THE UNIFORM SOYBEAN TESTS
SOUTHERN REGION
1982

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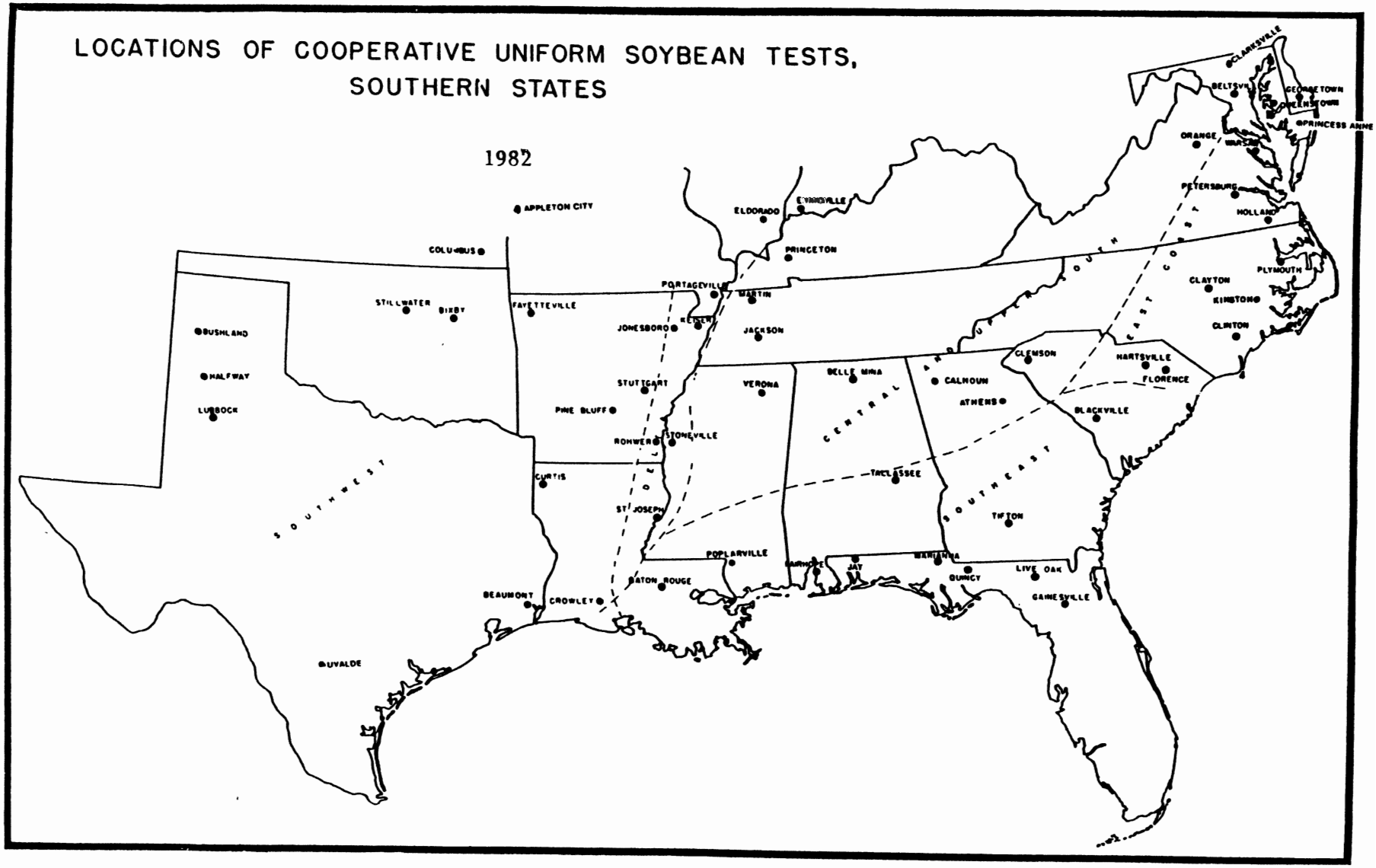
SOUTHERN REGION
STONEVILLE, MISSISSIPPI

LOCATIONS OF COOPERATIVE UNIFORM SOYBEAN TESTS, SOUTHERN STATES

1982



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SOUTHERN STATES

1982

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TABLE OF CONTENTS

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INTRODUCTION

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

Eleven uniform test groups have been established to evaluate the better strains developed in the breeding programs. The groups 00 through IV are adapted in the northern part of the United States, and the groups IV-S through VIII are grown in the southern part. Within their area of adaptation, there is a maturity range of 12 to 18 days within each maturity class. The best standard varieties available of each maturity class are used as check varieties with which to compare new strains as to seed yield, chemical composition, maturity, height, lodging, seed quality, and reaction to diseases and nematodes. For the groups grown in the southern area, the major check varieties are: Douglas, Essex, Forrest, Tracy-M, Centennial, Braxton, Wright, Hutton, and Cobb. At Stoneville, Mississippi, where all maturity classes will mature, the approximate maturity dates of these varieties when planted during the first half of May, are: Douglas, September 7; Essex, September 25; Forrest, October 1; Tracy-M, October 13; Centennial, October 16; Braxton, October 25; Hutton, November 1; and Cobb, November 6.

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

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

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

STRAIN IDENTIFICATION

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

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

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

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

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

Location	IV	V	VI	VII	VIII		P_2O_5	K_2O	pH	Fertilizer[1]	Yield-adapted variety[2]
East Coast											
Queenstown, MD	1*	1				Matapeake silt loam	H	VH	6.9	0-45-90	42.1 - B
Georgetown, DE		1				Sassafras sandy loam	H	H	5.8	None	35.3 - C
Warsaw, VA	1*	1*	1			Kempsville loam	H+	M	6.1	0-55-75	50.7 - B
Holland, VA		1	1*			Eunola lfs	H-	M-	6.7	None	42.2 - C
Plymouth, NC		1*	1*	1		Bladen f. s. loam	-	-	-	0-40-80	
Kinston, NC			1	1		Norfolk sandy loam	-	-	-	0-40-80	34.6 - F
Clinton, NC				1	1	Norfolk sandy loam	-	-	-	0-40-80	41.7 - F
Florence, SC (A)			1	1	1	Wagram sandy loam	-	-	-	25-50-150	39.0 - E
Florence, SC (B)				1	1	Wagram sandy loam	-	-	-	20-50-150	36.1 - G
Hartsville, SC (A)			1	1	1	Norfolk sandy loam	-	-	-	0-45-135	31.9 - G
Hartsville, SC (B)				1	1	Norfolk sandy loam	-	-	-	0-45-135	36.7 - J
Southeast											
Blackville, SC (A)			1	1*	1	Dothan loamy sand	-	-	-	0-37-75	34.2 - F
Blackville, SC (B)				1	1*	Dothan loamy sand	-	-	-	0-37-75	32.9 - J
Tifton, GA			1	1*	1	Tifton sandy loam	M	M	-	0-50-100	55.2 - F
Tallassee, AL			1	1*	1	Cahaba 1.f.s.	H	H	5.7	0-30-60	44.9 - F
Gainesville, FL				1	1*	Arredonda fine sand	H	M	6.3	20-32-96	48.1 - G
Quincy, FL			1	1	1*						
Marianna, FL				1	1	Chipola loamy sand	H	H	6.2	None	47.6 - G
Jay, FL			1*	1*	1*	Red bay sandy loam	-	-	-	0-75-150	49.7 - F
Fairhope, AL			1	1	1	Malbis f.s.l.	M	H	6.2	None	44.9 - F
Poplarville, MS				1	1	Sawyer f.s.l.	-	-	-		39.5 - G
Baton Rouge, LA			1	1*		Olivier silt loam					
Upper & Central South											
Orange, VA	1	1				Davidson sandy loam	M	H	5.9		48.6 - B
Eldorado, IL	1						-	-	-		49.0 - A
Clemson, SC		1	1	1		Cecil sandy loam	VH	H	6.2	0-104-104	30.8 - F
Calhoun, GA		1	1	1		Sequatchie silty clay l.	H	M	6.8	0-44-120	62.5 - C
Athens, GA		1	1	1	1	Cecil sandy loam	H	M	6.2	0-0-78	48.1 - C
Knoxville, TN	1	1				Sequatchie silt loam	-	-	-	0-60-60	75.0 - B
Belle Mina, AL		1	1*			Decatur clay loam	M	H	5.8	0-60-0	49.1 - C
Princeton, KY	1*	1				Crider silt loam	H	H	6.1	None	45.7 - C
Tiptonville, TN		1*					H	L	7.5	0-50-100	40.8 - D
Martin, TN	1	1				Falaya silt loam	M	M	6.3	0-40-40	68.6 - C
Jackson, TN		1	1			Loring silt loam	H	H	6.6	None	50.0 - C

Location	IV	V	VI	VII	VIII	Soil type	P_2O_5	K_2O	pH	Fertilizer[1]	Yield-adapted variety[2]
Delta											
Portageville, MO (A)	1*	1*	1			Tiptonville silt loam	-	-	-	0-0-60	46.7 - C
Portageville, MO (B)	1	1	1			Sharkey clay	-	-	-	0-0-60	35.8 - C
Keiser, AR	1*	1*	1*			Sharkey clay	L	H	6.3	None	53.1 - C
Jonesboro, AR		1	1			Calloway silt loam					
Pinetree, AR		1	1								
Stoneville, MS (A)		1*	1*	1*		Bosket f.s.l.	VH	H	6.5	None	52.2 - C
Stoneville, MS (B)	1	1*	1*	1*	1*	Sharkey clay	VH	H	6.2	None	49.8 - F
Rohwer, AR			1	1		Perry clay	M	H	7.3	None	43.8 - E
St. Joseph, LA		1	1	1		Commerce silt loam					
West											
Manhattan, KS	1	1				Muir silt loam	M	H	6.8	None	44.0 - A
Ottawa, KS	1*	1				Woodson silt loam	L	M	6.6	None	39.5 - A
Columbus, KS	1	1*				Cherokee silt loam	M	M	7.3	None	26.6 - C
Bixby, OK	1	1	1			Reinach silt loam	H	H	6.5	None	37.8 - C
Bushland, TX	1					Pullman clay	H	H	7.3	None	67.7 - A
Clovis, NM	1					Pullman silty clay loam	-	-	-	None	36.9 - A
Lubbock, TX	1	1				Amarillo loam	H	H	8.1	None	49.0 - C
Stuttgart, AR		1	1	1		Crowley silt loam	L	M	6.1	0-30-45	46.0 - C
Pine Bluff, AR		1	1	1		Calloway silt loam	M	M	6.5	0-70-90	50.0 - C
Bossier City, LA		1	1	1		Norwood silty clay loam	M	M	6.5	0-70-90	50.0 - C
Crowley, LA			1	1							
Beaumont, TX		1	1	1*	1*	Bernard-Morey complex	H	M	5.2	0-0-60	39.4 - G

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

[2]Varieties: A = Douglas; B = Essex; C = Forrest; D = D77-5090; E = Tracy-M; F = Centennial; G = Braxton; H = Wright; I = Foster; J = Kirby.

*Preliminary nursery also grown.

METHODS

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

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

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

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

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

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

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

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

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

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

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

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

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 1982.

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

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

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

UNIFORM GROUP IV-S

1982

	Variety or strain	Parentage	Generation composited
1.	Douglas	Williams X Calland	F_5
2.	Crawford	Williams X Columbus	F_4
3.	S76-2109	D67-3297 X Essex	F_4
4.	D77-18	Tracy X Forrest	F_5
5.	Md77-5675	V68-1171 X Columbus	
6.	S77-7992	Forrest X V71-480	F_4
7.	V76-411	Essex X SRF-400	F_5
8.	LS78-248	L71L-436 X J74-5	F_5
9.	V78-444	Essex mutant	
10.	V78-105	V68-1034 X V71-380	F_5
11.	V78-713	Essex X V68-1171	F_5
12.	V78-727	Essex X V68-1171	F_5

Background of breeding lines used as parents:

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

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

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

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

V68-1034 is a selection from Dare X PI 71506 which was evaluated in Preliminary Group V in 1971.

Results of 18 Uniform Group IV-S nurseries are summarized in Tables 1 through 7. Table 1 gives a general summary of performance and characteristics of each variety or strain.

S76-2109 has been evaluated 4 years. Its three-year mean seed yield is good in all areas. Average maturity is 8 to 10 days later than Douglas. D77-18 and Md77-5675 have been evaluated three years. D77-18 is resistant to race 3 of the soybean cyst nematode. It has yielded below Douglas in all but the Delta area. Md77-5675 has had an average seed yield below that of Douglas in all production regions.

The two strains, S77-7992 and V76-411, have been evaluated two years. Seed yield of S77-7992 averaged below that for Douglas in each of the production regions. V76-411 yielded slightly below Douglas in the East Coast area, but had an average seed yield above that for Douglas in the other production areas.

Five strains, LS78-248, V78-444, V78-105, V78-713, and V78-727, have been evaluated one year. V78-444, V78-713, and V78-727 appear to merit further testing. These three strains, along with V78-105, appear to be resistant to soybean mosaic virus.

Table 1 - General summary of performance for the strains in Uniform Group IV-S, 1982

	No. of locations	Douglas	Crawford	S76-2109	D77-18	Md77-5675
Seed Yield - 1982						
East Coast	2	49.2	45.0	48.1	43.7	45.0
Upper & Central South	4	52.8	47.8	56.4	51.4	46.9
Delta	4	36.3	35.2	39.9	41.7	32.5
West	7	40.9	38.8	39.4	36.7	34.5
1981-82						
East Coast		46.7	42.1	45.8	41.4	43.6
Upper & Central South		52.3	47.8	54.3	49.1	45.5
Delta		38.9	37.3	41.4	40.9	35.1
West		43.0	41.6	43.2	40.1	38.5
1980-82						
East Coast		42.7	40.1	44.8	40.0	41.2
Upper & Central South		48.0	43.9	51.4	44.9	43.9
Delta		33.9	34.9	37.8	38.9	33.7
West		41.7	39.5	41.8	37.6	36.4
Oil Content - 1982		18.9	18.7	17.4	18.0	17.9
1981-82		19.6	19.3	18.4	18.5	18.5
1980-82		19.9	19.7	19.0	18.9	18.9
Protein Content - 1982		41.1	41.7	40.7	41.3	42.4
1981-82		41.6	42.6	41.6	42.6	43.8
1980-82		42.2	42.9	42.0	43.0	42.9
Seed size		16.7	15.4	11.5	13.3	15.3
Maturity index		9-29	0	+8	+4	+3
Height		33	39	29	32	33
Seed quality		3.2	2.2	1.7	2.2	2.2
Bacterial pustule		1	1	1	1	1
M. incognita		5.0	5.0	3.0	3.0	4.5
M. arenaria		2.0	3.5	4.5	4.5	5.0
SCN race 3		S	S	S	R	S
Percent mottled seed		4	35	14	40	11
Flower color		W	P	W	W	P
Pubescence color		T	T	G	T	T
Pod wall color		B	T	T	T	T

Table 1 - (continued)

	S77-7992	V76-411	LS78-248	V78-444	V78-105	V78-713	V78-727
Seed Yield - 1982							
East Coast	44.6	47.4	41.7	45.9	46.5	47.6	48.6
Upper & Central South	47.7	56.5	47.3	53.9	49.5	57.3	55.0
Delta	41.8	39.1	37.9	39.0	37.5	44.7	42.9
West	37.2	41.9	37.5	38.0	36.0	38.9	36.7
1981-82							
East Coast	43.9	44.7					
Upper & Central South	46.4	54.9					
Delta	41.4	41.3					
West	39.9	44.1					
1980-82							
East Coast							
Upper & Central South							
Delta							
West							
Oil Content - 1982	19.2	18.7	17.8	18.4	19.0	18.2	18.4
1981-82	19.6	19.3					
1980-82							
Protein Content - 1982	38.9	39.9	40.0	41.6	39.0	42.0	41.5
1981-82	39.9	41.2					
1980-82							
Seed size	13.5	12.1	12.5	12.5	12.7	12.9	12.6
Maturity index	+8	+6	+2	+4	+7	+8	+8
Height	36	31	32	27	38	30	31
Seed quality	1.6	1.6	2.3	2.0	1.7	1.9	1.7
Bacterial pustule	1	1	1	1	3	1	1
M. incognita	4.5	4.0	5.0	4.0	3.0	3.0	3.0
M. arenaria	2.5	2.5	3.5	4.5	2.0	5.0	5.0
SCN race 3	S	S	R	S	S	S	S
Percent mottled seed	32	13	42	0	0	0	0
Flower color	W	P	W	P	P	P	P
Pubescence color	T	G	T	G	G	G	G
Pod wall color	T	B	T	T	T	T	T

Table 2 - Seed yield, in bushels per acre, for the strains in Uniform Group IV-S, 1982

Location	Douglas	Crawford	S76-2109	D77-18	Md77-5675	S77-7992	V76-411
			EAST COAST				
Queenstown, MD	47.5	43.1	47.7	39.8-	39.2-	43.2	46.4
Warsaw, VA	50.8	46.9-	48.5	47.6	50.8	46.0-	48.4
Mean	49.2	45.0	48.1	43.7	45.0	44.6	47.4
			UPPER AND CENTRAL SOUTH				
Orange, VA	52.7	44.6-	52.9	42.5-	39.5-	43.4-	50.5
Knoxville, TN	59.0	55.1	66.4	61.2	52.9	53.6	66.2
Eldorado, IL	49.0	48.4	52.6	56.0	50.0	46.9	55.3
Princeton, KY	50.6	43.1-	53.6	46.0-	45.2-	46.7-	54.0
Mean	52.8	47.8	56.4	51.4	46.9	47.7	56.5
			DELTA				
Portageville, MO (A)	37.4	37.9	41.6	50.2+	34.0	41.7	42.7
Portageville, MO (B)	14.5	16.5	28.5+	32.6+	24.4+	30.1+	19.8+
Martin, TN	50.4	44.4	49.0	60.0	42.5	56.4	54.7
Keiser, AR	39.5	35.3	43.1	31.7-	36.0	43.0	44.2+
Stoneville, MS (A)	39.5	42.0	37.5	34.1-	25.8-	37.6	33.9-
Mean	36.3	35.2	39.9	41.7	32.5	41.8	39.1
			WEST				
Manhattan, KS	44.0	40.0-	44.3	41.6	37.6-	43.9	41.5
Ottawa, KS	39.5	32.7	35.4	36.5	29.5	29.1	36.3
Columbus, KS	20.8	27.0	24.5	26.2	22.9	23.5	26.1
Bixby, OK	24.3	21.2-	16.5-	23.1	24.6	27.5+	27.7+
Bushland, TX	67.7	57.8	53.7	51.3	51.5	42.2	61.0
Lubbock, TX	52.9	50.4	57.3	38.3-	39.8-	52.8	56.2
Clovis, NM	36.9	42.3	44.2	39.8	35.6	41.5	44.4
Mean	40.9	38.8	39.4	36.7	34.5	37.2	41.9

(+) - 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	LS78-248	V78-444	V78-105	V78-713	V78-727	L.S.D. (.05)	C.V. (%)
			EAST COAST				
Queenstown, MD	40.3-	44.4	43.7	46.3	47.0	4.6	6
Warsaw, VA	43.1-	47.4	49.2	48.9	50.1	3.3	4
Mean	41.7	45.9	46.5	47.6	48.6		
			UPPER AND CENTRAL SOUTH				
Orange, VA	40.4-	48.9	44.7-	49.0	48.4	5.9	8
Knoxville, TN	49.3	63.3	61.6	71.4	72.6+	13.0	13
Eldorado, IL	53.9	53.4	42.0	56.7	49.8	N.S.	10
Princeton, KY	45.5-	50.0	49.6	52.0	49.0	3.4	8
Mean	47.3	53.9	49.5	57.3	55.0		
			DELTA				
Portageville, MO (A)	49.4+	43.7	36.1	45.8+	45.7+	7.1	10
Portageville, MO (B)	21.9+	23.9+	25.0+	31.9+	32.3+	4.1	10
Martin, TN	46.3	59.7	50.6	63.3+	57.8	10.1	11
Keiser, AR	41.2	34.9-	39.9	47.9+	44.4+	4.5	7
Stoneville, MS (A)	30.7-	32.9-	35.9	34.4-	34.4-	5.0	8
Mean	37.9	39.0	37.5	44.7	42.9		
			WEST				
Manhattan, KS	40.2	44.6	40.4	44.3	45.0	3.9	6
Ottawa, KS	34.2	36.7	31.1	37.6	34.3	N.S.	11
Columbus, KS	26.5+	20.2	17.3	25.1	21.7	5.6	14
Bixby, OK	17.5-	25.5	19.3-	24.8	23.3	2.9	7
Bushland, TX	52.0	50.0	44.3	39.6	40.6	9.9	11
Lubbock, TX	47.8	50.1	57.0	57.7	51.6	8.2	9
Clovis, NM	44.1	38.9	42.9	43.0	40.7	N.S.	9
Mean	37.5	38.0	36.0	38.9	36.7		

Table 3 - Chemical composition and seed size for the strains in Uniform Group IV-S, 1982

Location	Douglas	Crawford	S76-2109	D77-18	Md77-5675	S77-7992
			OIL PERCENTAGES			
Queenstown, MD	18.8	18.1	16.9	16.4	18.3	18.7
Warsaw, VA	19.3	18.9	17.2	17.2	17.3	19.4
Orange, VA	18.9	17.8	16.7	18.0	17.4	17.8
Knoxville, TN	20.1	19.1	17.4	18.0	18.2	19.0
Eldorado, IL	18.3	18.7	16.6	18.6	17.5	18.9
Portageville, MO (A)	19.4	18.7	17.9	18.5	18.0	19.8
Keiser, AR	18.7	18.7	17.9	18.3	18.2	19.4
Stoneville, MS (A)	20.9	21.0	19.1	19.3	18.8	21.1
Columbus, KS	17.3	18.2	18.2	19.4	18.2	20.0
Bixby, OK	17.3	17.8	15.6	16.6	17.0	17.4
Mean	18.9	18.7	17.4	18.0	17.9	19.2
			PROTEIN PERCENTAGES			
Queenstown, MD	40.1	42.0	39.6	41.2	41.0	37.6
Warsaw, VA	39.9	41.5	40.7	41.9	43.5	38.5
Orange, VA	38.7	40.3	39.6	38.9	39.8	37.2
Knoxville, TN	40.4	41.6	40.7	41.2	43.1	39.5
Eldorado, IL	41.0	43.0	42.4	41.8	42.5	39.6
Portageville, MO (A)	41.4	41.9	41.3	41.2	43.5	40.3
Keiser, AR	43.4	42.0	40.6	42.4	42.5	40.0
Stoneville, MS (A)	42.3	41.7	41.1	42.6	44.6	41.3
Columbus, KS	41.3	40.7	38.4	37.4	39.8	34.3
Bixby, OK	42.5	42.2	42.5	44.1	43.4	40.6
Mean	41.1	41.7	40.7	41.3	42.4	38.9
			GRAMS PER 100 SEEDS			
Queenstown, MD	19.4	17.9	12.0	14.2	17.4	15.4
Warsaw, VA	20.7	16.8	11.7	14.6	17.6	15.1
Orange, VA	18.0	17.0	12.0	14.0	17.0	16.0
Knoxville, TN	11.1	13.6	13.3	13.3	15.8	14.4
Eldorado, IL	14.8	15.1	11.9	13.3	14.6	12.6
Portageville, MO (A)	18.5	16.0	12.6	15.4	15.4	14.0
Keiser, AR	16.6	15.2	11.4	13.1	16.1	12.6
Stoneville, MS (A)	17.0	13.8	10.5	11.8	11.4	11.6
Columbus, KS	15.8	14.6	10.1	10.9	12.7	10.3
Bixby, OK	14.9	13.7	9.8	12.3	14.8	13.0
Mean	16.7	15.4	11.5	13.3	15.3	13.5

Table 3 - (continued)

Location	V76-411	LS78-248	V78-444	V78-105	V78-713	V78-727
			OIL PERCENTAGES			
Queenstown, MD	17.8	16.3	18.1	19.2	18.4	18.5
Warsaw, VA	18.4	18.0	18.4	19.4	18.2	18.0
Orange, VA	17.0	17.3	17.6	18.5	16.7	17.7
Knoxville, TN	19.2	18.4	19.9	18.6	19.1	18.7
Eldorado, IL	19.2	18.3	19.0	19.0	18.6	18.5
Portageville, MO (A)	19.4	18.3	18.8	18.9	17.8	18.8
Keiser, AR	19.8	18.4	18.4	20.1	18.1	17.9
Stoneville, MS (A)	21.0	19.6	20.2	19.1	20.1	19.8
Columbus, KS	18.0	17.9	17.5	18.7	18.2	18.5
Bixby, OK	17.3	15.9	16.5	18.1	17.1	17.1
Mean	18.7	17.8	18.4	19.0	18.2	18.4
			PROTEIN PERCENTAGES			
Queenstown, MD	38.7	40.4	41.7	37.2	41.5	41.4
Warsaw, VA	40.4	39.6	42.4	38.0	42.7	42.0
Orange, VA	39.9	37.6	41.1	36.6	41.3	40.1
Knoxville, TN	39.9	40.0	40.6	39.5	42.5	42.0
Eldorado, IL	40.2	39.9	41.1	40.6	42.3	42.5
Portageville, MO (A)	38.9	40.6	41.4	39.4	42.7	42.0
Keiser, AR	39.9	40.8	42.8	38.7	42.3	42.1
Stoneville, MS (A)	39.7	40.2	40.8	41.0	41.7	42.8
Columbus, KS	39.5	36.9	40.5	37.3	40.7	37.3
Bixby, OK	41.6	43.5	43.9	41.6	42.6	42.7
Mean	39.9	40.0	41.6	39.0	42.0	41.5
			GRAMS PER 100 SEEDS			
Queenstown, MD	13.4	13.0	12.9	13.1	14.0	13.7
Warsaw, VA	13.2	12.4	13.4	14.1	13.6	13.6
Orange, VA	13.0	12.0	13.0	13.0	13.0	13.0
Knoxville, TN	13.1	16.6	14.0	16.0	16.1	15.0
Eldorado, IL	11.5	11.7	11.7	12.5	12.9	13.1
Portageville, MO (A)	14.5	13.7	13.8	12.6	12.5	12.3
Keiser, AR	11.9	11.1	13.9	12.7	13.1	12.5
Stoneville, MS (A)	11.6	11.8	11.2	11.2	11.0	11.4
Columbus, KS	9.4	11.1	8.8	9.8	10.7	10.2
Bixby, OK	9.8	11.4	11.8	11.7	11.7	11.4
Mean	12.1	12.5	12.5	12.7	12.9	12.6

Table 4 - Relative maturity data, days earlier (-) or later (+) than Douglas, for the strains in Uniform Group IV-S, 1982

Location	Date planted	Douglas	Crawford	S76-2109	D77-18	Md77-5675
			EAST COAST			
Queenstown, MD	6-3	10-5	+2	+9	+7	+5
Warsaw, VA	5-27	9-29	+2	+10	+7	+6
Mean		10-2	+2	+10	+7	+6
			UPPER AND CENTRAL SOUTH			
Orange, VA	5-18	10-1	+3	+13	+6	+1
Knoxville, TN	5-4	9-20	+3	+14	+3	+4
Eldorado, IL	5-14	9-19	+12	+19	+14	+15
Princeton, KY	6-7	10-5	0	+4	+2	-3
Mean		9-26	+5	+13	+9	+4
			DELTA			
Portageville, MO (A)	5-11	9-18	+1	+14	+9	+10
Portageville, MO (B)	5-6	9-21	-1	+10	+6	+1
Martin, TN	6-1	10-11	-5	-3	0	-5
Keiser, AR	5-14	10-2	-12	+1	-6	+1
Stoneville, MS (A)	5-13	9-11	+3	+5	0	+2
Mean		9-25	-3	+5	+2	+2
			WEST			
Manhattan, KS	6-11	10-14	+1	-	+2	+1
Bushland, TX	4-26	9-27	+3	+13	+11	+11
Lubbock, TX	6-3	10-4	-5	+10	-2	-6
Clovis, NM	5-3	10-6	-15	0	-8	-7
Mean		10-5	-4	+6	+1	0

Table 4 - (continued)

Location	S77-7992	V76-411	LS78-248	V78-444	V78-105	V78-713	V78-727
			EAST COAST				
Queenstown, MD	+11	+7	+6	+5	+12	+9	+9
Warsaw, VA	+13	+8	+6	+5	+13	+9	+11
Mean	+12	+8	+6	+5	+13	+9	+10
			UPPER AND CENTRAL SOUTH				
Orange, VA	+20	+15	+6	+6	+13	+15	+18
Knoxville, TN	+16	+5	+1	+7	+5	+16	+17
Eldorado, IL	+19	+16	+11	+9	+18	+19	+19
Princeton, KY	+9	+3	-1	-2	+6	+5	+5
Mean	+16	+10	+4	+5	+11	+14	+15
			DELTA				
Portageville, MO (A)	+10	+10	+9	+14	+8	+14	+10
Portageville, MO (B)	+11	+5	+5	+5	+11	+11	+10
Martin, TN	+3	0	-5	-1	-3	-1	-8
Keiser, AR	-8	-4	-10	0	-4	+1	0
Stoneville, MS (A)	+5	+4	+2	-3	+4	+5	+5
Mean	+4	+3	0	+3	+3	+6	+3
			WEST				
Manhattan, KS	-	-	+2	+1	-	-	-
Bushland, TX	+14	+13	+8	+9	+17	+13	+12
Lubbock, TX	+4	+12	0	+5	+10	+8	+13
Clovis, NM	-5	-2	-8	-3	-4	-1	0
Mean	+3	+6	+1	+3	+6	+5	+6

Table 5 - Plant height for the strains in Uniform Group IV-S, 1982

Location	Douglas	Crawford	S76-2109	D77-18	Md77-5675	S77-7992
			EAST COAST			
Queenstown, MD	34	43	29	33	36	39
Warsaw, VA	30	40	29	35	34	38
Mean	32	42	29	34	35	39
			UPPER AND CENTRAL SOUTH			
Orange, VA	42	48	38	40	47	39
Knoxville, TN	32	42	33	33	31	43
Eldorado, IL	44	50	37	38	39	42
Princeton, KY	37	38	31	38	34	37
Mean	39	45	35	37	38	40
			DELTA			
Portageville, MO (A)	32	42	28	37	22	42
Portageville, MO (B)	24	24	25	28	22	30
Martin, TN	37	38	34	34	34	42
Keiser, AR	25	31	22	22	22	25
Stoneville, MS (A)	34	43	26	27	28	29
Mean	30	36	27	30	26	34
			WEST			
Manhattan, KS	45	45	34	40	39	42
Ottawa, KS	38	45	33	38	41	37
Columbus, KS	32	40	29	34	38	37
Bixby, OK	32	40	27	32	32	36
Bushland, TX	33	37	29	27	31	32
Lubbock, TX	31	34	27	25	32	29
Clovis, NM	18	22	18	20	23	24
Mean	33	38	28	31	34	34

Table 5 - (continued)

Location	V76-411	LS78-248	V78-444	V78-105	V78-713	V78-727
		EAST COAST				
Queenstown, MD	36	37	29	41	33	31
Warsaw, VA	29	35	27	36	30	31
Mean	33	36	28	39	32	31
		UPPER AND CENTRAL SOUTH				
Orange, VA	41	28	31	44	36	37
Knoxville, TN	31	34	29	39	31	32
Eldorado, IL	38	39	35	47	40	39
Princeton, KY	32	36	27	38	31	32
Mean	36	34	31	42	35	35
		DELTA				
Portageville, MO (A)	29	35	29	45	37	35
Portageville, MO (B)	18	25	22	38	31	29
Martin, TN	34	40	28	40	31	33
Keiser, AR	21	25	21	28	22	25
Stoneville, MS (A)	24	22	22	37	24	24
Mean	25	29	24	38	29	29
		WEST				
Manhattan, KS	41	41	33	44	34	35
Ottawa, KS	35	37	29	38	33	35
Columbus, KS	29	36	26	37	30	32
Bixby, OK	-	32	25	36	27	28
Bushland, TX	32	34	27	35	31	30
Lubbock, TX	29	26	22	34	26	26
Clovis, NM	21	21	19	24	21	22
Mean	27	32	26	35	29	30

Table 6 - Lodging scores for the strains in Uniform Group IV-S, 1982

Location	Douglas	Crawford	S76-2109	D77-18	Md77-5675	S77-7992
			EAST COAST			
Queenstown, MD	2.3	3.0	2.2	3.2	3.2	3.8
Warsaw, VA	1.1	1.8	1.1	2.4	1.5	2.3
			UPPER AND CENTRAL SOUTH			
Orange, VA	1.5	2.2	1.3	3.7	1.7	4.7
Knoxville, TN	1.0	4.5	1.6	2.0	1.0	2.2
Eldorado, IL	1.7	2.3	1.6	2.7	1.9	3.0
Princeton, KY	1.0	2.0	1.3	3.3	1.3	2.7
			DELTA			
Portageville, MO (A)	1.0	1.5	1.0	1.5	1.0	2.0
Portageville, MO (B)	1.0	1.0	1.0	1.0	1.0	1.0
Martin, TN	1.0	3.0	1.0	3.0	1.5	2.0
Keiser, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, MS (A)	2.0	3.0	2.0	2.0	2.0	2.0
			WEST			
Manhattan, KS	2.2	3.2	2.0	3.2	3.0	3.0
Ottawa, KS	1.0	1.0	1.0	1.7	1.7	3.0
Columbus, KS	1.0	1.0	1.0	1.3	1.0	1.0
Bixby, OK	1.0	2.3	1.0	3.3	2.0	3.0
Bushland, TX	1.5	2.5	2.5	4.5	3.3	4.5
Lubbock, TX	1.5	1.5	1.5	3.3	1.5	2.3
Clovis, NM	2.0	2.3	2.0	3.0	2.3	3.3

Table 6 - (continued)

Location	V76-411	LS78-248	V78-444	V78-105	V78-713	V78-727
		EAST COAST				
Queenstown, MD	2.5	2.7	3.2	3.5	2.8	2.5
Warsaw, VA	1.1	1.5	1.8	2.2	1.3	1.6
		UPPER AND CENTRAL SOUTH				
Orange, VA	1.8	3.3	1.0	2.2	1.3	1.2
Knoxville, TN	1.2	1.0	1.2	2.2	1.7	1.8
Eldorado, IL	1.6	2.2	1.8	2.2	2.1	2.0
Princeton, KY	1.0	1.3	1.0	1.0	1.3	2.0
		DELTA				
Portageville, MO (A)	1.0	1.5	1.0	1.5	1.5	1.5
Portageville, MO (B)	1.0	1.0	1.0	1.5	1.5	1.5
Martin, TN	3.0	2.0	1.0	2.0	1.5	1.5
Keiser, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
		WEST				
Manhattan, KS	2.8	3.2	2.5	3.0	2.7	2.7
Ottawa, KS	1.3	1.3	1.0	1.3	1.0	1.3
Columbus, KS	1.0	1.0	1.0	1.0	1.0	1.0
Bixby, OK	1.7	2.0	1.3	1.0	1.7	2.0
Bushland, TX	3.0	2.7	3.7	3.5	4.2	4.2
Lubbock, TX	1.2	2.3	3.7	1.5	1.8	3.3
Clovis, NM	1.7	2.7	3.0	2.3	3.0	4.0

Table 7 - Seed quality scores for the strains in Uniform Group IV-S, 1982

Location	Douglas	Crawford	S76-2109	D77-18	Md77-5675	S77-7992
			EAST COAST			
Queenstown, MD	2.8	2.2	2.5	2.0	2.3	1.5
Warsaw, VA	2.2	1.4	1.0	1.5	2.0	1.2
			UPPER AND CENTRAL SOUTH			
Orange, VA	1.0	1.0	1.0	1.0	1.0	1.0
Knoxville, TN	5.0	3.0	1.0	2.0	3.0	2.0
Eldorado, IL	3.5	3.5	3.0	1.8	3.3	1.5
Princeton, KY	4.0	3.0	2.0	3.0	2.0	3.0
			DELTA			
Portageville, MO (A)	4.0	3.0	2.0	2.5	3.0	2.0
Portageville, MO (B)	4.5	3.5	3.0	2.0	3.0	2.0
Martin, TN	3.5	3.0	1.5	2.0	2.5	2.0
Keiser, AR	3.5	2.5	2.0	2.5	3.0	2.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
			WEST			
Manhattan, KS	4.0	1.0	1.0	2.0	1.0	1.0
Ottawa, KS	2.0	1.0	1.0	1.0	1.0	1.0
Columbus, KS	3.0	1.5	1.5	1.5	2.0	1.0
Bushland, TX	2.0	1.5	1.0	1.5	1.5	1.0
Lubbock, TX	4.0	2.2	1.5	1.5	2.0	1.5

Table 7 - (continued)

Location	V76-411	LS78-248	V78-444	V78-105	V78-713	V78-727
		EAST COAST				
Queenstown, MD	1.0	2.0	1.5	2.7	1.7	1.7
Warsaw, VA	1.3	1.8	1.3	1.2	1.3	1.0
		UPPER AND CENTRAL SOUTH				
Orange, VA	1.0	1.0	1.0	1.0	1.0	1.0
Knoxville, TN	1.0	4.0	2.0	2.0	2.0	1.0
Eldorado, IL	1.2	2.3	2.3	1.7	2.3	2.2
Princeton, KY	2.0	4.0	3.0	2.0	3.0	2.0
		DELTA				
Portageville, MO (A)	2.5	2.5	2.5	2.0	2.5	2.5
Portageville, MO (B)	2.5	3.0	4.0	2.5	3.0	3.0
Martin, TN	3.0	2.5	2.5	1.5	2.0	2.0
Keiser, AR	2.0	2.5	3.0	2.0	3.0	2.5
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
		WEST				
Manhattan, KS	1.0	1.0	1.0	1.0	1.0	1.0
Ottawa, KS	1.0	2.5	1.5	1.0	1.0	1.0
Columbus, KS	1.5	1.5	2.0	1.5	1.5	1.5
Bushland, TX	1.0	1.5	1.0	1.0	1.0	1.0
Lubbock, TX	1.5	2.8	1.5	1.5	1.5	1.5

PRELIMINARY GROUP IV-S

1982

Preliminary Group IV-S nurseries, including 22 experimental strains along with Douglas and Hill, were grown at 7 locations. The parentage of each of these strains is reported in Table 8. Performance data are summarized in Tables 8 through 14.

The variety Hill was included as a maturity check. Strains of Hill maturity or later are considered as being too late to be considered of IV-S maturity. Five strains, K1092, LS79-238, R79-5584, S78-1135, and V79-800, were considered as being of Group V maturity. Only two strains, V79-1397 and V79-2856, were earlier in maturity than Douglas.

Douglas had a mean seed yield of 45.2 bushels per acre. Four strains had higher mean seed yields. These were V79-1362, V79-1387, V79-1397, and V79-2856. Two strains, LS79-220 and S79-4259, had good seed yields and were rated resistant to SCN race 3.

Strains which appear to merit further evaluation in Uniform Group IV-S are LS79-220, S79-4259, V79-1362, V79-1387, V79-1393, and V79-2856.

Table 8 - Parentage of the strains grown in Preliminary Group IV-S, 1982

	Variety or strain	Parentage	Generation composited
1.	Douglas	Williams X Crawford	F_5
2.	Hill	D632-15 X D49-2525	F_5
3.	K1091	K1034 X Columbus	
4.	K1092	K1034 X Essex	
5.	LS78-347	L71L-436 X J74-5	F_4
6.	LS78-731	L71L-436 X J74-5	F_5
7.	LS79-220	Forrest X V71-480	F_5
8.	LS79-238	Forrest X V71-480	F_5
9.	R74-851	Forrest X SRF 450	F_5
10.	R79-2572	Bedford X Hill	F_5
11.	R79-2962	Dare X SRF 450	F_5
12.	R79-3015	Dare X SRF 450	F_5
13.	R79-5584	Kent X Mack	F_4
14.	S78-57	V71-807 X Franklin	F_4
15.	S78-1135	D66-12392 X Essex	F_4
16.	S79-4259	Bedford X Crawford	F_5
17.	S79-4296	Bedford X Crawford	F_5
18.	V79-145	Essex X V73-1906	F_5
19.	V79-800	Essex X V68-1171	F_5
20.	V79-1362	Essex X Williams	F_5
21.	V79-1387	V68-183 X Williams	F_5
22.	V79-1393	V68-183 X Williams	F_5
23.	V79-1397	V68-183 X Williams	F_5
24.	V79-2856	Hodgson X V73-1899	F_5

Table 9 - General summary of performance for the strains grown in Preliminary Group IV-S, 1982

Strain	Seed yield	Maturity index	Ht.	Percent Oil	Percent Protein	M. incognita	M. arenaria	SCN race 3	Bacterial pustule
Douglas	45.2	9-29	34	19.2	41.4	3.5	2.5	S	R
Hill	35.6	+8	38	17.3	40.1	3.5	4.0	S	R
K1091	45.1	+4	42	18.0	42.1	4.5	4.0	S	R
K1092	46.3	+8	30	18.6	40.9	5.0	4.0	S	R
LS78-347	39.1	+5	34	18.2	39.8	4.5	1.5	S	R
LS78-731	43.0	+6	36	18.7	38.8	4.5	1.5	R	R
LS79-220	44.3	+6	35	18.3	39.7	4.5	-	R	R
LS79-238	45.6	+8	37	18.2	39.4	4.0	2.5	S	R
R74-851	40.6	+3	40	18.9	41.1	4.5	2.2	S	S
R79-2572	36.5	+7	40	18.0	42.0	4.0	5.0	S	S
R79-2962	41.7	+4	40	18.8	39.9	4.5	2.5	S	R
R79-3015	42.2	+5	42	18.4	40.4	4.5	1.8	S	R
R79-5584	38.4	+11	40	17.5	39.5	5.0	3.0	S	R
S78-57	44.1	+1	40	18.4	40.1	4.0	3.0	S	R
S78-1135	45.2	+9	33	17.3	40.6	3.5	5.0	S	S
S79-4259	43.1	+7	45	18.3	38.4	3.0	5.0	R	R
S79-4296	40.1	+5	41	17.9	40.6	3.0	4.0	R	R
V79-145	43.6	+7	37	17.5	41.5	3.0	2.5	S	R
V79-800	46.8	+11	28	16.6	36.3	4.0	5.0	S	R
V79-1362	46.6	+2	38	18.5	36.4	5.0	3.5	S	R
V79-1387	46.9	+5	33	18.5	35.3	4.5	4.5	S	R
V79-1393	42.7	+4	33	18.8	35.0	4.5	4.0	S	R
V79-1397	45.7	-3	34	18.1	36.7	4.0	4.5	S	R
V79-2856	47.4	-1	33	18.5	35.5	5.0	2.5	S	R

Table 10 - Seed yield, in bushels per acre, for the strains grown in Preliminary Group IV-S, 1982

Strain	Queens-town, MD	Warsaw, VA	Portage-ville, MO (A)	Keiser, AR	Stone-ville, MS (B)	Ottawa, KS	Prince-ton, KY
Douglas	47.0	52.0	42.8	42.3	36.4	42.2	53.5
Hill	32.0-	33.0-	35.5	42.3	34.0	27.3-	44.8-
K1091	45.0	49.9	43.4	44.3	41.7	40.0	51.3
K1092	39.9	49.3	42.0	47.1	49.8+	39.7	56.2
LS78-347	36.9	42.5-	38.7	37.8	32.0	35.0	50.8
LS78-731	46.4	34.8-	43.4	42.0	46.0+	37.6	50.8
LS79-220	46.3	45.9-	45.9	46.5	40.4	27.7-	57.1+
LS79-238	48.8	45.8-	45.4	41.9	44.7+	30.5-	62.0+
R74-851	38.8	41.0-	40.0	40.8	38.6	38.9	46.3-
R79-2572	39.4	33.0-	30.2-	40.0	38.6	27.0-	47.6-
R79-2962	43.7	39.4-	39.0	37.5	46.3+	33.7	52.5
R79-3015	42.8	43.2-	42.1	41.7	40.5	36.2	49.2-
R79-5584	42.8	37.0-	37.0	41.3	39.2	27.5-	43.8-
S78-57	48.9	45.6-	39.9	46.8	43.9	32.9-	50.5
S78-1135	53.1	43.7-	47.2+	45.0	41.0	36.9	49.7-
S79-4259	41.2	44.7-	51.0+	35.9	44.3	35.2	49.5-
S79-4296	28.9-	42.4-	45.5	41.5	37.1	38.7	46.8-
V79-145	48.4	39.2-	40.2	45.2	40.3	37.8	54.2
V79-800	58.5+	51.8	44.5	44.2	37.9	36.6	54.2
V79-1362	55.3	46.9-	44.3	40.7	43.7	41.9	53.5
V79-1387	49.3	50.3	36.5	39.4	43.1	44.1	65.7+
V79-1393	46.5	50.7	38.1	39.3	36.4	34.2	53.6
V79-1397	58.3+	49.5	39.6	41.0	42.3	37.4	51.7
V79-2856	57.4	55.7	39.8	44.0	38.3	45.1	51.5
L.S.D.(.05)	11.1	4.7	7.4	N.S.	8.0	8.6	3.5
C.V.	12%	5%	9%	9%	9%	12%	8%

Table 11 - Oil percentages for the strains in Preliminary Group IV-S, 1982

Strain	Queenstown, MD	Warsaw, VA	Keiser, AR	Ottawa, KS
Douglas	19.6	19.5	20.0	17.5
Hill	18.4	16.5	18.7	15.4
K1091	17.6	18.9	17.9	17.4
K1092	18.6	19.1	18.6	17.9
LS78-347	18.3	18.8	19.4	16.2
LS78-731	19.8	18.4	19.3	17.2
LS79-220	18.8	18.4	19.3	16.5
LS79-238	18.6	18.9	19.3	16.1
R74-851	19.0	19.4	19.0	18.3
R79-2572	18.4	17.9	18.9	16.6
R79-2962	19.3	18.5	19.7	17.6
R79-3015	18.8	18.9	18.2	17.5
R79-5584	17.9	17.4	19.2	15.6
S78-57	19.9	18.5	18.4	16.7
S78-1135	17.2	17.3	19.1	15.6
S79-4259	18.7	18.4	19.8	16.4
S79-4296	18.5	17.6	19.4	16.0
V79-145	17.8	17.5	17.9	16.6
V79-800	16.4	17.6	16.6	15.9
V79-1362	18.8	19.3	17.8	17.9
V79-1387	18.0	19.2	19.4	17.2
V79-1393	18.5	18.6	20.4	17.6
V79-1397	18.5	18.2	18.3	17.3
V79-2856	18.4	19.2	18.9	17.5

Table 12 - Protein percentages for the strains in Preliminary Group IV-S, 1982

Strain	Queenstown, MD	Warsaw, VA	Keiser, AR	Ottawa, KS
Douglas	40.3	40.3	43.0	41.8
Hill	38.8	40.9	41.4	39.3
K1091	42.0	41.5	42.7	42.3
K1092	41.7	40.4	40.3	41.0
LS78-347	39.6	39.5	39.7	40.2
LS78-731	36.5	41.3	38.4	38.9
LS79-220	38.1	40.5	41.1	39.2
LS79-238	37.9	40.2	40.2	39.3
R74-851	38.8	41.3	42.9	41.2
R79-2572	40.8	43.7	41.5	41.8
R79-2962	38.1	41.4	40.1	40.0
R79-3015	38.5	40.8	41.5	40.6
R79-5584	37.9	40.6	40.3	39.0
S78-57	38.5	40.7	40.9	40.1
S78-1135	39.6	41.4	40.7	40.8
S79-4259	37.2	39.0	38.6	38.7
S79-4296	38.8	42.8	39.8	41.0
V79-145	40.1	42.3	42.0	41.6
V79-800	42.6	42.2	43.5	42.9
V79-1362	40.8	41.4	43.8	41.5
V79-1387	40.4	41.5	40.8	40.9
V79-1393	39.2	41.3	39.9	40.3
V79-1397	42.1	43.2	42.8	42.1
V79-2856	40.4	40.7	41.5	41.3

Table 13 - Plant height for the strains in Preliminary Group IV-S, 1982

Strain	Queenstown, MD	Warsaw, VA	Portage-ville, MO (A)	Keiser, AR	Ottawa, KS	Princeton, KY
Douglas	27	30	38	32	39	38
Hill	39	38	41	36	40	35
K1091	39	42	45	36	48	40
K1092	31	28	32	24	36	29
LS78-347	38	33	38	24	38	34
LS78-731	36	34	40	28	37	39
LS79-220	36	34	38	29	38	34
LS79-238	39	35	44	30	39	37
R74-851	38	41	47	31	42	39
R79-2572	39	40	46	39	41	37
R79-2962	35	38	48	33	42	41
R79-3015	36	38	48	38	46	43
R79-5584	36	36	47	38	41	41
S78-57	34	40	48	33	46	38
S78-1135	31	32	42	28	33	34
S79-4259	42	46	57	31	48	44
S79-4296	33	42	47	33	46	42
V79-145	39	32	44	32	40	36
V79-800	29	26	29	23	33	28
V79-1362	41	32	46	32	39	40
V79-1387	38	34	28	31	37	32
V79-1393	36	33	36	26	36	32
V79-1397	33	28	41	25	38	39
V79-2856	33	30	39	27	36	34

Table 14 - Seed quality scores for the strains in Preliminary Group IV-S, 1982

Strain	Queenstown, MD	Warsaw, VA	Portage-ville, MO (A)	Keiser, AR	Ottawa, KS	Princeton, KY
Douglas	3.3	2.0	3.5	3.5	4.0	4.0
Hill	2.0	1.0	2.0	2.5	1.0	3.0
K1091	3.0	1.8	2.5	3.0	2.5	2.0
K1092	2.0	1.2	3.0	3.0	1.0	2.0
LS78-347	1.8	1.3	2.5	1.5	1.0	3.0
LS78-731	1.5	1.5	2.0	2.0	1.5	4.0
LS79-220	1.5	1.0	2.0	2.0	1.0	2.0
LS79-238	2.3	1.0	2.0	1.5	1.0	2.0
R74-851	2.5	1.7	3.5	3.0	1.5	3.0
R79-2572	2.5	1.8	2.5	2.5	1.5	4.0
R79-2962	1.8	1.2	2.0	2.5	1.0	3.0
R79-3015	1.8	1.5	3.0	3.0	1.5	3.0
R79-5584	1.5	1.2	2.0	2.0	1.5	3.0
S78-57	2.3	1.5	2.0	3.5	2.0	2.0
S78-1135	1.8	1.3	2.5	2.0	1.5	3.0
S79-4259	1.5	1.5	2.5	1.5	1.5	3.0
S79-4296	2.0	1.4	2.5	2.0	1.5	3.0
V79-145	1.3	1.2	2.0	2.0	1.0	2.0
V79-800	3.0	1.0	2.0	2.5	1.5	2.0
V79-1362	1.8	1.3	3.5	3.0	1.0	2.0
V79-1387	1.5	1.0	2.5	2.0	1.0	3.0
V79-1393	1.8	1.0	2.0	2.0	1.0	2.0
V79-1397	2.0	2.0	3.0	3.5	1.5	3.0
V79-2856	2.0	1.0	2.5	4.0	1.5	2.0

UNIFORM GROUP V

1982

	Variety or strain	Parentage	Generation composited
1.	Essex	Lee X S5-7075	F_5
2.	Forrest	Dyer X Bragg	F_5
3.	Nathan	Forrest(2) X (D68-18 X PI 88788)	F_5
4.	D77-5090	[Pickett 71(2) X (Dare(2) X PI 96983)] X J74-47	F_5
5.	N77-179	N70-1549 X N72-3213	F_5
6.	D77-5169	Centennial X J74-47	F_5
7.	R74-511	R66-873 X Mack	F_4
8.	D77-5147	[Pickett 71(2) X (Dare(2) X PI 96983)] X J74-47	F_5
9.	D77-6056	Centennial X J74-47	F_5
10.	N79-2337	Forrest(2) X 4-74-6-3	F_4
11.	R79-121	Mack X V72-128	F_5
12.	S76-2425	D70-3115 X Essex	F_5

Background of breeding lines used as parents:

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

D68-18 is a selection from Dyer X Bragg.

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

N70-1549 is a selection from Dare X D65-6765 which was grown in Uniform Group V in 1974.

N72-3213 is a selection from D67-B5 X N64-2451 which was grown in Preliminary Group VII in 1974.

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

V12-128 is a selection from PI 96983 X V66-318. It was evaluated in Uniform Group V in 1975.

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

UNIFORM GROUP V, 1982

Uniform Group V nurseries were planted at 32 locations. Additional plantings were made at Blackville, South Carolina to evaluate for M. arenaria, at Jay, Florida to evaluate for M. incognita, and at Ames Plantation in Tennessee to evaluate for SCN race 3. Plantings were made in the field cage at Stoneville to evaluate for foliar-feeding insects. Results are summarized in Tables 15 through 21. Table 15 gives a general summary of seed yields, oil and protein percentages, growth characteristics, and reaction to diseases and nematodes. Insect feeding in the cage at Stoneville was insufficient for evaluating strains.

SCN race 1 was present where the plantings were made at Holland, Virginia, and SCN race 4 was present where the plantings were made at Tiptonville, Tennessee.

The three-year mean seed yield for Forrest was slightly higher than that for Essex in each of the production regions. Nathan, D77-5090, and N77-179 have been evaluated 3 years. Nathan has produced well on race 4 cyst nematode infested soil in northwest Tennessee, but its overall average seed yield is lower than that for Essex and Forrest. D77-5090 is also resistant to SCN race 4. In addition, it is resistant to SMV and has the Arksoy gene for resistance to phytophthora rot. Its three-year mean seed yield is nearly similar to that for Essex. D77-5090 is being proposed for increase and release as a variety. The three-year mean seed yield for N77-179 closely approximates that for Essex. Seed yield is slightly below that for Essex in the East Coast and West regions and slightly above in the Upper and Central South and Delta. D77-5169 and R74-511 have been evaluated two years. D77-5169 is resistant to both SCN races 3 and 4. Its two-year mean seed yield is above that for Forrest in all but the Western region and in that region it equaled Forrest in seed yield.

Five strains were advanced from the 1981 Preliminary Group V nursery. D77-5147 and D77-6056 are both resistant to races 3 and 4 of the cyst nematode. D77-6056 also received low ratings for both of the root knot nematodes M. incognita and M. arenaria. N79-2337 received a low rating for M. arenaria. D77-6056 and S76-2425 appear to merit further evaluation.

Table 15 - General summary of performance of the strains in Uniform Group V, 1982

	No. of locations	Essex	Forrest	Nathan	D77-5090	N77-179	D77-5169
Seed yield - 1982							
East Coast	4	40.6	40.6	36.5	40.8	39.4	45.1
Upper & Central South	10	49.5	50.1	44.5	44.7	48.2	49.3
Delta	7	35.4	39.7	35.9	36.5	35.5	40.1
West	7	38.2	37.3	34.4	33.9	37.8	34.7
1981-82							
East Coast		41.5	42.8	37.9	41.7	40.0	43.7
Upper & Central South		46.9	48.7	43.8	44.8	47.8	49.5
Delta		38.6	40.9	37.3	38.7	39.3	41.4
West		37.3	36.8	34.1	34.5	35.9	36.1
1980-82							
East Coast		39.3	40.0	35.1	38.6	38.1	
Upper & Central South		43.2	45.9	39.7	42.3	44.3	
Delta		37.6	40.7	36.4	38.7	39.3	
West		35.8	36.7	33.4	35.1	34.6	
Oil Content - 1982		18.4	18.8	19.2	17.9	19.5	18.2
1981-82		19.0	19.1	19.4	18.3	19.7	18.6
1980-82		19.2	19.4	19.7	18.8	19.8	
Protein Content - 1982		41.3	38.4	38.0	40.6	39.2	40.0
1981-82		42.0	39.2	38.8	41.6	40.2	40.7
1980-82		42.8	40.1	40.0	42.2	41.1	
Seed size		13.3	12.7	13.0	14.0	14.1	15.6
Maturity index		10-4	+4	-2	+2	+1	+4
Height		30	37	41	35	31	37
Seed quality		1.9	1.9	1.9	1.9	1.9	1.9
Bacterial pustule		R	R	R	R	R	R
M. incognita		4.0	2.0	2.0	2.5	4.0	2.0
M. arenaria		5.0	1.8	2.8	5.0	4.0	5.0
SCN race 3		S	R	R	R	S	R
SCN race 4		S	S	R	R	S	R
*Percent mottled seed		0	3	2	1	2	1
Flower color		P	W	W	P	W	P
Pubescence color		G	T	T	G	T	T
Pod wall color		T	T	T	T	T	T

*Orange, Virginia

Table 15 - (continued)

	R74-511	D77-5147	D77-6056	N79-2337	R79-121	S76-2425
Seed yield - 1982						
East Coast	39.4	41.2	41.8	39.6	41.9	41.9
Upper & Central South	47.5	46.5	50.6	46.9	45.4	50.4
Delta	41.4	37.4	40.4	31.0	36.2	37.6
West	37.4	35.4	34.6	32.5	35.4	38.1
1981-82						
East Coast	40.8					
Upper & Central South	45.6					
Delta	41.4					
West	38.3					
1980-82						
East Coast						
Upper & Central South						
Delta						
West						
Oil Content - 1982	19.3	18.6	18.6	19.1	18.1	18.8
1981-82	19.3					
1980-82						
Protein Content - 1982	38.7	39.3	38.7	38.2	40.6	39.8
1981-82	40.0					
1980-82						
Seed size	13.7	14.6	14.3	12.5	13.0	12.3
Maturity index	+1	+1	+4	+2	-1	+4
Height	31	40	37	34	37	37
Seed quality	1.8	1.9	1.9	1.9	1.9	1.9
Bacterial pustule	R	R	R	R	R	R
M. incognita	5.0	5.0	2.5	3.5	4.0	3.0
M. arenaria	2.5	2.5	1.8	1.0	2.5	3.5
SCN race 3	S	R	R	S	S	S
SCN race 4	S	R	R	S	S	S
Percent mottled seed	7	4	11	22	7	0
Flower color	P	W	P	W	P	W
Pubescence color	G	T	T	T	T	G
Pod wall color	T	T	T	T	T	T

Table 16 - Seed yield, in bushels per acre, for the strains in Uniform Group V, 1982

Location	Essex	Forrest	Nathan	D77-5090	N77-179	D77-5169	R74-511
			EAST COAST				
Queenstown, MD	42.1	40.4	41.1	45.9	46.5	47.1	40.3
Georgetown, DE	35.1	35.3	30.5	32.2	32.0	32.1	30.3
Warsaw, VA	50.7	44.4-	41.5-	42.6-	51.6	49.2	47.7
Holland, VA	34.4	42.2	32.8	42.3	27.3	46.8+	39.1
*Plymouth, NC	34.9	37.8	23.8	42.3	40.5	44.6	35.1
Mean	40.6	40.6	36.5	40.8	39.4	45.1	39.4
			UPPER AND CENTRAL SOUTH				
Orange, VA	48.6	44.5	37.8-	36.2-	42.4	37.3-	42.8
Knoxville, TN	75.0	66.1	65.1	62.2	75.3	76.8	59.3
Clemson, SC	29.0	30.3	28.4	26.7	29.4	28.4	33.4
Calhoun, GA	62.8	62.5	54.8	47.4-	44.1-	55.3	59.9
Athens, GA	44.1	48.1	39.5	38.8	48.6	43.5	49.4
Belle Mina, AL	51.4	49.1	37.2-	41.6-	53.3	45.4	46.3
Princeton, KY	44.8	45.7	45.7	48.5+	52.7+	42.6	44.7
Tiptonville, TN	29.9	36.5+	36.9+	40.8+	31.2	42.2+	33.6+
Martin, TN	62.1	68.6	58.3	59.5	69.5	65.0	56.1
Jackson, TN	47.8	50.0	40.8-	45.1	35.6-	56.6+	49.0
Mean	49.5	50.1	44.5	44.7	48.2	49.3	47.5
			DELTA				
Portageville, MO (A)	44.5	46.7	42.3	42.3	43.9	44.9	47.0
Portageville, MO (B)	29.0	29.1	27.5	29.4	25.4	31.8	33.4
Keiser, AR	49.1	53.1	48.8	47.8	56.2+	52.5	53.9
Jonesboro, AR	26.7	33.6+	29.0	26.5	26.6	34.3+	33.9+
Pine Tree, AR	29.4	27.5	29.6	22.4-	23.0-	32.0	31.1
Stoneville, MS (A)	41.9	52.2+	45.0	52.2+	43.9	49.9+	56.1+
Stoneville, MS (B)	27.0	35.6+	28.9	35.2+	29.7	35.5+	34.7+
*St. Joseph, LA	62.9	60.3	54.4-	55.6-	60.6	53.9-	47.3-
Mean	35.4	39.7	35.9	36.5-	35.5	40.1	41.4
			WEST				
Ottawa, KS	33.0	27.4-	28.7-	26.0-	35.8	21.7-	31.0
Columbus, KS	22.2	26.6+	23.8	23.9	23.6	23.4	25.1
Pine Bluff, AR	53.0	50.0	37.0	42.0	49.0	49.0	45.0
Stuttgart, AR	49.1	46.0	46.0	38.4	43.8	48.2	46.9
*Bossier City, LA	28.4	24.1	26.6	26.8	30.3	24.5	29.9
Bixby, OK	36.9	37.8	34.0	35.4	32.3	34.4	39.8
Lubbock, TX	47.6	49.0	46.3	44.1	54.7	37.9-	45.1
Beaumont, TX	25.8	24.2	25.2	27.3	25.4	28.6	28.7
Mean	38.2	37.3	34.4	33.9	37.8	34.7	37.4

*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)

Location	D77-5147	D77-6056	N79-2337	R79-121	S76-2425	L.S.D. (.05)	C.V. (%)
			EAST COAST				
Queenstown, MD	42.1	40.4	42.8	44.7	44.6	N.S.	7
Georgetown, DE	31.8	37.7	34.2	36.3	30.7	N.S.	13
Warsaw, VA	46.3-	45.3-	44.3-	45.5-	47.4	3.9	5
Holland, VA	44.6+	43.8+	36.9	41.1	44.9+	9.4	14
Plymouth, NC	39.2	43.1	39.2	36.5	40.6	N.S.	18
Mean	41.2	41.8	39.6	41.9	41.9		
			UPPER AND CENTRAL SOUTH				
Orange, VA	38.7-	43.6	46.9	44.3	45.1	7.6	11
Knoxville, TN	63.1	67.9	62.4	65.5	65.4	N.S.	11
Clemson, SC	26.1	29.5	26.7	30.0	30.6	N.S.	13
Calhoun, GA	47.3-	60.8	48.4-	49.6-	63.4	12.4	13
Athens, GA	42.0	47.2	47.6	41.1	54.0+	8.0	10
Belle Mina, AL	45.1-	42.8-	42.3-	44.9-	48.3	6.2	8
Princeton, KY	40.4-	44.3	45.0	49.7+	46.5	3.5	6
Tiptonville, TN	44.0+	48.0+	37.4+	30.3	34.1+	3.4	5
Martin, TN	65.5	69.5	64.3	55.7	65.5	7.7	7
Jackson, TN	52.9	52.5	48.4	42.4	50.7	6.9	9
Mean	46.5	50.6	46.9	45.4	50.4		
			DELTA				
Portageville, MO (A)	44.8	44.6	40.9	40.9	43.8	N.S.	10
Portageville, MO (B)	28.8	33.4	27.0	30.2	26.5	4.6	8
Keiser, AR	49.4	52.9	27.1-	52.5	56.3+	5.1	6
Jonesboro, AR	27.3	31.0	26.5	21.0	24.4	6.8	14
Pine Tree, AR	27.5	30.6	26.0	23.8	24.4	6.4	14
Stoneville, MS (A)	50.3+	51.8+	43.6	49.7+	53.8+	6.7	8
Stoneville, MS (B)	34.0+	38.8+	26.2	35.0+	34.2+	5.4	10
St. Joseph, LA	50.4-	52.9-	55.0-	46.8-	52.8-	7.0	8
Mean	37.4	40.4	31.0	36.2	37.6		
			WEST				
Ottawa, KS	26.2-	20.1-	19.5-	31.1	30.5	3.7	8
Columbus, KS	25.4	24.0	13.7-	25.6	24.0	3.7	9
Pine Bluff, AR	47.0	43.0	50.0	46.0	51.0	N.S.	13
Stuttgart, AR	44.9	47.8	44.2	44.5	49.3	N.S.	8
Bossier City, LA	25.2	25.2	20.6-	26.8	28.8	5.2	12
Bixby, OK	34.2	29.6-	27.1-	31.7	31.0	5.9	10
Lubbock, TX	42.7	48.5	50.5	53.7	52.3	8.1	10
Beaumont, TX	27.6	29.3	22.7	23.8	28.7	N.S.	16
Mean	35.4	34.6	32.5	35.4	38.1		

Table 17 - Chemical composition and seed size for the strains in Uniform Group V, 1982

Location	Essex	Forrest	Nathan	D77-5090	N77-179	D77-5169
			OIL PERCENTAGES			
Queenstown, MD	18.3	18.7	18.9	17.6	18.7	18.3
Warsaw, VA	18.5	18.9	18.6	18.5	18.6	18.4
Orange, VA	17.9	18.9	18.3	17.9	18.0	18.3
Jackson, TN	18.6	19.4	19.5	18.3	19.9	18.2
Portageville, MO (A)	18.2	18.9	19.9	17.9	19.8	18.3
Keiser, AR	18.5	18.4	19.6	17.7	20.0	17.3
Stoneville, MS (A)	19.3	19.5	20.2	18.5	21.4	19.7
Stuttgart, AR	17.5	17.7	18.8	17.1	19.6	17.2
Mean	18.4	18.8	19.2	17.9	19.5	18.2
			PROTEIN PERCENTAGES			
Queenstown, MD	41.1	37.6	37.3	40.2	39.1	39.0
Warsaw, VA	40.5	36.9	37.3	38.4	38.8	39.2
Orange, VA	39.4	34.6	35.5	38.0	37.2	35.3
Jackson, TN	40.9	37.3	35.6	39.6	38.2	37.6
Portageville, MO (A)	41.2	38.1	38.2	40.3	38.9	40.4
Keiser, AR	41.9	39.3	39.4	41.9	38.9	42.0
Stoneville, MS (A)	41.3	41.3	40.9	43.8	40.6	43.6
Stuttgart, AR	43.8	42.0	39.5	42.7	41.5	43.0
Mean	41.3	38.4	38.0	40.6	39.2	40.0
			GRAMS PER 100 SEEDS			
Queenstown, MD	12.7	13.3	13.5	14.6	14.9	16.9
Warsaw, VA	13.7	13.9	13.6	15.1	15.7	17.4
Orange, VA	13.0	13.0	12.0	13.0	15.0	16.0
Jackson, TN	13.7	13.7	13.1	14.2	14.9	15.9
Portageville, MO (A)	13.6	12.8	13.9	14.9	14.7	15.9
Keiser, AR	13.9	11.8	12.6	13.0	13.0	14.2
Stoneville, MS (A)	11.8	10.8	12.6	12.8	11.5	13.4
Stuttgart, AR	14.0	12.0	13.0	14.0	13.0	15.0
Mean	13.3	12.7	13.0	14.0	14.1	15.6

Table 17 - (continued)

Location	R74-511	D77-5147	D77-6056	N79-2337	R79-121	S76-2425
			OIL PERCENTAGES			
Queenstown, MD	18.4	18.5	18.4	18.6	17.3	18.6
Warsaw, VA	19.0	18.7	18.5	19.0	18.1	19.3
Orange, VA	18.5	17.8	18.8	18.7	17.8	18.0
Jackson, TN	20.7	18.8	19.1	19.2	17.6	18.6
Portageville, MO (A)	19.4	19.4	19.2	18.7	18.2	19.4
Keiser, AR	19.4	18.4	18.1	20.2	17.8	18.1
Stoneville, MS (A)	20.1	20.0	18.8	19.7	19.6	20.1
Stuttgart, AR	19.2	17.5	18.0	18.4	18.3	17.8
Mean	19.3	18.6	18.6	19.1	18.1	18.8
			PROTEIN PERCENTAGES			
Queenstown, MD	39.1	38.5	37.5	38.1	40.6	39.2
Warsaw, VA	38.8	38.0	38.1	36.0	39.5	38.4
Orange, VA	35.8	36.1	34.6	34.6	37.8	37.7
Jackson, TN	33.5	38.2	36.6	37.0	40.3	40.0
Portageville, MO (A)	39.0	38.6	38.8	38.0	40.5	38.9
Keiser, AR	39.5	40.5	40.1	37.6	41.4	40.5
Stoneville, MS (A)	41.8	42.1	41.9	41.7	42.4	41.0
Stuttgart, AR	42.2	42.5	41.7	42.3	42.0	42.8
Mean	38.7	39.3	38.7	38.2	40.6	39.8
			GRAMS PER 100 SEEDS			
Queenstown, MD	14.3	15.6	14.9	13.4	13.4	12.3
Warsaw, VA	14.5	15.5	16.3	14.2	14.0	12.3
Orange, VA	13.0	15.0	15.0	13.0	13.0	11.0
Jackson, TN	14.2	14.7	14.5	13.2	13.4	13.6
Portageville, MO (A)	14.8	14.7	14.7	12.6	13.8	13.0
Keiser, AR	13.3	13.4	13.4	12.4	12.2	12.6
Stoneville, MS (A)	12.6	12.8	11.4	10.3	11.3	11.2
Stuttgart, AR	13.0	15.0	14.0	11.0	13.0	12.0
Mean	13.7	14.6	14.3	12.5	13.0	12.3

Table 18 - Relative maturity, days earlier (-) or later (+) than Essex, for the strains in Uniform Group V, 1982

Location	Date planted	Essex matured	Forrest	Nathan	D77-5090	N77-179	D77-5169
			EAST COAST				
Queenstown, MD	6-3	10-19	+9	+1	+3	+3	+9
Georgetown, DE	6-4	10-21	+2	0	+2	-3	+3
Warsaw, VA	5-27	10-16	+8	+2	+5	0	+10
Holland, VA	6-2	10-5	+14	+5	+12	+2	+13
*Plymouth, NC	5-10	10-18	0	-17	0	-11	0
Mean	6-1	10-15	+8	+2	+6	0	+9
			UPPER AND CENTRAL SOUTH				
Orange, VA	5-18	10-18	0	0	+3	0	+3
Knoxville, TN	5-4	10-5	+2	-4	+1	0	+2
Clemson, SC	5-12	9-28	-4	-8	-5	-2	+2
Calhoun, GA	6-7	10-16	-1	-4	-1	-1	+2
Athens, GA	5-10	9-15	+5	-4	+2	+2	+6
Belle Mina, AL	5-10	9-23	+2	-10	-2	+2	+2
Princeton, KY	6-7	10-21	-1	-3	-1	+1	-1
Martin, TN	6-1	10-14	+3	+2	+2	+3	0
Jackson, TN	5-14	10-1	+5	0	+4	+3	+6
Mean	5-20	10-6	+1	-3	0	+1	+2
			DELTA				
Portageville, MO (A)	5-11	10-3	+7	0	+2	0	+8
Portageville, MO (B)	-	10-4	+5	-3	0	-1	0
Keiser, AR	5-14	10-5	+1	-5	0	0	+4
Jonesboro, AR	5-18	10-8	+3	+4	+1	+3	+3
Pine Tree, AR	6-14	10-10	+3	+2	+3	+1	+2
Stoneville, MS (A)	5-13	9-19	+4	-1	+8	+2	+4
Stoneville, MS (B)	5-10/11	9-21	+5	-4	+5	+2	+4
St. Joseph, LA	5-11	9-11	+4	0	+4	+1	+4
Mean	5-18	9-30	+4	+1	+3	+1	+4
			WEST				
Pine Bluff, AR	6-24	10-13	+3	-5	-1	-1	0
*Bossier City, LA	-	9-20	+3	0	+3	+3	+4
Lubbock, TX	6-3	10-16	+4	-6	+2	0	+2
Beaumont, TX	5-21	9-17	+2	-4	-2	+3	+9
Mean	6-6	10-5	+3	-5	0	+1	+4

*Not included in mean.

Table 18 - (continued)

Location	R74-511	D77-5147	D77-6056	N79-2337	R79-121	S76-2425
			EAST COAST			
Queenstown, MD	0	+3	+9	+9	0	+2
Georgetown, DE	-2	+3	+3	+3	0	0
Warsaw, VA	+1	+4	+10	+9	+1	+6
Holland, VA	0	+8	+14	+8	0	+12
Plymouth, NC	0	-11	-11	-11	-11	+10
Mean	0	+5	+9	+7	0	+5
			UPPER AND CENTRAL SOUTH			
Orange, VA	0	+3	+3	+3	0	0
Knoxville, TN	-2	-2	+6	0	-3	+3
Clemson, SC	-1	-7	+2	-6	-5	+2
Calhoun, GA	-6	-4	0	-5	-6	+2
Athens, GA	+1	+3	+7	+3	-1	+9
Belle Mina, AL	-4	+1	+2	+2	-5	+2
Princeton, KY	-4	-2	-2	0	-2	+1
Martin, TN	0	0	0	0	0	+3
Jackson, TN	+1	+4	+6	+5	-2	+6
Mean	+2	0	+3	0	-3	+3
			DELTA			
Portageville, MO (A)	0	+1	0	+7	0	+9
Portageville, MO (B)	-1	0	+6	+5	0	+6
Keiser, AR	0	0	+3	+1	-2	+4
Jonesboro, AR	+3	+1	+3	+2	+2	+7
Pine Tree, AR	+1	+1	+3	+1	+2	+4
Stoneville, MS (A)	+1	+1	+6	+3	+1	+8
Stoneville, MS (B)	+3	0	+6	+1	0	+6
St. Joseph, LA	-4	-2	0	+1	-3	-1
Mean	0	0	+3	+3	0	+5
			WEST			
Pine Bluff, AR	-2	+1	+3	-2	-2	+2
Bossier City, LA	+2	+3	+2	+1	+1	+5
Lubbock, TX	-2	+2	+4	+3	+1	+3
Beaumont, TX	-1	+2	+5	-2	-1	+4
Mean	-2	+2	+4	+1	-1	+3

Table 19 - Plant height for the strains in Uniform Group V, 1982

Location	Essex	Forrest	Nathan	D77-5090	N77-179	D77-5169
			EAST COAST			
Queenstown, MD	29	37	35	35	29	37
Georgetown, DE	38	42	45	40	36	44
Warsaw, VA	34	39	44	37	34	41
Holland, VA	28	29	35	29	26	33
*Plymouth, NC	27	36	36	35	22	29
Mean	32	37	40	35	31	39
			UPPER AND CENTRAL SOUTH			
Orange, VA	37	43	54	36	37	41
Knoxville, TN	33	42	49	39	36	41
Clemson, SC	26	37	41	36	30	38
Calhoun, GA	31	37	39	34	32	38
Athens, GA	25	36	42	35	25	34
Belle Mina, AL	30	38	43	37	33	33
Princeton, KY	31	44	46	37	31	38
Tiptonville, TN	28	40	48	40	32	46
Martin, TN	36	40	46	36	38	42
Jackson, TN	37	49	51	47	41	49
Mean	31	41	46	38	34	40
			DELTA			
Portageville, MO (A)	40	47	50	49	40	43
Portageville, MO (B)	27	29	40	28	29	34
Keiser, AR	26	35	34	31	29	35
Jonesboro, AR	30	38	37	37	29	39
Pine Tree, AR	26	31	34	31	24	34
Stoneville, MS (A)	27	36	42	36	26	32
Stoneville, MS (B)	24	31	35	29	26	31
St. Joseph, LA	26	33	40	32	25	30
Mean	28	35	39	34	29	35
			WEST			
Ottawa, KS	37	42	47	39	37	39
Columbus, KS	31	36	41	34	31	38
Pine Bluff, AR	30	30	31	29	26	35
Stuttgart, AR	29	36	38	33	29	36
Bossier City, LA	27	31	39	32	27	33
Bixby, OK	32	38	44	38	32	40
Lubbock, TX	28	31	29	30	29	23
Beaumont, TX	19	21	29	24	16	24
Mean	29	33	37	32	28	34

*Not included in mean

Table 19 - (continued)

Location	R74-511	D77-5147	D77-6056	N79-2337	R79-121	S76-2425
			EAST COAST			
Queenstown, MD	28	45	36	34	39	35
Georgetown, DE	40	44	42	43	41	41
Warsaw, VA	35	42	40	38	38	38
Holland, VA	26	35	31	25	35	35
Plymouth, NC	26	33	34	29	35	32
Mean	32	42	37	35	38	37
			UPPER AND CENTRAL SOUTH			
Orange, VA	43	41	42	41	44	44
Knoxville, TN	33	45	45	38	44	43
Clemson, SC	27	39	37	36	36	36
Calhoun, GA	30	38	36	34	34	34
Athens, GA	27	40	38	30	36	33
Belle Mina, AL	34	36	38	36	40	38
Princeton, KY	37	41	39	39	39	40
Tiptonville, TN	32	46	40	32	38	36
Martin, TN	35	42	38	38	35	52
Jackson, TN	45	51	51	46	50	48
Mean	34	42	40	37	40	40
			DELTA			
Portageville, MO (A)	39	47	37	46	48	48
Portageville, MO (B)	28	31	36	33	28	33
Keiser, AR	25	37	33	25	32	36
Jonesboro, AR	29	43	38	35	35	35
Pine Tree, AR	27	32	36	28	29	30
Stoneville, MS (A)	27	31	36	32	38	37
Stoneville, MS (B)	26	33	35	27	29	30
St. Joseph, LA	26	33	34	28	36	33
Mean	28	36	36	32	34	35
			WEST			
Ottawa, KS	35	41	43	42	40	37
Columbus, KS	23	37	36	26	32	34
Pine Bluff, AR	23	36	35	29	34	33
Stuttgart, AR	31	39	38	36	34	36
Bossier City, LA	28	36	36	28	34	34
Bixby, OK	32	41	38	35	37	40
Lubbock, TX	30	26	29	31	34	32
Beaumont, TX	17	26	27	17	25	22
Mean	27	35	35	31	34	34

Table 20 - Lodging scores for the strains in Uniform Group V, 1982

Location	Essex	Forrest	Nathan	D77-5090	N77-179	D77-5169
			EAST COAST			
Queenstown, MD	2.7	3.2	3.2	3.7	2.8	3.2
Georgetown, DE	2.3	3.3	3.2	3.5	2.0	3.5
Warsaw, VA	1.5	3.4	2.7	3.8	1.5	3.1
Holland, VA	3.3	2.0	2.7	4.0	1.3	2.7
*Plymouth, NC	2.3	2.3	3.3	3.0	2.0	2.3
			UPPER AND CENTRAL SOUTH			
Orange, VA	1.3	2.5	4.7	2.2	2.3	4.7
Knoxville, TN	1.7	3.7	5.0	5.0	2.0	3.2
Clemson, SC	1.0	2.3	3.3	3.3	1.0	2.7
Calhoun, GA	1.2	1.7	2.2	2.8	1.8	1.5
Athens, GA	1.3	1.8	2.7	2.7	1.2	2.3
Belle Mina, AL	1.7	1.7	4.0	4.0	1.7	2.7
Princeton, KY	2.3	2.7	2.7	4.3	2.7	4.0
Tiptonville, TN	2.0	2.0	2.0	2.0	2.0	2.0
Martin, TN	2.0	3.0	3.0	5.0	4.0	4.0
Jackson, TN	3.0	2.0	3.0	3.7	1.3	2.7
			DELTA			
Portageville, MO (A)	2.5	2.5	2.5	3.0	2.5	3.5
Portageville, MO (B)	1.5	1.5	1.5	1.0	1.0	1.5
Keiser, AR	1.0	1.0	2.0	2.0	1.0	1.0
Jonesboro, AR	2.0	3.0	3.0	4.0	2.0	3.0
Pine Tree, AR	2.0	1.0	2.0	3.0	1.0	2.0
Stoneville, MS (A)	2.0	2.7	3.0	3.0	2.0	2.3
Stoneville, MS (B)	2.0	2.0	2.0	2.7	2.0	2.3
*St. Joseph, LA	1.9	2.5	2.5	3.3	1.7	2.4
			WEST			
Ottawa, KS	1.0	3.0	1.7	2.7	1.7	1.3
Columbus, KS	1.7	1.8	2.0	2.2	1.5	2.0
Pine Bluff, AR	2.0	2.0	2.0	3.0	1.0	3.0
Stuttgart, AR	2.0	2.2	3.5	4.0	1.4	3.2
*Bossier City, LA	1.0	1.1	1.6	2.3	1.0	1.6
Bixby, OK	2.3	3.3	4.0	4.3	2.0	4.0
Lubbock, TX	1.2	1.0	1.0	1.0	1.2	1.0
Beaumont, TX	1.2	1.5	2.0	1.5	1.2	1.3

*Not included in mean

Table 20 - (continued)

Location	R74-511	D77-5147	D77-6056	N79-2337	R79-121	S76-2425
			EAST COAST			
Queenstown, MD	2.7	3.8	3.0	2.8	3.0	3.2
Georgetown, DE	2.7	3.7	3.3	3.2	3.3	2.8
Warsaw, VA	1.8	3.0	3.6	4.0	2.3	2.0
Holland, VA	1.7	2.7	2.7	1.3	2.0	2.7
Plymouth, NC	2.3	2.7	3.0	2.0	3.7	3.0
			UPPER AND CENTRAL SOUTH			
Orange, VA	1.5	4.0	2.7	3.0	2.8	1.5
Knoxville, TN	2.7	4.5	4.0	2.5	4.7	2.2
Clemson, SC	1.0	2.7	2.0	2.0	3.3	1.0
Calhoun, GA	1.7	2.0	1.5	1.5	2.2	1.2
Athens, GA	1.2	2.0	2.7	1.3	2.3	1.3
Belle Mina, AL	1.7	2.7	3.0	1.3	3.0	2.0
Princeton, KY	1.7	4.0	2.7	3.3	3.3	2.0
Tiptonville, TN	2.0	2.0	2.0	2.0	2.0	2.0
Martin, TN	4.0	3.0	3.0	2.0	2.0	4.0
Jackson, TN	1.7	3.3	3.0	2.0	2.3	3.3
			DELTA			
Portageville, MO (A)	3.0	3.0	2.5	2.5	3.5	3.0
Portageville, MO (B)	1.5	1.5	1.5	1.5	1.5	1.5
Keiser, AR	1.0	2.0	1.0	1.0	2.0	1.0
Jonesboro, AR	3.0	4.0	2.0	3.0	4.0	2.0
Pine Tree, AR	1.0	2.0	2.0	1.0	2.0	1.0
Stoneville, MS (A)	2.0	3.0	3.0	2.0	2.7	2.3
Stoneville, MS (B)	2.0	2.3	2.3	2.0	2.0	2.0
St. Joseph, LA	1.7	3.3	2.7	2.0	2.3	1.7
			WEST			
Ottawa, KS	1.3	1.7	1.7	3.0	1.7	2.0
Columbus, KS	1.2	2.2	2.0	2.0	2.0	1.7
Pine Bluff, AR	1.0	3.0	2.0	2.0	2.0	2.0
Stuttgart, AR	1.6	3.1	3.2	1.8	2.5	1.5
Bossier City, LA	1.0	2.3	1.5	1.5	2.0	1.0
Bixby, OK	2.0	4.7	4.0	3.0	3.7	3.0
Lubbock, TX	1.0	1.0	1.0	1.0	1.0	1.0
Beaumont, TX	1.3	1.3	1.7	1.0	1.8	1.2

Table 21 - Seed quality scores for the strains in Uniform Group V, 1982

Location	Essex	Forrest	Nathan	D77-5090	N77-179	D77-5169
			EAST COAST			
Queenstown, MD	2.5	1.7	1.3	1.8	2.6	1.3
Georgetown, DE	1.5	2.0	2.0	2.0	1.7	1.8
Warsaw, VA	1.3	1.5	1.2	1.2	1.2	1.5
Holland, VA	1.0	1.0	1.0	1.0	1.0	1.0
			UPPER AND CENTRAL SOUTH			
Orange, VA	1.0	1.0	1.0	1.0	1.0	1.0
Knoxville, TN	2.0	2.0	2.0	1.0	2.0	2.0
Calhoun, GA	1.7	2.0	2.0	2.0	2.0	2.2
Athens, GA	1.5	1.5	1.8	2.0	1.5	1.5
Princeton, KY	2.0	3.0	3.0	3.0	3.0	2.0
Martin, TN	2.0	2.0	2.0	2.5	2.0	2.5
Jackson, TN	1.0	1.0	2.0	1.0	1.0	1.0
			DELTA			
Portageville, MO (A)	2.5	2.0	2.5	2.5	2.0	2.5
Portageville, MO (B)	2.5	2.0	2.0	2.0	2.0	2.5
Keiser, AR	2.0	2.0	2.0	2.0	2.0	2.5
Jonesboro, AR	2.0	3.0	2.0	3.0	2.0	2.0
Pine Tree, AR	3.0	3.0	2.0	2.0	3.0	2.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	3.0	2.0	2.3	2.0
*St. Joseph, LA	2.9	2.3	2.8	2.6	2.6	2.5
			WEST			
Ottawa, KS	1.5	2.0	2.0	3.0	2.0	2.0
Columbus, KS	2.0	1.0	2.0	2.0	3.0	2.0
Pine Bluff, AR	1.0	2.0	2.0	2.0	2.0	2.0
Stuttgart, AR	2.0	2.3	2.2	3.0	2.3	1.7
*Bossier City, LA	1.6	2.6	2.6	2.0	3.0	2.0
Lubbock, TX	1.2	1.0	1.0	1.0	1.2	1.0
Beaumont, TX	2.0	2.7	3.0	2.2	3.5	3.0

*Not included in mean.

Table 21 - (continued)

Location	R74-511	D77-5147	D77-6056	N79-2337	R79-121	S76-2425
			EAST COAST			
Queenstown, MD	2.0	2.0	1.3	1.8	2.3	2.3
Georgetown, DE	2.0	2.0	2.0	2.0	1.8	2.2
Warsaw, VA	1.0	1.7	1.5	1.2	1.4	1.0
Holland, VA	1.0	1.0	1.0	1.0	1.0	1.0
			UPPER AND CENTRAL SOUTH			
Orange, VA	1.0	1.0	1.0	1.0	1.0	1.0
Knoxville, TN	1.0	2.0	2.0	1.0	2.0	2.0
Calhoun, GA	1.5	2.2	2.2	1.7	1.7	1.5
Athens, GA	1.5	1.5	1.5	1.5	2.0	1.5
Princeton, KY	2.0	2.0	2.0	3.0	2.0	2.0
Martin, TN	2.0	2.0	2.5	2.0	2.5	2.5
Jackson, TN	1.0	1.0	1.0	1.0	1.5	1.0
			DELTA			
Portageville, MO (A)	2.0	2.5	2.5	2.5	2.0	2.5
Portageville, MO (B)	2.0	2.5	2.0	2.5	2.0	2.0
Keiser, AR	2.5	2.0	2.0	2.0	1.5	2.0
Jonesboro, AR	2.0	3.0	3.0	2.0	3.0	3.0
Pine Tree, AR	3.0	2.0	3.0	3.0	2.0	2.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.7	2.3	2.0	2.3	2.0	2.0
St. Joseph, LA	2.6	2.7	2.3	2.6	2.4	2.3
			WEST			
Ottawa, KS	2.0	2.0	2.0	4.0	1.0	1.0
Columbus, KS	2.0	2.0	2.0	3.0	1.0	2.0
Pine Bluff, AR	1.0	2.0	2.0	2.0	1.0	1.0
Stuttgart, AR	1.8	2.7	2.5	2.0	1.8	2.0
Bossier City, LA	1.6	1.3	1.3	3.3	2.3	1.0
Lubbock, TX	1.0	1.0	1.0	1.0	1.0	1.0
Beaumont, TX	2.5	2.5	2.0	2.5	2.2	1.5

PRELIMINARY GROUP V

1982

Plantings of Preliminary Group V nurseries, which included 34 experimental strains along with Forrest and Hill, were made at 8 locations. The parentage of each strain is reported in Table 22. Table 23 gives a general summary of performance. Additional data are summarized in Tables 24 through 28. Plantings at Tiptonville, Tennessee were on soil infested with SCN race 4.

Three strains, R80-359, R80-721, and R80-753, are considered too late in maturity to be evaluated as Group V maturity. Eighteen strains were rated resistant to SCN race 3, and three additional strains were considered to be segregating. Ten strains were considered to be resistant to SCN race 4. All strains resistant to SCN race 4 were also resistant to SCN race 3. Two of the strains having J74-88 as a parent were rated resistant to SCN race 5.

The mean seed yield for Forrest was 42.3 bushels per acre. Only two strains had seed yields slightly above that for Forrest. S79-4240 had a mean yield of 42.4 bushels per acre, and Tn77-119 had a seed yield of 42.8 bushels.

Strains which appear to merit advance into Uniform Group V are D79-7858, LS79-330, R76-479, S79-4060, and S79-4240.

Table 22 - Parentage of the strains grown in Preliminary Group V, 1982

	Strain or variety	Parentage	Generation composited
1.	Forrest	Dyer X Bragg	F_5
2.	Hill	D632-15 X D49-2525	F_5
3.	D79-7858	Bedford X (Tracy X D72-8707)	F_5
4.	D80-8321	Bedford X (J74-77 X J74-88)	F_5
5.	D80-8361	Bedford X (J74-77 X J74-88)	F_5
6.	D80-8382	Bedford X (J74-77 X J74-88)	F_5
7.	D80-8421	Bedford X (J74-77 X J74-88)	F_5
8.	D80-8457	Bedford X (J74-77 X J74-88)	F_5
9.	K1093	K1034 X Essex	
10.	K1094	K1034 X Essex	
11.	La74-3854	Forrest X Mack	F_{11}
12.	LS77-952	Sel. from Ts76-952	F_6
13.	LS78-742	L71L-436 X J74-5	F_5
14.	LS79-330	Forrest X V71-480	F_5
15.	Md80-2	Essex X Forrest	F_3
16.	Md80-4	Essex X Forrest	F_3
17.	NCR-8157	Forrest X Semmes	F_5
18.	N80-69	(N70-1501 X N72-40) X N73-538	F_6
19.	N80-173	N72-3037 X (N70-1501 X Ransom)	F_6
20.	N80-337	N72-137 X N73-520	F_5
21.	N80-437	N72-137 X N73-520	F_5
22.	N80-554	N72-3037 X (N70-1501 X Ransom)	F_5
23.	R76-479	Centennial X Forrest	F_5
24.	R80-359	R74-1625 X R74-511	F_5
25.	R80-372	R74-1625 X R74-511	F_5
26.	R80-721	Forrest X R74-605	F_5
27.	R80-753	Forrest X R74-605	F_5
28.	S79-4060	(D74-7636 X D70-3045) X (D68-18 X PI 88788)	F_5
29.	S79-4229	D70-3045 X Bedford	F_5
30.	S79-4240	D70-3045 X Bedford	F_5
31.	S79-4307	Bedford X Crawford	F_5
32.	Tn77-111	D68-127 (Dwarf mutant) X Essex	F_4
33.	Tn77-119	D68-127 (Dwarf mutant) X Essex	F_4
34.	Tn80-69	Essex X J74-40	
35.	V77-2011	V68-1034 X V68-920	F_5
36.	V77-2016	V68-1034 X V68-920	F_5

Table 23 - General summary of performance for the strains grown in Preliminary Group V, 1982

Strain	Seed Yield	Maturity index	Ht.	Percent Oil	Percent Protein	Bacterial pustule	M. incognita	M. arenaria	SCN race 3	SCN race 4
Forrest	42.3	10-4	37	19.5	39.6	R	2.5	1.8	R	S
Hill	34.7 -	-9	35	18.8	39.4	R	3.5	5.0	S	S
D79-7858	39.1 -	0	44	18.6	40.4	R	3.0	4.5	R	R
D80-8321	34.5 -	+3	42	17.9	40.2	R	3.0	4.0	R	R
D80-8361	32.8 -	-1	41	17.9	39.8	R	2.0	1.5	R	R
D80-8382	32.8 -	-8	44	19.2	39.6	R	2.5	3.0	R	R
D80-8421	31.3 -	-6	41	18.1	39.9	R	3.0	4.0	R	R
D80-8457	31.7 -	-4	36	17.1	40.2	S	3.0	4.0	R	R
K1093	39.4 -	-2	38	19.3	40.3	R	5.0	3.0	S	S
K1094	36.8 -	-7	25	20.1	40.7	R	3.0	5.0	S	S
La74-3854	29.6 -	+3	30	19.2	40.7	R	5.0	-	R	S
LS77-952	38.6 -	-4	30	19.3	40.0	R	5.0	2.5	S	S
LS78-742	34.8 -	-8	31	19.4	39.9	R	4.0	2.5	R	S
LS79-330	40.7	-4	33	19.3	39.6	R	2.0	1.8	R	S
Md80-2	37.4 -	-7	26	18.8	41.5	R	3.0	5.0	S	S
Md80-4	38.7 -	-6	29	18.7	41.4	R	0.5	2.5	S	S
NCR-8157	34.2 -	+2	29	19.1	40.7	R	3.0	1.8	seg.	S
N80-69	34.1 -	-1	33	18.2	41.8	R	1.5	5.0	S	S
N80-173	39.3 -	-3	31	19.7	40.1	R	0.0	4.5	S	S
N80-337	40.6	+5	36	19.1	40.0	R	1.0	4.5	S	S
N80-437	37.9 -	-1	36	19.7	30.2	R	0.5	4.5	S	S
N80-554	40.2	-1	31	19.2	40.2	R	4.5	5.0	S	S
R76-479	41.4	0	35	19.0	39.7	R	2.0	2.5	R	S
R80-359	36.8 -	+14	34	19.4	39.8	R	5.0	5.0	R	S
R80-372	38.1 -	+7	38	18.6	41.0	R	4.5	4.5	R	R
R80-721	39.4 -	+12	38	18.8	40.1	R	1.5	1.5	R	S
R80-753	38.1 -	+10	37	18.4	40.5	R	1.0	1.8	seg	S
S79-4060	40.8	+1	45	19.0	39.6	R	1.0	5.0	R	R
S79-4229	38.0 -	-3	40	18.4	41.1	R	0.5	3.5	R	R
S79-4240	42.4	+2	40	18.1	41.8	R	1.5	1.5	R	R
S79-4307	39.6	+7	38	19.2	39.3	R	1.5	1.5	R	R
Tn77-111	41.1	0	36	19.2	40.1	R	5.0	2.5	R	S
Tn77-119	42.8	-2	36	19.3	40.1	R	2.5	2.0	R	S
Tn80-69	39.7	-3	35	18.5	40.6	R	1.5	4.5	S	S
V77-2011	37.8 -	-6	26	19.1	39.4	S	2 0	5.0	S	S
V77-2016	37.7 -	-7	29	18.8	39.9	R	1.0	4.0	S	S
L.S.D.(.05)	2.8									
C.V.	11%									

Table 24 - Seed yield, in bushels per acre, for the strains grown in Preliminary Group V, 1982

Strain	Warsaw VA	*Plymouth, NC	Portageville, MO (A)	Tiptonville, TN	Keiser, AR	Stoneville, MS(A)	Stoneville, MS(B)	Columbus, KS
Forrest	49.2	34.7	43.7	36.9	53.4	51.4	31.6	30.0
Hill	44.5	31.2	27.5-	31.6	43.1-	40.3-	30.1	25.8
D79-7858	44.8	38.3	36.2	41.7	45.3	45.0	27.8	32.7
D80-8321	42.3	34.4	32.6-	33.2	40.4-	41.2-	26.5-	25.7
D80-8361	43.7	35.1	32.2-	28.0-	41.6-	36.3-	20.5-	27.0
D80-8382	39.9-	27.8	27.3-	30.5	48.5	37.2-	22.9-	23.3
D80-8421	35.4-	32.1	23.5-	28.2-	38.5-	44.4	23.3-	25.5
D80-8457	43.3	28.5	27.4-	26.9-	36.1-	38.3-	18.9-	30.7
K1093	48.6	30.8	30.4-	28.2-	54.8	51.5-	29.3	33.3
K1094	54.8	38.6	35.9	25.0-	49.7	47.1	16.8-	28.3
La74-3854	48.5	—	48.8	33.9	19.1-	18.3-	17.6-	27.2
LS77-952	52.6	34.7	37.3	31.2	53.6	42.7-	25.3-	27.6
LS78-742	44.7	29.5	28.9-	35.4	44.7	44.3	21.6-	29.5
LS79-330	50.1	44.7+	38.4	40.2	51.6	49.1	24.0-	31.2
Md80-2	51.8	33.6	34.1-	31.6	53.3	43.1-	19.0-	28.6
Md80-4	52.6	40.6	33.6-	27.4-	57.0	44.2	23.4-	32.5
NCR-8157	48.3	33.4	33.7-	34.5	33.0-	48.2	31.6	10.3-
N80-69	43.9	43.3+	27.1-	28.8-	44.9	41.0-	27.5-	25.5
N80-173	54.0	31.3	29.1-	31.9	56.3	44.4	33.2	26.0
N80-337	49.6	35.6	36.6	33.3	49.7	42.3-	37.4+	35.4
N80-437	50.6	33.1	32.0-	30.5	49.4	41.6-	29.3	31.6
N80-554	48.7	35.8	30.3-	34.4	58.0	41.7-	35.7	32.5
R76-479	45.6	36.7	41.8	38.9	51.6	45.9	32.3	33.5
R80-359	53.5	36.2	36.4	35.1	41.0-	31.6-	34.9	25.1
R80-372	49.8	38.9	24.0-	37.7	52.2	40.3-	32.4	29.7
R80-721	42.1	45.2	39.3	35.7	52.5	33.2-	40.0+	33.2
R80-753	45.6	43.5+	33.2-	37.8	52.7	33.2-	30.8	33.5
S79-4060	48.9	36.3	44.2	38.9	47.2	50.7	28.4	27.3
S79-4229	41.9	29.4	36.1	38.4	48.7	43.7	29.2	28.0
S79-4240	49.3	36.1	40.7	41.8	52.2	49.6	32.7	30.2
S79-4307	49.6	35.7	34.6-	38.2	48.1	47.1	31.3-	28.3
Tn77-111	46.7	36.7	45.2	28.5 -	55.3	51.9	28.1	32.0
Tn77-119	46.6	44.6+	46.1	37.4	50.0	52.9	30.5	36.3
Tn80-69	52.3	38.6	34.3-	38.9	47.2	48.2	24.8-	32.2
V77-2011	50.2	42.7+	32.6-	39.7	47.6	39.7-	22.8-	32.2
V77-2016	51.6	36.3	36.0	38.2	51.1	41.2-	17.5-	28.4
L.S.D.(.05)	8.3	7.6	9.0	6.7	9.8	8.3	5.5	6.9
C.V.	9%	11%	13%	10%	10%	10%	10%	14%

*Plymouth not included in mean because of delayed harvest.

Table 25 - Oil percentages for the strains in Preliminary Group V, 1982

Strain	Warsaw, VA	Portageville, MO (A)	Keiser, AR	Stoneville, MS (A)
Forrest	18.8	19.2	20.0	20.1
Hill	17.3	19.6	19.0	19.2
D79-7858	17.5	17.9	18.8	20.2
D80-8321	17.1	17.2	17.6	19.5
D80-8361	17.4	17.8	18.4	18.0
D80-8382	17.8	18.9	19.0	21.2
D80-8421	16.5	17.3	19.8	18.9
D80-8457	18.2	16.1	16.4	17.5
K1093	18.7	18.5	19.9	20.0
K1094	20.4	19.6	19.4	20.9
La74-3854	18.3	20.2	17.7	20.4
LS77-952	18.3	19.1	18.5	21.3
LS78-742	18.3	19.1	17.6	22.5
LS79-330	18.5	19.5	17.6	21.4
Md80-2	17.2	18.9	19.4	19.6
Md80-4	17.8	19.5	18.2	19.1
NCR-8157	18.9	19.2	18.7	19.7
N80-69	18.1	17.8	18.6	18.1
N80-173	19.1	20.2	18.6	20.8
N80-337	18.3	19.9	18.7	19.6
N80-437	19.1	20.0	19.8	20.0
N80-554	18.6	20.5	17.8	19.9
R76-479	19.1	19.8	17.6	19.4
R80-359	19.1	19.5	19.0	19.9
R80-372	18.9	18.8	16.9	19.9
R80-721	19.0	18.3	17.2	20.6
R80-753	18.5	18.0	17.2	20.0
S79-4060	19.2	18.9	19.4	18.4
S79-4229	18.0	18.4	17.5	19.8
S79-4240	17.4	18.4	17.5	19.1
S79-4307	19.2	18.4	18.4	20.7
Tn77-111	18.7	19.3	19.7	18.9
Tn77-119	19.5	20.5	17.8	19.2
Tn80-69	17.8	19.0	17.8	19.4
V77-2011	17.8	19.9	18.3	20.2
V77-2016	18.0	19.0	17.8	20.5

Table 26 - Protein percentages for the strains in Preliminary Group V, 1982

Strain	Warsaw, VA	Portageville, MO	Keiser, AR	Stoneville, MS (A)
Forrest	37.4	38.4	40.6	41.9
Hill	39.0	38.1	39.1	41.2
D79-7858	39.5	40.5	40.7	40.8
D80-8321	38.6	39.9	41.0	41.3
D80-8361	39.3	40.2	39.5	40.0
D80-8382	38.9	38.9	41.0	39.6
D80-8421	39.0	40.5	40.1	39.9
D80-8457	39.5	40.8	40.0	40.6
K1093	41.6	40.3	38.0	41.2
K1094	41.3	39.1	40.1	42.2
La74-3854	38.9	39.6	41.0	43.2
LS77-952	40.7	39.3	39.3	40.8
LS78-742	39.4	38.8	41.0	40.2
LS79-330	38.9	37.8	40.9	40.6
Md80-2	42.8	41.1	39.8	42.2
Md80-4	41.9	38.4	42.4	43.0
NCR-8157	41.3	39.4	39.3	42.7
N80-69	40.3	41.3	42.1	43.6
N80-173	40.0	38.4	42.1	39.7
N80-337	41.6	38.6	39.7	40.2
N80-437	41.0	40.4	39.3	42.6
N80-554	41.1	38.0	41.0	40.6
R76-479	38.6	38.8	39.5	42.0
R80-359	40.0	39.0	39.0	41.0
R80-372	40.0	39.3	42.8	41.8
R80-721	39.5	40.1	41.5	39.3
R80-753	40.8	40.7	41.0	39.6
S79-4060	39.9	39.1	38.4	40.8
S79-4229	40.4	39.7	42.2	42.0
S79-4240	41.6	41.3	42.2	42.1
S79-4307	38.5	39.7	39.4	39.5
Tn77-111	40.0	39.0	39.5	42.0
Tn77-119	38.8	38.7	40.8	42.0
Tn80-69	40.5	39.3	41.5	41.2
V77-2011	40.6	37.6	39.1	40.4
V77-2016	39.1	38.0	41.0	41.4

Table 27 - Plant height for the strains in Preliminary Group V, 1982

Strain	Warsaw, VA	Portage-ville, MO (A)	Tipton-ville, TN	Keiser, AR	Stone-ville, MS (A)	Stone-ville, MS (B)	Columbus, KS
Forrest	40	47	34	33	38	27	37
Hill	39	42	34	34	30	27	36
D79-7858	42	57	50	39	42	34	42
D80-8321	51	48	52	33	45	31	36
D80-8361	44	59	45	32	43	30	34
D80-8382	45	59	52	37	44	35	37
D80-8421	44	60	46	33	38	32	36
D80-8457	42	46	38	25	36	25	38
K1093	38	48	36	34	48	30	29
K1094	28	35	26	24	24	13	23
La74-3854	35	42	28	24	25	25	28
LS77-952	34	43	26	29	27	20	29
LS78-742	35	39	32	28	28	23	35
LS79-330	34	47	36	32	30	23	30
Md80-2	30	41	22	25	25	16	26
Md80-4	34	42	24	25	29	21	26
NCR-8157	37	42	28	22	33	26	18
N80-69	40	37	30	34	27	27	34
N80-173	34	40	30	31	27	26	29
N80-337	38	44	36	35	33	30	38
N80-437	39	48	36	34	35	26	36
N80-554	31	43	28	31	27	25	29
R76-479	38	48	24	32	35	30	35
R80-359	38	43	34	29	35	27	29
R80-372	40	54	36	33	36	28	37
R80-721	42	48	36	34	38	29	38
R80-753	40	48	32	36	43	26	32
S79-4060	41	56	44	33	34	32	37
S79-4229	34	44	36	30	33	27	33
S79-4240	42	58	38	34	37	32	39
S79-4307	40	46	46	31	41	29	36
Tn77-111	38	52	30	34	37	25	37
Tn77-119	39	48	36	34	33	28	37
Tn80-69	37	46	36	32	31	26	37
V77-2011	32	36	26	18	23	19	25
V77-2016	35	40	30	25	25	16	29

Table 28 - Seed quality scores for the strains in Preliminary Group V, 1982

Strain	Warsaw, VA	Portageville, MO (A)	Keiser, AR	Stoneville, MS (A)	Columbus, KS
Forrest	1.0	2.0	2.5	2.0	1.0
Hill	1.3	2.5	1.5	2.0	2.0
D79-7858	1.2	2.5	2.0	2.0	1.0
D80-8321	2.0	3.0	2.0	2.0	2.0
D80-8361	1.4	2.5	1.5	2.0	2.0
D80-8382	1.5	2.5	1.5	2.0	2.0
D80-8421	1.8	3.0	2.5	2.0	2.0
D80-8457	1.5	2.5	2.0	2.0	2.0
K1093	1.0	3.0	2.0	2.0	1.0
K1094	1.2	3.0	2.5	2.0	2.0
La74-3854	1.2	2.5	1.5	2.0	2.0
LS77-952	1.0	2.5	2.5	2.0	2.0
LS78-742	1.5	2.5	1.5	2.0	2.0
LS79-330	1.3	2.5	2.0	2.0	2.0
Md80-2	1.0	2.5	1.5	2.0	1.0
Md80-4	1.2	2.5	2.0	2.0	1.0
NCR-8157	1.2	2.0	1.5	2.0	2 0
N80-69	1.4	2.0	2.5	2.0	2.0
N80-173	1.0	2.0	2.0	2.0	1.0
N80-337	1.2	2.0	2.0	2.0	1.0
N80-437	1.5	2.0	2.5	2.0	2.0
N80-554	1.2	2.0	2.5	2.0	1.0
R76-479	1.2	2.5	1.5	2.0	1.0
R80-359	1.0	2.5	1.5	2.0	2.0
R80-372	1.0	2.5	1.5	2.0	2.0
R80-721	1.6	2.5	2.0	2.0	2.0
R80-753	1.0	2.5	2.5	2.0	2.0
S79-4060	2.0	2.5	2.0	2.0	2.0
S79-4229	1.6	2.5	2.0	2.0	2.0
S79-4240	1.5	2.0	2.0	2.0	2.0
S79-4307	1.3	2.5	2.0	2.0	2.0
Tn77-111	1.0	2.0	2.0	2.0	1.0
Tn77-119	1.2	2.5	3.0	2.0	1.0
Tn80-69	1.4	2.5	2.0	2.0	1.0
V77-2011	1.0	2.0	2.0	2.0	1.0
V77-2016	1.0	2.5	2.0	2.0	1.0

UNIFORM GROUP VI

1982

	Variety or strain	Parentage	Generation composited
1.	Centennial	D64-4636 X tawny pubescent Pickett 71 type	F_5
2.	Tracy-M	Metribuzin tolerant sel. from Tracy X (D61-618 X D60-9647)	F_{10}
3.	Jeff	Centennial X [R72-2647(3) X sel (D68-18 X PI 88788)]	F_3
4.	D77-6057	Centennial X J74-47	F_5
5.	N77-114	Essex X N70-2173	F_5
6.	D77-6166	Centennial X J74-47	F_5
7.	D78-5502	Forrest(2) X Tracy	F_5
8.	D79-6058	Tracy X Centennial	F_5
9.	N79-491	N70-1501 X Centennial	F_6
10.	N79-606	Essex X Centennial	F_6
11.	R79-167S	R72-26 X Forrest	F_5
12.	Bradley (S77-281)	D70-3115 X J74-39	F_4

Background of breeding lines used as parents:

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

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

N70-2173 is a selection from Hutton X Ransom.

N70-1501 is a selection from Dare X D65-6765 which was evaluated in Uniform Group VI, 1974-76.

D70-3115 is of the same parentage as Centennial.

J74-39 is of the same parentage as Bedford.

Plantings of Uniform Group VI nurseries were made at 32 locations. Additional plantings were made at Blackville, South Carolina for evaluating strain reaction to Meloidogyne arenaria, at Jay, Flordia for evaluation against M. incognita, and at Ames Plantation in Tennessee for evaluation against SCN race 3. The plantings at Jay, Florida were on soil infested with SCN race 3 and at Holland, Virginia were on a field infested with SCN race 1. Results are summarized in Tables 29 through 35. Table 29 gives a general summary of seed yields, oil and protein content, growth characteristics, and reaction to diseases and nematodes.

The variety Jeff was released to provide a variety of Group VI maturity with resistance to SCN race 4. In these plantings, the three-year mean seed yields for Jeff are similar to those for Centennial. However, in plantings at the Northeast Branch Station at Verona, Mississippi where stem canker is a problem, seed yield for Jeff has averaged 20 to 25% below that for Centennial because of injury from stem canker. The two strains, D77-6057 and N77-114, have also been evaluated three years. Both have yielded well. D77-6057 is resistant to SCN races 3 and 4. It also has good resistance to M. incognita, but is susceptible to M. arenaria.

The two strains, D77-6166 and D78-5502, have been evaluated two years. D77-6166 is resistant to SCN races 3 and 4 and has good resistance to M. incognita. It has produced well under stem canker conditions at Verona, Mississippi. It is being considered for possible increase and release. D78-5502 is resistant to SCN race 3 and to M. incognita.

Five strains were evaluated one year. Four of these are resistant to SCN race 3. Two have good resistance to M. incognita and one to M. arenaria. D79-6058, N79-491, and R79-167S appear to merit further evaluation. The strain, S77-281, has been released as Bradley. Bradley is resistant to SCN races 3 and 4, and is similar in maturity to Jeff. It does not appear to offer any production advantages over Jeff. Its reaction to stem canker at Verona appears similar to that for Jeff.

Table 29 - General summary of the performance for the strains grown in Uniform Group VI, 1982

	No. of locations	Centennial	Tracy-M	Jeff	D77-6057	N77-114	D77-6166
Seed yield - 1982							
East Coast	6	38.2	36.8	35.7	39.0	38.9	38.1
Southeast	4	46.0	41.3	44.0	43.1	37.0	46.0
Upper & Central South	5	43.1	43.9	41.8	42.2	46.9	44.0
Delta	8	37.6	38.3	37.7	39.2	40.9	37.3
West	4	36.6	38.5	38.1	36.8	44.9	39.1
1981-82							
East Coast		38.8	36.7	36.8	39.3	40.5	38.8
Southeast		43.4	38.7	41.7	40.1	37.4	43.7
Upper & Central South		40.7	39.5	37.5	41.2	42.1	41.7
Delta		38.7	38.4	38.9	42.3	41.9	39.8
West		38.3	39.5	38.8	40.0	44.5	40.7
1980-82							
East Coast		37.1	35.2	36.0	36.3	38.8	
Southeast		39.6	35.7	38.2	36.4	33.8	
Upper & Central South		36.9	34.8	34.0	36.4	36.2	
Delta		40.3	38.5	40.7	43.7	43.2	
West		38.6	36.4	37.7	38.6	40.4	
Oil Content - 1982		17.6	16.8	17.8	17.4	19.7	17.3
1981-82		17.9	17.0	18.4	17.7	19.9	17.7
1980-82		18.4	17.5	18.7	18.3	20.0	
Protein Content - 1982		37.7	42.7	41.8	41.4	39.9	41.2
1981-82		40.8	43.6	41.9	42.1	40.8	41.9
1980-82		41.8	43.8	42.4	42.7	41.6	
Seed size		13.8	16.3	14.1	13.7	13.7	13.4
Maturity index		10-19	-6	0	-6	-12	0
Height		38	35	39	37	32	40
Seed quality		2.0	2.1	2.1	2.2	2.3	1.9
Bacterial pustule		R	R	R	R	R	R
M. incognita		0	4.0	0.5	0.5	4.0	0.5
M. arenaria		5.0	5.0	4.5	4.0	4.5	4.5
SCN race 3		R	S	R	R	S	R
SCN race 4		S	S	R	R	S	R
Percent mottled seed		5	15	6	25	0	10
Flower color		P	W	P	P	P	P
Pubescence color		T	T	T	T	G	T

Table 29 - (continued)

	D78-5502	D79-6058	N79-491	N79-606	R79-167S	(Bradley) S77-281
Seed yield - 1982						
East Coast	40.7	37.4	40.5	36.5	38.0	36.2
Southeast	43.7	46.0	40.7	37.2	40.4	35.8
Upper & Central South	46.7	46.0	49.1	44.5	42.9	43.7
Delta	41.4	43.2	42.7	38.4	40.0	37.5
West	39.2	42.0	44.7	38.0	37.4	40.4
1981-82						
East Coast	41.4					
Southeast	43.0					
Upper & Central South	41.9					
Delta	41.8					
West	41.5					
1980-82						
East Coast						
Southeast						
Upper & Central South						
Delta						
West						
Oil Content - 1982	18.3	17.3	18.8	18.5	18.4	18.3
1981-82	18.5					
1980-82						
Protein Content - 1982	41.0	42.7	41.7	42.1	40.4	40.7
1981-82	41.8					
1980-82						
Seed size	15.5	14.8	12.1	12.9	12.3	12.4
Maturity index	-2	+1	-14	-7	0	-6
Height	34	40	33	34	39	35
Seed quality	2.0	1.9	2.1	2.1	1.8	2.3
Bacterial pustule	R	R	R	R	R	S
M. incognita	2.0	3.5	1.0	4.5	3.5	1.0
M. arenaria	5.0	5.0	4.0	4.5	1.8	3.0
SCN race 3	R	R	R	S	R	R
SCN race 4	S	S	S	S	S	R
Percent mottled seed	2	10	2	0	10	25
Flower color	W	W	P	P	P	W
Pubescence color	T	T	G	G	T	T

Table 30 - Seed yield, in bushels per acre, for the strains in Uniform Group VI, 1982

Location	Centennial	Tracy-M	Jeff	D77-6057	N77-144	D77-6166	D78-5502
			EAST COAST				
Warsaw, VA	36.5	44.4	35.8	39.7	46.8	40.3	39.2
Holland, VA	48.5	40.5	42.4	44.0	45.8	43.2	48.2
*Plymouth, NC	46.8	43.0	42.3	40.6	37.8-	46.9	49.6
Clinton, NC	41.7	39.6	43.8	44.1	47.9	41.4	37.3
Kinston, NC	34.6	36.0	34.3	33.2	36.4	32.8	39.4
Florence, SC	36.7	39.0	34.8	38.6	31.1-	31.3-	38.6-
Hartsville, SC	31.3	21.5	23.3	34.2	25.2	39.5	41.3
Mean	38.2	36.8	35.7	39.0	38.9	38.1	40.7
			SOUTHEAST				
Blackville, SC	34.2	29.6	34.0	29.1	33.0	33.0	30.6
Tifton, GA	55.2	48.4	53.7	55.2	55.5	57.7	57.7
*Quincy, FL	30.7	14.7-	17.7-	16.9-	26.6	24.8	20.4-
Jay, FL	49.7	39.7-	46.0	45.0	26.3-	50.3	42.7
Fairhope, AL	44.9	47.6	42.4	43.1	33.3	43.1	43.9
*Baton Rouge, LA	37.1	15.1-	29.0	17.2-	12.1-	26.7	30.7
Mean	46.0	41.3	44.0	43.1	37.0	46.0	43.7
			UPPER AND CENTRAL SOUTH				
Athens, GA	39.1	46.8+	39.3	44.5	41.4	43.6	47.0+
Calhoun, GA	53.3	50.7	54.0	53.0	60.4	49.5	58.1
Belle Mina, AL	46.4	49.4	41.0	45.3	55.6+	44.3	49.9
Clemson, SC	30.8	30.6	37.2+	34.0	35.7+	32.6	35.8+
Jackson, TN (A)	45.7	41.9	37.3	34.1	41.3	49.9	42.6
Mean	43.1	43.9	41.8	42.2	46.9	44.0	46.7
			DELTA				
Portageville, MO (A)	40.6	37.9	34.6	49.1	50.2	35.1	52.4+
Portageville, MO (B)	35.8	29.9-	37.0	35.9	30.3-	34.9	38.1
Keiser, AR	47.1	49.5	45.3	49.5	58.7+	42.4	49.2
Jonesboro, AR	21.4	21.0	24.8	24.1	22.8	28.0	23.9
Pine Tree, AR	31.2	33.6	26.7	18.9-	30.2	33.7	31.7
Stoneville, MS (A)	38.4	43.5	49.9	42.7	45.6	40.7	46.0
Stoneville, MS (B)	49.8	47.2	45.2	50.7	52.8	47.0	50.0
*St. Joseph, LA	39.0	39.5	40.6	48.9+	63.3+	42.1	44.6+
Rohwer, AR	36.2	43.8+	37.8	42.5+	36.3	36.7	39.8
Mean	37.6	38.3	37.7	39.2	40.9	37.3	41.4
			WEST				
Pine Bluff, AR	37.8	47.1	46.1	47.4+	61.9+	54.6+	42.1
Stuttgart, AR	47.2	47.2	45.0	48.1	51.2	48.5	50.7
*Bossier City, LA	13.2	13.9	16.5	23.9+	25.7+	14.8	17.0
*Crowley, LA	47.4	50.4	47.5	50.3	55.9+	58.2+	57.6+
Beaumont, TX	29.1	25.5	28.5	19.1	24.2	20.3	25.5
Bixby, OK	32.1	34.1	32.7	32.4	42.2+	33.1	38.6+
Mean	36.6	38.5	38.1	36.8	44.9	39.1	39.2

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

Table 30 - (continued)

Location	D79-6058	N79-491	N79-606	R79-167S	(Bradley) S77-281	L.S.D. (.05)	C.V. (%)
			EAST COAST				
Warsaw, VA	43.2	43.7	41.2	39.3	39.0	N.S.	10
Holland, VA	46.0	47.6	40.9	42.9	43.6	N.S.	9
Plymouth, NC	34.5-	44.2	38.5-	46.2	43.3	7.8	11
Clinton, NC	38.1	45.0	42.5	42.3	35.1	N.S.	12
Kinston, NC	39.2	42.9+	35.0	34.3	29.6	6.8	11
Florence, SC	34.8	29.2-	29.6-	34.1	30.6-	4.6	8
Hartsville, SC	22.8	34.2	29.8	34.9	39.4	N.S.	31
Mean	37.4	40.5	36.5	38.0	36.2		
			SOUTHEAST				
Blackville, SC	28.0	30.9	33.5	26.8	23.3	N.S.	19
Tifton, GA	57.0	47.7	49.0	51.8	42.5-	7.7	9
Quincy, FL	24.0	21.8-	9.7-	24.0	24.1	10.2	28
Jay, FL	49.0	44.7	33.7-	46.0	44.0	9.9	14
Fairhope, AL	49.9	39.3	32.5	37.1	33.3	N.S.	16
Baton Rouge, LA	27.7	15.2-	21.2-	20.5-	17.8-	10.4	27
Mean	46.0	40.7	37.2	40.4	35.8		
			UPPER AND CENTRAL SOUTH				
Athens, GA	47.5+	51.5+	48.9+	39.5	41.6	7.4	10
Calhoun, GA	61.5	66.9	57.7	59.0	65.0	N.S.	14
Belle Mina, AL	45.1	59.3+	47.1	43.3	43.7	7.1	9
Clemson, SC	30.4	31.4	28.5	32.3	30.9	3.7	7
Jackson, TN (A)	45.7	36.4	40.2	40.3	37.5	N.S.	14
Mean	46.0	49.1	44.5	42.9	43.7		
			DELTA				
Portageville, MO (A)	44.5	49.6	37.7	51.9+	37.1	10.0	14
Portageville, MO (B)	38.5	36.8	25.4-	36.7	34.3	5.3	9
Keiser, AR	51.8	54.4+	50.7	43.3	51.3	5.5	7
Jonesboro, AR	31.7	35.0	28.6	26.5	25.5	N.S.	19
Pine Tree, AR	33.9	21.1-	32.6	32.7	26.3	8.3	16
Stoneville, MS (A)	49.4	44.4	44.9	43.7	42.0	N.S.	9
Stoneville, MS (B)	52.7	53.4	49.0	50.1	43.4-	5.8	7
St. Joseph, LA	40.3	54.5+	54.3+	45.0+	41.4	5.1	7
Rohwer, AR	42.8+	47.0+	38.5	34.8	39.7	5.0	8
Mean	43.2	42.7	38.4	40.0	37.5		
			WEST				
Pine Bluff, AR	53.3+	58.0+	46.3	44.6	51.6+	9.5	14
Stuttgart, AR	50.1	51.0	49.2	47.7	48.2	N.S.	6
Bossier City, LA	18.8+	25.9+	17.9+	16.6	18.3+	4.6	15
Crowley, LA	51.3	56.9+	60.0+	54.0+	40.7-	4.0	4
Beaumont, TX	29.1	30.9	21.9	22.7	23.6	N.S.	26
Bixby, OK	35.6	38.8+	34.4	34.7	38.0+	4.2	7
Mean	42.0	44.7	38.0	37.4	40.4		

Table 31 - Chemical composition and seed size for the strains in Uniform Group VI, 1982

Location	Centennial	Tracy-M	Jeff	D77-6057	N77-114	D77-6166
			OIL PERCENTAGES			
Warsaw, VA	17.4	15.9	17.8	17.3	18.8	17.1
Plymouth, NC	17.4	13.3	17.4	16.4	20.0	16.4
Clinton, NC	19.0	16.1	18.2	17.8	20.4	18.1
Jay, FL	18.8	18.1	20.0	18.3	21.8	18.7
Jackson, TN	18.1	16.3	16.7	17.6	19.3	16.9
Portageville, MO (A)	16.5	15.4	17.4	16.5	19.7	16.0
Keiser, AR	16.9	15.1	16.8	16.6	19.4	15.9
Stoneville, MS (B)	16.7	16.0	17.3	15.9	19.6	16.6
Stuttgart, AR	16.2	18.2	16.7	19.0	17.0	18.2
Beaumont, TX	18.9	19.1	19.3	17.8	21.2	18.1
Mean	17.6	16.4	17.8	17.3	19.7	17.2
			PROTEIN PERCENTAGES			
Warsaw, VA	40.4	41.6	40.6	39.0	39.6	39.8
Plymouth, NC	42.1	43.7	41.6	42.3	39.1	40.8
Clinton, NC	41.7	43.3	41.9	42.3	40.7	40.6
Jay, FL	42.1	42.8	41.5	40.9	39.1	40.8
Jackson, TN	40.0	41.4	41.1	40.5	39.1	39.8
Portageville, MO (A)	42.0	42.6	41.1	41.2	38.6	42.0
Keiser, AR	43.1	43.7	42.6	41.8	39.6	41.4
Stoneville, MS (B)	43.5	43.6	42.6	43.4	40.2	42.0
Stuttgart, AR	44.3	41.8	42.5	41.0	42.4	41.2
Beaumont, TX	42.3	43.7	42.5	42.3	39.4	41.8
Mean	42.2	42.8	41.8	41.5	39.8	41.0
			GRAMS PER 100 SEEDS			
Warsaw, VA	15.3	19.5	15.8	15.4	14.0	14.6
Plymouth, NC	14.6	16.3	15.4	14.9	13.8	14.0
Clinton, NC	15.9	17.7	15.6	14.7	15.0	13.4
Jay, FL	14.0	16.0	15.0	14.0	13.0	14.0
Jackson, TN	14.4	16.5	14.9	15.0	16.1	14.3
Portageville, MO (A)	14.4	16.4	14.5	14.9	13.5	13.7
Keiser, AR	13.2	15.0	13.8	13.3	13.4	13.6
Stoneville, MS (B)	12.8	14.6	12.0	12.8	12.4	11.8
Stuttgart, AR	14.0	18.0	15.0	14.0	15.0	15.0
Beaumont, TX	10.1	12.9	10.7	8.8	11.2	10.0
Mean	13.9	16.3	14.3	13.8	13.7	13.4

Table 31 - (continued)

Location	D78-5502	D79-6058	N79-491	N79-606	R79-167S	S77-281
			OIL PERCENTAGES			
Warsaw, VA	18.3	17.6	18.8	18.1	18.1	19.0
Plymouth, NC	18.2	15.3	17.6	17.9	17.1	18.5
Clinton, NC	19.6	16.9	18.9	20.1	20.3	20.5
Jay, FL	20.0	18.4	21.5	19.6	19.9	19.6
Jackson, TN	18.7	17.3	19.0	18.8	18.4	17.7
Portageville, MO (A)	18.0	15.9	18.5	17.9	17.9	17.6
Keiser, AR	17.1	15.4	18.0	18.4	17.3	17.1
Stoneville, MS (B)	17.1	16.3	17.4	17.5	17.3	16.9
Stuttgart, AR	16.2	17.9	17.4	17.3	17.4	17.4
Beaumont, TX	20.0	19.7	19.7	19.0	19.1	19.3
Mean	18.3	17.1	18.7	18.5	18.3	18.4
			PROTEIN PERCENTAGES			
Warsaw, VA	39.2	40.2	40.2	41.7	38.3	38.6
Plymouth, NC	40.8	43.4	42.5	42.7	41.3	40.6
Clinton, NC	41.1	44.1	42.8	43.4	40.5	41.1
Jay, FL	41.1	42.3	40.6	43.0	40.6	40.6
Jackson, TN	39.5	40.8	40.2	40.7	38.9	40.5
Portageville, MO (A)	40.2	41.9	41.1	41.0	39.6	39.7
Keiser, AR	42.6	44.1	41.6	42.1	40.8	40.6
Stoneville, MS (B)	42.8	44.1	43.2	43.6	41.5	42.5
Stuttgart, AR	43.4	42.7	43.9	40.9	42.3	41.1
Beaumont, TX	42.2	43.8	41.6	42.8	40.7	41.4
Mean	41.3	42.7	41.8	42.2	40.5	40.7
			GRAMS PER 100 SEEDS			
Warsaw, VA	17.6	16.6	12.6	12.7	14.2	12.5
Plymouth, NC	17.0	15.3	13.3	14.4	13.6	12.3
Clinton, NC	17.1	15.8	13.2	13.3	12.5	12.2
Jay, FL	14.0	15.0	13.0	15.0	13.0	14.0
Jackson, TN	15.9	15.2	14.0	15.1	13.2	13.9
Portageville, MO (A)	17.5	15.5	12.9	12.3	12.9	12.6
Keiser, AR	14.7	14.6	11.6	12.9	11.5	12.7
Stoneville, MS (B)	13.6	13.6	11.0	12.3	10.8	11.6
Stuttgart, AR	17.0	15.0	12.0	13.0	13.0	13.0
Beaumont, TX	12.0	12.1	8.9	9.7	9.9	8.9
Mean	15.6	14.9	12.3	13.1	12.5	12.4

Table 32 - Relative maturity data, days earlier (-) or later (+) than Centennial, for the strains in Uniform VI, 1982

Location	Date planted	Centennial	Tracy-M	Jeff	D77-6057	N77-114	D77-6166
			EAST COAST				
Warsaw, VA	5-27	10-29	-5	-2	0	-8	0
Holland, VA	6-2	10-27	-6	0	-2	-14	0
*Plymouth, NC	5-10	10-28	0	0	0	0	0
Clinton, NC	5-20	10-22	-7	+5	0	-14	0
Kinston, NC	5-13	10-27	0	+7	+7	-12	+7
Florence, SC	5-15	10-27	-4	-2	-12	-32	+7
Hartsville, SC	6-2	10-16	-6	-2	-7	-14	+1
Mean		10-25	-5	+1	-2	-16	+3
			SOUTHEAST				
Blackville, SC	5-19	10-14	-9	-1	-10	-23	-3
Tifton, GA	5-6	10-4	-4	+2	+2	+2	+2
*Quincy, FL	7-1	11-4	-8	+4	+8	+8	+6
Jay, FL	6-7	10-11	-6	0	-3	-10	-1
Fairhope, AL	6-8	10-13	-7	0	-4	-7	-1
Baton Rouge, LA	5-14	10-20	-7	0	0	0	0
Mean		10-12	-7	0	-3	-8	-1
			UPPER AND CENTRAL SOUTH				
Athens, GA	5-10	10-08	-5	+2	-3	-13	-2
Calhoun, GA	6-7	10-23	-1	0	-1	-1	0
Belle Mina, AL	5-10	10-10	-9	+1	-4	-9	0
Clemson, SC	5-12	10-23	-18	-2	-9	-18	-7
Mean		10-16	-8	0	-4	-10	-2
			DELTA				
Portageville, MO (A)	5-11	10-21	-4	-1	-5	-10	-2
Portageville, MO (B)	5-6	10-24	-7	0	-9	-14	-3
Keiser, AR	5-14	10-24	-5	-1	-14	-12	0
Pine Tree, AR	6-14	10-25	-4	+1	-4	-10	+1
Stoneville, MS (A)	5-13	10-18	-4	-1	-9	-24	-2
Stoneville, MS (B)	5-10/11	10-20	-5	+1	-13	-16	0
*St. Joseph, LA	5-11	10-1	-11	0	-11	-13	0
Rohwer, AR	6-2	10-19	-6	-1	-8	-13	0
Mean		10-19	-6	0	-9	-14	-1
			WEST				
Pine Bluff, AR	6-24	10-22	-2	+1	-3	-5	+2
Bossier City, LA	-	10-14	-10	0	-15	-20	-4
Crowley, LA	5-26	10-26	-11	0	0	0	0
Beaumont, TX	5-21	10-22	-9	0	-22	-30	-3
Mean		10-21	-8	0	-10	-14	-1

*Not included in mean.

Table 32 - (continued)

Location	D78-5502	D79-6058	N79-491	N79-606	R79-167S	S77-281
		EAST COAST				
Warsaw, VA	-1	-1	-7	-6	+1	-2
Holland, VA	+1	0	-13	-6	0	-2
Plymouth, NC	0	0	0	0	0	0
Clinton, NC	0	+8	-14	0	0	-7
Kinston, NC	-7	+14	-12	-12	+7	-7
Florence, SC	-6	+7	-32	-17	-2	-14
Hartsville, SC	-1	-5	-13	-9	-1	-7
Mean	-2	+4	-15	-8	+1	-7
		SOUTHEAST				
Blackville, SC	-3	+3	-22	-9	-2	-13
Tifton, GA	-1	+2	+2	+4	+2	+4
Quincy, FL	-1	+8	+6	+7	+8	+7
Jay, FL	0	0	-11	-2	-1	0
Fairhope, AL	0	0	-9	0	0	-2
Baton Rouge, LA	0	0	-7	0	0	0
Mean	-1	+1	-9	-1	0	-2
		UPPER AND CENTRAL SOUTH				
Athens, GA	-2	-3	-15	-4	-2	-6
Calhoun, GA	0	0	-3	-5	-1	0
Belle Mina, AL	0	0	-13	-8	0	-9
Clemson, SC	-8	-3	-25	-14	-3	-18
Mean	-3	-2	-14	-8	-2	-8
		DELTA				
Portageville, MO (A)	0	-1	-16	-9	0	-8
Portageville, MO (B)	-3	0	-15	-7	-1	-9
Keiser, AR	-2	-2	-18	-7	0	-2
Pine Tree, AR	+1	0	-4	-2	0	-5
Stoneville, MS (A)	-1	-2	-25	-13	-1	-10
Stoneville, MS (B)	0	0	-20	-4	-1	+1
St. Joseph, LA	0	-2	-17	-8	+1	-12
Rohwer, AR	-1	+2	-10	-6	-1	-6
Mean	-1	-1	-16	-7	0	-6
		WEST				
Pine Bluff, AR	0	0	-7	-2	+2	-3
Bossier City, LA	-4	0	-20	-17	-1	-20
Crowley, LA	0	0	-11	0	0	0
Beaumont, TX	-4	0	-31	-19	-4	-22
Mean	-2	0	-17	-10	-1	-11

Table 33 - Plant height for the strains in Uniform Group VI, 1982

Location	Centennial	Tracy-M	Jeff	D77-6057	N77-114	D77-6166
			EAST COAST			
Warsaw, VA	42	40	41	42	37	44
Holland, VA	38	36	39	37	34	41
Plymouth, NC	40	34	41	38	29	43
Clinton, NC	42	36	43	42	40	44
Florence, SC	33	29	36	29	27	32
Hartsville, SC	37	30	40	37	27	41
Mean	39	34	40	38	32	41
			SOUTHEAST			
Blackville, SC	40	34	42	38	30	41
Tifton, GA	33	26	34	35	28	33
*Quincy, FL	29	27	28	28	23	26
Jay, FL	33	29	32	32	26	31
Fairhope, AL	38	32	36	35	31	35
Baton Rouge, LA	32	23	32	30	23	31
Mean	35	29	35	34	28	34
			UPPER AND CENTRAL SOUTH			
Athens, GA	36	35	37	37	29	35
Calhoun, GA	36	32	38	40	34	38
Belle Mina, AL	40	41	39	39	37	42
Clemson, SC	37	35	40	39	31	39
Jackson, TN (A)	52	45	53	53	45	52
Mean	40	38	41	42	35	41
			DELTA			
Portageville, MO (A)	44	46	45	49	44	50
Portageville, MO (B)	36	31	39	29	36	39
Keiser, AR	37	37	36	32	32	37
Pine Tree, AR	36	31	39	30	28	39
Stoneville, MS (A)	43	41	42	43	38	44
Stoneville, MS (B)	40	39	39	39	33	41
St. Joseph, LA	41	41	40	41	30	45
Rohwer, AR	42	39	42	42	31	47
Mean	40	38	40	38	35	42
			WEST			
Pine Bluff, AR	37	34	39	38	29	40
Stuttgart, AR	38	37	40	34	30	43
Bossier City, LA	32	34	30	28	30	36
Crowley, LA	38	41	42	40	33	41
Beaumont, TX	27	26	30	26	17	24
Bixby, OK	39	39	41	39	33	44
Mean	35	35	37	34	29	38

*Not included in mean.

Table 33 - (continued)

Location	D78-5502	D79-6058	N79-491	N79-606	R79-167S	S77-281
		EAST COAST				
Warsaw, VA	40	45	38	39	42	39
Holland, VA	31	42	32	36	36	33
Plymouth, NC	36	39	33	36	41	38
Clinton, NC	39	41	39	40	42	39
Florence, SC	26	36	28	30	32	28
Hartsville, SC	36	40	33	34	37	33
Mean	35	41	34	36	38	35
		SOUTHEAST				
Blackville, SC	35	37	32	34	38	36
Tifton, GA	27	31	26	29	28	30
Quincy, FL	23	28	24	22	25	22
Jay, FL	27	33	28	27	30	28
Fairhope, AL	30	39	32	38	34	38
Baton Rouge, LA	31	39	24	28	31	26
Mean	30	36	28	31	32	32
		UPPER AND CENTRAL SOUTH				
Athens, GA	34	41	31	32	38	34
Calhoun, GA	35	37	36	34	37	34
Belle Mina, AL	37	41	35	38	44	40
Clemson, SC	37	36	33	30	40	36
Jackson, TN (A)	42	49	46	47	49	48
Mean	37	41	36	36	42	38
		DELTA				
Portageville, MO (A)	48	50	45	44	61	46
Portageville, MO (B)	34	36	36	25	38	31
Keiser, AR	30	43	29	32	34	34
Pine Tree, AR	36	39	19	33	40	33
Stoneville, MS (A)	39	41	38	41	43	40
Stoneville, MS (B)	37	40	33	39	39	38
St. Joseph, LA	33	50	29	33	42	40
Rohwer, AR	35	44	35	38	40	37
Mean	37	42	34	36	42	37
		WEST				
Pine Bluff, AR	33	39	32	29	37	30
Stuttgart, AR	36	41	33	35	39	36
Bossier City, LA	31	29	26	31	38	30
Crowley, LA	37	40	36	34	40	34
Beaumont, TX	20	32	19	22	26	27
Bixby, OK	38	42	39	37	41	38
Mean	33	37	31	31	37	33

Table 34 - Lodging scores for the strains in Uniform Group VI, 1982

Location	Centennial	Tracy-M	Jeff	D77-6057	N77-114	D77-6166
			EAST COAST			
Warsaw, VA	2.3	2.9	2.3	2.1	2.4	2.8
Holland, VA	3.7	3.3	3.0	2.0	1.3	4.0
Plymouth, NC	3.0	3.3	3.7	3.0	2.3	3.0
Clinton, NC	3.3	3.0	3.0	3.0	2.3	3.0
Kinston, NC	2.7	2.0	3.0	3.0	3.0	2.7
Florence, SC	1.0	2.0	2.0	1.0	1.0	1.0
Hartsville, SC	2.0	1.7	1.8	2.2	1.0	1.8
			SOUTHEAST			
Blackville, SC	1.0	2.0	2.0	1.0	1.0	1.0
Tifton, GA	1.0	1.0	1.0	1.3	1.0	1.0
Quincy, FL	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	2.0	2.0	3.0	2.0	1.0	2.0
Fairhope, AL	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, LA	2.0	1.3	1.0	1.0	1.0	1.0
			UPPER AND CENTRAL SOUTH			
Athens, GA	2.0	2.0	2.2	2.0	1.5	1.7
Calhoun, GA	1.7	1.8	1.7	1.7	1.2	1.7
Belle Mina, AL	2.5	3.0	2.5	2.5	2.0	3.5
Clemson, SC	1.0	1.0	1.0	1.0	1.0	1.0
Jackson, TN (A)	3.0	2.0	3.0	2.0	3.0	3.0
			DELTA			
Portageville, MO (A)	3.0	2.5	3.0	2.0	2.5	2.5
Portageville, MO (B)	2.0	2.5	2.0	1.0	1.5	1.5
Keiser, AR	2.0	2.0	2.0	1.0	1.0	2.0
Jonesboro, AR	4.0	4.0	4.0	3.0	3.0	4.0
Pine Tree, AR	2.0	3.0	3.0	2.0	1.0	2.0
Stoneville, MS (A)	3.0	3.0	3.0	2.0	2.0	3.0
Stoneville, MS (B)	3.0	3.0	3.0	2.0	2.0	3.0
St. Joseph, LA	1.9	2.0	2.1	1.9	1.5	2.3
Rohwer, AR	2.0	3.0	2.0	2.0	2.0	2.0
			WEST			
Pine Bluff, AR	2.0	1.0	2.0	2.0	2.0	2.0
Stuttgart, AR	3.2	3.5	3.1	2.7	2.0	3.6
Bossier City, LA	1.1	2.0	1.3	1.1	1.0	1.0
Crowley, LA	1.3	3.7	2.0	1.0	1.0	1.3
Beaumont, TX	1.5	1.5	1.5	1.6	1.2	1.1
Bixby, OK	3.0	3.7	3.3	2.7	3.3	3.7

Table 34 - (continued)

Location	D78-5502	D79-6058	N79-491	N79-606	R79-167S	S77-281
		EAST COAST				
Warsaw, VA	3.4	2.6	1.9	1.6	3.8	3.3
Holland, VA	3.7	4.0	2.0	1.7	3.7	4.3
Plymouth, NC	3.3	3.7	2.7	3.0	3.0	4.0
Clinton, NC	3.6	3.0	3.0	2.0	3.3	4.0
Kinston, NC	2.7	3.0	3.0	2.0	3.0	3.0
Florence, SC	2.0	2.0	1.0	1.0	2.0	1.0
Hartsville, SC	2.3	2.0	1.0	1.0	2.3	2.3
		SOUTHEAST				
Blackville, SC	2.0	2.0	1.0	1.0	1.0	3.0
Tifton, GA	1.0	1.5	1.0	1.0	1.0	1.5
Quincy, FL	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	2.0	2.0	1.0	1.0	3.0	3.0
Fairhope, AL	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, LA	1.7	2.3	1.0	1.0	1.0	1.7
		UPPER AND CENTRAL SOUTH				
Athens, GA	1.7	1.8	1.5	1.5	2.2	2.3
Calhoun, GA	1.8	2.0	1.5	1.5	2.0	2.3
Belle Mina, AL	3.0	2.5	2.5	2.0	3.5	3.5
Clemson, SC	1.3	1.0	1.0	1.0	1.0	1.7
Jackson, TN (A)	2.0	3.0	2.0	2.0	3.0	3.0
		DELTA				
Portageville, MO (A)	3.5	3.0	2.5	2.5	3.0	3.0
Portageville, MO (B)	1.5	2.5	1.0	1.0	1.5	2.0
Keiser, AR	1.0	2.0	1.0	1.0	1.0	2.0
Jonesboro, AR	4.0	3.0	3.0	2.0	4.0	5.0
Pine Tree, AR	4.0	3.0	1.0	1.0	3.0	2.0
Stoneville, MS (A)	2.7	3.0	2.0	2.0	3.0	3.0
Stoneville, MS (B)	3.0	3.0	2.0	2.0	3.0	2.7
St. Joseph, LA	2.5	2.4	1.3	1.5	3.0	2.4
Rohwer, AR	2.3	2.3	2.3	2.0	2.3	2.7
		WEST				
Pine Bluff, AR	2.0	2.0	2.0	1.0	2.0	3.0
Stuttgart, AR	3.5	3.4	1.9	2.3	3.4	3.7
Bossier City, LA	1.0	1.5	1.0	1.0	1.1	2.1
Crowley, LA	2.0	1.0	1.0	1.0	1.3	1.3
Beaumont, TX	1.2	1.7	1.0	1.1	1.5	1.7
Bixby, OK	4.0	3.3	2.3	1.7	3.7	4.0

Table 35 - Seed quality scores for the strains in Uniform Group VI, 1982

Location	Centennial	Tracy-M	Jeff	D77-6057	N77-114	D77-6166
			EAST COAST			
Warsaw, VA	1.3	1.5	1.5	1.8	1.0	1.2
Holland, VA	1.0	1.0	1.0	1.0	1.0	1.0
Plymouth, NC	1.5	2.5	2.5	2.0	2.0	2.0
Clinton, NC	2.0	2.0	2.5	2.0	3.5	2.0
Kinston, NC	2.5	3.0	3.0	2.5	3.0	2.5
			SOUTHEAST			
Tifton, GA	2.5	2.5	2.0	3.0	4.0	2.5
Quincy, FL	3.0	4.0	4.0	3.0	3.0	3.0
Jay, FL	2.0	3.0	2.0	2.0	2.0	2.0
Baton Rouge, LA	1.0	2.7	1.0	2.7	3.7	1.7
			UPPER AND CENTRAL SOUTH			
Athens, GA	2.3	2.0	2.5	3.0	3.3	2.5
Calhoun, GA	1.5	1.8	1.5	1.8	2.5	1.7
Belle Mina, AL	1.0	1.3	1.0	1.3	1.3	1.0
Jackson, TN (A)	1.5	1.5	1.5	1.5	1.0	1.5
			DELTA			
Portageville, MO (A)	2.0	2.0	2.5	2.5	2.5	2.5
Portageville, MO (B)	2.0	2.0	2.0	2.0	3.0	2.0
Keiser, AR	2.5	2.0	3.0	2.5	2.0	1.5
Jonesboro, AR	3.0	2.0	3.0	3.0	2.0	3.0
Pine Tree, AR	2.0	3.0	2.0	2.0	3.0	2.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	1.8	2.4	1.9	2.4	2.8	1.7
Rohwer, AR	2.7	2.7	2.0	2.5	2.8	1.8
			WEST			
Pine Bluff, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stuttgart, AR	1.2	2.5	1.3	3.0	2.5	1.5
Bossier City, LA	4.1	1.3	4.0	1.5	1.5	3.0
Crowley, LA	2.0	2.0	2.0	2.8	3.0	2.3
Beaumont, TX	2.3	2.3	2.7	2.3	1.7	2.3

Table 35 - (continued)

Location	D78-5502	D79-6058	N79-491	N79-606	R79-167S	S77-281
			EAST COAST			
Warsaw, VA	1.2	1.2	1.0	1.2	1.5	1.5
Holland, VA	1.0	1.0	1.0	1.0	1.0	1.0
Plymouth, NC	1.5	2.0	2.5	2.0	2.5	2.0
Clinton, NC	3.0	2.5	3.0	2.5	2.0	2.0
Kinston, NC	3.0	2.5	4.0	3.0	2.0	2.5
			SOUTHEAST			
Tifton, GA	2.0	2.0	3.0	3.5	1.5	3.0
Quincy, FL	3.0	3.0	3.0	4.0	2.0	3.0
Jay, FL	2.0	2.0	2.0	2.0	2.0	2.0
Baton Rouge, LA	2.3	2.0	3.7	3.0	1.0	3.0
			UPPER AND CENTRAL SOUTH			
Athens, GA	2.0	2.0	3.8	2.8	2.5	3.3
Calhoun, GA	2.0	1.7	1.8	2.2	1.8	2.5
Belle Mina, AL	1.0	1.0	1.0	1.0	1.0	1.0
Jackson, TN (A)	1.5	1.0	1.5	1.0	1.0	1.5
			DELTA			
Portageville, MO (A)	2.0	2.5	2.5	2.0	2.0	2.0
Portageville, MO (B)	2.0	2.0	2.0	2.0	2.0	2.5
Keiser, AR	2.0	2.0	2.0	2.5	2.5	2.0
Jonesboro, AR	3.0	2.0	2.0	3.0	3.0	3.0
Pine Tree, AR	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.3
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	2.3	2.1	2.8	2.6	1.6	2.0
Rohwer, AR	2.0	1.7	1.8	2.5	2.2	2.7
			WEST			
Pine Bluff, AR	1.0	1.0	1.0	1.0	1.0	2.0
Stuttgart, AR	1.8	1.0	1.7	1.8	1.2	2.5
Bossier City, LA	1.8	3.0	1.1	1.6	2.0	2.3
Crowley, LA	4.0	2.3	2.3	2.7	2.3	3.0
Beaumont, TX	2.8	2.0	1.5	1.8	2.2	3.5

PRELIMINARY GROUP VI

1982

Preliminary Group VI nurseries, which included 34 experimental strains along with Centennial and Bedford, were planted at eight locations. The parentage of the strains included is reported in Table 36. Table 37 gives a summary of seed yield, oil and protein percentages, and reaction to several diseases and nematodes. Data from individual locations are reported in Tables 38 through 42.

An incomplete stand was obtained in a planting near Jackson, Tennessee on a soil infested with SCN race 4. Harvest of the material in the planting at Plymouth, North Carolina was delayed appreciably because of a prolonged wet period.

The mean-seed yield for Centennial for six locations was 42.3 bushels per acre. Seventeen strains had seed yields which ranked above Centennial. The highest yielding strain was D79-6162, which had a mean-seed yield of 51 bushels per acre. Fifteen strains were rated resistant to SCN race 3, and 7 strains were resistant to both SCN races 3 and 4. There were 4 strains, D80-7987, J80-293, J80-337, and R80-759, which received low ratings for both species of root-knot nematodes as well as for SCN races 3 and 4. D80-7987 had been selected for resistance to soybean mosaic virus and was free of seed coat mottling at Plymouth. J80-337 had proved to be very susceptible to stem canker in a planting at the Northeast Mississippi Branch Station at Verona.

A few of the strains were evaluated in a planting at Verona, Mississippi where stem canker was a problem. Strains which, along with Centennial, appeared to have a high level of field resistance were D79-5935, D79-6104, and D79-6162. These strains were all selections from Tracy X Centennial. D80-7987 and J80-293 were classified as moderately resistant while D79-10158, J79-454, and J80-337 were classified as being very susceptible. Seed yields for these strains were less than 50% of the seed yield for Centennial.

Strains which appear to merit further evaluation in Uniform Group VI are D79-6162, D80-7987, Ga79-402, J80-293, and R80-437. D79-5935 and D79-6104 also gave good performance, but have a background very similar to that of D79-6162.

Table 36 - Parentage of the strains in Preliminary Group VI, 1982

	Strain or variety	Parentage	Generation composited
1.	Centennial	N64-4636 X t.p. Pickett 71	F_5
2.	Bedford	Forrest(2) X (D68-18 X PI 88788)	F_5
3.	D79-3853	Tracy X D73-7705	F_5
4.	D79-5724	Tracy X D73-8707	F_5
5.	D79-5935	Tracy X Centennial	F_5
6.	D79-6104	Tracy X Centennial	F_5
7.	D79-6162	Tracy X Centennial	F_5
8.	D79-10158	Forrest X D75-10169	F_5
9.	D80-7987	Bedford X (Tracy X D72-8707)	F_5
10.	Ga78-2127	Essex X Davis	F_6
11.	Ga78-2249	Dare X Forrest	F_5
12.	Ga78-2422	Hutton X Ga70-276	F_4
13.	Ga79-402	Centennial X Forrest	F_5
14.	Ga79-403	Centennial X Forrest	F_5
15.	J79-454	D75-10701 X Centennial	F_5
16.	J80-293	J74-39 X Centennial	F_5
17.	J80-337	[Forrest(2) X Tracy] sel. X Bedford	F_5
18.	La74-923	Davis X York	F_{13}
19.	N80-343	N72-137 X N73-520	F_6
20.	N80-357	N72-137 X N73-520	F_6
21.	N80-367	N72-137 X N73-520	F_6
22.	N80-464	N72-137 X N73-520	F_6
23.	N80-739	Ransom X (N70-1501 X Ransom)	F_6
24.	N80-1076	N72-3037 X (D71-9203 X N72-3037)	F_6
25.	N80-1141	N72-3037 X (N70-1501 X Ransom)	F_6
26.	N80-1274	Hutton X (Forrest X Lee 74)	F_6
27.	N80-1373	N72-3154 X (D71-9203 X Ransom)	F_6
28.	N80-1655	N72-3154 X (D71-9203 X N72-3154)	F_6
29.	R78-4558	(D64-4636 X Dortchsoy 2A) X Ransom	F_6
30.	R79-343	Davis X Centennial	F_5
31.	R80-10	Tracy X R73-12	F_7
32.	R80-119	R74-312 X CL-55	F_5
33.	R80-437	(Centennial X R75-12L) X (Pickett 71 X PI 90763R)	F_5
34.	R80-759	Forrest X R74-605	F_5
35.	S79-4034	(D74-7636 X D70-3045) X (D68-18 X PI 88788)	F_5
36.	Tn80-83	Essex X J74-40	F_5

Table 37 - General summary of performance for the strains in Preliminary Group VI, 1982

Strain	Seed yield	Mat. index	Ht.	Percent Oil	Percent Protein	M. incognita	M. arenaria	SCN race 3	SCN race 4	BP	% mottled seed
Centennial	42.2	10-18	39	17.4	43.1	0.5	5.0	R	S	R	8
Bedford	39.5	-12	36	18.4	40.3	1.5	2.5	R	R	R	50
D79-3853	39.3	-5	36	15.8	44.2	3.0	5.0	S	S	R	15
D79-5724	34.9-	-10	36	15.3	44.9	4.0	3.5	S	S	R	5
D79-5935	49.1+	+1	44	18.0	41.4	2.5	5.0	R	S	R	3
D79-6104	46.3+	-1	38	17.0	42.2	3.5	5.0	R	S	R	4
D79-6162	51.0+	+1	38	16.4	43.1	3.5	5.0	R	S	R	2
D79-10158	38.5	-3	36	18.0	40.6	1.0	1.8	R	S	R	5
D80-7987	42.9	-3	37	18.2	40.4	1.0	1.5	R	R	R	0
Ga78-2127	43.8	-7	39	19.1	41.7	5.0	5.0$_h$	S	S	R	0
Ga78-2249	36.1-	-10	41	19.4	40.4	2.0	3.0^h	S	S	R	10
Ga78-2422	34.4-	-2	35	17.0	41.6	0.5	4.5	S	S	R	5
Ga79-402	46.5$^+$	-13	38	18.7	41.0	0.5	1.5$_h$	R	S	R	6
Ga79-403	42.6	-11	37	18.2	39.8	2.0	3.0^h	R	S	R	15
J79-454	43.0	-9	37	17.8	40.9	0.5	3.5	R	R	R	27
J80-293	45.8	-6	35	17.8	42.2	1.5	1.5	R	R	R	2
J80-337	44.7	-14	34	18.5	41.5	2.0	1.5	R	R	R	18
La74-923	42.5	+3	39	18.5	41.2	5.0	3.0	S	S	R	10
N80-343	41.9	-7	34	19.1	40.9	3.5	5.0	S	S	R	75
N80-357	42.0	-10	32	18.5	40.5	3.0	5.0	S	S	R	8
N80-367	39.1	-12	31	17.9	42.3	3.5	5.0	S	S	R	10
N80-464	38.9	-14	36	18.8	41.9	2.0	2.5	S	S	S	6
N80-739	39.4	-5	34	19.0	40.7	1.5	3.5	S	S	R	27
N80-1076	39.9	-2	34	18.2	41.0	4.5	4.5	S	S	R	5
N80-1141	41.6	-6	33	19.3	39.7	4.0	5.0	S	S	R	3
N80-1274	39.9	-11	34	17.2	42.8	2.0	3.0	S	S	R	9
N80-1373	41.7	-4	34	18.3	41.7	5.0	4.5	S	S	R	2
N80-1655	36.7-	-3	34	18.4	40.7	0.5	5.0	S	S	R	0
R78-4558	39.4	-10	35	18.2	40.8	0.5	5.0$_h$	S	S	R	5
R79-343	43.2	-6	35	18.3	40.9	0.5	4.0^h	S	S	R	33
R80-10	40.4	-4	35	18.1	41.8	1.5	4.0^h	S	S	R	4
R80-119	43.2	+4	37	17.8	43.1	4.0	2.0	R	S	R	3
R80-437	46.2+	-3	34	17.3	41.8	4.0	4.5	R	R	R	15
R80-759	43.2	-4	36	18.4	41.8	2.0	1.5	R	R	R	5
S79-4034	42.7	-5	35	18.5	41.9	1.5	4.0	R	R	R	45
Tn80-83	42.8	-5	34	18.4	41.0	2.0	2.0	R	S	R	5
L.S.D.(.05)	3.9										
C.V.	13%										

Table 38 - Seed yield, in bushels per acre, for the strains in Preliminary Group VI, 1982

Strain	Holland, VA	*Plymouth, NC	Belle Mina, AL	Jay, FL	Keiser, AR	Stone-ville, MS(A)	Stone-ville, MS(B)
Centennial	43.3	51.5	45.9	41.0	44.6	43.0	35.1
Bedford	41.8	35.1-	44.2	40.5	42.2-	38.3	30.2
D79-3853	40.1	35.8-	35.8	30.0-	48.2	40.1	41.6
D79-5724	26.1-	30.2-	41.5	29.5-	40.0	35.2	37.3
D79-5935	48.7	47.7	48.3	48.0	51.4	48.0	50.2+
D79-6104	44.4	46.0	47.1	41.0	48.7	52.0+	44.3
D79-6162	43.3	41.0	58.9+	48.0	51.8	50.1	54.0+
D79-10158	33.7	31.6-	42.3	35.0	46.7	39.4	33.6
D80-7987	38.0	42.9	45.9	44.0	46.9	48.0	34.7
Ga78-2127	44.1	35.7-	47.5	32.0	53.6+	42.2	43.4
Ga78-2249	36.7	42.3	35.1-	24.0-	41.7	41.2	37.9
Ga78-2422	25.2-	33.9-	35.1-	29.5-	48.7	36.0	32.1
Ga79-402	44.9	44.2	49.4	45.0	49.4	48.4	42.1
Ga79-403	46.3	44.9	46.5	41.5	47.3	43.2	30.6
J79-454	47.0	41.0	46.9	38.0	45.9	44.7	35.2
J80-293	44.6	45.6	53.3	42.5	43.6	51.8+	38.8
J80-337	39.2	49.2	55.2	39.0	43.0	48.1	43.9
La74-923	36.6	46.9	47.0	36.5	51.2	41.4	42.4
N80-343	44.7	33.3-	43.9	41.0	44.1	45.1	32.8
N80-357	40.5	48.0	48.8	29.5-	46.5	45.9	40.5
N80-367	38.5	31.1-	52.2	28.0-	50.2	41.7	24.2
N80-464	42.0	43.5	48.8	31.0-	41.5	35.9	34.1
N80-739	38.8	42.3	43.0	33.0	43.4	42.9	35.3
N80-1076	37.8	51.9	47.2	34.0	43.7	41.5	35.3
N80-1141	38.8	45.7	58.5+	20.5-	49.8	40.9	41.0
N80-1274	39.4	45.1	39.7	31.0-	51.6	39.7	37.9
N80-1373	45.5	40.2	41.5	33.5	49.9	39.9	40.0
N80-1655	30.9	46.0	50.3	33.0	31.8-	37.7	36.3
R78-4558	40.1	37.5-	35.1-	36.0	45.1	38.5	41.7
R79-343	44.1	43.7	46.0	34.5	47.2	43.5	43.7
R80-10	35.3	40.0	44.1	34.0	47.9	43.5	37.6
R80-119	42.1	35.7-	37.5	42.5	58.3+	34.3-	44.4
R80-437	48.8	40.4	50.3	40.0	44.9	47.9	45.2
R80-759	38.2	42.4	47.9	38.0	45.5	46.1	43.5
S79-4034	45.4	41.7	36.2	47.0	45.2	44.3	37.9
Tn80-83	47.9	47.5	51.3	34.0	51.2	43.9	28.2
L.S.D.(.05)	12.6	11.8	10.8	9.5	8.8	8.2	11.1
C.V.	15%	14%	12%	13%	9%	9%	14%

*Not included in mean.

Table 39 - Oil percentages for the strains in Preliminary Group VI, 1982

Strain	Holland, VA	*Plymouth, NC	Jay, FL	Keiser, AR	Stoneville, MS (B)
Centennial	17.4	17.0	18.7	16.9	16.7
Bedford	16.4	17.0	20.0	17.4	19.6
D79-3853	14.1	14.8	17.4	16.6	14.9
D79-5724	14.4	12.1	15.5	17.8	13.4
D79-5935	16.5	17.1	19.8	17.6	18.2
D79-6104	15.4	17.0	18.6	17.3	16.8
D79-6162	15.0	15.5	18.2	15.4	16.8
D79-10158	17.1	17.8	18.8	18.2	18.0
D80-7987	16.8	16.6	20.7	16.6	18.6
Ga78-2127	17.9	19.2	20.9	18.6	18.9
Ga78-2249	17.2	18.7	21.9	18.9	19.6
Ga78-2422	15.4	16.1	18.2	17.9	16.5
Ga79-402	17.8	17.4	20.1	18.3	18.7
Ga79-403	17.2	18.2	19.9	16.9	18.6
J79-454	17.3	17.3	19.6	16.7	17.6
J80-293	17.4	17.9	19.5	17.4	17.0
J80-337	16.7	17.3	20.2	18.3	18.9
La74-923	18.1	19.8	20.8	16.2	18.8
N80-343	18.0	18.3	21.2	18.3	19.0
N80-357	16.6	16.5	20.9	17.0	19.3
N80-367	16.9	17.2	19.9	16.7	18.2
N80-464	17.4	19.7	20.8	18.5	18.5
N80-739	18.4	17.2	20.5	17.7	19.3
N80-1076	16.8	17.7	19.9	18.6	17.4
N80-1141	19.3	20.7	20.6	18.1	19.2
N80-1274	17.0	17.8	18.8	15.4	17.5
N80-1373	16.8	17.5	19.5	18.6	18.2
N80-1655	17.7	18.8	18.9	18.3	18.7
R78-4558	16.9	17.5	19.4	18.4	18.0
R79-343	17.1	19.6	20.4	17.4	18.2
R80-10	16.6	17.4	18.7	19.4	17.8
R80-119	17.1	18.8	19.1	17.5	17.5
R80-437	17.1	15.6	18.8	15.6	17.5
R80-759	17.3	17.8	20.2	17.2	18.9
S79-4034	17.2	18.8	21.4	16.5	18.9
Tn80-83	16.6	17.2	19.7	18.5	18.8

*Not included in Mean

Table 40 - Protein percentages for the strains in Preliminary Group VI, 1982

Strain	Holland, VA	*Plymouth, NC	Jay, FL	Keiser, AR	Stoneville, MS (B)
Centennial	41.6	39.6	42.3	43.1	44.4
Bedford	39.9	42.3	39.0	41.8	40.6
D79-3853	45.0	43.6	44.1	41.6	46.2
D79-5724	45.7	47.6	46.3	40.2	47.4
D79-5935	42.3	42.2	40.5	39.4	43.4
D79-6104	42.8	41.7	41.6	40.2	44.0
D79-6162	43.3	43.1	41.2	44.1	43.6
D79-10158	40.5	39.5	41.0	39.5	41.2
D80-7987	40.9	39.8	38.5	43.5	38.6
Ga78-2127	41.7	39.1	40.3	42.2	42.7
Ga78-2249	41.5	40.2	38.9	40.0	41.3
Ga78-2422	41.6	41.5	40.7	41.2	42.8
Ga79-402	40.9	40.2	39.3	41.9	41.8
Ga79-403	40.0	40.3	39.4	39.2	40.6
J79-454	41.0	41.0	39.4	42.3	40.7
J80-293	42.0	42.1	41.9	40.8	44.2
J80-337	41.8	42.2	41.4	40.1	42.5
La74-923	41.8	39.1	38.8	43.1	41.0
N80-343	41.7	40.3	39.4	42.0	40.4
N80-357	42.2	40.2	39.2	40.6	40.0
N80-367	43.3	43.2	42.0	42.3	41.6
N80-464	41.7	40.3	41.5	41.7	42.5
N80-739	41.1	41.0	40.2	40.7	40.7
N80-1076	43.0	40.3	40.5	38.1	42.4
N80-1141	40.4	35.5	39.0	40.1	39.2
N80-1274	42.6	41.7	42.1	43.7	42.8
N80-1373	43.6	40.8	41.6	40.3	41.2
N80-1655	41.0	38.6	41.5	41.0	39.4
R78-4558	41.1	40.4	39.9	39.7	42.3
R79-343	41.3	38.0	38.1	42.0	42.2
R80-10	43.4	40.5	41.2	40.6	41.8
R80-119	43.4	39.3	41.9	43.7	43.3
R80-437	42.3	42.4	40.8	42.7	41.3
R80-759	42.4	39.9	40.5	42.9	41.2
S79-4034	42.7	40.8	40.5	42.0	42.4
Tn80-83	41.7	40.9	40.3	40.0	41.8

*Not included in mean.

Table 41 - Plant height for the strains in Preliminary Group VI, 1982

Strain	Holland, VA	Plymouth, NC	Belle Mina, AL	Jay, FL	Keiser, AR	Stone-ville, MS(A)	Stone-ville, MS(B)
Centennial	42	42	42	32	39	42	35
Bedford	34	47	35	29	38	44	38
D79-3853	32	40	37	30	37	41	37
D79-5724	36	39	36	27	33	42	39
D79-5935	45	45	48	38	46	44	41
D79-6104	40	40	40	28	37	42	38
D79-6162	43	46	28	32	40	40	42
D79-10158	35	42	40	30	32	43	36
D80-7987	38	42	40	31	35	42	33
Ga78-2127	39	42	42	33	38	43	37
Ga78-2249	39	43	47	31	43	47	41
Ga78-2422	30	40	32	31	37	41	37
Ga79-402	38	36	40	31	41	44	33
Ga79-403	36	42	42	31	37	43	30
J79-454	40	38	36	33	34	42	36
J80-293	36	40	40	28	37	41	27
J80-337	31	40	40	27	32	39	32
La74-923	43	39	38	36	40	41	38
N80-343	35	46	37	29	38	36	26
N80-357	32	31	35	25	31	36	33
N80-367	34	30	35	23	33	35	25
N80-464	35	36	40	35	31	40	34
N80-739	33	36	36	27	35	40	30
N80-1076	33	38	30	29	34	41	35
N80-1141	36	38	30	26	36	37	31
N80-1274	36	42	25	27	35	41	37
N80-1373	33	41	35	27	36	38	36
N80-1655	34	37	37	29	36	39	29
R78-4558	30	37	40	31	34	39	33
R79-343	37	37	30	27	35	44	38
R80-10	29	38	39	31	35	42	31
R80-119	42	43	34	29	38	42	35
R80-437	36	35	30	31	40	35	34
R80-759	32	39	44	25	34	43	37
S79-4034	41	44	20	34	39	38	36
Tn80-83	33	39	40	30	30	42	26

Table 42 - Seed quality scores for the strains in Preliminary Group VI, 1982

Strain	Holland, VA	Plymouth, NC	Belle Mina, AL	Jay, FL	Keiser, AR	Stone-ville, MS(A)	Stone-ville, MS(B)
Centennial	1.0	2.0	1.5	2.0	2.0	2.0	2.0
Bedford	1.0	3.0	1.0	3.0	2.0	2.0	2.0
D79-3853	1.0	1.5	1.0	2.0	3.0	2.0	2.0
D79-5724	1.0	2.5	1.0	2.0	2.0	2.0	2.0
D79-5935	1.0	2.0	1.0	2.0	2.0	2.0	2.0
D79-6104	1.0	2.0	1.0	3.0	2.0	2.0	2.0
D79-6162	1.0	1.5	2.0	3.0	1.5	2.0	2.0
D79-10158	1.0	2.0	1.0	3.0	2.0	2.0	2.0
D80-7987	1.0	2.0	1.0	3.0	2.0	2.0	2.0
Ga78-2127	1.0	2.0	1.0	2.0	2.5	2.0	2.0
Ga78-2249	1.0	1.5	1.5	2.0	1.0	2.0	2.0
Ga78-2422	1.0	2.5	1.0	2.0	2.0	2.0	2.0
Ga79-402	1.0	2.5	1.0	2.0	2.0	2.0	2.0
Ga79-403	1.0	3.0	1.0	2.0	1.5	2.0	2.0
J79-454	1.0	2.0	2.0	2.0	2.5	2.0	2.0
J80-293	1.0	2.0	1.0	2.0	1.5	2.0	2.0
J80-337	1.0	3.0	2.0	4.0	2.0	3.0	2.0
La74-923	1.0	2.0	1.0	2.0	2.0	2.0	2.0
N80-343	1.0	1.5	1.5	3.0	1.5	2.0	2.0
N80-357	1.0	2.5	1.5	3.0	2.5	2.0	2.0
N80-367	1.0	2.5	1.0	3.0	1.5	2.0	2.0
N80-464	1.0	3.0	1.0	3.0	2.0	2.0	2.0
N80-739	1.0	2.5	2.0	3.0	2.0	2.0	2.0
N80-1076	1.0	2.0	1.0	2.0	1.5	2.0	2.0
N80-1141	1.0	2.5	1.0	4.0	2.0	2.0	2.0
N80-1274	1.0	3.0	1.5	3.0	2.0	2.0	2.0
N80-1373	1.0	2.0	1.0	2.0	1.5	2.0	2.0
N80-1655	1.0	2.5	1.0	3.0	2.0	2.0	2.0
R78-4558	1.0	3.0	1.5	2.0	2.0	2.0	2.0
R79-343	1.0	2.0	1.0	2.0	1.5	2.0	2.0
R80-10	1.0	2.0	1.0	2.0	2.0	2.0	2.0
R80-119	1.0	1.5	1.5	2.0	2.0	3.5	2.0
R80-437	1.0	3.0	1.0	2.0	2.5	2.0	2.0
R80-759	1.0	2.0	1.0	2.0	2.5	2.0	2.0
S79-4034	1.0	3.0	2.0	3.0	2.0	2.0	2.0
Tn80-83	1.0	2.5	1.0	2.0	2.0	2.0	2.0

UNIFORM GROUP VII

1982

	Variety or strain	Parentage	Generation composited
1.	Braxton	F59-1505 X [Bragg(3) X D60-7965]	F_5
2.	Wright	Bragg X Lee	F_4
3.	F76-8757	Centennial X [Forrest X (Cobb X D68-216)]	F_5
4.	D77-6103	Centennial X J74-47	F_5
5.	F77-1576	Centennial X [Forrest X (Cobb X D68-216)]	F_6
6.	N77-940	N70-1549 X Centennial	F_5
7.	D76-9454	Forrest X Centennial	F_5
8.	F77-1880	Centennial X [Forrest X (Cobb X D68-216)]	F_5
9.	F77-7142	Centennial X [Forrest X (Cobb X D68-216)]	F_5
10.	D79-10458	J74-39 X D75-10169	F_5
11.	Ga78-2708	Forrest X Pickett 71	F_4
12.	F77-2122	Centennial X [Forrest X (Cobb X D68-216)]	F_5

Background of breeding lines used as parents:

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

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

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

J74-47 is of the same parentage as Bedford.

N70-1549 is a selection from Dare X D65-6765.

J74-39 is of the same parentage as Bedford but slightly later in maturity.

D75-10169 is from Govan X an F_4 selection of Bragg X PI 229358, selected for resistance to foliar-feeding insects.

Uniform Group VII nurseries were planted at 30 locations. Additional plantings were made for evaluation for reaction to the two root-knot species, M. arenaria and M. incognita, and for evaluation against soybean cyst nematode race 3. An additional planting was made in a field cage at Stoneville to evaluate for reaction to foliar-feeding insects. Insufficient insects developed to obtain satisfactory readings. Results are summarized in Tables 43 through 49. Table 43 gives a general summary of seed yield, oil and protein content, general agronomic qualities, and reaction to diseases and nematodes. The planting at Jay, Florida was on soil infested with SCN race 3.

The four strains, F76-8757, D77-6103, F77-1576, and N77-940, have been evaluated three years. All have yielded well. F76-8757 has moderate resistance to both root-knot nematodes and resistance to SCN race 3. D77-6103 has resistance to races 3 and 4 of the cyst nematode and good resistance to M. incognita. F77-1576 has excellent resistance to M. incognita and appeared to be heterozygous for reaction to M. arenaria. It is resistant to SCN race 3. None of these lines appears to have sufficient merit to justify release.

The three strains, D76-9454, F77-1880, and F77-7142, have been evaluated two years. All are resistant to SCN race 3 and have good resistance to M. incognita. D76-9454 and F77-7142 also appear to have good resistance to M. arenaria. All three have yielded well.

The three strains, D79-10458, Ga78-2708, and F77-2122, were evaluated one year. D79-10458 was selected for resistance to foliar-feeding insects. It also has good resistance to M. incognita and M. arenaria and SCN race 3. It yielded quite well in the East Coast, Delta, and West Regions, but not as well as Braxton in other areas. Ga78-2708 has good resistance to both species of root-knot nematodes and to SCN race 3. F77-2122 has excellent resistance to M. incognita, a moderate reaction to M. arenaria, and is resistant to SCN race 3.

Table 43 - General summary of performance for the strains in Uniform Group VII, 1982

	No. of locations	Braxton	Wright	F76-8757	D77-6103	F77-1576	N77-940
Seed yield - 1982							
East Coast	6	31.4	28.2	34.1	32.1	32.5	36.3
Southeast	8	41.5	39.1	36.7	37.0	40.8	40.7
Upper & Central South	3	43.1	43.7	38.7	38.1	39.5	45.5
Delta & West	5	43.3	43.6	40.7	44.1	39.1	43.0
1981-82							
East Coast		36.0	32.6	36.4	35.4	34.5	38.6
Southeast		37.6	36.1	36.2	35.3	38.4	37.2
Upper & Central South		40.1	39.1	37.8	37.7	38.2	40.7
Delta & West		39.6	41.5	39.0	41.1	39.3	41.1
1980-82							
East Coast		33.5	32.5	34.6	33.4	33.8	35.7
Southeast		35.1	34.1	35.2	33.8	36.9	34.9
Upper & Central South		38.9	37.1	35.9	34.8	36.7	38.5
Delta & West		39.4	42.1	40.2	41.4	41.0	40.9
Oil Content - 1982		18.7	19.3	18.6	18.7	18.8	18.8
1981-82		18.8	19.2	18.9	18.7	19.2	18.9
1980-82		19.0	19.4	19.2	19.0	19.5	19.2
Protein Content - 1982		41.8	40.8	42.2	42.7	41.5	41.3
1981-82		42.5	41.9	42.7	43.7	42.4	42.5
1980-82		42.8	42.4	43.0	44.0	42.8	42.8
Seed size		16.7	14.1	13.5	13.6	11.3	12.5
Maturity index		10-26	-3	0	-4	-1	-5
Height		41	39	41	40	44	36
Seed quality		2.2	2.0	1.9	2.1	1.8	1.9
Bacterial pustule		R	R	R	R	R	R
M. incognita		2.0	2.0	2.0	2.0	0.0	4.0
M. arenaria		2.0	2.5	3.0	5.0	3.0	2.0
SCN-3		S	S	R	R	R	S
SCN-4		S	S	S	R	S	S
Percent mottled seed		6	7	7	4	4	3
Flower color		P	P	W	P	W	W
Pubescence color		T	T	T	T	T	T
Pod wall color		T	T	T	T	T	T

Table 43 - (continued)

	D76-9454	F77-1880	F77-7142	D79-10458	Ga78-2708	F77-2122
Seed yield - 1982						
East Coast	33.3	34.5	31.7	29.2	34.3	32.2
Southeast	39.0	43.1	42.3	38.5	38.6	41.8
Upper & Central South	42.4	41.1	47.3	38.5	42.1	41.4
Delta & West	43.5	40.7	40.3	41.8	43.7	42.7
1981-82						
East Coast	37.1	36.9	35.2			
Southeast	36.5	39.5	37.8			
Upper & Central South	39.3	36.7	37.5			
Delta & West	41.6	40.5	38.9			
1980-82						
East Coast						
Southeast						
Upper & Central South						
Delta & West						
Oil Content - 1982	20.0	18.3	18.5	19.1	18.7	18.4
1981-82	19.7	18.5	18.8			
1980-82						
Protein Content - 1982	41.2	42.4	41.7	41.6	40.3	41.3
1981-82	41.9	43.4	42.4			
1980-82						
Seed size	14.4	13.9	13.3	13.0	12.1	12.4
Maturity index	-2	-1	0	-4	-5	-2
Height	39	40	44	36	39	42
Seed quality	2.1	1.9	2.0	2.2	2.0	2.0
Bacterial pustule	R	R	R	S	R	R
M. incognita	0.5	1.0	1.5	0.5	0.0	0.0
M. arenaria	1.5	5.0	2.0	2.0	1.0	3.0
SCN-3	R	R	R	R	R	R
SCN-4	S	S	S	S	S	S
Percent mottled seed	15	3	2	23	7	22
Flower color	W	P	W	W	W	P
Pubescence color	T	T	G	T	G	T
Pod wall color	T	T	T	T	B	T

Table 44 - Seed yield, in bushels per acre, for the strains in Uniform Group VII, 1982

Location	Braxton	Wright	F76-8757	D77-6103	F77-1576	N77-940	D76-9454
			EAST COAST				
*Plymouth, NC	45.0	39.6	41.8	44.3	28.1	38.9	42.9
Kinston, NC	20.8	21.8	33.3+	29.3+	28.8+	31.8+	33.0+
Clinton, NC	29.1	25.7	32.9	29.4	29.5	41.1+	32.6
Florence, SC (A)	43.4	40.0	35.0	42.6	42.2	44.4	37.6
Florence, SC (B)	36.1	31.9	33.9	32.7	35.2	31.7	31.0
Hartsville, SC (A)	31.9	30.5	38.4	33.6	30.4	40.6	37.5
Hartsville, SC (B)	27.2	19.0	31.0	24.8	28.6	28.1	28.1
Mean	31.4	28.2	34.1	32.1	32.5	36.3	33.3
			SOUTHEAST				
Blackville, SC	23.2	24.2	19.2	24.1	26.0	25.4	26.3
Tallassee, AL	32.8	22.8	28.0	27.4	30.6	34.6	30.2
Tifton, GA	55.7	55.0	49.0	42.6	51.8	45.4	47.2
Gainesville, FL	48.1	43.6	37.0-	32.0-	42.6-	41.2-	29.1-
Marianna, FL	47.6	45.4	40.1	40.7	44.9	46.6	43.1
*Quincy, FL	33.3	30.0	40.0	28.7	33.6	30.9	27.9
Jay, FL	28.0	33.7	39.0+	43.0+	42.7+	33.7	44.0+
Fairhope, AL	57.2	50.2-	45.7-	46.6-	46.9-	53.4	47.9-
Poplarville, MS	39.5	37.8	35.4	39.5	40.9	44.9	44.5
*Baton Rouge, LA	27.5	32.1	34.3	31.1	40.7	28.9	36.5
Mean	41.5	39.1	36.7	37.0	40.8	40.7	39.0
			UPPER AND CENTRAL SOUTH				
Athens, GA	37.4	35.1	32.6	34.1	31.9	37.7	37.5
Calhoun, GA	53.4	59.1	45.5	46.0	54.9	61.9	53.5
Clemson, SC	38.6	37.0	38.1	34.3	31.7	37.0	36.1
Mean	43.1	43.7	38.7	38.1	39.5	45.5	42.4
			DELTA AND WEST				
Stoneville, MS (A)	35.0	40.2+	40.1+	44.5+	36.6	40.9+	38.3
Stoneville, MS (B)	40.3	45.8+	45.0+	42.6	39.4	45.2+	44.9+
Pine Bluff, AR	53.5	42.3	34.9	44.8	34.4	42.1	50.4
Stuttgart, AR	51.9	49.8	46.4	47.1	47.4	48.7	47.0
Rohwer, AR	35.6	40.1+	37.3	41.3+	37.8	38.2	37.1
*St. Joseph, LA	39.3	39.9	37.5	48.5+	41.0	23.1-	39.0
*Bossier City, LA	17.8	19.5	16.7	17.3	17.4	15.3	14.9
*Crowley, LA	46.8	48.1	46.5	44.4	52.1	51.0	47.0
*Beaumont, TX	39.4	42.5	46.2	38.4	41.3	45.8	38.9
Mean	43.3	43.6	40.7	44.1	39.1	43.0	43.5

*Not included in mean.
(+) - 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	F77-1880	F77-7142	D79-10458	Ga78-2708	F77-2122	L.S.D. (.05)	C.V. (%)
			EAST COAST				
Plymouth, NC	41.4	41.8	47.6	43.2	39.7	15.3	22
Kinston, NC	35.0+	30.3+	26.2	35.3+	30.7+	6.0	12
Clinton, NC	29.8	34.4	29.0	30.6	26.7	5.6	11
Florence, SC (A)	42.4	46.6	40.9	39.9	41.7	N.S.	11
Florence, SC (B)	40.9	34.4	22.4-	35.5	35.5	6.9	12
Hartsville, SC (A)	30.8	17.9	29.8	30.3	27.9	N.S.	22
Hartsville, SC (B)	27.7	26.5	26.5	34.2	30.7	N.S.	17
Mean	34.5	31.7	29.2	34.3	32.2		
			SOUTHEAST				
Blackville, SC	28.1	27.9	20.9	24.3	25.7	N.S.	18
Tallassee, AL	31.3	27.4	28.4	26.8	31.2	N.S.	21
Tifton, GA	50.5	58.7	54.9	53.0	59.3	N.S.	14
Gainesville, FL	41.1-	44.3	36.1-	34.9-	37.7-	5.1	8
Marianna, FL	49.7	43.2	45.5	41.4	47.2	N.S.	11
Quincy, FL	30.8	37.8	32.1	33.5	34.0	N.S.	20
Jay, FL	51.3+	45.0+	31.0	40.3+	46.0+	8.8	13
Fairhope, AL	51.9-	51.9-	48.7-	49.4-	50.2-	5.1	6
Poplarville, MS	40.9	40.0	42.7	39.0	36.7	N.S.	10
Baton Rouge, LA	38.0	31.2	32.8	38.2	34.6	N.S.	15
Mean	43.1	42.3	38.5	38.6	41.8		
			UPPER AND CENTRAL SOUTH				
Athens, GA	34.1	39.2	32.7	39.4	39.6	N.S.	10
Calhoun, GA	55.8	62.2	51.3	49.4	49.0	9.6	11
Clemson, SC	33.4	40.5	31.5	37.6	35.5	N.S.	12
Mean	41.1	47.3	38.5	42.1	41.4		
			DELTA AND WEST				
Stoneville, MS (A)	37.1	38.2	36.6	39.8+	40.5+	4.8	7
Stoneville, MS (B)	40.5	43.7+	41.4	41.9	41.8	3.4	5
Pine Bluff, AR	42.1	43.4	45.8	50.3	45.6	N.S.	17
Stuttgart, AR	47.3	49.7	47.2	50.2	47.5	N.S.	6
Rohwer, AR	36.5	26.3-	38.0	36.3	38.2	3.6	6
St. Joseph, LA	44.6	41.5	39.0	38.2	29.5-	5.5	9
Bossier City, LA	19.7	17.5	17.3	17.1	19.7	N.S.	18
Crowley, LA	47.0	53.9+	48.5	47.6	40.0-	5.6	7
Beaumont, TX	46.9	41.6	40.6	43.4	36.5	N.S.	17
Mean	40.7	40.3	41.8	43.7	42.7		

Table 45 - Chemical composition and seed size for the strains in Uniform Group VII, 1982

Location	Braxton	Wright	F76-8757	D77-6103	F77-1576	N77-940
			OIL PERCENTAGES			
Clinton, NC	19.2	21.3	18.1	18.9	19.5	18.8
Athens, GA	16.8	17.9	16.8	18.1	17.9	16.9
Tifton, GA	19.4	19.6	18.8	18.6	18.6	19.3
Gainesville, FL	20.0	20.6	20.2	20.2	20.1	19.9
Jay, FL	20.0	19.3	22.0	21.0	19.6	20.5
Baton Rouge, LA	19.0	19.8	18.8	18.7	20.3	20.0
Stoneville, MS (B)	16.1	17.4	16.8	16.4	17.4	17.0
Stuttgart, AR	18.1	17.1	17.2	17.6	17.2	17.5
Beaumont, TX	19.8	20.9	18.8	18.5	19.0	19.1
Mean	18.7	19.3	18.6	18.7	18.8	18.8
			PROTEIN PERCENTAGES			
Clinton, NC	42.2	41.8	41.8	44.2	39.2	40.2
Athens, GA	42.7	42.0	42.2	41.6	43.2	42.6
Tifton, GA	41.1	40.1	41.0	41.4	41.9	40.7
Gainesville, FL	41.6	40.7	42.6	42.4	41.5	39.9
Jay, FL	41.0	39.6	41.4	42.7	41.2	40.8
Baton Rouge, LA	43.2	41.5	43.9	44.5	41.7	43.0
Stoneville, MS (B)	42.8	41.0	43.1	43.3	42.5	41.6
Stuttgart, AR	41.0	40.6	42.1	41.0	41.8	41.6
Beaumont, TX	40.3	40.1	41.6	42.9	40.8	41.6
Mean	41.8	40.8	42.2	42.7	41.5	41.3
			GRAMS PER 100 SEEDS			
Clinton, NC	18.9	14.8	13.8	14.0	11.9	13.5
Athens, GA	15.5	12.7	11.9	12.0	10.4	11.6
Tifton, GA	19.3	17.3	15.1	15.2	12.8	12.9
Gainesville, FL	19.3	15.5	14.7	14.5	12.2	14.0
Jay, FL	17.0	14.0	15.0	14.0	11.0	12.0
Baton Rouge, LA	13.4	11.8	12.2	13.0	10.6	11.9
Stoneville, MS (B)	16.5	13.1	12.4	11.5	10.2	11.0
Stuttgart, AR	18.0	15.0	14.0	16.0	12.0	14.0
Beaumont, TX	12.8	12.3	12.7	12.1	10.7	11.3
Mean	16.7	14.1	13.5	13.6	11.3	12.5

Table 45 - (continued)

Location	D76-9454	F77-1880	F77-7142	D79-10458	Ga78-2708	F77-2122
			OIL PERCENTAGES			
Clinton, NC	20.8	19.0	19.1	19.1	19.0	19.0
Athens, GA	18.7	17.1	17.6	17.0	17.7	16.7
Tifton, GA	21.6	18.4	18.1	19.8	18.8	17.7
Gainesville, FL	21.5	18.9	20.1	21.7	20.4	18.9
Jay, FL	21.1	19.1	19.6	19.9	19.8	20.7
Baton Rouge, LA	20.8	18.4	18.4	20.0	20.3	19.3
Stoneville, MS (B)	18.3	17.4	16.8	17.3	17.4	16.6
Stuttgart, AR	17.0	17.8	17.4	17.4	16.4	18.5
Beaumont, TX	20.1	19.0	19.0	20.0	18.6	18.5
Mean	20.0	18.3	18.5	19.1	18.7	18.4
			PROTEIN PERCENTAGES			
Clinton, NC	39.8	41.4	39.5	41.5	39.0	41.4
Athens, GA	41.9	44.1	41.8	43.8	40.2	42.1
Tifton, GA	39.8	42.8	42.0	41.2	39.8	41.1
Gainesville, FL	41.4	43.3	41.5	40.5	39.1	40.4
Jay, FL	39.9	41.4	41.0	40.0	38.8	39.5
Baton Rouge, LA	42.1	43.5	43.7	43.0	41.5	42.4
Stoneville, MS (B)	41.6	42.6	42.3	43.3	41.3	43.1
Stuttgart, AR	42.7	40.1	41.8	40.6	42.1	40.2
Beaumont, TX	41.3	42.0	41.8	40.8	40.9	41.7
Mean	41.2	42.4	41.7	41.6	40.3	41.3
			GRAMS PER 100 SEEDS			
Clinton, NC	15.3	14.9	13.2	12.3	11.2	12.4
Athens, GA	13.1	12.9	12.7	11.9	11.5	11.8
Tifton, GA	16.8	15.2	15.0	16.3	14.0	15.2
Gainesville, FL	15.9	15.0	14.4	14.8	13.4	13.1
Jay, FL	14.0	15.0	14.0	12.0	12.0	13.0
Baton Rouge, LA	13.9	12.5	11.1	12.3	11.5	11.2
Stoneville, MS (B)	12.6	11.4	12.0	11.4	11.2	10.8
Stuttgart, AR	15.0	17.0	16.0	14.0	13.0	14.0
Beaumont, TX	13.0	11.6	11.7	12.0	11.4	10.3
Mean	14.4	13.9	13.3	13.0	12.1	12.4

Table 46 - Relative maturity data, days earlier (-) or later (+) than Braxton, for the strains in Uniform Group VII, 1982

Location	Date planted	Braxton matured	Wright	F76-8757	D77-6103	F77-1576	N77-940
			EAST COAST				
Plymouth, NC	5-10	11-3	0	0	0	0	-6
Kinston, NC	5-13	10-27	+7	+7	+7	+7	+7
Clinton, NC	5-20	10-30	-3	-3	-8	0	-3
Florence, SC (A)	5-15	11-3	-7	-2	-9	-11	-11
Florence, SC (B)	6-15	11-3	0	-5	-2	-2	0
Hartsville, SC (A)	6-2	10-21	-1	+1	-4	+1	-2
Hartsville, SC (B)	6-15	10-23	-4	+1	-4	0	-5
Mean		10-29	-1	0	-3	-1	-3
			SOUTHEAST				
Blackville, SC	5-19	10-27	-4	0	-5	-2	-12
Tallassee, AL	5-17	10-17	-5	-2	-4	+1	-4
Tifton, GA	5-6	10-10	+2	+4	+2	+4	+2
Gainesville, FL	6-3	10-23	-4	-3	-5	-3	-5
Marianna, FL	6-7	10-28	-2	-2	-1	-2	-3
*Quincy, FL	7-1	11-2	+10	-1	-4	-5	+2
Jay, FL	6-7	10-25	-10	-7	-13	-7	-14
Fairhope, AL	6-8	10-21	-3	+1	-3	+2	-6
Baton Rouge, LA	5-14	11-3	-9	-6	-9	-9	-9
Mean		10-23	-4	-2	-5	-2	-6
			UPPER AND CENTRAL SOUTH				
Athens, GA	5-10	10-13	-7	+1	-6	-1	-7
Clemson, SC	5-12	10-26	-1	+2	-1	0	-4
Mean		10-19	-4	+2	-4	-1	-6
			DELTA AND WEST				
Stoneville, MS (A)	5-13	10-24	+1	+2	-1	+1	0
Stoneville, MS (B)	5/10-12	10-25	0	+1	-6	+1	-5
Pine Bluff, AR	6-24	11-4	-4	-2	-5	-1	-8
Rohwer, AR	6-2	10-26	-3	0	-4	+6	-4
St. Joseph, LA	5-11	10-8	0	+9	-2	+3	-12
Bossier City, LA		11-15	+1	+1	-5	-1	-2
Crowley, LA	5-26	11-8	-10	-7	-10	-10	-10
Beaumont, TX	5-21	10-28	0	+1	+1	+3	-1
Mean		10-29	-2	+1	-4	0	-5

*Not included in mean.

Table 46 - (continued)

Location	D76-9454	F77-1880	F77-7142	D79-10458	Ga78-2708	F77-2122
			EAST COAST			
Plymouth, NC	0	0	+5	0	0	0
Kinston, NC	+14	0	+7	+7	0	+7
Clinton, NC	-3	-3	+6	-3	-3	-3
Florence, SC (A)	-7	-7	-2	-11	-9	-7
Florence, SC (B)	-2	-2	+2	-5	-2	+2
Hartsville, SC (A)	0	0	0	-6	-1	0
Hartsville, SC (B)	0	+1	0	-4	-3	0
Mean	0	-1	+3	-3	-2	0
			SOUTHEAST			
Blackville, SC	-4	+2	+2	-9	-4	-5
Tallassee, AL	-4	+1	-1	-4	-4	-1
Tifton, GA	0	+2	+3	+4	-1	0
Gainesville, FL	-3	-3	-2	-8	-8	-3
Marianna, FL	+3	-1	-2	-3	-6	-1
Quincy, FL	+2	+10	0	-8	-6	-8
Jay, FL	-10	-7	-10	-14	-14	-8
Fairhope, AL	0	-2	+1	-8	-8	-3
Baton Rouge, LA	-2	-9	-9	-2	-16	-9
Mean	-3	-2	-2	-6	-8	-4
			UPPER AND CENTRAL SOUTH			
Athens, GA	+1	+4	+4	-6	-7	+3
Clemson, SC	0	+4	0	-8	-7	-1
Mean	+1	+4	+2	-7	-7	+1
			DELTA AND WEST			
Stoneville, MS (A)	-1	+2	0	+2	-1	+1
Stoneville, MS (B)	-4	-1	0	-4	-5	-5
Pine Bluff, AR	-4	-1	0	-8	-3	-4
Rohwer, AR	-4	+6	+2	-4	-4	-1
St. Joseph, LA	-5	+1	+5	-4	-5	-6
Bossier City, LA	-1	+1	-4	-4	-2	-3
Crowley, LA	-7	-10	-10	0	-17	-10
Beaumont, TX	+1	+1	-3	-3	+2	-1
Mean	-3	0	-1	-3	-4	-4

Table 47 - Plant height for the strains in Uniform Group VII, 1982

Location	Braxton	Wright	F76-8757	D77-6103	F77-1576	N77-940
			EAST COAST			
Plymouth, NC	47	44	46	45	47	42
Clinton, NC	52	45	44	47	49	39
Florence, SC (A)	41	37	42	37	44	37
Florence, SC (B)	36	35	37	39	37	34
Hartsville, SC (A)	41	39	42	41	43	37
Hartsville, SC (B)	41	42	41	44	47	37
Mean	43	40	42	42	45	38
			SOUTHEAST			
Blackville, SC	42	36	44	39	46	36
Tallassee, AL	41	41	43	42	45	39
Tifton, GA	35	32	28	30	41	20
Gainesville, FL	29	33	31	33	37	28
Marianna, FL	40	37	38	41	41	36
*Quincy, FL	28	26	31	32	31	23
Jay, FL	34	30	32	32	35	28
Fairhope, AL	39	38	41	40	43	39
Poplarville, MS	38	33	38	35	40	33
Baton Rouge, LA	28	36	38	34	33	30
Mean	36	35	37	36	40	32
			UPPER AND CENTRAL SOUTH			
Athens, GA	45	44	45	44	44	36
Calhoun, GA	40	40	39	40	46	35
Clemson, SC	40	42	41	44	41	37
Mean	42	42	42	43	44	36
			DELTA AND WEST			
Stoneville, MS (A)	49	45	49	44	52	44
Stoneville, MS (B)	47	42	47	43	47	40
Pine Bluff, AR	41	40	43	44	42	38
Stuttgart, AR	42	41	43	43	41	44
Rohwer, AR	48	44	45	46	43	41
St. Joseph, LA	53	49	51	42	57	43
Bossier City, LA	40	37	39	34	45	35
Crowley, LA	39	43	43	42	46	41
Beaumont, TX	40	41	40	37	44	32
Mean	44	42	44	42	46	40

*Not included in mean.

Table 47 - (continued)

Location	D76-9454	F77-1880	F77-7142	D79-10458	Ga78-2708	F77-2122
			EAST COAST			
Plymouth, NC	44	45	51	44	42	50
Clinton, NC	47	45	50	41	42	50
Florence, SC (A)	40	40	38	37	36	41
Florence, SC (B)	36	38	38	33	35	38
Hartsville, SC (A)	39	39	42	38	38	43
Hartsville, SC (B)	39	41	49	38	39	42
Mean	41	41	45	39	39	44
			SOUTHEAST			
Blackville, SC	39	42	41	37	39	41
Tallassee, AL	40	42	48	36	39	42
Tifton, GA	30	36	40	30	27	32
Gainesville, FL	27	32	38	28	30	31
Marianna, FL	37	37	39	35	39	38
Quincy, FL	24	28	34	23	23	25
Jay, FL	31	33	38	24	31	33
Fairhope, AL	39	40	42	32	38	41
Poplarville, MS	34	34	39	31	36	36
Baton Rouge, LA	32	33	38	30	32	37
Mean	34	37	40	31	35	37
			UPPER AND CENTRAL SOUTH			
Athens, GA	44	41	50	38	38	43
Calhoun, GA	40	44	46	34	40	40
Clemson, SC	41	40	49	37	39	42
Mean	42	42	48	36	39	42
			DELTA AND WEST			
Stoneville, MS (A)	51	44	53	41	43	51
Stoneville, MS (B)	43	42	45	39	47	49
Pine Bluff, AR	40	40	45	36	36	42
Stuttgart, AR	41	43	42	38	38	40
Rohwer, AR	43	43	50	40	45	44
St. Joseph, LA	47	43	56	41	48	51
Bossier City, LA	37	37	47	35	40	38
Crowley, LA	41	43	46	39	45	46
Beaumont, TX	38	38	44	35	38	41
Mean	42	41	48	38	42	45

Table 48 - Lodging scores for the strains in Uniform Group VII, 1982

Location	Braxton	Wright	F76-8757	D77-6103	F77-1576	N77-940
			EAST COAST			
Plymouth, NC	3.0	4.0	3.0	4.0	4.0	4.0
Kinston, NC	2.0	3.0	3.0	3.0	3.0	2.0
Clinton, NC	2.7	4.3	3.7	3.7	4.0	3.0
Florence, SC (A)	3.0	3.0	3.0	3.0	4.0	2.0
Florence, SC (B)	2.0	2.0	2.0	2.0	3.0	1.0
Hartsville, SC (A)	2.0	2.3	2.3	2.8	3.0	2.3
Hartsville, SC (B)	1.8	2.5	2.0	2.8	2.8	1.2
			SOUTHEAST			
Blackville, SC	1.0	2.0	2.0	3.0	3.0	1.0
Tallassee, AL	1.3	1.3	2.0	1.3	2.0	1.7
Tifton, GA	1.3	1.0	1.0	1.3	1.5	1.0
Gainesville, FL	1.0	1.3	1.3	1.3	1.7	1.0
Marianna, FL	2.0	3.0	3.0	3.0	3.0	3.0
*Quincy, FL	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	2.0	2.0	2.0	3.0	2.0	2.0
Fairhope, AL	1.0	1.0	1.0	1.0	2.0	1.0
Baton Rouge, LA	2.3	3.0	2.7	2.3	3.0	2.0
			UPPER AND CENTRAL SOUTH			
Athens, GA	2.3	3.5	3.0	3.0	3.0	2.3
Calhoun, GA	1.5	1.8	1.7	1.7	2.2	1.3
Clemson, SC	1.0	2.7	1.0	2.0	1.7	1.0
			DELTA AND WEST			
Stoneville, MS (A)	2.3	3.3	3.0	3.0	3.0	3.3
Stoneville, MS (B)	3.0	3.7	3.3	3.0	3.3	3.0
Pine Bluff, AR	2.0	4.0	2.0	3.0	3.0	2.0
Stuttgart, AR	2.7	4.0	3.6	4.1	4.2	4.4
Rohwer, AR	2.0	2.7	2.0	2.3	2.0	3.3
St. Joseph, LA	2.1	3.0	2.7	3.3	2.9	1.7
Bossier City, LA	1.1	1.3	1.3	2.0	1.6	1.0
Crowley, LA	1.0	3.0	2.3	2.3	3.0	1.3
Beaumont, TX	2.1	2.6	2.1	1.8	2.0	1.8

*Not included in mean.

Table 48 - (continued)

Location	D76-9454	F77-1880	F77-7142	D79-10458	Ga78-2708	F77-2122
			EAST COAST			
Plymouth, NC	3.3	4.3	4.0	3.7	3.3	3.6
Kinston, NC	3.0	3.0	3.0	3.0	3.0	3.0
Clinton, NC	3.3	4.0	3.7	4.0	3.7	4.0
Florence, SC (A)	3.0	3.0	3.0	4.0	3.0	4.0
Florence, SC (B)	2.0	3.0	2.0	3.0	2.0	3.0
Hartsville, SC (A)	2.7	2.7	2.5	3.2	3.0	3.5
Hartsville, SC (B)	2.2	2.5	2.8	2.8	2.0	2.8
			SOUTHEAST			
Blackville, SC	1.0	2.0	3.0	3.0	2.0	3.0
Tallassee, AL	1.3	2.0	2.0	2.0	1.0	2.0
Tifton, GA	1.0	1.3	1.3	1.0	1.0	1.3
Gainesville, FL	1.0	1.0	2.0	1.0	1.0	1.3
Marianna, FL	2.0	3.0	3.0	4.0	3.0	3.0
Quincy, FL	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	3.0	3.0	3.0	3.0	2.0	3.0
Fairhope, AL	1.0	1.0	2.0	2.0	1.0	1.0
Baton Rouge, LA	1.7	3.3	3.3	2.3	2.3	2.3
			UPPER AND CENTRAL SOUTH			
Athens, GA	2.0	3.5	2.3	3.3	2.5	3.3
Calhoun, GA	1.5	2.0	1.8	1.8	1.7	2.2
Clemson, SC	1.0	1.7	2.3	1.3	1.3	2.0
			DELTA AND WEST			
Stoneville, MS (A)	2.3	4.0	3.0	3.0	3.0	3.0
Stoneville, MS (B)	3.0	3.7	3.3	3.0	3.0	3.3
Pine Bluff, AR	2.0	2.0	2.0	3.0	3.0	2.0
Stuttgart, AR	2.6	4.0	4.1	4.0	3.0	4.0
Rohwer, AR	2.0	2.0	2.7	3.7	2.0	2.7
St. Joseph, LA	2.2	2.8	2.9	3.0	2.4	3.0
Bossier City, LA	1.1	1.8	1.3	1.5	1.3	1.6
Crowley, LA	1.3	3.0	3.0	2.7	2.7	2.2
Beaumont, TX	1.2	3.7	2.9	2.2	1.5	2.3

Table 49 - Seed quality scores for the strains in Uniform Group VII, 1982

Location	Braxton	Wright	F76-8757	D77-6103	F77-1576	N77-940
			EAST COAST			
Plymouth, NC	1.5	1.5	1.5	1.5	1.5	1.5
Kinston, NC	2.5	2.5	2.5	3.0	2.0	2.0
Clinton, NC	2.5	2.5	2.0	2.5	1.5	2.0
			SOUTHEAST			
Tallassee, AL	2.0	1.5	1.5	1.5	1.5	1.5
Tifton, GA	2.5	1.5	1.5	2.0	1.5	2.0
Gainesville, FL	1.3	1.3	1.3	2.3	1.0	1.7
*Quincy, FL	2.0	3.0	2.0	2.0	2.0	2.0
Jay, FL	2.0	2.0	2.0	2.0	2.0	2.0
Baton Rouge, LA	2.0	1.0	1.3	1.3	1.0	1.0
			UPPER AND CENTRAL SOUTH			
Athens, GA	3.3	2.5	3.0	2.5	3.0	3.5
Calhoun, GA	1.7	1.5	1.5	1.7	1.5	1.8
			DELTA AND WEST			
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Pine Bluff, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stuttgart, AR	1.0	1.8	1.7	2.0	1.2	1.2
Rohwer, AR	2.5	2.2	1.7	2.0	1.8	1.7
St. Joseph, LA	2.6	2.2	2.2	2.6	2.1	2.1
Bossier City, LA	3.3	3.6	3.5	4.0	3.1	3.1
Crowley, LA	3.0	3.0	3.0	3.0	2.8	2.3
Beaumont, TX	2.2	1.7	1.8	1.8	1.8	1.8

Table 49 - (continued)

Location	D76-9454	F77-1880	F77-7142	D79-10458	Ga78-2708	F77-2122
			EAST COAST			
Plymouth, NC	1.5	1.5	1.5	1.5	1.5	1.5
Kinston, NC	2.5	2.5	2.5	3.0	3.0	3.0
Clinton, NC	2.0	2.0	2.0	2.5	2.0	2.5
			SOUTHEAST			
Tallassee, AL	1.5	1.5	1.5	1.5	1.5	1.5
Tifton, GA	1.5	1.5	1.5	1.5	1.5	1.5
Gainesville, FL	3.0	1.0	1.0	2.0	1.7	1.0
Quincy, FL	3.0	2.0	2.0	2.0	3.0	2.0
Jay, FL	2.0	2.0	2.0	2.0	2.0	2.0
Baton Rouge, LA	1.7	1.7	1.3	1.3	2.0	1.0
			UPPER AND CENTRAL SOUTH			
Athens, GA	3.3	3.0	3.3	3.5	3.0	3.3
Calhoun, GA	1.7	1.5	1.5	1.8	1.5	1.7
			DELTA AND WEST			
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Pine Bluff, AR	1.0	1.0	1.0	2.0	1.0	1.0
Stuttgart, AR	1.0	1.0	1.0	2.0	1.2	1.5
Rohwer, AR	1.8	1.8	2.2	2.8	2.0	1.8
St. Joseph, LA	2.2	2.0	2.4	2.3	2.2	2.2
Bossier City, LA	4.3	3.3	4.1	3.0	4.3	3.1
Crowley, LA	3.0	2.3	2.3	3.0	2.0	3.0
Beaumont, TX	2.7	1.8	2.0	2.2	2.0	2.3

PRELIMINARY GROUP VII

1982

Nine Preliminary Group VII nurseries were planted which included 34 experimental strains along with Braxton and Centennial. Table 50 lists the strains along with parentage, and Table 51 gives a general summary of performance. Data for individual locations are reported in Tables 53 through 56.

Braxton had a mean seed yield of 38.2 bushels per acre. The strain having the highest average yield was La74-4656, with a mean yield of 39.9 bushels per acre. There were six strains having an average yield equal to or slightly above Braxton.

The eight "D" lines had been selected for resistance to foliar-feeding insects. All ranked below Braxton in seed yield. However, two have good resistance to both species of root-knot nematodes and to SCN race 3. All have good resistance to M. incognita.

Eight strains appear to have a good combination of resistance to M. incognita, M. arenaria, and SCN race 3. There was a total of 13 strains resistant to SCN race 3. A total of 29 strains received low ratings for M. incognita, and 16 strains had low ratings for M. arenaria. Twelve strains received low ratings for both.

Strains which appear to merit further evaluation in Uniform Group VII are F79-4833, F80-3508, La74-4656, N80-777, and N80-2282.

Table 50 - Parentage of strains in Preliminary Group VII, 1982

	Variety or strain	Parentage	Generation composited
1.	Braxton		
2.	Centennial		
3.	D79-3749	[Forrest(2) X PI 229358] X [Pickett 71(2) X (Dare(2) X PI 96983)]	F_5
4.	D79-10163	Forrest X D75-10169	F_5
5.	D79-10178	Forrest X D75-10169	F_5
6.	D79-10185	Forrest X D75-10169	F_5
7.	D79-10190	Forrest X D75-10169	F_5
8.	D79-10262	Forrest X D75-10169	F_5
9.	D79-10381	Forrest X D75-10169	F_5
10.	D79-10390	Forrest X D75-10169	F_5
11.	F79-3986	Centennial X D71-9112	F_5
12.	F79-4003	Centennial X D71-9112	F_5
13.	F79-4246	Centennial X D71-9112	F_5
14.	F79-4696	Centennial X [Forrest X (Cobb X D68-216)]	F_8
15.	F79-4821	Centennial X [Forrest X (Cobb X D68-216)]	F_8
16.	F79-4833	Centennial X [Forrest X (Cobb X D68-216)]	F_8
17.	F80-3508	Forrest(2) X (Cobb X D68-216)	F_7
18.	F80-3513	Forrest(2) X (Cobb X D68-216)	F_7
19.	Ga78-673	Forrest X Pickett 71	F_4
20.	Ga78-684	Forrest X Pickett 71	F_4
21.	Ga78-2414	Hutton X Ga70-276	F_4
22.	Ga79-580	Tracy X Hutton	F_6
23.	GaT78-14	Braxton X Centennial	F_5
24.	GaT78-63	Braxton X Centennial	F_5
25.	GaT78-89	Braxton X Centennial	F_5
26.	GaT79-150	N68-358 X Forrest	F_5
27.	La74-4656	Bragg X Pickett 71	F_{11}
28.	N80-556	N72-3037 X (N70-1501 X Ransom)	F_6
29.	N80-568	N72-3037 X (N70-1501 X Ransom)	F_6
30.	N80-724	Hutton X (Forrest X Lee 74)	F_6
31.	N80-777	N70-1501 X (N72-40 X N73-538)	F_6
32.	N80-1363	D72-8126 X N72-3189	F_6
33.	N80-1739	D72-8126 X N72-3189	F_6
34.	N80-1792	N72-3194 X (D71-9203 X Ransom)	F_6
35.	N80-1798	N72-3194 X (D71-9203 X Ransom)	F_6
36.	N80-2282	Forrest(2) X 4-74-6-3	F_6

Table 51 - General summary of performance for the strains in Preliminary Group VII, 1982

Strain	Seed yield	Maturity index	Ht.	Percent Oil	Percent Protein	BP	M. incognita	M. arenaria	SCN race 3
Braxton	38.3	10-23	41	17.9	42.3	R	2.0	3.0	S
Centennial	40.5	-6	38	18.1	42.4	R	0.5	4.5	R
D79-3749	27.5	+6	39	17.5	41.3	R	1.5	4.5	S
D79-10163	29.8	+3	38	15.6	43.6	R	2.0	1.2	S
D79-10178	31.8	0	45	16.8	43.9	R	1.0	3.5	S
D79-10185	33.7	+5	41	18.2	40.1	R	0.5	1.5	R
D79-10190	34.7	+2	43	17.4	41.9	R	1.0	1.5	Seg
D79-10262	32.2	+3	41	16.7	43.8	R	2.0	2.0	Seg
D79-10381	35.8	+2	42	17.7	40.9	R	2.5	2.0	R
D79-10390	32.8	0	44	17.7	41.7	R	2.0	2.0	S
F79-3986	32.9	+1	41	17.4	41.2	R	2.5	1.0	S
F79-4003	35.6	0	42	17.6	42.3	R	0.5	1.0	R
F79-4246	36.6	0	38	17.6	41.9	R	0.0	3.0	R
F79-4696	39.5	0	40	18.1	41.7	R	0.0	4.5	R
F79-4821	35.7	-2	39	17.9	41.6	R	0.0	5.0	R
F79-4833	38.7	+2	39	17.7	41.3	R	0.0	1.8	R
F80-3508	36.5	+2	43	19.2	38.9	R	0.5	2.0	R
F80-3513	34.6	0	41	18.0	41.4	R	0.5	5.0	R
Ga78-673	35.8	-8	36	17.9	41.7	R	0.5	1.8	R
Ga78-684	36.6	-6	29	18.1	41.4	R	0.5	3.0	R
Ga78-2414	35.0	-4	36	18.3	43.0	R	1.5	5.0	S
Ga79-580	38.2	+2	49	16.8	42.2	R	1.5	5.0	S
GaT78-14	32.6	0	39	18.2	41.7	R	1.5	2.0	S
GaT78-63	34.2	0	39	18.6	41.9	R	1.5	4.5	S
GaT78-89	37.2	-2	37	18.7	41.5	R	2.0	2.0[h]	S
GaT79-150	37.3	-6	35	18.4	41.7	R	3.5	5.0	R
La74-4656	38.2	-3	35	17.8	42.6	R	2.5	1.7	R
N80-556	36.9	-8	30	19.8	40.9	R	3.0	5.0	S
N80-568	34.8	-11	32	19.6	41.6	R	2.0	2.5	S
N80-724	33.3	-12	35	19.1	42.9	R	2.0	3.0	S
N80-777	38.6	-10	36	18.7	41.6	R	4.0	5.0	S
N80-1363	39.4	-7	34	18.3	43.8	R	2.0	5.0	S
N80-1739	38.6	-7	35	19.1	41.0	R	4.0	5.0	S
N80-1792	33.2	-10	34	18.8	41.0	R	4.5	4.5	S
N80-1798	35.3	-7	34	19.1	40.4	R	1.5	4.5	S
N80-2282	41.4	-4	38	17.3	43.1	R	3.0[h]	2.5	R

[h] Appears to be segregating.

Table 52 - Seed yield, in bushels per acre, for the strains in Preliminary Group VII, 1982

Strain	Clinton, NC	Black-ville, SC	Tifton, GA	Tallas-see, AL	Jay, FL	Baton Rouge, LA	Stone-ville, MS(A)	Stone-ville, MS(B)	*Beau-mont, TX
Braxton	38.3	28.0	60.6	33.4	32.5	38.4	31.6	43.9	37.0
Centennial	43.8	25.3	53.6	28.1	41.5+	45.9	42.5+	43.1	25.6
D79-3749	26.5	15.3	36.5-	29.5	27.5	22.0-	27.1	35.4-	28.6
D79-10163	34.6	21.5	47.0-	22.6	30.5	19.0-	32.0	31.1-	18.5
D79-10178	37.3	21.7	47.7-	27.1	25.0	21.5-	36.5	37.5	35.3
D79-10185	37.0	20.7	49.1-	22.0	38.5	24.9	39.4+	37.8	38.1
D79-10190	37.4	23.1	52.6-	25.3	35.5	28.1	36.5	39.4	31.8
D79-10262	32.1	31.3	47.5-	24.9	34.0	15.9-	34.0	38.1	36.8
D79-10381	26.4	22.0	49.7-	26.2	39.0	46.9	38.4+	38.0	22.1
D79-10390	39.8	22.4	46.9-	17.5	29.5	39.3	33.1	33.8-	33.8
F79-3986	43.9	18.0	45.2-	21.9	28.5	42.9	32.1	30.8-	32.0
F79-4003	36.9	22.5	51.5-	23.6	40.0	38.1	34.9	37.4	34.1
F79-4246	40.1	22.8	45.9-	27.8	42.0+	38.3	35.7	40.2	28.6
F79-4696	35.5	26.2	53.5	26.0	44.5+	48.0	41.6+	40.4	29.9
F79-4821	35.7	19.2	53.4	28.7	43.5+	31.0	34.7	39.7	35.4
F79-4833	41.8	26.6	55.5	25.3	38.0	45.7	38.6+	38.0	25.8
F80-3508	36.9	19.4	52.9-	23.3	38.0	40.3	39.2+	41.8	40.8
F80-3513	35.8	22.3	54.4	26.3	39.0	30.7	34.1	34.1-	40.0
Ga78-673	35.5	17.9	50.5-	24.4	37.5	39.6	42.9+	38.3	38.5
Ga78-684	40.2	26.2	53.7	29.7	33.0	35.4	39.5+	35.3-	29.7
Ga78-2414	40.6	15.5	58.4	26.2	31.0	28.2	39.1+	41.2	14.2
Ga79-580	40.4	29.1	54.0	28.7	27.0	37.5	43.8+	44.9	37.4
GaT78-14	32.8	27.2	56.7	20.7	23.0-	32.4	31.9	36.2-	34.7
GaT78-63	31.3	24.5	50.8-	28.3	28.0	36.5	34.2	39.8	29.6
GaT78-89	38.6	28.4	58.5	24.6	30.5	36.5	42.0+	38.8	19.2
GaT79-150	33.8	21.6	59.7	24.8	41.5+	34.1	43.9+	38.9	14.9
La74-4656	43.4	28.1	49.5-	32.6	35.0	32.9	41.5+	42.2	47.1
N80-556	40.3	22.6	59.4	33.5	28.5	26.9	42.5+	41.7	28.7
N80-568	42.3	19.0	50.7-	33.5	25.5	29.0	35.1	43.6	37.1
N80-724	40.8	21.3	49.4-	31.1	31.0	13.6-	37.0	41.9	28.5
N80-777	44.6	26.6	59.0	28.2	32.0	28.1	43.0+	47.4	33.1
N80-1363	40.8	24.0	56.1	35.6	30.5	45.8	34.6	47.4	40.1
N80-1739	42.6	24.6	51.2-	37.2	37.5	34.4	39.4+	41.8	34.7
N80-1792	40.6	22.3	53.4	23.6	27.0	19.2-	35.7	44.1	35.7
N80-1798	44.1	25.6	52.4	18.3	26.0	32.7	40.1+	43.4	21.7
N80-2282	49.0	34.1	52.3-	25.8	42.5+	45.6	41.0+	41.1	29.8
L.S.D.(.05)	N.S.	N.S.	7.2	N.S.	7.6	14.4	6.5	6.9	12.6
C.V.	16%	19%	7%	21%	11%	21%	9%	9%	20%

*Not included in mean.

Table 53 - Oil percentages for the strains in Preliminary Group VII, 1982

Strain	Clinton, NC	Jay, FL	Stoneville, MS (B)	Beaumont, TX
Braxton	18.0	18.0	16.9	18.6
Centennial	17.6	19.0	16.7	19.0
D79-3749	17.1	18.5	17.4	17.1
D79-10163	15.5	16.3	14.6	15.9
D79-10178	16.8	17.9	15.1	17.4
D79-10185	18.3	19.4	17.0	18.2
D79-10190	17.9	17.8	15.9	17.8
D79-10262	17.0	17.1	15.3	17.2
D79-10381	17.4	17.7	16.9	18.9
D79-10390	17.7	18.3	16.5	18.2
F79-3986	17.8	17.4	15.4	19.0
F79-4003	17.7	18.7	16.1	17.7
F79-4246	18.4	18.4	16.0	17.6
F79-4696	18.1	18.5	16.7	19.1
F79-4821	17.9	18.9	16.5	18.2
F79-4833	18.2	18.0	16.3	18.4
F80-3508	19.1	20.1	18.4	19.2
F80-3513	18.4	19.3	16.2	18.0
Ga78-673	17.4	19.4	16.1	18.8
Ga78-684	17.4	18.5	16.7	19.6
Ga78-2414	17.0	18.6	16.7	20.9
Ga79-580	16.5	18.2	15.2	17.3
GaT78-14	17.9	18.9	16.5	19.4
GaT78-63	19.0	18.5	17.0	19.7
GaT78-89	18.6	19.2	17.0	19.9
GaT79-150	17.1	18.9	17.6	19.8
La74-4656	17.2	19.4	15.8	18.6
N80-556	19.6	20.3	18.5	20.8
N80-568	19.3	20.2	18.3	20.4
N80-724	17.9	19.9	17.6	20.8
N80-777	19.0	19.6	17.2	19.0
N80-1363	16.9	18.7	17.6	20.0
N80-1739	17.9	20.3	18.8	19.3
N80-1792	18.2	19.6	17.4	19.8
N80-1798	18.5	20.0	17.9	19.8
N80-2282	18.0	17.5	16.5	17.2

Table 54 - Protein percentages for the strains in Preliminary Group VII, 1982

Strain	Clinton, NC	Jay, FL	Stoneville, MS (B)	Beaumont, TX
Braxton	43.1	41.2	42.7	42.0
Centennial	41.8	41.3	43.0	43.5
D79-3749	41.7	40.6	40.6	42.1
D79-10163	43.8	42.2	45.3	43.0
D79-10178	44.1	42.8	45.7	43.0
D79-10185	39.5	38.6	41.4	41.0
D79-10190	41.0	40.9	42.9	42.1
D79-10262	43.0	42.6	44.8	44.9
D79-10381	39.3	42.1	41.5	40.5
D79-10390	41.7	39.4	43.7	41.8
F79-3986	39.9	41.9	43.5	39.4
F79-4003	40.9	41.4	43.2	43.6
F79-4246	42.0	38.5	43.8	43.3
F79-4696	40.9	40.5	42.2	43.0
F79-4821	40.7	40.5	42.3	43.0
F79-4833	41.5	40.9	42.3	40.3
F80-3508	37.9	37.8	39.1	40.9
F80-3513	40.4	39.6	42.4	43.2
Ga78-673	41.6	39.8	43.1	42.4
Ga78-684	40.4	40.6	42.1	42.6
Ga78-2414	42.9	43.1	43.8	42.2
Ga79-580	42.0	41.0	42.1	43.5
GaT78-14	40.5	41.5	43.3	41.4
GaT78-63	41.0	40.9	43.5	42.3
GaT78-89	41.4	40.7	42.7	41.1
GaT79-150	42.5	40.6	41.2	42.3
La74-4656	42.7	41.6	43.4	42.8
N80-556	40.8	41.2	41.5	39.9
N80-568	41.8	41.3	42.5	40.9
N80-724	42.3	42.0	44.0	43.3
N80-777	40.6	40.6	42.5	42.5
N80-1363	43.8	44.0	43.5	43.7
N80-1739	41.3	40.9	40.0	41.7
N80-1792	41.2	41.0	42.0	39.8
N80-1798	39.1	40.3	41.7	40.4
N80-2282	41.6	42.2	43.4	45.1

Table 55 - Plant height for the strains in Preliminary Group VII, 1982

Strain	Clinton, NC	Black-ville, SC	Tifton, GA	Tallas-see, AL	Jay, FL	Baton Rouge, LA	Stone-ville, MS (A)	Stone-ville, MS (B)	Beau-mont, TX
Braxton	48	43	39	40	31	38	47	48	36
Centennial	44	41	36	39	29	34	45	44	30
D79-3749	42	44	30	48	29	38	38	43	43
D79-10163	42	38	37	40	31	35	42	43	32
D79-10178	49	49	47	48	32	41	44	48	47
D79-10185	44	43	39	48	31	40	44	43	36
D79-10190	50	44	42	45	33	41	49	44	43
D79-10262	45	45	43	45	29	33	50	46	37
D79-10381	42	51	48	44	31	38	47	42	38
D79-10390	45	48	46	47	33	39	48	49	45
F79-3986	45	45	42	41	32	37	46	45	35
F79-4003	44	43	42	40	37	40	46	48	42
F79-4246	38	38	38	38	33	34	47	45	34
F79-4696	44	39	39	41	34	47	40	42	38
F79-4821	42	43	40	40	33	35	42	40	40
F79-4833	46	41	42	39	33	40	42	41	29
F80-3508	49	42	40	41	35	38	47	47	47
F80-3513	50	38	37	44	33	34	49	45	41
Ga78-673	41	41	30	39	27	32	42	41	31
Ga78-684	35	34	20	32	23	23	37	34	22
Ga78-2414	44	30	34	44	27	31	42	43	31
Ga79-580	47	51	48	52	37	51	54	48	49
GaT78-14	47	47	35	38	29	35	47	41	35
GaT78-63	37	42	38	38	32	36	47	48	37
GaT78-89	41	40	36	35	34	33	44	42	32
GaT79-150	37	38	36	38	28	30	44	40	25
La74-4656	40	34	26	38	27	33	40	41	38
N80-556	35	33	24	32	23	30	37	34	26
N80-568	38	34	22	36	29	26	40	37	28
N80-724	42	35	32	36	31	33	35	39	29
N80-777	40	40	32	40	29	30	40	42	33
N80-1363	43	36	26	39	27	33	38	42	24
N80-1739	46	32	30	34	27	34	41	39	30
N80-1792	39	34	30	36	27	30	41	37	28
N80-1798	36	33	28	33	27	33	40	40	32
N80-2282	45	41	29	41	29	33	45	45	34

Table 56 - Seed quality scores for the strains in Preliminary Group VII, 1982

Strain	Clinton, NC	Tifton, GA	Tallas-see, AL	Jay, FL	Baton Rouge, LA	Stone-ville, MS(A)	Stone-ville, MS(B)	Beau-mont, TX
Braxton	3.0	2.5	1.5	3.0	3.0	2.0	2.0	1.8
Centennial	3.0	2.0	1.5	2.0	1.5	2.0	2.0	2.3
D79-3749	2.0	2.0	1.5	2.0	3.0	2.0	2.0	2.3
D79-10163	2.0	1.5	1.5	2.0	2.5	2.0	2.0	1.5
D79-10178	2.0	1.5	1.5	2.0	2.0	2.0	2.0	2.5
D79-10185	1.5	1.5	1.5	2.0	2.0	2.0	2.0	1.5
D79-10190	2.0	2.0	1.5	2.0	3.5	2.0	2.0	1.8
D79-10262	2.0	2.0	1.5	2.0	2.5	2.0	2.0	1.8
D79-10381	1.5	2.0	1.5	2.0	2.5	2.0	2.0	2.0
D79-10390	2.0	1.5	1.5	2.0	1.0	2.0	2.0	2.0
F79-3986	2.0	2.0	1.5	2.0	1.5	2.0	2.0	1.8
F79-4003	2.5	2.0	1.5	2.0	2.0	2.0	2.0	2.3
F79-4246	2.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0
F79-4696	2.5	1.5	1.5	2.0	3.0	2.0	2.0	2.3
F79-4821	2.0	1.5	1.5	2.0	2.5	2.0	2.0	2.3
F79-4833	2.0	1.5	1.5	2.0	3.0	2.0	2.0	1.5
F80-3508	2.0	1.5	1.5	2.0	1.5	2.0	2.0	1.8
F80-3513	2.0	2.0	2.0	2.0	1.5	2.0	2.0	2.0
Ga78-673	2.0	1.5	1.5	2.0	2.0	2.0	2.0	1.5
Ga78-684	2.0	1.5	1.5	2.0	2.5	2.0	2.0	2.0
Ga78-2414	3.0	2.0	1.5	2.0	3.0	2.0	2.0	3.0
Ga79-580	2.0	2.0	1.5	3.0	4.5	2.0	2.0	2.8
GaT78-14	2.0	2.5	1.5	3.0	2.5	2.0	2.0	2.0
GaT78-63	2.0	2.0	1.5	2.0	2.0	2.0	2.0	2.5
GaT78-89	2.5	2.0	1.5	2.0	4.0	2.0	2.0	2.3
GaT79-150	3.0	1.5	1.5	2.0	2.5	2.0	2.0	2.8
La74-4656	3.0	2.0	1.5	2.0	2.0	2.0	2.0	2.0
N80-556	2.0	1.5	1.5	3.0	2.5	2.0	2.0	2.0
N80-568	2.5	1.5	1.5	3.0	2.0	2.0	2.0	2.3
N80-724	3.0	3.0	2.0	4.0	4.0	2.0	2.0	2.8
N80-777	2.0	1.5	1.5	2.0	2.5	2.0	2.0	1.8
N80-1363	2.5	2.0	1.5	2.0	2.0	2.0	2.0	1.5
N80-1739	2.5	2.5	1.5	3.0	3.0	2.0	2.0	2.0
N80-1792	2.5	2.0	1.5	3.0	4.0	2.0	2.0	2.5
N80-1798	3.0	1.5	1.5	2.0	4.0	2.0	2.0	3.2
N80-2282	2.0	1.5	1.5	2.0	1.5	2.0	2.0	2.5

UNIFORM GROUP VIII

1982

	Variety or strain	Parentage	Generation composited
1.	Hutton	F55-822 X (Roanoke X CNS-4)	F_6
2.	Cobb	F57-735 X D58-3358	F_6
3.	Foster	Centennial X [Forrest X (Cobb X D68-216)]	F_5
4.	N76-1507	N70-2173 X Hutton	F_5
5.	F77-1790	Centennial X [Forrest X (Cobb X D68-216)]	F_6
6.	Kirby (F77-1797)	Centennial X [Forrest X (Cobb X D68-216)]	F_6
7.	N77-1602	Hutton X N70-2205	F_6
8.	Coker 368	Co71-211 X Centennial	F_5
9.	F77-7450	Forrest X (Cobb X D68-216)	F_5
10.	Co79-760	Co73-473 X Centennial	F_5
11.	D79-10496	J74-39 X D75-10169	F_5
12.	Ga78-2488	Hutton X Ga70-276	F_4

Background of breeding lines used as parents:

F55-822 is the parent line of Bragg.

F57-735 is a selection from D49-772 X Improved Pelican which was grown in Uniform Group VIII.

D58-3358 is a bacterial pustule-resistant selection from Jackson(4) X D49-2491.

D68-216 is a selection from Dyer X Bragg.

N70-2205 is a selection from Hampton X Ransom.

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

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

J74-39 is of the same parentage as Bedford but of later maturity.

Uniform Group VIII nurseries were planted at 19 locations. Additional plantings were made for evaluating lines for reaction to the two root-knot nematodes, Meloidogyne incognita and Meloidogyne arenaria. Plantings were also made for evaluating the strains against SCN race 3. Table 57 summarizes seed yield, general characteristics, and reaction to nematodes and diseases. Data from individual locations are summarized in Tables 58 through 63. The plantings at Jay, Florida were on soil infested with SCN race 3.

The strain F77-1797 has been released as Kirby. Kirby has resistance to the two root-knot nematodes, M. incognita and M. arenaria, along with resistance to SCN race 3. This multiple nematode resistance is a much needed combination for west Florida and south Alabama. Its three-year mean seed yield is greater than that for Hutton, Cobb, or Foster.

The strains, N76-1507, F77-1790, and N77-1602, have also been evaluated 3 years. The three-year mean seed yields are very similar to that for Kirby. However, with the release of Kirby, there does not appear to be any need for further evaluation of these strains.

The two strains, Coker 368 and F77-7450, have been evaluated two years. Both strains have yielded well, are resistant to SCN race 3 and to M. incognita, but are susceptible to M. arenaria.

The three strains, Co79-760, D79-10496, and Ga78-2488, were evaluated one year. Co79-760 yielded extremely well. D79-10496 averaged lower in yield than the check variety. All three received low ratings for M. incognita and susceptible ratings for M. arenaria. Co79-760 and D79-10496 were considered resistant to SCN race 3. D79-10496 had been selected for resistance to foliar-feeding insects.

Table 57 - General summary of performance for the strains in Uniform Group VIII, 1982

Location	No. of locations	Hutton	Cobb	Foster	N76-1507	F77-1790	F77-1797
Seed yield - 1982	17	33.3	33.8	36.3	39.9	38.9	38.5
1981-82		32.8	32.6	34.5	37.9	36.8	37.0
1980-82		32.1	32.5	34.6	38.0	35.6	36.5
Oil Content - 1982		17.8	19.5	19.5	20.0	18.8	18.7
1981-82		18.2	19.7	19.5	20.1	19.1	19.1
1980-82		18.6	19.9	19.7	20.2	19.2	19.3
Protein Content - 1982		42.7	38.6	39.3	39.5	41.7	40.4
1981-82		43.9	40.2	40.8	40.3	42.7	41.6
1980-82		44.2	40.9	41.3	41.4	43.3	42.3
Seed size		15.7	13.1	11.0	15.5	13.1	12.8
Maturity index		10-28	+5	-3	-2	+2	+1
Height		36	39	36	33	39	36
Seed quality		1.9	1.8	1.8	2.1	1.9	1.9
Bacterial pustule		R	R	R	R	R	R
M. incognita		1.5	1.5	1.5	3.0	1.0	1.5
M. arenaria		5.0	5.0	5.0	5.0	3.5	2.0
SCN race 3		S	S	R	S	R	R
Percent mottled seed		1	0	0	0	0	0
Flower color		P	W	P	P	P	P
Pubescence color		T	G	G	T	T	T
Pod wall color		T	T	T	T	T	T

Table 57 - (continued)

Location	N77-1602	Coker 368	F77-7450	Co79-760	D79-10496	Ga78-2488
Seed yield - 1982	38.4	39.9	36.2	42.0	33.3	36.5
1981-82	37.8	38.0	36.2			
1980-82	36.2					
Oil Content - 1982	18.8	19.7	18.7	20.3	18.4	18.9
1981-82	19.2	19.6	19.1			
1980-82	19.5					
Protein Content - 1982	41.8	39.4	40.8	40.1	41.6	41.4
1981-82	42.5	40.8	41.7			
1980-82	43.1					
Seed size	15.7	13.8	11.9	15.0	10.6	15.1
Maturity index	-4	+1	0	0	+1	0
Height	35	38	37	37	38	39
Seed quality	2.1	1.9	1.9	2.2	1.7	1.9
Bacterial pustule	R	R	R	R	R	R
M. incognita	2.5	1.5	2.0	1.0	1.5	1.5
M. arenaria	5.0	5.0	3.5	5.0	3.0	5.0
SCN race 3	S	R	R	R	R	S
Percent mottled seed	0	0	15	0	12	0
Flower color	P	W	W	W	W	P
Pubescence color	T	G	T	G	T	T
Pod wall color	T	T	T	T	T	T

Table 58 - Seed yield, in bushels per acre, for the strains in Uniform Group VIII, 1982

Location	Hutton	Cobb	Foster	N76-1507	F77-1790	F77-1797	N77-1602
Clinton, NC	43.7	28.5-	36.2	48.9	45.6	48.2	39.5
Florence, SC (A)	38.6	47.2	44.5	50.5	49.1	39.8	53.3
Florence, SC (B)	29.6	32.9	38.0	33.6	38.6	40.2	36.2
Hartsville, SC (A)	23.9	22.4	22.5	35.9	21.5	31.0	31.7
Hartsville, SC (B)	20.6	22.6	19.9	26.4	33.6+	36.7+	27.8
Blackville, SC (A)	25.4	30.5	29.8	34.3	31.7	32.9	34.4
Blackville, SC (B)	11.7	16.6	22.3+	15.5	17.1	19.2+	12.0
Athens, GA	28.1	20.4	33.7	36.4+	36.1+	34.9+	35.2+
Tallassee, AL	28.9	26.9	29.2	34.5+	30.4	32.4	36.7+
Tifton, GA	52.5	55.4	62.8	69.1	64.3	56.9	58.4
Gainesville, FL	40.9	48.4	44.3	37.4	45.9	45.3	44.1
Marianna, FL	49.0	51.1	48.0	55.7+	44.8	49.3	53.8
Quincy, FL	37.4	35.5	34.9	43.5	41.1	33.0	33.3
Jay, FL	24.0	28.3	42.3+	29.3	43.3+	42.0+	28.7
Fairhope, AL	55.0	52.2	46.6	53.7	52.4	52.9	52.7
Poplarville, MS	24.5	24.3	27.9	38.1+	31.1	28.6	37.4+
Stoneville, MS (B)	33.0	31.5	33.5	35.4	34.7	30.8	37.9
*Beaumont, TX	35.9	45.2	31.5	37.0	43.1	36.5	34.7
Mean	33.3	33.8	36.3	39.9	38.9	38.5	38.4

*Not included in mean.

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

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

Table 58 - (continued)

Location	Coker 368	F77-7450	Co79-760	D79-10496	Ga78-2488	L.S.D. (.05)	C.V. %
Clinton, NC	36.6	35.5	44.2	34.5	35.8	10.0	15
Florence, SC (A)	52.0	44.3	57.3	47.8	44.4	N.S.	13
Florence, SC (B)	38.8	35.6	34.8	32.3	35.9	N.S.	12
Hartsville, SC (A)	34.5	22.7	45.5+	22.9	24.9	13.7	29
Hartsville, SC (B)	34.2+	27.5	37.2+	22.3	27.4	9.1	19
Blackville, SC (A)	34.8	30.4	33.6	30.1	31.5	N.S.	11
Blackville, SC (B)	16.0	17.0	18.7+	16.3	14.0	5.7	21
Athens, GA	35.7+	30.8	41.1+	23.0	30.3	5.8	11
Tallassee, AL	36.7+	30.5	35.9+	30.7	33.7	5.1	9
Tifton, GA	59.5	53.1	59.0	50.4	64.0	N.S.	14
Gainesville, FL	47.2	40.1	40.5	40.5	48.8	N.S.	13
Marianna, FL	54.1	46.8	54.6	41.8-	48.9	6.3	8
Quincy, FL	33.9	47.3+	47.8+	37.3	37.1	9.8	15
Jay, FL	45.0+	46.0+	38.7+	39.3+	26.3	9.8	16
Fairhope, AL	50.7	54.2	54.2	49.7	50.4	N.S.	8
Poplarville, MS	37.7+	24.5	36.1+	21.3	35.2	9.4	18
Stoneville, MS (B)	30.2	29.1	34.3	26.2	32.0	N.S.	11
Beaumont, TX	40.2	37.7	32.0	31.0	36.6	8.1	13
Mean	39.9	36.2	42.0	33.3	36.5		

Table 59 - Chemical composition and seed size for the strains in Uniform Group VIII, 1982

Location	Hutton	Cobb	Foster	N76-1507	F77-1790	F77-1797
			OIL PERCENTAGES			
Hartsville, SC (A)	17.6	18.2	19.4	19.3	19.0	18.5
Tifton, GA	17.6	20.0	19.4	19.5	19.4	19.0
Tallassee, AL	18.7	20.8	20.3	20.9	19.2	17.9
Gainesville, FL	19.5	20.8	19.9	21.0	19.2	19.3
Jay, FL	17.6	20.6	21.0	22.2	20.2	21.4
Stoneville, MS (B)	15.9	16.3	16.7	17.1	15.8	16.1
Mean	17.8	19.5	19.5	20.0	18.8	18.7
			PROTEIN PERCENTAGES			
Hartsville, SC (A)	40.6	36.9	35.9	37.7	38.8	37.8
Tifton, GA	43.5	39.6	41.2	39.5	42.1	40.5
Tallassee, AL	42.4	37.0	38.0	39.3	41.3	40.5
Gainesville, FL	43.4	39.1	39.8	40.1	42.5	41.9
Jay, FL	42.8	38.4	39.5	39.6	42.0	39.4
Stoneville, MS (B)	43.5	40.6	41.2	40.9	43.5	42.1
Mean	42.7	38.6	39.3	39.5	41.7	40.4
			GRAMS PER 100 SEEDS			
Hartsville, SC (A)	12.1	9.1	8.1	12.1	10.2	10.5
Tifton, GA	18.5	16.3	12.8	18.9	15.5	15.2
Tallassee, AL	16.6	13.3	10.3	15.9	12.0	12.1
Gainesville, FL	17.6	14.9	11.5	16.6	14.9	14.3
Jay, FL	16.0	15.0	14.0	17.0	16.0	15.0
Stoneville, MS (B)	13.2	10.0	9.2	12.4	9.8	9.7
Mean	15.7	13.1	11.0	15.5	13.1	12.8

Table 59 - (continued)

Location	N77-1602	Coker 368	F77-7450	Co79-760	D79-10496	Ga78-2488
			OIL PERCENTAGES			
Hartsville, SC (A)	18.1	19.1	18.4	19.6	17.0	18.4
Tifton, GA	19.4	20.7	18.7	20.4	19.0	18.6
Tallassee, AL	19.0	20.0	18.7	20.3	19.0	19.1
Gainesville, FL	19.5	20.3	19.7	22.1	18.9	19.2
Jay, FL	20.4	21.6	20.3	21.6	20.7	21.8
Stoneville, MS (B)	16.5	16.5	16.2	17.9	15.9	16.2
Mean	18.8	19.7	18.7	20.3	18.4	18.9
			PROTEIN PERCENTAGES			
Hartsville, SC (A)	40.0	37.5	39.0	39.1	40.3	39.7
Tifton, GA	41.4	39.4	41.4	40.3	41.9	41.9
Tallassee, AL	41.1	38.1	39.5	40.4	39.6	40.1
Gainesville, FL	42.2	40.2	42.1	40.3	42.4	42.2
Jay, FL	43.2	39.3	40.2	39.6	41.8	41.2
Stoneville, MS (B)	43.0	41.7	42.5	40.9	43.4	43.2
Mean	41.8	39.4	40.8	40.1	41.6	41.4
			GRAMS PER 100 SEEDS			
Hartsville, SC (A)	12.6	10.9	9.1	13.0	8.5	12.3
Tifton, GA	19.0	18.3	14.5	18.6	12.7	19.2
Tallassee, AL	16.6	12.2	11.0	14.1	10.7	13.6
Gainesville, FL	17.0	15.0	14.2	15.9	11.9	16.8
Jay, FL	15.0	16.0	13.0	17.0	11.0	15.0
Stoneville, MS (B)	13.9	10.2	9.5	11.4	8.6	13.4
Mean	15.7	13.8	11.9	15.0	10.6	15.1

Table 60 - Relative maturity, days earlier (-) or later (+) than Hutton, for the strains in Uniform Group VIII, 1982

Location	Date planted	Hutton matured	Cobb	Foster	N76-1507	F77-1790	F77-1797
Clinton, NC	5-20	11-5	0	-6	-9	0	0
Florence, SC (A)	5-15	11-3	+5	-8	-6	-4	0
Florence, SC (B)	6-15	11-3	+2	+7	+2	+2	+7
Hartsville, SC (A)	6-2	10-25	+4	-5	+1	+1	+2
Hartsville, SC (B)	6-15	10-23	+10	+2	+1	+5	+5
Blackville, SC (A)	5-20	10-31	+8	-2	-4	+2	+2
Blackville, SC (B)	6-29	11-4	+10	-1	-1	+5	+1
Athens, GA	5-10	10-18	0	-2	-2	0	+1
Tallassee, AL	5-17	10-19	+6	0	-4	+2	+2
Tifton, GA	5-6	10-15	+9	+1	0	+5	+4
Gainesville, FL	6-3	10-23	+7	-2	-3	+5	+4
Marianna, FL	6-8	10-30	+6	-5	-1	+1	-2
Quincy, FL	7-1	11-2	+9	-9	+6	-5	-5
Jay, FL	6-7	10-25	0	-10	-10	0	-1
Fairhope, AL	6-8	10-24	+8	-2	-1	+4	+1
Stoneville, MS (B)	6-4	10-29	+4	-4	-2	0	+1
Beaumont, TX	5-26	11-6	0	-1	-1	+3	-1
Mean		10-28	+5	-3	-2	+2	+1

Table 60 - (continued)

Location	N77-1602	Coker 368	F77-7450	Co79-760	D79-10496	Ga78-2488
Clinton, NC	-9	0	0	0	0	0
Florence, SC (A)	-9	+2	-9	+2	-2	-8
Florence, SC (B)	+2	+7	+2	0	+3	0
Hartsville, SC (A)	-4	+1	+1	+2	+4	+1
Hartsville, SC (B)	-1	+4	+3	+4	+8	+2
Blackville, SC (A)	-8	+2	0	+4	+4	+1
Blackville, SC (B)	-3	+1	+1	+4	-3	+3
Athens, GA	-11	+1	0	0	+1	-1
Tallassee, AL	-5	0	+1	-2	+4	+1
Tifton, GA	-1	+3	+3	+1	+6	+5
Gainesville, FL	-4	0	+1	-1	+2	+1
Marianna, FL	-2	-3	+4	-3	-3	-1
Quincy, FL	0	+10	-3	-1	-3	+2
Jay, FL	-10	-1	0	-10	-1	-1
Fairhope, AL	-1	-1	+2	-1	+3	0
Stoneville, MS (B)	-1	-4	-1	-2	+1	0
Beaumont, TX	-2	0	-1	-1	-1	-1
Mean	-4	+1	0	0	+1	0

Table 61 - Plant height for the strains in Uniform Group VIII, 1982

Location	Hutton	Cobb	Foster	N76-1507	F77-1790	F77-1797
Clinton, NC	43	49	46	41	46	38
Florence, SC (A)	42	44	40	37	46	40
Florence, SC (B)	34	34	36	31	37	36
Hartsville, SC (A)	39	43	41	39	43	41
Hartsville, SC (B)	38	39	41	35	41	36
Blackville, SC (A)	40	45	38	33	44	40
Blackville, SC (B)	26	28	30	26	34	32
Athens, GA	39	43	39	34	41	39
Tallassee, AL	40	41	39	34	43	41
Tifton, GA	35	37	34	26	36	34
Gainesville, FL	30	36	33	26	37	30
Marianna, FL	34	37	36	34	39	36
Quincy, FL	26	27	26	24	31	27
Jay, FL	31	37	31	30	35	34
Fairhope, AL	35	39	39	34	40	37
Poplarville, MS	41	43	34	34	39	40
Stoneville, MS	39	40	37	38	40	39
Beaumont, TX	30	35	31	26	36	32
Mean	36	39	36	33	39	36

Table 61 - (continued)

Location	N77-1602	Coker 368	F77-7450	Co79-760	D79-10496	Ga78-2488
Clinton, NC	40	45	45	47	45	46
Florence, SC (A)	44	43	41	42	40	45
Florence, SC (B)	36	37	35	36	33	37
Hartsville, SC (A)	41	45	41	42	43	45
Hartsville, SC (B)	39	42	41	43	39	43
Blackville, SC (A)	36	42	36	42	44	42
Blackville, SC (B)	24	29	32	30	28	30
Athens, GA	40	42	40	39	43	42
Tallassee, AL	40	40	40	41	43	41
Tifton, GA	29	35	28	33	34	35
Gainesville, FL	28	31	30	30	35	34
Marianna, FL	36	36	39	38	38	37
Quincy, FL	25	26	28	28	27	28
Jay, FL	31	37	30	33	32	31
Fairhope, AL	32	39	40	38	39	35
Poplarville, MS	42	44	37	41	42	41
Stoneville, MS	38	41	39	37	38	42
Beaumont, TX	32	32	36	33	34	35
Mean	35	38	37	37	38	39

Table 62 - Lodging scores for the strains in Uniform Group VIII, 1982

Location	Hutton	Cobb	Foster	N76-1507	F77-1790	F77-1797
Clinton, NC	2.7	3.3	3.7	3.0	3.0	3.0
Florence, SC (A)	4.0	4.0	5.0	2.0	4.0	2.0
Florence, SC (B)	2.0	2.0	2.0	1.0	2.0	2.0
Hartsville, SC (A)	1.3	2.5	2.2	1.7	1.8	2.0
Hartsville, SC (B)	1.0	1.8	2.6	1.2	2.0	2.0
Blackville, SC (A)	1.0	2.0	2.0	1.0	1.0	1.0
Blackville, SC (B)	1.0	1.0	1.0	1.0	1.0	1.0
Athens, GA	2.0	2.0	3.0	2.0	2.2	1.8
Tallassee, AL	1.3	2.0	2.0	1.3	2.0	1.0
Tifton, GA	1.3	1.5	1.0	1.0	1.3	1.0
Gainesville, FL	1.0	1.7	1.3	1.0	1.3	1.0
Marianna, FL	3.0	3.0	3.0	3.0	2.0	2.0
Quincy, FL	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	1.0	2.0	3.0	2.0	3.0	2.0
Fairhope, AL	1.0	2.0	3.0	1.0	1.0	1.0
Stoneville, MS (B)	2.0	2.0	2.3	2.0	2.0	2.0
Beaumont, TX	1.5	1.5	2.1	1.6	1.6	1.6

Table 62 - (continued)

Location	N77-1602	Coker 368	F77-7450	Co79-760	D79-10496	Ga78-2488
Clinton, NC	2.7	3.0	3.7	3.0	4.0	3.0
Florence, SC (A)	2.0	3.0	4.0	3.0	4.0	3.0
Florence, SC (B)	1.0	2.0	3.0	2.0	3.0	2.0
Hartsville, SC (A)	1.7	2.0	2.2	2.0	3.3	2.0
Hartsville, SC (B)	1.5	1.5	2.6	2.0	2.8	1.5
Blackville, SC (A)	1.0	1.0	3.0	1.0	3.0	2.0
Blackville, SC (B)	1.0	1.0	2.0	1.0	2.0	1.0
Athens, GA	2.2	2.2	2.7	2.2	3.2	2.5
Tallassee, AL	2.0	1.3	2.0	1.3	2.3	1.7
Tifton, GA	1.0	1.0	1.0	1.0	1.5	1.3
Gainesville, FL	1.0	1.0	2.0	1.0	2.3	1.0
Marianna, FL	3.0	2.0	3.0	2.0	3.0	2.0
Quincy, FL	1.0	1.0	1.0	1.0	2.0	1.0
Jay, FL	1.0	1.0	2.0	1.0	3.0	2.0
Fairhope, AL	1.0	1.0	1.0	1.0	3.0	1.0
Stoneville, MS (B)	2.0	2.0	2.3	2.0	2.7	2.0
Beaumont, TX	1.6	1.4	1.8	1.2	2.2	1.5

Table 63 - Seed quality scores for the strains in Uniform Group VIII, 1982

Location	Hutton	Cobb	Foster	N76-1507	F77-1790	F77-1797
Clinton, NC	2.0	2.0	2.0	2.0	2.0	2.0
Athens, GA	3.0	2.8	3.0	3.0	2.7	2.5
Tallassee, AL	2.0	1.0	1.5	1.5	1.5	1.5
Tifton, GA	2.0	1.5	1.0	2.5	2.0	2.0
Gainesville, FL	1.0	1.0	1.0	1.7	1.0	1.0
Quincy, FL	1.0	2.0	2.0	2.0	2.0	2.0
Jay, FL	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, TX	2.0	2.0	2.0	2.0	2.0	2.0

Table 63 - (continued)

Location	N77-1602	Coker 368	F77-7450	Co79-760	D79-10496	Ga78-2488
Clinton, NC	3.0	2.0	2.0	3.0	2.0	2.0
Athens, GA	2.8	2.8	3.0	3.0	2.6	3.0
Tallassee, AL	1.5	1.5	1.5	2.5	1.0	1.5
Tifton, GA	2.0	2.0	1.5	3.0	1.5	2.0
Gainesville, FL	2.0	1.0	1.3	1.7	1.0	1.0
Quincy, FL	2.0	2.0	2.0	1.0	1.0	2.0
Jay, FL	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, TX	2.0	2.0	2.0	2.0	2.0	2.0

PRELIMINARY GROUP VIII

1982

Preliminary Group VIII nurseries, which included 34 experimental strains along with Cobb and Braxton, were planted at 6 locations. Parentage of each of the strains is reported in Table 64. Table 65 summarizes seed yield, plant height, maturity, protein and oil percentages, and reaction to diseases and nematodes. Data for individual locations are reported in Tables 66 through 70. Plantings at Jay, Florida were on soil infested with SCN race 3.

Cobb had a mean seed yield of 31.3 bushels per acre. Twenty-one strains had higher mean seed yields. Six strains received low ratings for the two root-knot nematodes M. incognita and M. arenaria and also a resistant rating for SCN race 3. The five "D" lines had been selected for resistance to foliar-feeding insects. All had lower mean seed yields than the check varieties.

Strains which appear to merit further evaluation in Uniform Group VIII are Co80-917, F79-4299, F79-4589, F79-4860, F80-3602, and Ga78-1011.

Table 64 - Parentage of strains in Preliminary Group VIII, 1982

	Variety or strain	Parentage	Generation composited
1.	Cobb		
2.	Braxton		
3.	Co80-853	Centennial X (Co71-211 X Hutton)	F_5
4.	Co80-870	Centennial X (Co71-211 X Hutton)	F_5
5.	Co80-873	Centennial X (Co71-211 X Hutton)	F_5
6.	Co80-888	Centennial X (Co71-211 X Hutton)	F_5
7.	Co80-917	Centennial X Co76-863	F_5
8.	Co80-926	Centennial X Co76-863	F_5
9.	D79-10293	Forrest X D75-10169	F_5
10.	D79-10455	J74-39 X D75-10169	F_5
11.	D79-10520	J74-39 X D75-10169	F_5
12.	D79-10624	D72-9241 X D75-10169	F_5
13.	D79-10633	D72-9241 X D75-10169	F_5
14.	F76-1514	Davis X Cobb	F_6
15.	F76-3730	Forrest X (Cobb X D68-216)	F_5
16.	F78-5917	Cobb X (Bragg X D69-9801)	F_6
17.	F78-6573	Centennial X (Cobb X Hood)	F_5
18.	F79-4299	Centennial X [Forrest X (Cobb X D68-216)]	F_8
19.	F79-4589	Centennial X [Forrest X (Cobb X D68-216)]	F_8
20.	F79-4860	Centennial X [Forrest X (Cobb X D68-216)]	F_8
21.	F80-3414	D68-201 X (Hampton X D67-10472)	F_9
22.	F80-3452	Forrest X (Cobb X D68-216)	F_8
23.	F80-3558	Forrest(2) X (Cobb X D68-216)	F_7
24.	F80-3602	Forrest(2) X (Cobb X D68-216)	F_7
25.	F80-3636	Forrest(2) X (Cobb X D68-216)	F_7
26.	Ga78-1011	Forrest X Hutton	F_6
27.	Ga79-301	Ga70-163 X Ga70-263	F_5
28.	Ga79-312	Ga70-163 X Ga70-276	F_5
29.	Ga79-581	Tracy X Hutton	F_6
30.	Ga79-622	Tracy X Hutton	F_6
31.	GaT78-61	Bedford X Centennial	F_5
32.	GaT78-71	Bedford X Centennial	F_5
33.	GaT79-170	Jackson X D68-180	F_5
34.	N80-1370	N72-3154 X (D71-9203 X Ransom)	F_6
35.	N80-1408	Hutton X (Forrest X Lee 74)	F_6
36.	N80-1758	N72-3154 X (D71-9203 X Ransom)	F_6

Table 65 - General summary of performance for the strains in Preliminary Group VIII, 1982

Strain	Seed yield	Maturity index	Ht.	Percent Oil	Percent Protein	BP	M. incognita	M. arenaria	SCN race 3
Cobb	31.3	11-1	39	19.2	39.8	R	1.0	5.0	S
Braxton	31.5	-6	36	18.4	41.6	R	0.5	2.0	S
Co80-853	35.0	-7	38	19.4	40.2	R	1.0	5.0	R
Co80-870	34.5	-6	35	19.5	38.8	R	0.5	3.0	R
Co80-873	30.9	-8	35	18.7	41.5	R	1.0	5.0	R
Co80-888	33.4	-10	36	19.9	40.8	R	1.0	5.0	R
Co80-917	35.7	-6	34	19.1	40.5	R	0.5	5.0	R
Co80-926	34.5	-5	31	19.4	40.5	R	0.5	5.0	R
D79-10293	27.3	-8	31	16.3	43.6	R	0.5	2.0	S
D79-10455	27.5	-5	33	17.6	42.3	R	1.0	2.0	S[h]
D79-10520	26.2	-2	34	16.1	44.0	R	1.5	2.5	S[h]
D79-10624	28.8	-3	38	16.7	42.4	R	1.0	1.5	S[h]
D79-10633	27.6	-4	35	16.6	42.2	R	3.0[h]	2.0	S
F76-1514	28.6	-5	35	19.2	40.4	R	2.5[h]	5.0	S
F76-3730	34.3	-4	36	19.7	39.9	R	2.0	5.0	R
F78-5917	32.0	-4	37	18.6	41.2	R	1.0	5.0	S
F78-6573	27.7	-7	42	19.1	39.6	R	1.0	5.0	S
F79-4299	33.1	-4	38	18.0	41.4	R	1.0	3.0	R
F79-4589	32.8	-3	35	18.6	41.6	R	1.0	2.0	R
F79-4860	33.2	-6	36	18.8	39.8	R	1.0	2.5	R
F80-3414	31.2	-2	35	19.2	41.2	R	6.5	5.0	R
F80-3452	31.8	-4	36	18.8	40.8	R	1.0	5.0	R
F80-3558	29.9	-7	33	18.3	41.2	R	1.0	3.0	R
F80-3602	32.9	-6	40	19.2	39.5	R	1.5	2.0	R
F80-3636	31.8	-5	36	19.3	39.8	R	0.5	3.0	R
Ga78-1011	34.4	-5	35	18.6	41.2	R	0.5	5.0	R
Ga79-301	31.4	-6	31	19.1	41.4	R	0.5	5.0	S
Ga79-312	32.1	-8	28	18.5	41.6	R	1.0	4.5	S
Ga79-581	29.7	-4	32	17.1	42.8	R	1.5	5.0	S
Ga79-622	31.9	-3	30	16.9	43.7	R	1.0	5.0	S
GaT78-61	31.4	-10	33	19.3	40.8	R	1.5	5.0	R
GaT78-71	31.7	-7	33	18.7	41.7	R	0.5	3.5	S
GaT79-170	28.1	-10	33	18.6	41.8	R	2.0	2.0	S
N80-1370	30.0	-17	28	19.6	40.6	R	4.5	5.0	S
N80-1408	32.3	-8	24	19.2	42.4	R	4.0	2.5	S
N80-1758	29.8	-17	27	18.9	41.8	R	5.0	4.5	S

[h]appears to be segregating.

Table 66 - Seed yield, in bushels per acre, for the strains in Preliminary Group VIII, 1982

Strain	Blackville, SC	Gainesville, FL	Quincy, FL	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Cobb	31.7	32.4	44.9	25.5	27.7	25.3
Braxton	29.0	40.9	27.9-	31.0	31.5	28.5
Co80-853	32.0	39.7	30.2-	42.5+	33.5	32.3
Co80-870	24.8	31.0	36.7	49.0+	31.6	33.7
Co80-873	24.0	42.5	32.0	40.0+	23.1	24.0
Co80-888	28.7	32.7	38.1	39.0+	27.8	34.0
Co80-917	27.8	32.2	39.2	43.5+	36.8+	34.8
Co80-926	32.9	38.1	39.0	41.5+	27.8	27.9
D79-10293	31.2	25.3	25.5-	23.5	22.8	35.2
D79-10455	20.5	34.4	31.5-	30.0	26.3	22.5
D79-10520	23.5	35.7	26.1-	26.5	26.9	18.3
D79-10624	25.7	35.5	25.6-	34.5+	28.7	22.5
D79-10633	22.3	28.0	26.3-	32.0	28.8	28.1
F76-1514	25.8	46.9	30.1-	24.0	18.9-	26.0
F76-3730	31.8	36.5	35.9-	42.5+	24.8	34.3
F78-5917	26.8	40.8	36.4	32.5+	21.6	33.8
F78-6573	30.7	31.3	34.1-	22.5	26.2	21.1
F79-4299	27.0	42.4	29.4-	38.0+	35.9	26.0
F79-4589	27.4	37.0	29.8-	40.5+	31.6	30.2
F79-4860	23.4	42.4	26.9-	46.0+	31.2	29.3
F80-3414	24.3	34.8	20.6-	38.5+	34.3	34.5
F80-3452	23.4	34.1	38.2	29.0+	28.2	27.6
F80-3558	23.7	33.7	27.2-	37.0+	31.2	26.6
F80-3602	28.7	30.5	34.0-	39.5+	33.7	30.8
F80-3636	34.5	28.7	36.3	37.0+	29.5	24.9
Ga78-1011	29.6	35.9	36.9	38.0+	33.4	32.6
Ga79-301	30.5	37.5	40.6	25.5	27.8	26.6
Ga79-312	30.7	34.6	42.5	31.0	23.4	30.2
Ga79-581	34.7	39.2	22.5-	27.0	25.3	29.4
Ga79-622	34.8	32.3	24.8-	32.0	32.5	35.1
GaT78-61	20.9	34.2	38.9	37.5+	25.5	31.5
GaT78-71	26.6	36.3	32.6-	26.0	30.6	38.2
GaT79-170	23.1	39.8	31.2-	26.5	20.8	27.1
N80-1370	25.1	30.2	31.3-	27.0	39.0+	27.3
N80-1408	33.2	34.6	31.7-	29.0	33.3	31.9
N80-1758	25.1	34.4	18.7-	25.0	45.0+	30.8
L.S.D.(.05)	N.S	N.S.	8.8	6.9	8.5	N.S.
C.V.	21%	20%	14%	10%	14%	22%

Table 67 - Oil percentages for the strains in Preliminary Group VIII, 1982

Strain	Gainesville, FL	Jay, FL	Stoneville, MS (B)
Cobb	20.1	20.1	17.5
Braxton	19.8	19.3	16.0
Co80-853	19.7	21.2	17.3
Co80-870	20.7	20.3	17.5
Co80-873	19.7	19.6	16.7
Co80-888	20.7	21.4	17.7
Co80-917	19.6	20.2	17.6
Co80-926	20.1	20.9	17.3
D79-10293	16.8	17.0	15.2
D79-10455	19.8	18.2	14.7
D79-10520	17.1	17.6	13.5
D79-10624	17.6	17.9	14.5
D79-10633	16.9	17.7	15.2
F76-1514	19.7	20.4	17.4
F76-3730	21.1	21.4	16.7
F78-5917	19.9	19.9	16.1
F78-6573	20.6	20.5	16.1
F79-4299	19.4	19.4	15.3
F79-4589	19.6	20.0	16.2
F79-4860	19.6	20.4	16.5
F80-3414	19.4	20.9	17.3
F80-3452	20.9	20.0	15.4
F80-3558	19.6	19.7	15.7
F80-3602	19.9	20.6	17.2
F80-3636	20.7	20.6	16.6
Ga78-1011	19.3	19.9	16.7
Ga79-301	20.9	20.5	16.0
Ga79-312	20.8	18.8	16.0
Ga79-581	18.4	18.1	14.7
Ga79-622	18.3	17.5	15.0
GaT78-61	20.7	20.2	17.0
GaT78-71	20.1	19.8	16.2
GaT79-170	18.9	19.8	17.1
N80-1370	20.9	20.3	17.7
N80-1408	20.1	20.1	17.3
N80-1758	19.0	19.5	18.1

Table 68 - Protein percentages for the strains in Preliminary Group VIII, 1982

Strain	Gainesville, FL	Jay, FL	Stoneville, MS (B)
Cobb	39.4	39.8	40.3
Braxton	41.9	40.2	42.6
Co80-853	41.7	39.0	40.0
Co80-870	39.8	38.0	38.7
Co80-873	41.6	41.1	41.9
Co80-888	41.2	39.4	41.9
Co80-917	41.4	39.9	40.3
Co80-926	42.0	38.1	41.3
D79-10293	44.8	43.0	43.0
D79-10455	41.4	42.3	43.3
D79-10520	43.1	42.8	46.2
D79-10624	42.0	41.7	43.5
D79-10633	43.2	41.6	41.8
F76-1514	40.9	39.4	40.8
F76-3730	40.5	38.5	40.7
F78-5917	40.9	41.2	41.6
F78-6573	39.5	39.0	40.3
F79-4299	41.6	40.2	42.4
F79-4589	43.2	39.8	41.7
F79-4860	39.7	37.9	41.9
F80-3414	43.3	40.9	39.5
F80-3452	41.3	38.9	42.3
F80-3558	41.1	40.2	42.4
F80-3602	40.4	38.6	39.4
F80-3636	40.6	37.7	41.0
Ga78-1011	42.3	39.9	41.4
Ga79-301	40.5	40.0	43.6
Ga79-312	40.7	41.5	42.5
Ga79-581	43.3	41.0	44.0
Ga79-622	43.6	42.8	44.8
GaT78-61	40.9	39.7	41.8
GaT78-71	42.4	40.0	42.6
GaT79-170	42.6	40.4	42.5
N80-1370	40.4	39.8	41.5
N80-1408	42.6	42.0	42.7
N80-1758	41.5	42.0	41.9

Table 69 - Plant height for the strains in Preliminary Group VIII, 1982

Strain	Blackville, SC	Gainesville, FL	Quincy, FL	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Cobb	49	32	33	37	44	41
Braxton	46	27	27	33	38	45
Co80-853	45	32	32	35	42	42
Co80-870	43	26	29	34	36	39
Co80-873	46	30	29	35	34	37
Co80-888	45	29	29	33	35	41
Co80-917	43	24	27	35	36	40
Co80-926	38	26	26	31	34	33
D79-10293	39	27	27	26	31	38
D79-10455	43	30	24	31	35	34
D79-10520	43	27	24	33	39	38
D79-10624	49	31	28	36	43	42
D79-10633	45	30	23	32	39	39
F76-1514	48	27	27	29	39	39
F76-3730	43	31	28	33	41	41
F78-5917	45	30	31	34	39	40
F78-6573	46	33	38	35	49	51
F79-4299	46	32	31	37	39	40
F79-4589	43	30	29	33	36	39
F79-4860	47	30	28	35	37	37
F80-3414	39	28	32	31	39	38
F80-3452	41	29	31	31	41	41
F80-3558	41	26	26	31	36	39
F80-3602	40	27	28	32	36	40
F80-3636	45	28	27	37	35	42
Ga78-1011	41	30	32	31	38	38
Ga79-301	37	25	26	30	34	36
Ga79-312	32	21	24	26	33	32
Ga79-581	38	28	27	29	34	37
Ga79-622	35	24	26	27	31	37
GaT78-61	42	25	30	30	34	36
GaT78-71	37	25	29	31	35	38
GaT79-170	41	28	27	28	35	38
N80-1370	36	20	23	26	32	32
N80-1408	28	20	23	25	26	24
N80-1758	33	18	23	22	31	32

Table 70 - Seed quality scores for the strains in Preliminary Group VIII, 1982

Strain	Gainesville, FL	Quincy, FL	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Cobb	1.0	2.0	2.0	3.3	2.0
Braxton	1.5	3.0	2.0	4.0	2.0
Co80-853	1.5	2.0	2.0	3.3	2.0
Co80-870	2.0	2.0	2.0	3.0	2.0
Co80-873	2.0	2.0	2.0	3.5	2.0
Co80-888	1.5	2.0	2.0	3.5	2.0
Co80-917	1.5	2.0	2.0	3.0	2.0
Co80-926	2.0	2.0	2.0	2.8	2.0
D79-10293	2.0	2.0	2.0	3.5	2.0
D79-10455	1.0	2.0	2.0	3.8	2.0
D79-10520	1.5	2.0	2.0	3.5	2.5
D79-10624	1.0	2.0	2.0	3.3	2.0
D79-10633	1.0	3.0	2.0	2.5	2.0
F76-1514	2.0	2.0	2.0	4.5	2.0
F76-3730	2.0	2.0	2.0	4.0	2.0
F78-5917	1.0	2.0	2.0	3.8	2.0
F78-6573	2.5	2.0	2.0	2.8	2.0
F79-4299	2.0	3.0	2.0	2.8	2.0
F79-4589	2.0	2.0	2.0	2.3	2.0
F79-4860	1.0	2.0	2.0	3.0	2.0
F80-3414	1.5	4.0	2.0	2.5	2.0
F80-3452	2.0	3.0	2.0	3.5	2.0
F80-3558	1.5	3.0	2.0	2.8	2.0
F80-3602	1.5	2.0	2.0	3.0	2.0
F80-3636	1.5	2.0	2.0	3.5	2.0
Ga78-1011	1.0	2.0	2.0	3.0	2.0
Ga79-301	1.5	2.0	2.0	3.3	2.0
Ga79-312	2.0	2.0	2.0	3.3	2.0
Ga79-581	1.5	4.0	2.0	3.3	2.0
Ga79-622	2.0	3.0	2.0	3.3	2.0
GaT78-61	2.0	2.0	2.0	4.3	2.0
GaT78-71	2.5	3.0	2.0	3.5	2.0
GaT79-170	2.0	3.0	2.0	4.3	2.0
N80-1370	3.0	2.0	2.0	3.0	2.0
N80-1408	1.5	2.0	2.0	2.5	2.0
N80-1758	2.0	4.0	2.0	2.0	2.0