK	36.0	38.7	38.0	40.8	40.2	40.1
Mean	38.3	39.2	39.1	41.4	41.6	40.7
			GRAMS PER 100 SEEDS			
Queenstown, MD	14.5	14.3	14.8	16.9	16.6	21.0
Warsaw, VA	13.8	15.5	15.7	14.5	15.9	19.1
Orange, VA	17.3	20.7	18.6	17.8	19.1	23.9
Knoxville, TN	9.5	11.7	12.6	11.4	12.3	13.9
Eldorado, IL	9.0	10.2	10.7	10.3	9.8	10.6
Portageville, MO (A)	9.2	10.2	10.3	11.3	10.6	11.7
Keiser, AR	10.1	11.7	12.5	13.0	11.1	12.7
Lubbock, TX	20.4	15.8	16.9	17.0	15.1	20.6
Mean	13.0	13.8	14.0	14.0	13.8	16.7

Table 4 - Relative maturity data, days earlier (-) or later (+) than Douglas, for the strains in Uniform Group IV-S, 1987

Location	Date planted	Douglas matured	Stafford	S82-1443	D83-3349	LS82-W1206
			EAST COAST			
Queenstown, MD	6-1	10-18	+9	+6	+2	+6
Warsaw, VA	6-8	10-20	+4	+3	+2	+3
Mean	6-5	10-19	+7	+5	+2	+5
			UPPER AND CENTRAL SOUTH			
Orange, VA	6-2	10-15	+1	-1	-1	0
Knoxville, TN	5-1	9-14	+1	+3	+4	+1
Eldorado, IL	5-14	9-16	+14	+13	+14	+6
Carbondale, IL	5-6	9-11	+14	+14	+11	+5
Princeton, KY	6-3	9-20	+11	+13	+12	+9
Martin, TN	5-22	9-18	-3	-3	0	-3
Mean	5-18	9-21	+6	+7	+7	+3
			DELTA			
Portageville, MO (A)	5-9	9-22	+6	+7	+2	+1
Portageville, MO (B)	5-29	9-21	+7	+7	+7	+3
Keiser, AR	5-7	9-8	+13	+11	+8	+5
Jonesboro, AR	6-5	9-20	+3	+7	+3	+2
Pine Tree, AR	6-17	9-29	+3	+7	+3	+2
Stoneville, MS (B)	5-12	9-17	+2	+6	+5	+1
Mean	5-23	9-20	+6	+8	+5	+2
			WEST			
Manhattan, KS	5-20	10-5	F	F	F	+2
Bushland, TX	5-14	9-28	+2	+9	+4	+4
Lubbock, TX	5-15	9-28	+5	+7	+7	+4
Mean	5-16	9-30	+4	+8	+5	+3

Table 4 - (continued)

Location	S81-2203	K1130	K1133	Md83-5008	Md83-5198	S83-1014	V82-673
			EAST COAST				
Queenstown, MD	+6	+9	+6	+5	-3	+4	+7
Warsaw, VA	+4	+3	+5	+3	-1	+3	+2
Mean	+5	+6	+6	+4	-2	+4	+5
			UPPER AND CENTRAL SOUTH				
Orange, VA	-3	0	+1	-2	-14	+2	+1
Knoxville, TN	-1	0	+2	+4	0	+1	0
Eldorado, IL	+5	+5	+17	+13	+16	+1	+6
Carbondale, IL	+11	+14	+14	+14	+5	+10	+4
Princeton, KY	+7	+10	+14	+13	+2	+11	+5
Martin, TN	0	0	-2	-1	-3	-1	-5
Mean	+3	+5	+8	+7	+1	+4	+2
			DELTA				
Portageville, MO (A)	+1	+5	+4	+7	-2	+5	0
Portageville, MO (B)	+3	+8	+9	+10	0	+7	+7
Keiser, AR	-1	+11	+13	+15	-3	+13	+7
Jonesboro, AR	+1	+7	+6	+7	+1	+7	0
Pine Tree, AR	+1	+8	+6	+7	+1	+7	0
Stoneville, MS (B)	-5	+4	+2	+8	-3	+6	+1
Mean	0	+7	+7	+8	-1	+8	+3
			WEST				
Manhattan, KS	+1	F	F	F	-3	F	+1
Bushland, TX	-5	+7	+8	+8	0	+7	0
Lubbock, TX	-3	+12	+7	+11	-6	+9	+4
Mean	-2	+9	+8	+10	-3	+8	+2

Table 5 - Plant height for the strains in Uniform Group IV-S, 1987

Location	Douglas	Stafford	S82-1443	D83-3349	LS82-W1206	S81-2203
			EAST COAST			
Queenstown, MD	24	26	30	27	25	27
Warsaw, VA	23	25	31	31	27	25
Mean	24	26	31	29	26	26
			UPPER AND CENTRAL SOUTH			
Orange, VA	24	29	31	30	28	27
Knoxville, TN	26	23	32	37	24	37
Eldorado, IL	37	36	45	41	40	48
Carbondale, IL	39	38	40	39	40	43
Princeton, KY	33	35	40	36	36	40
Martin, TN	37	28	36	34	34	45
Tiptonville, TN	23	26	32	30	29	38
Mean	31	31	37	35	33	40
			DELTA			
Portageville, MO (A)	35	35	38	30	30	42
Portageville, MO (B)	26	23	32	28	21	31
Keiser, AR	29	23	29	24	21	33
Jonesboro, AR	37	35	45	35	32	39
Pine Tree, AR	19	13	19	13	17	22
Stoneville, MS (B)	19	12	16	9	13	25
Mean	28	24	30	23	22	32
			WEST			
Manhattan, KS	36	31	44	34	36	50
Pittsburg, KS	29	27	32	28	29	31
Bixby, OK	29	28	32	28	30	28
Bushland, TX	24	24	27	21	24	28
Lubbock, TX	24	23	25	23	19	26
Clovis, NM	23	29	34	31	28	28
Mean	28	27	32	28	28	32

Table 5 - (continued)

Location	K1130	K1133	Md83-5008	Md83-5198	S83-1014	V82-673
			EAST COAST			
Queenstown, MD	24	27	29	34	28	24
Warsaw, VA	23	28	27	32	27	23
Mean	24	28	28	33	28	24
			UPPER AND CENTRAL SOUTH			
Orange, VA	24	29	31	34	29	28
Knoxville, TN	19	29	29	32	24	18
Eldorado, IL	35	38	36	56	39	35
Carbondale, IL	36	39	36	52	36	32
Princeton, KY	33	32	33	43	35	31
Martin, TN	24	30	38	54	35	19
Tiptonville, TN	19	29	32	42	23	23
Mean	27	32	34	45	32	27
			DELTA			
Portageville, MO (A)	25	29	34	59	35	31
Portageville, MO (B)	21	28	28	35	28	22
Keiser, AR	21	24	24	30	24	20
Jonesboro, AR	25	33	36	50	50	30
Pine Tree, AR	15	19	19	18	18	16
Stoneville, MS (B)	12	16	18	27	13	13
Mean	20	25	27	37	28	22
			WEST			
Manhattan, KS	35	39	41	62	37	24
Pittsburg, KS	25	28	30	35	30	28
Bixby, OK	26	27	32	36	26	26
Bushland, TX	25	24	23	29	25	22
Lubbock, TX	21	24	21	28	23	18
Clovis, NM	25	29	27	36	27	20
Mean	26	29	29	38	28	23

Table 6 - Lodging scores for the strains in Uniform Group IV-S, 1987

Location	Douglas	Stafford	S82-1443	D83-3349	LS82-W1206	S81-2203
			EAST COAST			
Queenstown, MD	2.0	2.0	2.7	2.0	2.0	2.0
Warsaw, VA	1.0	1.0	1.2	1.0	1.0	1.0
			UPPER AND CENTRAL SOUTH			
Orange, VA	1.0	1.3	3.3	2.0	1.3	1.0
Knoxville, TN	1.3	1.0	1.2	1.2	1.0	1.5
Eldorado, IL	1.4	1.3	3.0	2.8	1.9	2.6
Carbondale, IL	1.8	1.5	2.0	2.7	1.8	2.2
Princeton, KY	1.0	2.7	3.3	3.7	3.3	2.7
Martin, TN	1.0	1.0	1.0	1.0	1.0	2.0
Tiptonville, TN	1.7	1.7	1.3	1.3	1.3	3.0
			DELTA			
Portageville, MO (A)	2.0	1.0	1.5	2.0	2.0	3.0
Portageville, MO (B)	1.0	1.0	1.5	2.0	1.0	1.5
Keiser, AR	1.0	1.0	1.0	1.0	1.0	1.7
Jonesboro, AR	1.0	1.0	1.0	1.0	1.0	1.0
Pine Tree, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, MS (B)	2.0	2.0	2.0	1.7	2.0	2.0
			WEST			
Manhattan, KS	1.7	1.0	1.0	2.7	1.0	2.7
Pittsburg, KS	1.0	1.3	2.0	1.7	2.0	2.0
Bixby, OK	1.0	2.0	2.0	1.0	2.0	1.0
Bushland, TX	2.0	4.0	2.7	5.0	4.0	1.7
Lubbock, TX	1.5	1.0	1.3	1.5	1.0	2.0
Clovis, NM	1.0	2.0	1.6	4.0	1.0	1.0

Table 6 - (continued)

Location	K1130	K1133	Md83-5008	Md83-5198	S83-1014	V82-673
			EAST COAST			
Queenstown, MD	2.0	2.0	2.2	2.0	2.0	2.0
Warsaw, VA	1.0	1.2	1.1	1.0	1.0	1.0
			UPPER AND CENTRAL SOUTH			
Orange, VA	1.0	3.0	3.7	1.3	1.0	1.3
Knoxville, TN	1.0	1.3	1.0	1.3	1.0	1.0
Eldorado, IL	1.2	2.2	3.3	2.2	2.2	1.5
Carbondale, IL	1.7	2.0	3.0	1.5	2.0	1.3
Princeton, KY	1.0	3.3	3.0	2.3	2.3	1.0
Martin, TN	1.0	1.0	2.0	2.0	1.0	1.0
Tiptonville, TN	1.0	1.3	1.7	2.7	1.3	1.0
			DELTA			
Portageville, MO (A)	1.0	1.0	1.5	2.5	1.5	1.0
Portageville, MO (B)	1.0	1.5	2.0	1.5	1.0	1.0
Keiser, AR	1.0	1.0	1.2	1.2	1.0	1.0
Jonesboro, AR	1.0	1.0	1.0	1.0	1.0	1.0
Pine Tree, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, MS (B)	1.7	2.0	2.0	2.0	2.0	2.0
			WEST			
Manhattan, KS	1.0	1.0	1.7	2.0	1.0	1.0
Pittsburg, KS	1.0	1.3	2.3	1.7	1.3	1.0
Bixby, OK	1.0	1.0	2.0	1.0	1.0	1.0
Bushland, TX	1.5	4.2	5.0	2.5	4.0	2.5
Lubbock, TX	1.5	1.5	2.0	1.5	1.0	1.0
Clovis, NM	1.0	2.0	5.0	1.0	1.0	1.0

Table 7 - Seed quality scores for the strains in Uniform Group IV-S, 1987

Location	Douglas	Stafford	S82-1443	D83-3349	LS82-W1206	S81-2203
			EAST COAST			
Queenstown, MD	3.0	1.0	1.0	1.0	1.0	2.2
Warsaw, VA	3.0	1.8	1.8	1.8	2.2	3.5
			UPPER AND CENTRAL SOUTH			
Orange, VA	3.0	2.0	1.5	3.0	2.3	2.3
Knoxville, TN	3.0	1.7	2.0	2.3	2.7	2.2
Eldorado, IL	2.7	2.0	2.5	2.0	2.0	2.7
Carbondale, IL	3.0	2.0	3.0	1.0	2.0	4.0
Princeton, KY	1.0	1.0	2.0	3.0	2.0	3.0
Martin, TN	2.5	1.5	2.5	2.5	2.0	3.0
			DELTA			
Portageville, MO (A)	3.5	1.5	2.0	1.5	1.5	3.0
Portageville, MO (B)	3.0	2.0	2.0	1.5	1.5	2.0
Keiser, AR	3.5	2.5	2.5	2.0	1.5	3.5
Jonesboro, AR	2.3	2.0	2.3	3.0	3.3	3.3
Pine Tree, AR	2.7	2.0	2.3	2.7	2.3	3.0
Stoneville, MS (B)	2.3	2.3	3.0	3.0	2.3	3.0
			WEST			
Manhattan, KS	4.0	1.0	2.0	2.0	2.0	3.0
Pittsburg, KS	4.0	2.0	4.0	1.0	1.0	2.0
Bushland, TX	2.0	1.0	2.0	2.0	1.3	1.3
Lubbock, TX	2.5	1.7	1.5	1.5	1.5	2.0

Table 7 - (continued)

Location	K1130	K1133	Md83-5008	Md83-5198	S83-1014	V82-673
			EAST COAST			
Queenstown, MD	1.0	1.0	1.0	1.0	1.0	1.3
Warsaw, VA	1.5	1.3	1.5	3.0	1.3	1.2
			UPPER AND CENTRAL SOUTH			
Orange, VA	1.5	1.3	1.5	1.8	2.0	1.5
Knoxville, TN	2.0	1.0	2.2	2.3	2.2	1.7
Eldorado, IL	2.0	2.0	1.7	2.0	1.8	2.2
Carbondale, IL	1.0	1.0	2.0	2.0	1.0	1.0
Princeton, KY	3.0	2.0	2.0	4.0	3.0	1.0
Martin, TN	2.5	2.0	2.5	3.0	2.5	2.0
			DELTA			
Portageville, MO (A)	1.5	1.0	1.5	2.5	2.0	2.0
Portageville, MO (B)	1.5	1.5	2.0	2.5	2.0	2.0
Keiser, AR	2.0	2.0	3.0	3.0	2.5	2.5
Jonesboro, AR	3.0	2.3	2.3	3.0	3.3	2.0
Pine Tree, AR	3.0	1.7	2.3	3.0	2.7	2.0
Stoneville, MS (B)	2.0	2.0	2.7	3.3	2.7	2.7
			WEST			
Manhattan, KS	2.0	2.0	2.0	2.0	2.0	2.0
Pittsburg, KS	2.0	2.0	2.0	2.0	3.0	3.0
Bushland, TX	1.5	1.0	1.5	2.0	2.3	1.3
Lubbock, TX	1.2	1.0	1.2	1.2	1.5	2.5

PRELIMINARY GROUP IV-S

1987

Preliminary IV-S nurseries which included Douglas and Stafford along with 34 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, general agronomic qualities, oil and protein percentages, and reaction to nematodes and diseases. Data from individual locations are reported in Tables 10-14.

Stafford averaged ten days later in maturity than Douglas. There were no strains earlier in maturity than Douglas. One strain was one day later than Stafford. Douglas had a mean seed yield of 32.1 bushels per acre and Stafford a mean seed yield of 39.2 bushels per acre. Seventeen strains had mean seed yields significantly greater than that for Douglas at the 5% level of confidence. There were twelve strains which had mean seed yields slightly greater than that for Stafford. It is of interest that a few years ago nearly all strains grown in the IV-S maturity class had an indeterminate growth type. Now the majority of the strains have a determinate growth habit.

Plantings were made in the greenhouse at the University of Georgia to rate for reaction to the two root-knot nematode species M. incognita and M. arenaria. Fifteen were rated resistant to M. incognita and two resistant to both species. Plantings were made in the greenhouse at Jackson, Tennessee to rate for reaction to SCN races 3 and 4. Eleven were rated resistant to race 3 and seven of these were rated resistant to both 3 and 4.

Strains which appear to merit further evaluation in Uniform Group IV-S are K1150, K1154, Ky84-1616, LS83-3800, S85-1163, and V83-1357.

Table 8 - Parentage of the strains grown in Preliminary Group IV-S, 1987

	Variety or strain	Parentage	Generation composited
1.	Douglas	Williams X Calland	F_5
2.	Stafford	V66-318 X V68-2331	F_5
3.	K1150	Essex X Cumberland	F_5
4.	K1151	Essex X Cumberland	F_5
5.	K1152	Essex X Cumberland	F_5
6.	K1153	V76-482 X Essex	F_5
7.	K1154	V76-482 X Essex	F_5
8.	Ky84-1616	K1044 X Williams	F_5
9.	L82-3681	L74D-619 X D66-5566	F_8
10.	L82-4794	L73-4124 X Elf	F_8
11.	L83L-360	L78-8694 X L78L-449	F_6
12.	L83L-428	L78-8694 X L78L-688	F_6
13.	L83L-627	L78L-449 X L78L-688	F_6
14.	L83-4082	L78-9069 X L78L-449	F_6
15.	L83-4137	L78-9069 X L78L-688	F_6
16.	LS80-4977	Mack X Woodworth	F_5
17.	LS82-0816	Bedford X Franklin	F_5
18.	LS82-2908	Mack X Crawford	F_5
19.	LS83-3800	Franklin X J74-5	F_7
20.	Md84-0499	Essex X A75-302005	F_5
21.	Md84-0641	Essex X A75-302005	F_5
22.	Md84-6061	Nathan X Pixie	F_5
23.	S85-1163	L77-443 X L77-906	F_5
24.	S85-11081	Fayette X Pella	F_6
25.	S85-11362	L77-546 X Fayette	F_6
26.	S85-11561	L77-443 X L77-906	F_6
27.	S85-11562	L77-443 X L77-906	F_6
28.	Tn85-13	Essex X D72-8927	
29.	Tn85-32	K1044 X Fayette	
30.	Tn85-48	Essex X J74-88	
31.	Tn85-117	Essex X D72-8927	
32.	V83-702	PI 96194-3 X Essex	F_5
33.	V83-1357	Essex(3) X L73-811	F_4
34.	V83-1454	Essex(4) X L73-811	F_3
35.	V83-5064	MS2 population	F_4
36.	V84-1790	Epps X L77-994	F_5

Table 9 - General summary of performance for the strains grown in Preliminary Group IV-S, 1987

Strain	Seed yield	Mat. index	Ht.	Percent Oil	Percent Protein	M. incognita	M. arenaria	SCN race 3	SCN race 4
Douglas	32.1	9-27	28	21.5	40.2	3.7	3.7	S	S
Stafford	38.0+	+10	27	21.6	39.6	3.4	4.0	S	S
K1150	39.2+	+1	34	21.8	39.3	2.3	3.7	S	S
K1151	40.8+	+11	39	21.5	40.4	2.7	3.0	S	S
K1152	39.2+	+8	32	22.3	40.3	1.7	3.5	S	S
K1153	39.0+	+5	26	21.4	40.4	1.8	2.3	S	S
K1154	40.5+	+5	25	20.9	41.6+	2.0	4.3	S	S
Ky84-1616	41.5+	+13	36	20.6	41.7+	1.7	4.8	S	S
L82-3681	37.6+	+6	27	21.2	40.8	4.3	5.0	S	S
L82-4794	38.1+	+9	27	20.2-	40.6	2.1	3.0	S	S
L83L-360	36.0	+1	29	21.6	40.1	2.3	3.0	S	S
L83L-428	38.3+	+6	30	22.0	40.2	2.7	4.0	S	S
L83L-627	35.5	+7	27	21.3	41.7+	1.4	5.0	S	S
L83-4082	36.9	+11	31	20.2-	42.9+	1.7	5.0	S	S
L83-4137	37.6+	+11	28	20.8	42.4+	1.5	4.0	S	S
LS80-4977	34.9	+6	27	21.3	40.9	1.7	3.0	h	S
LS82-0816	35.8	+5	40	21.6	39.5	4.0	3.7	R	R
LS82-2908	34.6	+2	35	21.2	42.3+	3.7	3.3	S	S
LS83-3800	38.2+	+6	31	19.8-	40.7	3.7	2.7	R	S
Md84-0499	37.8+	-1	35	21.3	41.7+	2.3	4.0	S	S
Md84-0641	36.6	+5	26	21.0	40.1	3.2	3.5	S	S
Md84-6061	37.2+	+6	29	21.2	40.3	2.0	3.7	h	h
S85-1163	39.7+	+6	40	20.7	40.5	1.5	2.0	R	R
S85-11081	38.0+	+10	41	21.0	41.8+	1.5	2.7	R	R
S85-11362	35.6	-3	34	22.2	40.4	4.0	3.3	R	R
S85-11561	36.5	+6	39	20.5-	42.5+	3.5	4.2	R	R
S85-11562	37.2+	+6	38	20.1-	42.4+	2.7	4.0	R	R
Tn85-13	36.6	+5	29	19.4-	41.9+	1.3	3.7	S	S
Tn85-32	34.8	+11	38	19.9-	43.2+	0.8	3.3	R	h
Tn85-48	31.6	+7	28	18.2-	43.5+	2.7	4.7	S	S
Tn85-117	35.5	+9	36	19.0-	41.5+	2.3	3.3	S	S
V83-702	35.2	+6	26	20.1-	42.1+	4.3	3.7	S	S
V83-1357	39.5+	+7	25	20.3-	42.7+	1.7	4.3	S	S
V83-1454	40.2+	+10	40	21.2	42.1+	1.0	4.3	S	S
V83-5064	33.4	+7	22	20.9	42.7+	3.0	5.0	S	S
V84-1790	36.9	+10	30	21.2	42.2+	1.0	4.0	R	R
L.S.D.(.05)	4.9			.9	1.2				
C.V.	13%			3%	2%				

+ or - designations refer to differences from Douglas.

Table 10 - Seed yield, in bushels per acre, for the strains grown in Preliminary Group IV-S, 1987

Strain	Queens-town, MD	Warsaw, VA	Portage-ville, MO (A)	Keiser, AR	Carbon-dale, IL	Prince-ton, KY	Stone-ville, MS (B)
Douglas	35.2	18.8	34.6	53.3	29.1	44.6	9.1
Stafford	43.4	28.8+	36.7	55.8	44.5	43.5	13.3
K1150	38.5	25.1+	34.7	54.8	47.5	52.9+	20.8+
K1151	40.9	30.5+	31.9	55.1	51.2	47.2	29.0+
K1152	39.0	27.4+	33.6	51.1	47.3	52.8+	23.0+
K1153	38.2	29.3+	41.2+	43.8	45.3	57.3+	18.1+
K1154	43.1	31.1+	42.5+	48.0	49.7	49.9+	19.4+
Ky84-1616	42.3	30.7+	31.4	64.4+	46.4	44.1	31.0+
L82-3681	40.2	30.8+	28.9	53.9	42.6	47.3	19.6+
L82-4794	42.1	26.2+	36.5	52.3	47.9	50.2+	11.6+
L83L-360	42.9	22.7	36.2	47.5	46.8	47.3	8.5
L83L-428	44.5	26.5+	35.5	46.5	50.6	47.3	17.4+
L83L-627	42.6	25.6+	41.5+	36.8-	43.4	51.2+	7.4
L83-4082	40.3	26.9+	32.7	47.8	49.5	46.1	15.1+
L83-4137	38.7	26.8+	32.7	55.0	35.6	48.6+	25.8+
LS80-4977	40.1	29.8+	33.7	44.9	42.1	44.5	9.2
LS82-0816	36.1	24.5+	35.7	55.9	41.7	40.9-	15.8+
LS82-2908	38.4	23.3	34.4	43.0	42.3	46.9	14.0
LS83-3800	32.5	31.1+	38.2	54.0	51.7	39.3-	20.5+
Md84-0499	44.9	26.5+	38.9	48.6	37.3	48.5+	20.1+
Md84-0641	45.7	26.8+	33.8	42.6-	44.2	48.7+	14.6
Md84-6061	40.4	29.1+	34.9	48.0	46.4	41.9	19.7+
S85-1163	38.0	22.8	42.5+	55.4	39.8	53.3+	26.4+
S85-11081	39.0	32.0+	32.8	55.4	43.7	43.9	19.2+
S85-11362	33.6	24.8+	42.7+	51.5	40.5	45.9	10.4
S85-11561	36.6	25.0+	39.7	49.7	44.2	48.4+	11.7
S85-11562	39.4	29.4+	36.6	50.2	40.2	45.3	19.2+
Tn85-13	39.0	28.2+	41.7+	46.4	42.6	41.0-	17.0+
Tn85-32	38.5	22.7	32.6	47.2	39.7	42.4	20.5+
Tn85-48	37.2	24.3+	33.5	42.9	-	33.5-	18.2+
Tn85-117	38.4	26.7+	30.0	48.1	43.7	42.2	19.6+
V83-702	42.0	31.6+	35.9	34.6-	47.1	44.0	10.9
V83-1357	43.3	26.5+	42.5+	53.5	48.8	45.4	16.2+
V83-1454	43.3	33.8+	37.1	49.2	46.0	39.3-	32.5+
V83-5064	39.7	24.9+	32.1	25.8-	47.4	47.5+	16.4+
V84-1790	37.1	31.0+	37.8	47.9	46.8	39.4-	18.0+
L.S.D.(.05)	N.S.	5.4	5.3	10.6	N.S.	2.8	5.9
C.V.	10%	10%	7%	11%	12%	10%	16%

Table 11 - Oil percentages for the strains in Preliminary Group IV-S, 1987

Strain	Queenstown, MD	Portageville, MO (A)	Keiser, AR	Carbondale, IL
Douglas	22.0	19.7	22.6	21.5
Stafford	21.2	20.0	22.8	22.4
K1150	22.2	19.9	23.0	22.2
K1151	21.0	21.3	22.4	21.3
K1152	22.0	22.8	22.6	21.9
K1153	20.8	21.6	21.6	21.6
K1154	21.1	20.4	20.7	21.5
Ky84-1616	21.1	20.2	20.6	20.6
L82-3681	21.2	20.8	21.4	21.5
L82-4794	20.0	19.9	20.2	20.7
L83L-360	21.2	21.4	21.7	21.9
L83L-428	20.7	21.9	22.7	22.7
L83L-627	21.3	20.0	21.6	22.3
L83-4082	20.0	19.5	21.4	19.9
L83-4137	21.4	20.3	20.9	20.6
LS80-4977	20.9	21.3	21.3	21.6
LS82-0816	21.6	20.6	22.0	22.0
LS82-2908	21.5	21.4	20.9	20.9
LS83-3800	17.7	20.2	20.6	20.6
Md84-0499	22.1	20.8	20.9	21.3
Md84-0641	21.0	20.6	20.8	21.5
Md84-6061	21.4	20.9	21.1	21.2
S85-1163	21.7	20.3	20.3	20.5
S85-11081	20.6	21.4	21.1	20.8
S85-11362	22.5	21.4	22.6	22.2
S85-11561	21.0	20.2	20.6	20.1
S85-11562	20.3	19.4	20.3	20.3
Tn85-13	19.5	19.5	19.0	19.4
Tn85-32	19.9	19.4	19.8	20.5
Tn85-48	17.9	18.2	18.0	18.7
Tn85-117	19.5	18.5	18.6	19.4
V83-702	21.0	19.3	19.6	20.4
V83-1357	20.4	20.2	19.8	20.8
V83-1454	20.9	21.3	21.3	21.3
V83-5064	21.3	20.7	20.4	21.0
V84-1790	20.1	20.5	23.3	21.0

Table 12 - Protein percentages for the strains in Preliminary Group IV-S, 1987

Strain	Queenstown, MD	Portageville, MO (A)	Keiser, AR	Carbondale, IL
Douglas	40.1	37.9	41.0	41.9
Stafford	39.5	40.2	38.9	39.8
K1150	38.5	39.7	38.8	40.2
K1151	39.0	41.8	39.4	41.3
K1152	39.0	40.3	40.2	41.5
K1153	40.3	40.8	39.8	40.6
K1154	40.1	42.0	42.2	42.0
Ky84-1616	40.5	42.3	41.7	42.3
L82-3681	39.9	42.0	40.6	40.8
L82-4794	38.5	41.7	40.9	41.3
L83L-360	38.9	40.5	40.8	40.1
L83L-428	40.2	40.3	40.6	39.8
L83L-627	40.5	43.0	42.4	41.0
L83-4082	41.7	42.8	43.7	43.3
L83-4137	39.5	42.5	43.0	44.6
LS80-4977	39.4	41.0	41.1	42.2
LS82-0816	37.4	41.4	39.4	39.9
LS82-2908	40.9	42.5	42.7	43.1
LS83-3800	41.5	41.4	40.5	39.3
Md84-0499	39.0	42.0	42.4	43.2
Md84-0641	38.9	39.9	41.2	40.3
Md84-6061	38.3	40.8	40.9	41.0
S85-1163	37.4	41.5	41.0	41.9
S85-11081	39.5	41.8	43.0	42.8
S85-11362	39.5	41.0	40.5	40.5
S85-11561	41.2	42.7	42.3	43.7
S85-11562	41.3	42.2	43.0	43.0
Tn85-13	41.3	42.5	42.0	41.8
Tn85-32	41.9	43.3	43.9	43.6
Tn85-48	43.0	42.9	45.5	42.7
Tn85-117	39.7	42.9	42.0	41.3
V83-702	40.0	42.6	43.4	42.4
V83-1357	41.0	42.8	44.4	42.7
V83-1454	41.4	42.5	41.3	43.0
V83-5064	40.2	43.1	44.0	43.3
V84-1790	41.1	41.9	44.0	41.8

Table 13 - Plant height for the strains in Preliminary Group IV-S, 1987

Strain	Queens-town, MD	Warsaw, VA	Portage-ville, MO (A)	Keiser, AR	Carbon-dale, IL	Prince-ton, KY	Stone-ville, MS (B)
Douglas	27	23	39	20	31	37	16
Stafford	28	24	32	25	35	34	12
K1150	36	24	41	32	45	38	22
K1151	37	28	46	34	49	42	29
K1152	36	26	40	32	23	35	30
K1153	26	26	30	19	34	32	14
K1154	23	22	28	31	29	33	12
Ky84-1616	38	26	41	35	47	38	30
L82-3681	29	24	31	20	36	33	14
L82-4794	28	26	33	25	32	33	11
L83L-360	30	28	35	20	37	36	15
L83L-428	27	30	36	23	42	37	16
L83L-627	26	26	28	31	33	34	14
L83-4082	31	28	29	34	39	36	17
L83-4137	31	30	38	35	40	37	18
LS80-4977	30	26	31	21	33	34	13
LS82-0816	44	31	51	34	49	44	24
LS82-2908	38	27	46	29	45	38	23
LS83-3800	32	31	39	25	37	36	17
Md84-0499	37	28	43	35	44	39	22
Md84-0641	26	24	29	19	35	35	13
Md84-6061	29	27	31	33	34	32	15
S85-1163	42	28	52	37	51	43	27
S85-11081	41	33	52	34	53	45	29
S85-11362	37	30	42	30	41	37	21
S85-11561	44	29	50	33	45	44	25
S85-11562	46	30	50	32	43	41	25
Tn85-13	31	24	34	24	39	33	17
Tn85-32	44	27	45	32	47	42	30
Tn85-48	28	26	32	26	-	34	23
Tn85-117	35	30	41	33	48	44	19
V83-702	25	24	30	21	36	33	13
V83-1357	24	22	28	21	36	33	14
V83-1454	36	31	58	35	51	40	32
V83-5064	26	24	23	13	29	31	11
V84-1790	30	30	39	21	40	35	16

Table 14 - Seed quality scores for the strains in Preliminary Group IV-S, 1987

Strain	Queens-town, MD	Warsaw, VA	Portage-ville, MO (A)	Keiser, AR	Carbon-dale, IL	Prince-ton, KY	Stone-ville, MS (B)
Douglas	4.0	2.5	3.5	3.5	4.0	3.0	3.0
Stafford	1.8	1.2	1.5	2.5	2.0	1.0	2.5
K1150	2.3	2.0	2.0	4.0	2.0	2.0	3.5
K1151	1.5	1.2	2.0	3.5	3.0	2.0	2.0
K1152	1.3	1.0	2.0	3.0	3.0	2.0	2.0
K1153	2.0	1.5	2.0	2.0	3.0	2.0	2.0
K1154	1.3	1.2	2.0	2.0	3.0	2.0	2.0
Ky84-1616	1.3	1.2	1.5	3.5	2.0	2.0	2.5
L82-3681	1.5	1.0	1.5	2.0	2.0	3.0	2.0
L82-4794	1.3	1.5	1.5	3.0	2.0	2.0	2.0
L83L-360	1.5	1.8	2.5	2.0	2.0	3.0	2.5
L83L-428	1.5	1.0	2.5	3.5	3.0	3.0	3.0
L83L-627	1.0	1.8	2.0	3.0	3.0	2.0	2.5
L83-4082	1.0	1.5	1.5	3.0	2.0	3.0	2.5
L83-4137	1.0	1.0	2.0	2.0	3.0	2.0	2.0
LS80-4977	1.0	1.2	2.0	2.0	2.0	3.0	3.0
LS82-0816	1.5	1.8	3.0	3.5	3.0	4.0	3.5
LS82-2908	2.3	1.8	2.5	3.5	3.0	2.0	2.5
LS83-3800	1.8	1.2	2.0	2.0	2.0	3.0	2.0
Md84-0499	3.5	3.0	3.0	3.5	4.0	2.0	2.5
Md84-0641	1.0	1.8	2.0	2.5	3.0	1.0	2.0
Md84-6061	1.5	1.2	1.0	2.0	1.0	3.0	2.5
S85-1163	1.5	2.2	3.0	3.0	4.0	4.0	3.0
S85-11081	1.5	2.0	2.5	3.0	3.0	3.0	3.0
S85-11362	1.3	1.8	2.5	2.5	2.0	1.0	3.0
S85-11561	1.5	2.2	3.0	4.0	3.0	3.0	3.0
S85-11562	1.5	2.2	2.5	3.5	3.0	2.0	3.0
Tn85-13	1.0	1.2	2.0	1.5	2.0	2.0	2.0
Tn85-32	1.3	2.0	2.0	3.5	3.0	3.0	3.0
Tn85-48	1.3	1.5	1.5	2.0	-	2.0	2.0
Tn85-117	1.0	1.0	1.5	1.5	2.0	1.0	2.5
V83-702	1.0	1.0	2.0	2.0	2.0	1.0	3.0
V83-1357	1.0	1.8	1.5	2.0	2.0	2.0	2.0
V83-1454	1.0	1.2	3.0	2.5	3.0	3.0	2.0
V83-5064	1.0	1.0	2.5	3.5	3.0	2.0	2.0
V84-1790	1.0	1.5	2.0	4.0	3.0	4.0	2.0

UNIFORM GROUP V

1987

	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.	S82-1318	Essex X D74-7741	F_5
6.	D82-2896	Forrest X D78-5089	F_5
7.	Md83-5078	D74-7824 X Miles	F_5
8.	N84-507	N77-114 X N77-907	F_6
9.	R83-1342	Forrest X Narow	F_6
10.	R84-150	(R76-1017 X R68-208) X (Forrest X Narow)	F_5
11.	S82-3641	Forrest X Bedford	F_5
12.	S83-1188	Bedford X N77-347	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 Forrest X Lee 74.

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

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.

R76-1017 is a selection from Dare X D65-6765.

R68-208 is a selection from Davis X Lee 68.

N77-347 is a selection from N70-1549 X Centennial which was included in Uniform Group VI in 1980.

Plantings of the strains in Uniform Group V were made at 31 locations. Data from 21 locations are summarized in Tables 15-21. Table 15 gives an overall summary of seed yield, oil and protein content, agronomic characteristics, and disease and nematode resistance. Data from individual locations are presented in Tables 16-21.

Ratings for the two root-knot species, M. incognita and M. arenaria, were made in the greenhouse at the University of Georgia. A field planting for evaluation for M. arenaria was made in the field near the Edisto Station at Blackville, South Carolina. Four strains were rated resistant to M. incognita. Only Forrest was resistant to both M. incognita and M. arenaria. Ratings for reaction to soybean cyst nematode races 3 and 4 were made in the greenhouse at Jackson, Tennessee. Seven were rated resistant to SCN race 3 and two strains were resistant to both races 3 and 4. There was good field development of stem canker at Beaumont. Ratings were made on a 0-9 basis. Only D82-2896 received a 0 rating, but three additional strains received very low ratings. Observation plots were also planted at Verona, Mississippi for stem canker evaluation, but disease development was not as severe as at Beaumont. Ratings were made for purple stain development on the seed and hilum color distribution into the seed coat as a result of soybean mosaic virus infection at both Orange and Warsaw, Virginia. Development was too low for distinguishing differences among strains.

There were no strains that had been evaluated three years. The three strains N83-375, R83-310, and S82-1318, were in their second year of evaluation. Seed yield for S82-1318 was somewhat lower than for the other two strains. Seven strains were evaluated on a regional basis for the first time. D82-2896 has the character for delayed flowering under short-day condition. This character should permit better growth from plantings made in April when day length is still short. However, there were no plantings at which this character could be expressed. This strain appears to have a high level of resistance to stem canker.

Table 15 - General summary of performance for the strains in Uniform Group V, 1987

	No. of locations	Essex	Forrest	N83-375	R83-310	S82-1318
Seed Yield - 1987						
East Coast	5	39.0	39.4	40.6	39.7	39.5
Upper & Central South	8	31.8	32.0	30.4	33.9	29.5
Delta	7	36.0	36.0	37.0	37.0	34.0
West	7	40.4	40.8	44.1	43.2	39.8
1986-87						
East Coast		44.1	43.9	46.1	43.5	44.6
Upper & Central South		31.1	31.9	31.9	34.2	31.3
Delta		34.6	36.2	36.6	37.5	32.1
West		40.8	41.2	44.1	43.3	42.3
1985-87						
East Coast		42.2	41.3			
Upper & Central South		34.8	35.5			
Delta		35.8	37.7			
West		39.2	39.3			
Oil Content - 1987		20.5	20.9	21.2	20.3	21.4
1986-87		20.4	21.1	20.8	20.2	21.0
1985-87		20.5	21.0			
Protein Content - 1987		42.4	39.6	42.0	41.3	41.4
1986-87		42.0	39.8	41.9	41.2	41.6
1985-87		42.5	40.1			
Seed size		13.3	13.1	16.4	14.3	13.0
Maturity index		10-6	+3	+5	+3	+1
Height		26	32	31	31	29
Seed quality		1.8	1.9	1.9	1.7	1.7
M. incognita		3.4	1.0	4.3	5.1	4.9
M. arenaria		5.0	2.8	5.0	5.0	4.5
SCN race 3		S	R	R	R	R
SCN race 4		S	S	S	h	S
Stem Canker		3.2	5.8	0.7	1.7	2.0
Flower color		P	W	W	P	P
Pubescence color		G	T	T	T	G
Pod wall color		T	T	B	T	T

Table 15 - (continued)

	D82-2896	Md83-5078	N84-507	R83-1342	R84-150	S82-3641	S83-1188
Seed Yield - 1987							
East Coast	36.7	39.3	44.1	42.5	38.5	40.2	39.8
Upper & Central South	31.2	29.5	34.9	31.5	31.9	28.5	31.2
Delta	36.5	37.1	40.1	41.2	37.2	37.2	35.3
West	42.3	43.1	46.4	42.5	41.4	38.9	38.3
1986-87							
East Coast							
Upper & Central South							
Delta							
West							
1985-87							
East Coast							
Upper & Central South							
Delta							
West							
Oil Content - 1987	20.1	20.1	21.0	20.8	21.2	21.7	21.0
1986-87							
1985-87							
Protein Content - 1987	41.0	41.0	40.6	40.9	41.3	39.5	39.7
1986-87							
1985-87							
Seed size	15.0	12.0	17.2	14.0	15.6	13.9	14.9
Maturity index	+2	-1	+6	+4	+2	+3	+4
Height	28	29	28	32	31	34	33
Seed quality	1.7	1.8	1.8	1.9	2.0	2.0	1.9
M. incognita	1.8	5.0	5.0	1.0	4.7	1.0	4.0
M. arenaria	5.0	5.0	5.0	5.0	4.5	5.0	5.0
SCN race 3	R	S	S	R	S	R	R
SCN race 4	S	S	S	S	S	R	R
Stem Canker	0	4.2	1.2	3.5	3.0	4.0	1.0
Flower color	W	P	P	P	P	W	W
Pubescence color	G	T	G	T	T	T	T
Pod wall color	T	T	T	T	T	T	T

Table 16 - Seed yield, in bushels per acre, for the strains in Uniform V, 1987

	Essex	Forrest	N83-375	R83-310	S82-1318	D82-2896	Md83-5078
			EAST COAST				
Queenstown, MD	35.9	34.2	38.3	34.7	38.8	37.1	36.3
Georgetown, DE	24.8	26.6	23.5	28.9	26.0	23.8	26.3
Warsaw, VA	34.2	32.7	30.7	31.7	30.2	31.1	35.3
Holland, VA	42.5	45.9	47.8	49.0	48.5	44.6	44.9
Plymouth, NC	57.5	57.6	62.5	54.4	54.0	46.9-	53.5
Mean	39.0	39.4	40.6	39.7	39.5	36.7	39.3
			UPPER AND CENTRAL SOUTH				
Orange, VA	41.4	38.0	41.7	42.3	44.1	32.9-	41.3
Knoxville, TN	29.3	27.9	24.0	29.2	34.1	27.9	27.3
Clemson, SC	20.7	21.6	20.4	19.6	20.2	19.1	17.5
Calhoun, GA	21.7	27.9	31.1+	30.1	8.0-	18.3	17.4
*Belle Mina, AL	17.8	16.0	13.5	13.9	20.5	20.0	13.7
Princeton, KY	55.5	41.1-	40.9-	50.3-	46.6-	48.5-	50.4-
Tiptonville, TN	30.7	33.9+	33.2	33.9+	36.4+	40.7+	31.0
Martin, TN	29.1	24.2	21.0-	27.7	23.5-	24.9	24.4
Jackson, TN	25.6	35.2+	30.8	37.9+	23.3	37.5+	26.4
Mean	31.8	32.0	30.4	33.9	29.5	31.2	29.5
			DELTA				
Portageville, MO (A)	43.2	39.3	33.4	36.2	45.2	44.3	38.3-
Portageville, MO (B)	32.1	32.5	30.7	32.2	35.7	32.4	36.1
Keiser, AR	58.6	53.9	61.8	56.5	51.4	59.7	68.4+
Jonesboro, AR	20.3	16.8	14.0	18.4	21.3	19.5	16.1
*Pine Tree, AR	12.8	20.9	19.4	21.5	28.2	24.4	24.7
Stoneville, MS (A)	39.0	45.9+	44.2	44.2	35.1	43.1	42.4
Stoneville, MS (B)	21.5	30.4	35.9+	34.6+	23.6	25.8	30.4
St. Joseph, LA	35.0	34.5	37.1	35.8	27.5-	30.8	29.3
Mean	36.0	36.2	36.7	36.8	34.3	36.5	37.1
			WEST				
Pittsburg, KS	48.1	41.9	42.3	41.9	40.0	43.2	44.5
Mound Valley, KS	34.8	26.8	30.0	31.3	34.5	36.8	36.5
Stuttgart, AR	51.5	50.8	54.2	54.3	50.2	50.6	49.6
Bossier City, LA	31.0	47.7+	50.8+	48.6+	35.6	38.1	39.8
Bixby, OK	42.7	51.8+	55.7+	55.5+	39.2	47.7+	55.5+
Lubbock, TX	58.6	54.4-	55.5	53.9	59.4	50.4-	55.8
Beaumont, TX	16.1	12.2	20.3	17.0	19.9	29.1+	20.2
Mean	40.4	40.8	44.1	43.2	39.8	42.3	43.1

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

Table 16 - (continued)

	N84-507	R83-1342	R84-150	S82-3641	S83-1188	L.S.D. (.05)	C.V. (%)
			EAST COAST				
Queenstown, MD	42.2	36.9	34.4	35.7	39.9	N.S.	10
Georgetown, DE	31.6	28.4	29.0	27.3	25.0	7.9	17
Warsaw, VA	33.1	37.2	30.1	34.6	28.5	8.8	16
Holland, VA	52.2+	50.7	47.2	45.5	49.2	8.4	10
Plymouth, NC	61.3	59.1	51.6	58.1	56.3	7.2	8
Mean	44.1	42.5	38.5	40.2	39.8		
			UPPER AND CENTRAL SOUTH				
Orange, VA	41.4	38.8	40.1	35.3-	39.8	3.9	6
Knoxville, TN	28.9	23.9	28.7	33.1	34.3	6.5	13
Clemson, SC	25.9	23.7	21.4	21.8	21.6	N.S.	15
Calhoun, GA	27.3	23.8	22.9	11.7-	20.6	6.5	18
Belle Mina, AL	21.3	16.0	18.9	16.1	17.1	4.5	16
Princeton, KY	55.1	45.9-	48.3-	34.6-	40.4-	4.5	9
Tiptonville, TN	34.8+	34.9+	34.7+	37.1+	36.5+	3.1	5
Martin, TN	28.2	26.8	20.3-	22.4-	26.3	5.2	12
Jackson, TN	37.4+	34.4+	38.5+	32.1+	29.7	5.6	10
Mean	34.9	31.5	31.9	28.5	31.2		
			DELTA				
Portageville, MO (A)	39.6	37.8-	39.8	42.9	39.5	4.9	7
Portageville, MO (B)	34.1	34.6	34.6	35.5	30.4	5.2	9
Keiser, AR	67.0+	65.2	57.1	61.5	54.7	8.2	8
Jonesboro, AR	20.1	20.3	16.4	15.9	22.1	4.8	15
Pine Tree, AR	12.8	27.0	18.0	24.7	16.9	N.S.	28
Stoneville, MS (A)	49.8+	49.7+	48.1+	43.0	39.7	5.9	8
Stoneville, MS (B)	28.6	41.8+	33.5+	27.9	24.8	8.9	18
St. Joseph, LA	41.2	36.7	31.5	33.9	33.3	6.5	11
Mean	40.1	41.2	37.2	37.2	35.3		
			WEST				
Pittsburg, KS	48.1	43.2	45.8	39.0-	30.0-	6.3	9
Mound Valley, KS	36.1	28.7	27.4	34.5	28.7	N.S.	20
Stuttgart, AR	55.2	56.6+	52.5	57.1+	48.5	4.1	5
Bossier City, LA	41.4	41.6	38.9	38.1	42.9	14.8	21
Bixby, OK	56.5+	57.2+	51.3+	47.0+	52.0+	4.3	5
Lubbock, TX	58.6	55.1	56.3	39.7-	47.8-	8.0	9
Beaumont, TX	29.2+	15.0	17.5	17.2	18.1	5.2	16
Mean	46.4	42.5	41.4	38.9	38.3		

Table 17 - Chemical composition and seed size for the strains in Uniform Group V, 1987

Location	Essex	Forrest	N83-375	R83-310	S82-1318	D82-2896
			OIL PERCENTAGE			
Queenstown, MD	20.4	18.6	19.1	17.5	19.8	18.1
Plymouth, NC	20.3	21.2	21.5	19.5	21.7	19.4
Orange, VA	19.9	19.3	19.5	19.4	20.7	18.7
Jackson, TN	20.5	21.0	20.2	20.9	21.2	20.2
Portageville, MO (A)	19.3	20.0	19.5	19.7	19.9	19.2
Keiser, AR	21.2	21.8	21.4	20.0	20.9	20.1
Stoneville, MS (A)	20.2	20.5	21.2	20.6	21.5	20.3
Stuttgart, AR	20.5	20.9	21.2	20.3	21.4	20.1
Mean	20.3	20.4	20.5	19.7	20.9	19.5
			PROTEIN PERCENTAGE			
Queenstown, MD	40.9	36.7	40.5	40.9	39.6	39.6
Plymouth, NC	42.8	41.3	43.3	43.3	41.8	42.4
Orange, VA	42.4	38.5	42.2	40.6	39.5	41.5
Jackson, TN	42.6	40.3	42.0	41.5	42.4	41.5
Portageville, MO (A)	43.8	39.7	42.4	41.2	42.4	40.2
Keiser, AR	41.5	38.0	41.1	40.4	42.0	40.6
Stoneville, MS (A)	42.7	41.1	43.3	41.2	41.6	40.7
Stuttgart, AR	42.8	40.8	41.5	41.6	41.8	41.3
Mean	42.4	39.6	42.0	41.3	41.4	41.0
			GRAMS PER 100 SEED			
Queenstown, MD	14.8	13.9	17.5	15.1	13.7	17.0
Warsaw, VA	16.0	15.0	20.1	17.0	15.4	17.5
Plymouth, NC	14.8	13.8	18.9	15.6	14.6	16.4
Calhoun, GA	14.7	14.3	19.0	18.2	15.1	14.2
Jackson, TN	12.6	13.3	15.2	13.9	13.4	14.2
Portageville, MO (A)	10.6	11.2	13.5	11.0	10.3	12.9
Keiser, AR	11.6	12.0	13.2	11.0	11.1	14.1
Stoneville, MS (A)	11.4	11.9	14.2	12.8	11.1	13.2
Stuttgart, AR	13.0	12.7	15.6	13.9	12.6	15.9
Mean	13.3	13.1	16.4	14.3	13.0	15.0

Table 17 - (continued)

Location	Md83-5078	N84-507	R83-1342	R84-150	S82-3641	S83-1188
			OIL PERCENTAGE			
Queenstown, MD	17.4	18.3	18.7	17.1	17.9	19.3
Plymouth, NC	19.8	22.0	19.8	20.2	20.1	21.6
Orange, VA	20.0	20.8	19.6	19.5	18.7	19.1
Jackson, TN	20.2	20.9	20.2	21.1	21.0	20.9
Portageville, MO (A)	19.3	20.9	19.9	20.1	20.5	20.1
Keiser, AR	20.7	21.6	20.4	21.5	20.7	21.0
Stoneville, MS (A)	19.2	21.6	20.3	20.8	20.2	20.8
Stuttgart, AR	20.1	21.0	20.8	21.2	21.7	21.0
Mean	19.6	20.9	20.0	20.2	20.1	20.5
			PROTEIN PERCENTAGE			
Queenstown, MD	39.4	40.7	39.5	41.0	36.9	36.5
Plymouth, NC	42.8	39.9	42.8	43.0	41.2	41.0
Orange, VA	38.9	38.6	39.4	39.8	38.7	38.0
Jackson, TN	41.8	41.7	41.5	41.3	40.5	40.7
Portageville, MO (A)	41.5	40.0	40.3	41.9	38.2	39.3
Keiser, AR	40.0	40.5	40.9	40.4	40.8	41.2
Stoneville, MS (A)	41.8	41.0	41.9	41.2	41.8	40.4
Stuttgart, AR	41.5	42.0	41.1	41.4	38.6	40.7
Mean	41.0	40.6	40.9	41.3	39.5	39.7
			GRAMS PER 100 SEED			
Queenstown, MD	13.9	17.3	15.4	17.4	14.7	15.7
Warsaw, VA	13.5	19.8	15.5	18.5	15.9	17.1
Plymouth, NC	12.4	18.0	16.1	18.2	15.1	16.8
Calhoun, GA	12.7	17.6	15.6	16.4	14.6	16.6
Jackson, TN	13.4	16.4	14.4	14.6	14.0	15.4
Portageville, MO (A)	10.1	14.8	11.7	12.5	12.2	12.1
Keiser, AR	10.5	15.4	11.4	14.5	12.0	13.5
Stoneville, MS (A)	10.0	16.7	12.2	13.6	12.5	13.0
Stuttgart, AR	11.6	18.8	14.1	15.1	14.3	14.3
Mean	12.0	17.2	14.0	15.6	13.9	14.9

Table 18 - Relative maturity, days earlier (-) or later (+) than Essex, for the strains in Uniform Group V, 1987

Location	Date planted	Essex matured	Forrest	N83-375	R83-310	S82-1318	D82-2896
			EAST COAST				
Queenstown, MD	6-1	10-27	0	+4	+5	0	+2
Georgetown, DE	5-22	9-10	F	F	F	F	F
Warsaw, VA	6-8	10-26	+1	+3	0	-1	+1
Holland, VA	5-26	10-17	+1	+5	+1	+1	-4
Plymouth, NC	5-18	10-14	0	+2	+2	-4	+2
Mean	5-27	10-13	+1	+4	+2	-1	0
			UPPER AND CENTRAL SOUTH				
Orange, VA	6-2	10-20	+3	+4	0	0	-3
Knoxville, TN	5-1	9-22	+2	+4	+3	+5	+3
Clemson, SC	5-12	9-28	+2	+7	+4	+1	-7
Calhoun, GA	5-12	10-21	-2	-3	-2	-14	-1
Belle Mina, AL	5-14	9-3	0	0	0	0	0
Princeton, KY	6-3	F	F	F	F	F	F
Martin, TN	5-22	9-21	+13	+15	+15	+9	+8
Jackson, TN	5-13	9-25	+7	+8	+8	0	+7
Mean	5-17	9-25	+4	+6	+4	+1	+1
			DELTA				
Portageville, MO (A)	5-9	9-29	+6	+5	+6	0	+6
Portageville, MO (B)	5-29	10-2	+5	+3	+7	+7	0
Keiser, AR	5-7	10-1	0	+4	+6	-2	-2
Jonesboro, AR	6-5	10-2	+4	+5	+4	+3	+2
Pine Tree, AR	6-17	10-3	+5	+5	+7	+3	+2
Stoneville, MS (A)	5-21	9-29	+3	+4	+3	0	+2
Stoneville, MS (B)	5-11	9-25	+7	+6	+6	+3	+5
St. Joseph, LA	6-6	9-25	+3	+7	+7	+1	+2
Mean	5-24	9-30	+4	+5	+6	+2	+2
			WEST				
Mound Valley, KS	6-9	10-12	+3	+4	+4	+6	0
Stuttgart, AR	5-22	9-30	+3	+7	+3	-2	+1
Bossier City, LA	5-19	9-25	-1	+2	-3	-2	+8
Lubbock, TX	5-15	10-15	0	-2	-1	-4	-2
Beaumont, TX	5-22	9-19	-2	+7	+2	+3	+7
Mean	5-26	10-2	+1	+4	+1	+1	+3

Table 18 - (continued

Location	Md83-5078	N84-507	R83-1342	R84-150	S82-3641	S83-1188
			EAST COAST			
Queenstown, MD	+4	+5	+5	+5	+5	+2
Georgetown, DE	F	F	F	F	F	F
Warsaw, VA	-3	+2	+2	+1	+1	+1
Holland, VA	-3	+5	+1	-3	+1	+2
Plymouth, NC	-2	+6	+4	+2	0	+2
Mean	-1	+5	+3	+1	+2	+2
			UPPER AND CENTRAL SOUTH			
Orange, VA	-3	+1	0	-1	+2	+2
Knoxville, TN	-1	-	+3	0	-	-
Clemson, SC	-5	+5	+4	+4	-2	-1
Calhoun, GA	-2	+2	-2	-1	-5	-2
Belle Mina, AL	0	+11	+9	0	+4	+9
Princeton, KY	F	F	F	F	F	F
Martin, TN	+7	+14	+13	+9	+11	+18
Jackson, TN	0	+15	+8	+7	+11	+11
Mean	-1	+7	+5	+3	+3	+5
			DELTA			
Portageville, MO (A)	+4	+13	+12	+5	+8	+12
Portageville, MO (B)	+4	+9	+8	+2	+4	+7
Keiser, AR	-3	+6	+5	-2	-1	+2
Jonesboro, AR	0	+5	+5	+3	+3	+8
Pine Tree, AR	0	+7	+6	+3	+3	+9
Stoneville, MS (A)	0	+7	+3	+2	+3	+3
Stoneville, MS (B)	+1	+7	+7	+4	+4	+6
St. Joseph, LA	0	+5	+4	0	+4	+8
Mean	+1	+7	+6	+2	+4	+7
			WEST			
Mound Valley, KS	+1	+5	+3	+3	0	+4
Stuttgart, AR	-2	+13	+7	+1	+3	+6
Bossier City, LA	-4	+7	-3	-4	+1	+3
Lubbock, TX	-3	-2	-1	-1	+3	0
Beaumont, TX	+1	+8	-2	0	+1	+5
Mean	-1	+6	+1	0	+2	+3

Table 19 - Plant height for the strains in Uniform Group V, 1987

Location	Essex	Forrest	N83-375	R83-310	S82-1318	D82-2896
			EAST COAST			
Queenstown, MD	26	33	30	30	29	28
Georgetown, DE	23	27	21	25	24	26
Warsaw, VA	25	32	27	28	29	28
Holland, VA	27	33	36	34	31	32
Plymouth, NC	31	37	36	35	33	33
Mean	26	32	30	30	29	29
			UPPER AND CENTRAL SOUTH			
Orange, VA	28	35	32	34	30	30
Knoxville, TN	30	37	34	32	36	29
Clemson, SC	24	31	27	28	25	29
Calhoun, GA	26	36	31	32	24	30
Belle Mina, AL	28	34	36	35	31	29
Princeton, KY	32	34	38	37	35	35
Tiptonville, TN	25	33	31	33	29	31
Jackson, TN	34	37	36	36	36	35
Mean	28	35	33	33	31	31
			DELTA			
Portageville, MO (A)	33	34	35	40	33	33
Portageville, MO (B)	28	33	35	32	31	30
Keiser, AR	27	31	35	33	35	26
Jonesboro, AR	32	44	38	38	36	37
Pine Tree, AR	18	20	21	20	17	16
Stoneville, MS (A)	25	31	30	27	25	27
Stoneville, MS (B)	19	22	24	21	18	21
St. Joseph, LA	28	34	30	28	29	26
Mean	26	31	31	30	28	27
			WEST			
Ottawa, KS	25	29	31	30	31	31
Pittsburg, KS	27	34	32	33	30	31
Mound Valley, KS	25	29	31	30	31	31
Stuttgart, AR	29	42	37	39	35	36
Bossier City, LA	15	25	23	22	22	23
Bixby, OK	29	34	28	30	29	28
Lubbock, TX	26	29	28	28	27	26
Beaumont, TX	19	24	25	23	21	23
Mean	24	31	29	29	28	26

Table 19 - (continued)

Location	Md83-5078	N84-507	R83-1342	R84-150	S82-3641	S83-1188
			EAST COAST			
Queenstown, MD	32	26	31	32	35	32
Georgetown, DE	23	24	21	29	22	28
Warsaw, VA	26	25	33	30	34	31
Holland, VA	31	28	33	30	39	32
Plymouth, NC	35	33	36	35	41	35
Mean	29	27	31	31	34	32
			UPPER AND CENTRAL SOUTH			
Orange, VA	31	29	31	33	36	34
Knoxville, TN	31	28	33	29	42	36
Clemson, SC	30	26	32	31	37	33
Calhoun, GA	26	29	30	34	27	32
Belle Mina, AL	31	30	36	30	41	39
Princeton, KY	36	35	37	38	41	39
Tiptonville, TN	30	27	31	30	37	34
Jackson, TN	35	34	35	38	40	37
Mean	31	30	33	33	38	36
			DELTA			
Portageville, MO (A)	40	36	37	38	46	46
Portageville, MO (B)	33	31	36	34	39	30
Keiser, AR	30	24	29	30	38	35
Jonesboro, AR	36	31	40	42	41	40
Pine Tree, AR	16	14	21	17	22	19
Stoneville, MS (A)	23	27	28	27	29	28
Stoneville, MS (B)	21	19	25	20	23	22
St. Joseph, LA	25	26	30	29	32	31
Mean	28	26	31	30	30	31
			WEST			
Ottawa, KS	29	28	30	28	38	31
Pittsburg, KS	33	33	34	35	37	32
Mound Valley, KS	29	28	30	28	38	31
Stuttgart, AR	36	31	39	36	45	42
Bossier City, LA	23	19	23	21	29	24
Bixby, OK	30	30	34	30	33	36
Lubbock, TX	28	28	30	27	32	30
Beaumont, TX	20	23	25	23	23	22
Mean	29	28	31	29	34	31

Table 20 - Lodging scores for the strains in Uniform Group V, 1987

Location	Essex	Forrest	N83-375	R83-310	S82-1318	D82-2896
			EAST COAST			
Queenstown, MD	2.0	2.3	2.0	2.2	2.0	2.2
Warsaw, VA	1.0	1.0	1.0	1.0	1.0	1.0
Holland, VA	1.3	2.3	1.7	2.3	1.0	2.3
Plymouth, NC	2.3	2.0	2.0	3.0	2.0	2.3
			UPPER AND CENTRAL SOUTH			
Orange, VA	2.0	3.3	1.3	3.0	1.7	3.0
Knoxville, TN	1.2	1.7	1.2	1.3	1.3	1.2
Calhoun, GA	1.0	1.0	1.3	1.0	1.0	1.0
Belle Mina, AL	2.0	2.3	2.3	2.0	3.3	2.3
Princeton, KY	4.0	4.7	2.3	4.0	3.7	4.0
Tiptonville, TN	1.0	2.3	1.3	2.7	1.7	2.0
Martin, TN	1.0	2.0	1.0	2.0	1.0	1.0
Jackson, TN	2.0	1.0	1.0	3.0	3.0	2.0
			DELTA			
Portageville, MO (A)	2.0	2.0	1.0	2.5	2.0	2.0
Portageville, MO (B)	1.5	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	1.0	1.0	1.0	1.0	1.0
Pine Tree, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	1.3	2.1	1.5	1.6	1.5	1.6
			WEST			
Pittsburg, KS	1.7	2.3	1.7	2.0	2.7	2.0
Mound Valley, KS	1.7	1.3	1.3	2.0	1.3	2.7
Stuttgart, AR	2.3	3.6	1.1	3.7	1.3	4.1
Bossier City, LA	1.0	1.0	1.3	1.0	1.0	1.0
Bixby, OK	2.0	2.0	1.0	1.0	3.0	2.0
Lubbock, TX	1.5	2.0	1.2	2.0	2.0	2.0
Beaumont, TX	1.0	1.0	1.0	1.0	1.0	1.0

Table 20 - (continued)

Location	Md83-5078	N84-507	R83-1342	R84-150	S82-3641	S83-1188
			EAST COAST			
Queenstown, MD	2.0	2.0	2.5	2.2	2.3	2.0
Warsaw, VA	1.0	1.0	1.0	1.0	1.0	1.0
Holland, VA	1.7	2.0	2.0	1.7	3.0	1.3
Plymouth, NC	2.3	2.3	3.0	2.0	2.7	2.0
			UPPER AND CENTRAL SOUTH			
Orange, VA	1.0	1.7	4.0	3.0	3.3	1.3
Knoxville, TN	1.3	1.0	1.5	1.3	2.3	1.3
Calhoun, GA	1.0	1.0	1.0	1.3	1.0	1.0
Belle Mina, AL	2.3	2.0	2.7	2.3	3.3	2.3
Princeton, KY	3.7	3.7	4.0	3.3	4.7	3.0
Tiptonville, TN	2.0	2.3	2.3	2.0	3.0	2.0
Martin, TN	1.0	1.0	1.0	1.0	2.0	2.0
Jackson, TN	1.0	1.0	2.0	2.0	3.0	2.0
			DELTA			
Portageville, MO (A)	1.5	1.0	2.0	2.0	2.5	2.0
Portageville, MO (B)	1.0	1.0	1.5	1.0	2.0	1.0
Keiser, AR	1.0	1.0	1.0	1.0	2.3	1.0
Jonesboro, AR	1.0	1.0	1.0	1.0	1.0	1.0
Pine Tree, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.3	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	1.2	1.1	2.1	1.6	2.2	1.4
			WEST			
Pittsburg, KS	2.0	2.0	2.3	2.3	3.3	2.0
Mound Valley, KS	1.0	1.0	1.7	1.3	2.3	1.7
Stuttgart, AR	1.4	1.1	4.0	2.4	3.7	1.3
Bossier City, LA	1.0	1.0	1.0	1.0	1.0	1.0
Bixby, OK	1.0	1.0	1.0	1.0	2.0	2.0
Lubbock, TX	2.0	1.5	2.0	1.7	2.0	1.2
Beaumont, TX	1.0	1.0	1.0	1.0	1.0	1.0

Table 21 - Seed quality scores for the strains in Uniform Group V, 1987

Location	Essex	Forrest	N83-375	R83-310	S82-1318	D82-2896
			EAST COAST			
Queenstown, MD	1.0	1.0	1.0	1.0	1.0	1.0
Georgetown, DE	1.0	1.0	1.0	1.0	1.0	1.0
Warsaw, VA	1.5	1.0	1.0	1.0	1.3	1.0
Holland, VA	1.0	1.0	1.0	1.0	1.0	1.0
Plymouth, NC	2.0	1.5	1.5	1.5	1.5	1.5
			UPPER AND CENTRAL SOUTH			
Orange, VA	1.0	1.5	1.0	1.0	1.0	1.0
Knoxville, TN	1.2	1.8	1.2	1.3	1.2	1.3
Calhoun, GA	3.0	4.0	3.0	3.0	3.3	3.3
Princeton, KY	1.0	2.0	2.0	3.0	1.0	1.0
Martin, TN	2.0	2.0	3.0	2.0	2.0	2.5
Jackson, TN	2.0	2.0	2.0	1.0	2.0	2.0
			DELTA			
Portageville, MO (A)	1.5	2.0	2.0	2.0	1.5	1.5
Portageville, MO (B)	1.5	1.5	1.5	1.5	1.5	1.5
Keiser, AR	2.0	2.5	3.0	3.0	2.5	1.5
Jonesboro, AR	2.0	2.0	2.0	2.0	2.0	2.0
Pine Tree, AR	2.3	2.7	2.3	2.0	2.0	1.7
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	3.0	2.0	2.0	2.0	2.0
St. Joseph, LA	1.8	1.8	1.7	1.7	1.8	1.7
			WEST			
Pittsburg, KS	2.0	1.0	3.0	2.0	2.0	2.0
Mound Valley, KS	3.0	1.0	2.0	2.0	2.0	2.0
Stuttgart, AR	1.8	1.5	1.7	1.5	1.5	1.8
Lubbock, TX	1.0	1.5	1.7	1.0	1.0	1.5
Beaumont, TX	3.0	4.0	2.7	2.2	2.7	2.5

Table 21 - (continued)

Location	Md83-5078	N84-507	R83-1342	R84-150	S82-3641	S83-1188
			EAST COAST			
Queenstown, MD	1.0	1.0	1.0	1.0	1.0	1.0
Georgetown, DE	1.0	1.0	1.0	1.0	1.0	1.0
Warsaw, VA	1.0	1.2	1.5	1.5	1.2	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
			UPPER AND CENTRAL SOUTH			
Orange, VA	1.0	1.0	1.0	1.0	1.0	1.0
Knoxville, TN	1.3	1.5	1.7	1.3	1.5	2.0
Calhoun, GA	3.7	3.7	3.7	3.3	3.7	3.7
Princeton, KY	3.0	1.0	3.0	4.0	3.0	3.0
Martin, TN	2.5	1.5	2.5	2.5	2.5	2.5
Jackson, TN	2.0	2.0	1.0	2.0	3.0	2.0
			DELTA			
Portageville, MO (A)	1.5	2.0	2.0	1.5	1.5	2.0
Portageville, MO (B)	1.5	1.5	2.0	1.5	1.5	2.0
Keiser, AR	2.0	3.0	2.5	2.0	2.5	2.5
Jonesboro, AR	2.3	2.0	2.3	2.3	3.0	2.3
Pine Tree, AR	2.0	2.0	2.7	3.0	2.7	3.0
Stoneville, MS (A)	2.0	2.3	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.7	2.3
St. Joseph, LA	1.8	1.7	1.5	2.3	1.8	1.8
			WEST			
Pittsburg, KS	3.0	2.0	2.0	2.0	2.0	2.0
Mound Valley, KS	1.0	2.0	1.0	2.0	2.0	1.0
Stuttgart, AR	1.5	2.0	1.5	2.0	1.5	1.8
Lubbock, TX	1.2	1.7	1.0	1.5	1.5	1.5
Beaumont, TX	2.7	2.3	3.2	3.5	3.5	2.5

PRELIMINARY GROUP V

1987

Preliminary Group V nurseries which included Forrest and Pershing along with 34 experimental strains were grown at eight locations. The parentage for each of the strains is reported in Table 22. A general summary of performance is reported in Table 23. Data from individual locations are reported in Tables 24-26.

Differences among strains for seed yield were significant at the 5% level of confidence at each of the locations. The mean seed yield for Forrest as an average of the eight locations was 41.4 bushels per acre. There were five strains that had a mean seed yield slightly above that for Forrest, but none had a mean seed yield which was greater than Forrest at the 5% level of confidence. There were nine strains that had mean seed yields significantly lower than that for Forrest. All strains were rated for reaction to the two species of root-knot nematode, M. incognita and M. arenaria, in the greenhouse at the University of Georgia. Twenty strains were considered resistant to M. incognita with a rating of 2 being satisfactory field resistant. A rating of three would be considered satisfactory field resistant to M. arenaria. Only Forrest and two breeding lines had resistance to both M. incognita and M. arenaria. All strains were rated for reaction to SCN races 3 and 4 in the greenhouse at Jackson, Tennessee. Twenty-three strains were rated resistant to SCN race 3. Sixteen strains were resistant to both races 3 and 4. Two strains were resistant to races 3, 4, and 5, and two strains were considered resistant to races 3 and 5. An observation plot was planted at the Verona, Mississippi location to observe reaction to stem canker. A four-row plot was planted with one of the rows being the highly susceptible strain, J77-339. Only three strains were considered highly susceptible to stem canker, but the disease was somewhat late in development.

Two strains, N85-578 and R85-164, have been recommended for being advanced for Uniform Group V in 1988.

Table 22 - Parentage of the strains grown in Preliminary Group V, 1987

	Variety or strain	Parentage	Generation composited
1.	Forrest	Dyer X Bragg	F_5
2.	Pershing	D67-3297 X Essex	F_4
3.	D82-2397A	Bedford X D72-8927	F_7
4.	D82-2559A	Bedford X D72-8927	F_7
5.	D84-5151	Forrest X D79-5353	F_5
6.	D84-5261	Forrest X D79-5304	F_5
7.	D84-5387	Forrest X sel (Peking X Centennial)	F_5
8.	D85-904	Bedford X sel (Forrest X D75-10169)	F_8
9.	K1155	Essex X K1061	F_5
10.	K1156	V76-482 X Essex	F_5
11.	K1157	Essex X K1061	F_5
12.	K1158	Essex X K1061	F_5
13.	N85-67	N77-179 X Epps	F_6
14.	N85-214	N80-50075 X N80-53024	F_3
15.	N85-471	N77-179 X Johnston	F_6
16.	N85-578	N77-179 X Johnston	F_6
17.	N85-618	N79-606 X Forrest	F_6
18.	Md84-5817	D77-18 X Essex	F_5
19.	Ok81-7316	Forrest X V68-2331	F_6
20.	R85-164	Davis X Bedford	F_5
21.	R85-336	(R74-33 X Centennial) X (R74-1438 X Braxton)	F_5
22.	R85-3280	Narow X R75-579	F_5
23.	R85-3309	Narow X R75-579	F_5
24.	R85-3526	Bedford X (Jeff X DPL 345)	F_5
25.	S84-1407	N77-432 X Bedford	F_5
26.	S85-1706	Bedford X Essex	F_5
27.	S85-1708	Bedford X Essex	F_5
28.	S85-11485	L78-1734 X L77-1233	F_6
29.	Tn85-55	Tn77-46 X Fayette	
30.	Tn85-102	Jeff X Nathan	
31.	Tn85-121	D72-8927 X Epps	
32.	Tn85-157	D72-8927 X Tn80-83	
33.	V84-1049	Stafford X Epps	F_5
34.	V84-1726	Essex X R75-579	F_5
35.	V84-1802	Epps X L77-994	F_5
36.	V84-1805	Epps X L77-994	F_5

Table 23 - General summary of performance for the strains grown in Preliminary Group V, 1987

Strain	Seed yield	Mat. index	Ht.	Percent Oil	Percent Protein	M. incognita	M. arenaria	SCN race 3	SCN race 4	Stem canker
Forrest	41.4	10-13	33	20.8	41.0	1.0	2.8	R	S	2.0
Pershing	39.0	-7	26	19.6	42.5	3.3	5.0	S	S[1]	2.0
D82-2397A	36.8-	-2	39	19.2-	40.6	3.6	4.5	R	R[1]	2.0
D82-2559A	34.8-	-2	30	18.6-	42.3	1.3	5.0	R	R[1]	2.0
D84-5151	38.3	-2	38	20.4	39.9	1.0	5.0	R	S[1]	2.0
D84-5261	39.2	-1	39	19.3-	41.2	1.0	5.0	R	S[1]	2.0
D84-5387	37.8	-1	35	19.7	41.1	1.0	4.0	R	R	2.0
D85-904	35.4-	0	37	20.2	40.5	1.0	4.0	R	R	1.0
K1155	38.6	-4	39	21.9	39.8	3.0	5.0	S	S	2.0
K1156	36.6-	-7	24	20.4	42.3	3.0	5.0	S	S	2.0
K1157	40.3	-3	25	19.9	42.3	2.3	5.0	S	S	2.0
K1158	36.8-	-3	26	20.7	41.5	3.3	5.0	S	S	3.0
N85-67	42.7	-2	34	20.6	41.4	3.0	5.0	R	S	2.0
N85-214	38.4	+3	37	20.2	41.2	1.0	5.0	S	S	2.0
N85-471	39.7	0	27	19.9	41.7	2.0	5.0	S	S	1.0
N85-578	45.3	-4	26	20.8	39.7	3.7	5.0	S	S	2.0
N85-618	39.3	-5	24	20.0	41.4	1.0	5.0	S	S	2.0
Md84-5817	39.4	-3	29	18.7-	43.9+	1.0	5.0	S	S	1.0
Ok81-7316	36.6-	-6	26	21.3	40.5	3.0	2.5	S	S	1.0
R85-164	41.4	+1	38	19.5	40.6	1.7	5.0	R	R	1.0
R85-336	33.5-	+6	48	20.1	42.9+	4.0	5.0	S	S	1.0
R85-3280	42.7	0	30	19.6	42.3	1.0	5.0	R	R	2.0
R85-3309	44.5	-1	31	19.8	41.0	4.7	5.0	R	S	1.0
R85-3526	41.7	+3	33	20.5	42.0	1.7	5.0	R	R	2.0
S84-1407	38.8	-1	34	20.0	41.8	1.0	3.0	R	S	2.0
S85-1706	40.8	-3	34	19.4-	40.6	1.0	5.0	R	R	3.0
S85-1708	37.5	-3	32	19.0-	41.7	1.0	5.0	R	R	2.0
S85-11485	32.9-	0	43	20.0	41.6	2.3	5.0	R	R	2.0
Tn85-55	37.8	-4	35	21.9	39.6	1.0	5.0	R	R	1.0
Tn85-102	37.5	+1	40	20.5	40.0	1.3	5.0	R	R	2.0
Tn85-121	36.1-	-2	36	20.1	40.2	3.3	5.0	R	S	2.0
Tn85-157	40.5	-2	36	19.8	40.7	3.3	5.0	R	R	2.0
V84-1049	40.4	+1	34	20.3	41.5	3.3	5.0	R	R	3.0
V84-1726	39.1	-1	28	20.7	42.0	1.0	3.0	R	S	2.0
V84-1802	38.6	-1	33	20.5	42.7+	2.7	5.0	R	R	2.0
V84-1805	37.6	-5	32	20.3	42.4	2.3	5.0	R	R	4.0
L.S.D.(.05)	4.5			1.3	1.6					
C.V.	12%			5%	3%					

[1]Resistant to SCN race 5.
+ or - designations refer to differences from Forrest.

Table 24 - Seed yield in bushels per acre, for the strains grown in Preliminary Group V, 1987

Strain	Warsaw, VA	Ply-mouth, NC	Portage-ville, MO (A)	Tipton-ville, TN	Keiser, AR	Stone-ville, MS (A)	Stone-ville, MS (B)	Mound Valley, KS
Forrest	32.4	53.7	36.8	38.5	56.0	47.3	33.0	33.4
Pershing	31.3	51.0	41.2	36.6	50.0	43.9	22.2-	35.8
D82-2397A	26.9	46.8-	33.4	38.7	51.3	42.3	28.8	26.1-
D82-2559A	24.7	44.4-	33.2	36.4	50.9	39.3-	21.5-	28.1-
D84-5151	27.7	47.7	35.8	43.0	49.4	43.4	29.7	29.5
D84-5261	25.5	54.2	37.1	39.8	54.2	44.9	29.4	28.1-
D84-5387	31.2	47.1	33.4	35.4	51.2	44.5	27.8	31.9
D85-904	28.6	52.5	33.3	34.9	47.8	39.8-	19.4-	26.6-
K1155	28.1	55.5	39.3	36.9	52.9	44.9	24.5	26.6-
K1156	26.0	56.1	40.8	37.1	45.4-	36.5-	19.2-	31.9
K1157	36.2	54.1	35.1	37.7	56.6	39.8-	22.8-	40.2+
K1158	25.5	49.4	36.0	37.8	47.6	42.0	21.2-	34.8
N85-67	29.4	61.5+	45.1+	45.5	53.6	47.6	22.9-	36.3
N85-214	31.8	53.1	26.8-	35.3	50.7	42.4	40.8	26.1-
N85-471	32.5	52.4	26.2-	37.1	53.3	47.6	31.9	36.3
N85-578	33.3	63.0+	36.8	42.0	54.2	53.9+	33.9	45.5+
N85-618	28.9	52.6	36.8	35.4	53.2	41.3	24.1	42.1+
Md84-5817	28.5	61.4+	42.7	41.9	51.7	43.7	8.2-	36.8
Ok81-7316	32.8	54.3	33.2	32.7	51.2	32.4-	17.3-	39.2+
R85-164	29.1	55.8	33.2	39.1	60.3	52.7	28.3	32.9
R85-336	28.4	33.7-	30.1	35.3	48.2	31.7-	37.1	23.7-
R85-3280	29.3	51.6	33.2	46.5	59.6	52.7	34.0	34.8
R85-3309	34.5	56.2	34.5	41.3	59.0	51.9	45.7+	32.9
R85-3526	28.4	59.0	32.7	37.2	55.7	50.3	40.4	30.0
S84-1407	30.1	47.2	29.3-	40.3	50.8	44.4	31.8	36.3
S85-1706	34.6	49.8	37.9	44.4	54.5	42.7	31.8	30.5
S85-1708	29.7	44.1-	33.8	41.7	48.9	39.2-	27.8	34.8
S85-11485	22.4-	47.5	22.3-	21.7-	48.0	36.4-	29.5	35.3
Tn85-55	29.1	53.3	32.0	38.5	56.8	37.9-	21.0-	33.9
Tn85-102	27.8	47.8	34.7	34.9	53.4	39.7-	35.6	26.1-
Tn85-121	24.7	45.4-	33.8	36.3	47.1	37.3-	34.8	29.5
Tn85-157	36.7	43.5-	38.5	44.5	48.7	46.2	32.0	33.9
V84-1049	28.9	51.9	37.4	38.2	49.9	50.9	30.4	35.8
V84-1726	31.5	48.1	40.1	41.9	48.3	43.3	24.0	35.3
V84-1802	28.3	44.7-	35.8	41.1	50.0	44.4	27.4	37.3
V84-1805	27.2	51.4	34.1	34.2	44.0-	45.1	31.3	33.4
L.S.D.(.05)	8.8	6.7	7.0	10.1	9.4	6.2	9.9	5.1
C.V.	15%	6%	10%	13%	9%	7%	17%	8%

Table 25 - Oil percentages for the strains in Preliminary Group V, 1987

Strain	Plymouth, NC	Portageville, MO (A)	Keiser, AR	Stoneville, MS (A)
Forrest	21.5	20.1	21.5	19.9
Pershing	19.8	19.8	20.6	18.2
D82-2397A	19.4	19.6	19.5	18.4
D82-2559A	18.6	18.4	19.0	18.5
D84-5151	19.8	19.5	20.0	22.1
D84-5261	20.0	18.7	19.9	18.7
D84-5387	20.8	19.7	20.5	17.8
D85-904	19.7	19.4	19.3	22.5
K1155	22.6	20.6	22.2	22.1
K1156	19.6	20.5	20.1	21.5
K1157	20.1	20.6	21.1	17.6
K1158	21.4	19.9	21.0	20.6
N85-67	21.0	19.6	21.2	20.5
N85-214	20.8	19.6	21.4	18.8
N85-471	20.9	19.3	21.1	18.2
N85-578	20.2	21.2	21.9	19.7
N85-618	21.0	19.6	21.5	17.9
Md84-5817	18.9	19.5	18.9	17.5
Ok81-7316	20.9	20.6	21.5	22.2
R85-164	20.0	19.4	19.8	18.9
R85-336	19.8	20.0	19.8	20.7
R85-3280	20.3	20.5	20.4	17.2
R85-3309	20.7	19.9	20.6	18.0
R85-3526	21.3	21.2	21.2	18.1
S84-1407	21.0	19.4	21.4	18.0
S85-1706	20.0	19.4	20.8	17.5
S85-1708	19.6	19.6	20.9	15.9
S85-11485	19.7	20.6	20.2	19.4
Tn85-55	21.8	21.0	22.2	22.6
Tn85-102	20.0	20.3	21.1	20.4
Tn85-121	20.0	20.3	19.7	20.4
Tn85-157	19.8	19.7	19.5	20.3
V84-1049	20.7	19.4	20.4	20.6
V84-1726	19.9	19.9	21.6	21.5
V84-1802	20.2	19.9	20.8	21.0
V84-1805	20.2	20.5	20.6	19.9

Table 26 - Protein percentages for the strains in Preliminary Group V, 1987

Strain	Plymouth, NC	Portageville, MO (A)	Keiser, AR	Stoneville, MS (A)
Forrest	41.5	40.7	38.6	43.3
Pershing	43.1	41.3	42.7	43.0
D82-2397A	42.3	39.2	39.7	41.2
D82-2559A	42.7	42.7	42.1	41.6
D84-5151	41.0	39.1	39.8	39.8
D84-5261	41.9	40.1	40.4	42.4
D84-5387	42.4	38.8	40.3	42.8
D85-904	42.5	40.3	40.0	39.3
K1155	40.3	39.4	40.0	39.6
K1156	44.6	42.1	41.8	40.6
K1157	42.1	40.6	41.3	45.1
K1158	43.1	41.5	42.4	39.0
N85-67	43.3	41.9	41.3	38.9
N85-214	41.6	41.1	39.5	42.5
N85-471	41.5	42.5	41.2	41.4
N85-578	39.7	38.6	39.1	41.5
N85-618	41.6	40.9	40.9	42.3
Md84-5817	44.2	43.0	44.5	43.8
Ok81-7316	41.2	40.0	41.0	39.8
R85-164	41.0	40.3	39.8	41.4
R85-336	45.6	42.8	42.8	40.4
R85-3280	42.6	41.4	40.2	45.0
R85-3309	41.6	40.1	40.8	41.6
R85-3526	43.2	40.7	40.3	43.7
S84-1407	42.0	40.3	40.2	44.6
S85-1706	41.1	38.6	39.7	42.9
S85-1708	43.9	39.4	39.0	44.5
S85-11485	41.3	40.8	41.5	42.8
Tn85-55	41.0	38.4	39.5	39.5
Tn85-102	41.7	38.8	38.8	40.6
Tn85-121	41.0	40.0	39.8	39.9
Tn85-157	41.5	40.1	40.7	40.3
V84-1049	42.9	40.4	41.1	41.4
V84-1726	43.7	42.0	40.5	41.6
V84-1802	44.5	42.0	41.7	42.4
V84-1805	43.2	41.2	42.3	43.0

Table 27 - Plant height for the strains in Preliminary Group V, 1987

Strain	Warsaw, VA	Ply-mouth, NC	Portage-ville, MO (A)	Tipton-ville, TN	Keiser, AR	Stone-ville, MS (A)	Stone-ville, MS (B)	Mound Valley, KS
Forrest	34	36	42	34	27	33	20	36
Pershing	24	29	31	26	31	27	15	27
D82-2397A	36	44	46	40	44	37	26	38
D82-2559A	27	38	35	29	33	31	16	33
D84-5151	39	42	38	43	37	40	22	40
D84-5261	38	46	44	41	38	38	24	42
D84-5387	38	41	41	39	28	36	19	39
D85-904	38	41	42	41	39	34	20	42
K1155	28	44	50	46	42	46	28	29
K1156	23	29	29	24	24	24	13	27
K1157	24	31	28	26	25	24	13	26
K1158	24	31	29	30	24	27	13	29
N85-67	32	38	40	38	29	35	20	41
N85-214	31	43	42	39	37	38	23	39
N85-471	25	28	30	24	33	28	15	29
N85-578	24	28	29	25	26	26	16	30
N85-618	23	28	27	21	24	23	13	30
Md84-5817	30	36	31	29	31	28	15	35
Ok81-7316	26	33	32	25	24	22	13	30
R85-164	35	44	42	43	46	34	24	39
R85-336	36	51	63	53	49	51	37	44
R85-3280	25	36	34	35	32	28	17	34
R85-3309	30	37	36	30	31	31	20	36
R85-3526	32	41	34	36	25	34	22	40
S84-1407	30	39	41	36	32	33	21	36
S85-1706	34	39	36	36	35	34	23	38
S85-1708	32	36	37	35	26	28	22	38
S85-11485	29	45	52	50	43	48	35	43
Tn85-55	33	40	41	40	33	33	18	42
Tn85-102	36	42	45	45	45	40	26	43
Tn85-121	34	41	38	43	36	35	24	40
Tn85-157	40	42	38	40	31	35	24	38
V84-1049	34	41	38	34	33	30	18	40
V84-1726	27	32	32	31	27	27	16	31
V84-1802	30	42	39	35	31	32	20	36
V84-1805	30	40	38	33	31	32	19	36

Table 28 - Seed quality scores for the strains in Preliminary Group V, 1987

Strain	Warsaw, VA	Plymouth, NC	Portage-ville, MO (A)	Keiser, AR	Stone-ville, MS (A)	Stone-ville, MS (B)	Mound Valley, KS
Forrest	1.0	1.0	2.0	2.0	2.0	3.0	2.0
Pershing	1.5	1.5	1.5	2.0	2.0	2.0	1.0
D82-2397A	1.2	1.0	1.5	1.5	2.0	2.0	1.0
D82-2559A	1.2	1.0	1.5	1.5	2.0	2.0	1.0
D84-5151	1.0	1.0	1.5	1.5	2.0	2.0	2.0
D84-5261	1.0	1.0	1.5	1.5	2.0	2.0	1.0
D84-5387	1.2	1.0	1.5	3.0	2.0	3.0	2.0
D85-904	2.2	1.5	2.0	2.5	2.5	2.0	1.0
K1155	1.2	1.5	1.5	2.0	2.0	2.0	1.0
K1156	1.5	2.5	1.5	3.0	2.0	2.0	2.0
K1157	1.0	1.5	2.0	2.0	2.0	2.0	2.0
K1158	1.8	1.5	2.0	2.5	2.0	2.0	2.0
N85-67	1.5	1.5	2.0	3.5	2.0	2.0	2.0
N85-214	1.2	1.5	2.0	2.0	2.0	2.0	3.0
N85-471	1.0	1.5	2.0	2.5	2.0	2.0	2.0
N85-578	1.8	1.5	1.5	3.5	2.0	2.0	3.0
N85-618	1.2	1.0	1.5	2.5	2.0	2.5	2.0
Md84-5817	2.0	2.0	1.5	2.0	2.0	3.0	3.0
Ok81-7316	1.2	1.0	1.0	2.0	2.0	2.0	2.0
R85-164	1.0	1.5	2.0	2.5	2.0	2.5	1.0
R85-336	2.5	2.0	3.0	3.5	2.5	2.0	2.0
R85-3280	1.0	1.5	1.5	3.0	2.0	2.0	2.0
R85-3309	1.0	1.5	2.0	1.5	2.0	2.0	1.0
R85-3526	1.0	1.5	1.5	3.0	2.0	2.0	2.0
S84-1407	1.0	1.0	1.5	2.5	2.0	2.0	1.0
S85-1706	1.2	1.5	2.0	3.0	2.0	2.0	2.0
S85-1708	1.5	1.5	2.0	3.0	2.0	2.0	2.0
S85-11485	2.5	2.5	2.5	4.0	2.0	3.0	3.0
Tn85-55	1.3	2.0	2.5	3.5	2.0	2.5	3.0
Tn85-102	1.2	1.5	1.5	1.5	2.0	2.5	3.0
Tn85-121	1.0	1.5	1.5	1.5	2.0	2.0	1.0
Tn85-157	1.5	1.5	1.5	2.5	2.0	2.0	3.0
V84-1049	1.2	1.5	2.0	2.0	2.0	2.0	2.0
V84-1726	1.5	1.5	1.5	3.0	2.0	2.0	2.0
V84-1802	1.0	1.5	2.0	3.0	2.0	2.5	2.0
V84-1805	1.3	1.5	1.5	2.5	2.0	2.0	2.0

UNIFORM GROUP VI

1987

	Variety or strain	Parentage	Generation composited
1.	Leflore	Centennial X J74-47	F_5
2.	Tracy-M	Metribuzin tolerant sel. from Tracy (D61-618 X D60-9647)	F_{10}
3.	Sharkey (D79-6162)	Tracy X Centennial	F_5
4.	D82-3885	Tracy-M X sel (Centennial X D75-10169)	F_5
5.	N82-1198	Young X N73-1102	F_7
6.	G81-152	D74-7741 X Co237	F_6
7.	G81-234	Centennial X Bedford	F_6
8.	S82-1338	Essex X D74-7741	F_5
9.	Au82-589	N74-1572 X F76-8846	F_6
10.	G82-481	D74-7741 X F76-8846	F_6
11.	R83-980	Narow X R75-868	F_5
12.	S83-1144	Forrest X Ransom	F_6

Background of breeding 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).

N73-1102 is a selection from Tracy X Ransom which was grown in Uniform Group VI, 1977-1979.

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.

N74-1572 is a selection from Govan X Davis.

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

R75-868 is a selection from (R66-873 X Mack) X (Mack X York) which was included in Uniform Group VI in 1979.

Plantings of Uniform Group VI were made at 31 locations. A general summary of overall performance of the strains is reported in Table 29. One-, two-, and three-year seed yield data are reported by production region. Data are also presented on oil and protein percentages, general agronomic characteristics along with ratings for reaction to nematodes and diseases. Tables 30-35 present data from individual locations.

Plantings were made in the greenhouse at the University of Georgia to rate for reaction to the two root-knot nematodes, M. incognita and M. arenaria. Seven entries were considered to be resistant to M. incognita and two entries were considered resistant to both M. incognita and M. arenaria. A rating of 3 is considered to give good field resistance to M. arenaria. A field planting to rate for M. arenaria was made near the Edisto Station at Blackville, South Carolina. There was good agreement between the two plantings. Plantings were made in the greenhouse at Jackson, Tennessee to rate for reaction to the soybean cyst nematode. Eight entries were rated resistant to SCN race 3. Only Leflore was resistant to both races 3 and 4. D82-3885 has had a low rating for feeding by soybean looper in the field cage at Stoneville. It has consistently had less than 20% defoliation where the standard varieties have had over 80% defoliation. Ratings for stem canker development in the planting at Beaumont ranged form 0 - 8.5 on a rating scale of 0 - 9. Tracy-M and two strains having Tracy or Tracy-M as a parent received ratings of 0.

D79-6162 has been named Sharkey and released for production. It is anticipated that Sharkey should replace Tracy-M and Centennial. Sharkey has phytophthora rot and stem canker resistance similar to Tracy-M and SCN race 3 and common root-knot nematode resistance similar to Centennial. It has good tolerance to metribuzin. D82-3885 has been proposed for release as a variety having resistance to foliar-feeding insects. D82-3885 probably does not have the full compliment of genes for resistance to SCN race 3 similar to Forrest or Centennial.

Table 29 - General summary of performance for the strains in Uniform Group VI, 1987

	No. of locations	Leflore	Tracy-M	Sharkey (D79-6162)	D82-3885	N82-1198
Seed Yield - 1987						
East Coast	6	37.5	33.3	36.1	36.7	38.1
Southeast	7	38.7	34.7	40.9	36.5	41.0
Upper & Central South	5	35.5	33.9	33.9	37.2	38.1
Delta	7	34.2	36.5	34.4	33.6	44.6
West	4	41.8	45.3	46.2	43.6	48.7
1986-87						
East Coast		40.4	38.0	40.5	38.9	43.4
Southeast		38.9	33.5	38.7	35.9	40.3
Upper & Central South		37.1	33.8	34.7	36.0	38.4
Delta		37.6	37.3	36.8	34.5	40.4
West		43.2	45.0	46.6	43.2	49.1
1985-87						
East Coast		37.4	35.1	36.8	36.5	39.7
Southeast		40.1	35.0	40.1	37.6	41.4
Upper & Central South		39.0	36.4	36.3	38.4	40.3
Delta		36.7	36.7	36.2	34.1	41.7
West		42.2	43.5	43.9	41.8	45.7
Oil Content - 1987		18.5	17.9	17.8	18.7	19.2
1986-87		19.0	18.7	18.8	19.0	19.7
1985-87		18.8	18.6	18.5	19.1	19.7
Protein Content - 1987		41.6	42.4	42.3	42.2	42.1
1986-87		41.9	42.5	42.6	42.7	42.1
1985-87		42.2	42.7	42.8	42.7	42.3
Seed size		12.9	15.6	15.4	13.8	13.6
Maturity index		10-20	-5	+2	0	-3
Height		35	33	40	33	36
Seed quality		2.0	1.9	2.0	1.8	1.7
M. incognita		1.0	4.5	2.0	1.0	5.0
M. arenaria		5.0	5.0	5.0	5.0	5.0
SCN race 3		R	S	R	R	S
SCN race 4		R	S	S	S	S
Soybean looper		4.0	3.0	4.0	2.0	3.5
Flower color		P	W	W	W	W
Pubescence color		T	T	T	T	G
Pod wall color		T	T	T	T	Br
Stem canker		3.0	0	0	0	5.7

Table 29 - (continued)

	G81-152	G81-234	S82-1338	Au82-589	G82-481	R83-980	S83-1144
Seed Yield - 1987							
East Coast	40.3	37.6	36.7	36.9	38.0	34.0	38.0
Southeast	38.8	41.9	34.1	39.6	39.5	38.7	35.9
Upper & Central South	35.4	34.8	34.7	37.8	37.4	34.5	36.3
Delta	44.0	41.0	44.8	37.1	37.6	39.1	38.6
West	44.3	42.9	41.9	47.1	43.1	44.6	41.7
1986-87							
East Coast	44.0	41.4	40.7				
Southeast	39.4	41.0	34.7				
Upper & Central South	37.8	36.7	35.9				
Delta	43.0	41.2	43.9				
West	47.7	45.5	44.6				
1985-87							
East Coast							
Southeast							
Upper & Central South							
Delta							
West							
Oil Content - 1987	20.1	19.0	19.6	18.7	19.3	19.4	20.5
1986-87	20.5	19.9	20.0				
1985-87							
Protein Content - 1987	42.2	39.8	42.1	41.9	41.5	41.3	39.5
1986-87	42.1	40.4	41.8				
1985-87							
Seed size	14.8	14.0	13.7	11.3	12.2	14.4	14.9
Maturity index	-7	0	-6	0	-2	0	-4
Height	30	35	32	34	36	31	27
Seed quality	1.7	1.9	2.0	1.8	1.9	1.8	1.8
M. incognita	1.0	1.0	3.0	1.0	1.3	3.3	3.0
M. arenaria	3.5	3.3	3.8	2.8	2.8	4.5	4.8
SCN race 3	R	R	R	S	R	S	R
SCN race 4	S	S	S	S	S	S	S
Soybean looper	4.0	4.0	4.0	3.5	5.0	4.0	4.0
Flower color	W	P	P	P	P	P	W
Pubescence color	T	T	G	G	T	G	T
Pod wall color	T	T	T	T	T	T	T
Stem canker	6.0	4.8	5.8	4.0	5.0	3.0	8.5

Table 30 - Seed yield, in bushels per acre, for the strains in Uniform Group VI, 1987

	Leflore	Tracy-M	Sharkey (D79-6162)	D82-3885	N82-1198	G81-152	G81-234
			EAST COAST				
Warsaw, VA	32.2	31.5	33.4	33.5	35.1	36.8	39.2+
Holland, VA	43.8	39.5	42.6	46.2	45.4	50.5	48.0
Plymouth, NC	49.2	44.9	45.0	49.7	49.9	48.7	44.4
Kinston, NC	24.1	21.5	29.1	27.6	23.7	27.6	27.7
Florence, SC	32.2	27.7	25.3	30.3	32.5	33.2	28.4
Hartsville, SC	43.7	34.6	41.0	32.6-	41.9	44.9	38.0-
Mean	37.5	33.3	36.1	36.7	38.1	40.3	37.6
			SOUTHEAST				
Blackville, SC	38.7	31.3-	32.0	43.6	33.8	33.8	35.2
Tifton, GA	52.1	50.2	48.0	52.8	58.7	51.6	57.3
Quincy, FL	37.8	25.8	44.5	29.9	39.9	36.3	42.5
Jay, FL	35.6	34.8	43.3	33.7	30.4	36.7	44.4+
Fairhope, AL	36.5	34.6	39.0	37.0	35.1	41.4	36.3
Baton Rouge, LA	38.7	26.7-	36.2	28.6-	35.5	24.6-	30.1-
Tallassee, AL	31.3	39.4+	43.3+	29.8	53.8+	47.1+	47.6+
Mean	38.7	34.7	40.9	36.5	41.0	38.8	41.9
			UPPER AND CENTRAL SOUTH				
Athens, GA	34.0	33.0	35.4	31.9	31.2	30.0	34.7
Calhoun, GA	33.1	30.5	31.8	40.9+	40.0+	34.8	32.8
*Belle Mina, AL	20.1	19.8	14.8	15.8	22.6	16.9	16.7
Clemson, SC	25.6	26.7	25.9	30.3	30.8	29.6	29.5
Jackson, TN	49.1	45.3	42.4	45.6	50.4	47.2	42.2
Mean	35.5	33.9	33.9	37.2	38.1	35.4	34.8
			DELTA				
Portageville, MO (A)	27.5	30.6	23.1-	26.1	36.2+	38.3+	26.7
Portageville, MO (B)	22.3	27.8+	20.1	26.4	28.9+	35.4+	29.7+
Keiser, AR	53.0	55.7	50.6	57.2	70.0+	65.2+	59.6
*Jonesboro, AR	3.9	6.9	6.1	7.0	5.9	9.0	4.9
*Pine Tree, AR	20.2	25.5	32.0	17.7	28.5	27.1	34.4
Stoneville, MS (A)	37.3	39.9	40.5	36.8	48.4+	48.4+	45.0+
Stoneville, MS (B)	26.0	28.2	33.5+	27.1	39.7+	31.5	38.3+
St. Joseph, LA	41.3	40.4	37.4-	37.0-	46.6+	43.9	42.4
Rohwer, AR	32.0	32.9	35.5	24.3-	42.9+	45.4+	45.2+
Mean	34.2	36.5	34.4	33.6	44.6	44.0	41.0
			WEST				
Stuttgart, AR	45.5	48.0	51.3+	42.3	54.1+	58.0+	51.9+
Bossier City, LA	59.4	69.3	67.1	63.1	73.7+	44.9-	57.9
Beaumont, TX	17.2	21.9+	28.1+	20.7	14.3	20.7	12.7-
Bixby, OK	44.9	42.0	38.4	48.2	52.5	53.5	49.0
Mean	41.8	45.3	46.2	43.6	48.7	44.3	42.9

*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)

	S82-1338	Au82-589	G82-481	R83-980	S83-1144	L.S.D. (.05)	C.V. (%)
			EAST COAST				
Warsaw, VA	37.2	35.5	32.1	32.3	40.1+	6.7	11
Holland, VA	45.0	47.8	44.8	48.4	37.8	7.4	10
Plymouth, NC	41.7	50.0	44.6	39.2-	49.0	7.6	10
Kinston, NC	21.0	18.7	29.1	19.5	27.7	6.7	16
Florence, SC	31.5	30.5	34.6	23.9	29.4	N.S.	13
Hartsville, SC	43.9	39.1	42.8	40.7	44.1	4.8	7
Mean	36.7	36.9	38.0	34.0	38.0		
			SOUTHEAST				
Blackville, SC	30.2-	35.3	36.9	36.8	35.6	7.2	12
Tifton, GA	50.2	53.9	51.5	51.9	52.6	N.S.	9
Quincy, FL	23.9	45.5	39.4	35.2	37.7	5.9	10
Jay, FL	29.3	31.9	37.4	30.8	16.1-	8.4	15
Fairhope, AL	35.8	31.5	38.0	36.1	27.1-	5.0	8
Baton Rouge, LA	29.6-	31.0-	34.3	38.4	29.1-	5.9	11
Tallassee, AL	39.8+	48.2+	38.7	41.9+	53.2+	7.5	10
Mean	34.1	39.6	39.5	38.7	35.9		
			UPPER AND CENTRAL SOUTH				
Athens, GA	30.1	29.7	38.4	30.6	35.8	5.5	10
Calhoun, GA	31.3	44.9+	37.7	33.6	36.7	5.5	9
Belle Mina, AL	18.0	26.7	19.5	18.9	22.3	6.7	21
Clemson, SC	30.3	30.5	30.6	30.0	29.2	N.S.	9
Jackson, TN	47.4	46.0	42.8	43.7	43.5	N.S.	9
Mean	34.7	37.8	37.4	34.5	36.3		
			DELTA				
Portageville, MO (A)	40.0+	27.7	30.8	32.1+	31.3	4.3	8
Portageville, MO (B)	39.5+	25.2	25.8	30.7+	27.6+	5.3	11
Keiser, AR	66.7+	59.4	59.6	57.2	49.5	9.1	9
Jonesboro, AR	8.5	7.4	8.2	9.0	6.3	N.S.	32
Pine Tree, AR	24.5	18.3	17.8	23.5	22.1	N.S.	30
Stoneville, MS (A)	49.3+	42.6+	45.4+	42.3+	45.6+	4.1	6
Stoneville, MS (B)	33.9+	25.0	32.4	27.6	31.0	7.1	13
St. Joseph, LA	38.9	43.2	33.6-	41.9	43.2	3.8	5
Rohwer, AR	45.6+	36.8	35.8	41.8+	42.3+	6.0	9
Mean	44.8	37.1	37.6	39.1	38.6		
			WEST				
Stuttgart, AR	55.3+	48.6	50.8+	47.6	57.4+	4.2	5
Bossier City, LA	48.6	72.8+	57.2	59.6	54.1	11.3	11
Beaumont, TX	14.3	21.0	17.5	22.1+	6.2-	4.4	14
Bixby, OK	49.4	46.1	46.8	49.1	49.2	2.7	3
Mean	41.9	47.1	43.1	44.6	41.7		

Table 31 - Chemical composition and seed size for the strains in Uniform Group VI, 1987

Location	Leflore	Tracy-M	Sharkey (D79-6162)	D82-3885	N82-1198	G81-152
			OIL PERCENTAGE			
Holland, VA	17.0	16.5	16.0	18.6	18.4	20.1
Plymouth, NC	18.3	17.4	18.0	18.7	18.9	20.0
Kinston, NC	16.6	15.4	15.6	17.0	17.3	19.8
Jay, FL	19.9	21.1	21.8	20.6	21.1	21.7
Jackson, TN	18.6	18.2	17.1	19.3	19.8	21.8
Portageville, MO (A)	18.3	17.3	16.4	18.5	19.3	19.7
Keiser, AR	18.0	17.4	17.4	17.9	20.2	20.1
Stoneville, MS (B)	20.9	20.6	20.6	18.7	18.3	17.2
Stuttgart, AR	18.6	17.5	17.3	18.9	19.6	20.8
Mean	18.5	17.9	17.8	18.7	19.2	20.1
			PROTEIN PERCENTAGE			
Holland, VA	43.3	43.4	43.5	41.8	43.0	41.2
Plymouth, NC	42.3	43.7	44.4	43.3	43.1	44.0
Kinston, NC	43.1	44.2	43.4	44.2	44.1	44.7
Jay, FL	40.5	41.0	40.7	40.8	41.2	40.8
Jackson, TN	39.4	40.9	39.8	40.3	41.5	40.8
Portageville, MO (A)	39.3	42.7	41.8	42.4	41.4	40.9
Keiser, AR	42.4	43.0	44.2	42.7	41.8	43.5
Stoneville, MS (B)	41.9	39.7	40.3	41.0	41.0	42.0
Stuttgart, AR	41.9	43.4	42.6	42.9	42.1	41.8
Mean	41.6	42.4	42.3	42.2	42.1	42.2
			GRAMS PER 100 SEEDS			
Holland, VA	15.2	18.4	17.3	17.3	16.0	15.8
Plymouth, NC	14.2	16.8	15.8	15.0	14.4	15.6
Kinston, NC	14.1	15.9	16.5	14.7	14.7	17.8
Jay, FL	10.0	15.0	18.0	12.0	14.0	14.0
Jackson, TN	15.5	16.5	16.8	16.2	14.7	16.9
Portageville, MO (A)	11.1	14.4	13.6	11.8	11.7	11.9
Keiser, AR	11.2	13.6	12.6	12.0	13.8	13.6
Stoneville, MS (B)	10.7	12.8	12.9	11.4	10.4	12.7
Stuttgart, AR	13.8	16.7	15.4	13.5	12.8	14.6
Mean	12.9	15.6	15.4	13.8	13.6	14.8

Table 31 - (continued)

Location	G81-234	S82-1338	Au82-589	G82-481	R83-980	S83-1144
			OIL PERCENTAGE			
Holland, VA	18.2	19.3	17.8	18.5	18.4	19.7
Plymouth, NC	19.5	19.0	18.8	18.5	18.9	20.0
Kinston, NC	17.3	19.1	16.9	17.6	17.6	18.1
Jay, FL	22.1	21.7	21.5	21.3	21.2	22.9
Jackson, TN	18.3	20.0	19.1	19.3	19.7	21.7
Portageville, MO (A)	18.8	19.4	18.9	21.0	20.1	21.5
Keiser, AR	19.5	19.5	18.5	19.6	19.5	20.4
Stoneville, MS (B)	17.7	18.9	17.3	18.0	19.6	19.3
Stuttgart, AR	19.4	19.6	19.2	19.7	19.4	20.8
Mean	19.0	19.6	18.7	19.3	19.4	20.5
			PROTEIN PERCENTAGE			
Holland, VA	39.4	40.6	42.2	41.1	42.0	38.0
Plymouth, NC	40.9	43.5	42.4	42.2	42.4	40.6
Kinston, NC	40.7	43.6	43.2	42.2	43.2	41.0
Jay, FL	38.8	41.0	39.7	39.7	40.4	38.0
Jackson, TN	37.1	40.6	39.9	39.5	39.2	36.6
Portageville, MO (A)	39.4	41.2	41.3	41.6	40.6	40.7
Keiser, AR	39.0	41.8	43.1	41.8	41.3	39.4
Stoneville, MS (B)	43.1	43.5	44.2	43.6	42.1	43.0
Stuttgart, AR	39.8	42.7	41.1	41.6	40.9	38.2
Mean	39.8	42.1	41.9	41.5	41.3	39.5
			GRAMS PER 100 SEEDS			
Holland, VA	14.9	14.8	11.7	14.4	16.3	15.8
Plymouth, NC	13.6	15.1	12.3	12.7	15.0	15.9
Kinston, NC	14.8	14.4	11.3	13.7	14.5	16.6
Jay, FL	15.0	12.0	11.0	11.0	15.0	16.0
Jackson, TN	16.4	15.7	13.3	14.7	16.5	15.5
Portageville, MO (A)	11.8	11.7	10.4	10.3	11.7	13.5
Keiser, AR	13.5	12.3	10.8	10.5	13.4	11.3
Stoneville, MS (B)	11.7	12.6	9.5	10.1	12.9	13.1
Stuttgart, AR	14.0	14.3	11.2	12.0	14.0	16.2
Mean	14.0	13.7	11.3	12.2	14.4	14.9

Table 32 - Relative maturity data, days earlier (-) or later (+) than Leflore, for the strains in Uniform Group VI, 1987

Location	Date planted	Leflore matured	Tracy-M	Sharkey (D79-6162)	D82-3885	N82-1198	G81-152
			EAST COAST				
Warsaw, VA	6-9	11-07	-1	-2	0	-1	-1
Holland, VA	5-26	10-27	-1	+2	+2	-1	-1
Plymouth, NC	5-21	10-26	-3	0	0	-3	0
Kinston, NC	5-18	10-23	0	0	0	0	0
Florence, SC	5-27	10-17	-2	+3	0	-4	-6
Hartsville, SC	5-25	10-18	-5	+3	-2	-3	-5
Mean	5-26	10-25	-2	+1	0	-2	-3
			SOUTHEAST				
Blackville, SC	5-18	10-21	-4	+6	+1	-1	-1
Tifton, GA	5-25	10-10	-4	+1	+1	-2	-6
Quincy, FL	5-20	10-12	-3	+2	0	+1	+1
Jay, FL	6-1	10-13	0	+1	-2	0	-1
Fairhope, AL	6-26	10-12	-5	0	0	-6	0
Tallassee, AL	5-25	10-10	-4	0	-1	-2	-10
Mean	5-29	10-16	-3	+2	0	-2	-3
			UPPER AND CENTRAL SOUTH				
Athens, GA	5-13	10-17	-3	+1	-3	-4	-6
Calhoun, GA	5-12	10-21	-4	-2	-1	-2	-1
Belle Mina, AL	5-14	10-17	-3	+2	+2	-3	-23
Clemson, SC	5-12	10-21	+2	+4	-1	-1	-2
Jackson, TN	5-13	10-16	0	0	0	0	0
Mean	5-13	10-18	-2	+1	-1	-3	-8
			DELTA				
Portageville, MO (A)	5-9	10-27	-3	0	-2	-6	-4
Portageville, MO (B)	5-29	10-24	-6	+1	0	-6	-7
Keiser, AR	5-7	10-25	-8	+1	-3	-2	-11
Jonesboro, AR	6-5	10-21	-1	+1	+2	0	-3
Pine Tree, AR	6-17	10-18	-1	+1	+2	-1	-4
Stoneville, MS (A)	5-21	10-16	0	+1	0	0	-4
Stoneville, MS (B)	6-5	10-18	-1	0	0	0	-1
St. Joseph, LA	6-6	10-15	-4	0	0	-4	-7
Rohwer, AR	5-15	10-09	-3	+1	-4	0	-4
Mean	5-26	10-19	-3	+1	-1	-2	-5
			WEST				
Stuttgart, AR	5-22	10-27	-8	-1	+1	-8	-10
Beaumont, TX	5-23	10-12	-2	+6	0	-3	-15
Mean	5-23	10-20	-5	+3	+1	-6	-13

Table 32 - (continued)

Location	G81-234	S82-1338	Au82-589	G82-481	R83-980	S83-1144
			EAST COAST			
Warsaw, VA	-1	0	-1	0	0	-1
Holland, VA	-1	-1	0	0	+2	-1
Plymouth, NC	-3	0	0	0	0	0
Kinston, NC	0	0	0	0	0	0
Florence, SC	0	-11	0	-2	+2	-1
Hartsville, SC	0	-5	0	-2	-1	-2
Mean	-1	-4	0	-1	+1	-1
			SOUTHEAST			
Blackville, SC	+3	-1	0	-2	+1	-2
Tifton, GA	+1	-8	+1	-2	-1	-2
Quincy, FL	+2	+1	+1	-3	0	+1
Jay, FL	+2	-4	+2	+2	+1	+2
Fairhope, AL	+1	0	+2	0	+1	-5
Tallassee, AL	0	-11	+1	-2	0	-3
Mean	+2	-4	+1	-1	0	-2
			UPPER AND CENTRAL SOUTH			
Athens, GA	+1	-13	0	-1	+1	-7
Calhoun, GA	+1	+1	-1	-1	+3	-1
Belle Mina, AL	-3	-23	+5	-3	-3	-16
Clemson, SC	+1	-5	0	-1	+3	-2
Jackson, TN	0	0	0	0	0	0
Mean	0	-10	+1	-2	+1	-6
			DELTA			
Portageville, MO (A)	-1	-9	-3	-2	-3	-4
Portageville, MO (B)	+1	-8	+1	0	+2	-6
Keiser, AR	-3	-12	-2	-2	-3	-7
Jonesboro, AR	+3	-3	0	+3	+3	-4
Pine Tree, AR	+2	-4	-1	+2	+2	+5
Stoneville, MS (A)	0	-2	+1	0	0	0
Stoneville, MS (B)	+1	-1	0	0	+2	-2
St. Joseph, LA	0	-8	+1	0	-1	0
Rohwer, AR	+1	-4	+1	-4	0	-4
Mean	0	-6	0	0	0	-2
			WEST			
Stuttgart, AR	0	-9	0	-3	-2	-1
Beaumont, TX	-1	-9	-2	-7	-2	-17
Mean	-1	-9	-1	-5	-2	-9

Table 33 - Plant height for the strains in Uniform Group VI, 1987

Location	Leflore	Tracy-M	Sharkey (D79-6162)	D82-3885	N82-1198	G81-152
			EAST COAST			
Warsaw, VA	40	38	43	36	35	34
Holland, VA	39	41	47	41	37	37
Plymouth, NC	47	41	44	41	48	37
Kinston, NC	33	33	38	33	31	27
Florence, SC	34	32	42	32	33	27
Mean	39	37	43	37	37	32
			SOUTHEAST			
Blackville, SC	31	31	39	28	38	29
Tifton, GA	35	30	39	36	39	30
Quincy, FL	20	23	34	24	29	24
Jay, FL	28	26	32	27	26	24
Fairhope, AL	25	23	26	24	23	23
Baton Rouge, LA	31	25	36	30	37	25
Tallassee, AL	32	31	38	31	35	26
Mean	29	28	35	29	32	26
			UPPER AND CENTRAL SOUTH			
Athens, GA	23	26	32	27	27	16
Calhoun, GA	37	34	39	35	36	34
Belle Mina, AL	40	35	46	34	36	33
Clemson, SC	37	36	42	33	41	34
Jackson, TN	44	40	42	41	44	41
Mean	36	34	40	34	37	32
			DELTA			
Portageville, MO (A)	45	43	42	40	45	30
Portageville, MO (B)	38	40	41	38	41	36
Keiser, AR	40	39	40	41	42	32
Jonesboro, AR	53	47	49	48	43	44
Pine Tree, AR	26	22	29	20	21	18
Stoneville, MS (A)	39	34	39	35	39	30
Stoneville, MS (B)	24	26	33	26	28	20
St. Joseph, LA	39	34	39	33	36	33
Rohwer, AR	38	34	45	33	41	31
Mean	38	35	40	35	37	30
			WEST			
Stuttgart, AR	35	40	51	39	44	41
Bossier City, LA	30	33	42	32	39	28
Beaumont, TX	24	18	29	22	27	21
Bixby, OK	42	34	40	34	37	30
Mean	33	31	41	32	37	30

Table 33 - (continued)

Location	G81-234	S82-1338	Au82-589	G82-481	R83-980	S83-1144
			EAST COAST			
Warsaw, VA	44	41	39	31	30	32
Holland, VA	39	38	40	40	35	31
Plymouth, NC	43	41	39	45	39	37
Kinston, NC	36	31	29	31	28	24
Florence, SC	35	28	33	33	28	23
Mean	39	36	36	36	32	29
			SOUTHEAST			
Blackville, SC	36	24	32	37	29	21
Tifton, GA	38	34	36	37	31	25
Quincy, FL	26	23	24	28	21	15
Jay, FL	26	19	25	31	22	16
Fairhope, AL	23	23	21	28	22	17
Baton Rouge, LA	27	26	30	35	27	19
Tallassee, AL	33	28	34	34	28	24
Mean	30	25	29	33	26	20
			UPPER AND CENTRAL SOUTH			
Athens, GA	26	17	26	29	23	17
Calhoun, GA	38	35	36	35	34	30
Belle Mina, AL	41	35	36	41	35	29
Clemson, SC	39	36	36	40	34	32
Jackson, TN	45	42	38	43	41	38
Mean	38	33	34	38	33	29
			DELTA			
Portageville, MO (A)	44	33	45	42	39	37
Portageville, MO (B)	41	34	36	39	32	30
Keiser, AR	43	35	36	40	38	29
Jonesboro, AR	53	48	47	47	44	42
Pine Tree, AR	25	19	19	25	21	17
Stoneville, MS (A)	39	33	34	37	33	27
Stoneville, MS (B)	28	24	23	26	23	19
St. Joseph, LA	41	32	34	32	31	26
Rohwer, AR	39	35	36	41	34	29
Mean	39	33	34	37	33	28
			WEST			
Stuttgart, AR	46	41	40	45	37	39
Bossier City, LA	35	27	35	33	31	21
Beaumont, TX	20	19	23	24	19	13
Bixby, OK	36	38	40	41	35	33
Mean	34	31	35	36	31	27

Table 34 - Lodging scores for the strains in Uniform Group VI, 1987

Location	Leflore	Tracy-M	Sharkey (D79-6162)	D82-3885	N82-1198	G81-152
			EAST COAST			
Warsaw, VA	1.0	1.0	1.3	1.1	1.0	1.1
Holland, VA	3.7	3.3	5.0	3.3	2.7	2.3
Plymouth, NC	3.3	3.0	3.0	3.0	2.7	3.0
Kinston, NC	2.7	3.0	2.7	2.7	2.7	2.3
Hartsville, SC	2.8	2.2	3.2	2.5	2.3	1.7
			SOUTHEAST			
Blackville, SC	1.0	1.0	2.0	1.0	1.0	1.0
Tifton, GA	1.2	1.2	2.7	1.3	1.6	1.1
Quincy, FL	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	1.3	1.0	2.3	1.3	1.0	1.0
Fairhope, AL	1.0	1.0	1.3	1.0	1.0	1.0
Baton Rouge, LA	1.5	2.0	2.3	2.0	2.0	2.0
Tallassee, AL	1.2	1.8	2.2	1.7	1.0	1.2
			UPPER AND CENTRAL SOUTH			
Athens, GA	1.0	1.0	1.3	1.2	1.0	1.0
Calhoun, GA	1.7	1.7	2.0	2.0	1.0	1.0
Belle Mina, AL	2.0	2.0	2.7	2.0	2.0	2.0
Jackson, TN	3.0	3.0	3.0	3.0	3.0	3.0
			DELTA			
Portageville, MO (A)	3.5	3.0	4.0	2.5	3.5	3.0
Portageville, MO (B)	1.5	1.5	2.5	1.5	1.0	1.0
Keiser, AR	1.7	1.8	3.0	1.7	1.3	1.0
Jonesboro, AR	1.0	1.0	1.0	1.0	1.0	1.0
Pine Tree, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, MS (A)	2.3	2.0	3.0	2.7	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.3	2.0	2.0	2.0
St. Joseph, LA	2.2	2.3	2.8	2.3	2.2	2.3
Rohwer, AR	1.0	3.0	3.7	3.3	1.7	1.0
			WEST			
Stuttgart, AR	4.1	3.1	3.9	3.2	2.3	2.5
Bossier City, LA	1.0	1.3	3.0	1.0	2.0	1.0
Beaumont, TX	1.0	1.0	2.7	1.2	1.0	1.0
Bixby, OK	1.0	3.0	2.0	2.0	1.0	1.0

Table 34 - (continued)

Location	G81-234	S82-1338	Au82-589	G82-481	R83-980	S83-1144
		EAST COAST				
Warsaw, VA	1.0	1.0	1.0	1.0	1.0	1.0
Holland, VA	2.3	2.7	2.7	3.3	2.3	1.3
Plymouth, NC	2.2	3.0	3.0	3.3	3.0	3.0
Kinston, NC	2.7	2.7	2.3	2.7	2.0	2.3
Hartsville, SC	2.2	2.0	2.5	3.0	1.5	1.0
		SOUTHEAST				
Blackville, SC	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, GA	1.3	1.3	1.5	1.5	1.2	1.1
Quincy, FL	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	1.0	1.0	1.3	2.0	1.0	1.0
Fairhope, AL	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, LA	3.3	1.3	1.0	2.3	1.0	1.0
Tallassee, AL	1.0	1.0	1.2	1.8	1.0	1.0
		UPPER AND CENTRAL SOUTH				
Athens, GA	1.2	1.0	1.3	1.3	1.2	1.0
Calhoun, GA	1.0	2.0	1.7	1.7	1.3	1.0
Belle Mina, AL	2.0	2.0	2.0	2.3	2.0	2.0
Jackson, TN	3.0	3.0	3.0	4.0	3.0	3.0
		DELTA				
Portageville, MO (A)	2.0	2.5	2.5	2.5	2.5	3.5
Portageville, MO (B)	1.0	1.0	1.0	2.0	1.0	1.0
Keiser, AR	1.0	1.0	1.0	1.8	1.0	1.0
Jonesboro, AR	1.0	1.0	1.0	1.0	1.0	1.0
Pine Tree, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, MS (A)	2.0	2.0	2.0	2.7	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	1.9	2.1	2.0	2.4	1.5	1.6
Rohwer, AR	1.0	1.0	2.0	2.0	1.0	1.0
		WEST				
Stuttgart, AR	2.3	3.1	2.4	3.0	2.3	2.9
Bossier City, LA	1.3	1.0	1.0	1.3	1.0	1.0
Beaumont, TX	1.0	1.0	1.0	1.3	1.0	1.0
Bixby, OK	1.0	3.0	2.0	3.0	2.0	1.0

Table 35 - Seed quality scores for the strains in Uniform Group VI, 1987

Location	Leflore	Tracy-M	Sharkey (D79-6162)	D82-3885	N82-1198	G81-152
			EAST COAST			
Warsaw, VA	1.0	1.3	1.2	1.0	1.2	1.0
Holland, VA	1.0	1.0	1.0	1.0	1.0	1.0
Plymouth, NC	1.5	1.5	1.5	1.0	1.5	1.5
Kinston, NC	2.0	1.5	1.5	1.5	1.5	1.5
			SOUTHEAST			
Blackville, SC	1.0	2.0	2.0	2.0	1.0	1.0
Tifton, GA	1.6	1.3	1.9	1.7	1.0	1.1
Quincy, FL	2.0	2.0	2.0	2.0	1.7	2.7
Jay, FL	3.0	2.0	4.0	2.0	2.0	2.0
Baton Rouge, LA	2.0	2.0	3.0	2.7	1.7	2.0
Tallassee, AL	1.0	1.5	2.0	1.0	1.0	1.0
			UPPER AND CENTRAL SOUTH			
Athens, GA	1.5	1.5	1.5	1.5	1.5	1.5
Calhoun, GA	2.3	2.7	1.7	2.3	2.7	2.3
Jackson, TN	3.0	2.0	2.0	2.0	1.0	1.0
			DELTA			
Portageville, MO (A)	2.0	1.5	1.5	1.5	1.5	1.0
Portageville, MO (B)	2.0	2.0	2.0	1.5	1.5	1.0
Keiser, AR	2.0	2.0	1.5	2.5	2.0	2.5
Jonesboro, AR	3.3	3.3	3.7	2.7	3.0	3.0
Pine Tree, AR	3.0	2.3	2.3	3.0	2.0	2.7
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	1.8	1.5	1.5	1.5	1.5	1.5
Rohwer, AR	2.2	2.5	2.3	2.3	2.5	2.2
			WEST			
Stuttgart, AR	2.0	1.5	2.0	1.5	1.5	1.5
Beaumont, TX	1.8	1.5	2.2	1.7	2.0	1.8

Table 35 - (continued)

Location	G81-234	S82-1338	Au82-589	G82-481	R83-980	S83-1144
		EAST COAST				
Warsaw, VA	1.2	1.0	1.0	1.0	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	1.5	1.5
		SOUTHEAST				
Blackville, SC	2.0	2.0	2.0	3.0	1.0	1.0
Tifton, GA	1.5	1.8	1.4	1.4	1.3	1.6
Quincy, FL	2.7	2.7	1.0	2.0	1.7	2.0
Jay, FL	2.0	3.0	2.0	3.0	2.0	2.0
Baton Rouge, LA	2.3	2.3	1.7	2.3	2.0	2.3
Tallassee, AL	1.5	1.0	1.0	1.0	1.0	1.0
		UPPER AND CENTRAL SOUTH				
Athens, GA	1.5	1.5	1.5	1.5	1.5	1.5
Calhoun, GA	1.7	2.3	1.3	1.0	2.0	2.7
Jackson, TN	3.0	2.0	3.0	3.0	2.0	2.0
		DELTA				
Portageville, MO (A)	1.5	1.5	1.5	1.5	1.5	1.5
Portageville, MO (B)	1.5	1.5	1.5	1.5	1.5	1.5
Keiser, AR	2.5	2.5	2.5	2.5	3.0	2.5
Jonesboro, AR	4.0	3.0	3.3	3.3	2.3	3.0
Pine Tree, AR	3.3	2.7	3.0	3.0	3.0	3.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	1.5	1.5	1.8	1.8	1.5	1.5
Rohwer, AR	2.5	2.5	2.2	2.5	2.5	2.5
		WEST				
Stuttgart, AR	1.5	1.5	1.0	1.5	1.5	1.8
Beaumont, TX	2.3	2.5	1.5	1.7	1.7	2.0

PRELIMINARY GROUP VI

1987

Preliminary Group VI nurseries which included Leflore and Bedford along with 34 experimental lines were grown at eight locations. The parentage for each of the strains is reported in Table 36. A general summary of performance is reported in Table 37. Data from individual locations are reported in Tables 38-42.

Plantings were made in the greenhouse at the University of Georgia to evaluate strains for reaction to the two root-knot nematode species M. incognita and M. arenaria. Twenty-three lines were rated resistant to M. incognita. Bedford and seven of the breeding lines were rated resistant to both M. incognita and M. arenaria. A rating of three is considered adequate to give good field resistance to M. arenaria. Plantings were made in the greenhouse at Jackson, Tennessee to rate strains for reaction to SCN races 3 and 4. Twenty-two were rated resistant to SCN race 3. Leflore, Bedford, and nine strains were rated resistant to both SCN race 3 and 4. Observation plantings were made at Verona, Mississippi to evaluate strains for reaction to stem canker. A four-row plot was planted with one row of the four being planted to the susceptible line J77-339. Six strains were rated moderately susceptible to stem canker. Of the strains ranking above Leflore or Bedford in seed yield, only D84-7174 would have been rated resistant to the two root-knot species, to races 3 and 4 of the soybean cyst nematode, and to stem canker. Plantings were made in the field cage at Stoneville and infested with soybean looper. There were no strains having ratings low enough to be considered resistant to looper feeding.

Differences among strains for seed yield were significant at the 5% level of confidence at each of the eight locations at which plantings were made. Leflore had a mean seed yield of 42.2 bushels per acre and Bedford a mean seed yield of 42.8 bushels per acre. There were six strains that had mean seed yields that were significantly higher than that for Leflore at the 5% level of confidence. There were five strains having seed yields significantly lower than that for Leflore. The lowest yielding strain was one having an indeterminate growth type, R84-410, which had a mean seed yield of 32.5 bushels per acre.

The strains D84-7174, G83-198, N85-492, S84-1876, and SC84-1531 appear to merit further testing in the uniform group in 1988.

Table 36 - Parentage of the strains in Preliminary Group VI, 1987

	Variety or strain	Parentage	Generation composited
1.	Leflore	Centennial X J74-47	F_5
2.	Bedford	Forrest(2) X (D68-18 X PI 88788)	F_5
3.	D83-213	D76-9665(2) X D79-5304	F_5
4.	D83-341	D76-9665(2) X D79-5304	F_5
5.	D83-493	D76-9665 X D79-5304	F_5
6.	D84-7174	D77-12 X D77-6057	F_5
7.	D84-7229	D77-12 X D77-6057	F_5
8.	D85-7692	Epps X sel [Forrest X sel (Peking X Centennial)]	F_5
9.	D85-8150	D79-4145 X D80-7579	F_5
10.	D85-B4	Forrest X Tracy	F_6
11.	G82-2643	D74-7741 X F76-8757	F_6
12.	G83-12	F77-1965 X D72-8927	F_6
13.	G83-198	D74-7741 X Young	F_6
14.	G83-635	D77-6103 X F77-6903	F_6
15.	G83-1243	D77-6103 X F77-6790	F_6
16.	G83-1362	D77-6103 X F77-6790	F_6
17.	N85-12	N77-179 X Epps	F_6
18.	N85-130	N77-8106 X N77-8461	F_3
19.	N85-205	N80-50552 x N80-53033	F_3
20.	N85-234	N80-52925 X N80-50313	F_3
21.	N85-492	N77-179 X Johnston	F_6
22.	N85-571	N77-179 X Johnston	F_6
23.	N85-1088	RS_{III} Cycle 3 (Sel.)	F_6
24.	Ok80-3015	Dyer X Bragg	F_6
25.	R84-410	Jeff X R78-1180	F_5
26.	R85-48	(Jeff X R79-334) X (R76-717 X R75-579)	F_5
27.	R85-59S	Coker 317 X Narow	F_5
28.	R85-110S	Wright X Jeff	F_5
29.	R85-153S	Wright X Jeff	F_5
30.	S83-1085	S76-2593 X Narow	F_5
31.	S84-1576	Bedford X Ransom	F_5
32.	S84-1876	Bedford X Essex	F_5
33.	SC84-340	Jeff X Govan	F_5
34.	SC84-730	D76-9665 X Johnston	F_5
35.	SC84-1531	Braxton X Young	F_5
36.	SC84-2800	Foster X Jeff	F_5

Table 37 - General summary of performance for the strains in Preliminary Group VI, 1987

Strain	Seed yield	Mat. index	Ht.	Percent Oil	Percent Protein	M. incognita	M. arenaria	SCN race 3	SCN race 4	Stem canker
Leflore	42.2	10-19	38	18.3	41.8	1.0	4.0	R	R	1.0
Bedford	42.8	-8	37	20.3+	40.4-	1.1	2.9	R	R	1.0
D83-213	37.9	-1	41	18.8	41.2	3.0	4.0	R	S	1.0
D83-341	37.6	-4	37	18.8	42.2	1.7	3.7	R	S	1.0
D83-493	39.5	+6	43	19.1	40.7	3.6	3.9	R	S	1.0
D84-7174	45.4	+3	36	18.8	41.9	1.0	3.0	R	R	1.0
D84-7229	42.7	+1	34	18.7	41.7	1.4	4.6	R	R	1.0
D85-7692	37.1-	-5	31	19.0	43.0	1.9	4.1	R	S	1.0
D85-8150	38.5	0	34	17.9	43.7+	4.6	4.9	S	S	1.0
D85-B4	37.8	+3	40	18.7	41.9	1.9	4.5	S	S	1.0
G82-2643	46.4	-5	34	19.7+	41.5	1.6	2.9	R	S	2.0
G83-12	48.2+	+5	38	19.7+	41.6	3.7	4.7	S	S	1.0
G83-198	47.8+	-1	31	21.0+	41.2	1.3	4.0	R	S	1.0
G83-635	44.4	+3	38	19.4+	41.8	1.0	4.0	R	R	1.0
G83-1243	45.4	+2	37	19.3	41.0	1.7	3.3	R	R	1.0
G83-1362	37.2	0	37	20.3+	40.1-	1.1	4.4	R	R	1.0
N85-12	49.0+	-8	29	21.8+	40.8	4.0	4.7	S	S	3.0
N85-130	40.4	+4	38	19.8+	40.8	1.0	3.0	R	S	3.0
N85-205	35.9-	+2	38	19.7+	40.3-	1.3	3.7	R	R	2.0
N85-234	35.7-	+3	36	19.0	41.5	1.0	3.1	S	S	3.0
N85-492	50.4+	-5	28	21.8+	40.4-	3.0	4.0	S	S	3.0
N85-571	49.7+	-5	32	21.4+	40.6	3.0	5.0	S	S	3.0
N85-1088	40.2	+5	42	19.8+	42.7	3.5	4.0	S	S	1.0
Ok80-3015	44.1	-3	33	20.9+	40.0-	4.0	4.7	S	S	2.0
R84-410	32.5-	-2	46	19.6+	42.0	3.0	4.3	S	S	3.0
R85-48	41.4	+3	35	19.8+	39.9-	1.0	4.1	R	S	2.0
R85-59S	42.9	-4	35	20.6+	41.2	2.7	4.3	R	S	1.0
R85-110S	40.0	+3	37	20.1+	40.4-	1.3	2.7	R	R	2.0
R85-153S	41.6	+2	38	19.4+	42.0	1.3	2.7	S	S	1.0
S83-1085	39.5	-6	28	21.6+	41.1	1.7	3.0	R	S	1.0
S84-1576	39.3	+2	31	20.6+	40.2-	1.0	4.1	-	R	2.0
S84-1876	47.4+	-7	30	20.3+	40.8	1.0	3.0	R	S	1.0
SC84-340	35.7-	+4	38	19.3	43.7+	1.0	3.0	S	S	1.0
SC84-730	42.0	+5	38	19.5+	39.9-	2.6	3.4	S	S	2.0
SC84-1531	48.7+	+4	38	19.4+	41.6	4.3	4.3	S	S	1.0
SC84-2800	42.1	-1	36	20.2+	42.2	1.5	5.0	R	R	1.0
L.S.D.(.05)	5.0			1.0	1.2					
C.V.	12%			4%	2%					

+ or - designations refer to differences from Leflore.

Table 38 - Seed yield, in bushels per acre, for the strains in Preliminary Group VI, 1987

Strain	Holland, VA	Ply-mouth, NC	Athens GA	Tallas-see, AL	Jay, FL	Keiser, AR	Stone-ville, MS (A)	Stone-ville, MS (B)
Leflore	40.1	55.9	42.9	33.8	41.8	54.9	38.6	29.7
Bedford	42.2	44.5-	39.8	38.2	37.4	57.2	45.7	37.7
D83-213	40.2	44.0-	35.4	36.2	29.2-	52.6	33.9	31.5
D83-341	44.0	45.6-	30.6-	34.3	25.9-	51.8	39.9	28.9
D83-493	39.2	41.2-	44.7	34.8	38.5	52.8	32.9	32.0
D84-7174	41.1	55.8	41.9	46.2+	43.5	58.1	42.4	34.4
D84-7229	40.7	45.6-	40.4	49.1+	39.6	48.6	42.4	34.8
D85-7692	42.9	42.8-	32.7-	39.0	19.8-	51.8	38.9	28.7
D85-8150	36.4	48.3	39.4	39.9	33.0-	49.6	32.6	28.5
D85-B4	40.6	47.0-	37.4	30.5	34.1-	52.7	34.4	25.6
G82-2643	47.8+	43.2-	50.4	46.8+	39.6	62.8	48.0+	32.6
G83-12	46.3+	54.0	42.7	53.1+	46.8	62.0	40.0	40.5+
G83-198	47.0+	47.8-	41.9	48.6+	45.7	73.0+	43.8	34.5
G83-635	41.2	54.6	45.6	39.1	40.2	58.7	40.0	35.8
G83-1243	35.8	52.8	35.5	56.3+	41.8	53.8	48.7+	38.6
G83-1362	42.9	41.9-	43.3	35.5	25.9-	50.8	27.7-	29.5
N85-12	46.8+	62.3	31.9-	46.0+	35.2-	73.4+	47.8+	48.3+
N85-130	43.4	42.8-	37.9	40.3	35.8-	56.4	36.5	30.1
N85-205	37.3	47.1-	35.5	30.3	30.3-	50.6	30.2-	25.6
N85-234	42.8	46.6	32.2-	27.0	26.4-	46.0-	31.6	32.6
N85-492	51.8+	53.3	44.0	55.1+	32.5-	72.1+	50.7+	43.9+
N85-571	51.4+	48.9	46.0	55.8+	34.7-	69.2+	49.2+	42.6+
N85-1088	35.9	55.3	34.6-	51.0+	36.9	47.1	31.5	29.0
Ok80-3015	47.8+	47.4-	46.4	38.9	27.5-	63.1+	44.2	37.4
R84-410	40.1	38.2-	23.2-	38.3	37.4	37.6-	28.4-	17.0-
R85-48	44.9	46.4-	41.1	46.1+	35.8-	52.7	31.7	32.1
R85-59S	46.1+	46.2-	45.1	40.2	33.6-	59.1	33.7	39.1
R85-110S	44.7	42.5-	33.1-	38.3	38.0	54.7	38.5	30.1
R85-153S	39.2	44.3-	43.5	40.5	38.5	60.2	35.0	31.2
S83-1085	47.3+	44.1-	43.3	33.8	18.7-	59.0	37.1	32.3
S84-1576	42.9	40.8-	35.8	46.9+	18.2-	61.5	40.3	27.7
S84-1876	47.5+	49.5	46.1	50.9+	31.9-	67.0+	54.6+	31.3
SC84-340	36.3	41.2-	33.2-	33.2	34.7-	48.5	35.8	22.9
SC84-730	45.9+	46.1-	34.7	43.0+	39.6	52.4	38.1	36.4
SC84-1531	49.9+	44.7-	37.4	56.5+	47.9+	65.5+	47.1+	40.3+
SC84-2800	38.6	38.0-	42.4	40.7	38.0	60.4	39.1	39.3+
L.S.D.(.05)	5.6	8.0	8.3	7.9	5.9	8.1	8.0	9.5
C.V.	6%	8%	10%	9%	8%	7%	10%	14%

Table 39 - Oil percentages for the strains in Preliminary Group VI, 1987

Strain	Holland, VA	Plymouth, NC	Jay, FL	Keiser, AR	Stoneville, MS (A)
Leflore	17.1	18.3	20.6	18.0	17.5
Bedford	20.0	19.4	21.5	20.0	20.8
D83-213	18.4	18.3	20.7	18.6	18.1
D83-341	18.3	18.8	20.9	18.6	17.3
D83-493	18.4	18.8	21.3	18.6	18.3
D84-7174	17.7	17.6	21.7	17.8	19.0
D84-7229	17.7	18.2	21.0	18.8	18.0
D85-7692	18.9	18.4	20.6	18.1	19.0
D85-8150	17.5	17.4	19.9	16.9	17.8
D85-B4	18.3	18.1	21.0	18.3	17.8
G82-2643	19.8	19.5	21.8	19.1	18.1
G83-12	18.9	18.5	22.3	19.6	19.4
G83-198	20.4	20.4	22.5	20.9	20.6
G83-635	18.1	18.9	21.0	18.8	20.0
G83-1243	18.5	18.7	21.3	18.6	19.4
G83-1362	19.6	20.1	23.0	20.2	18.8
N85-12	22.0	21.6	23.9	22.0	19.5
N85-130	18.5	18.9	22.2	19.6	19.9
N85-205	17.1	19.2	21.7	19.7	20.7
N85-234	17.6	18.5	20.8	18.2	19.7
N85-492	21.5	20.2	23.7	21.8	21.7
N85-571	20.5	21.6	23.4	21.0	20.7
N85-1088	18.8	18.7	21.6	18.8	21.1
Ok80-3015	20.7	19.5	22.2	21.0	21.3
R84-410	18.4	18.7	20.9	18.8	21.4
R85-48	18.2	18.9	21.5	19.7	20.8
R85-59S	19.6	19.3	23.0	20.3	20.8
R85-110S	18.6	18.7	22.0	19.0	22.0
R85-153S	18.0	18.6	21.1	18.3	21.1
S83-1085	21.5	21.4	23.7	22.2	19.0
S84-1576	19.1	20.0	22.1	19.9	22.0
S84-1876	20.1	20.0	21.3	20.6	19.4
SC84-340	17.9	18.4	21.1	18.6	20.5
SC84-730	18.9	18.4	21.8	18.0	20.5
SC84-1531	18.9	18.4	21.1	18.2	20.5
SC84-2800	19.4	19.3	20.7	19.4	22.3

Table 40 - Protein percentages for the strains in Preliminary Group VI, 1987

Strain	Holland, VA	Plymouth, NC	Jay, FL	Keiser, AR	Stoneville, MS (A)
Leflore	42.9	42.4	39.2	41.4	42.9
Bedford	39.2	42.7	39.3	41.2	39.5
D83-213	41.0	43.2	39.8	41.2	40.9
D83-341	41.3	42.7	40.8	41.3	45.1
D83-493	39.8	41.1	38.1	41.1	43.5
D84-7174	41.9	43.3	39.0	42.4	42.7
D84-7229	43.3	42.8	39.8	41.8	40.8
D85-7692	43.0	44.5	41.9	43.7	41.9
D85-8150	43.4	44.7	42.1	45.5	43.0
D85-B4	41.7	42.4	39.7	42.4	43.3
G82-2643	41.3	42.0	39.9	42.2	42.3
G83-12	43.2	43.5	39.0	42.6	39.7
G83-198	41.3	43.3	39.0	40.7	41.5
G83-635	42.2	43.3	40.6	41.7	41.1
G83-1243	41.2	43.1	39.6	40.7	40.5
G83-1362	39.8	41.1	38.2	39.8	41.7
N85-12	39.8	42.8	40.2	40.3	41.0
N85-130	40.8	41.7	39.7	41.3	40.5
N85-205	41.4	40.4	38.8	39.6	41.1
N85-234	42.2	41.8	40.1	41.5	41.7
N85-492	39.5	42.1	40.4	40.2	39.9
N85-571	40.6	40.9	39.7	39.9	41.8
N85-1088	43.7	44.2	41.0	43.6	41.1
Ok80-3015	38.7	42.0	39.5	38.8	41.2
R84-410	42.9	43.9	39.9	42.2	41.2
R85-48	40.5	41.4	38.7	38.8	40.1
R85-59S	40.9	43.3	40.0	41.0	40.8
R85-110S	40.8	42.3	38.2	40.7	39.9
R85-153S	42.8	42.9	40.3	42.5	41.4
S83-1085	38.8	41.7	40.4	39.5	45.3
S84-1576	40.4	40.9	39.5	39.0	41.2
S84-1876	39.9	41.8	40.4	39.9	41.9
SC84-340	44.2	45.3	42.0	43.4	43.8
SC84-730	40.5	41.3	37.7	40.1	40.1
SC84-1531	42.4	43.5	39.8	41.5	41.0
SC84-2800	42.6	43.9	40.6	43.2	40.7

Table 41 - Plant height for the strains in Preliminary Group VI, 1987

Strain	Holland, VA	Plymouth, NC	Athens, GA	Tallassee, AL	Jay, FL	Keiser, AR	Stoneville, MS (A)	Stoneville, MS (B)
Leflore	41	47	31	40	32	39	44	29
Bedford	42	48	33	39	26	41	41	27
D83-213	42	52	35	43	33	47	46	31
D83-341	37	48	33	38	26	40	42	29
D83-493	46	57	37	47	32	42	48	34
D84-7174	37	42	31	36	29	41	39	31
D84-7229	39	43	30	33	28	39	35	28
D85-7692	35	40	25	33	24	32	30	24
D85-8150	36	38	31	36	29	36	40	26
D85-B4	45	50	35	38	31	46	45	31
G82-2643	36	41	31	33	28	40	36	25
G83-12	40	49	32	39	31	45	41	30
G83-198	35	39	24	32	24	37	34	24
G83-635	40	51	33	39	29	42	42	31
G83-1243	39	50	32	35	30	43	40	29
G83-1362	43	45	34	35	28	40	40	29
N85-12	29	38	23	32	27	27	33	24
N85-130	49	44	33	35	28	46	41	31
N85-205	37	48	32	37	26	45	42	33
N85-234	46	46	33	37	22	41	39	26
N85-492	33	36	22	29	23	30	32	22
N85-571	37	39	24	33	25	37	34	23
N85-1088	40	50	40	46	31	46	48	33
Ok80-3015	39	41	28	33	24	37	38	25
R84-410	44	58	38	50	42	50	51	36
R85-48	41	44	31	36	25	41	37	27
R85-59S	41	43	28	36	27	38	36	29
R85-110S	39	45	32	36	32	40	42	29
R85-153S	44	43	34	36	29	41	43	33
S83-1085	30	37	24	26	19	33	30	22
S84-1576	30	38	28	30	23	38	37	25
S84-1876	31	39	28	28	21	37	33	20
SC84-340	39	48	33	38	31	42	41	30
SC84-730	40	49	31	38	30	41	39	32
SC84-1531	42	46	34	38	31	44	41	29
SC84-2800	39	43	32	35	27	41	41	29

Table 42 - Seed quality scores for the strains in Preliminary Group VI, 1987

Strain	Holland, VA	Ply-mouth, NC	Athens, GA	Jay, FL	Keiser, AR	Stone-ville, MS (A)	Stone-ville, MS (B)
Leflore	1.0	1.0	1.5	2.0	1.5	2.0	2.0
Bedford	1.0	1.5	1.5	4.0	1.5	2.0	2.0
D83-213	1.0	1.0	1.5	3.0	2.5	2.0	2.0
D83-341	1.0	1.5	1.5	3.0	1.5	2.0	2.0
D83-493	1.0	1.5	2.0	3.0	2.0	2.0	2.0
D84-7174	1.0	1.5	1.5	3.0	2.5	2.0	2.0
D84-7229	1.0	1.0	1.5	3.0	1.5	2.0	2.0
D85-7692	1.0	1.0	1.5	3.0	1.5	2.0	2.0
D85-8150	1.0	1.0	1.5	2.0	2.0	2.0	2.0
D85-B4	1.0	1.0	1.5	2.0	1.5	2.0	2.0
G82-2643	1.0	1.0	1.5	2.0	2.5	2.0	2.0
G83-12	1.0	1.0	1.5	2.0	1.5	2.0	2.0
G83-198	1.0	1.0	1.5	2.0	2.0	2.0	2.0
G83-635	1.0	1.5	1.5	2.0	2.5	2.0	2.0
G83-1243	1.0	1.0	1.5	2.0	2.5	2.0	2.0
G83-1362	1.0	1.0	1.5	3.0	1.5	2.0	2.0
N85-12	1.0	1.5	1.5	2.0	2.5	2.0	2.0
N85-130	1.0	1.0	1.5	2.0	2.5	2.0	2.0
N85-205	1.0	1.0	1.5	3.0	2.0	2.0	2.0
N85-234	1.0	1.0	1.5	4.0	2.0	2.0	2.0
N85-492	1.0	1.0	2.0	3.0	2.0	2.0	2.0
N85-571	1.0	1.5	2.0	2.0	3.0	2.0	2.0
N85-1088	1.0	1.5	1.5	2.0	2.0	2.0	2.0
Ok80-3015	1.0	2.0	2.0	3.0	2.5	2.0	2.0
R84-410	1.0	1.5	1.5	3.0	2.5	2.0	2.0
R85-48	1.0	1.0	1.5	2.0	2.0	2.0	2.0
R85-59S	1.0	1.0	1.5	3.0	2.5	2.0	2.0
R85-110S	1.0	1.0	1.5	3.0	2.0	2.0	2.0
R85-153S	1.0	1.0	1.5	2.0	1.5	2.0	2.0
S83-1085	1.0	1.5	1.5	3.0	2.5	2.0	2.0
S84-1576	1.0	1.0	1.5	3.0	2.0	2.0	2.0
S84-1876	1.0	1.5	1.5	2.0	2.5	2.0	2.0
SC84-340	1.0	1.0	1.5	3.0	2.0	2.0	2.0
SC84-730	1.0	1.0	1.5	2.0	2.0	2.0	2.0
SC84-1531	1.0	1.0	1.5	2.0	2.0	2.0	2.0
SC84-2800	1.0	1.5	1.5	3.0	2.0	2.0	2.0

UNIFORM GROUP VII

1987

	Variety or strain	Parentage	Generation composited
1.	Braxton	F59-1505 X [Bragg(3) X D60-7965]	F_5
2.	Gordon	Forrest X Pickett 71	F_5
3.	Thomas (G80-1413)	Centennial X F71-1138	F_6
4.	G80-1011	Wright X Braxton	F_6
5.	N82-1933	Wright X N72-3148	F_7
6.	R82-368	Centennial X Ransom	F_5
7.	Au82-204	N73-693 X F76-8757	F_6
8.	F83-1918	Bedford X Kirby	F_6
9.	G81-1949	D74-7741 X Braxton	F_6
10.	Au82-211	N73-693 X F76-8757	F_6
11.	F83-1960	Bedford X Kirby	F_6
12.	G82-2933	D74-7741 X F76-8757	F_6

Background of breeding lines used as parents:

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

D60-7965 is a high protein selection from a cross of an F_5 line from 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 1975-1977.

N72-3148 is a selection from D67-B5 X N64-2451 which was evaluated in Uniform Group VI 1976-1978.

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.

Uniform Group VII nurseries were planted at 26 locations. Data from 23 locations are summarized in Tables 43-49. Table 43 gives a general summary of performance with seed yield summarized by production areas. Information is also presented on protein and oil percentages, general agronomic characteristics and reaction to nematodes and diseases. Tables 44-49 report data from individual locations.

Strains were evaluated for reaction to the two species of root-knot nematode in the greenhouse at the University of Georgia. Nine entries were rated resistant to M. incognita and three entries were considered resistant to both M. incognita and M. arenaria. A rating of 3 is considered adequate for protection in the field. Strains were evaluated for SCN races 3 and 4 in the greenhouse at Jackson, Tennessee. Two entries were resistant to races 3 and 4. Lance nematodes were present in the field where the late planting was made at Hartsville, South Carolina. Distinct differences were noted among strains and general agreement was noted between infection score and seed yield. Strains receiving a low infection score were well nodulated, while strains receiving a high infection score had no nodules. There was also agreement between infection scores and protein content of the seed. Au82-204, which received a score of 1, had a seed yield of 37.5 bushels per acre, while Braxton which had an infection score of 3.3 had a seed yield of 22.6 bushels per acre. Strains were rated for frogeye infection at Tallassee, Alabama and Quincy, Florida. Infection seemed to be somewhat higher at Tallassee than at Quincy, but there was agreement as to strains having low infection scores. Four strains appeared to have a good level of resistance. Strains were rated for stem canker development in the nursery at Beaumont, Texas with scores ranging from 0 - 5.2 on a 0 - 9 basis. Seven entries had scores of 2 or lower.

Four entries have been evaluated on a regional basis for three years. G80-1413 has been named Thomas and released for production. It will replace Gordon as a check variety. Three entries have been evaluated two years and three entries were evaluated one year. Of the strains evaluated three years, R82-368 has given good seed yields, especially in the Southeast and Delta and West regions.

Table 43 - General summary of performance for the strains in Uniform Group VII, 1987

	No. of locations	Braxton	Gordon	Thomas (G80-1413)	G80-1011	N82-1933
Seed yield - 1987						
East Coast	6	30.6	32.6	32.7	33.2	29.9
Southeast	8	37.0	35.8	37.6	38.9	39.9
Upper & Central South	2	30.5	28.8	26.0	32.2	26.8
Delta & West	7	32.3	33.7	37.2	38.1	40.4
1986-87						
East Coast		32.9	35.6	37.3	36.5	32.5
Southeast		33.1	36.9	38.0	38.2	39.7
Upper & Central South		35.9	33.5	32.7	38.4	33.4
Delta & West		34.9	34.5	38.3	40.5	41.5
1985-87						
East Coast		32.3	33.0	34.7	34.1	32.2
Southeast		37.0	37.1	38.4	39.1	40.2
Upper & Central South		36.9	34.7	33.5	38.8	34.2
Delta & West		34.1	33.6	37.0	38.8	40.4
Oil Content - 1987		19.1	19.7	18.4	19.9	20.3
1986-87		19.8	20.6	19.1	20.5	21.0
1985-87		19.8	20.5	19.1	20.5	21.0
Protein Content - 1987		41.7	40.8	41.8	40.6	40.9
1986-87		41.6	40.3	41.9	40.7	40.6
1985-87		41.8	40.7	42.2	40.9	41.0
Seed size		14.7	11.3	14.0	14.0	14.4
Maturity index		10-22	-2	+2	-1	+2
Height		37	35	34	36	34
Seed quality		1.9	1.9	1.7	1.7	1.7
M. incognita		0.8	1.0	1.5	1.3	1.5
M. arenaria		3.8	3.0	4.8	4.0	5.0
SCN race 3		S	R	R	S	S
SCN race 4		S	S	S	S	S
Lance nematode		3.3	2.0	3.2	4.2	2.3
Flower color		P	W	P	P	P
Pubescence color		T	G	T	T	T
Pod wall color		T	T	T	T	T
Stem canker		0.3	4.8	0	1.7	4.0
Frogeye		2.7	3.0	3.7	3.7	1.3

Table 43 - (continued)

	R82-368	Au82-204	F83-1918	G81-1949	Au82-211	F83-1960	G82-2933
Seed yield - 1987							
East Coast	33.9	36.4	31.0	32.8	35.7	30.7	33.3
Southeast	40.7	40.6	34.9	36.2	40.9	35.7	37.3
Upper & Central South	30.4	21.3	33.1	28.9	29.3	32.4	28.1
Delta & West	41.1	40.8	35.1	37.1	44.5	33.2	36.6
1986-87							
East Coast	37.2	39.2	36.9	36.4			
Southeast	40.1	39.8	38.1	39.0			
Upper & Central South	36.0	31.2	37.0	39.4			
Delta & West	41.2	40.5	37.6	37.9			
1985-87							
East Coast	34.7						
Southeast	41.2						
Upper & Central South	36.9						
Delta & West	41.4						
Oil Content - 1987	20.1	20.9	19.3	19.8	20.8	19.9	19.9
1986-87	20.9	21.3	20.0	20.3			
1985-87	21.0						
Protein Content - 1987	41.1	41.1	41.9	41.3	41.3	40.2	41.6
1986-87	40.9	41.4	41.5	41.0			
1985-87	41.3						
Seed size	16.3	15.6	11.1	11.6	15.8	10.3	12.7
Maturity index	+2	-1	0	+1	-2	0	-1
Height	37	31	34	37	32	35	34
Seed quality	1.6	1.8	1.8	1.8	1.8	2.0	1.7
M. incognita	4.2	3.5	1.0	1.3	4.8	1.0	1.8
M. arenaria	5.0	4.0	2.0	3.8	5.0	2.8	4.8
SCN race 3	S	R	R	R	h	R	R
SCN race 4	S	S	R	S	S	R	S
Lance nematode	1.8	1.0	4.2	3.0	1.3	4.3	1.3
Flower color	P	W	P	W	W	W	W
Pubescence color	T	T	T	T	T	T	T
Pod wall color	T	T	T	T	T	T	T
Stem canker	2.7	1.3	4.0	2.0	0.7	5.2	2.0
Frogeye	1.0	1.0	4.7	3.0	1.0	3.0	4.0

Table 44 - Seed yield, in bushels per acre, for the strains in Uniform Group VII, 1987

Location	Braxton	Gordon	Thomas (G80-1413)	G80-1011	N82-1933	R82-368	Au82-204
			EAST COAST				
Kinston, NC	22.9	25.0	23.2	26.5	29.0	24.3	24.9
Clinton, NC	32.1	35.9	29.8	35.4	35.8	29.9	37.1+
Florence, SC (A)	31.0	32.9	33.6	37.2	34.1	38.9	35.1
Florence, SC (B)	38.4	36.7	40.3	37.2	37.7	40.1	39.1
Hartsville, SC (A)	36.3	35.9	41.4	38.4	27.6-	38.0	44.9+
Hartsville, SC (B)	22.6	28.9+	28.1	24.4	15.0-	32.4+	37.5+
Mean	30.6	32.6	32.7	33.2	29.9	33.9	36.4
			SOUTHEAST				
Blackville, SC	39.4	37.4	40.9	38.4	36.3	37.8	35.2
Tallassee, AL	34.7	35.1	33.6	33.9	48.3+	51.3+	51.6+
Tifton, GA	49.3	45.2	45.6	55.5	48.7	50.3	48.4
Marianna, FL	39.3	38.3	38.3	41.3	35.8	25.2-	38.3
Quincy, FL	31.1	36.1	36.2	36.0	42.2	40.7	37.4
Jay, FL	34.5	27.5-	35.6	30.1	42.2+	50.6+	46.2+
Fairhope, AL	39.2	38.2	38.7	43.8+	41.1	37.3	36.5
Baton Rouge, LA	28.4	28.3	32.1	32.1	24.2	32.2	30.9
Mean	37.0	35.8	37.6	38.9	39.9	40.7	40.6
			UPPER AND CENTRAL SOUTH				
Calhoun, GA	36.5	34.6	30.6-	39.7	33.2	33.3	20.1-
Clemson, SC	24.4	22.9	21.3	24.6	20.4	27.4	22.5
Mean	30.5	28.8	26.0	32.2	26.8	30.4	21.3
			DELTA AND WEST				
Stoneville, MS (A)	30.5	34.9	36.9	30.5	40.7+	36.3	42.6+
Stoneville, MS (B)	21.3	13.4	27.4	29.9	34.2+	29.2	26.7
Stuttgart, AR	33.9	37.8	39.8+	41.0+	47.2+	44.6+	49.3+
Rohwer, AR	26.2	35.2+	29.8	32.4+	35.4+	37.5+	42.6+
St. Joseph, LA	38.0	38.5	38.8	39.8	43.3+	42.9	39.8
Bossier City, LA	55.9	65.6	62.5	66.4	63.8	68.6	46.4
Beaumont, TX	20.6	11.0-	25.2+	26.6+	18.2	28.4+	38.2+
Mean	32.3	33.7	37.2	38.1	40.4	41.1	40.8

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

Table 44 - (continued)

Location	F83-1918	G81-1949	Au82-211	F83-1960	G82-2933	L.S.D. (.05)	C.V. (%)
			EAST COAST				
Kinston, NC	26.3	20.2	20.7	23.9	20.0	N.S.	21
Clinton, NC	35.5	30.6	34.1	34.8	37.7+	4.2	7
Florence, SC (A)	33.4	39.4	39.6	32.5	32.7	N.S.	8
Florence, SC (B)	36.3	38.7	40.3	34.1	34.8	N.S.	10
Hartsville, SC (A)	35.2	40.3	44.7+	36.9	41.0	7.6	12
Hartsville, SC (B)	19.0	27.3	34.5+	21.8	33.3+	5.6	12
Mean	31.0	32.8	35.7	30.7	33.3		
			SOUTHEAST				
Blackville, SC	36.3	39.3	33.0-	38.3	39.0	4.9	8
Tallassee, AL	36.7	36.8	50.8+	39.8	33.2	6.9	10
Tifton, GA	47.5	46.8	41.4	49.2	44.5	N.S.	9
Marianna, FL	30.7-	36.3	36.3	30.7-	39.8	8.3	14
Quincy, FL	34.4	31.6	46.0	36.4	39.5	10.2	12
Jay, FL	31.5	29.3	44.7+	37.4	30.8	6.8	11
Fairhope, AL	38.0	38.2	41.4	34.1-	36.3	4.3	7
Baton Rouge, LA	24.0	31.4	33.4	19.5	35.6	-	9
Mean	34.9	36.2	40.9	35.7	37.3		
			UPPER AND CENTRAL SOUTH				
Calhoun, GA	36.5	34.0	29.0-	35.1	34.8	5.6	10
Clemson, SC	29.7	23.8	29.6	29.7	21.3	N.S.	18
Mean	33.1	28.9	29.3	32.4	28.1		
			DELTA AND WEST				
Stoneville, MS (A)	35.8	35.5	49.9+	37.9+	41.2+	7.3	11
Stoneville, MS (B)	17.6	32.9+	34.6+	19.3	29.7	9.3	21
Stuttgart, AR	46.0+	40.4+	51.5+	40.3+	43.4+	5.6	8
Rohwer, AR	30.3	28.3	46.3+	31.8+	34.7+	5.1	9
St. Joseph, LA	41.6	38.1	43.6+	37.0	40.9	4.9	7
Bossier City, LA	64.7	62.5	48.4	57.2	46.0	15.3	15
Beaumont, TX	9.6-	21.8	37.4+	9.1-	20.0	4.4	12
Mean	35.1	37.1	44.5	33.2	36.6		

Table 45 - Chemical composition and seed size for the strains in Uniform Group VII, 1987

Location	Braxton	Gordon	Thomas (G80-1413)	G80-1011	N82-1933	R82-368
			OIL PERCENTAGE			
Kinston, NC	18.4	19.0	16.5	18.3	18.8	18.7
Blackville, SC (A)	18.9	20.1	18.6	20.1	20.3	19.1
Tallassee, AL	19.0	19.3	19.5	20.4	20.6	19.8
Quincy, FL	20.4	21.5	18.9	21.0	21.6	22.5
Jay, FL	21.3	21.1	19.9	21.9	22.4	22.6
Stoneville, MS (B)	18.1	18.8	17.8	19.5	20.2	19.7
Stuttgart, AR	18.2	18.8	17.7	19.1	18.1	18.3
Rohwer, AR	18.7	19.7	18.3	19.2	20.7	19.9
Mean	19.1	19.7	18.4	19.9	20.3	20.1
			PROTEIN PERCENTAGE			
Kinston, NC	42.1	41.0	41.8	42.0	42.0	40.8
Blackville, SC (A)	40.7	40.6	40.1	39.7	39.6	40.0
Tallassee, AL	43.6	42.6	43.2	41.8	42.0	42.8
Quincy, FL	42.0	40.3	42.7	41.0	40.7	40.8
Jay, FL	39.2	38.8	40.4	38.2	38.8	39.4
Stoneville, MS (B)	42.2	41.3	42.8	40.9	41.8	41.7
Stuttgart, AR	42.0	41.4	41.7	40.5	42.9	42.3
Rohwer, AR	42.0	40.3	41.3	40.8	39.7	41.0
Mean	41.7	40.8	41.8	40.6	40.9	41.1
			GRAMS PER 100 SEEDS			
Blackville, SC (A)	18.1	14.8	17.1	16.7	16.2	17.6
Tallassee, AL	14.2	10.7	12.3	13.0	14.9	15.6
Tifton, GA	17.4	12.3	16.1	15.7	15.3	17.3
Quincy, FL	14.5	12.7	14.3	16.1	15.2	18.6
Jay, FL	14.0	10.0	13.0	12.0	16.0	16.0
Stoneville, MS (B)	12.8	10.4	12.9	12.3	12.2	14.8
Stuttgart, AR	14.4	11.8	15.1	14.2	14.6	17.5
Rohwer, AR	13.2	10.3	12.7	12.8	11.9	14.5
Beaumont, TX	13.3	9.1	12.6	12.9	12.9	14.9
Mean	14.7	11.3	14.0	14.0	14.4	16.3

Table 45 - (continued)

Location	Au82-204	F83-1918	G81-1949	Au82-211	F83-1960	G82-2933
			OIL PERCENTAGE			
Kinston, NC	19.9	17.9	19.5	18.6	18.3	18.4
Blackville, SC (A)	20.6	19.0	20.1	21.4	20.0	20.4
Tallassee, AL	20.2	19.2	20.3	20.6	19.6	19.8
Quincy, FL	21.6	21.0	20.2	21.9	21.3	22.3
Jay, FL	22.5	20.4	20.2	22.9	21.1	21.1
Stoneville, MS (B)	20.5	18.9	20.3	20.6	19.5	19.0
Stuttgart, AR	20.2	18.3	18.8	19.9	19.4	18.9
Rohwer, AR	21.5	19.3	19.2	20.9	19.8	19.1
Mean	20.9	19.3	19.8	20.8	19.9	19.9
			PROTEIN PERCENTAGE			
Kinston, NC	42.1	41.8	43.0	41.9	40.2	41.8
Blackville, SC (A)	40.0	41.1	39.0	40.4	38.4	40.2
Tallassee, AL	43.7	44.4	42.5	44.3	42.8	42.4
Quincy, FL	42.2	41.7	41.7	41.7	40.0	41.1
Jay, FL	39.9	41.0	40.2	39.0	38.9	39.6
Stoneville, MS (B)	41.1	41.9	40.8	40.8	40.3	43.0
Stuttgart, AR	41.1	42.5	41.3	41.5	41.6	42.3
Rohwer, AR	38.6	40.7	41.5	40.4	39.5	42.6
Mean	41.1	41.9	41.3	41.3	40.2	41.6
			GRAMS PER 100 SEEDS			
Blackville, SC (A)	18.1	13.5	15.0	18.6	13.1	14.9
Tallassee, AL	15.2	10.8	11.4	15.4	10.1	11.8
Tifton, GA	15.8	12.3	13.7	14.3	11.6	13.8
Quincy, FL	15.3	12.1	11.5	17.0	11.6	14.5
Jay, FL	16.0	10.0	10.0	15.0	9.0	12.0
Stoneville, MS (B)	13.6	10.5	10.7	13.9	9.7	11.3
Stuttgart, AR	16.8	12.0	11.9	16.8	11.0	13.1
Rohwer, AR	14.7	10.0	10.0	14.9	9.4	12.1
Beaumont, TX	14.9	8.7	10.1	16.2	7.6	11.2
Mean	15.6	11.1	11.6	15.8	10.3	12.7

Table 46 - Relative maturity data, days earlier (-) or late (+) than Braxton, for the strains in Uniform Group VII, 1987

Location	Date planted	Braxton matured	Gordon	Thomas (G80-1413)	G80-1011	N82-1933	R82-368
			EAST COAST				
Florence, SC (A)	5-27	10-21	-4	+2	-3	+4	+4
Florence, SC (B)	6-22	10-28	-2	-1	-2	+2	+3
Hartsville, SC (A)	5-25	10-23	+4	0	-2	+2	+2
Mean	6-5	10-24	-1	0	-2	+3	+3
			SOUTHEAST				
Blackville, SC	5-18	10-27	-3	-1	-2	0	+2
Tallassee, AL	5-25	10-12	-1	-3	-1	+3	+3
Tifton, GA	5-25	10-15	-2	-1	-2	+3	+3
Marianna, FL	6-11	10-16	-4	-2	-2	+2	+1
Quincy, FL	5-20	10-14	-5	-3	-1	+2	+2
Jay, FL	6-1	10-16	-3	-1	-2	+3	+3
Fairhope, AL	6-26	10-18	-3	-2	-1	0	+1
Mean	6-1	10-17	-3	-2	-2	+2	+2
			UPPER AND CENTRAL SOUTH				
Calhoun, GA	5-12	10-21	0	+4	+1	+1	+3
Clemson, SC	5-12	10-27	-3	+1	-1	0	+2
Mean	5-12	10-24	-2	+3	0	+1	+3
			DELTA AND WEST				
Stoneville, MS (A)	5-21	10-24	-5	+3	-2	+1	+2
Stoneville, MS (B)	5-12	10-28	-6	-1	-1	0	+1
Stuttgart, AR	5-22	11-2	-3	-3	-3	-2	-1
Rohwer, AR	5-15	10-12	0	0	0	+1	+2
St. Joseph, LA	6-6	10-11	+3	+6	+4	+3	-2
Beaumont, TX	5-22	10-17	-8	0	0	+3	+3
Mean	5-21	10-21	-3	+1	0	+1	+1

Table 46 - (continued)

Location	Au82-204	F83-1918	G81-1949	Au82-211	F83-1960	G82-2933
			EAST COAST			
Florence, SC (A)	0	0	+1	-1	0	-1
Florence, SC (B)	+1	-1	+2	-2	0	-1
Hartsville, SC (A)	-2	0	0	-2	-2	-2
Mean	0	0	+1	-2	-1	-1
			SOUTHEAST			
Blackville, SC	-3	-1	0	-2	-2	-4
Tallassee, AL	+2	+1	+2	-1	+1	0
Tifton, GA	-4	+2	+1	-4	+2	-4
Marianna, FL	-3	0	+1	-3	-1	-2
Quincy, FL	0	-1	-1	-2	0	-2
Jay, FL	-1	-1	-1	-1	-1	-2
Fairhope, AL	-2	+1	+1	-2	-1	-2
Mean	-1	0	0	-2	0	-2
			UPPER AND CENTRAL SOUTH			
Calhoun, GA	0	+3	+1	0	0	+3
Clemson, SC	-2	0	0	-1	-2	-1
Mean	-1	+2	+1	-1	-1	-1
			DELTA AND WEST			
Stoneville, MS (A)	-3	-3	0	-2	-2	-4
Stoneville, MS (B)	-1	+2	+1	-8	+1	-6
Stuttgart, AR	-6	-5	-2	-5	-3	-7
Rohwer, AR	0	0	0	0	+1	0
St. Joseph, LA	+2	+5	+1	+1	+3	+3
Beaumont, TX	+3	-3	+2	+3	-3	0
Mean	-1	-1	0	-2	+1	+2

Table 47 - Plant height for the strains in Uniform Group VII, 1987

Location	Braxton	Gordon	Thomas (G80-1413)	G80-1011	N82-1933	R82-368
			EAST COAST			
Clinton, NC	51	46	42	44	42	46
Florence, SC (A)	37	37	33	38	35	37
Florence, SC (B)	27	31	28	28	25	29
Hartsville, SC (A)	33	32	36	37	35	39
Mean	37	37	35	37	34	38
			SOUTHEAST			
Blackville, SC	34	27	26	32	30	37
Tallassee, AL	38	36	34	35	35	35
Tifton, GA	33	28	28	30	29	36
Marianna, FL	28	26	28	27	27	32
Quincy, FL	29	30	29	30	29	35
Jay, FL	31	29	30	31	30	35
Fairhope, AL	27	26	26	28	27	31
Baton Rouge, LA	29	30	29	26	22	26
Mean	31	29	29	30	29	33
			UPPER AND CENTRAL SOUTH			
Calhoun, GA	40	39	36	38	37	38
Clemson, SC	44	37	41	41	39	42
Mean	42	38	39	40	38	40
			DELTA AND WEST			
Stoneville, MS (A)	47	45	43	45	43	46
Stoneville, MS (B)	26	23	25	27	27	29
Stuttgart, AR	47	43	40	44	40	43
Rohwer, AR	41	37	37	34	34	38
St. Joseph, LA	37	35	35	37	34	41
Bossier City, LA	34	33	33	36	30	34
Beaumont, TX	26	22	24	25	24	29
Mean	37	34	34	35	33	37

Table 47 - (continued)

Location	Au82-204	F83-1918	G81-1949	Au82-211	F83-1960	G82-2933
			EAST COAST			
Clinton, NC	44	42	44	41	44	40
Florence, SC (A)	29	36	37	31	35	30
Florence, SC (B)	23	27	29	24	28	24
Hartsville, SC (A)	51	37	34	33	38	37
Mean	37	36	36	32	36	33
			SOUTHEAST			
Blackville, SC	27	30	28	30	30	30
Tallassee, AL	32	34	37	33	35	31
Tifton, GA	30	32	33	29	34	29
Marianna, FL	25	29	28	28	30	26
Quincy, FL	21	23	30	24	25	27
Jay, FL	30	29	31	29	32	29
Fairhope, AL	24	27	27	27	25	25
Baton Rouge, LA	21	27	30	23	27	27
Mean	26	29	31	28	30	28
			UPPER AND CENTRAL SOUTH			
Calhoun, GA	28	34	39	36	37	36
Clemson, SC	34	39	46	36	41	40
Mean	31	37	43	36	39	38
			DELTA AND WEST			
Stoneville, MS (A)	39	45	46	43	43	43
Stoneville, MS (B)	22	21	27	23	23	23
Stuttgart, AR	39	43	48	41	42	44
Rohwer, AR	33	41	43	35	38	34
St. Joseph, LA	34	37	34	36	34	34
Bossier City, LA	22	33	33	32	32	28
Beaumont, TX	19	27	27	18	25	20
Mean	30	35	37	33	34	33

Table 48 - Lodging scores for the strains in Uniform Group VII, 1987

Location	Braxton	Gordon	Thomas (G80-1413)	G80-1011	N82-1933	R82-368
			EAST COAST			
Clinton, NC	3.0	3.0	3.0	3.0	3.0	3.0
Hartsville, SC (A)	2.0	2.2	2.3	2.7	2.2	2.3
			SOUTHEAST			
Blackville, SC	1.0	1.0	1.0	1.0	1.0	1.0
Tallassee, AL	1.8	1.5	1.8	2.0	1.8	1.8
Tifton, GA	1.6	1.1	1.3	1.2	1.3	1.5
Marianna, FL	1.2	1.0	1.0	1.0	1.3	1.0
Quincy, FL	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	2.0	1.0	1.3	1.3	2.3	2.7
Fairhope, AL	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, LA	1.7	1.3	1.3	1.0	1.0	1.0
			UPPER AND CENTRAL SOUTH			
Calhoun, GA	1.3	2.0	2.0	2.0	1.7	1.7
			DELTA AND WEST			
Stoneville, MS (A)	3.0	2.7	3.0	3.0	3.0	3.3
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Stuttgart, AR	1.6	3.6	2.9	2.5	1.8	1.3
Rohwer, AR	2.0	1.7	1.3	1.7	3.7	3.0
St. Joseph, LA	2.4	2.4	1.8	2.3	2.2	2.1
Bossier City, LA	1.0	1.0	1.0	1.0	1.0	1.0
Beaumont, TX	1.0	1.0	1.0	1.0	1.0	1.0

Table 48 - (continued)

Location	Au82-204	F83-1918	G81-1949	Au82-211	F83-1960	G82-2933
			EAST COAST			
Clinton, NC	3.0	2.0	3.0	3.0	3.0	3.0
Hartsville, SC (A)	1.3	2.3	2.8	1.7	2.2	2.7
			SOUTHEAST			
Blackville, SC	1.0	1.0	1.0	1.0	1.0	1.0
Tallassee, AL	1.3	1.5	2.5	1.3	1.3	1.3
Tifton, GA	1.1	1.2	1.5	1.1	1.4	1.1
Marianna, FL	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, FL	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	1.3	2.0	2.0	1.7	1.7	1.3
Fairhope, AL	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, LA	1.3	1.3	1.7	1.0	1.3	1.3
			UPPER AND CENTRAL SOUTH			
Calhoun, GA	1.0	1.0	2.3	1.3	2.0	2.0
			DELTA AND WEST			
Stoneville, MS (A)	2.0	3.0	3.7	3.0	3.0	2.7
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Stuttgart, AR	2.1	2.1	3.1	3.4	2.5	2.5
Rohwer, AR	1.0	2.7	3.7	1.3	2.0	1.3
St. Joseph, LA	2.0	1.9	2.7	2.4	1.8	2.1
Bossier City, LA	1.0	1.0	1.0	1.0	1.0	1.0
Beaumont, TX	1.0	1.0	1.0	1.0	1.0	1.0

Table 49 - Seed quality scores for the strains in Uniform Group VII, 1987

Location	Braxton	Gordon	Thomas (G80-1413)	G80-1011	N82-1933	R82-368
			EAST COAST			
Clinton, NC	1.0	1.5	1.5	1.0	1.0	1.5
			SOUTHEAST			
Blackville, SC	1.0	1.0	2.0	2.0	1.0	1.0
Tallassee, AL	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, GA	1.4	1.7	1.5	1.5	1.2	1.5
Quincy, FL	1.6	1.0	1.7	1.0	2.0	1.3
Jay, FL	2.0	3.0	2.0	3.0	2.0	2.0
Baton Rouge, LA	2.0	2.0	1.0	1.7	2.0	1.3
			UPPER AND CENTRAL SOUTH			
Calhoun, GA	3.0	3.0	3.0	3.0	3.0	3.3
			DELTA AND WEST			
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.3	2.0	2.0	2.0	2.0	2.0
Stuttgart, AR	2.0	2.0	2.0	2.0	1.8	2.0
Rohwer, AR	2.0	2.0	2.5	2.5	2.5	2.2
St. Joseph, LA	2.0	2.3	1.8	1.5	1.7	1.5
Beaumont, TX	1.5	2.5	1.2	1.2	1.5	1.0

Table 49 - (continued)

Location	Au82-204	F83-1918	G81-1949	Au82-211	F83-1960	G82-2933
			EAST COAST			
Clinton, NC	1.0	1.0	1.0	1.5	1.0	1.0
			SOUTHEAST			
Blackville, SC	2.0	1.0	2.0	2.0	2.0	1.0
Tallassee, AL	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, GA	1.5	1.8	1.4	1.4	1.8	1.4
Quincy, FL	2.0	2.0	1.3	2.0	1.7	1.3
Jay, FL	2.0	2.0	3.0	2.0	4.0	3.0
Baton Rouge, LA	1.3	1.3	2.0	1.3	2.3	2.0
			UPPER AND CENTRAL SOUTH			
Calhoun, GA	3.7	3.0	2.3	3.0	3.0	3.0
			DELTA AND WEST			
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.3	2.0
Stuttgart, AR	2.0	2.0	2.0	2.0	2.0	2.0
Rohwer, AR	2.2	2.0	2.3	2.5	2.3	2.0
St. Joseph, LA	1.5	2.2	1.7	1.7	2.0	1.5
Beaumont, TX	1.2	2.0	1.3	1.3	2.0	1.5

PRELIMINARY GROUP VII

1987

Preliminary Group VII nurseries which included Braxton, Centennial and D79-6162 along with 33 experimental strains was grown at nine locations. Parentage for each of the strains within the group is reported in Table 50. A general summary of performance is reported in Table 51 which includes information on seed yield, agronomic characteristics, protein and oil percentage, and reaction to nematodes, soybean looper, and diseases. Performance data from individual locations are reported in Tables 52-56.

D79-6162 which has been released as Sharkey was included as an additional check. Its vigorous growth characteristics might fit it into areas where Group VII is grown somewhat better than Centennial. Braxton had a mean seed yield of 30.0 bushels per acre and Sharkey a mean seed yield of 39.0 bushels per acre. Seed yield differences were significant at the 5% level of confidence at each of the nine locations. Nine strains had overall mean seed yields significantly higher than that for Braxton, but only two strains ranked slightly above Sharkey in overall mean seed yield.

Plantings were made in the greenhouse at the University of Georgia to evaluate strains for reaction to the two root-knot nematodes M. incognita and M. arenaria. Twenty-five entries were rated resistant to M. incognita and five entries were rated resistant to both M. incognita and M. arenaria. A rating of 3 was considered adequate to give field resistance to M. arenaria. A field planting was also made near the Edisto Station at Blackville, South Carolina on soil infested with M. arenaria. There was good agreement among strains receiving low ratings under the two evaluation systems. Strains were evaluated for reaction to SCN races 3 and 4 in the greenhouse at Jackson, Tennessee. Fourteen strains were rated resistant to SCN race 3, and seven of these were also resistant to race 4. Plantings were made in the field cage at Stoneville to rate for feeding by soybean looper. Two strains had low feeding scores. The plantings at Beaumont, Texas were rated for development of stem canker on a scoring basis of 0 - 9. Sixteen of the strains received low ratings. There were four strains that received scores of 6 or higher.

Five strains, Au83-1018, Au84-1855, G83-559, N85-574, and SC84-818, are being suggested to be advanced for further testing in Uniform Group VII.

Table 50 - Parentage of strains grown in Preliminary Group VII, 1987

	Variety or strain	Parentage	Generation composited
1.	Braxton	F59-1505 X (Bragg(3) X D60-7965)	F_5
2.	Centennial	D64-4636 X tawny pub. Pickett 71 type	F_5
3.	Sharkey (D79-6162)	Tracy X Centennial	F_5
4.	Au82-1653	N73-693 X F76-8846	F_6
5.	Au83-1018	Wright X F76-8846	F_6
6.	Au84-1855	N77-940 X Johnston	F_7
7.	Au84-1861	N77-940 X Johnston	F_7
8.	Au84-1875	N77-940 X Johnston	F_7
9.	Au84-1919	N77-940 X Johnston	F_7
10.	D82-4980	Tracy-M X sel (D71-9241 X D75-10169)	F_5
11.	D82-5173	Tracy-M X sel (D71-9241 X D75-10169)	F_5
12.	D82-6212	D77-12480 X sel (Hardee X PI 227687)	F_5
13.	D84-6773	D79-9736 X sel (D63-8232 X D77-12480)	F_5
14.	D84-6779	D79-9736 X sel (D63-8232 X D77-12480)	F_5
15.	D84-7479	D77-6103 X D77-7769	F_5
16.	F85-4742	Bedford X Kirby	F_6
17.	G83-559	D77-6103 X F77-6903	F_6
18.	G83-615	D77-6103 X F77-6903	F_6
19.	G83-622	D77-6103 X F77-6903	F_6
20.	G83-636	D77-6103 X F77-6903	F_6
21.	G83-969	Young X F77-6903	F_6
22.	G83-1133	D77-6103 X F77-6903	F_6
23.	N85-398	N77-174 X D76-9665	F_6
24.	N85-405	Young X Jeff	F_6
25.	N85-574	N77-179 X Johnston	F_6
26.	N85-600	N79-606 X Forrest	F_6
27.	N85-661	N79-606 X Forrest	F_6
28.	N85-662	N79-606 X Forrest	F_6
29.	N85-1081	RS_{III} Cycle 3 (Sel.)	F_6
30.	R84-3387	Jeff X Davis	F_6
31.	R85-136S	Wright X Jeff	F_5
32.	R85-140S	Wright X Jeff	F_5
33.	SC83-105	F74-1349 X Centennial	F_8
34.	SC84-371	Jeff X Govan	F_5
35.	SC84-623	D76-9665 X Johnston	F_5
36.	SC84-818	Centennial X Young	F_5

Table 51.- General summary of performance for the strains in Preliminary Group VII, 1987

Strain	Seed yield	Mat. index	Ht.	Percent Oil	Percent Protein	M. incognita	M. arenaria	SCN race 3	SCN race 4	Soybean looper	Stem canker
Braxton	30.0	10-20	38	19.4	41.7	1.0	3.0	S	S	4.0	1.3
Centennial	34.1	-3	34	19.3	42.9+	1.0	4.7	R	S	5.0	3.8
Sharkey	39.0+	-2	37	18.6-	42.2	3.0	5.0	R	S	4.0	0.0
Au82-1653	31.9	-1	34	19.4	42.3	1.0	3.3	S	S	4.0	4.6
Au83-1018	39.3+	-1	27	19.9	41.1	1.1	3.4	S	S	4.0	1.5
Au84-1855	36.5+	-1	27	20.4+	39.3-	3.7	4.3	S	S	4.0	3.3
Au84-1861	36.6+	-1	29	20.7+	40.5-	2.1	3.4	S	S	4.0	5.8
Au84-1875	35.6	-1	27	19.7	41.3	2.3	3.3	S	S	4.0	5.0
Au84-1919	35.6	0	27	18.9	40.7	2.4	5.0	S	S	4.0	3.8
D82-4980	34.3	-1	29	18.1-	43.1+	3.0	5.0	S	S	1.0	0.0
D82-5173	30.3	0	33	18.2-	42.7	2.1	4.0	S	S	2.0	1.5
D82-6212	28.1	-1	39	17.9-	42.7	3.3	4.3	S	S	3.0	0.0
D84-6773	23.0	-1	29	19.2	41.6	4.0	4.7	S	S	4.0	0.5
D84-6779	27.5	+1	35	18.5-	41.1	3.7	4.7	S	S	4.0	0.0
D84-7479	28.6	-3	36	19.2	41.4	1.3	4.7	R	R	4.0	3.5
F85-4742	29.8	0	36	19.3	40.8	1.0	3.0	R	R	4.0	6.0
G83-559	36.0+	0	33	18.7-	41.7	1.0	3.3	R	R	4.0	1.5
G83-615	34.0	+1	36	18.5-	40.2-	1.0	4.3	R	R	4.0	1.3
G83-622	34.9	0	35	19.2	41.1	1.0	3.7	R	R	4.0	1.8
G83-636	34.5	0	36	19.6	41.1	1.0	4.7	R	S	4.0	1.5
G83-969	36.7+	-1	40	19.3	40.1-	1.0	3.7	R	S	4.0	0.5
G83-1133	32.7	-1	36	19.4	42.6	1.3	4.3	h	S	4.0	2.8
N85-398	33.9	-3	36	20.0	41.1	1.5	4.0	S	S	4.0	8.0
N85-405	32.8	-1	37	19.9	41.1	1.3	4.7	S	S	4.0	7.0
N85-574	39.5+	-2	29	21.5+	40.7	3.7	5.0	S	S	4.0	3.8
N85-600	33.2	-1	36	19.7	42.6	2.0	5.0	R	S	4.0	2.0
N85-661	32.8	-10	26	20.1+	43.4+	2.0	5.0	R	S	3.0	0.0
N85-662	36.4+	-1	35	20.6+	42.5	3.0	5.0	S	S	4.0	2.0
N85-1081	34.2	0	39	19.8	43.5+	3.0	5.0	S	S	3.0	0.5
R84-3387	34.2	-1	38	19.9	41.3	1.3	4.5	S	S	4.0	4.5
R85-136S	30.6	-2	34	19.5	41.4	1.0	3.0	R	R	4.0	6.5
R85-140S	34.5	-2	36	20.3+	40.9	2.0	3.7	R	R	4.0	4.0
SC83-105	30.8	-3	35	19.2	41.8	1.0	3.7	S	S	4.0	4.0
SC84-371	30.9	0	36	18.9	43.1+	1.0	3.0	R	S	4.0	2.3
SC84-623	29.8	-1	34	20.0	41.2	1.3	4.3	S	S	4.0	3.0
SC84-818	38.0+	+1	38	19.7	42.2	1.7	4.7	S	S	4.0	3.0
L.S.D.(.05)	5.8			0.6	1.0						
C.V.	19%			3%	2%						

+ or - designations refer to differences from Braxton.

Table 52 - Seed yield, in bushels per acre, for the strains in Preliminary Group VII, 1987

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	34.1	28.5	43.9	27.5	30.3	25.4	29.0	27.3	24.1
Centennial	33.4	38.3+	43.7	30.8	36.9+	32.1+	37.8+	38.5+	15.5-
Sharkey	32.0	24.6	52.7	39.4+	36.9+	46.1+	37.4+	46.4+	35.2+
Au82-1653	34.1	38.7+	51.5	28.9	33.0	32.7+	31.3	16.7-	20.1
Au83-1018	32.3	31.6	50.4	41.3+	50.6+	35.9+	38.1+	38.5+	35.2+
Au84-1855	37.1	32.3	46.7	43.7+	36.9+	41.0+	38.3+	29.8	22.9
Au84-1861	35.1	35.4	55.4+	47.3+	42.4+	36.1+	39.2+	25.7	12.7-
Au84-1875	46.2+	23.6	44.4	37.0	45.7+	42.2+	42.0+	26.0	13.5-
Au84-1919	36.7	38.0+	44.2	38.2+	40.7+	39.5+	36.4+	25.9	20.7
D82-4980	30.1	31.0	41.7	31.4	36.3	40.0+	35.9+	33.3	29.2
D82-5173	32.0	22.2	43.4	27.5	27.5	36.4+	33.6	31.6	18.1
D82-6212	27.7	21.7	36.7	26.3	26.4	28.0	30.6	30.3	25.2
D84-6773	26.1-	3.1-	23.8-	26.1	33.0	15.7-	17.7-	31.2	30.1
D84-6779	27.5	6.5-	27.3-	30.1	27.5	28.9	29.6	31.2	39.2+
D84-7479	28.6	35.3	42.6	33.3	23.1-	30.7	31.8	18.2-	14.2-
F85-4742	30.7	31.0	41.7	37.3	38.0+	33.0+	35.4+	16.9-	4.6-
G83-559	32.6	35.3	43.6	34.1	35.8	37.2+	38.6+	29.1	37.5+
G83-615	36.5	31.7	44.0	31.0	33.6	32.2+	36.1+	31.9	28.7
G83-622	32.0	38.9+	40.4	37.4	35.8	29.0	37.0+	28.6	35.4+
G83-636	37.1	34.6	34.7	41.6+	31.9	30.6	35.5+	34.8	29.4
G83-969	35.5	40.4+	41.9	37.7+	38.0+	33.3+	33.9	34.1	35.6+
G83-1133	35.3	33.4	45.3	27.1	30.3	35.2+	37.2+	33.0	17.6-
N85-398	38.9	37.3	42.8	37.2	41.8+	40.8+	39.1+	20.8	6.4-
N85-405	30.0	34.4	45.0	42.2+	37.4+	31.9+	38.7+	31.3	6.2-
N85-574	43.4+	31.0	44.2	45.6+	37.4+	50.0+	44.2+	37.5+	22.4
N85-600	37.7	36.3	49.6	31.9	34.1	34.5+	40.5+	10.9-	23.6
N85-661	36.2	19.3	43.5	40.5+	25.9	44.6+	47.3+	24.4	13.4-
N85-662	33.5	33.2	40.3	41.7+	41.3+	41.6+	44.9+	23.3	27.4
N85-1081	32.7	34.3	35.8	32.1	44.0+	28.0	32.7	32.7	35.4+
R84-3387	36.8	33.8	44.3	37.2	41.8+	37.2+	39.5+	24.9	12.3-
R85-136S	31.7	40.8+	44.8	29.7	29.7	29.4	30.2	34.8	4.6-
R85-140S	37.6	38.5+	46.2	31.9	40.7+	37.0+	33.1	32.3	13.3-
SC83-105	31.4	34.6	41.4	26.6	29.7	34.2+	34.9+	31.8	12.3-
SC84-371	35.2	32.1	36.8	26.0	33.0	26.5	33.2	35.9	19.1
SC84-623	26.3-	38.2+	40.0	29.7	27.0	33.2+	33.3	23.0	17.9
SC84-818	35.5	38.3+	42.2	47.7+	47.9+	39.1+	35.2+	37.2+	18.5
L.S.D.(.05)	6.8	9.2	10.7	10.0	6.3	5.6	5.4	9.0	6.3
C.V.	10%	14%	12%	14%	9%	8%	7%	15%	14%

Table 53 - Oil percentages for the strains in Preliminary Group VII, 1987

Strain	Clinton, NC	Blackville SC	Tallassee, AL	Jay, FL	Stoneville, MS (B)
Braxton	18.5	19.5	18.9	21.1	18.9
Centennial	18.0	19.0	18.8	21.3	19.6
Sharkey	17.2	17.2	18.3	21.1	19.3
Au82-1653	18.3	19.4	19.4	20.8	19.3
Au83-1018	19.1	19.6	19.5	21.6	19.8
Au84-1855	18.3	21.0	20.6	22.0	20.1
Au84-1861	19.3	20.9	20.3	22.4	20.6
Au84-1875	18.9	20.3	19.5	21.2	18.7
Au84-1919	15.5	19.8	19.8	20.4	19.2
D82-4980	17.9	17.6	17.5	20.5	16.9
D82-5173	17.6	17.9	17.6	19.9	17.9
D82-6212	16.9	18.2	17.7	19.4	17.1
D84-6773	17.5	19.6	19.1	20.5	19.1
D84-6779	17.2	19.1	18.2	20.0	17.8
D84-7479	18.0	19.1	19.5	20.0	19.3
F85-4742	18.6	19.4	19.2	20.9	18.5
G83-559	17.5	19.2	18.1	19.9	18.6
G83-615	17.0	18.4	17.9	20.8	18.6
G83-622	17.9	19.8	18.6	21.2	18.7
G83-636	18.8	20.4	19.2	20.5	19.4
G83-969	18.0	19.8	19.6	20.1	18.9
G83-1133	18.5	19.8	18.7	20.8	19.4
N85-398	18.2	20.1	20.2	21.9	19.7
N85-405	18.8	20.6	19.8	20.8	19.3
N85-574	21.2	21.0	21.0	23.2	21.0
N85-600	18.9	20.3	18.8	21.5	19.0
N85-661	19.1	20.1	20.3	21.5	19.4
N85-662	20.4	20.1	19.8	21.9	20.6
N85-1081	18.4	20.2	19.3	21.6	19.6
R84-3387	18.5	19.8	19.8	22.1	19.2
R85-136S	18.1	19.4	19.3	21.2	19.3
R85-140S	19.3	20.7	20.1	21.6	20.0
SC83-105	17.9	19.2	19.5	20.7	18.8
SC84-371	16.8	19.5	19.0	20.5	18.6
SC84-623	18.5	20.0	19.9	22.2	19.5
SC84-818	18.4	19.6	19.6	21.2	19.5

Table 53 - Protein percentages for the strains in Preliminary Group VII, 1987

Strain	Clinton, NC	Blackville, SC	Tallassee, AL	Jay, FL	Stoneville, MS (B)
Braxton	42.2	40.1	43.2	40.4	42.7
Centennial	42.0	41.6	45.5	41.5	44.1
Sharkey	42.8	42.0	43.3	40.4	42.4
Au82-1653	42.8	41.9	43.8	40.5	42.5
Au83-1018	41.6	40.9	42.0	38.8	42.1
Au84-1855	40.5	38.3	40.2	38.5	39.1
Au84-1861	41.3	40.6	42.0	38.1	40.7
Au84-1875	41.4	40.2	43.0	39.5	42.4
Au84-1919	43.8	39.1	41.3	38.8	40.6
D82-4980	41.2	42.8	44.8	41.8	45.0
D82-5173	43.1	42.3	43.3	41.4	43.5
D82-6212	42.7	41.0	44.3	40.9	44.7
D84-6773	41.5	41.3	42.4	39.7	42.9
D84-6779	40.7	40.1	42.2	39.6	43.0
D84-7479	41.2	40.5	43.1	40.7	41.5
F85-4742	41.1	39.0	42.5	39.4	42.0
G83-559	42.7	39.9	43.5	40.6	42.0
G83-615	40.2	38.5	42.5	39.1	40.8
G83-622	40.7	39.5	43.4	39.7	42.4
G83-636	40.7	39.4	43.5	40.7	41.3
G83-969	41.6	38.7	41.0	39.1	40.2
G83-1133	42.3	40.3	45.1	42.0	43.5
N85-398	41.7	39.9	41.4	40.2	42.5
N85-405	41.0	40.5	42.6	40.3	41.5
N85-574	40.9	40.5	42.0	38.8	41.4
N85-600	43.4	40.4	44.0	40.7	44.3
N85-661	43.7	44.1	45.3	40.9	43.2
N85-662	43.9	40.6	44.2	41.1	42.9
N85-1081	43.7	45.7	44.6	41.0	42.4
R84-3387	42.2	41.3	42.4	39.3	41.3
R85-136S	41.8	40.3	42.7	40.1	42.1
R85-140S	40.7	40.4	43.3	39.0	40.9
SC83-105	41.6	41.2	43.3	40.7	42.3
SC84-371	44.1	40.5	44.1	42.6	44.1
SC84-623	41.4	40.0	42.8	39.7	42.1
SC84-818	43.1	41.0	44.0	40.3	42.8

Table 55 - Plant height for the strains in Preliminary Group VII, 1987

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	48	35	36	37	33	44	48	32	27
Centennial	38	28	34	36	33	41	45	27	22
Sharkey	42	29	40	41	31	44	46	34	28
Au82-1653	44	30	37	37	31	40	41	21	22
Au83-1018	36	19	28	29	29	25	36	21	18
Au84-1855	36	22	27	31	27	33	33	19	18
Au84-1861	38	24	32	29	30	35	34	22	21
Au84-1875	36	23	28	26	26	33	35	22	17
Au84-1919	38	18	30	27	25	32	36	18	16
D82-4980	30	24	30	30	29	37	35	27	21
D82-5173	38	31	34	34	32	39	39	30	24
D82-6212	48	30	36	36	36	49	48	35	28
D84-6773	30	27	29	29	31	32	33	27	23
D84-6779	38	31	32	36	30	45	40	33	32
D84-7479	52	27	36	40	32	40	47	27	20
F85-4742	42	32	38	41	35	42	43	24	24
G83-559	42	29	35	36	30	39	41	25	21
G83-615	40	31	38	38	32	41	44	31	29
G83-622	44	32	36	37	35	39	41	24	26
G83-636	40	26	34	37	38	41	42	32	30
G83-969	46	37	37	42	33	50	51	33	27
G83-1133	44	26	38	38	41	36	45	29	23
N85-398	46	33	34	38	37	39	51	24	22
N85-405	48	32	34	42	32	43	44	30	26
N85-574	38	21	28	34	28	36	35	26	18
N85-600	48	32	38	40	33	40	47	24	22
N85-661	36	20	26	31	22	28	33	19	17
N85-662	48	29	36	39	34	37	45	25	22
N85-1081	50	30	36	43	33	49	51	30	30
R84-3387	48	34	36	42	32	42	48	30	29
R85-136S	44	24	34	38	34	41	44	28	19
R85-140S	46	33	34	37	35	43	46	29	25
SC83-105	46	31	38	37	32	41	44	27	22
SC84-371	44	32	34	34	34	41	42	30	29
SC84-623	44	26	32	38	31	40	43	24	26
SC84-818	44	34	34	37	39	47	48	35	26

Table 56 - Seed quality scores for the strains in Preliminary Group VII, 1987

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	1.5	1.0	1.5	2.0	2.0	2.5	2.0	2.0	1.3
Centennial	1.5	1.0	1.5	1.0	3.0	2.3	2.0	2.0	1.8
Sharkey	2.0	3.0	1.5	2.0	2.0	2.5	2.0	2.0	2.5
Au82-1653	1.5	2.0	1.5	1.0	3.0	2.5	2.0	2.0	1.8
Au83-1018	1.5	3.0	1.5	1.0	2.0	2.3	2.0	2.0	1.0
Au84-1855	1.5	2.0	1.5	1.0	3.0	2.0	2.0	2.0	1.5
Au84-1861	1.5	1.0	1.5	1.0	2.0	2.3	2.0	2.0	2.0
Au84-1875	1.0	2.0	1.5	1.0	2.0	2.5	2.0	2.0	1.8
Au84-1919	1.0	2.0	1.5	1.0	3.0	2.3	2.0	2.0	1.5
D82-4980	1.0	3.0	1.5	1.0	2.0	2.3	2.0	2.0	1.3
D82-5173	1.5	2.0	1.5	2.0	3.0	2.5	2.0	2.0	2.0
D82-6212	1.0	3.0	1.5	1.0	2.0	2.3	2.0	2.0	1.0
D84-6773	1.5	3.0	1.5	1.0	2.0	2.5	2.0	2.0	2.0
D84-6779	1.5	2.0	2.0	1.0	3.0	2.5	2.0	2.0	1.0
D84-7479	1.0	1.0	1.5	1.0	3.0	2.3	2.0	2.0	2.0
F85-4742	1.0	1.0	1.5	1.0	3.0	2.3	2.0	2.0	2.8
G83-559	1.0	1.0	1.5	1.0	3.0	2.0	2.0	2.0	1.0
G83-615	1.0	2.0	1.5	1.0	2.0	2.0	2.0	2.0	1.3
G83-622	1.0	1.0	1.5	1.0	2.0	2.0	2.0	2.0	1.0
G83-636	1.0	2.0	1.5	1.0	3.0	2.0	2.0	2.0	1.5
G83-969	1.0	2.0	1.5	1.0	3.0	2.3	2.0	2.0	1.3
G83-1133	1.5	2.0	1.5	1.0	2.0	2.0	2.0	2.0	2.0
N85-398	1.0	1.0	1.5	1.0	2.0	2.0	2.0	2.0	2.0
N85-405	1.5	1.0	1.5	1.0	2.0	2.3	2.0	2.0	2.3
N85-574	1.5	2.0	1.5	1.0	2.0	2.3	2.0	2.0	1.5
N85-600	1.0	1.0	1.5	1.0	2.0	2.5	2.0	2.0	1.5
N85-661	2.0	4.0	1.5	2.0	3.0	2.0	2.0	2.0	3.0
N85-662	1.5	2.0	1.5	1.0	2.0	2.3	2.0	2.0	1.5
N85-1081	1.0	1.0	1.5	1.0	2.0	2.0	2.0	2.0	1.0
R84-3387	1.5	3.0	1.5	1.0	2.0	3.0	2.0	2.0	2.0
R85-136S	1.0	2.0	1.5	2.0	2.0	2.5	2.0	2.0	2.3
R85-140S	1.5	1.0	1.5	1.0	3.0	2.5	2.0	2.0	1.8
SC83-105	1.5	2.0	1.5	1.0	3.0	2.0	2.0	2.0	1.5
SC84-371	1.0	1.0	1.5	1.0	2.0	2.5	2.0	2.0	1.0
SC84-623	1.5	1.0	1.5	2.0	3.0	2.3	2.0	2.0	1.5
SC84-818	1.0	1.0	1.5	1.0	2.0	2.0	2.0	2.0	1.3

UNIFORM GROUP VIII

1987

	Variety or strain	Parentage	Generation composited
1.	Kirby	Centennial X [Forrest X (Cobb X D68-216)]	F_6
2.	Hutton	F55-822 X (Roanoke X CNS-4)	F_6
3.	Co6738	Braxton X Co368	F_5
4.	SC82-1672	Coker 488 X Braxton	F_5
5.	Co82-622	Braxton X Co368	F_5
6.	F83-2048	Bedford X Kirby	F_6
7.	F83-2184	Bedford X Kirby	F_6
8.	F83-1648	Bedford X Kirby	F_5
9.	F83-5568	F77-1790 X [Forrest(3) X D77-12480]	F_4
10.	G82-2820	D74-7741 X F76-8757	F_6
11.	G82-3458	Braxton X Dowling	F_6
12.	SC83-1810	Foster X Ransom	F_5

Background of breeding lines used as parents:

D68-216 is a selection from Dyer X Bragg.

F55-822 is the parent line of Bragg.

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

F77-1790 is a selection from Centennial X [Forrest X (Cobb X D68-216)].

D77-12480 is a selection from Tracy X (Hill X PI 159925) which has the character for delayed flowering under short-day conditions.

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

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

Uniform Group VIII nurseries were planted at nineteen locations. Results of seventeen of these nurseries are summarized in Tables 57-63. Table 57 gives a general summary of seed yield, oil and protein percentage, general agronomic qualities, and reaction to nematodes and diseases. Data from individual locations are reported in Tables 58-63.

Kirby, Hutton, and Co6738 are included as checks. One strain, SC82-1672, has been evaluated three years, three strains have been evaluated two years, and five strains only one year.

Plantings were made in the greenhouse at the University of Georgia to evaluate strains for reaction to the two root-knot nematodes M. incognita and M. arenaria. Eleven of the entries were rated resistant to M. incognita. Kirby and Co6738 were rated resistant to both M. incognita and M. arenaria. Plantings were made in the greenhouse at Jackson, Tennessee to evaluate for reaction to two SCN races, 3 and 4. Eight entries were rated resistant to SCN race 3. Three strains were resistant to both races 3 and 4. Strains were rated for frogeye development in the plantings at Quincy, Florida. Kirby received a rating of 4.7 and SC83-1810 received a score of 1. Strains were rated for stem canker development at Beaumont, Texas. Hutton, considered to be susceptible to stem canker, received a rating of 6.2. Four strains received ratings of less than 1.

Table 57 - General summary of performance for the strains in Uniform Group VIII, 1987

	No. of locations	Kirby	Hutton	Co6738	SC82-1672	Co82-622	F83-2048
Seed Yield - 1987	17	29.2	30.1	35.3	33.8	38.4	31.7
1986-87		34.4	31.7	38.6	35.9	40.8	35.4
1985-87		33.9	31.2	38.1	36.0		
Oil Content - 1987		19.8	19.6	20.8	19.9	20.0	19.4
1986-87		20.2	19.9	21.2	20.5	20.5	19.7
1985-87		20.4	20.0	21.3	20.5		
Protein Content - 1987		41.1	42.6	40.1	40.7	40.4	41.8
1986-87		41.7	43.0	40.5	41.3	40.7	42.4
1985-87		41.7	43.0	40.5	41.3		
Seed size		11.6	14.5	13.0	15.3	12.8	10.9
Maturity index		10-23	-1	-1	+1	-1	-1
Height		30	32	33	33	34	36
Seed quality		1.8	1.8	1.5	1.7	1.3	2.2
M. incognita		1.7	1.3	1.1	1.0	0.8	0.5
M. arenaria		3.0	4.8	3.0	3.5	3.3	3.8
SCN race 3		R	S	R	S	R	R
SCN race 4		S	S	S	S	S	R
Frogeye 2		4.7	3.3	4.0	4.3	3.0	3.0
Flower color		P	P	P	P	W	P
Pubescence color		T	T	T	T	G	T
Pod wall color		T	T	T	T	T	T
Stem canker		3.2	6.2	0.7	0.3	0.7	5.7

Table 57 - (continued)

	F83-2184	F83-1648	F83-5568	G82-2820	G82-3458	SC83-1810
Seed Yield - 1987	30.5	32.5	29.3	33.9	33.8	34.7
1986-87	34.1					
1985-87						
Oil Content - 1987	19.6	20.3	19.4	20.2	20.2	20.6
1986-87	20.4					
1985-87						
Protein Content - 1987	40.4	41.8	41.7	41.7	41.0	41.3
1986-87	41.0					
1985-87						
Seed size	12.2	12.3	10.4	12.2	15.7	13.0
Maturity index	+2	-2	+2	-4	0	+1
Height	43	35	37	31	34	33
Seed quality	1.7	2.0	2.0	1.7	1.5	1.5
M. incognita	1.3	0.5	0.5	1.0	1.5	3.5
M. arenaria	4.0	4.0	3.5	4.3	3.8	5.5
SCN race 3	R	R	R	R	S	S
SCN race 4	R	R	S	S	S	S
Frogeye 2	3.7	4.0	4.3	4.3	3.3	1.0
Flower color	W	P	Seg.	W	P	P
Pubescence color	T	T	T	T	G	T
Pod wall color	T	T	T	T	T	T
Stem canker	3.2	3.3	4.0	1.7	0.7	2.5

Table 58 - Seed yield, in bushels per acre, for the strains in Uniform Group VIII, 1987

Location	Kirby	Hutton	Co6738	SC82-1672	Co82-622	F83-2048	F83-2184
Clinton, NC	30.1	27.8	31.9	26.8	37.5	30.8	25.3
Florence, SC (A)	37.5	35.1	37.2	36.1	37.5	33.6	34.2
Florence, SC (B)	36.3	38.9	38.4	37.7	37.7	32.9	32.7
Hartsville, SC (A)	35.2	28.3	41.2+	33.8	39.0	33.8	35.5
Hartsville, SC (B)	25.1	21.4	36.3	18.6	27.9	27.7	15.1
Blackville, SC (A)	31.5	31.5	36.8+	32.7	35.5	32.8	30.0
Blackville, SC (B)	26.1	28.0	30.0+	27.0	31.4+	24.9	26.0
Athens, GA	48.6	51.5	48.7	52.2	55.3	44.2	37.5-
Tallassee, AL	24.3	25.4	27.6	27.2	30.9	35.6+	33.7+
Tifton, GA	51.0	47.0	54.7	46.9	57.3	40.6-	41.3
Marianna, FL	38.8	41.8	44.3	43.3	47.8+	37.8	29.7-
Quincy, FL	27.8	34.4	33.5	31.5	35.8	36.1	36.1
Jay, FL	19.4	35.9+	24.2	36.3+	40.3+	41.4+	37.0+
Fairhope, AL	24.4	33.4+	35.1+	37.3+	39.0+	36.5+	36.8+
Baton Rouge, LA	23.1	13.1-	35.3+	34.3+	39.2+	24.3	27.9
Stoneville, MS (B)	12.0	25.5+	17.7	27.0+	34.5+	22.9+	23.9+
Beaumont, TX	5.1	3.7	27.0+	26.7+	26.3+	3.4	15.2+
Mean	29.2	30.1	35.3	33.8	38.4	31.7	30.5

Table 58 - (continued)

Location	F83-1648	F83-5568	G82-2820	G82-3458	SC83-1810	L.S.D. (.05)	C.V. (%)
Clinton, NC	34.0	31.9	31.9	33.1	28.0	5.8	11
Florence, SC (A)	33.4	35.1	37.9	32.7	38.5	N.S.	10
Florence, SC (B)	38.0	34.1	35.6	37.0	43.0	N.S.	7
Hartsville, SC (A)	38.0	39.8	41.6+	35.7	30.5	6.0	10
Hartsville, SC (B)	17.6	30.6	31.1	25.2	23.3	10.1	18
Blackville, SC (A)	32.3	25.9-	32.0	28.9	30.0	4.0	11
Blackville, SC (B)	25.6	25.3	26.9	29.7+	28.7	3.1	10
Athens, GA	43.3	45.5	47.5	45.4	47.6	6.1	8
Tallassee, AL	31.5	21.2	29.5	28.7	38.2+	7.7	15
Tifton, GA	48.8	45.1	39.1-	43.2	49.2	10.0	13
Marianna, FL	37.8	27.7-	43.3	43.3	31.7-	6.2	9
Quincy, FL	39.9+	23.7	29.3	29.6	39.5+	9.0	12
Jay, FL	38.9+	27.9+	29.3+	35.9+	45.8+	4.8	8
Fairhope, AL	35.6+	27.8	38.7+	37.3+	33.9+	4.0	7
Baton Rouge, LA	25.7	23.2	34.2+	33.5+	28.1	8.0	17
Stoneville, MS (B)	21.8+	28.1+	31.5+	29.1+	22.6+	9.0	21
Beaumont, TX	10.1+	5.6	21.7+	25.5+	31.9+	4.4	15
Mean	32.5	29.3	33.9	33.8	34.7		

Table 59 - Chemical composition and seed size for the strains in Uniform Group VIII, 1987

Location	Kirby	Hutton	Co6738	SC82-1672	Co82-622	F83-2048
			OIL PERCENTAGE			
Blackville, SC (A)	19.0	18.7	19.8	19.0	18.6	18.4
Tifton, GA	21.3	20.3	22.4	21.0	21.2	20.3
Tallassee, AL	18.8	18.8	20.0	19.2	19.2	18.8
Quincy, FL	21.4	20.4	21.0	20.0	20.1	19.7
Jay, FL	20.9	20.1	21.3	20.7	20.8	20.3
Beaumont, TX	17.6	19.0	20.3	19.7	19.8	18.7
Mean	19.8	19.6	20.8	19.9	20.0	19.4
			PROTEIN PERCENTAGE			
Blackville, SC (A)	40.8	42.6	38.9	39.6	39.2	41.1
Tifton, GA	38.0	41.4	37.8	38.3	38.8	40.5
Tallassee, AL	43.3	43.8	42.0	41.8	42.0	42.1
Quincy, FL	40.9	42.9	41.4	41.4	41.0	42.5
Jay, FL	40.8	41.6	39.1	40.4	39.4	41.1
Beaumont, TX	42.6	43.0	41.1	42.4	41.7	43.2
Mean	41.1	42.6	40.1	40.7	40.4	41.8
			GRAMS PER 100 SEEDS			
Hartsville, SC (A)	12.9	13.9	13.6	16.9	13.2	11.4
Blackville, SC (A)	12.9	18.3	15.1	18.4	15.2	13.3
Tifton, GA	14.1	17.1	15.2	17.0	15.0	12.6
Tallassee, AL	10.3	13.4	11.9	13.2	11.1	9.7
Quincy, FL	11.9	14.5	12.5	13.9	11.8	11.0
Jay, FL	10.0	14.0	11.0	14.0	12.0	11.0
Beaumont, TX	9.3	10.2	11.4	13.6	11.1	7.6
Mean	11.6	14.5	13.0	15.3	12.8	10.9

Table 59 - (continued)

Location	F83-2184	F83-1648	F83-5568	G82-2820	G82-3458	SC83-1810
			OIL PERCENTAGE			
Blackville, SC (A)	18.6	19.0	19.4	19.6	19.3	19.1
Tifton, GA	20.4	21.0	20.9	21.5	20.6	21.1
Tallassee, AL	18.6	19.9	18.9	19.6	19.9	20.6
Quincy, FL	20.7	20.9	20.1	20.4	20.2	20.6
Jay, FL	20.2	21.8	19.9	20.2	20.6	21.5
Beaumont, TX	19.0	19.1	17.4	19.6	20.6	20.4
Mean	19.6	20.3	19.4	20.2	20.2	20.6
			PROTEIN PERCENTAGE			
Blackville, SC (A)	38.9	41.0	40.3	39.5	40.4	40.3
Tifton, GA	37.3	39.7	40.9	39.9	39.8	40.5
Tallassee, AL	42.5	43.4	43.7	43.4	41.8	41.5
Quincy, FL	41.3	42.7	41.7	42.8	41.9	42.5
Jay, FL	40.9	41.6	40.1	40.8	40.2	40.9
Beaumont, TX	41.5	42.4	43.6	43.8	41.6	42.3
Mean	40.4	41.8	41.7	41.7	41.0	41.3
			GRAMS PER 100 SEEDS			
Hartsville, SC (A)	12.6	12.2	11.8	12.1	14.9	12.4
Blackville, SC (A)	14.0	15.0	13.2	14.1	17.6	14.6
Tifton, GA	13.4	13.9	12.9	13.7	18.9	13.7
Tallassee, AL	11.6	11.7	9.2	10.6	14.1	11.6
Quincy, FL	12.3	11.8	10.6	13.2	15.5	12.4
Jay, FL	10.0	11.0	8.0	10.0	14.0	13.0
Beaumont, TX	11.2	10.5	7.4	11.6	14.9	13.1
Mean	12.2	12.3	10.4	12.2	15.7	13.0

Table 60 - Relative maturity, days earlier (-) or later (+) than Kirby, for the strains in Uniform Group VIII, 1987

Location	Date planted	Kirby matured	Hutton	Co6738	SC82-1672	Co82-622	F83-2048
Clinton, NC	5-28	10-30	0	0	0	0	0
Florence, SC (A)	5-27	10-29	-3	-3	0	-3	-2
Florence, SC (B)	6-22	11-1	-2	0	0	-1	-3
Hartsville, SC (A)	5-22	10-28	-5	-2	0	-1	-5
Blackville, SC (A)	5-18	10-23	F	F	F	F	F
Blackville, SC (B)	6-30	10-23	F	F	F	F	F
Athens, GA	5-13	10-30	-3	-4	-3	-3	-4
Tallassee, AL	5-25	10-15	-1	-1	-1	0	+1
Tifton, GA	5-25	10-20	-1	-2	+3	-1	-1
Marianna, FL	6-12	10-24	+3	-3	+2	0	-1
Quincy, FL	5-20	10-15	0	-1	+1	0	+2
Jay, FL	6-1	10-15	-3	0	0	0	+3
Fairhope, AL	6-26	10-21	0	-1	0	-1	-1
Stoneville, MS (B)	5-12	11-4	0	-4	-4	-5	-1
Beaumont, TX	5-22	10-15	-2	+4	+6	+4	-3
Mean	5-30	10-23	-1	-1	+1	-1	-1

Table 60 - (continued)

Location	F83-2184	F83-1648	F83-5568	G82-2820	G82-3458	SC83-1810
Clinton, NC	0	0	0	0	0	0
Florence, SC (A)	+1	-6	+3	-7	-2	+1
Florence, SC (B)	0	-3	+3	-4	0	+1
Hartsville, SC (A)	-1	-3	0	-7	-1	-1
Blackville, SC (A)	F	F	F	F	F	F
Blackville, SC (B)	F	F	F	F	F	F
Athens, GA	0	-2	0	-7	-1	-3
Tallassee, AL	+2	0	+1	-2	0	+3
Tifton, GA	+4	-2	+1	-4	+2	+1
Marianna, FL	+3	0	+4	-5	+3	+3
Quincy, FL	+2	+1	0	-1	0	+3
Jay, FL	+2	+1	+4	-2	+2	+2
Fairhope, AL	+1	-1	+2	-4	0	-1
Stoneville, MS (B)	-1	0	-2	-9	-2	-5
Beaumont, TX	+7	+2	-2	+2	+3	+9
Mean	+2	-2	+2	-4	0	+1

Table 61 - Plant height for the strains in Uniform Group VIII, 1987

Location	Kirby	Hutton	Co6738	SC82-1672	Co82-622	F83-2048
Clinton, NC	37	44	47	45	45	45
Florence, SC (A)	40	39	41	42	44	45
Florence, SC (B)	31	30	29	33	30	32
Blackville, SC (A)	33	32	35	34	31	41
Blackville, SC (B)	29	31	29	29	29	32
Athens, GA	34	35	33	38	34	37
Tallassee, AL	34	37	38	41	37	42
Tifton, GA	30	33	36	34	36	36
Marianna, FL	26	33	30	36	30	36
Quincy, FL	28	36	34	36	35	35
Jay, FL	30	32	35	34	34	37
Fairhope, AL	24	26	28	33	28	31
Baton Rouge, LA	27	23	30	31	34	37
Stoneville, MS (B)	25	29	29	33	31	33
Beaumont, TX	24	22	27	27	26	27
Mean	30	32	33	33	34	36

Table 61 - (continued)

Location	F83-2184	F83-1648	F83-5568	G82-2820	G82-3458	SC83-1810
Clinton, NC	50	49	40	39	46	45
Florence, SC (A)	57	42	44	38	42	42
Florence, SC (B)	36	28	41	29	33	31
Blackville, SC (A)	42	31	38	28	33	33
Blackville, SC (B)	41	32	36	32	32	32
Athens, GA	47	36	37	33	34	35
Tallassee, AL	60	42	41	36	41	38
Tifton, GA	43	35	38	32	34	35
Marianna, FL	39	33	38	29	33	36
Quincy, FL	43	37	37	33	35	35
Jay, FL	37	37	38	33	30	39
Fairhope, AL	35	30	34	29	30	32
Baton Rouge, LA	46	34	36	26	33	35
Stoneville, MS (B)	39	27	33	29	31	35
Beaumont, TX	30	25	31	22	26	30
Mean	43	35	37	31	34	33

Table 62 - Lodging scores for the strains in Uniform Group VIII, 1987

Location	Kirby	Hutton	Co6738	SC82-1672	Co82-622	F83-2048
Clinton, NC	3.0	3.0	3.0	2.6	3.0	3.0
Hartsville, SC (A)	2.5	2.5	1.8	2.0	2.0	2.5
Blackville, SC (A)	1.0	1.0	1.0	1.0	1.0	1.0
Blackville, SC (B)	1.0	1.0	1.0	1.0	1.0	1.0
Athens, GA	2.2	2.2	1.5	1.8	2.0	1.8
Tallassee, AL	1.0	2.5	1.2	1.7	1.2	1.8
Tifton, GA	1.3	1.2	1.2	1.3	1.2	1.4
Marianna, FL	1.5	1.7	1.5	1.7	1.5	1.5
Quincy, FL	1.0	1.0	1.0	1.0	1.0	1.7
Jay, FL	1.3	1.7	1.0	2.7	1.3	2.3
Fairhope, AL	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, LA	3.0	1.3	1.7	1.7	2.0	2.7
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, TX	1.0	1.0	1.0	1.0	1.2	1.0

Table 62 - (continued)

Location	F83-2184	F83-1648	F83-5568	G82-2820	G82-3458	SC83-1810
Clinton, NC	3.0	2.6	3.0	3.0	3.0	3.0
Hartsville, SC (A)	2.5	2.3	2.7	2.3	2.5	2.0
Blackville, SC (A)	1.0	1.0	1.0	1.0	1.0	1.0
Blackville, SC (B)	1.0	1.0	1.0	1.0	1.0	1.0
Athens, GA	2.5	1.8	2.3	1.8	2.0	1.8
Tallassee, AL	1.8	1.5	1.8	1.7	1.2	1.3
Tifton, GA	1.4	1.1	1.2	1.2	1.2	1.0
Marianna, FL	1.8	1.5	1.8	1.5	1.8	1.5
Quincy, FL	1.0	1.0	1.7	1.0	1.0	1.0
Jay, FL	2.0	1.7	2.7	1.3	2.0	2.0
Fairhope, AL	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, LA	2.7	2.3	2.7	2.0	2.3	2.3
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, TX	1.0	1.0	1.2	1.0	1.0	1.0

Table 63 - Seed quality scores for the strains in Uniform Group VIII, 1987

Location	Kirby	Hutton	Co6738	SC82-1672	Co82-622	F83-2048
Clinton, NC	1.5	1.5	1.5	1.5	1.5	1.5
Blackville, SC (A)	2.0	1.0	1.0	2.0	1.0	3.0
Blackville, SC (B)	2.0	2.0	1.0	1.0	1.0	3.0
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	1.7	1.9	1.6	1.4	1.2	1.9
Quincy, FL	2.0	1.7	1.7	2.0	1.0	3.0
Jay, FL	3.0	2.0	2.0	3.0	2.0	3.0
Baton Rouge, LA	1.3	2.0	1.7	1.7	1.0	2.3
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, TX	2.5	2.7	1.0	1.2	1.3	3.2

Table 63 - (continued)

Location	F83-2184	F83-1648	F83-5568	G82-2820	G82-3458	SC83-1810
Clinton, NC	1.5	1.5	1.5	1.5	1.5	1.5
Blackville, SC (A)	1.0	2.0	1.0	1.0	2.0	1.0
Blackville, SC (B)	2.0	2.0	3.0	2.0	1.0	1.0
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	1.7	2.0	1.8	1.7	1.8	1.5
Quincy, FL	2.0	3.0	2.0	2.0	1.0	2.0
Jay, FL	3.0	3.0	4.0	3.0	2.0	2.0
Baton Rouge, LA	1.7	2.0	2.3	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, TX	1.5	2.0	2.5	1.5	1.0	1.2

PRELIMINARY GROUP VIII

1987

Preliminary Group VIII nurseries which included Kirby and Braxton along with 34 breeding lines were planted at six locations. Parentage for each of the strains in the group is reported in Table 64. A general summary of performance is reported in Table 65. Data from individual locations is reported in Tables 66-70.

Data are presented from only four of the locations where plantings were made. Irregular stands were obtained at Stoneville as a result of pythium injury at emergence. The CV for seed yield was extremely high. The CV for seed yield at Beaumont was also very high.

Kirby had a mean seed yield of 20.4 bushels per acre and Braxton a mean seed yield of 26.0 bushels per acre. The CV for the combined analysis for seed yield was 29%. The range in mean seed yields was from 15.6 bushels per acre to 43.1 bushels per acre. Data relative to specific qualities would appear to have greater value for rating strains than seed yield, although strains having the highest seed yield would not have been severely damaged by any specific problem at any of the locations.

Strains were evaluated for reaction to the two root-knot species M. incognita and M. arenaria in the greenhouse at the University of Georgia. Twenty-seven strains received scores of 2 or less for M. incognita and would be considered resistant. Five entries would be considered resistant to both M. incognita and M. arenaria. Plantings were made in the greenhouse at Jackson, Tennessee to evaluate for reaction to SCN races 3 and 4. Seventeen strains were rated resistant to SCN race 3 and eight strains were rated resistant to both SCN races 3 and 4. Plantings were made in the field cage at Stoneville to evaluate for feeding by soybean looper. Three strains were rated resistant - D75-10169, which has been released as a breeding line, T83-5387, and T83-5408. T83-5387 has been released as a variety and named Crockett. Strains were rated for frogeye development in the nursery at Quincy. Twelve strains were rated resistant. Strains were rated for stem canker development in the nursery at Beaumont, Texas. Twelve strains appeared to be resistant. Three strains received ratings of 5 or greater. T83-5387 and T83-5408 both appeared highly resistant to frogeye development and to stem canker. However, both appeared susceptible to phytophthora rot at Stoneville.

Strains which appear to merit further evaluation in Uniform Group VIII are Co85-483, G83-266, and Crockett.

Table 64 - Parentage of strains in Preliminary Group VIII, 1987

	Variety or strain	Parentage	Generation composited
1.	Kirby	Centennial X [Forrest X (Cobb X D68-216)]	F_6
2.	Braxton	F59-1505 X [Bragg(3) X D60-7965]	F_5
3.	Au83-801	Braxton X Dowling	F_6
4.	Au84-1868	N77-940 X Johnston	F_7
5.	Au84-1874	N77-940 X Johnston	F_7
6.	Au84-1913	N77-940 X Johnston	F_7
7.	Au84-1922	N77-940 X Johnston	F_7
8.	Co83-1227	Co368 X D74-7741	F_5
9.	Co85-481	Co368 X (Co317 X D77-6103)	F_5
10.	Co85-483	Co368 X (Co317 X D77-6103)	F_5
11.	Co85-485	Co368 X (Co317 X D77-6103)	F_5
12.	D75-10169	Govan X sel (Bragg X PI 229358)	
13.	F83-1462	Forrest(3) X D77-12480	F_5
14.	F83-7968	F73-3376 X [Late Giant(2) X sel (Jupiter X F66-1534)]	F_5
15.	F84-5049	Kirby X (Forrest(3) X D77-12480)	F_5
16.	F84-5117	Forrest(3) X D77-12480	F_5
17.	F84-5319	Kirby X (Forrest(3) X D77-12480)	F_5
18.	F84-5824	F77-1790 X (Forrest(3) X D77-12480)	F_5
19.	F85-2750	Braxton X IAC74-2832	F_6
20.	F85-2773	Braxton X IAC74-2832	F_6
21.	F85-2993	F77-1790 X F80-4690	F_6
22.	F85-4702	Bedford X Kirby	F_6
23.	F85-4704	Bedford X Kirby	F_6
24.	F85-4777	Bedford X Kirby	F_6
25.	G83-266	Braxton X Young	F_6
26.	G83-644	D77-6103 X F77-6903	F_6
27.	G83-1225	D77-6103 X F77-6790	F_6
28.	G83-1242	D77-6103 X F77-6790	F_6
29.	SC83-367	Braxton X D75-7527	F_5
30.	SC83-484	Braxton X Centennial	F_5
31.	SC83-1007	Govan X Foster	F_5
32.	SC83-1017	Govan X Foster	F_5
33.	SC84-773	Centennial X Young	F_5
34.	SC84-2312	Foster X D76-9665	F_5
35.	T83-5387	PI 171451 X Hampton 266A	F_{14}
36.	T83-5408	PI 171451 X Hampton 266A	F_{14}

Table 65 - General summary of performance for the strains in Preliminary Group VIII, 1987

Strain	Seed yield	Mat. index	Ht.	Percent Oil	Percent Protein	M. incognita	M. arenaria	SCN race 3	SCN race 4	Soybean looper	Frogeye 2	Stem canker
Kirby	20.4	10-19	32	19.7	41.3	1.3	3.0	R	S	5.0	4.8	2.8
Braxton	26.1	0	28	19.6	41.9	1.1	3.7	S	S	5.0	3.0	1.0
Au83-801	30.9	+5	29	20.4	40.1	1.0	2.1	S	S	5.0	3.5	0.5
Au84-1868	29.7	+2	21	20.3	40.0	3.0	4.0	S	S	5.0	1.0	3.5
Au84-1874	28.2	0	29	20.6	41.1	4.4	5.0	S	S	5.0	1.0	4.8
Au84-1913	28.4	+2	27	20.9+	40.1	2.0	4.0	S	S	5.0	1.0	4.3
Au84-1922	30.7	+2	30	19.9	40.9	3.0	3.9	S	S	5.0	1.0	4.8
Co83-1227	29.7	0	27	20.9+	39.6-	0.9	3.9	R	S	5.0	3.3	3.0
Co85-481	34.3+	+3	31	20.0	40.0	1.4	5.0	R	R	5.0	1.0	3.5
Co85-483	41.0+	+4	29	20.2	40.1	1.0	4.7	R	R	5.0	1.0	2.8
Co85-485	24.4	0	36	20.8	40.1	3.7	4.7	R	R	5.0	4.0	3.5
D75-10169	20.4	+4	31	17.6-	44.1+	1.0	-	S	S	1.5	3.0	0.8
F83-1462	23.4	-1	38	19.4	40.8	1.3	4.3	R	S	5.0	3.0	3.5
F83-7968	23.7	+7	40	18.8	40.6	2.3	4.7	S	S	5.0	1.0	0.0
F84-5049	25.6	+1	30	20.2	41.6	1.3	3.0	R	S	5.0	3.0	3.5
F84-5117	23.7	+7	43	17.9-	42.4	3.4	4.4	S	S	5.0	1.0	0.0
F84-5319	22.2	+2	35	18.2-	42.4	1.1	4.0	S	S	5.0	2.8	3.4
F84-5824	15.6	+2	33	18.5-	42.4	1.0	4.0	R	S	5.0	3.5	4.5
F85-2750	26.1	+4	31	17.3-	41.2	1.3	4.7	S	S	5.0	3.5	0.0
F85-2773	24.0	+6	34	17.4-	41.6	2.7	4.7	S	S	5.0	2.5	0.0
F85-2993	21.7	-3	33	18.4-	41.4	1.0	3.6	S	S	5.0	4.3	5.3
F85-4702	23.6	+1	30	19.1	41.0	1.0	3.6	R	R	5.0	3.0	5.3
F85-4704	23.7	+1	28	19.9	40.0	1.0	3.1	R	R	5.0	3.0	2.5
F85-4777	25.2	-1	32	19.2	40.4	1.6	3.0	R	R	5.0	3.0	5.5
G83-266	43.1+	+3	30	20.0	41.7	2.3	4.3	S	-	5.0	1.0	0.0
G83-644	32.2+	+4	31	19.8	42.1	0.7	5.0	R	R	5.0	5.0	2.3
G83-1225	24.7	+1	28	19.6	41.4	1.0	3.7	R	S	5.0	4.3	2.5
G83-1242	22.1	-1	31	20.2	40.9	2.0	4.3	R	R	5.0	3.5	4.3
SC83-367	28.7	-1	28	20.0	40.6	1.0	3.0	S	S	5.0	3.5	0.0
SC83-484	24.1	-1	31	19.4	40.5	1.0	3.7	S	S	5.0	4.3	0.0
SC83-1007	24.3	-1	33	19.0	41.6	1.0	3.7	R	S	5.0	3.3	3.8
SC83-1017	22.3	+1	33	19.1	41.2	1.0	3.4	R	S	5.0	3.3	2.0
SC84-773	31.1	+1	34	19.6	42.7+	1.7	4.7	S	S	5.0	3.0	3.0
SC84-2312	26.5	-5	29	19.1	42.5	1.3	3.7	R	S	5.0	4.0	5.5
T83-5387	27.6	+5	32	17.9-	43.2+	2.9	4.9	S	S	1.5	1.0	0.0
T83-5408	29.6	+1	33	17.9-	43.3+	3.7	5.0	S	S	1.0	1.0	0.0
L.S.D.(.05)	10.9			1.1	1.3							
C.V.	29%			4%	2%							

Table 66 - Seed yield, in bushels per acre, for the strains in Preliminary Group VIII, 1987

Strain	Blackville, SC	Quincy, FL	Jay, FL	Beaumont, TX
Kirby	22.0	25.9	23.1	10.4
Braxton	26.5	20.8	34.7+	22.2+
Au83-801	36.7	32.8	34.7+	19.2
Au84-1868	27.7	30.1	48.4+	12.6
Au84-1874	24.2	28.5	49.5+	10.5
Au84-1913	20.5	36.9+	44.0+	12.1
Au84-1922	28.0	38.8+	45.7+	10.4
Co83-1227	34.4	35.4+	30.3+	18.7
Co85-481	27.1	44.3+	49.5+	16.3
Co85-483	27.5	51.6+	51.7+	33.3
Co85-485	29.3	36.3+	22.0	10.0
D75-10169	18.1	10.6-	28.1	24.8
F83-1462	23.1	27.4	26.4	16.8
F83-7968	18.4	24.3	20.9	31.1
F84-5049	25.7	33.4	28.6	14.7
F84-5117	17.9	18.5	29.2+	29.2
F84-5319	27.0	27.0	27.0	7.9
F84-5824	8.8	22.1	23.1	8.3
F85-2750	23.1	25.9	26.4	29.3
F85-2773	20.7	17.2	27.5	30.5
F85-2993	35.7	22.8	25.3	2.9
F85-4702	31.2	27.8	30.3+	5.0
F85-4704	18.1	29.9	26.4	20.5
F85-4777	26.1	39.9+	30.8+	3.9
G83-266	27.9	46.2+	55.0+	43.3
G83-644	34.8	27.8	34.1+	31.9
G83-1225	26.0	28.3	24.2	20.2
G83-1242	26.0	30.9	20.9	10.7
SC83-367	27.8	31.9	28.6	26.4
SC83-484	28.4	26.6	22.0	19.5
SC83-1007	26.6	30.5	27.0	12.9
SC83-1017	20.7	26.8	27.0	14.5
SC84-773	34.4	37.3+	33.0+	19.6
SC84-2312	36.0	32.4	30.3+	7.3
T83-5387	23.4	23.2	28.6	35.3
T83-5408	25.6	21.9	38.5+	32.4
L.S.D.(.05)	15.6	8.8	5.9	9.4
C.V.	30%	15%	9%	25%

Table 67 - Oil percentages for the strains in Preliminary Group VIII, 1987

Strain	Blackville, SC	Quincy, FL	Jay, FL	Beaumont, TX
Kirby	19.0	20.8	20.1	18.9
Braxton	18.0	20.0	20.7	19.6
Au83-801	18.7	20.9	21.5	20.6
Au84-1868	19.8	21.2	21.1	18.9
Au84-1874	20.3	21.2	21.2	19.6
Au84-1913	20.3	21.9	21.8	19.7
Au84-1922	19.7	20.9	19.9	19.0
Co83-1227	20.5	21.4	21.5	20.2
Co85-481	18.8	21.6	20.7	18.9
Co85-483	19.1	21.6	21.4	18.8
Co85-485	20.5	21.2	21.7	19.8
D75-10169	17.6	17.7	16.9	18.1
F83-1462	20.1	19.6	19.0	19.0
F83-7968	19.1	19.3	18.0	18.6
F84-5049	21.3	20.6	20.4	18.4
F84-5117	17.6	18.1	17.7	18.1
F84-5319	18.5	18.1	18.2	17.8
F84-5824	18.9	18.7	18.9	17.3
F85-2750	17.0	17.5	17.7	16.9
F85-2773	16.8	17.9	17.3	17.6
F85-2993	19.0	18.5	18.3	17.7
F85-4702	18.1	19.7	20.4	18.0
F85-4704	19.4	20.9	20.7	18.4
F85-4777	18.9	20.9	19.9	16.9
G83-266	19.1	20.4	20.6	19.7
G83-644	19.2	20.8	20.1	19.2
G83-1225	20.0	20.1	19.5	18.7
G83-1242	20.6	21.0	19.7	19.5
SC83-367	20.2	20.8	18.8	20.2
SC83-484	17.0	21.1	20.2	19.2
SC83-1007	19.0	19.8	19.1	18.2
SC83-1017	18.8	19.5	19.5	18.4
SC84-773	20.1	19.9	19.9	18.5
SC84-2312	19.8	19.8	19.4	17.2
T83-5387	19.0	17.3	17.2	18.0
T83-5408	18.2	17.1	18.7	17.4

Table 68 - Protein percentages for the strains in Preliminary Group VIII, 1987

Strain	Blackville, SC	Quincy, FL	Jay, FL	Beaumont, TX
Kirby	38.7	41.6	42.1	42.8
Braxton	42.3	42.5	40.1	42.5
Au83-801	39.8	41.0	39.3	40.1
Au84-1868	38.0	40.6	39.4	42.0
Au84-1874	39.1	41.8	40.6	42.7
Au84-1913	39.0	39.7	40.3	41.5
Au84-1922	39.2	41.2	40.8	42.5
Co83-1227	38.4	40.8	37.9	41.4
Co85-481	38.0	40.5	40.7	40.9
Co85-483	39.2	39.8	39.2	42.2
Co85-485	38.4	40.6	39.0	42.3
D75-10169	42.5	44.1	44.7	44.9
F83-1462	37.5	41.9	41.1	42.5
F83-7968	40.3	40.0	41.2	41.0
F84-5049	40.0	42.0	41.0	43.3
F84-5117	40.3	42.7	44.2	42.3
F84-5319	40.8	43.3	42.7	42.9
F84-5824	39.9	42.9	42.9	43.8
F85-2750	40.3	41.0	41.3	42.1
F85-2773	40.7	42.5	42.1	41.1
F85-2993	39.0	42.5	42.3	41.6
F85-4702	40.1	42.0	40.2	41.8
F85-4704	38.5	40.6	38.6	42.3
F85-4777	38.2	40.1	40.0	43.2
G83-266	41.1	41.7	40.9	43.2
G83-644	40.7	42.3	41.8	43.6
G83-1225	39.0	42.1	41.1	43.3
G83-1242	39.3	41.0	42.0	41.3
SC83-367	39.9	41.8	39.6	40.9
SC83-484	40.9	40.0	40.2	40.9
SC83-1007	40.8	41.5	41.0	43.0
SC83-1017	39.2	42.5	41.3	41.7
SC84-773	41.5	43.7	42.5	43.0
SC84-2312	42.5	42.0	41.7	43.9
T83-5387	40.2	44.7	44.1	43.9
T83-5408	41.1	44.6	42.5	45.0

Table 69 - Plant height for the strains in Preliminary Group VIII, 1987

Strain	Blackville, SC	Quincy, FL	Jay, FL	Beaumont, TX
Kirby	32	34	34	27
Braxton	29	26	31	26
Au83-801	33	29	31	21
Au84-1868	20	18	27	18
Au84-1874	29	28	36	23
Au84-1913	28	30	32	19
Au84-1922	29	35	35	20
Co83-1227	25	30	32	22
Co85-481	27	35	37	24
Co85-483	25	33	36	22
Co85-485	38	37	37	30
D75-10169	31	28	34	29
F83-1462	39	36	41	35
F83-7968	25	54	33	46
F84-5049	33	29	34	25
F84-5117	41	47	37	46
F84-5319	41	38	29	33
F84-5824	31	38	37	27
F85-2750	29	33	32	30
F85-2773	36	31	34	34
F85-2993	33	37	35	25
F85-4702	28	27	37	27
F85-4704	31	30	30	21
F85-4777	33	32	37	27
G83-266	30	32	29	28
G83-644	30	34	31	27
G83-1225	28	31	29	24
G83-1242	42	29	30	23
SC83-367	24	31	33	24
SC83-484	34	33	33	24
SC83-1007	31	38	34	28
SC83-1017	27	37	37	29
SC84-773	37	34	37	29
SC84-2312	28	31	34	24
T83-5387	29	32	38	29
T83-5408	34	31	38	28

Table 70 - Seed quality scores for the strains in Preliminary Group VIII, 1987

Strain	Blackville, SC	Quincy, FL	Jay, FL	Beaumont, TX
Kirby	1.0	2.0	3.0	1.8
Braxton	2.0	2.0	3.0	1.3
Au83-801	1.0	2.0	3.0	1.0
Au84-1868	2.0	2.0	2.0	1.5
Au84-1874	1.0	2.0	2.0	1.5
Au84-1913	1.0	2.0	2.0	1.5
Au84-1922	1.0	2.0	2.0	2.3
Co83-1227	1.0	2.0	3.0	1.5
Co85-481	1.0	1.0	3.0	1.8
Co85-483	1.0	1.0	2.0	1.3
Co85-485	1.0	1.0	3.0	1.5
D75-10169	1.0	2.5	2.0	1.3
F83-1462	1.0	3.0	4.0	1.8
F83-7968	1.0	1.0	4.0	1.3
F84-5049	1.0	2.0	3.0	1.5
F84-5117	1.0	3.0	3.0	1.3
F84-5319	1.0	3.0	3.0	2.0
F84-5824	1.0	3.0	3.0	1.8
F85-2750	1.0	3.0	4.0	1.3
F85-2773	2.0	3.0	3.0	1.3
F85-2993	2.0	3.0	4.0	1.5
F85-4702	1.0	2.0	3.0	1.5
F85-4704	3.0	2.0	3.0	1.3
F85-4777	1.0	2.5	3.0	1.5
G83-266	1.0	1.0	2.0	1.0
G83-644	1.0	2.0	2.0	1.0
G83-1225	1.0	2.5	3.0	1.3
G83-1242	1.0	1.5	3.0	1.5
SC83-367	2.0	2.0	3.0	1.0
SC83-484	1.0	2.0	3.0	1.0
SC83-1007	1.0	1.0	3.0	1.5
SC83-1017	2.0	1.5	3.0	1.5
SC84-773	1.0	1.0	2.0	1.0
SC84-2312	1.0	1.0	3.0	2.0
T83-5387	2.0	2.5	4.0	1.0
T83-5408	2.0	3.0	3.0	1.0