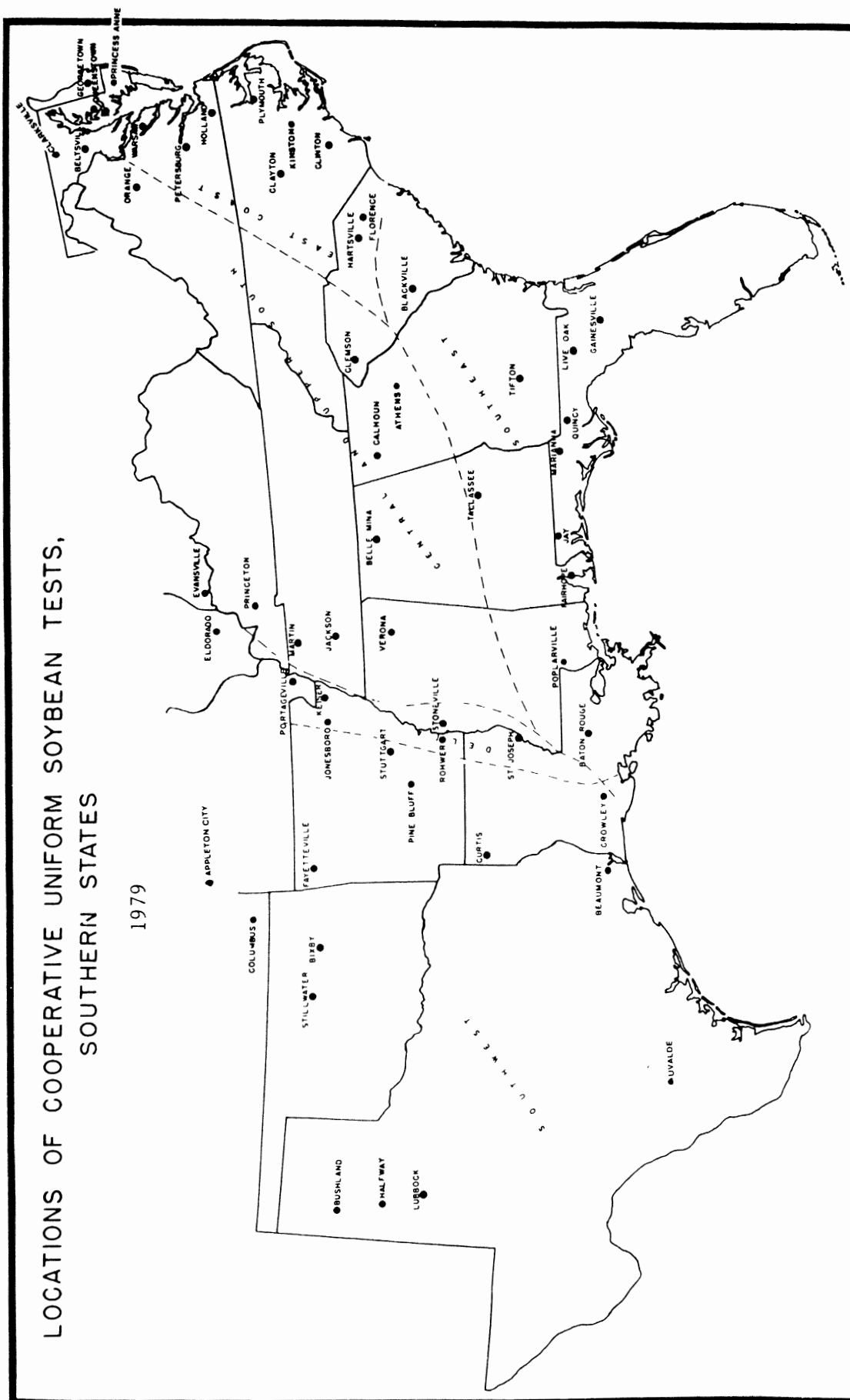


THE UNIFORM SOYBEAN TESTS
SOUTHERN STATES
1979

UNITED STATES DEPARTMENT OF AGRICULTURE
SCIENCE AND EDUCATION ADMINISTRATION
AGRICULTURAL RESEARCH
COOPERATING WITH
STATE AGRICULTURAL EXPERIMENT STATIONS
SOUTHERN REGION
STONEVILLE, MISSISSIPPI

1979



THE UNIFORM SOYBEAN TESTS

SOUTHERN STATES

1979

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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.

Ten 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: Crawford, Essex, Forrest, Tracy, Centennial, Bragg, GaSoy 17, 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: Crawford, September 12; Essex, September 25; Forrest, October 1; Tracy, October 13; Centennial, October 16; Bragg, October 22; 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 within 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 AR, USDA
- F - Florida Agricultural Experiment Station and AR, USDA
- Ga - Georgia Agricultural Experiment Station
- J - Delta Branch Experiment Station, West Tennessee Experiment Station and AR, USDA
- L - Illinois Agricultural Experiment Station and AR, USDA
- La - Louisiana Agricultural Experiment Station
- Md - Maryland Agricultural Experiment Station and AR, USDA
- N - North Carolina Agricultural Experiment Station and AR, USDA
- R - Arkansas Agricultural Experiment Station
- S - Missouri Agricultural Experiment Station and AR, USDA
- 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.

* * * * *

* This annual report of activity of the Soybean Production *
* Research Program, as well as that of the state stations *
* which cooperate, is a progress report and as such may *
* contain statements which may or may not be verified by *
* subsequent experiments. The fact that any statement has *
* been made herein does not necessarily constitute publica- *
* tion. For this reason, citation to particular statements *
* in the report should not be published unless permission *
* has been granted previously by those concerned. *

* * * * *

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

Location	IV	V	VI	VII	VIII	Soil type	P ₂ O ₅	K ₂ O	pH	Ferti- lizer ¹	Yield-adapted variety ²
East Coast											
Queenstown, Md.	1	1*				Mattapex silt loam	M	H	6.5	0-45-90	38.4 - B
Georgetown, Del.	1	1*				Norfolk loamy sand	H	M	6.6	0-0-120	47.5 - B
Warsaw, Va.	1	1*	1			Sassafras sandy loam	H-	M	6.5	0-40-80	41.8 - B
Holland, Va.	1	1*	1			Othello f.s. loam	H	M	5.8	36-72-72	46.5 - C
Plymouth, N.C.	1	1*	1			Bladen f.s. loam	H	H	5.9	0-40-80	43.4 - F
Kinston, N.C.	1	1	1			Norfolk sandy loam				0-40-80	43.6 - F
Clinton, N.C.	1	1	1		1	Norfolk sandy loam				0-40-80	37.3 - F
Florence, S.C.	1	1	1		1	Faceville sandy loam				0-0-0	62.2 - L
Hartsville, S.C.	1	1	1		1	Norfolk sandy loam	VH	H	6.2	0-18-54	50.2 - F
Southeast											
Blackville, S.C. (A)			1	1*	1	Dothan loamy sand	H	H	5.9	0-37-75	44.6 - F
Blackville, S.C. (B)			1	1*	1	Dothan loamy sand	H+	M	5.9	0-37-75	30.9 - K
Tifton, Ga.			1	1*	1	Tifton sandy loam	M	H	6.2	0-50-100	46.5 - H
Tallassee, Ala.				1*	1	Cahaba l.f.s.	H	H	5.9	0-30-40	51.9 - H
Gainesville, Fla.				1	1*	Arredonda fine sand	H	L	6.1	0-45-90	37.6 - H
Marianna, Fla.				1	1	Orangburg f.s.l.	H	M	6.8	25-50-75	
Quincy, Fla.			1	1	1*	Norfolk l.f.s.	H	H	5.9	25-50-75	41.0 - F
Jay, Fla.		1	1	1*	1*	Red bay f.s.l.	H	H	5.6	0-150-75	32.5 - F
Fairhope, Ala.			1	1	1	Malbis f.s.l.	H	H	6.0	0-0-0	29.5 - F
Poplarville, Miss.			1	1	1	Sawyer f. sandy loam					31.2 - H
Baton Rouge, La.			1	1*	1	Olivier silt loam	M	M	6.5	0-60-60	38.9 - F
Upper & Central South											
Orange, Va.	1					Davidson sandy loam	M	M	6.6	12-72-72	39.0 - B
Calhoun, Ga.	1		1			Tyler gravelly f.s.l.	H	M	6.5	4-40-80	39.3 - C
Eldorado, Ill.	1					Harco silt loam					45.7 - A
Knoxville, Tenn.	1					Sequatchi loam				0-10-60	54.3 - B
Princeton, Ky.	1	1*				Crider silt loam	M	H	5.6	0-0-54	48.3 - B
Martin, Tenn.	1					Falaya silt loam	H	H	6.3	0-150-54	73.7 - C
Jackson, Tenn.	1		1			Grenada s. loam	M	M	6.3	0-0-156	44.5 - C
Belle Mina, Ala.	1		1	1*		Decatur clay loam	M	H	7.0	0-67-0	45.1 - C
Verona, Miss.	1		1			Tuscumbia silty loam	H+	M	7.0	0-80-100	42.0 - F
Athens, Ga.	1		1	1	1	Cecil sandy loam	VH	M	6.3	0-50-100	46.0 - F
Clemson, S.C.			1	1	1	Cecil sandy loam	VH	M	6.0	0-0-60	36.8 - C

Location	IV	V	VI	VII	VIII	Soil type	P ₂ O ₅	K ₂ O	pH	Ferti- lizer ¹	Yield-adapted variety ²
Delta											
Portageville, Mo.(A)	1	1*	1*			Tiptonville silt loam	VH	M	6.0	10-30-60	37.0 - C
Portageville, Mo.(B)	1	1	1			Sharkey clay	VH	VH	7.0	0-0-0	35.4 - D
Keiser, Ark.	1	1*	1*			Sharkey clay	H	H	6.2	0-0-0	36.2 - E
Jonesboro, Ark.	1	1	1			Calloway silt loam	L	H	5.5	0-40-40	27.9 - D
Stoneville, Miss.(A)	1	1	1*	1*		Bosket f.s.l.	VH	H	6.5	0-0-0	49.4 - C
Stoneville, Miss.(B)	1*	1*	1*	1*	1	Sharkey clay	VH	H	6.6	0-0-0	46.2 - E
Rohwer, Ark.	1	1	1	1		Perry clay	H	H	6.9	0-0-0	37.0 - E
St. Joseph, La.	1	1	1	1		Commerce silt loam	H	M	6.0	0-0-0	59.0 - C
West											
Columbus, Kan.	1	1				Cherokee silt loam	L	M	6.5	12-50-50	38.6 - A
Clinton, Mo.	1	1				Parson silt loam	M	H		0-0-0	43.1 - C
Pine Bluff, Ark.	1	1	1			Calloway silt loam	M	M	6.6	26-26-26	62.7 - F
Stuttgart, Ark.	1	1	1	1		Crowley silt loam	VL	L	6.2	0-40-40	44.4 - C
Bossier City, La.	1	1	1	1		Severn very f.s.l.	H	L	7.4	0-0-0	50.7 - H
Crowley, La.	1	1	1	1		Crowley s.l.	L	L	6.0	0-60-60	37.9 - F
Bixby, Okla.	1	1	1			Reinoch silt loam	H	H	6.5	0-0-0	30.0 - B
Bushland, Texas	1	1				Pullman s.c.l.				0-0-0	30.6 - A
Lubbock, Texas	1	1				Amarillo loam	M	VH	7.7	0-0-0	49.2 - B
Beaumont, Texas	1	1	1	1*	1*	Morrey silt loam	VL	H	5.9	12-48-48	42.2 - L
Clovis, N.M.	1					Pullman silty clay loam				275-0-0	40.6 - A
Uvalde, Texas				1	1	Uvalde s.c.l.	H	VH	7.8	0-0-0	26.5 - H

¹Fertilizer applied converted to pounds N, P₂O₅, K₂O. For example: 400# of 2-12-12 equals 8-48-48.

²Varieties: A = Crawford; B = Essex; C = Forrester; D = Bedford; E = Tracy; F = Centennial; G = Bragg;

H = Braxton; I = GaSoy 17; J = Hutton; K = Cobb; L = Wright.

* 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 | 4 - 9 to 19% shattered |
| 2 - 1 to 3% shattered | 5 - over 20% shattered |
| 3 - 4 to 8% 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, Crawford; Group V, Essex; Group VI, Tracy; Group VII, Bragg; 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 ratings are given on a scale of 1 to 5 as follows:

A. Foliar:

- | | |
|---|--|
| 1 - immune to highly resistant | 4 - lesions numerous and necrosis surround lesions |
| 2 - lesions small and few in number | 5 - leaves covered with lesions and much necrosis |
| 3 - lesions moderate in number and size | |

B. Root and Stem:

- | | |
|------------------------------|-------------------------------|
| 1 - no plants killed | 4 - 9 to 19% of plants killed |
| 2 - 1 to 3% of plants killed | 5 - over 20% of plants killed |
| 3 - 4 to 8% of plants killed | |

In addition to percentage of plants killed, apparent plant vigor is considered in giving ratings for phytophthora rot.

C. Root knot ratings are based upon degree of galling development on roots. Ratings for *M. incognita* were made from a special planting on a heavily infested field in western Florida at the Jay Station. Ratings for *M. arenaria* were made from a planting on a heavily infested field near Blackville, South Carolina. Field observations for cyst nematode race 3 were made at Ames Plantation in Tennessee.

D. Purple stain or seedcoat mottling is determined as actual percentages at locations where the problem develops.

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 and each area. 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

1979

<u>Variety or strain</u>	<u>Parentage</u>	<u>Generation composited</u>
1. Columbus	C1069 X Clark	F ₈
2. Crawford	Williams X Columbus	F ₄
3. K1033	Williams X Calland	F ₅
4. S76-2392	Essex X Mitchell	F ₄
5. C1573	C1421 X Williams	F ₇
6. S76-2109	D67-3297 X Essex	F ₄
7. S76-2203	D67-3297 X Essex	F ₄
8. S76-2229	Forrest X V71-480	F ₄
9. V74-315	V66-318 X V68-2331	
10. V76-398	Essex X SRF400	
11. V76-465	Essex X SRF400	
12. V76-482	Essex X SRF400	

Background of breeding lines used as parents:

C1069 is a selection from Lincoln X Ogden closely related to Kent.

C1421 is a selection from Adelpia(8) X Mukden.

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

V71-480 is a selection from V73-76 X V66-318. V73-76 is a selection from Hill X D53-354.

V66-318 is a selection from D53-184 X J22.

V68-2331 is a selection from York X Clark.

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 of the strains. Two strains have been evaluated two years and 8 strains only one year.

Differences among strains for seed yield were significant (odds 19:1 or greater) at 15 locations. A combined analysis of variance for seed yield by production regions showed differences among strains to be significant in the East Coast and West.

Crawford continues to show a yield advantage over Columbus in all regions. K1033 has a two-year mean seed yield above that for Crawford in each region. However, in each year it has had a distinctly poorer rating for seed quality than either Columbus or Crawford. S76-2392 has a two-year mean seed yield above that for Crawford in the East Coast and Delta.

Of the strains grown one year, C1573 and S76-2229 averaged lower in seed quality ratings than the check varieties. S76-2109 yielded well in all regions and showed improved seed quality. Six of the 12 strains had a determinate growth type.

Table 1 - General summary of performance for the strains in Uniform Group IV-S, 1979

	No. of locations	Columbus	Crawford	K1033	S76-2392	C1573
Seed Yield - 1979						
East Coast	2	31.7	39.8+	45.2+	42.3+	43.4+
Upper & Central South	3	44.3	44.0	43.1	43.1	43.3
Delta	4	38.5	42.1	44.1	42.1	43.2
West	5	34.3	35.8	46.6+	33.3	29.5-
1978-79						
East Coast		34.7	39.4	45.5	41.4	
Upper & Central South		45.3	46.3	49.1	44.6	
Delta		36.0	39.8	42.7	42.9	
West		34.2	35.1	42.0	34.9	
1977-79						
East Coast		37.0	39.5			
Upper & Central South		43.0	43.1			
Delta		35.3	38.2			
West		37.4	38.8			
Oil Content - 1979						
		19.5	19.4	20.4+	19.1	20.0
- 1978-79		20.2	20.3	20.9	20.0	
- 1977-79		20.4	20.5			
Protein Content - 1979						
		42.6	42.5	41.6	41.3-	41.6
- 1978-79		43.2	42.9	42.3	41.1	
- 1977-79		42.7	42.4			
Seed size						
		15.0	15.6	18.7+	13.1-	16.9+
Maturity index						
		10-5	-3	-4	+1	-6
Height						
		36	36	31	34	35
Seed quality						
		1.9	1.9	3.1	2.0	2.2
Bacterial pustule						
		S	S	R	R	R
Cyst nematode						
		S	S	S	S	S
<i>M. incognita</i>						
		5.0	5.0	5.0	5.0	5.0
<i>M. arenaria</i>						
		2.5	2.5	2.7	4.5	3.0
Percent mottled seed						
		28.0	23.0	2.3	40.7	2.3
Flower color						
		P	P	W	W	W
Pubescence color						
		T	T	T	T	T
Pod wall color						
		Br	Tn	Br	Tn	Tn
Growth type						
		I	I	I	Det	I

Table 1 - (continued)

	S76-2109	S76-2203	S76-2229	V74-315	V76-398	V76-465	V76-482
Seed Yield - 1979							
East Coast	43.2+	40.4+	43.1+	41.4+	38.1+	36.6	35.4
Upper & Central South	47.1	47.8	43.9	47.9	47.4	46.4	46.1
Delta	42.1	41.4	42.9	43.7	40.2	41.5	42.2
West	36.1	33.8	31.8	37.1	34.8	33.2	32.9
- 1978-79							
East Coast							
Upper & Central South							
Delta							
West							
- 1977-79							
East Coast							
Upper & Central South							
Delta							
West							
Oil Content - 1979	19.1	19.4	19.8	20.1+	19.8	20.3+	19.6
- 1978-79							
- 1977-79							
Protein Content - 1979	41.1-	42.4	39.9-	40.8-	41.2-	41.7	41.0-
- 1978-79							
- 1977-79							
Seed size	12.1-	13.1-	14.9	13.1-	12.6-	13.4-	11.9-
Maturity index	+3	+3	-3	+4	+2	+1	0
Height	28	33	38	32	28	30	28
Seed quality	1.6	1.8	2.3	1.8	1.9	1.8	1.9
Bacterial pustule	R	R	R	S	S	R	R
Cyst nematode	S	S	S	S	S	S	S
<i>M. incognita</i>	5.0	5.0	5.0	5.0	4.0	5.0	5.0
<i>M. arenaria</i>	5.0	4.5	2.7	2.5	4.0	5.0	4.8
Percent mottled seed	8.0	5.0	0.0	5.0	15.7	18.0	0.0
Flower color	P	P	P	P	P	P	P
Pubescence color	G	G	G	G	T	T	G
Pod wall color	Tn	Tn	Tn	Tn	Br	Br	Tn
Growth type	Det	Det	I	Det	Det	Det	Det

Table 2 - Seed yield, in bushels per acre, for the strains in Uniform Group IV-S, 1979

Location	Columbus	Crawford	K1033	S76-2392	C1573	S76-2109	S76-2203
<u>EAST COAST</u>							
Queenstown, MD	32.4	40.2+	44.4+	40.1+	42.4+	40.8+	39.8+
*Georgetown, DE	36.9	36.0	39.4	37.6	37.3	40.2	38.9
Warsaw, VA	31.0	39.5+	45.9+	44.5+	44.4+	45.6+	40.9+
Mean	31.7	39.8	45.2	42.3	43.4	43.2	40.4
<u>UPPER AND CENTRAL SOUTH</u>							
Orange, VA	35.7	32.1	25.3-	34.4	29.4	39.1	36.6
Knoxville, TN	47.9	50.3	49.4	45.2	53.5+	54.7+	55.6+
**Eldorado, IL	-	45.7	51.4	54.2	51.9	52.6	53.5
Princeton, KY	49.2	49.6	54.5	49.8	46.9	47.5	51.1
Mean	44.3	44.0	43.1	43.1	43.3	47.1	47.8
<u>DELTA</u>							
Portageville, MO (A)	34.0	37.4	31.4	30.0	30.8	30.8	33.9
**Portageville, MO (B)	16.7	15.5	10.7	26.7+	13.8	18.8	24.4+
Martin, TN	44.5	53.2	60.6	59.2	53.4	59.7	54.6
Keiser, AR	26.2	26.0	39.6+	32.4	35.3+	31.9	31.8
Stoneville, MS (A)	49.3	51.8	44.6	46.7	53.4	46.1	45.4
Mean	38.5	42.1	44.1	42.1	43.2	42.1	41.4
<u>WEST</u>							
Columbus, KS	34.2	38.6+	39.2+	34.9	38.8+	38.2	33.7
**Clinton, MO	37.2	38.4	37.6	41.1	36.4	46.5	42.6
Bixby, OK	25.7	27.0	30.1	22.8	22.1	24.9	27.7
Bushland, TX	30.4	30.6	36.6+	27.7	20.2-	31.8	28.2
Lubbock, TX	41.1	43.1	42.9	43.1	36.1-	45.5+	44.2
Clovis, NM	40.1	40.0	37.5	37.7	30.0-	40.0	35.3-
Mean	34.3	35.8	46.6	33.3	29.5-	36.1	33.8

*Not included in mean, only two replications harvested.

**Not included in mean.

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

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

Table 2 - (continued)

Location	S76-2229	V74-315	V76-398	V76-465	V76-482	L.S.D. (.05)	C.V. (%)
<u>EAST COAST</u>							
Queenstown, MD	46.0+	43.4+	35.9+	34.4	32.1	3.2	5
Georgetown, DE	41.1	42.2+	33.5	34.4	35.8	4.9	6
Warsaw, VA	40.1+	39.4+	40.3+	38.9+	38.9+	2.8	4
Mean	43.1	41.4	38.1	36.6	35.4	6.0	
<u>UPPER AND CENTRAL SOUTH</u>							
Orange, VA	33.4	42.0	39.1	37.8	36.4	7.5	13
Knoxville, TN	51.1	53.5+	53.3+	51.5	50.3	5.1	6
Eldorado, IL	47.1	51.8	46.0	47.8	48.4	6.1	7
Princeton, KY	47.0	48.3	49.9	50.0	51.6	N.S.	11
Mean	43.9	47.9	47.4	46.4	46.1	N.S.	
<u>DELTA</u>							
Portageville, MO (A)	30.5	34.9	33.5	33.2	35.0	N.S.	14
Portageville, MO (B)	19.0	19.9	14.4	20.4	16.0	7.1	23
Martin, TN	50.6	58.1	57.7	57.7	60.6	N.S.	10
Keiser, AR	39.9+	34.0+	29.0	32.9	35.0	6.9	12
Stoneville, MS (A)	50.5	44.4	40.7-	43.3	38.3-	7.0	9
Mean	42.9	43.7	40.2	41.5	42.2	N.S.	
<u>WEST</u>							
Columbus, KS	37.8	42.2+	30.4	29.5-	32.8	4.0	7
Clinton, MO	44.2	45.0	48.5	44.7	44.3	7.3	13
Bixby, OK	26.9	32.7	24.8	25.5	27.1	N.S.	19
Bushland, TX	24.7-	28.1	28.5	28.1	26.1	5.1	11
Lubbock, TX	38.3	46.4+	45.6+	45.8+	43.5	4.0	6
Clovis, NM	31.3-	36.0	44.5	37.0	34.8-	4.4	7
Mean	31.8	37.1	34.8	33.2	32.9	4.0	

Table 3 - Chemical composition and seed size for the strains in Uniform Group IV-S, 1979

Location	Columbus	Crawford	K1033	S76-2392	C1573	S76-2109	S76-2203
<u>OIL PERCENTAGE</u>							
Queenstown, MD	19.2	19.1	19.8	19.0	19.6	18.2	18.7
Warsaw, VA	19.8	19.9	20.9	18.7	20.1	18.6	19.2
Orange, VA	19.9	20.1	20.1	20.1	19.7	19.6	20.6
Knoxville, TN	18.9	18.4	19.9	18.4	19.4	19.6	18.8
Princeton, KY	19.1	19.9	19.6	19.3	20.5	19.6	20.1
Portageville, MO (A)	21.0	19.7	21.6	20.1	22.0	20.3	21.5
Stoneville, MS (A)	21.0	20.6	21.8	19.1	20.6	19.5	20.1
Columbus, KS	18.1	18.1	19.5	18.0	18.1	17.6	17.2
Bixby, OK	18.0	19.1	19.6	18.3	19.1	19.0	17.4
Lubbock, TX	20.2	19.4	20.7	19.6	20.5	19.1	20.5
Mean	19.5	19.4	20.4+	19.1	20.0	19.1	19.4
<u>PROTEIN PERCENTAGE</u>							
Queenstown, MD	42.1	43.6	42.0	39.9	41.7	42.4	44.2
Warsaw, VA	42.8	42.7	41.0	41.7	42.8	42.7	43.1
Orange, VA	40.3	40.5	40.2	40.8	39.8	39.8	36.9
Knoxville, TN	45.3	44.1	41.5	43.5	42.3	40.8	45.6
Princeton, KY	41.9	41.2	40.1	39.2	38.7	39.4	39.5
Portageville, MO (A)	39.6	41.9	39.3	37.5	38.4	39.2	39.2
Stoneville, MS (A)	41.8	40.4	42.2	42.3	42.2	40.9	43.5
Columbus, KS	44.6	44.4	44.6	43.8	45.4	44.2	45.6
Bixby, OK	46.2	44.3	42.8	43.4	42.8	42.6	45.7
Lubbock, TX	41.7	42.1	42.6	40.6	41.8	39.2	40.9
Mean	42.6	42.5	41.6	41.3-	41.6	41.1-	42.4
<u>GRAMS PER 100 SEEDS</u>							
Queenstown, MD	13.7	14.2	15.8	12.2	16.4	11.0	12.9
Warsaw, VA	16.1	16.2	20.6	14.9	18.7	12.2	14.2
Orange, VA	16.0	15.0	18.7	13.3	17.0	12.3	13.0
Knoxville, TN	17.0	19.0	18.0	14.0	18.0	14.0	15.0
Princeton, KY	16.8	17.0	21.4	14.9	18.9	13.2	15.0
Portageville, MO (A)	13.8	14.8	17.6	13.2	15.8	11.9	13.4
Stoneville, MS (A)	15.2	14.8	20.0	12.4	16.8	13.0	13.0
Columbus, KS	12.7	14.3	18.7	12.0	15.6	10.5	10.3
Bixby, OK	11.4	12.6	14.5	9.9	13.0	9.5	10.2
Lubbock, TX	16.8	18.3	22.0	14.3	18.5	12.9	14.1
Mean	15.0	15.6	18.7+	13.1-	16.9+	12.1-	13.1-

Table 3 - (continued)

Location	S76-2229	V74-315	V76-398	V76-465	V76-482	L.S.D. (.05)
<u>OIL PERCENTAGE</u>						
Queenstown, MD	19.7	18.6	18.9	18.9	19.1	
Warsaw, VA	19.7	19.3	18.6	19.7	19.2	
Orange, VA	19.0	19.9	20.5	20.9	20.2	
Knoxville, TN	18.5	19.6	20.0	20.0	18.9	
Princeton, KY	20.0	20.8	19.7	20.8	20.0	
Portageville, MO (A)	21.6	22.0	21.3	21.6	20.4	
Stoneville, MS (A)	20.0	21.9	20.5	21.9	20.2	
Columbus, KS	19.3	19.3	18.9	18.5	18.1	
Bixby, OK	20.8	19.2	18.8	18.7	19.2	
Lubbock, TX	19.8	20.7	21.1	21.8	20.3	
Mean	19.8	20.1+	19.8	20.3+	19.6	0.5
<u>PROTEIN PERCENTAGE</u>						
Queenstown, MD	41.0	43.5	40.9	41.3	43.7	
Warsaw, VA	42.1	42.5	42.4	42.1	40.7	
Orange, VA	40.0	38.9	38.6	38.7	38.5	
Knoxville, TN	43.4	43.6	43.8	44.5	43.8	
Princeton, KY	38.7	38.8	40.4	40.7	40.7	
Portageville, MO (A)	33.8	34.2	37.2	38.7	36.6	
Stoneville, MS (A)	39.3	40.1	40.8	41.9	39.9	
Columbus, KS	40.7	43.0	44.3	44.3	43.7	
Bixby, OK	39.6	42.0	43.4	44.9	42.8	
Lubbock, TX	40.3	41.2	40.5	40.0	39.6	
Mean	39.9-	40.8-	41.2-	41.7	41.0-	1.1
<u>GRAMS PER 100 SEEDS</u>						
Queenstown, MD	15.7	12.5	12.1	12.2	11.1	
Warsaw, VA	16.1	12.8	14.1	15.1	12.4	
Orange, VA	15.0	13.3	12.3	13.3	11.0	
Knoxville, TN	16.0	14.0	14.0	16.0	14.0	
Princeton, KY	16.8	14.7	15.1	16.7	14.5	
Portageville, MO (A)	13.1	13.4	12.2	12.9	12.1	
Stoneville, MS (A)	14.6	13.0	12.8	13.0	12.0	
Columbus, KS	13.7	12.1	10.3	10.3	9.7	
Bixby, OK	11.9	10.8	9.2	10.2	8.8	
Lubbock, TX	15.6	13.9	14.0	14.6	13.1	
Mean	14.9	13.1-	12.6-	13.4-	11.9-	0.7

Table 4 - Relative maturity data, days earlier (-) or later (+) than Columbus, for the strains in Uniform Group IV-S, 1979

Location	Date planted	Columbus matured	Crawford	K1033	S76-2392	C1573	S76-2109
<u>EAST COAST</u>							
Queenstown, MD	5-29	10-10	0	0	+1	+1	+4
Georgetown, DE	6-8	10-10	0	0	+2	-2	+6
Warsaw, VA	5-30	10-11	-2	-3	+2	-4	0
Mean		10-10	-1	-1	+2	-2	+3
<u>UPPER AND CENTRAL SOUTH</u>							
Orange, VA	5-30	10-18	-9	-12	-2	-16	+1
Knoxville, TN	5-15	10-1	0	-6	0	-6	+3
*Princeton, KY	6-7	10-7	0	-3	+3	-3	-
Mean		10-10	-5	-9	-1	-11	+2
<u>DELTA</u>							
Portageville, MO (A)	5-10	9-30	0	-2	-1	-11	+3
Portageville, MO (B)	6-11	10-12	-4	-6	+1	-6	+4
Martin, TN	6-5	10-1	-4	-3	-3	-3	+6
Keiser, AR	6-6	10-4	-1	-1	-1	-7	+1
Stoneville, MS (A)	5-11	9-17	-1	-4	-4	-4	+1
Mean		10-1	-2	-3	-2	-6	+3
<u>WEST</u>							
Columbus, KS	6-15	9-30	0	-3	+1	-4	+3
Lubbock, TX	5-19	9-28	-4	-4	+3	-9	+5
Clovis, NM	5-10	10-3	-3	+1	+4	-9	+4
Mean		9-30	-2	-2	+3	-7	+4

*Not included in mean.

Table 4 - (continued)

Location	S76-2203	S76-2229	V74-315	V76-398	V76-465	V76-482
<u>EAST COAST</u>						
Queenstown, MD	+3	+2	+8	+1	+2	+3
Georgetown, DE	+5	-3	+7	+4	+3	+4
Warsaw, VA	+5	+1	+7	+1	+1	-1
Mean	+4	0	+7	+2	+2	+2
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	-1	-14	0	0	0	-7
Knoxville, TN	+2	+2	+8	+1	0	0
Princeton, KY	+3	+1	-	+2	+3	-
Mean	+2	-6	+4	+1	0	-4
<u>DELTA</u>						
Portageville, MO (A)	-1	0	+2	+2	+1	+2
Portageville, MO (B)	+3	-6	+3	+2	+3	-3
Martin, TN	+2	+3	+7	+4	+3	+7
Keiser, AR	+2	-4	+1	0	0	+2
Stoneville, MS (A)	-3	-1	+1	0	-2	0
Mean	+1	-2	+3	+2	+1	+1
<u>WEST</u>						
Columbus, KS	+3	-1	+2	0	0	0
Lubbock, TX	+3	-10	-1	+1	+3	+1
Clovis, NM	+4	+1	+3	+3	+2	-1
Mean	+3	-3	+1	+1	+2	0

Table 5 - Plant height for the strains in Uniform Group IV-S, 1979

Location	Columbus	Crawford	K1033	S76-2392	C1573	S76-2109
<u>EAST COAST</u>						
Queenstown, MD	38	41	36	42	43	34
Georgetown, DE	32	28	26	31	27	28
Warsaw, VA	45	43	42	42	43	37
Mean	38	37	35	38	38	33
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	31	31	23	36	27	27
Knoxville, TN	43	37	35	39	38	28
*Eldorado, IL	-	48	41	44	46	33
Princeton, KY	37	40	34	35	38	31
Mean	37	36	31	37	34	29
<u>DELTA</u>						
Portageville, MO (A)	40	39	28	28	34	22
Portageville, MO (B)	26	29	21	28	23	20
Martin, TN	40	45	38	38	43	33
Keiser, AR	30	31	29	27	34	21
Stoneville, MS (A)	44	45	35	29	41	24
Mean	36	38	30	30	35	24
<u>WEST</u>						
Columbus, KS	35	36	30	35	34	27
Clinton, MO	29	32	27	34	33	27
Bixby, OK	37	37	31	31	36	23
Bushland, TX	29	28	26	26	27	25
Lubbock, TX	32	32	28	30	32	25
Clovis, NM	27	26	23	26	26	23
Mean	32	32	28	30	31	25

*Not included in mean.

Table 5 - (continued)

Location	S76-2203	S76-2229	V74-315	V76-398	V76-465	V76-482
<u>EAST COAST</u>						
Queenstown, MD	38	45	38	34	41	37
Georgetown, DE	30	28	29	26	28	27
Warsaw, VA	39	52	41	33	37	33
Mean	36	42	36	31	35	32
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	33	32	32	27	31	30
Knoxville, TN	36	42	35	28	31	28
Eldorado, IL	37	49	39	34	36	36
Princeton, KY	35	39	35	31	33	31
Mean	35	38	34	29	32	30
<u>DELTA</u>						
Portageville, MO (A)	29	37	25	25	23	22
Portageville, MO (B)	26	22	17	18	18	19
Martin, TN	34	51	41	34	36	33
Keiser, AR	28	33	21	22	24	20
Stoneville, MS (A)	31	45	25	25	25	21
Mean	30	38	26	25	25	23
<u>WEST</u>						
Columbus, KS	35	36	34	29	29	28
Clinton, MO	34	37	34	28	28	28
Bixby, OK	28	35	30	25	27	24
Bushland, TX	26	30	28	28	26	26
Lubbock, TX	29	35	25	24	25	24
Clovis, NM	25	27	27	24	24	25
Mean	30	33	30	26	27	26

Table 6 - Lodging scores for the strains in Uniform Group IV-S, 1979

Location	Columbus	Crawford	K1033	S76-2392	C1573	S76-2109
<u>EAST COAST</u>						
Queenstown, MD	3.8	3.3	3.0	3.7	3.3	3.2
Georgetown, DE	1.5	1.5	1.5	2.3	1.5	1.5
Warsaw, VA	3.0	1.9	1.9	3.1	1.9	1.7
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	1.3	1.3	1.0	2.0	1.0	1.0
Knoxville, TN	3.0	3.0	2.0	3.0	3.0	1.0
Eldorado, IL	-	2.7	2.1	4.3	2.7	1.2
Princeton, KY	2.3	2.3	1.0	3.3	1.7	1.0
<u>DELTA</u>						
Portageville, MO (A)	2.2	2.5	1.3	1.8	1.5	1.0
Portageville, MO (B)	2.0	2.0	1.5	2.0	2.0	1.5
Martin, TN	2.0	3.0	1.0	4.0	2.0	2.0
Keiser, AR	2.0	2.0	1.6	2.6	2.0	1.6
Stoneville, MS (A)	3.0	2.7	2.0	2.7	3.0	2.0
<u>WEST</u>						
Columbus, KS	1.1	1.1	1.1	1.9	1.1	1.0
Clinton, MO	1.3	1.6	1.0	3.8	1.3	1.3
Bixby, OK	3.0	3.0	2.0	2.5	3.0	1.0
Bushland, TX	1.7	1.5	1.5	4.0	2.2	1.5
Lubbock, TX	2.0	2.5	1.5	2.3	2.0	1.5
Clovis, NM	1.3	1.0	1.0	4.0	1.3	1.3

Table 6 - (continued)

Location	S76-2203	S76-2229	V74-315	V76-398	V76-465	V76-482
<u>EAST COAST</u>						
Queenstown, MD	3.5	3.5	3.5	3.5	4.0	4.0
Georgetown, DE	1.8	1.5	2.3	1.5	2.3	2.3
Warsaw, VA	2.6	2.6	2.7	1.6	2.4	2.8
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	2.3	1.0	1.3	1.3	2.0	3.0
Knoxville, TN	2.0	2.0	2.0	2.0	3.0	4.0
Eldorado, IL	3.3	2.8	2.8	2.3	3.4	2.9
Princeton, KY	2.0	2.7	2.7	1.7	4.0	3.0
<u>DELTA</u>						
Portageville, MO (A)	1.7	1.5	1.2	1.2	1.3	1.2
Portageville, MO (B)	2.0	1.6	1.0	1.0	1.5	1.5
Martin, TN	2.0	3.0	3.0	3.0	3.0	5.0
Keiser, AR	2.6	2.0	1.6	1.0	2.0	1.6
Stoneville, MS (A)	2.3	3.0	2.0	2.0	2.0	2.0
<u>WEST</u>						
Columbus, KS	1.4	1.3	1.2	1.1	1.1	1.1
Clinton, MO	2.6	2.0	2.5	1.3	2.5	2.3
Bixby, OK	2.5	1.0	2.0	1.5	2.5	2.0
Bushland, TX	3.0	2.2	3.3	1.5	3.0	3.0
Lubbock, TX	2.0	1.5	1.5	1.2	1.5	1.7
Clovis, NM	4.0	2.0	3.0	2.0	3.0	2.7

Table 7 - Seed quality scores for the strains in Uniform Group IV-S, 1979

Location	Columbus	Crawford	K1033	S76-2392	C1573	S76-2109
<u>EAST COAST</u>						
Queenstown, MD	3.0	3.0	3.8	3.5	2.7	2.0
Georgetown, DE	2.3	2.3	3.0	2.5	2.5	1.5
Warsaw, VA	1.8	2.3	3.8	2.0	2.5	1.5
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	1.0	1.0	2.7	1.0	1.0	1.0
Knoxville, TN	2.0	2.0	4.0	2.0	3.0	1.0
*Eldorado, IL	-	1.7	3.3	2.0	2.2	2.3
<u>DELTA</u>						
Portageville, MO (A)	2.0	2.0	3.0	2.0	2.5	1.5
Portageville, MO (B)	1.5	1.6	2.0	2.0	2.0	2.0
Martin, TN	2.0	3.0	4.0	2.0	3.0	2.0
Keiser, AR	1.5	1.0	2.0	1.5	1.5	1.0
Stoneville, MS (A)	2.0	2.0	3.0	2.0	2.0	2.0
<u>WEST</u>						
Columbus, KS	1.5	1.5	2.0	2.0	2.0	1.5
Clinton, MO	1.8	2.0	3.0	2.5	2.0	2.0
Bushland, TX	3.0	2.0	3.5	2.0	2.0	2.5
Lubbock, TX	1.7	1.2	3.0	1.5	1.5	1.5

*Not included in mean.

Table 7 - (continued)

Location	S76-2203	S76-2229	V74-315	V76-398	V76-465	V76-482
<u>EAST COAST</u>						
Queenstown, MD	2.3	3.0	2.0	2.5	2.5	2.7
Georgetown, DE	2.0	2.5	1.5	2.0	2.0	2.0
Warsaw, VA	1.6	2.8	1.2	1.2	1.5	1.5
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	1.0	2.0	1.0	1.0	1.0	1.0
Knoxville, TN	2.0	2.0	2.0	3.0	2.0	2.0
Eldorado, IL	1.7	2.0	1.7	1.3	1.5	1.3
<u>DELTA</u>						
Portageville, MO (A)	1.5	2.0	2.5	2.0	2.0	2.0
Portageville, MO (B)	2.0	2.0	2.0	2.0	1.5	2.0
Martin, TN	2.0	3.0	2.0	2.0	2.0	3.0
Keiser, AR	1.5	1.5	1.5	1.0	1.5	1.0
Stoneville, MS (A)	2.0	3.0	2.0	2.0	2.0	2.0
<u>WEST</u>						
Columbus, KS	2.0	2.0	1.5	1.5	1.5	2.0
Clinton, MO	1.8	2.3	2.0	1.8	2.0	1.5
Bushland, TX	2.5	2.5	2.5	2.5	2.5	2.5
Lubbock, TX	1.5	1.2	1.5	1.5	1.5	1.5

UNIFORM GROUP V

1979

<u>Variety or strain</u>	<u>Parentage</u>	<u>Generation composited</u>
1. Essex	Lee X S5-7075	F ₆
2. Forrest	Dyer X Bragg	F ₅
3. Bedford	Forrest(2) X (D68-18 X PI 88788)	F ₄
4. R74-511	R66-873 X Mack	F ₄
5. D75-12035	Forrest(2) X PI 229358	F ₅
6. D76-9375	Forrest X Centennial	F ₅
7. J74-51	Forrest(2) X (D68-18 X PI 88788)	F ₄
8. N76-098	N70-1741 X Essex	F ₅
9. N76-683	N70-1501 X N70-2173	F ₅
10. R76-45	Forrest X Mack	F ₅
11. S76-2120	D67-3297 X Essex	F ₄
12. V75-345	Essex X Shore	F ₄

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.

R66-873 is a selection from Jackson X Semmes.

N70-1741 is a selection from Dare X D65-6765. D65-6765 was grown in Uniform Group VII in 1968.

N70-1501 is a selection from Dare X D65-6765.

N70-2173 is a selection from Hampton X Ransom.

D67-3297 is a selection from Hill(2) X PI 171450.

Results of 32 Uniform Group V nurseries are summarized in Tables 8 through 14. Table 8 gives a general summary of performance along with characteristics of each strain. Three-year data are reported for Essex, Forrest, and Bedford. Two-year data are reported for these three varieties and R74-511.

Differences among strains were significant (odds 19:1 or greater) at 19 locations. Because of high variety X location interaction, differences among strains for seed yield were nonsignificant within any of the production regions.

Seven varieties and strains were resistant to cyst nematode race 3. Bedford and J74-51 were also resistant to cyst nematode race 4. In addition to having resistance to cyst nematodes, Forrest and Bedford have good resistance to the two species of root-knot nematode. D73-9375 appeared to be segregating in reaction to *M. arenaria*. D76-12035 was selected for resistance to feeding by soybean looper. It is resistant to cyst nematode race 3 but is segregating in reaction to bacterial pustule.

Essex and the breeding lines R74-511, N76-098, N76-683, S76-2120, and V75-345 were essentially free of mottled seed at several East Coast locations.

Table 8 - General summary of performance of the strains in Uniform Group V, 1979

	No. of locations	Essex	Forrest	Bedford	R74-511	D75-12035
Seed Yield - 1979						
East Coast	4	40.3	40.4	35.9	38.5	39.4
Upper & Central South	10	43.4	44.7	41.3	41.6	39.6
Delta	7	39.6	38.9	38.4	39.8	37.0
West	6	40.7	40.4	38.3	41.5	37.0
1978-79						
East Coast		44.9	41.5	38.9	42.1	
Upper & Central South		42.4	40.9	37.8	40.1	
Delta		38.0	38.4	39.2	39.4	
West		39.7	40.7	38.4	41.8	
1977-79						
East Coast		45.1	42.8	38.9		
Upper & Central South		42.6	40.9	38.4		
Delta		38.5	39.2	39.7		
West		41.7	41.6	39.5		
Oil Content - 1979						
		19.8	19.6	19.8	20.1	19.0-
1978-79		20.4	20.6	20.4	20.8	
1977-79		20.7	20.7	20.5		
Protein Content - 1979						
		41.8	39.5-	38.1-	39.6-	41.6
1978-79		42.3	39.9	38.9	40.3	
1977-79		41.8	39.9	38.9		
Seed size		12.7	12.6	12.6	13.7	10.4-
Maturity index		10-5	+4	+5	+2	+2
Height		27	34	36	30	32
Seed quality		1.9	1.8	1.9	1.8	1.9
Bacterial pustule		R	R	R	R	Seg
Cyst nematode race 3		S	R	R	R	R
Cyst nematode race 4		S	S	R	S	S
<i>M. incognita</i>		5.0	2.5	2.5	5.0	5.0
<i>M. arenaria</i>		5.0	1.8	2.2	2.3	2.0
Percent mottled seed		0	53	40	5	3.5
Flower color		P	W	W	P	W
Pubescence color		G	T	T	G	T
Pod wall color		Tn	Tn	Tn	Tn	Br

Table 8 - (continued)

	D76-9375	J74-51	N76-098	N76-683	R76-45	S76-2120	V75-345
Seed Yield - 1979							
East Coast	39.1	37.8	40.7	40.7	37.1	37.2	39.6
Upper & Central South	43.7	41.4	43.1	42.5	40.8	42.6	45.6
Delta	38.8	33.9	38.9	36.7	38.2	38.2	37.8
West	39.4	35.3	37.9	38.2	38.5	38.6	42.0
1978-79							
East Coast							
Upper & Central South							
Delta							
West							
1977-79							
East Coast							
Upper & Central South							
Delta							
West							
Oil Content - 1979	20.2	20.6+	19.9	19.9	20.3	20.0	19.9
1978-79							
1977-79							
Protein Content - 1979	38.6-	38.8-	41.9	40.0-	39.3-	39.2-	40.1
1978-79							
1977-79							
Seed size	12.7	13.7	13.8+	14.8+	12.5	11.8	14.9+
Maturity index	+6	0	-1	+5	+4	-2	+4
Height	36	36	26	36	34	30	36
Seed quality	1.8	2.0	1.8	1.8	1.8	1.9	1.8
Bacterial pustule	R	R	R	R	R	R	R
Cyst nematode race 3	R	R	S	S	R	S	S
Cyst nematode race 4	S	R	S	S	S	S	S
<i>M. incognita</i>	2.5	3.0	5.0	5.0	5.0	5.0	5.0
<i>M. arenaria</i>	Seg	2.0	5.0	5.0	4.0	5.0	5.0
Percent mottled seed	27	32	0	3	25	1	0
Flower color	W	W	W	W	W	P	P
Pubescence color	T	T	G	T	T	G	G
Pod wall color	Tn	Tn	Tn	Tn	Br	Tn	Br

Table 9 - Seed yield, in bushels per acre, for the strains in Uniform Group V, 1979

Location	Essex	Forrest	Bedford	R74-511	D75-12035	D76-9375	J74-51
<u>EAST COAST</u>							
Queenstown, MD	38.4	37.7	33.8-	34.5-	39.5	37.6	39.4
*Georgetown, DE	47.5	47.5	42.8	44.3	42.7	46.1	53.2
Warsaw, VA	41.8	39.3-	33.4-	38.6	42.4	39.1	39.5
Holland, VA	41.1	46.5	42.9	45.3	44.8	40.3	39.7
Plymouth, NC	39.7	37.9	33.4	35.5	31.1	39.3	32.8
Mean	40.3	40.4	35.9	38.5	39.4	39.1	37.8
<u>SOUTHEAST</u>							
Jay, FL	26.5	30.2	18.1-	35.0+	29.5	30.9	16.5-
<u>UPPER AND CENTRAL SOUTH</u>							
Orange, VA	39.0	37.1	30.8-	36.9	33.5-	28.9-	35.8
Knoxville, TN	54.3	47.4-	48.2	44.5-	47.2-	48.7	53.2
Clemson, SC	30.9	36.8	35.4	31.3	34.6	38.4	31.3
Calhoun, GA	44.0	39.3	39.5	48.8	42.1	46.2	43.5
Athens, GA	37.9	42.5	33.2	33.5	32.9	34.7	29.9
Belle Mina, AL	44.3	45.1	40.6	38.1	43.0	43.1	44.6
Princeton, KY	48.3	46.1	38.6-	47.4	41.8-	42.3-	37.8-
Woodland Mills, TN	23.6	34.5+	46.7+	32.4+	31.2+	42.6+	37.7+
Martin, TN	68.7	73.6	57.2-	63.2	51.7-	62.6	57.1-
Jackson, TN	43.5	44.5	42.6	39.7	37.7	49.7	43.0
Mean	43.4	44.7	41.3	41.6	39.6	43.7	41.4
<u>DELTA</u>							
Portageville, MO (A)	35.7	37.0	35.3	32.8	35.4	35.1	33.7
Portageville, MO (B)	28.9	30.4	26.4	28.4	27.1	31.8	23.4
Keiser, AR	35.8	34.2	35.6	42.5+	35.0	40.8	35.9
Jonesboro, AR	23.7	22.4	27.8	24.2	23.7	19.8	21.3
**Goodwin, AR	18.7	18.3	20.1	21.0	20.3	28.0	18.7
Stoneville, MS (A)	45.5	49.4	51.3	54.9+	46.2	49.9	42.6
Stoneville, MS (B)	49.7	45.5	44.8	46.4	43.7	44.9	42.7
St. Joseph, LA	62.8	59.0	51.2-	54.6-	52.2-	55.7	42.2-
Mean	39.6	38.9	38.4	39.8	37.0	38.8	33.9
<u>WEST</u>							
**Clinton, MO	43.1	43.1	29.2	38.4	37.6	42.6	33.8
Columbus, KS	34.0	27.9-	25.8-	30.4-	28.6-	23.1-	29.2-
Pine Bluff, AR	62.3	59.9	48.8	58.7	47.4	56.8	40.4
Stuttgart, AR	36.5	44.4+	39.7	40.0	41.4+	46.8+	40.5+
Bossier City, LA	43.3	43.6	38.9	48.1	39.7	40.8	37.7
**Bixby, OK	30.3	21.7	30.0	22.1	26.4	30.3	23.7
Lubbock, TX	49.2	42.4-	45.4	45.5	39.5-	37.8-	43.4
Beaumont, TX	18.6	24.0	31.5+	26.2	25.5	30.8+	20.7
Mean	40.7	40.4	38.3	41.5	37.0	39.4	35.3

*Not included in mean - only 2 replications harvested.

**Not included in mean.

Table 9 - (continued)

Location	N76-098	N76-683	R76-45	S76-2120	V75-345	L.S.D. (.05)	C.V. (%)
<u>EAST COAST</u>							
Queenstown, MD	41.7	38.1	34.3-	39.3	33.1-	3.7	6
Georgetown, DE	51.5	43.3	50.4	47.9	45.0	N.S.	11
Warsaw, VA	45.5	38.1	41.4	38.1	48.2+	4.8	7
Holland, VA	42.7	46.4	36.5	38.1	40.7	N.S.	12
Plymouth, NC	32.8	40.4	36.1	33.3	36.3	N.S.	12
Mean	40.7	40.7	37.1	37.2	39.6		
<u>SOUTHEAST</u>							
Jay, FL	29.2	26.9	31.9	29.6	31.9	6.8	14
<u>UPPER AND CENTRAL SOUTH</u>							
Orange, VA	40.4	31.7-	35.4	41.6	35.6	4.2	7
Knoxville, TN	54.4	54.2	48.0	56.3	54.3	6.3	7
Clemson, SC	39.3	32.6	35.8	36.6	39.2	N.S.	18
Calhoun, GA	50.1	52.8	44.6	45.1	49.9	N.S.	13
Athens, GA	27.4	34.8	33.1	30.8	35.5	N.S.	15
Belle Mina, AL	49.6	41.1	40.5	50.5	48.9	N.S.	16
Princeton, KY	50.4	50.3	43.4-	44.6	49.2	4.8	6
Woodland Mills, TN	22.2	32.6+	26.7	24.8	29.0	7.5	14
Martin, TN	59.7-	56.6-	64.4	57.7-	71.8	8.2	8
Jackson, TN	39.2	38.5	36.4-	37.6	42.8	6.5	9
Mean	43.1	42.5	40.8	42.6	45.6		
<u>DELTA</u>							
Portageville, MO (A)	34.1	33.0	33.3	30.8	33.6	N.S.	7
Portageville, MO (B)	27.7	30.6	30.9	30.6	26.6	N.S.	10
Keiser, AR	38.3	41.2+	38.2	38.1	33.6	5.2	8
Jonesboro, AR	20.6	14.8-	22.1	17.7-	18.3	5.6	18
Goodwin, AR	19.4	24.1	18.2	20.9	20.7	N.S.	22
Stoneville, MS (A)	54.2+	45.7	49.4	52.9+	51.0	6.7	8
Stoneville, MS (B)	45.5	42.6	44.3	44.8	51.8	N.S.	7
St. Joseph, LA	58.0	56.2	54.2-	59.4	56.2	7.5	8
Mean	38.9	36.7	38.2	38.2	37.8		
<u>WEST</u>							
Clinton, MO	45.2	37.5	44.6	45.2	47.4	6.6	11
Columbus, KS	30.7-	26.4-	24.9-	31.9	34.3-	2.3	5
Pine Bluff, AR	49.4	50.9	49.0	52.0	64.0	N.S.	17
Stuttgart, AR	36.9	33.5	42.7+	36.1	36.9	3.2	5
Bossier City, LA	46.9	49.2	47.8	47.1	44.5	6.1	8
Bixby, OK	31.5	27.8	31.4	28.6	29.2	N.S.	25
Lubbock, TX	44.9	39.9-	40.0-	51.4	44.2	5.9	8
Beaumont, TX	18.8	29.3+	26.8+	12.7	27.8+	7.6	18
Mean	37.9	38.2	38.5	38.6	42.0		

Table 10 - Chemical composition and seed size for the strains in Uniform Group V, 1979

Location	Essex	Forrest	Bedford	R74-511	D75-12035	D76-9375	J74-51
<u>OIL PERCENTAGE</u>							
Queenstown, MD	19.2	18.7	18.2	19.3	17.9	19.0	19.0
Warsaw, VA	19.6	19.5	18.6	19.8	18.0	19.3	19.9
Plymouth, NC	19.2	20.3	19.4	20.7	18.4	20.7	20.0
Calhoun, GA	19.8	19.4	19.9	20.7	19.3	20.3	21.2
Jackson, TN	20.6	20.4	22.0	20.6	22.0	19.9	22.7
Portageville, MO (A)	20.8	19.7	21.0	20.0	19.2	20.2	21.4
Keiser, AR	20.0	19.9	20.4	20.7	19.8	21.3	20.4
Stoneville, MS (B)	19.5	19.7	20.2	19.9	18.9	20.1	20.9
Stuttgart, AR	18.0	20.1	19.1	19.1	18.3	21.0	19.2
Lubbock, TX	20.8	18.7	19.3	20.1	18.6	19.7	20.9
Mean	19.8	19.6	19.8	20.1	19.0-	20.2	20.6+
<u>PROTEIN PERCENTAGE</u>							
Queenstown, MD	42.6	41.7	39.1	39.8	42.2	38.8	39.8
Warsaw, VA	43.0	39.7	39.6	41.1	42.1	38.6	40.1
Plymouth, NC	44.9	41.0	40.3	40.3	43.2	41.9	40.1
Calhoun, GA	41.5	40.5	37.7	39.8	42.0	38.8	39.7
Jackson, TN	39.5	34.4	34.9	36.0	35.0	38.8	33.9
Portageville, MO (A)	39.8	38.4	38.4	38.5	41.4	35.8	37.3
Keiser, AR	40.7	39.5	35.6	39.1	41.1	37.6	39.1
Stoneville, MS (B)	42.5	39.7	38.1	40.8	43.6	38.8	40.3
Stuttgart, AR	43.2	39.1	38.5	43.2	42.8	38.9	39.8
Lubbock, TX	40.1	40.6	38.8	37.7	42.3	38.1	37.7
Mean	41.8	39.5-	38.1-	39.6-	41.6	38.6-	38.8-
<u>GRAMS PER 100 SEEDS</u>							
Queenstown, MD	11.3	12.4	12.2	13.2	11.0	12.1	13.4
Warsaw, VA	14.0	14.1	13.7	15.8	12.2	13.7	16.3
Plymouth, NC	15.0	15.3	16.1	15.4	11.7	15.5	16.4
Calhoun, GA	13.5	13.2	13.2	15.7	11.4	14.4	15.2
Jackson, TN	12.1	13.1	12.3	12.4	9.9	12.7	12.6
Portageville, MO (A)	13.0	12.7	11.5	13.6	10.6	12.4	13.3
Keiser, AR	11.3	10.8	11.4	12.3	8.8	11.6	11.6
Stoneville, MS (B)	12.2	11.4	11.4	13.4	9.8	10.6	12.8
Stuttgart, AR	11.7	12.0	13.0	12.0	9.7	12.0	13.3
Lubbock, TX	13.2	11.4	11.1	12.9	9.3	11.5	12.4
Mean	12.7	12.6	12.6	13.7	10.4-	12.7	13.7

Table 10 - (continued)

Location	N76-098	N76-683	R76-45	S76-2120	V75-345	L.S.D. (.05)
<u>OIL PERCENTAGE</u>						
Queenstown, MD	18.5	19.0	18.4	18.8	18.9	
Warsaw, VA	20.1	18.7	20.0	19.2	19.2	
Plymouth, NC	20.3	18.9	20.7	20.0	19.4	
Calhoun, GA	20.5	19.7	21.0	20.1	19.9	
Jackson, TN	21.3	21.5	21.3	21.2	20.8	
Portageville, MO (A)	19.5	20.1	20.0	21.0	19.7	
Keiser, AR	19.8	21.3	20.2	20.8	20.4	
Stoneville, MS (B)	19.3	20.0	20.6	20.0	19.8	
Stuttgart, AR	19.4	18.7	19.7	18.6	19.8	
Lubbock, TX	19.9	21.3	20.7	19.9	21.3	
Mean	19.9	19.9	20.3	20.0	19.9	0.5
<u>PROTEIN PERCENTAGE</u>						
Queenstown, MD	42.2	39.9	40.3	40.8	40.1	
Warsaw, VA	42.7	41.3	39.2	39.6	40.7	
Plymouth, NC	43.3	42.9	40.3	39.4	43.6	
Calhoun, GA	41.6	40.8	40.3	40.4	39.9	
Jackson, TN	38.0	35.2	36.1	35.1	37.3	
Portageville, MO (A)	40.6	39.2	36.4	36.6	39.3	
Keiser, AR	41.8	39.2	40.4	38.9	39.8	
Stoneville, MS (B)	42.4	40.9	40.1	40.6	41.5	
Stuttgart, AR	44.7	41.2	41.6	42.2	41.0	
Lubbock, TX	41.6	39.0	37.9	38.4	38.0	
Mean	41.9	40.0-	39.3-	39.2-	40.1	1.7
<u>GRAMS PER 100 SEEDS</u>						
Queenstown, MD	13.1	14.5	11.8	11.0	13.2	
Warsaw, VA	15.4	16.4	13.9	12.7	17.2	
Plymouth, NC	16.7	17.6	15.2	14.1	18.2	
Calhoun, GA	15.1	16.0	13.3	13.0	16.9	
Jackson, TN	13.4	14.0	12.6	12.1	14.6	
Portageville, MO (A)	13.0	14.9	12.9	12.1	14.8	
Keiser, AR	12.0	13.3	10.9	10.5	12.4	
Stoneville, MS (B)	12.4	14.0	11.6	10.4	14.4	
Stuttgart, AR	12.0	13.0	12.0	10.0	12.7	
Lubbock, TX	15.0	14.3	11.2	12.0	14.6	
Mean	13.8+	14.8+	12.5	11.8	14.9+	1.0

Table 11 - Relative maturity, days earlier (-) or later (+) than Essex, for the strains in Uniform Group V, 1979

Location	Date planted	Essex matured	Forrest	Bedford	R74-511	D75-12035
<u>EAST COAST</u>						
Queenstown, MD	5-29	10-18	+5	+6	+2	+5
Georgetown, DE	6-8	10-20	+4	+8	+3	+3
Warsaw, VA	5-30	10-20	+6	+8	+4	+7
Holland, VA	6-8	10-17	+5	+7	+1	+3
Plymouth, NC	6-8	10-22	+4	+4	-8	0
Mean		10-19	+5	+7	0	+2
<u>SOUTHEAST</u>						
Jay, FL	5-29	9-26	+5	+2	+2	+2
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	5-30	10-22	0	0	0	0
Knoxville, TN	5-15	10-12	+4	+6	+2	+4
Clemson, SC	5-18	10-2	+3	+6	+2	+3
Calhoun, GA	6-17	10-8	0	+7	-3	+7
Athens, GA	5-7	9-22	+10	+10	+10	+7
Belle Mina, AL	5-8	10-1	+1	+2	+1	+1
Martin, TN	6-5	10-13	+4	+7	+5	+1
Jackson, TN	5-17	9-28	+10	+12	+3	+4
Mean		10-6	+4	+6	+3	+3
<u>DELTA</u>						
Portageville, MO (A)	5-10	10-13	0	-14	0	-15
Keiser, AR	6-6	10-7	+5	+7	+5	+4
Jonesboro, AR	6-9	10-5	+9	+10	+5	+6
Goodwin, AR	6-15	10-9	+4	+6	+1	+2
Stoneville, MS (A)	5-11	9-26	+4	+7	+3	+1
Stoneville, MS (B)	6-12	10-8	+1	+2	0	+1
St. Joseph, LA	5-21	9-23	+1	+3	0	0
Mean		10-4	+3	+3	+2	0
<u>WEST</u>						
Columbus, KS	6-15	10-4	+2	+6	+4	+1
Pine Bluff, AR	5-17	10-6	+1	0	-1	+1
Stuttgart, AR	6-11	9-30	+7	+11	+3	+5
Bossier City, LA	5-22	9-22	+6	+2	+3	-2
Lubbock, TX	5-19	10-4	+3	+6	+1	+1
Beaumont, TX	5-26	10-1	+2	+3	-3	-2
Mean		10-1	+4	+5	+1	+1

Table 11 - (continued)

Location	D76-9375	J74-51	N76-098	N76-683	R76-45	S76-2120	V75-345
<u>EAST COAST</u>							
Queenstown, MD	+5	0	+1	+5	+3	0	+6
Georgetown, DE	+6	+1	0	+3	+7	+2	+4
Warsaw, VA	+9	0	+2	+5	+3	0	+5
Holland, VA	+7	0	0	+5	+6	-2	+5
Plymouth, NC	+2	-8	-8	+4	+2	-8	0
Mean	+6	-1	-1	+4	+4	-2	+4
<u>SOUTHEAST</u>							
Jay, FL	+5	+5	+2	+2	+5	0	+2
<u>UPPER AND CENTRAL SOUTH</u>							
Orange, VA	0	0	+4	0	0	0	0
Knoxville, TN	+6	-2	-4	+5	+3	-3	+4
Clemson, SC	+6	0	0	+5	+4	-1	+5
Calhoun, GA	+11	0	0	+7	+7	0	+7
Athens, GA	+12	-4	-5	+10	+9	-5	+10
Belle Mina, AL	+2	-2	-3	+4	0	-3	+4
Martin, TN	+8	+1	-5	+8	+8	-5	+6
Jackson, TN	+14	+4	0	+15	+8	0	+6
Mean	+8	0	-2	+7	+5	-2	+5
<u>DELTA</u>							
Portageville, MO (A)	+1	0	0	+1	0	0	+1
Keiser, AR	+9	-2	-3	+11	+5	-3	+5
Jonesboro, AR	+10	+2	+1	+10	+8	+1	+7
Goodwin, AR	+6	+1	-3	+5	+4	-2	+3
Stoneville, MS (A)	+7	-5	-4	+4	+3	-4	+7
Stoneville, MS (B)	+4	-6	-6	+2	+1	-6	+2
St. Joseph, LA	+4	-4	-6	+6	+2	-4	+5
Mean	+6	-2	-3	+6	+3	-3	+4
<u>WEST</u>							
Columbus, KS	+6	+1	-2	+5	+2	-1	+3
Pine Bluff, AR	+2	-3	-2	+2	+1	-5	+1
Stuttgart, AR	+10	+2	-2	+9	+6	-2	+6
Bossier City, LA	+6	-2	+3	+8	+7	+2	+3
Lubbock, TX	+6	+1	+1	+1	+3	+1	0
Beaumont, TX	+3	+1	-4	+4	+3	-4	+5
Mean	+6	0	-1	+5	+4	-2	+3

Table 12 - Plant height for the strains in Uniform Group V, 1979

Location	Essex	Forrest	Bedford	R74-511	D75-12035	D76-9375
<u>EAST COAST</u>						
Queenstown, MD	32	43	45	35	39	45
Georgetown, DE	33	37	36	29	36	36
Warsaw, VA	36	40	39	39	39	41
Holland, VA	27	35	38	31	34	33
Plymouth, NC	29	39	39	34	33	41
Mean	31	39	39	34	36	39
<u>SOUTHEAST</u>						
Jay, FL	22	33	32	29	26	30
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	29	35	37	29	34	38
Knoxville, TN	32	39	42	39	36	38
Clemson, SC	20	28	37	26	28	32
Calhoun, GA	24	27	32	25	32	31
Athens, GA	25	35	37	26	32	36
Belle Mina, AL	33	40	51	38	43	49
Princeton, KY	31	39	40	34	36	38
Martin, TN	37	45	49	39	41	45
Jackson, TN	34	43	47	37	41	44
Mean	29	37	41	33	36	39
<u>DELTA</u>						
Portageville, MO (A)	25	30	24	27	21	34
Portageville, MO (B)	25	28	23	19	27	25
Keiser, AR	23	28	34	28	31	35
Jonesboro, AR	29	37	41	32	36	37
Goodwin, AR	23	30	32	27	30	36
Stoneville, MS (A)	25	30	36	28	27	37
Stoneville, MS (B)	27	29	30	27	29	33
St. Joseph, LA	30	32	41	26	36	34
Mean	26	31	33	27	30	34
<u>WEST</u>						
Clinton, MO	29	34	37	27	32	37
Columbus, KS	29	32	43	35	38	42
Pine Bluff, AR	37	37	38	35	34	41
Stuttgart, AR	26	37	41	28	33	40
Bossier City, LA	27	34	30	29	35	35
Bixby, OK	22	31	37	27	27	35
Lubbock, TX	25	33	34	28	31	35
Beaumont, TX	15	19	24	16	21	19
Mean	26	32	36	28	31	36

Table 12 - (continued)

Location	J74-51	N76-098	N76-683	R76-45	S76-2120	V75-345
<u>EAST COAST</u>						
Queenstown, MD	44	34	42	38	33	39
Georgetown, DE	43	32	36	36	33	37
Warsaw, VA	41	36	42	41	39	42
Holland, VA	33	28	36	35	29	38
Plymouth, NC	40	27	40	39	34	31
Mean	40	31	39	38	34	37
<u>SOUTHEAST</u>						
Jay, FL	32	21	33	30	27	35
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	40	27	37	31	31	36
Knoxville, TN	44	34	43	36	38	39
Clemson, SC	34	26	30	31	28	31
Calhoun, GA	34	25	30	32	28	28
Athens, GA	36	24	34	34	28	32
Belle Mina, AL	47	34	43	43	38	46
Princeton, KY	41	32	41	36	33	39
Martin, TN	47	36	42	40	35	42
Jackson, TN	48	36	48	44	35	45
Mean	41	30	39	36	33	38
<u>DELTA</u>						
Portageville, MO (A)	36	24	34	28	26	34
Portageville, MO (B)	30	20	30	27	28	26
Keiser, AR	33	24	36	30	27	31
Jonesboro, AR	38	24	42	34	32	34
Goodwin, AR	36	23	30	30	26	32
Stoneville, MS (A)	36	23	36	31	27	37
Stoneville, MS (B)	30	25	32	31	27	31
St. Joseph, LA	33	31	36	34	31	40
Mean	34	24	35	31	28	33
<u>WEST</u>						
Clinton, MO	36	29	39	36	32	37
Columbus, KS	41	28	42	38	34	40
Pine Bluff, AR	37	36	41	37	32	48
Stuttgart, AR	35	27	39	33	29	36
Bossier City, LA	34	25	34	39	30	34
Bixby, OK	34	23	31	35	25	33
Lubbock, TX	31	27	33	31	29	32
Beaumont, TX	23	16	22	23	14	23
Mean	34	26	35	34	28	35

Table 13 - Lodging scores for the strains in Uniform Group V, 1979

Location	Essex	Forrest	Bedford	R74-511	D75-12035	D76-9375
<u>EAST COAST</u>						
Queenstown, MD	3.3	3.8	3.8	3.5	4.0	3.7
Georgetown, DE	2.0	2.3	2.5	2.0	2.5	2.0
Warsaw, VA	1.9	2.5	4.1	3.2	3.1	2.6
Holland, VA	3.0	3.3	4.0	3.3	4.0	3.0
Plymouth, NC	3.0	3.0	4.0	2.7	3.3	3.0
<u>SOUTHEAST</u>						
Jay, FL	1.0	3.0	4.0	3.0	3.0	2.0
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	1.7	2.0	2.7	1.0	2.0	2.0
Knoxville, TN	2.0	3.0	5.0	3.0	4.0	4.0
Calhoun, GA	1.0	1.8	2.3	2.5	2.2	1.7
Athens, GA	1.3	1.8	1.5	1.5	1.7	2.0
Belle Mina, AL	3.0	2.7	4.5	3.0	3.0	4.5
Princeton, KY	1.7	3.7	3.7	2.7	3.3	3.7
Martin, TN	3.0	2.0	5.0	5.0	2.0	4.0
Jackson, TN	1.0	2.0	2.5	2.0	2.0	2.0
<u>DELTA</u>						
Portageville, MO (A)	1.3	1.7	2.0	1.8	1.2	1.8
Portageville, MO (B)	2.0	1.5	2.0	1.5	1.5	2.0
Keiser, AR	1.0	1.0	2.3	1.0	1.3	2.0
Jonesboro, AR	1.1	1.5	2.3	1.5	1.6	1.9
Goodwin, AR	1.8	1.0	1.0	1.8	1.0	1.0
Stoneville, MS (A)	2.0	2.0	2.7	2.0	2.0	3.0
Stoneville, MS (B)	2.0	2.3	3.0	2.0	2.0	3.0
St. Joseph, LA	2.2	4.0	4.2	4.8	3.5	3.7
<u>WEST</u>						
Clinton, MO	1.8	2.0	3.0	2.0	3.0	2.3
Columbus, KS	1.3	2.3	1.8	1.3	1.7	1.9
Pine Bluff, AR	1.0	1.0	1.3	1.0	1.0	1.3
Stuttgart, AR	1.5	2.5	3.7	2.7	2.7	3.0
Bossier City, LA	2.2	2.0	3.0	2.0	1.8	2.3
Bixby, OK	1.0	1.5	2.5	1.5	1.0	1.5
Lubbock, TX	1.5	2.0	2.0	1.5	1.5	2.0
Beaumont, TX	1.7	1.7	2.0	1.7	2.0	2.0

Table 13 - (continued)

Location	J74-51	N76-098	N76-683	R76-45	S76-2120	V75-345
<u>EAST COAST</u>						
Queenstown, MD	3.8	2.7	3.5	3.5	3.7	3.5
Georgetown, DE	2.5	2.0	2.0	2.5	2.3	2.0
Warsaw, VA	3.6	1.8	2.3	2.9	2.1	1.8
Holland, VA	3.0	3.7	4.3	4.0	3.7	3.7
Plymouth, NC	3.0	1.3	3.0	3.3	2.7	2.7
<u>SOUTHEAST</u>						
Jay, FL	4.0	1.0	3.0	3.0	1.0	2.0
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	2.0	1.0	1.7	2.0	1.0	2.0
Knoxville, TN	3.0	2.0	3.0	3.0	2.0	3.0
Calhoun, GA	2.5	1.0	1.7	2.2	1.3	1.0
Athens, GA	1.8	1.0	1.5	1.7	1.5	1.5
Belle Mina, AL	4.7	2.0	2.5	3.3	2.7	2.7
Princeton, KY	3.3	1.3	3.3	4.0	3.3	3.3
Martin, TN	4.0	3.0	5.0	5.0	2.0	5.0
Jackson, TN	2.0	1.0	2.0	2.0	2.0	3.0
<u>DELTA</u>						
Portageville, MO (A)	2.0	1.0	1.7	1.8	1.5	2.2
Portageville, MO (B)	2.0	1.0	2.0	2.0	1.5	1.5
Keiser, AR	2.0	1.0	2.3	2.0	1.3	2.0
Jonesboro, AR	2.3	1.0	1.3	1.5	1.3	1.0
Goodwin, AR	1.5	2.0	1.0	1.0	1.0	1.3
Stoneville, MS (A)	2.7	2.0	2.7	2.7	2.0	3.0
Stoneville, MS (B)	2.0	2.0	3.0	2.7	2.0	3.0
St. Joseph, LA	4.7	1.3	4.2	4.3	2.7	3.3
<u>WEST</u>						
Clinton, MO	3.2	1.1	2.5	3.1	2.5	3.0
Columbus, KS	2.7	1.0	2.2	2.6	1.3	1.6
Pine Bluff, AR	1.0	1.0	1.0	1.3	1.0	1.0
Stuttgart, AR	2.8	1.0	2.3	2.7	1.3	3.0
Bossier City, LA	1.3	1.0	2.7	1.8	1.9	3.0
Bixby, OK	3.0	1.5	2.5	2.0	1.0	3.0
Lubbock, TX	2.2	1.5	1.5	2.0	1.5	1.7
Beaumont, TX	2.3	1.0	1.3	2.0	1.0	1.3

Table 14 - Seed quality scores for the strains in Uniform Group V, 1979

Location	Essex	Forrest	Bedford	R74-511	D75-12035	D76-9375
<u>EAST COAST</u>						
Queenstown, MD	1.2	1.5	2.0	1.7	2.0	2.0
Georgetown, DE	2.0	2.0	2.0	2.0	2.5	2.0
Warsaw, VA	1.3	1.2	1.5	1.2	1.5	1.5
Holland, VA	2.0	1.7	2.7	1.7	2.7	2.0
Plymouth, NC	2.0	1.5	1.5	1.5	1.5	1.5
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	1.0	1.0	1.0	1.0	1.0	1.0
Knoxville, TN	1.0	1.0	1.0	2.0	1.0	1.0
Calhoun, GA	2.0	1.9	2.3	2.0	2.3	2.8
Athens, GA	2.7	3.0	2.5	2.8	2.2	2.2
Martin, TN	2.0	2.0	2.0	2.0	2.0	2.0
Jackson, TN	1.0	1.0	1.0	1.0	1.0	1.0
<u>DELTA</u>						
Portageville, MO (A)	1.5	1.5	1.0	1.5	1.0	1.5
Portageville, MO (B)	2.0	2.0	2.0	2.0	2.0	2.0
Keiser, AR	1.0	2.0	1.5	1.5	1.0	1.0
Jonesboro, AR	2.0	1.0	1.5	2.0	1.3	1.0
Goodwin, AR	1.8	1.0	1.0	1.8	1.0	1.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
<u>WEST</u>						
Clinton, MO	2.0	2.0	2.5	2.0	3.0	2.5
Columbus, KS	1.5	2.0	2.0	1.5	2.0	1.5
Pine Bluff, AR	3.0	3.0	4.0	2.0	5.0	3.0
Stuttgart, AR	1.7	1.7	2.0	2.0	1.7	1.7
Lubbock, TX	1.2	1.5	1.5	1.5	2.0	1.5
Beaumont, TX	5.0	4.0	3.0	3.3	3.0	3.0

Table 14 - (continued)

Location	J74-51	N76-098	N76-683	R76-45	S76-2120	V75-345
<u>EAST COAST</u>						
Queenstown, MD	2.0	1.0	2.0	1.2	2.0	1.5
Georgetown, DE	2.0	1.5	2.0	2.0	2.0	1.8
Warsaw, VA	1.3	1.0	1.5	1.2	1.3	1.0
Holland, VA	2.0	2.3	2.0	2.0	2.3	2.0
Plymouth, NC	1.5	1.5	1.5	1.5	1.5	1.5
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	1.0	1.0	1.0	1.0	1.0	1.0
Knoxville, TN	1.0	2.0	1.0	1.0	2.0	1.0
Calhoun, GA	2.3	2.1	2.0	2.2	2.0	2.0
Athens, GA	3.0	2.5	2.0	3.0	2.8	2.8
Martin, TN	2.0	2.0	3.0	2.0	2.0	2.0
Jackson, TN	1.0	1.0	1.0	1.0	1.5	1.0
<u>DELTA</u>						
Portageville, MO (A)	1.5	1.5	1.5	1.5	1.5	1.5
Portageville, MO (B)	2.0	2.0	2.0	2.0	2.0	2.0
Keiser, AR	1.5	1.0	1.5	1.5	1.5	1.5
Jonesboro, AR	1.3	1.8	1.3	1.3	1.0	1.8
Goodwin, AR	1.5	2.0	1.0	1.0	1.0	1.3
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
<u>WEST</u>						
Clinton, MO	2.5	1.8	2.5	2.0	2.0	2.0
Columbus, KS	1.5	1.5	1.5	2.0	1.5	1.5
Pine Bluff, AR	4.0	2.0	3.0	4.0	3.0	2.0
Stuttgart, AR	2.5	2.0	1.7	1.8	2.2	2.2
Lubbock, TX	1.5	1.0	1.5	1.5	1.3	1.0
Beaumont, TX	5.0	4.3	3.0	3.0	5.0	4.0

PRELIMINARY GROUP V

1979

Preliminary Group V nurseries, including 34 experimental strains along with Hill and Forrest, were grown at 8 locations. The parentage of each of these strains is reported in Table 15. Performance data are summarized in Tables 16-21.

Differences among strains for seed yield were significant at 6 of the 8 locations. The combined analysis of variance for seed yield also showed differences among strains to be significant. Forrest had a mean seed yield of 41.5 bushels per acre. Eight strains ranked above Forrest in mean seed yield but none of these had seed yields significantly greater than that for Forrest. Four strains had mean seed yields significantly lower than that for Forrest.

All strains except D77-18 were later in maturity than Hill. D77-18 averaged 3 days earlier in maturity than Hill. Stands were poor for this strain as a result of delayed harvest of the plots in 1978.

D76-8070 was grown in the Preliminary V nursery a second year. Its mean protein content of the seed was 49.8% in 1978 and 49.5% in 1979. Its seed yield was much better at Stoneville than at other locations.

The strains Ga76-1615, N77-179, and V76-473 had narrow leaves. N73-850 was segregating for the character leaf shape.

Four strains were resistant to CN race 4 as well as race 3. Six strains were resistant to CN race 3. The strains R77-236, R77-512, R77-549, V76-20, V76-595 and V76-626 were susceptible to bacterial pustule.

Percent mottled seed ranged from 0 to 98% at Plymouth. Forrest, with 67% mottled seed, was ranked first in seed yield. Strains having 0 to 5% mottled seed were S76-2103, S77-7419, V76-200, V76-408, V76-473, V76-595, V76-626, and V76-640. All of these strains had Essex as one parent.

Table 15 - Parentage of the strains grown in Preliminary Group V, 1979

	Variety or strain	Parentage	Generation composited
1.	Hill	D632-15 X D49-2525	F ₅
2.	Forrest	Dyer X Bragg	F ₅
3.	D76-8070	D68-4641 X D72-347	F ₅
4.	D77-8	Forrest(2) X Tracy	F ₅
5.	D77-15	Forrest(2) X Tracy	F ₅
6.	D77-17	Tracy X Forrest	F ₅
7.	D77-18	Tracy X Forrest	F ₅
8.	D77-4870	D74-7631 X J74-57	F ₅
9.	D77-4874	D74-7631 X J74-57	F ₅
10.	D77-5064	[Forrest(2) X PI 229358] X J74-8	F ₅
11.	D77-5090	[Pickett 71(2) X (Dare(2) X PI 96983)] X J74-47	F ₅
12.	D77-5771	D71-6664 X D71-6234	F ₅
13.	Ga76-1534	Dare X D64-4731	F ₄
14.	Ga76-1615	Dare X D64-4731	F ₄
15.	N77-179	N70-1549 X N72-3213	F ₄
16.	N77-334	N70-1549 X Centennial	F ₅
17.	N77-432	N70-1549 X Centennial	F ₅
18.	N77-434	N70-1549 X Centennial	F ₅
19.	N77-506	N70-1549 X Centennial	F ₅
20.	N77-850	N70-1549 X Centennial	F ₅
21.	R77-15	Mack X D69-8201	F ₅
22.	R77-236	[T43 X Davis(2)] X Mack(3)	F ₅
23.	R77-238	[T43 X Davis(2)] X Mack(3)	F ₅
24.	R77-512	Mack X York	F ₄
25.	R77-549	(R68-873 X Mack) X (Mack X York)	F ₄
26.	S76-2103	D67-3297 X Essex	F ₄
27.	S76-8065	D70-3115 X Essex	F ₄
28.	S76-8112	D67-3297 X Essex	F ₄
29.	S77-7415	Essex X Mack	F ₄
30.	S77-7419	Essex X Mack	F ₄
31.	V76-200	V68-2331 X V69-495	
32.	V76-408	Essex X SRF400	
33.	V76-473	Essex X SRF400	
34.	V76-595	V68-920 X V69-862	
35.	V76-626	Essex X V68-920	
36.	V76-640	Essex X V68-920	

Table 16 - General summary of performance for the strains grown in Preliminary Group V, 1979

Strain	Seed yield	Maturity index	Ht.	Percent		Nematode Rating			
				Oil	Protein	CN-3	CN-4	<i>M. incognita</i>	<i>M. arenaria</i>
Hill	38.1	10-9	33	19.4	40.7	S	S	5.0	5.0
Forrest	41.5	+9	35	19.4	41.1	R	S	2.5	1.5
D76-8070	33.8-	+3	33	16.0-	49.5+	S	S	5.0	5.0
D77-8	40.5	+10	35	18.7-	43.3+	R	S	5.0	5.0
D77-15	38.7	+8	33	19.4	41.0	R	S	4.5	4.5
D77-17	37.6	+7	37	18.6-	42.2	R	S	3.0	1.5
D77-18	29.2-	-3	25	19.3	42.3	R	S	5.0	4.5
D77-4870	39.1	+9	38	18.6-	40.8	R	R	5.0	2.5
D77-4874	39.9	+8	41	19.2-	41.1	R	R	4.5	4.0
D77-5064	38.8	+9	35	19.0-	40.2	R	R	5.0	4.0
D77-5090	40.0	+9	33	18.6-	43.1+	R	R	5.0	5.0
D77-5771	38.5	+8	39	16.5-	46.3+	S	S	5.0	5.0
Ga76-1534	38.4	+10	33	20.6+	39.3-	S	S	5.0	2.0
Ga76-1615	34.8-	+12	29	19.1-	41.2	S	S	5.0	2.3
N77-179	41.7	+9	29	19.5	40.4	S	S	5.0	4.0
N77-334	40.9	+10	35	18.5-	42.5+	S	S	3.0	5.0
N77-432	41.4	+9	35	19.5	41.0	S	S	2.0	4.8
N77-434	42.0	+9	38	19.0-	41.2	S	S	4.5	4.0
N77-506	42.5	+11	34	19.4	40.9	S	S	5.0	5.0
N77-850	38.4	+13	32	19.0-	41.6	S	S	5.0	2.7
R77-15	39.1	+10	37	19.4	41.2	S	S	4.0	2.8
R77-236	38.4	+9	32	19.5	41.6	R	S	5.0	2.8
R77-238	41.7	+5	32	20.1	40.6	R	S	5.0	3.5
R77-512	37.7	+9	37	19.4	39.6	S	S	5.0	3.5
R77-549	39.2	+12	34	20.6+	39.7	S	S	5.0	3.3
S76-2103	43.8	+8	34	18.5-	42.3	S	S	5.0	4.8
S76-8065	41.6	+6	33	18.9-	43.0+	S	S	5.0	4.8
S76-8112	37.8	-1	29	18.7-	43.0+	S	S	5.0	4.0
S77-7415	40.2	+3	32	19.6	42.1	S	S	5.0	1.5
S77-7419	40.2	+5	32	19.2-	42.2	S	S	5.0	1.8
V76-200	45.7	+7	34	19.4	39.7	S	S	5.0	1.8
V76-408	38.0	+2	28	18.6-	44.0+	S	S	5.0	5.0
V76-473	41.5	+2	29	18.6-	42.4+	S	S	5.0	4.8
V76-595	43.4	+8	35	18.7-	41.1	S	S	5.0	3.8
V76-626	37.2-	+4	29	19.1-	40.0	S	S	5.0	4.5
V76-640	35.9-	+7	28	18.6-	41.7	S	S	5.0	5.0
L.S.D. (.05)	4.0			0.7	1.6				
L.S.D. (.01)	5.2			0.9	2.1				

+ or - designations refer to differences from Forrest.

Table 17 - Seed yield, in bushels per acre, for the strains grown in Preliminary Group V, 1979

Strain	George- town, DE	Queens- town, MD	Warsaw, VA	Plymouth, NC	Portage- ville, MO (B)	Keiser, AR	Stone- ville, MS (B)	Prince- ton, KY
Hill	45.1	36.0	41.4	26.7	29.0	40.1	38.9	47.9
Forrest	47.5	36.4	42.1	41.0+	30.3	45.2	44.3	45.4
D76-8070	38.7	34.9	38.9	21.7	15.7-	38.2	42.1	40.4
D77-8	48.1	40.9	42.0	32.2	33.7	43.1	41.8	41.9
D77-15	45.0	36.4	43.2	31.0	27.0	40.0	45.3+	42.1
D77-17	45.4	36.6	38.3	29.7	29.3	42.3	41.0	38.7
D77-18	32.3	30.8	38.0	17.6	11.1-	29.2-	31.6-	43.4
D77-4870	48.4	39.4	40.4	34.9	24.1	39.0	41.8	45.1
D77-4874	45.9	38.1	35.2	36.6	29.8	45.1	43.4	45.3
D77-5064	45.3	37.3	39.6	27.9	27.8	41.7	47.7+	43.3
D77-5090	58.0+	36.9	39.6	29.8	20.3-	43.6	46.4+	45.4
D77-5771	45.6	38.6	40.1	31.0	29.8	42.6	40.0	40.5
Ga76-1534	47.1	37.5	39.7	18.4	25.3	42.1	45.2+	52.0
Ga76-1615	40.5	35.2	39.6	18.5	25.4	33.9	42.2	43.2
N77-179	53.1	44.3	42.1	22.9	29.1	45.0	44.8+	52.2
N77-334	45.7	34.7	42.3	36.7	32.6	41.5	43.1	50.2
N77-432	45.3	30.6	40.5	40.9+	34.3	43.7	45.0+	51.3
N77-434	49.0	39.3	40.0	32.7	30.8	48.3+	43.7	52.6
N77-506	58.3+	42.9	44.0	29.3	30.5	42.5	42.7	49.6
N77-850	44.2	32.1	38.3	32.2	27.7	43.1	46.1+	43.6
R77-15	46.1	38.1	40.6	34.5	28.5	44.3	40.8	39.9
R77-236	43.3	38.6	42.5	29.1	23.3	39.9	43.6	47.0
R77-238	45.3	42.4	44.6	31.2	32.1	42.4	42.8	52.6
R77-512	44.8	28.7	41.4	28.9	30.6	42.1	40.6	45.1
R77-549	43.5	33.7	36.6	29.4	26.2	39.9	51.3+	53.3
S76-2103	60.0+	41.5	47.2	32.3	27.6	40.1	46.4+	55.2
S76-8065	46.7	39.8	40.3	30.5	35.0	45.3	46.9+	48.5
S76-8112	42.5	36.4	41.2	25.3	22.7	45.0	42.6	46.7
S77-7415	48.3	37.7	43.5	37.1	26.7	40.8	38.8	48.8
S77-7419	45.7	34.6	41.3	34.7	25.5	43.6	44.9+	51.1
V76-200	55.8+	45.3	45.0	37.5	27.9	50.3+	50.2+	53.6
V76-408	46.5	36.2	38.1	24.3	22.6	38.4	43.8	54.0
V76-473	47.6	31.2	40.5	38.9	28.8	41.8	44.0	59.0+
V76-595	50.3	40.2	45.4	37.4	31.0	43.8	43.0	56.5
V76-626	54.7	44.7	42.9	13.3	10.6-	33.3-	47.0+	50.8
V76-640	44.7	31.8	38.5	26.3	18.6-	35.8	41.7	50.0
L.S.D. (.05)	10.6	N.S.	N.S.	13.9	7.0	6.3	5.6	10.8
C.V.	11%	13%	7%	23%	13%	7%	6%	6%

Table 18 - Oil percentages for the strains in Preliminary Group V, 1979

Strain	Queenstown, MD	Warsaw, VA	Plymouth, NC	Portageville, MO (B)	Stoneville, MS (B)
Hill	19.8	18.4	20.4	19.2	19.1
Forrest	19.1	19.3	20.1	18.8	19.6
D76-8070	15.2	15.7	15.9	16.5	16.8
D77-8	19.5	18.6	18.8	17.5	18.9
D77-15	18.9	19.0	20.2	19.1	19.6
D77-17	18.2	18.6	19.5	17.9	18.8
D77-18	18.5	19.0	20.0	19.0	19.8
D77-4870	19.0	19.0	19.5	17.5	18.0
D77-4874	18.3	19.3	19.9	19.1	19.5
D77-5064	20.0	19.2	18.9	17.7	19.3
D77-5090	17.8	18.9	18.6	18.4	19.5
D77-5771	17.1	16.6	16.5	15.9	16.6
Ga76-1534	20.9	20.5	20.8	19.7	20.9
Ga76-1615	19.3	19.4	19.6	18.2	18.8
N77-179	18.6	18.7	21.0	19.5	19.8
N77-334	19.3	18.6	18.6	17.4	18.5
N77-432	18.9	18.8	20.9	18.8	20.3
N77-434	18.9	19.6	19.3	18.2	19.1
N77-506	19.3	19.3	19.9	19.7	18.9
N77-850	17.6	19.9	20.2	18.2	19.2
R77-15	18.4	18.9	20.1	19.5	20.2
R77-236	19.0	19.3	21.2	18.8	19.1
R77-238	19.3	19.8	21.4	19.3	20.7
R77-512	18.2	19.1	20.6	19.2	20.0
R77-549	20.0	19.8	21.5	20.4	21.4
S76-2103	18.2	19.0	19.4	17.7	18.4
S76-8065	18.0	18.6	20.4	18.6	19.0
S76-8112	18.3	18.6	19.1	18.6	18.8
S77-7415	19.4	19.1	21.0	19.0	19.6
S77-7419	18.2	19.4	20.0	19.0	19.4
V76-200	19.7	19.4	19.2	19.6	19.2
V76-408	18.0	18.3	20.0	18.4	18.5
V76-473	18.2	18.2	19.1	18.6	18.8
V76-595	18.6	18.5	18.6	18.3	19.6
V76-626	18.4	18.2	20.7	18.2	20.1
V76-640	18.5	18.8	19.1	17.9	18.6

Table 19 - Protein percentages for the strains in Preliminary Group V, 1979

Strain	Queenstown, MD	Warsaw, VA	Plymouth, NC	Portageville, MO (B)	Stoneville, MS (B)
Hill	41.4	41.2	38.1	39.6	43.4
Forrest	41.9	40.8	41.0	39.3	42.3
D76-8070	49.9	48.8	51.3	48.0	49.4
D77-8	41.8	43.2	45.6	42.1	44.0
D77-15	42.6	41.3	40.1	39.3	41.7
D77-17	43.3	43.5	41.8	40.1	42.3
D77-18	42.9	44.0	42.1	39.6	42.7
D77-4870	39.0	41.4	41.6	40.3	41.8
D77-4874	41.7	41.6	40.9	39.9	41.6
D77-5064	35.8	41.7	42.6	38.7	42.4
D77-5090	44.6	42.1	44.3	42.2	42.1
D77-5771	43.6	46.9	47.8	46.1	47.3
Ga76-1534	38.4	40.1	38.7	39.1	40.2
Ga76-1615	40.4	43.1	41.0	39.3	42.4
N77-179	42.3	41.2	37.7	39.7	41.2
N77-334	39.9	42.2	43.9	42.3	44.0
N77-432	41.8	42.6	39.3	39.3	41.9
N77-434	41.3	42.2	42.7	38.5	41.5
N77-506	42.5	39.7	39.5	38.3	44.7
N77-850	43.6	41.6	40.3	40.0	42.6
R77-15	42.4	42.5	41.4	38.7	41.2
R77-236	43.6	42.4	39.5	40.0	42.4
R77-238	41.4	42.4	38.6	39.5	41.2
R77-512	42.0	40.5	38.9	38.5	38.0
R77-549	40.3	40.9	38.7	38.6	39.9
S76-2103	42.5	42.7	42.3	41.8	42.3
S76-8065	45.1	43.6	40.8	41.7	43.9
S76-8112	43.6	44.0	42.0	41.2	44.1
S77-7415	41.9	43.3	40.7	41.2	43.6
S77-7419	44.1	43.3	40.3	40.8	42.7
V76-200	39.9	39.1	40.4	38.4	40.6
V76-408	45.7	45.6	40.4	41.9	46.2
V76-473	42.8	42.7	42.0	41.4	43.0
V76-595	42.0	41.2	42.6	38.3	41.6
V76-626	40.4	42.4	37.3	38.8	41.2
V76-640	42.2	42.1	41.2	41.0	42.2

Table 20 - Plant height for the strains in Preliminary Group V, 1979

Strain	George- town, DE	Queens- town, MD	Warsaw, VA	Ply- mouth, NC	Portage- ville, MO (B)	Keiser, AR	Stone- ville, MS (B)	Prince- ton, KY
Hill	30	39	38	36	25	30	26	39
Forrest	34	43	42	38	28	31	27	36
D76-8070	28	41	34	31	21	25	29	30
D77-8	31	38	40	36	27	32	30	42
D77-15	33	40	40	35	26	28	26	36
D77-17	38	38	41	39	29	34	32	43
D77-18	26	33	36	21	16	18	20	31
D77-4870	38	45	42	43	32	31	33	42
D77-4874	42	51	44	42	26	42	36	43
D77-5064	35	41	42	32	29	33	31	39
D77-5090	35	35	40	31	23	33	28	36
D77-5771	39	42	43	41	27	40	36	46
Ga76-1534	31	37	42	29	23	29	33	38
Ga76-1615	28	33	40	23	24	22	25	35
N77-179	28	35	38	25	24	26	25	33
N77-334	36	36	40	35	26	31	32	40
N77-432	36	38	40	36	28	33	30	40
N77-434	39	43	44	40	27	34	32	41
N77-506	36	38	44	25	27	34	30	39
N77-850	31	38	40	27	24	28	28	37
R77-15	33	40	44	37	33	37	31	37
R77-236	29	40	38	30	26	30	27	33
R77-238	31	36	39	32	23	33	27	37
R77-512	36	46	42	34	29	34	31	42
R77-549	34	42	44	30	22	32	31	39
S76-2103	34	39	39	38	23	32	31	36
S76-8065	33	41	40	31	29	29	27	37
S76-8112	28	36	38	25	26	25	25	28
S77-7415	32	41	42	34	23	27	27	31
S77-7419	31	35	40	31	24	29	28	35
V76-200	35	41	45	35	22	26	32	37
V76-408	30	33	32	24	21	24	24	32
V76-473	26	37	36	27	22	25	23	33
V76-595	34	39	42	35	30	31	30	40
V76-626	33	36	40	20	19	22	27	34
V76-640	27	34	37	23	24	23	24	29

Table 21 - Seed quality scores for the strains in Preliminary Group V, 1979

Strain	Georgetown, DE	Queens- town MD	Warsaw, VA	Plymouth, NC	Portage- ville, MO (B)	Keiser, AR	Stone- ville, MS (B)
Hill	1.8	1.5	1.2	1.5	1.5	1.5	2.0
Forrest	2.0	1.8	1.4	1.5	1.5	1.5	2.0
D76-8070	1.8	1.8	1.0	1.5	1.5	1.5	2.0
D77-8	2.0	1.8	1.2	1.5	1.5	1.5	2.0
D77-15	2.0	1.0	1.5	1.5	1.5	1.0	2.0
D77-17	2.0	3.0	1.8	1.5	1.5	1.5	2.0
D77-18	2.8	1.8	2.2	1.5	1.5	2.0	2.0
D77-4870	2.0	1.5	1.2	1.5	1.5	1.0	2.0
D77-4874	2.3	2.8	1.5	1.5	1.5	1.5	2.0
D77-5064	2.0	3.0	1.5	1.5	1.5	2.0	2.0
D77-5090	2.0	2.8	1.0	1.5	1.5	2.0	2.0
D77-5771	1.5	1.5	1.2	1.5	1.5	1.5	2.0
Ga76-1534	2.0	2.8	1.0	1.5	1.5	1.0	2.0
Ga76-1615	1.8	1.0	1.0	1.5	1.5	1.0	2.0
N77-179	1.8	3.0	1.0	1.5	1.5	1.5	2.0
N77-334	1.8	2.0	1.2	1.5	1.5	1.5	2.0
N77-432	1.8	3.0	1.3	1.5	1.5	1.0	2.0
N77-434	1.8	3.3	1.2	1.5	1.5	1.0	2.0
N77-506	1.8	2.8	1.3	1.5	1.5	1.0	2.0
N77-850	2.0	2.8	1.2	1.5	1.5	1.5	2.0
R77-15	2.0	2.8	1.0	1.5	1.5	1.5	2.0
R77-236	2.0	2.8	1.3	1.5	1.5	1.0	2.0
R77-238	2.0	2.5	1.0	1.5	1.5	1.5	2.0
R77-512	2.0	2.5	1.0	1.5	1.5	1.0	2.0
R77-549	2.0	3.0	1.2	1.5	1.5	1.5	2.0
S76-2103	2.0	2.5	1.2	1.5	1.5	1.5	2.0
S76-8065	2.0	1.8	1.2	1.5	1.5	1.0	2.0
S76-8112	2.0	2.5	1.2	2.0	1.5	1.0	2.0
S77-7415	2.0	2.5	1.8	1.5	1.5	1.5	2.0
S77-7419	1.8	2.3	1.0	1.5	1.5	1.5	2.0
V76-200	1.5	2.8	1.2	1.5	1.5	1.5	2.0
V76-408	2.0	2.3	1.0	1.5	1.5	1.0	2.0
V76-473	2.0	2.5	1.0	1.5	1.5	1.0	2.0
V76-595	2.0	2.8	1.2	1.5	1.5	1.5	2.0
V76-626	2.0	2.0	1.3	1.5	1.5	1.0	2.0
V76-640	1.8	2.5	1.0	1.5	1.5	1.5	2.0

UNIFORM GROUP VI

1979

<u>Variety or strain</u>	<u>Parentage</u>	<u>Generation composited</u>
1. Tracy	D68-618 X D60-9647	F ₅
2. Centennial	D64-4636 X tawny pubescent PICKETT 71 type	F ₅
3. D74-7741	Forrest X D70-3001	F ₅
4. N73-693	D68-216 X Ransom	F ₅
5. N73-1102	Tracy X Ransom	F ₅
6. D75-7527	Forrest X Mack	F ₅
7. N75-2213	Davis X Essex	F ₅
8. R74-1625	York X Davis	F ₄
9. D74-7711	Forrest X D70-3001	F ₅
10. D76-9665	Forrest X Centennial	F ₅
11. N76-325	N69-5020 X Essex	F ₅
12. R75-868	(R66-873 X Mack X (Mack X York))	F ₄

Background of breeding lines used as parents:

D68-618 is a phytophthora rot resistant selection from Hill(2) X PI 171442.

D60-9647 is a moderately high protein strain selected from FC31745 X D49-2510 which was included in Uniform Group VI 1963-65.

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.

D70-3001 same parentage as Centennial.

D68-216 same parentage as Forrest.

N69-5020 is a selection from D63-6094 X D62-7816. D63-6094 is a selection from Hill(4) X PI 171442. D62-7816 is D49-2491 converted to narrow leaf.

R66-873 is a selection from Jackson X Semmes.

Results of 34 Uniform Group VI nurseries are summarized in Tables 22 through 28. Table 22 gives a general summary of agronomic qualities, oil and protein content of the seed, and reaction to several pest problems.

Seed yield differences were significant (odds 19:1 or greater) at 19 locations. The combined analysis of variance for seed yield by production regions showed a high variety X location interaction in all regions. Strain differences were significant only in the Southeast.

The three strains D74-7741, N73-693, and N73-1102 have produced very well in three years of evaluation. D74-7741 has good resistance to CN race 3 and to *M. incognita* and *M. arenaria*.

The three strains D75-7527, N75-2213, and R74-1625 have been evaluated two years. D75-7527 has good nematode resistance and has yielded well. The two-year means for R74-1625 are somewhat inferior to the other two strains.

Of the strains evaluated one year, D76-9665 has the best performance. This selection from Forrest X Centennial has growth characteristics similar to Centennial, but is resistant to *M. arenaria* while Centennial is susceptible.

Table 22 - General summary of the performance for the strains grown in Uniform Group VI, 1979

	No. of locations	Tracy	Centennial	D74-7741	N73-693	N73-1102
Seed Yield - 1979						
East Coast	7	40.1	41.8	42.8	39.6	43.3
Southeast	6	35.4	38.4	35.0	34.2	38.1
Upper & Central South	6	39.7	40.7	40.7	41.8	42.4
Delta	9	34.3	35.4	38.9	32.7	36.7
West	3	46.7	49.0	46.2	52.3	49.1
1978-79						
East Coast		42.4	42.0	43.0	40.9	43.8
Southeast		34.5	39.4	35.3	35.1	37.9
Upper & Central South		35.8	34.7	35.8	37.3	37.5
Delta		34.9	34.0	39.2	34.8	36.5
West		43.2	43.4	43.4	46.6	45.2
1977-79						
East Coast		41.7	41.3	43.2	41.3	44.2
Southeast		37.6	41.5	37.8	39.0	39.1
Upper & Central South		35.2	36.4	36.1	38.6	37.9
Delta		34.3	32.9	38.3	34.6	35.3
West		39.7	39.9	41.1	43.0	42.9
Oil Content - 1979		17.9	18.7+	20.5+	19.4+	19.0+
1978-79		18.6	19.4	21.3	20.3	19.8
1977-79		18.5	19.6	21.9	20.6	20.0
Protein Content - 1979		42.0	42.8	40.0-	41.5	41.5
1978-79		42.7	43.0	40.3	41.6	41.6
1977-79		42.7	42.4	39.8	41.1	41.1
Seed size		16.5	13.9-	13.7-	15.7	16.7
Maturity index		10-15	+3	-2	+3	0
Height		36	38	35	34	37
Seed quality		1.8	1.6	1.7	1.6	1.6
Bacterial pustule		R	R	R	R	R
Cyst nematode race 3		S	R	R	S	S
<i>M. incognita</i>		5.0	1.5	2.0	4.5	5.0
<i>M. arenaria</i>		5.0	4.0	2.5	5.0	5.0
Percent mottled seed		16	24	19	5	12
Flower color		W	P	W	P	P
Pubescence color		T	T	T	T	T
Pod wall color		Tn	Tn	Tn	Tn	Br

Table 22 - (continued)

	D75-7527	N75-2213	R74-1625	D74-7711	D76-9665	N76-325	R75-868
Seed Yield - 1979							
East Coast	41.1	44.6	39.6	40.4	42.5	42.5	40.9
Southeast	37.2	38.6	32.4	35.3	40.3+	32.9	36.1
Upper & Central South	40.9	44.1	41.6	37.8	41.3	38.9	39.6
Delta	35.4	36.8	37.4	35.1	35.3	36.3	34.4
West	51.2	47.0	44.1	46.0	48.5	48.2	46.5
1978-79							
East Coast	43.0	44.7	42.4				
Southeast	36.7	38.1	33.5				
Upper & Central South	37.1	39.0	37.0				
Delta	38.3	36.0	37.4				
West	47.1	43.6	42.3				
1977-79							
East Coast							
Southeast							
Upper & Central South							
Delta							
West							
Oil Content - 1979	20.2+	19.2+	19.2+	19.4+	19.4+	19.1+	19.7+
1978-79	21.2	20.0	20.1				
1977-79							
Protein content - 1979	40.5-	42.9	41.6	40.9-	38.9-	42.6	39.9-
1978-79	40.4	42.9	41.9				
1977-79							
Seed size	13.7-	14.7-	15.7	12.3-	12.2-	12.9-	13.5-
Maturity index	-7	-2	-1	-7	+4	-2	-2
Height	34	38	35	34	40	29	34
Seed quality	1.9	1.6	1.6	1.8	1.5	1.5	1.5
Bacterial pustule	R	R	R	R	R	R	S
Cyst nematode race 3	R	S	S	R	R	S	R
<i>M. incognita</i>	3.0	4.0	5.0	5.0	2.0	5.0	5.0
<i>M. arenaria</i>	1.5	5.0	5.0	1.3	2.5	4.5	5.0
Percent mottled seed	16	3	3	20	17	3	0
Flower color	P	W	W	W	P	P	P
Pubescence color	T	G	G	T	T	Seg	G
Pod wall color	Tn	Tn	Tn	Tn	Tn	Tn	Tn

Table 23 - Seed yield, in bushels per acre, for the strains in Uniform Group VI, 1979

Location	Tracy	Centennial	D74-7741	N73-693	N73-1102	D75-7527	N75-2213
<u>EAST COAST</u>							
Warsaw, VA	32.2	26.8-	37.1+	33.5	36.0+	35.0	31.5
Holland, VA	32.2	32.6	34.0	30.6	32.5	21.4-	32.7
Plymouth, NC	37.6	43.4	43.8	38.0	38.9	39.0	43.1
Clinton, NC	40.1	43.6	43.1	45.7	46.2+	43.2	48.2+
Kinston, NC	36.2	37.1	42.2+	34.7	42.9+	44.7+	45.7+
Florence, SC	56.3	59.1	49.4-	48.4-	56.8	53.0	62.2
Hartsville, SC	45.8	50.2	49.9	46.4	49.6	51.3	48.9
Mean	40.1	41.8	42.8	39.6	43.3	41.1	44.6
<u>SOUTHEAST</u>							
Blackville, SC	35.9	44.6+	31.6	38.3	38.5	40.2	41.7
Tifton, GA	44.7	46.3	41.0	40.9	49.4	44.3	48.5
Quincy, FL	34.4	41.1	39.2	34.2	51.8+	39.9	46.6+
Jay, FL	29.6	32.6	35.0	28.2	28.9	31.3	29.9
Fairhope, AL	29.5	26.8	27.0	32.1	26.8	33.6	29.6
Baton Rouge, LA	38.5	38.8	36.1	31.6	33.3	33.9	35.1
Mean	35.4	38.4	35.0	34.2	38.1	37.2	38.6
<u>UPPER AND CENTRAL SOUTH</u>							
Athens, GA	46.6	43.7	47.0	42.5	47.5	49.2	49.7
Calhoun, GA	44.2	38.7	38.6	48.5	45.4	45.1	47.7
Belle Mina, AL	44.2	48.2	52.1+	49.4	52.0+	43.0	46.0
Clemson, SC	28.3	30.7	28.2	32.7	30.1	26.7	36.7
Woodland Mills, TN	26.2	37.5+	35.5+	29.7	30.0	36.6+	35.4+
Jackson, TN	48.4	45.7	42.8	47.7	49.4	44.6	49.2
Mean	39.7	40.7	40.7	41.8	42.4	40.9	44.1
<u>DELTA</u>							
Portageville, MO (A)	33.0	41.1+	49.2+	34.9	41.8+	45.5+	45.4+
Portageville, MO (B)	28.0	25.2	28.5	25.0	26.6	19.0-	26.8
Keiser, AR	36.2	34.8	42.7	32.5	36.2	41.4	36.7
Jonesboro, AR	20.3	20.6	31.0+	22.0	24.0	26.8+	21.3
Goodwin, AR	24.2	28.0	28.4	24.6	31.0+	27.1	29.2
Stoneville, MS (A)	45.0	46.4	50.1	45.3	43.0	47.6	48.1
Stoneville, MS (B)	46.2	46.8	49.4	44.0	46.5	51.0	42.0
St. Joseph, LA	45.9	48.5	47.2	44.2	48.0	48.7	51.8
Rohwer, AR	37.0	37.3	28.5-	28.0-	39.0	20.1-	34.1
Mean	35.1	36.5	39.4	33.4	37.3	36.4	37.3
<u>WEST</u>							
Pine Bluff, AR	56.9	62.7	51.5	67.4	58.1	66.9	60.5
Stuttgart, AR	37.4	44.5+	45.9+	40.8+	39.5	45.2+	38.1
Bossier City, LA	45.7	39.6-	41.1	48.5	49.6	41.5	42.4
*Crowley, LA	43.1	37.9	35.3	40.2	46.2	36.6	44.0
*Beaumont, TX	32.7	30.3	-	32.7	30.3	26.8	-
*Bixby, OK	23.7	19.4	30.5	28.1	24.4	32.9	24.2
Mean	46.7	49.0	46.2	52.3	49.1	51.2	47.0

*Not included in mean.

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

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

Table 23 - (continued)

Location	R74-1625	D74-7711	D76-9665	N76-325	R75-868	L.S.D. (.05)	C.V. (%)
<u>EAST COAST</u>							
Warsaw, VA	31.4	35.1	29.0	38.7+	29.9	3.6	7
Holland, VA	23.4-	26.8	34.7	30.0	27.7	7.0	14
Plymouth, NC	41.2	41.6	42.3	35.8	42.3	N.S.	8
Clinton, NC	38.5	39.0	45.6	45.0	38.6	5.9	8
Kinston, NC	37.9	39.9	39.6	41.0	39.3	5.9	9
Florence, SC	55.8	48.7-	56.1	57.6	62.7+	6.2	7
Hartsville, SC	49.0	51.5	50.4	49.3	45.7	N.S.	6
Mean	39.6	40.4	42.5	42.5	40.9	N.S.	
<u>SOUTHEAST</u>							
Blackville, SC	36.2	36.7	42.2+	36.2	32.5	6.1	9
Tifton, GA	42.7	41.9	48.1	47.3	46.3	N.S.	12
Quincy, FL	33.9	38.6	42.6+	44.0+	42.6+	7.9	11
Jay, FL	23.5-	33.3	30.9	19.8-	29.9	6.0	12
Fairhope, AL	32.1	27.8	31.3	29.8	29.5	N.S.	12
Baton Rouge, LA	26.0-	33.7	46.3	20.2-	35.9	11.8	20
Mean	32.4	35.3	40.3+	32.9	36.1	4.7	
<u>UPPER AND CENTRAL SOUTH</u>							
Athens, GA	45.1	43.7	45.4	44.3	41.5	N.S.	10
Calhoun, GA	42.3	37.8	42.7	43.9	40.7	N.S.	12
Belle Mina, AL	49.9	37.5-	45.0	46.4	43.9	6.2	8
Clemson, SC	31.8	30.0	36.0	28.9	29.0	N.S.	21
Woodland Mills, TN	34.6+	32.6+	33.5+	24.0	34.6+	5.6	10
Jackson, TN	45.9	45.0	44.9	45.6	47.8	N.S.	9
Mean	41.6	37.8	41.3	38.9	39.6	N.S.	
<u>DELTA</u>							
Portageville, MO (A)	41.3+	41.9+	46.7+	36.9	41.0+	6.1	9
Portageville, MO (B)	29.1	27.5	29.8	28.6	21.2-	4.3	10
Keiser, AR	42.0	43.2	31.5	42.1	36.4	N.S.	14
Jonesboro, AR	22.8	26.6+	21.1	21.6	27.6+	3.7	11
Goodwin, AR	26.3	21.8	23.5	25.7	27.3	5.2	14
Stoneville, MS (A)	48.7	46.2	47.8	43.2	46.6	N.S.	6
Stoneville, MS (B)	48.3	40.6	41.8	50.5	41.0	N.S.	6
St. Joseph, LA	49.6	53.6+	52.0	55.4+	46.3	6.1	7
Rohwer, AR	35.4	17.5-	30.6	32.4	23.9-	6.7	13
Mean	38.2	35.4	36.1	37.4	34.6	N.S.	
<u>WEST</u>							
Pine Bluff, AR	51.4	54.5	59.3	66.6	53.3	N.S.	14
Stuttgart, AR	38.9	41.8+	43.0+	38.2	42.4+	2.8	4
Bossier City, LA	42.1	41.7	43.4	39.8-	43.8	5.4	7
Crowley, LA	39.0	37.6	27.0	37.0	33.5	N.S.	22
Beaumont, TX	-	-	31.1	23.2	-	N.S.	19
Bixby, OK	31.8	30.9	18.1	25.4	30.9	N.S.	30
Mean	44.1	46.0	48.5	48.2	46.5	N.S.	

Table 24 - Chemical composition and seed size for the strains in Uniform Group VI, 1979

Location	Tracy	Centennial	D74-7741	N73-693	N73-1102	D75-7527
<u>OIL PERCENTAGE</u>						
Warsaw, VA	17.5	18.1	19.7	18.5	18.6	19.1
Clinton, NC	17.1	18.5	20.5	19.8	19.5	20.1
Kinston, NC	17.0	18.8	19.3	19.6	18.4	19.5
Jay, FL	18.2	18.5	20.9	20.4	19.7	20.7
Jackson, TN	19.9	20.2	22.2	20.6	20.7	21.1
Portageville, MO (A)	17.8	18.4	21.0	19.1	18.4	20.9
Keiser, AR	18.2	19.0	21.0	19.1	19.8	19.7
Stoneville, MS (B)	18.7	18.3	20.9	19.0	18.7	19.6
Stuttgart, AR	16.9	18.5	18.9	18.4	17.5	20.9
Mean	17.9	18.7+	20.5+	19.4+	19.0+	20.2+
<u>PROTEIN PERCENTAGE</u>						
Warsaw, VA	40.3	43.1	39.9	43.0	40.7	41.1
Clinton, NC	44.1	45.7	41.2	42.8	42.6	41.7
Kinston, NC	44.7	44.6	43.9	43.0	43.7	43.5
Jay, FL	44.7	45.3	42.2	42.1	43.7	42.4
Jackson, TN	36.1	35.6	36.0	35.8	37.1	36.2
Portageville, MO (A)	42.6	42.5	39.3	41.9	42.6	39.1
Keiser, AR	40.0	41.5	38.5	40.6	39.5	40.7
Stoneville, MS (B)	43.0	43.4	39.8	41.9	41.2	39.7
Stuttgart, AR	42.2	43.6	39.3	42.4	42.4	39.7
Mean	42.0	42.8	40.0-	41.5	41.5	40.5-
<u>GRAMS PER 100 SEEDS</u>						
Warsaw, VA	17.7	14.5	14.4	16.9	18.4	14.8
Clinton, NC	16.5	15.2	15.3	17.5	18.5	15.1
Kinston, NC	17.6	15.0	14.4	15.7	16.7	16.2
Jay, FL	14.7	11.4	12.6	18.5	15.7	12.1
Jackson, TN	17.1	15.0	13.8	15.3	16.7	12.9
Portageville, MO (A)	16.4	14.1	14.4	14.6	16.2	15.2
Keiser, AR	16.0	12.5	12.8	13.4	15.8	11.8
Stoneville, MS (B)	15.4	13.6	13.2	14.6	15.8	11.9
Stuttgart, AR	16.7	13.7	12.3	15.0	16.7	13.0
Mean	16.5	13.9-	13.7-	15.7	16.7	13.7-

Table 24 - (continued)

Location	N75-2213	R74-1625	D74-7711	D76-9665	N76-325	R75-868	L.S.D. (.05)
<u>OIL PERCENTAGE</u>							
Warsaw, VA	18.7	19.0	18.1	18.2	18.5	18.8	
Clinton, NC	18.7	18.8	19.0	19.5	18.8	19.3	
Kinston, NC	18.4	18.6	18.3	19.3	17.9	19.4	
Jay, FL	19.6	19.1	20.2	19.7	19.9	20.7	
Jackson, TN	20.9	20.5	20.8	20.2	20.8	20.4	
Portageville, MO (A)	18.6	18.7	19.9	20.1	18.6	19.6	
Keiser, AR	19.7	20.6	19.9	19.9	19.8	20.6	
Stoneville, MS (B)	19.2	18.8	19.3	18.7	19.3	18.7	
Stuttgart, AR	18.6	19.1	19.1	19.1	17.9	20.0	
Mean	19.2+	19.2+	19.4+	19.4+	19.1+	19.7+	0.5
<u>PROTEIN PERCENTAGE</u>							
Warsaw, VA	43.4	42.1	41.9	40.3	43.6	40.2	
Clinton, NC	44.7	43.2	42.2	40.0	43.5	41.4	
Kinston, NC	46.0	44.5	44.1	42.3	44.7	42.8	
Jay, FL	45.5	44.9	42.9	41.8	44.8	40.4	
Jackson, TN	36.3	35.3	36.5	34.4	37.9	36.8	
Portageville, MO (A)	44.0	42.0	39.4	37.7	42.4	40.1	
Keiser, AR	39.6	38.2	39.5	35.2	41.3	37.8	
Stoneville, MS (B)	42.3	41.2	41.5	39.8	42.0	40.9	
Stuttgart, AR	44.0	42.9	40.2	38.9	43.2	39.1	
Mean	42.9	41.6	40.9-	38.9-	42.6	39.9-	0.9
<u>GRAMS PER 100 SEEDS</u>							
Warsaw, VA	15.7	17.7	13.4	13.9	16.0	14.6	
Clinton, NC	18.1	18.1	13.8	13.2	13.8	14.5	
Kinston, NC	17.1	17.2	13.0	13.6	14.3	14.0	
Jay, FL	11.8	14.2	11.4	10.1	12.2	12.2	
Jackson, TN	14.5	14.8	12.5	12.9	12.4	14.7	
Portageville, MO (A)	14.3	16.0	13.2	12.6	11.6	14.9	
Keiser, AR	13.8	15.0	11.0	10.3	12.3	12.5	
Stoneville, MS (B)	13.4	13.8	11.0	11.4	12.4	11.4	
Stuttgart, AR	14.0	14.3	11.3	11.7	10.7	13.0	
Mean	14.7-	15.7	12.3-	12.2-	12.9-	13.5-	0.8

Table 25 - Relative maturity data, days earlier (-) or later (+) than Tracy, for the strains in Uniform Group VI, 1979

Location	Date planted	Tracy matured	Centennial	D74-7741	N73-693	N73-1102
<u>EAST COAST</u>						
Warsaw, VA	6-6	11-4	0	-2	-2	-4
Plymouth, NC	-	10-30	+3	-6	+3	-2
Clinton, NC	6-1	10-31	0	-7	0	0
Kinston, NC	5-18	10-24	+4	0	+2	0
Florence, SC	5-18	10-29	-3	0	+2	0
Hartsville, SC	5-25	10-21	+3	-10	+1	-1
Mean		10-28	+1	+4	+1	-1
<u>SOUTHEAST</u>						
Blackville, SC	5-18	10-15	+1	+3	-4	-2
Tifton, GA	5-17	10-8	+5	+5	+5	+1
Quincy, FL	5-29	10-18	+2	+6	+16	-3
Jay, FL	5-29	10-5	+3	-2	+3	+3
Fairhope, AL	6-7	10-2	0	-5	0	-4
Baton Rouge, LA	5-9	10-8	+3	-7	+1	0
Mean		10-9	+2	0	+4	-1
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	5-7	10-11	+4	-6	-1	-1
Calhoun, GA	6-17	10-15	+6	+3	+9	+3
Belle Mina, AL	5-8	10-10	0	-4	+3	-1
Clemson, SC	5-18	10-19	0	-10	-3	-4
Jackson, TN	5-17	10-18	+4	-3	+2	+2
Mean		10-15	+3	-4	+3	0
<u>DELTA</u>						
Keiser, AR	6-6	10-20	+2	-4	+3	+4
Jonesboro, AR	6-9	11-2	0	-14	-5	-1
Goodwin, AR	6-15	10-27	-3	-14	-2	-3
Stoneville, MS (A)	5-11	9-12	+5	-10	+8	0
Stoneville, MS (B)	6-13	10-16	+2	-2	+4	+2
St. Joseph, LA	5-21	10-2	+6	-4	+7	+6
Rohwer, AR	6-14	10-13	+3	-1	+3	+3
Mean		10-8	+2	-7	+3	+2
<u>WEST</u>						
Pine Bluff, AR	5-17	10-14	+10	0	+11	+6
Stuttgart, AR	6-11	10-19	-1	-7	+4	0
Bossier City, LA	5-22	10-8	+6	0	-1	+1
Crowley, LA	5-16	10-9	+6	-5	+7	+2
*Beaumont, TX	5-26	10-12	-1	-	+3	-2
Mean		10-13	+5	-3	+5	+2

*Not included in mean.

Table 25 - (continued)

Location	D75-7527	N75-2213	R74-1625	D74-7711	D76-9665	N76-325	R75-868
<u>EAST COAST</u>							
Warsaw, VA	-5	0	0	-6	+2	-6	-6
Plymouth, NC	-8	+3	0	-4	+3	-7	-4
Clinton, NC	-11	0	0	-13	0	-5	-5
Kinston, NC	-6	0	0	-4	+2	0	-4
Florence, SC	-3	0	-1	0	0	+1	-2
Hartsville, SC	-13	-8	+1	-12	+2	-1	-7
Mean	-8	-1	0	-7	+2	-3	-5
<u>SOUTHEAST</u>							
Blackville, SC	-12	0	+2	-9	+3	-2	-1
Tifton, GA	+4	-1	+4	-7	+5	+5	+1
Quincy, FL	0	-1	-2	-2	+8	0	+4
Jay, FL	-4	-2	-2	-4	+3	0	0
Fairhope, AL	-8	-6	-8	0	-6	0	-6
Baton Rouge, LA	-7	-5	-5	-7	+3	+2	0
Mean	-5	-3	-2	-5	+4	+1	0
<u>UPPER AND CENTRAL SOUTH</u>							
Athens, GA	-8	-1	-2	-8	+2	0	-2
Calhoun, GA	+3	+9	+5	0	+10	+3	-1
Belle Mina, AL	-6	+1	-2	-7	+1	-2	-2
Clemson, SC	-11	-5	-5	-11	-2	-5	-5
Jackson, TN	-8	-1	0	-9	+5	-1	0
Mean	-6	+1	-1	-7	+3	-1	-2
<u>DELTA</u>							
Keiser, AR	-4	+2	0	-6	+4	-4	-2
Jonesboro, AR	-17	-11	-13	-16	+1	-12	-12
Goodwin, AR	-14	-5	-5	-15	-1	-11	-7
Stoneville, MS (A)	-9	-3	0	-11	+4	-3	-1
Stoneville, MS (B)	-6	0	+1	-7	+3	-1	-2
St. Joseph, LA	-5	0	-1	-6	+7	+6	+3
Rohwer, AR	-3	+3	0	-4	+3	-1	+1
Mean	-8	-2	-3	-9	+3	-4	-3
<u>WEST</u>							
Pine Bluff, AR	-2	0	0	0	+10	+5	+2
Stuttgart, AR	-10	0	+1	-10	+5	-4	0
Bossier City, LA	-7	-4	-2	-3	+8	+4	+4
Crowley, LA	-7	-5	+5	-7	+7	+7	0
Beaumont, TX	-7	-	-	-	+2	-2	-
Mean	-7	-2	+1	-5	+8	+3	+2

Table 26 - Plant height for the strains in Uniform Group VI, 1979

Location	Tracy	Centennial	D74-7741	N73-693	N73-1102	D75-7527
<u>EAST COAST</u>						
Warsaw, VA	42	44	43	37	43	44
Holland, VA	30	30	27	30	32	21
Plymouth, NC	36	41	40	37	37	39
Clinton, NC	43	44	39	39	41	41
Kinston, NC	35	43	37	35	38	37
Florence, SC	40	44	43	36	38	41
Hartsville, SC	42	47	44	41	44	45
Mean	38	42	39	36	39	38
<u>SOUTHEAST</u>						
Blackville, SC	36	39	38	33	37	31
Tifton, GA	33	39	36	31	32	36
Quincy, FL	34	36	33	32	40	31
Jay, FL	34	36	34	28	28	34
Fairhope, AL	39	38	35	32	32	36
Baton Rouge, LA	26	29	26	23	29	28
Mean	34	36	34	30	33	33
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	38	38	37	36	38	38
Calhoun, GA	28	28	30	28	33	25
Belle Mina, AL	44	48	41	43	46	43
Clemson, SC	33	31	30	32	33	28
Jackson, TN	47	47	46	44	47	45
Mean	38	38	37	37	39	36
<u>DELTA</u>						
Portageville, MO (A)	33	39	28	32	32	27
Portageville, MO (B)	25	30	30	26	25	24
Keiser, AR	35	34	36	33	37	31
Jonesboro, AR	40	37	36	35	39	35
Goodwin, AR	35	36	31	33	37	31
Stoneville, MS (A)	38	40	35	36	39	32
Stoneville, MS (B)	38	39	36	35	37	33
St. Joseph, LA	39	37	35	35	42	30
Rohwer, AR	28	25	19	17	29	15
Mean	35	35	32	31	35	29
<u>WEST</u>						
Pine Bluff, AR	41	49	39	54	46	46
Stuttgart, AR	39	39	37	36	39	34
Bossier City, LA	37	35	31	36	39	33
Crowley, LA	31	29	24	27	32	23
*Beaumont, TX	28	20	-	24	28	20
Bixby, OK	39	39	31	36	40	30
Mean	37	38	32	38	39	33

*Not included in mean.

Table 26 - (continued)

Location	N75-2213	R74-1625	D74-7711	D76-9665	N76-325	R75-868
<u>EAST COAST</u>						
Warsaw, VA	39	36	40	44	33	42
Holland, VA	25	22	24	29	22	23
Plymouth, NC	41	35	37	43	31	39
Clinton, NC	44	35	41	48	33	42
Kinston, NC	42	36	39	45	31	37
Florence, SC	45	39	41	48	39	42
Hartsville, SC	46	45	43	51	38	45
Mean	40	35	38	44	32	39
<u>SOUTHEAST</u>						
Blackville, SC	41	34	37	36	24	36
Tifton, GA	39	35	36	37	27	29
Quincy, FL	38	36	36	41	33	32
Jay, FL	38	34	32	42	26	26
Fairhope, AL	38	39	40	29	35	35
Baton Rouge, LA	28	23	25	30	17	28
Mean	37	34	34	36	27	31
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	39	38	37	43	31	38
Calhoun, GA	34	30	28	34	27	28
Belle Mina, AL	47	48	44	54	36	45
Clemson, SC	36	32	31	34	29	31
Jackson, TN	46	46	41	48	39	45
Mean	40	39	36	43	32	37
<u>DELTA</u>						
Portageville, MO (A)	32	39	20	42	19	30
Portageville, MO (B)	30	24	26	27	22	21
Keiser, AR	34	34	29	33	30	34
Jonesboro, AR	40	36	34	45	30	39
Goodwin, AR	36	31	30	39	26	34
Stoneville, MS (A)	41	37	35	38	29	33
Stoneville, MS (B)	40	34	35	40	31	35
St. Joseph, LA	39	35	35	38	29	34
Rohwer, AR	24	19	15	23	18	19
Mean	35	32	29	36	26	31
<u>WEST</u>						
Pine Bluff, AR	45	44	43	48	40	44
Stuttgart, AR	38	38	34	45	30	38
Bossier City, LA	32	33	33	38	29	36
Crowley, LA	30	29	26	32	22	23
Beaumont, TX	-	-	-	25	17	-
Bixby, OK	38	35	30	37	30	31
Mean	37	36	33	40	30	34

Table 27 - Lodging scores for the strains in Uniform Group VI, 1979

Location	Tracy	Centennial	D74-7741	N73-693	N73-1102	D75-7527
<u>EAST COAST</u>						
Warsaw, VA	3.6	3.8	3.6	3.4	2.7	3.8
Holland, VA	2.0	1.7	2.3	2.7	1.7	1.3
Plymouth, NC	3.0	3.3	4.0	3.7	3.3	3.3
Clinton, NC	3.0	3.0	3.0	3.0	3.0	3.0
Kinston, NC	3.0	2.7	3.0	3.3	3.0	3.0
Florence, SC	3.0	3.0	3.0	2.0	2.0	2.0
Hartsville, SC	2.5	2.5	3.2	2.7	2.7	3.2
<u>SOUTHEAST</u>						
Blackville, SC	3.0	3.0	4.0	3.0	2.0	2.0
Tifton, GA	1.5	1.0	1.0	1.0	1.0	1.0
Quincy, FL	3.0	2.0	2.0	2.0	3.0	2.0
Jay, FL	2.0	2.0	4.0	3.0	3.0	3.0
Fairhope, AL	3.0	3.0	3.0	3.0	3.0	3.0
Baton Rouge, LA	1.8	1.0	1.4	1.2	1.5	1.0
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	2.0	2.0	1.8	2.0	1.5	1.7
Calhoun, GA	1.5	1.0	1.8	1.5	1.3	1.5
Belle Mina, AL	3.2	4.5	3.5	4.2	2.5	3.0
Jackson, TN	2.0	2.5	3.0	3.0	2.5	2.0
<u>DELTA</u>						
Portageville, MO (A)	2.0	1.5	2.5	2.0	3.0	1.5
Portageville, MO (B)	2.0	1.5	2.0	2.5	2.0	2.0
Keiser, AR	1.6	1.0	2.0	2.0	1.6	1.0
Jonesboro, AR	3.8	2.9	2.6	3.1	2.8	2.3
Goodwin, AR	2.1	1.6	1.6	2.0	1.8	1.4
Stoneville, MS (A)	3.0	3.0	2.3	3.0	3.0	2.0
Stoneville, MS (B)	3.0	3.0	3.0	2.7	3.0	2.0
St. Joseph, LA	4.2	3.5	4.5	4.2	4.1	4.5
Rohwer, AR	3.7	3.0	2.3	2.0	3.0	2.3
<u>WEST</u>						
Pine Bluff, AR	2.0	1.3	2.0	2.0	2.3	2.3
Stuttgart, AR	3.2	3.2	3.0	3.0	2.7	3.0
Bossier City, LA	2.3	2.3	3.5	2.6	2.2	2.3
Crowley, LA	1.0	1.0	1.0	1.0	1.0	1.0
Beaumont, TX	1.7	1.3	-	1.7	1.0	1.7
Bixby, OK	2.0	1.0	1.5	2.0	2.0	2.0

Table 27 - (continued)

Location	N75-2213	R74-1625	D74-7711	D76-9665	N76-325	R75-868
<u>EAST COAST</u>						
Warsaw, VA	3.8	3.0	2.7	3.8	2.4	3.9
Holland, VA	1.7	1.3	1.0	1.7	1.3	2.0
Plymouth, NC	3.7	3.0	3.3	3.0	3.0	3.7
Clinton, NC	3.0	3.0	3.0	3.0	3.0	3.0
Kinston, NC	3.0	2.7	3.0	3.0	2.3	3.0
Florence, SC	4.0	2.0	3.0	2.0	3.0	3.0
Hartsville, SC	2.8	2.5	2.7	3.0	2.2	3.2
<u>SOUTHEAST</u>						
Blackville, SC	2.0	2.0	4.0	2.0	2.0	2.0
Tifton, GA	1.3	1.0	1.0	1.0	1.0	1.0
Quincy, FL	4.0	2.0	2.0	2.0	1.0	2.0
Jay, FL	2.0	2.0	2.0	2.0	2.0	2.0
Fairhope, AL	3.0	3.0	3.0	3.0	3.0	3.0
Baton Rouge, LA	1.0	1.0	1.3	1.1	1.0	1.9
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	2.2	1.8	1.5	2.0	1.5	2.0
Calhoun, GA	1.5	1.2	1.2	1.5	1.0	1.7
Belle Mina, AL	4.5	3.3	3.7	4.0	2.0	3.0
Jackson, TN	2.0	2.0	1.5	1.5	2.0	2.0
<u>DELTA</u>						
Portageville, MO (A)	2.5	2.0	2.0	2.5	1.3	2.0
Portageville, MO (B)	2.0	2.0	2.0	1.5	1.5	2.0
Keiser, AR	1.0	1.0	1.0	1.0	1.0	1.3
Jonesboro, AR	2.1	1.6	1.9	3.3	1.6	3.9
Goodwin, AR	1.4	1.4	1.5	2.1	1.1	2.0
Stoneville, MS (A)	3.3	2.3	2.3	3.0	2.0	2.7
Stoneville, MS (B)	2.7	2.0	2.0	3.0	2.0	2.3
St. Joseph, LA	4.8	3.8	3.3	4.0	1.8	3.5
Rohwer, AR	2.0	2.0	2.3	2.3	2.0	2.0
<u>WEST</u>						
Pine Bluff, AR	2.0	1.3	2.6	2.3	1.0	1.6
Stuttgart, AR	3.2	2.3	3.0	3.7	2.2	3.7
Bossier City, LA	2.6	2.0	3.7	2.2	1.3	2.7
Crowley, LA	1.0	1.0	1.0	1.0	1.0	1.0
Beaumont, TX	-	-	-	1.0	1.0	-
Bixby, OK	2.5	1.0	1.0	1.0	1.0	1.5

Table 28 - Seed quality scores for the strains in Uniform Group VI, 1979

Location	Tracy	Centennial	D74-7741	N73-693	N73-1102	D75-7527
<u>EAST COAST</u>						
Warsaw, VA	1.6	1.6	1.4	1.3	1.2	1.2
Holland, VA	1.0	1.0	1.0	1.0	1.0	1.0
Plymouth, NC	1.5	1.5	1.5	1.5	1.5	1.5
Clinton, NC	1.5	1.5	1.5	1.5	1.5	1.5
Kinston, NC	1.5	1.5	1.5	1.5	1.5	1.5
<u>SOUTHEAST</u>						
Blackville, SC	2.0	2.0	2.0	2.0	2.0	2.0
Tifton, GA	2.5	1.5	3.0	2.0	2.0	5.0
Quincy, FL	3.0	2.0	3.0	2.0	2.0	3.0
Jay, FL	3.0	2.0	1.0	2.0	2.0	2.0
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	1.5	1.8	1.8	1.7	1.5	2.7
Jackson, TN	1.0	1.0	1.0	1.0	1.0	1.0
<u>DELTA</u>						
Portageville, MO (A)	1.5	1.5	1.5	1.5	1.5	1.5
Portageville, MO (B)	2.0	2.0	2.0	2.0	1.5	2.0
Keiser, AR	1.0	1.0	1.0	1.0	1.0	1.5
Jonesboro, AR	1.3	1.0	1.0	1.0	1.0	1.0
Goodwin, AR	1.8	1.0	1.5	1.0	1.3	1.5
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
Rohwer, AR	2.0	1.3	2.3	2.3	3.0	2.2
<u>WEST</u>						
Pine Bluff, AR	2.0	2.0	2.0	2.0	1.0	2.0
Stuttgart, AR	2.5	1.5	1.8	1.7	2.3	1.3
*Beaumont, TX	2.0	2.0	-	2.0	2.0	2.3

*Not included in mean.

Table 28 - (continued)

Location	N75-2213	R74-1625	D74-7711	D76-9665	N76-325	R75-868
<u>EAST COAST</u>						
Warsaw, VA	1.0	1.0	1.6	1.5	1.2	1.0
Holland, VA	1.0	1.0	1.0	1.0	1.0	1.0
Plymouth, NC	1.5	1.5	1.5	1.5	1.5	1.5
Clinton, NC	1.5	1.5	1.5	1.5	1.5	1.5
Kinston, NC	1.5	1.5	1.5	1.5	1.5	1.5
<u>SOUTHEAST</u>						
Blackville, SC	2.0	1.0	1.0	1.0	2.0	1.0
Tifton, GA	1.5	2.0	4.5	1.5	2.0	2.5
Quincy, FL	2.0	2.0	4.0	2.0	2.0	2.0
Jay, FL	1.0	2.0	1.0	1.0	1.0	1.0
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	1.5	1.7	2.5	1.5	1.5	1.5
Jackson, TN	1.0	1.0	1.0	1.0	1.0	1.0
<u>DELTA</u>						
Portageville, MO (A)	2.0	2.0	1.5	1.5	1.0	1.5
Portageville, MO (B)	2.0	2.0	2.0	2.0	2.0	2.0
Keiser, AR	1.0	1.0	1.5	1.0	1.0	1.0
Jonesboro, AR	1.5	1.0	1.0	1.0	1.0	1.0
Goodwin, AR	1.0	1.0	1.3	1.0	1.3	1.0
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Rohwer, AR	1.8	2.2	2.2	1.2	1.8	1.5
<u>WEST</u>						
Pine Bluff, AR	2.0	2.0	2.0	3.0	1.0	2.0
Stuttgart, AR	2.2	1.2	1.5	1.5	1.3	1.8
Beaumont, TX	-	-	-	2.0	2.7	-

PRELIMINARY GROUP VI

1979

Eight Preliminary Group VI nurseries, including 34 experimental strains along with Centennial and Bedford, were grown. The parentage for each of these strains is reported in Table 29. Performance data are summarized in Tables 30 through 35. Differences among strains for seed yield were significant at each of the locations. The combined analysis of variance also showed differences among strains to be significant.

Two strains, N77-114 and N77-347, produced mean seed yields significantly greater than that for Centennial. Both were earlier in maturity than Bedford. Four strains had mean seed yields significantly lower than that for Centennial.

Fourteen strains were resistant to CN race 3. Eight strains have resistance to CN races 3 and 4. D77-6057, resistant to both strains of CN, also had moderate resistance to *M. incognita* and *M. arenaria*. J77-272 demonstrated good nematode resistance but was very susceptible to stem canker in a planting at Verona, Mississippi.

Strains having 5 percent or less mottled seed at Plymouth, where J79-342 had 50%, were: D75-10148, D77-5398, D77-7148, Ga77-423, N77-16, N77-72, N77-114, R75-8B, R77-11, R77-38, R77-133, R77-196, S77-7788, and Sc75-614.

The strain Sc75-614 is being increased and released in South Carolina as Kershaw.

Table 29 - Parentage of the strains in Preliminary Group VI, 1979

Variety or strain	Parentage	Generation composited
1. Centennial		
2. Bedford		
3. D75-9505	Forrest X Centennial	F ₅
4. D75-10148	Semmes X Hood	F ₅
5. D77-12	Forrest(2) X Tracy	F ₅
6. D77-14	Forrest(2) X Tracy	F ₅
7. D77-21	Forrest(2) X Tracy	F ₅
8. D77-4806	D74-7631 X J74-57	F ₅
9. D77-5398	D71-5289 X D72-8605	F ₅
10. D77-5769	D71-664 X D71-6234	F ₅
11. D77-6057	Centennial X J74-47	F ₅
12. D77-7148	Hood(2) X Semmes	F ₅
13. Ga77-421	R67-141 X Bragg	F ₆
14. Ga77-423	R67-141 X Bragg	F ₆
15. J77-255	D74-7631 X J74-57	F ₅
16. J77-272	D74-7631 X J74-57	F ₅
17. J77-342	D74-7631 X J74-57	F ₅
18. N77-16	Essex X N70-2173	F ₅
19. N77-72	Essex X N70-2173	F ₅
20. N77-114	Essex X N70-2173	F ₅
21. N77-166	N70-1549 X N72-3213	F ₅
22. N77-347	N70-1549 X Centennial	F ₅
23. N77-907	N70-1549 X Centennial	F ₅
24. N77-931	N70-1549 X Centennial	F ₅
25. R75-8B	R72-2647(3) X D72-C57	F ₅
26. R77-11	Mack X D69-8201	F ₅
27. R77-38	[(D68-B4 X R66-1516) X Ray] X (York X Davis)	F ₅
28. R77-133	R69-1151 X Mack	F ₅
29. R77-166S	Forrest X R69-1400	F ₅
30. R77-196	Davis X Williams	F ₅
31. R77-238S	Forrest X R69-1400	F ₅
32. S77-314	D70-3115 X J74-39	F ₄
33. S77-318	D70-3115 X J74-39	F ₄
34. S77-7788	D69-8201 X R70-332	F ₄
35. S77-7865	D69-8201 X R70-332	F ₄
36. Kershaw (Sc75-614)	Davis X Hale 7	F ₅

Table 30 - General summary of performance for the strains in Preliminary Group VI, 1979

Strain	Seed yield	Maturity index	Ht.	Percent		Nematode Rating			
				Oil	Protein	CN Race 3	CN Race 4	M. <i>incognita</i>	M. <i>arenaria</i>
Centennial	39.3	10-19	38	18.7	42.9	R	S	1.5	4.5
Bedford	35.8	-8	35	19.2	39.2-	R	R	1.5	2.5
D75-9505	39.5	-1	37	19.0	41.2-	R	S	3.0	1.5
D75-10148	35.9	-6	35	19.4+	39.7-	S	S	4.0	4.8
D77-12	42.5	-2	37	18.5	42.4	R	S	4.5	5.0
D77-14	40.7	0	35	19.1	40.6-	R	S	4.5	2.5
D77-21	38.3	-1	40	19.1	40.9-	R	S	5.0	5.0
D77-4806	38.3	-4	43	18.3	41.6	R	R	3.5	3.5
D77-5398	33.5-	-9	34	17.3-	47.3+	S	S	5.0	5.0
D77-5769	36.0	-9	40	16.6-	46.3+	S	S	5.0	5.0
D77-6057	39.4	-7	34	18.4	42.6	R	R	3.0	3.2
D77-7148	33.4-	-8	28	18.5	42.4	S	S	5.0	5.0
Ga77-421	37.8	-5	34	19.3	40.9-	S	S	5.0	5.0
Ga77-423	40.0	0	33	19.4+	39.7-	S	S	5.0	4.0
J77-255	39.2	-6	40	18.7	42.5	R	R	5.0	3.5
J77-272	37.4	-6	35	19.2	41.9	R	R	1.5	1.8
J77-342	35.7-	-8	41	19.0	42.9	R	R	4.0	4.0
N77-16	40.6	-10	32	19.0	41.7	S	S	5.0	4.5
N77-72	39.6	-8	27	19.8+	41.2-	S	S	5.0	5.0
N77-114	44.3+	-10	30	20.2+	39.5-	S	S	5.0	5.0
N77-166	40.7	-9	28	19.8+	41.3-	S	S	5.0	5.0
N77-347	43.4+	-10	33	19.4+	42.5	S	S	1.5	5.0
N77-907	40.2	-7	31	20.0+	40.5-	S	S	5.0	4.8
N77-931	38.2	-5	38	19.4+	41.4-	S	S	5.0	3.2
R75-8B	35.3-	-5	33	20.0+	40.3-	R	R	5.0	3.5
R77-11	37.1	-8	38	19.8+	41.1-	S	S	4.0	2.5
R77-38	39.5	-2	42	19.4+	39.6-	S	S	3.0	2.3
R77-133	37.0	-5	34	19.0	41.8	R	S	4.0	4.0
R77-166S	39.5	0	40	19.0	40.3-	R	S	1.5	2.0
R77-196	39.5	+5	38	19.1	40.8	S	S	5.0	5.0
R77-238S	40.5	+1	38	18.9	41.3-	R	S	5.0	1.5
S77-314	39.4	-2	37	19.1	41.1-	R	R	2.0	3.0
S77-318	41.5	-9	35	19.4+	40.7	R	R	4.0	1.2
S77-7788	41.4	-10	35	19.5+	39.6-	S	S	5.0	3.2
S77-7865	40.2	-8	34	19.0	41.4-	S	S	4.3	3.0
Kershaw (Sc75-614)	36.9	0	41	18.8	41.6	S	S	5.0	4.8
L.S.D. (.05)	3.5			0.6	1.3				
L.S.D. (.01)	4.6			0.8	1.7				

Portageville, MO and Holland, VA not included in maturity index mean.

Table 31 - Seed yield, in bushels per acre, for the strains in Preliminary Group VI, 1979

Strain	Holland, VA	Ply- mouth, NC	Portage- ville, MO (B)	Keiser, AR	Stone- ville, MS (A)	Stone- ville, MS (B)	Jay, FL	Belle Mina, AL
Centennial	36.7	39.8	25.6	36.0	49.7	47.7	33.3	46.4
Bedford	32.2	32.1	20.0	43.0+	44.9	41.3-	30.2	42.8
D75-9505	38.2	39.1	22.1	41.9	50.8	46.2	30.2	47.4
D75-10148	34.8	37.7	25.1	41.6	42.2-	45.5	21.6-	39.2
D77-12	43.6	37.3	33.3+	43.5+	47.6	47.9	34.8	52.0
D77-14	40.2	34.4	29.1	40.2	47.2	50.1	33.3	51.6
D77-21	36.1	39.0	29.1	39.4	42.7-	48.0	29.2	43.0
D77-4806	38.7	30.9-	29.5	42.3	52.7	40.8-	31.3	40.6
D77-5398	32.6	28.4-	21.6	36.2	43.8	41.3-	25.2	38.8
D77-5769	32.3	29.8-	26.4	39.0	48.8	39.4-	25.7	46.5
D77-6057	33.7	33.4	21.3	41.6	52.1	51.1	35.3	47.1
D77-7148	31.4	34.5	15.7-	40.0	43.2-	42.2	23.2-	36.9-
Ga77-421	41.8	37.1	24.6	38.7	49.0	45.7	24.7	41.4
Ga77-423	42.3	37.8	27.6	42.4	48.5	47.4	23.2-	51.0
J77-255	36.8	39.3	27.8	40.8	47.5	43.4	31.2	47.1
J77-272	34.6	33.6	29.9	46.1+	46.4	47.3	24.7	36.8-
J77-342	37.8	30.3-	30.1	39.2	47.5	41.2-	26.7	32.5-
N77-16	42.6	41.6	26.0	43.6+	50.0	45.8	25.2	50.0
N77-72	42.3	42.6	20.3	41.5	48.7	50.7	26.2	44.2
N77-114	46.7+	45.4	26.2	42.6	53.3	52.5+	30.2	57.4+
N77-166	39.3	41.5	25.1	46.1+	50.8	45.7	28.2	48.7
N77-347	41.2	40.6	34.3+	46.1+	53.0	51.4+	29.8	51.0
N77-907	45.0+	34.8	28.8	43.6+	44.2	47.6	25.2	52.8
N77-931	39.8	37.3	30.5	36.0	41.5-	48.8	28.8	43.4
R75-8B	38.3	37.2	21.9	34.2	46.9	42.2-	22.7-	39.3
R77-11	39.5	37.8	21.9	36.9	46.0	43.4-	29.2	42.6
R77-38	41.1	33.1	27.6	40.9	45.9	48.5	29.2	49.9
R77-133	38.5	35.6	18.1-	38.5	49.5	49.9	18.6-	47.4
R77-166S	42.3	40.2	28.6	38.6	43.2-	47.6	29.2	46.6
R77-196	44.6	38.0	25.6	39.3	43.9	43.9-	36.8	44.2
R77-238S	47.7+	42.5	29.0	37.4	45.1	49.9	31.8	41.0
S77-314	39.6	37.3	27.6	42.1	48.3	45.4	32.8	41.8
S77-318	41.2	35.0	28.5	49.7+	54.4	47.5	38.4	37.4-
S77-7788	48.2+	35.2	24.8	42.2	54.3	51.4+	27.7	47.5
S77-7865	39.5	35.6	21.2	44.5+	54.2	49.0	27.8	49.8
Kershaw (Sc75-614)	40.7	39.3	28.0	37.1	38.4-	45.6	23.2	42.7
L.S.D. (.05)	8.2	7.9	6.0	6.9	6.0	3.5	8.7	8.4
C.V.	10%	11%	11%	8%	6%	4%	15%	9%

note S77 272 grown in variety sequence study
at Decora, very susceptible to blight under
seed yield 50% of Centennial or Tacy

Table 32 - Oil percentages for the strains in Preliminary Group VI, 1979

Strain	Holland, VA	Plymouth, NC	Portageville, MO (B)	Stoneville, MS (B)	Jay, FL
Centennial	19.6	18.4	17.6	19.1	18.8
Bedford	19.3	20.3	18.3	18.9	19.2
D75-9505	19.5	19.1	17.1	19.4	19.9
D75-10148	19.2	19.6	18.1	20.1	20.2
D77-12	18.9	18.5	17.2	19.0	18.9
D77-14	19.2	19.4	17.5	19.3	20.3
D77-21	18.6	19.4	18.7	19.6	19.2
D77-4806	18.5	19.3	16.7	18.8	18.3
D77-5398	17.7	16.9	16.5	18.2	17.0
D77-5769	16.6	17.1	16.9	16.2	16.2
D77-6057	18.6	18.8	17.4	18.7	18.4
D77-7148	19.1	19.1	17.5	18.6	18.4
Ga77-421	19.2	19.7	18.8	19.6	19.3
Ga77-423	19.9	19.4	18.1	19.5	19.9
J77-255	18.5	18.7	17.6	18.8	20.0
J77-272	19.4	19.6	19.3	18.5	19.4
J77-342	19.5	19.6	17.9	18.5	19.6
N77-16	19.5	19.2	17.9	18.8	19.8
N77-72	19.6	19.4	18.8	19.7	21.3
N77-114	19.8	20.8	19.5	19.9	21.0
N77-166	19.5	20.4	18.4	20.2	20.5
N77-347	19.4	20.6	17.8	19.2	20.2
N77-907	19.7	20.4	18.5	20.1	21.2
N77-931	19.8	20.2	18.3	19.3	19.5
R75-8B	20.0	19.6	18.7	20.8	20.8
R77-11	20.3	20.7	17.7	20.3	20.0
R77-38	19.3	19.2	18.1	20.2	20.1
R77-133	18.9	19.5	17.9	19.4	19.4
R77-166S	19.2	19.1	17.6	19.9	19.1
R77-196	19.1	19.0	18.0	19.6	20.0
R77-238S	19.3	19.0	17.9	19.2	19.1
S77-314	19.1	19.7	18.2	18.9	19.4
S77-318	19.6	20.3	18.3	19.8	19.1
S77-7788	19.5	20.1	19.7	18.8	19.4
S77-7865	19.3	19.9	17.8	19.5	18.4
Kershaw (Sc75-614)	19.3	18.1	18.3	18.7	19.4

Table 33 - Protein percentages for the strains in Preliminary Group VI, 1979

Strain	Holland, VA	Plymouth, NC	Portageville, MO (B)	Stoneville, MS (B)	Jay, FL
Centennial	41.2	43.6	40.1	43.8	45.7
Bedford	39.0	37.7	37.5	39.7	42.0
D75-9505	38.9	42.7	40.3	41.0	43.1
D75-10148	38.4	40.2	39.6	39.2	41.3
D77-12	41.9	42.6	42.5	41.0	43.9
D77-14	39.1	41.0	40.1	41.6	41.0
D77-21	41.1	41.5	39.8	40.2	42.0
D77-4806	40.7	39.8	44.9	41.0	41.7
D77-5398	47.5	48.2	44.9	46.7	49.0
D77-5769	45.6	45.1	45.8	47.3	47.9
D77-6057	41.7	44.2	42.8	41.3	43.2
D77-7148	41.3	42.4	42.1	42.7	43.7
Ga77-421	39.4	41.3	39.9	41.5	42.6
Ga77-423	39.6	39.0	39.2	39.1	41.4
J77-255	42.6	43.1	41.8	42.2	43.0
J77-272	39.5	42.4	41.8	41.7	44.0
J77-342	41.8	41.8	42.9	43.2	44.7
N77-16	40.7	40.6	40.8	42.2	44.3
N77-72	41.1	42.1	38.5	42.3	42.0
N77-114	39.5	38.7	39.1	40.0	40.4
N77-166	39.7	41.6	40.3	41.4	43.5
N77-347	42.7	41.0	41.9	42.9	44.0
N77-907	39.8	39.9	39.8	40.7	42.1
N77-931	41.2	40.8	39.4	42.2	43.5
R75-8B	39.3	40.8	39.9	39.8	41.9
R77-11	40.3	41.0	41.8	39.9	42.6
R77-38	40.5	40.4	38.9	39.7	38.7
R77-133	41.0	41.5	40.9	42.0	43.4
R77-166S	40.0	41.5	40.4	38.7	41.1
R77-196	41.2	41.4	41.4	41.3	38.5
R77-238S	41.5	41.1	40.6	42.2	41.0
S77-314	39.4	40.4	41.0	41.5	43.4
S77-318	41.4	39.9	41.0	40.5	40.8
S77-7788	39.5	38.4	38.1	39.8	42.1
S77-7865	41.4	39.3	41.5	40.5	44.4
Kershaw (Sc75-614)	41.5	42.7	41.2	40.4	42.0

Table 34 - Plant height for the strains in Preliminary Group VI, 1979

Strain	Holland, VA	Plymouth, NC	Portage- ville, MO (B)	Keiser, AR	Stone- ville MS (A)	Stone- ville, MS (B)	Jay, FL	Belle Mina, AL
Centennial	36	42	30	37	44	35	36	46
Bedford	27	40	28	34	43	33	34	44
D75-9505	34	46	25	40	46	38	36	44
D75-10148	29	39	24	36	39	36	32	46
D77-12	36	37	30	47	40	36	36	34
D77-14	31	39	27	38	42	29	34	43
D77-21	37	43	34	41	42	38	36	46
D77-4806	39	52	30	44	51	41	40	50
D77-5398	29	40	25	33	39	36	26	41
D77-5769	44	40	31	38	51	41	36	41
D77-6057	27	36	24	37	41	33	32	42
D77-7148	26	31	21	25	33	26	28	34
Ga77-421	33	38	27	31	40	31	32	41
Ga77-423	25	39	30	28	41	30	36	35
J77-255	38	45	32	39	49	37	32	47
J77-272	33	43	27	35	41	36	30	38
J77-342	36	40	34	37	52	39	40	50
N77-16	30	34	25	29	40	32	28	39
N77-72	27	27	22	23	30	29	22	35
N77-114	24	37	24	27	32	30	26	36
N77-166	26	34	24	26	31	25	23	31
N77-347	30	37	29	34	36	31	30	37
N77-907	28	36	29	28	30	29	28	37
N77-931	37	40	32	37	43	35	32	44
R75-8B	34	41	27	36	34	35	22	38
R77-11	36	40	28	34	44	38	36	47
R77-38	43	47	26	43	49	37	40	53
R77-133	30	40	25	35	40	30	30	42
R77-166S	38	45	30	41	43	37	38	47
R77-196	38	40	33	36	45	37	32	42
R77-238S	38	43	30	39	42	36	28	47
S77-314	32	38	30	38	43	39	34	43
S77-318	29	35	28	38	40	35	26	46
S77-7788	34	37	24	29	40	33	32	47
S77-7865	31	41	22	35	39	31	26	45
Kershaw (Sc75-614)	39	46	32	42	47	39	38	43

Table 35 - Seed quality for the strains in Preliminary Group VI, 1979

Strain	Holland, VA	Plymouth, NC	Portage- ville, MO (B)	Keiser, AR	Stone- ville, MS (A)	Stone- ville, MS (B)	Jay, FL
Centennial	1.0	1.5	1.5	1.5	2.0	2.0	1.0
Bedford	1.0	1.5	1.5	1.5	2.0	2.0	2.0
D75-9505	1.0	1.5	1.5	1.5	2.0	2.0	1.0
D75-10148	1.0	1.5	1.5	1.5	2.0	2.0	1.0
D77-12	1.0	1.5	1.5	1.5	2.0	2.0	1.0
D77-14	1.0	1.5	1.5	1.0	2.0	2.0	2.0
D77-21	1.5	1.5	1.5	1.5	2.0	2.0	1.0
D77-4806	1.0	1.5	1.5	1.0	2.0	2.0	1.0
D77-5398	1.5	1.5	1.5	1.5	2.0	2.0	1.0
D77-5769	1.5	1.5	1.5	1.5	2.0	2.0	2.0
D77-6057	1.0	1.5	1.5	1.5	2.0	2.0	1.0
D77-7148	1.5	1.5	1.5	1.5	2.0	2.0	2.0
Ga77-421	1.0	1.5	1.5	1.0	2.0	2.0	2.0
Ga77-423	1.0	1.5	2.0	1.0	2.0	2.0	3.0
J77-255	1.0	1.5	1.5	1.5	2.0	2.0	2.0
J77-272	1.0	1.5	1.5	1.5	2.0	2.0	2.0
J77-342	1.0	1.5	1.5	1.5	2.0	2.0	2.0
N77-16	1.0	1.5	1.5	1.5	2.0	2.0	2.0
N77-72	1.5	1.5	1.5	1.5	2.0	2.0	2.0
N77-114	1.5	1.5	1.5	1.5	2.0	2.0	2.0
N77-166	1.0	1.5	1.5	1.5	2.0	2.0	2.0
N77-347	1.0	1.5	1.5	1.5	2.0	2.0	2.0
N77-907	1.5	1.5	1.5	1.0	2.0	2.0	2.0
N77-931	1.0	1.5	1.5	1.5	2.0	2.0	1.0
R75-8B	1.0	1.5	1.5	1.5	2.0	2.0	2.0
R77-11	2.0	1.5	1.5	1.5	2.0	2.0	2.0
R77-38	1.0	1.5	1.5	1.0	2.0	2.0	1.0
R77-133	1.5	1.5	1.5	1.0	2.0	2.0	1.0
R77-166S	1.5	1.5	1.5	1.5	2.0	2.0	1.0
R77-196	1.0	1.5	1.5	1.0	2.0	2.0	1.0
R77-238S	1.0	1.5	1.5	1.5	2.0	2.0	1.0
S77-314	1.0	1.5	1.5	1.5	2.0	2.0	1.0
S77-318	1.0	1.5	1.5	2.0	2.0	2.0	3.0
S77-7788	1.0	1.5	1.5	1.5	2.0	2.0	2.0
S77-7865	1.0	1.5	1.5	1.0	2.0	2.0	2.0
Kershaw (Sc75-614)	1.0	1.5	1.5	1.0	2.0	2.0	2.0

UNIFORM GROUP VII

1979

<u>Variety or strain</u>	<u>Parentage</u>	<u>Generation composited</u>
1. Bragg	Jackson X D49-2491	F ₆
2. GaSoy 17	Bragg X Hood	F ₄
3. Braxton (F71-1180)	F59-1505 X [Bragg(3) X D69-7965]	F ₅
4. Wright (Ga72-663)	Bragg X Lee	F ₄
5. F73-7082	Bragg(3) X D60-7965	F ₇
6. N74-1572	Govan X Davis	F ₅
7. F76-8846	Centennial X [Forrest X (Cobb X D68-216)]	F ₅
8. GaT73-24	Davis X D68-180	F ₅
9. N74-1341	Govan X Ransom	F ₅
10. N76-1415	N70-2173 X Hutton	F ₅
11. N76-1505	N70-2173 X Hutton	F ₅
12. Ts77-5	D66-8556 X Ransom	F ₅

Background for breeding lines used as parents:

D49-2491 is a sister strain of Lee selected from S100 X CNS.

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

D60-7965 is a high protein selection from a cross of an F₅ line from Ogden X CNS with an F₅ 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.

D68-180 is a selection from Dyer X Bragg resistant to CN race 3.

N70-2173 is a selection from Hampton X Ransom.

D66-8556 is a selection from Bragg X Semmes.

Results of 29 Uniform Group VII nurseries are summarized in Tables 36 through 42. Table 36 gives a general summary of agronomic qualities, oil and protein percentages of the seed, and reaction to several pest problems. Two- and three-year data are reported for seed yield and oil and protein percentages.

Differences among strains were significant at the 5 percent level of confidence at only 11 of the 29 locations. The combined analysis of variance for seed yield showed differences among strains to be significant in the East Coast and Delta and West regions.

Two strains have been named and released for production, F71-1180 as Braxton and Ga72-663 as Wright. Each has a three-year mean seed yield greater than that for Bragg. Each has a higher level of resistance to *M. arenaria* than Bragg. Wright is more susceptible to *M. incognita* than Bragg.

Two strains, F73-7082 and N74-1572, have been evaluated two years. Neither shows superiority over the two new releases.

F76-8846, selected for resistance to CN race 3, was only moderate in seed yield. It also gave a moderate reaction to the two root-knot nematode species. Not any of the strains evaluated one year appeared to have exceptional promise.

Table 36 - General summary of performance for the strains in Uniform Group VII, 1979

	No. of locations	Bragg	GaSoy 17	Braxton (F71-1180)	Wright (Ga72-663)	F73-7082
Seed Yield - 1979						
East Coast	6	41.7	45.0	47.0+	42.9	43.4
Southeast	8	35.1	38.4	40.1	38.6	38.5
Upper & Central South	3	42.9	43.8	47.2	45.4	42.9
Delta & West	8	40.3	42.7	44.0+	43.4	43.8+
1978-79						
East Coast		41.3	43.9	44.7	41.7	43.2
Southeast		35.4	37.9	39.1	37.8	37.8
Upper & Central South		39.3	39.9	42.5	41.4	40.5
Delta & West		37.1	39.4	39.1	41.0	40.3
1977-79						
East Coast		41.1	44.1	44.3	42.7	
Southeast		36.5	38.7	39.8	38.6	
Upper & Central South		39.4	39.7	41.4	40.6	
Delta & West		35.3	37.5	37.8	38.8	
Oil Content - 1979						
		19.8	19.9	19.6	19.9	19.8
1978-79		20.1	20.5	20.0	20.2	20.3
1977-79		20.2	20.8	20.1	20.4	
Protein Content - 1979						
		42.1	40.5-	41.5	40.6-	41.6
1978-79		42.8	41.0	42.1	41.7	42.3
1977-79		42.5	40.5	41.9	41.2	
Seed size						
		15.7	15.3	17.7+	15.2	15.4
Maturity index						
		10-25	+1	+1	+1	0
Height						
		40	39	38	38	39
Seed quality						
		1.6	1.5	1.5	1.7	1.9
Bacterial pustule						
		R	R	R	R	R
Cyst nematode race 3						
		S	S	S	S	S
<i>M. incognita</i>						
		3.0	5.0	3.0	5.0	5.0
<i>M. arenaria</i>						
		3.0	4.5	2.0	1.3	2.0
Flower color						
		W	W	P	P	W
Pubescence color						
		T	G	T	T	T
Pod wall color						
		T	T	T	T	T

Table 36 - (continued)

	N74-1572	F76-8846	GaT73-24	N74-1341	N76-1415	N76-1505	Ts77-5
Seed Yield - 1979							
East Coast	42.5	39.5	41.3	43.8	40.2	37.7-	43.3
Southeast	39.7	35.7	37.9	38.3	37.5	35.2	36.6
Upper & Central South	45.0	40.6	44.2	43.7	43.2	41.8	41.8
Delta & West	38.6	38.8	41.7	42.2	44.1+	41.7	42.3
1978-79							
East Coast	42.4						
Southeast	38.9						
Upper & Central South	39.3						
Delta & West	36.6						
1977-79							
East Coast							
Southeast							
Upper & Central South							
Delta & West							
Oil Content - 1979	19.1-	19.1-	20.2+	20.3+	20.5+	19.5-	20.3+
1978-79	19.5						
1977-79							
Protein Content - 1979	41.9	42.4	41.8	40.3-	41.3	42.4	40.4-
1978-79	42.8						
1977-79							
Seed size	12.2-	12.8-	15.2	15.3	17.3+	18.3+	15.1
Maturity index	-1	+1	0	-1	0	-2	-1
Height	35	38	39	37	32	36	36
Seed quality	1.6	1.5	1.8	1.5	1.8	1.7	1.5
Bacterial pustule	R	R	R	R	R	R	R
Cyst nematode race 3	S	R	S	S	S	S	S
<i>M. incognita</i>	3.0	3.0	4.5	5.0	4.0	5.0	5.0
<i>M. arenaria</i>	3.0	3.8	3.3	2.0	4.8	5.0	1.8
Flower color	W	P	P & W	W	P	P	W
Pubescence color	G	T	T	G	T	T	G
Pod wall color	T	T	T	T	T	T	T

Table 37 - Seed yield, in bushels per acre, for the strains in Uniform Group VII, 1979

Location	Bragg	GaSoy 17	Braxton (F71-1180)	Wright (Ga72-663)	F73-7082	N74-1572	F76-8846
<u>EAST COAST</u>							
Plymouth, NC	37.2	34.2	26.4	33.0	35.8	38.0	37.9
Kinston, NC	40.2	44.3	40.7	39.9	40.8	38.0	40.1
Clinton, NC	37.5	47.3+	41.6	39.5	41.2	42.2	35.4
Florence, SC (A)	59.4	59.3	56.1	62.2	57.0	62.2	51.2-
*Florence, SC (B)	55.1	57.3	56.2	52.0	53.9	58.5	48.2
Hartsville, SC (A)	42.6	45.3	46.8	43.6	49.6	42.0	38.7
Hartsville, SC (B)	33.0	39.8	39.0	39.1	29.9	32.4	33.5
Mean	41.7	45.0	41.8	42.9	43.4	42.5	39.5
<u>SOUTHEAST</u>							
Blackville, SC	40.2	36.2	44.5	42.4	40.5	42.3	33.8
Tallassee, AL	43.0	50.6	51.9+	44.9	44.6	45.6	37.5
Tifton, GA	39.0	45.4	46.5	45.2	48.0	46.5	48.4
Gainesville, FL	31.4	38.7	37.6	31.0	38.6	36.5	32.0
Quincy, FL	40.4	45.0	42.0	42.6	42.8	43.5	42.9
Jay, FL	28.5	31.6	34.9	33.6	35.3	32.2	29.9
Fairhope, AL	24.8	25.5	29.3+	29.1+	28.8	30.1+	20.0-
**Poplarville, MS	21.6	26.5	31.2	25.6	30.2	38.1	35.6
Baton Rouge, LA	33.5	33.8	33.7	39.8	29.0	41.1	41.4
Mean	35.1	38.4	40.1	38.6	38.5	39.7	35.7
<u>UPPER AND CENTRAL SOUTH</u>							
Athens, GA	47.8	43.2	47.5	48.5	45.8	44.9	41.4
Calhoun, GA	45.8	48.6	55.1	48.3	44.1	50.1	43.0
Clemson, SC	35.0	39.7	38.9	39.4	38.8	39.9	37.3
Mean	42.9	43.8	47.2	45.4	42.9	45.0	40.6
<u>DELTA AND WEST</u>							
Stoneville, MS (A)	38.7	36.6	44.5	43.2	43.1	36.0	35.1
Stoneville, MS (B)	45.2	49.5	47.1	45.0	45.8	43.9	42.4
Pine Bluff, AR	47.0	48.5	55.8	44.4	60.8+	49.1	54.8
Stuttgart, AR	37.3	38.6	39.4	41.2	39.1	37.1	40.4
Rohwer, AR	31.8	39.1+	37.1	39.6+	30.5	30.4	33.7
St. Joseph, LA	51.6	54.4	50.6	53.0	48.7	43.2-	37.3-
Bossier City, LA	47.6	46.2	50.2	52.8	54.1+	45.9	40.4
**Crowley, LA	42.6	30.0	36.7	26.8	20.6	33.0	38.6
**Beaumont, TX	35.4	40.5	38.9	42.2	32.9	-	32.9
Uvalde, TX	23.3	28.7	26.9	27.8	28.4	23.3	26.0
Mean	40.3	42.7	44.0+	43.4	43.8+	38.6	38.8

*Not included in mean - only 2 replications harvested.

**Not included in mean.

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

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

Table 37 - (continued)

Location	GaT73-24	N74-1341	N76-1415	N76-1505	Ts77-5	L.S.D. (.05)	C.V. %
<u>EAST COAST</u>							
Plymouth, NC	31.9	37.0	34.9	34.9	33.2	N.S.	14
Kinston, NC	42.7	42.5	40.9	32.7	40.7	N.S.	9
Clinton, NC	41.2	44.8+	32.6	36.6	43.1	6.4	9
Florence, SC (A)	56.8	58.6	56.5	48.2-	58.6	6.6	7
Florence, SC (B)	55.8	47.4-	49.7	48.2	54.3	7.0	6
Hartsville, SC (A)	41.6	40.2	45.3	41.7	44.0	N.S.	14
Hartsville, SC (B)	33.8	39.9+	31.1	32.3	40.4+	6.8	12
Mean	41.3	43.8	40.2	37.7-	43.3	3.8	
<u>SOUTHEAST</u>							
Blackville, SC	42.5	40.4	37.1	32.2	36.4	N.S.	13
Tallassee, AL	44.3	50.1	56.3+	43.1	43.5	7.8	10
Tifton, GA	46.3	42.3	38.0	40.8	40.8	N.S.	13
Gainesville, FL	31.7	38.3	34.7	34.3	34.6	N.S.	13
Quincy, FL	40.0	39.0	45.9	47.9	39.5	N.S.	10
Jay, FL	29.9	27.9	28.9	28.2	29.9	N.S.	14
Fairhope, AL	30.3+	27.3	29.0+	27.8	28.8	4.1	9
Poplarville, MS	33.6	25.8	33.8	37.5	33.1	N.S.	31
Baton Rouge, LA	38.0	40.7	30.1	27.3	39.6	8.7	14
Mean	37.9	38.3	37.5	35.2	36.6	N.S.	
<u>UPPER AND CENTRAL SOUTH</u>							
Athens, GA	42.0	45.5	47.8	44.1	43.7	N.S.	6
Calhoun, GA	48.6	48.6	49.5	47.5	48.2	N.S.	11
Clemson, SC	41.9	36.9	32.4	33.7	33.5	N.S.	15
Mean	44.2	43.7	43.2	41.8	41.8	N.S.	
<u>DELTA AND WEST</u>							
Stoneville, MS (A)	41.7	37.4	40.7	37.7	40.7	N.S.	10
Stoneville, MS (B)	44.6	45.5	45.6	42.2	43.8	N.S.	8
Pine Bluff, AR	54.7	56.4	60.4+	57.0	57.4+	10.2	11
Stuttgart, AR	39.2	40.0	39.7	34.9	39.8	N.S.	6
Rohwer, AR	35.1	37.8	37.3	32.1	31.3	6.7	11
St. Joseph, LA	46.0	47.5	53.3	56.6	46.9	7.1	9
Bossier City, LA	47.0	48.6	49.3	46.0	48.6	5.9	7
Crowley, LA	25.0	31.4	30.1	37.2	39.6	N.S.	35
Beaumont, TX	37.2	39.0	37.3	32.7	39.0	5.4	9
Uvalde, TX	25.1	24.5	26.3	26.9	29.7	N.S.	16
Mean	41.7	42.2	44.1+	41.7	42.3	3.2	

Table 38 - Chemical composition and seed size for the strains in Uniform Group VII, 1979

Location	Bragg	GaSoy 17	Braxton (F71-1180)	Wright (Ga72-663)	F73-7082	N74-1572
<u>OIL PERCENTAGE</u>						
Clinton, NC	18.4	18.6	18.3	18.8	19.0	17.9
Blackville, SC	19.5	19.4	19.0	19.4	19.7	19.0
Athens, GA	20.4	20.1	20.0	20.3	20.5	19.6
Tifton, GA	20.9	20.4	20.4	21.0	21.1	19.4
Gainesville, FL	20.8	22.6	20.4	21.2	20.8	20.1
Jay, FL	20.6	19.5	20.6	19.9	20.1	18.3
Baton Rouge, LA	20.1	20.0	20.0	20.1	19.0	18.8
Stoneville, MS (B)	18.8	19.1	18.3	18.9	19.0	18.6
Stuttgart, AR	18.0	18.5	18.1	18.0	17.2	18.7
Beaumont, TX	20.7	20.8	21.1	21.4	21.3	20.9
Mean	19.8	19.9	19.6	19.9	19.8	19.1-
<u>PROTEIN PERCENTAGE</u>						
Clinton, NC	43.2	40.8	43.6	42.9	43.0	43.6
Blackville, SC	42.7	39.9	42.0	41.7	42.3	40.9
Athens, GA	41.3	39.8	41.1	39.6	39.2	40.6
Tifton, GA	40.4	40.5	40.7	40.2	41.3	42.8
Gainesville, FL	41.2	38.7	40.9	38.6	41.2	41.0
Jay, FL	44.6	42.7	43.6	41.7	42.0	44.8
Baton Rouge, LA	43.1	41.4	42.3	40.4	43.0	43.5
Stoneville, MS (B)	40.7	39.3	41.0	40.3	40.2	41.6
Stuttgart, AR	42.8	41.5	41.5	42.2	43.9	42.0
Beaumont, TX	40.5	40.7	38.3	38.2	39.9	37.7
Mean	42.1	40.5-	41.5	40.6-	41.6	41.9
<u>GRAMS PER 100 SEEDS</u>						
Clinton, NC	17.0	14.8	18.0	15.3	17.2	12.3
Blackville, SC	18.3	17.9	22.3	17.7	17.2	14.6
Athens, GA	15.7	16.5	17.5	16.2	16.5	13.6
Tifton, GA	19.3	20.1	20.2	18.4	18.8	13.0
Gainesville, FL	15.4	14.2	17.7	14.1	14.6	12.3
Jay, FL	13.5	13.9	17.1	12.9	12.8	10.4
Baton Rouge, LA	13.6	13.3	15.3	13.8	14.4	11.2
Stoneville, MS (B)	13.2	12.8	14.6	12.8	12.6	10.4
Stuttgart, AR	15.7	14.3	16.7	15.7	14.7	11.7
*Beaumont, TX	12.9	11.9	14.6	12.2	11.7	-
Mean	15.7	15.3	17.7+	15.2	15.4	12.2-

*Not included in mean.

Table 38 - (continued)

Location	F76-8846	GaT73-24	N74-1341	N76-1415	N76-1505	Ts77-5	L.S.D. (.05)
<u>OIL PERCENTAGE</u>							
Clinton, NC	18.1	19.3	19.3	19.7	18.1	18.7	
Blackville, SC	18.8	19.8	20.5	19.8	19.5	20.2	
Athens, GA	19.4	20.3	20.4	20.5	19.2	20.3	
Tifton, GA	20.1	21.2	21.1	21.0	21.1	21.4	
Gainesville, FL	20.6	22.2	23.0	22.3	20.8	22.1	
Jay, FL	18.9	19.7	20.2	20.0	19.8	20.6	
Baton Rouge, LA	18.6	20.4	20.2	21.6	19.4	20.4	
Stoneville, MS (B)	18.3	19.1	19.1	19.8	18.3	20.0	
Stuttgart, AR	18.0	19.0	18.4	18.8	17.2	18.4	
Beaumont, TX	20.2	21.3	21.2	21.9	21.9	20.8	
Mean	19.1-	20.2+	20.3+	20.5+	19.5-	20.3+	0.4
<u>PROTEIN PERCENTAGE</u>							
Clinton, NC	44.7	42.2	42.9	42.0	44.1	43.6	
Blackville, SC	43.1	40.7	39.7	42.9	42.2	41.0	
Athens, GA	40.8	40.1	39.1	41.5	40.9	36.4	
Tifton, GA	41.3	41.5	39.6	42.3	41.3	41.1	
Gainesville, FL	42.2	41.2	38.1	39.9	42.8	41.3	
Jay, FL	44.0	43.4	42.3	41.9	43.2	40.9	
Baton Rouge, LA	43.5	42.4	41.4	42.0	43.6	41.8	
Stoneville, MS (B)	42.4	42.1	40.0	40.7	44.2	38.5	
Stuttgart, AR	41.7	44.2	40.3	42.5	43.5	40.1	
Beaumont, TX	40.0	39.9	39.5	37.5	38.4	39.7	
Mean	42.4	41.8	40.3-	41.3	42.4	40.4-	0.9
<u>GRAMS PER 100 SEEDS</u>							
Clinton, NC	12.6	15.8	15.5	18.8	20.0	15.8	
Blackville, SC	15.6	17.4	18.3	19.2	20.5	17.5	
Athens, GA	12.8	15.4	14.9	17.3	16.9	14.8	
Tifton, GA	18.4	19.2	17.3	22.2	23.0	17.6	
Gainesville, FL	12.2	14.0	15.4	15.8	17.2	15.6	
Jay, FL	10.9	12.9	13.2	14.0	15.6	12.3	
Baton Rouge, LA	11.1	14.8	15.0	16.2	15.2	14.4	
Stoneville, MS (B)	10.6	13.4	13.2	15.6	18.2	13.6	
Stuttgart, AR	11.3	14.3	14.7	16.3	18.3	14.7	
Beaumont, TX	9.9	11.8	12.9	13.8	13.7	12.7	
Mean	12.8-	15.2	15.3	17.3+	18.3+	15.1	0.8

Table 39 - Relative maturity data, days earlier (-) or later (+) than Bragg, for the strains in Uniform Group VII, 1979

Location	Date planted	Bragg matured	GaSoy 17	Braxton (F71-1180)	Wright (Ga72-663)	F73-7082
<u>EAST COAST</u>						
Plymouth, NC	-	11-6	0	+2	+2	0
Kinston, NC	-	11-10	0	-2	0	0
Clinton, NC	6-1	11-18	-2	0	-2	-2
Florence, SC (A)	5-18	11-2	0	+5	+10	+5
Florence, SC (B)	6-15	11-8	+4	+2	+3	-1
Hartsville, SC (A)	5-25	10-28	+6	+2	+2	-1
Hartsville, SC (B)	6-14	10-27	+4	0	0	-1
Mean		11-5	+2	+1	+2	0
<u>SOUTHEAST</u>						
Blackville, SC	5-18	10-29	-4	-1	+1	-6
Tallassee, AL	5-19	10-22	+1	-4	0	-1
Tifton, GA	5-17	10-19	0	+1	0	+2
Gainesville, FL	6-5	10-21	0	+1	-1	-1
Quincy, FL	5-29	10-20	+2	+6	-1	+7
Jay, FL	5-29	10-17	+2	+2	0	+2
Fairhope, AL	6-7	10-8	-3	-2	-3	-5
Poplarville, MS	-	10-18	-3	0	+2	+2
Baton Rouge, LA	5-9	10-17	-1	-3	+5	-1
Mean		10-19	-1	0	0	0
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	5-7	10-17	+3	0	+1	0
Calhoun, GA	6-17	10-31	0	+1	0	0
Clemson, SC	5-18	10-22	+2	+1	0	0
Mean		10-23	+2	+1	0	0
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	5-11	10-20	-1	0	+2	-2
Stoneville, MS (B)	6-14	10-23	+2	0	+2	+1
Pine Bluff, AR	5-17	11-1	+2	+4	+3	0
Stuttgart, AR	6-11	10-26	+1	+1	+3	+1
Rohwer, AR	6-14	10-23	0	0	-4	0
St. Joseph, LA	5-21	10-15	+1	+1	-1	+1
Bossier City, LA	5-22	10-20	0	+1	+1	-1
Crowley, LA	5-16	10-20	+2	+4	+1	+1
*Beaumont, TX	5-26	10-18	-3	-1	0	-1
Uvalde, TX	6-13	10-21	0	+2	+2	+2
Mean		10-22	+1	+1	+1	0

*Not included in mean.

Table 39 - (continued)

Location	N74-1572	F76-8846	GaT73-24	N74-1341	N76-1415	N76-1505	Ts77-5
<u>EAST COAST</u>							
Plymouth, NC	-2	0	0	0	0	0	+2
Kinston, NC	0	0	-9	0	0	-13	0
Clinton, NC	-2	-4	-2	0	-2	+4	0
Florence, SC (A)	+4	+6	+4	+11	+6	+6	+10
Florence, SC (B)	+4	0	-1	+3	+1	+1	+3
Hartsville, SC (A)	+4	+2	+1	+2	+2	-5	+1
Hartsville, SC (B)	+1	+4	-1	-1	-1	-2	-2
Mean	+1	+1	-1	+2	+1	-1	+2
<u>SOUTHEAST</u>							
Blackville, SC	-6	-1	-1	-10	-13	-14	-10
Tallassee, AL	-4	+2	-5	-6	+2	-7	-7
Tifton, GA	+1	+1	+2	+1	0	-3	-2
Gainesville, FL	-3	+1	-1	-1	0	-4	-1
Quincy, FL	+2	+3	-4	-4	+5	-2	+7
Jay, FL	0	0	0	0	0	0	-2
Fairhope, AL	-3	-1	-1	-2	-3	-1	-4
Poplarville, MS	-7	-1	-3	-1	-2	+2	-1
Baton Rouge, LA	-4	-2	+3	+2	+4	-3	-5
Mean	-3	0	-1	-3	-1	-5	-4
<u>UPPER AND CENTRAL SOUTH</u>							
Athens, GA	+2	+2	-1	+1	+1	-1	+1
Calhoun, GA	-2	+2	0	-4	-1	-3	-3
Clemson, SC	0	+2	0	0	-2	0	-1
Mean	0	+2	0	-1	-1	-1	-1
<u>DELTA AND WEST</u>							
Stoneville, MS (A)	-2	0	0	0	-3	-4	-3
Stoneville, MS (B)	0	+1	+2	0	0	+1	0
Pine Bluff, AR	-4	-4	0	+2	+1	+1	0
Stuttgart, AR	0	+3	+2	+3	+1	+2	+3
Rohwer, AR	-7	-1	-2	-3	+1	-3	-6
St. Joseph, LA	-6	-3	0	-7	0	0	-7
Bossier City, LA	-2	-2	0	+1	0	-3	-2
Crowley, LA	+2	+1	0	+2	+3	+2	+1
Beaumont, TX	-	-1	0	-1	0	-2	-4
Uvalde, TX	-1	+4	+4	+2	+2	+1	0
Mean	-2	0	+1	0	+1	0	-2

Table 40 - Plant height for the strains in Uniform Group VII, 1979

Location	Bragg	GaSoy 17	Braxton (F71-1180)	Wright (Ga72-663)	F73-7082	N74-1572
<u>EAST COAST</u>						
Plymouth, NC	45	45	40	45	45	41
Kinston, NC	46	46	41	43	44	38
Clinton, NC	43	47	42	41	43	37
Florence, SC (A)	43	44	43	43	42	41
Florence, SC (B)	40	39	36	35	40	34
Hartsville, SC (A)	51	48	47	47	51	40
Hartsville, SC (B)	46	41	39	41	39	38
Mean	45	44	41	42	43	38
<u>SOUTHEAST</u>						
Blackville, SC	42	40	42	42	43	39
Tallassee, AL	43	40	39	38	40	36
Tifton, GA	44	41	42	38	41	39
Gainesville, FL	33	35	27	30	32	28
Quincy, FL	37	41	40	37	39	39
Jay, FL	36	42	38	36	36	34
Fairhope, AL	40	42	42	33	42	39
Baton Rouge, LA	29	33	32	28	24	33
Mean	38	39	38	35	37	36
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	41	40	42	42	42	39
Calhoun, GA	34	34	34	30	32	30
Clemson, SC	37	32	31	38	38	32
Mean	37	35	36	37	37	34
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	39	43	45	45	47	41
Stoneville, MS (B)	35	33	34	35	34	29
Pine Bluff, AR	52	50	48	57	52	44
Stuttgart, AR	43	42	42	44	42	36
Rohwer, AR	28	29	31	26	26	19
St. Joseph, LA	42	46	41	39	42	37
Bossier City, LA	39	44	37	39	40	36
Crowley, LA	35	30	33	31	29	27
*Beaumont, TX	29	30	31	30	26	-
Uvalde, TX	29	29	26	26	28	26
Mean	38	38	37	38	38	33

*Not included in mean.

Table 40 - (continued)

Location	F76-8846	GaT73-24	N74-1341	N76-1415	N76-1505	Ts77-5
<u>EAST COAST</u>						
Plymouth, NC	42	43	40	39	43	37
Kinston, NC	41	42	41	37	40	40
Clinton, NC	41	43	40	35	41	43
Florence, SC (A)	42	45	41	33	39	39
Florence, SC (B)	33	40	34	32	35	33
Hartsville, SC (A)	48	45	41	44	47	45
Hartsville, SC (B)	41	38	40	32	38	37
Mean	41	42	40	36	40	39
<u>SOUTHEAST</u>						
Blackville, SC	47	42	38	32	39	42
Tallassee, AL	37	41	35	31	35	35
Tifton, GA	42	39	39	33	38	38
Gainesville, FL	29	30	29	24	26	28
Quincy, FL	38	38	41	35	37	40
Jay, FL	40	40	38	30	34	38
Fairhope, AL	41	37	37	34	37	39
Baton Rouge, LA	37	36	26	21	25	29
Mean	39	38	35	30	34	36
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	38	42	39	35	41	38
Calhoun, GA	32	36	35	28	33	33
Clemson, SC	33	36	32	30	34	29
Mean	34	38	35	31	36	33
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	45	45	45	40	45	43
Stoneville, MS (B)	37	34	32	30	33	34
Pine Bluff, AR	53	54	53	47	51	57
Stuttgart, AR	41	43	41	35	39	41
Rohwer, AR	26	28	25	23	23	21
St. Joseph, LA	43	40	41	34	36	38
Bossier City, LA	35	40	37	30	36	35
Crowley, LA	31	29	25	24	26	29
Beaumont, TX	27	31	28	23	19	29
Uvalde, TX	25	28	23	25	27	25
Mean	37	38	36	32	35	36

Table 41 - Lodging scores for the strains in Uniform Group VII, 1979

Location	Bragg	GaSoy 17	Braxton (F71-1180)	Wright (Ga72-663)	F73-7082	N74-1572
<u>EAST COAST</u>						
Plymouth, NC	4.0	3.6	3.0	4.0	3.6	3.3
Kinston, NC	3.0	3.0	3.0	4.0	3.0	3.0
Clinton, NC	3.0	3.3	3.0	3.0	3.0	3.0
Florence, SC (A)	3.0	4.0	3.0	5.0	3.0	4.0
Florence, SC (B)	3.0	2.0	2.0	4.0	3.0	2.0
Hartsville, SC (A)	3.2	3.2	3.0	3.7	3.0	2.8
Hartsville, SC (B)	3.3	3.2	2.3	4.7	3.0	2.8
<u>SOUTHEAST</u>						
Blackville, SC	3.0	3.0	3.0	4.0	2.0	2.0
Tallassee, AL	1.5	2.2	1.5	2.2	1.5	1.5
Tifton, GA	1.5	1.5	1.5	2.0	1.5	1.0
Gainesville, FL	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, FL	2.0	4.0	2.0	3.0	2.0	3.0
Jay, FL	2.0	2.0	1.0	2.0	2.0	1.0
Fairhope, AL	3.0	3.0	3.0	3.0	3.0	3.0
Baton Rouge, LA	1.6	2.6	1.3	2.9	1.4	2.7
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	3.0	2.7	2.5	3.0	2.7	2.5
Calhoun, GA	2.0	1.5	1.3	2.2	1.2	1.2
Clemson, SC	1.0	1.0	1.0	1.0	1.0	1.0
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	3.0	3.0	3.0	3.0	3.0	3.0
Stoneville, MS (B)	3.0	2.7	2.3	3.0	3.0	3.0
Pine Bluff, AR	2.0	3.3	1.3	4.6	2.3	2.0
Stuttgart, AR	3.8	3.8	3.0	4.0	3.8	3.5
Rohwer, AR	2.7	2.3	3.0	3.0	2.3	2.0
St. Joseph, LA	4.5	4.8	4.0	4.7	4.2	4.3
Bossier City, LA	2.8	2.2	1.7	2.7	2.5	1.5
Crowley, LA	1.0	1.0	1.0	1.0	1.0	1.0
Beaumont, TX	2.7	1.7	1.7	2.7	2.3	-
Uvalde, TX	1.0	1.0	1.0	1.3	1.0	1.2

Table 41 - (continued)

Location	F76-8846	GaT73-24	N74-1341	N76-1415	N76-1505	Ts77-5
<u>EAST COAST</u>						
Plymouth, NC	3.6	4.0	3.0	3.0	3.3	3.3
Kinston, NC	3.0	3.0	3.0	3.3	2.3	2.3
Clinton, NC	3.0	3.7	3.0	3.0	3.0	3.0
Florence, SC (A)	3.0	4.0	3.0	2.0	3.0	3.0
Florence, SC (B)	2.0	3.0	1.0	2.0	3.0	1.0
Hartsville, SC (A)	3.2	3.2	2.3	2.8	3.0	2.7
Hartsville, SC (B)	3.0	3.2	2.2	3.0	3.0	2.3
<u>SOUTHEAST</u>						
Blackville, SC	2.0	3.0	2.0	2.0	3.0	2.0
Tallassee, AL	1.7	2.0	1.5	1.3	1.7	1.3
Tifton, GA	1.0	1.0	1.0	1.0	1.0	1.0
Gainesville, FL	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, FL	3.0	3.0	2.0	2.0	2.0	2.0
Jay, FL	2.0	1.0	1.0	2.0	2.0	2.0
Fairhope, AL	3.0	3.0	3.0	3.0	3.0	3.0
Baton Rouge, LA	1.4	2.2	1.3	1.7	1.5	1.5
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	2.3	3.0	2.0	2.2	2.3	2.2
Calhoun, GA	1.0	2.0	1.3	1.2	1.7	1.2
Clemson, SC	1.0	1.0	1.0	1.0	1.0	1.0
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	2.7	3.0	2.0	2.7	2.3	2.3
Stoneville, MS (B)	2.0	3.0	2.0	2.0	2.7	2.0
Pine Bluff, AR	1.6	4.0	1.0	1.3	1.0	1.3
Stuttgart, AR	3.8	3.8	3.0	3.0	3.5	2.5
Rohwer, AR	3.0	2.7	2.7	2.0	2.0	2.3
St. Joseph, LA	3.8	4.2	2.8	3.8	4.5	2.8
Bossier City, LA	1.7	2.7	1.2	1.3	2.2	1.5
Crowley, LA	1.0	1.0	1.0	1.0	1.0	1.0
Beaumont, TX	1.3	2.0	1.3	1.7	1.0	1.3
Uvalde, TX	1.3	1.7	1.0	1.0	1.0	1.0

Table 42 - Seed quality scores for the strains in Uniform Group VII, 1979

Location	Bragg	GaSoy 17	Braxton (F71-1180)	Wright (Ga72-663)	F73-7082	N74-1572
<u>EAST COAST</u>						
Clinton, NC	1.5	1.5	1.5	1.5	1.5	1.5
<u>SOUTHEAST</u>						
Blackville, SC	1.0	1.0	1.0	2.0	3.0	2.0
Tifton, GA	2.0	1.5	2.0	2.0	2.0	2.0
Gainesville, FL	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	1.0	1.0	2.0	1.0	1.0	1.0
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	1.7	1.8	1.5	1.5	2.0	1.5
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Pine Bluff, AR	2.0	2.0	1.0	2.0	3.0	2.0
Stuttgart, AR	1.2	1.0	1.3	1.5	1.8	1.0
Rohwer, AR	1.8	1.2	1.3	1.7	1.8	1.8
*Beaumont, TX	2.0	2.0	2.3	1.7	2.0	-

*Not included in mean.

Table 42 - (continued)

Location	F76-8846	GaT73-24	N74-1341	N76-1415	N76-1505	Ts77-5
<u>EAST COAST</u>						
Clinton, NC	1.5	1.5	1.5	1.5	1.5	1.5
<u>SOUTHEAST</u>						
Blackville, SC	1.0	2.0	2.0	1.0	1.0	2.0
Tifton, GA	2.0	2.0	2.0	2.5	2.0	1.5
Gainesville, FL	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	1.0	2.0	1.0	2.0	2.0	1.0
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	2.0	1.5	1.5	1.5	1.5	1.5
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Pine Bluff, AR	2.0	2.0	1.0	2.0	1.0	2.0
Stuttgart, AR	1.2	1.8	1.0	2.0	2.0	1.0
Rohwer, AR	1.0	1.5	1.8	2.5	2.3	1.5
Beaumont, TX	2.0	2.0	2.3	2.3	2.0	2.0

PRELIMINARY GROUP VII

1979

Thirty-four experimental strains along with Bragg and Centennial were grown in the Preliminary Group VII nursery at 9 locations. The parentage of these strains is reported in Table 43. Performance data are summarized in Tables 44 through 49. Differences among strains were significant at each location.

Data from Baton Rouge and Beaumont were not included in the combined analysis of variance for seed yield since these locations had missing plots. The combined analysis of variance for seed yield showed differences among strains to be significant. However, there were no varieties having a mean seed yield significantly greater than that for Bragg. Neither were there any strains ranking higher in seed yield than Centennial.

Nine of the strains in the group were rated resistant to CN race 3 in a field planting at Ames Plantation in Tennessee. One strain is also resistant to CN race 4. A few strains appear to have combined resistance to CN race 3, *M. incognita* and *M. arenaria*.

Table 43 - Parentage of strains in Preliminary Group VII, 1979

Variety or strain	Parentage	Generation composited
1. Bragg		
2. Centennial		
3. D77-6103	Centennial X J74-47	F
4. D77-7285	Hood X Lee 68	F ₅
5. D77-7302	D69-8765 X D71-9966	F ₇
6. D77-7312	D69-8765 X D71-9966	F ₅
7. D77-7336	D69-8765 X D71-9966	F
8. D77-7416	D69-8765 X D71-9966	F ₅
9. D77-7923	Centennial X D73-10204	F ₅
10. D77-7926	Centennial X D73-10204	F ₅
11. D77-7968	Centennial X D73-10204	F ₅
12. D77-7969	Centennial X D73-10204	F ₅
13. D77-12244	Tracy X (Hill X PI 159925)	F
14. F77-1587	Centennial X [Forrest X (Cobb X D68-216)]	F ₅
15. F77-1965	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
16. F77-1981	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
17. F77-2000	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
18. F77-2020	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
19. F77-2740	Forrest X (Cobb X D68-216)	F
20. Ga77-207	Lee 74 X D64-4636	F ₆
21. Ga77-223	Lee 74 X D64-4636	F ₆
22. Ga77-402	R67-141 X Bragg	F ₆
23. Ga77-501	Coker 68-41 X Lee 74	F ₆
24. Ga77-506	Coker 68-41 X Lee 74	F ₆
25. GaT75-731	Dare X Hampton 266A	F
26. GaT76-1122	Dare X D68-180	F ₅
27. N74-1618	Govan X Davis	F ₅
28. N77-822	N70-1549 X Centennial	F ₅
29. N77-889	N70-1549 X Centennial	F ₅
30. N77-940	N70-1549 X Centennial	F ₅
31. N77-1120	N72-3213 X N70-2173	F
32. N78-10001	Forrest X 4-74-6-3	F ₅
33. N78-10002	Forrest X 4-74-6	F ₅
34. N78-10003	Forrest X 6-39-4-3	F ₅
35. Sc76-493	Hale 7 X Hutton	F ₅
36. Sc75-8277	Davis X McNair 800	F ₅

Table 44 - General summary of performance for the strains in Preliminary Group VII, 1979

Strain	Seed Maturity		Ht.	Percent		Nematode Rating			
	yield	index		Oil	Protein	Race 3	Race 4	<i>M. incognita</i>	<i>M. arenaria</i>
Bragg	40.3	10-22	39	19.1	42.4	S	S	2.0	3.0
Centennial	44.4	-6	38	19.1	44.1+	R	S	1.5	5.0
D77-6103	40.6	-2	40	19.2	43.2	R	R	1.5	4.3
D77-7285	39.0	-5	36	18.6	44.1+	S	S	5.0	1.8
D77-7302	39.6	-1	39	19.7	42.1	S	S	5.0	4.5
D77-7312	38.1	+1	37	18.9	42.2	S	S	5.0	4.8
D77-7336	39.2	+3	33	19.2	42.5	S	S	5.0	4.2
D77-7416	40.4	-1	39	18.7	42.7	S	S	5.0	5.0
D77-7923	39.2	-3	35	18.5	44.0+	R	S	3.0	1.2
D77-7926	40.8	+1	37	18.5	43.1	S	S	1.5	1.5
D77-7968	37.4	-5	37	19.1	42.8	S	S	1.5	3.5
D77-7969	39.7	-5	34	18.6	42.7	R	S	2.5	2.0
D77-12244	33.7-	+1	44	18.0-	41.2	S	S	5.0	5.0
F77-1587	39.8	-2	38	18.7	42.9	R	S	2.0	4.3
F77-1965	41.7	0	38	19.3	40.9-	R	S	2.5	1.8
F77-1981	40.7	+3	47	18.8	41.9	R	S	2.5	2.2
F77-2000	42.2	+4	41	20.1+	40.9-	R	S	4.0	2.2
F77-2020	43.1	+2	37	19.0	41.5	R	S	5.0	5.0
F77-2740	40.4	-1	41	18.6	42.8	R	S	3.5	4.0
Ga77-207	40.5	-5	36	19.3	42.3	S	S	3.5	2.3
Ga77-223	38.4	-3	37	18.5	43.4	S	S	3.5	3.0
Ga77-402	40.1	-3	41	18.8	42.7	S	S	3.5	5.0
Ga77-501	39.0	0	40	19.3	42.5	S	S	3.5	5.0
Ga77-506	37.4	+1	39	19.1	40.9-	S	S	4.5	1.5
GaT75-731	42.4	+1	37	19.5	41.2	S	S	5.0	4.5
GaT76-1122	38.1	-1	37	20.5+	39.4-	S	S	3.5	5.0
N74-1618	39.7	0	37	18.9	42.1	S	S	2.0	4.8
N77-822	38.8	-5	35	19.6	41.6	S	S	5.0	5.0
N77-889	40.8	+2	35	20.5+	40.3-	S	S	5.0	5.0
N77-940	43.6	+2	34	19.2	41.8	S	S	5.0	4.0
N77-1120	38.7	-2	34	19.6	41.8	S	S	5.0	5.0
N78-10001	38.5	-3	38	18.7	42.3	S	S	3.5	4.0
N78-10002	38.3	-1	40	18.5	43.4	S	S	5.0	5.0
N78-10003	38.2	-2	40	18.5	42.1	S	S	4.0	2.8
Sc76-493	39.5	+1	36	19.2	42.5	S	S	4.0	5.0
Sc75-8277	36.4	-3	37	19.0	43.0	S	S	5.0	5.0
L.S.D. (.05)	4.4			0.6	1.2				
L.S.D. (.01)	5.8			0.8	1.6				

Table 45 - Seed yield, in bushels per acre, for the strains in Preliminary Group VII, 1979

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
Bragg	43.9	41.1	43.2	41.3	26.8	35.3	38.8	47.4	33.8
Centennial	45.0	44.6	46.0	46.8	36.4	49.8	46.3+	45.7	34.3
D77-6103	31.7-	40.1	41.0	45.7	31.8	49.1	53.2+	40.5-	32.0
D77-7285	38.6	33.4	37.1	45.9	25.7	40.0	29.6-	47.9	-
D77-7302	47.8	42.5	42.0	36.9	22.6	34.6	40.9	44.4	36.3
D77-7312	38.0	36.6	41.2	44.2	25.7	38.7	36.3	45.2	35.0
D77-7336	49.7	35.8	41.4	46.4	21.2	37.5	37.8	42.0	30.1
D77-7416	39.8	42.5	45.0	42.8	30.2	41.9	35.0	47.5	33.7
D77-7923	40.0	37.3	38.6	47.6	31.8	39.5	38.9	40.5-	31.0
D77-7926	44.8	35.4	39.7	48.6	36.8	45.5	38.6	41.7	34.3
D77-7968	35.8-	41.5	38.6	47.5	16.2	-	39.2	42.8	32.8
D77-7969	37.3	41.8	38.0	38.8	34.8	39.6	46.2+	40.7-	26.0
D77-12244	29.1-	30.6	30.8-	37.5	32.2	45.4	40.2	35.6-	30.6
F77-1587	38.8	40.5	44.4	42.6	30.8	44.8	38.7	42.7	34.0
F77-1965	41.0	45.7	44.0	48.2	35.8	46.9	32.3	44.6	29.4
F77-1981	41.7	42.8	45.5	44.4	29.2	43.6	39.7	41.5	30.0
F77-2000	43.4	41.3	51.0	44.7	29.8	49.4	43.2	42.2	35.0
F77-2020	47.0	44.8	50.2	46.2	32.8	43.4	37.0	43.6	34.6
F77-2740	36.5	43.8	38.0	40.8	32.8	49.4	48.8+	42.4	-
Ga77-207	41.5	40.8	50.4	44.1	30.2	52.4	35.5	41.0-	32.1
Ga77-223	41.4	39.1	39.9	41.0	25.2	37.8	37.9	44.2	33.6
Ga77-402	39.8	38.0	51.5	43.4	21.6	42.9	41.7	44.6	-
Ga77-501	36.7	41.4	46.1	45.5	27.2	37.7	37.0	39.5-	33.3
Ga77-506	34.5-	44.8	39.0	45.8	23.2	45.3	36.8	37.7-	31.2
GaT75-731	46.8	41.1	51.4	48.4	21.6	43.5	41.9	45.9	36.5
GaT76-1122	39.2	32.9	34.7	42.6	30.8	41.0	38.7	47.3	37.5
N74-1618	39.2	41.4	43.5-	47.0	27.2	-	39.8	39.8-	-
N77-822	42.8	38.4	35.7	44.9	28.2	34.8	37.1	44.4	34.7
N77-889	46.0	43.3	43.3	42.8	26.7	35.1	44.1	39.2-	33.8
N77-940	46.0	43.6	50.7	45.0	35.8	35.6	40.2	44.0	35.2
N77-1120	47.8	33.7	39.7	46.5	25.2	37.2	41.1	37.1-	36.7
N78-10001	45.2	45.3	41.1	39.5	20.6	44.4	35.6	42.1	33.2
N78-10002	40.3	36.9	44.4	38.0	28.2	45.2	38.9	41.9	28.6
N78-10003	46.4	39.7	36.9	37.2	27.8	33.1	41.5	38.0-	28.8
Sc76-493	43.2	41.7	40.6	53.1	22.2	34.0	38.1	38.0-	30.6
Sc75-8277	38.5	42.9	36.2	36.9	20.2	40.0	32.8	47.3	-
L.S.D. (.05)	6.7	N.S.	10.5	N.S.	10.7	6.7	7.1	6.1	N.S.
C.V.	8%	11%	12%	10%	19%	8%	9%	7%	12%

*Not included in mean.

Table 46 - Oil percentages for the strains in Preliminary Group VII, 1979

Strain	Clinton, NC	Blackville, SC	Jay, FL	Stoneville, MS (B)
Bragg	18.6	19.5	19.2	19.1
Centennial	18.1	19.6	19.4	19.2
D77-6103	18.6	19.5	20.1	18.5
D77-7285	18.0	18.6	19.0	18.8
D77-7302	18.6	20.5	20.8	18.8
D77-7312	18.2	18.9	19.2	19.2
D77-7336	18.3	19.8	19.7	18.9
D77-7416	17.8	18.8	19.6	18.6
D77-7923	17.9	19.3	19.2	17.7
D77-7926	17.5	19.1	19.3	18.1
D77-7968	18.2	19.5	19.7	19.0
D77-7969	17.1	18.3	19.9	18.9
D77-12244	17.4	18.4	18.3	17.7
F77-1587	17.8	19.3	19.4	18.3
F77-1965	18.2	19.8	20.6	18.5
F77-1981	18.3	18.9	18.6	19.3
F77-2000	19.9	20.3	20.6	19.4
F77-2020	18.1	19.4	19.9	18.7
F77-2740	17.8	18.8	19.2	18.5
Ga77-207	18.6	19.5	19.6	19.4
Ga77-223	17.9	18.8	18.9	18.4
Ga77-402	18.5	19.2	18.9	18.7
Ga77-501	18.8	20.0	19.3	19.2
Ga77-506	17.9	20.3	19.1	19.0
GaT75-731	19.3	20.1	18.9	19.6
GaT76-1122	20.1	20.8	20.8	20.1
N74-1618	18.7	19.1	19.7	18.2
N77-822	19.6	20.0	19.3	19.4
N77-889	19.9	21.2	21.1	19.9
N77-940	18.6	19.6	19.7	18.9
N77-1120	19.0	19.7	20.4	19.2
N78-10001	19.0	18.7	18.7	18.2
N78-10002	17.9	18.8	19.2	18.2
N78-10003	18.6	19.0	18.7	17.5
Sc76-493	19.1	19.5	19.6	18.7
Sc75-8277	18.7	19.5	18.6	19.0

Table 47 - Protein percentages for the strains in Preliminary Group VII, 1979

Strain	Clinton, NC	Blackville, SC	Jay, FL	Stoneville, MS (B)
Bragg	43.4	41.9	43.0	41.3
Centennial	44.4	45.1	44.1	42.9
D77-6103	43.0	43.2	43.4	43.1
D77-7285	44.2	44.0	44.9	43.3
D77-7302	43.0	40.5	41.8	43.1
D77-7312	42.0	43.7	42.0	41.2
D77-7336	42.5	42.7	42.7	42.2
D77-7416	42.3	42.9	43.2	42.3
D77-7923	44.8	44.1	43.3	43.8
D77-7926	43.3	43.6	43.4	42.0
D77-7968	43.8	42.8	44.3	40.4
D77-7969	44.5	43.4	41.6	41.4
D77-12244	41.0	41.4	43.0	39.5
F77-1587	43.8	42.2	43.1	42.6
F77-1965	42.0	40.9	39.9	40.6
F77-1981	41.3	41.5	43.6	41.1
F77-2000	41.3	41.4	40.5	40.4
F77-2020	42.8	40.6	42.0	40.7
F77-2740	43.1	42.9	43.1	42.0
Ga77-207	42.5	42.3	42.7	41.6
Ga77-223	43.6	44.7	42.7	42.5
Ga77-402	41.9	41.9	43.8	43.1
Ga77-501	43.5	41.4	43.3	41.9
Ga77-506	42.3	39.4	41.7	40.3
GaT75-731	41.7	41.3	42.2	39.7
GaT76-1122	38.9	39.4	40.0	39.2
N74-1618	43.0	41.9	41.4	42.0
N77-822	41.7	41.6	43.0	40.1
N77-889	40.1	39.1	42.4	39.6
N77-940	41.6	41.9	42.3	41.3
N77-1120	43.5	40.2	43.4	39.9
N78-10001	42.1	42.0	43.0	41.9
N78-10002	43.5	43.0	44.5	42.6
N78-10003	41.7	41.7	42.6	42.3
Sc76-493	42.9	41.5	42.7	42.7
Sc75-8277	44.0	42.2	44.8	42.2

Table 48 - Plant height for the strains in Preliminary Group VII, 1979

Strain	Clinton, NC	Black- ville, SC	Tifton, GA	Tallas- see, AL	Jay, FL	Baton Rouge, LA	Stone- ville, MS (A)	Stone- ville, MS (B)	*Beaumont, TX
Bragg	45	39	44	42	36	27	45	35	28
Centennial	42	38	36	40	36	32	44	32	24
D77-6103	48	42	36	41	38	34	44	35	27
D77-7285	38	43	28	39	32	31	42	31	-
D77-7302	43	37	44	43	34	34	44	33	31
D77-7312	39	42	36	41	36	28	43	31	26
D77-7336	38	36	28	35	32	23	43	29	24
D77-7416	44	44	38	46	34	31	46	32	25
D77-7923	39	36	36	37	24	30	43	31	22
D77-7926	38	37	34	40	38	31	44	31	24
D77-7968	40	43	36	34	30	34	46	29	20
D77-7969	38	37	31	33	36	27	41	29	24
D77-12244	45	47	41	52	48	41	47	31	38
F77-1587	46	37	38	40	38	33	40	34	28
F77-1965	41	43	36	37	38	34	42	29	24
F77-1981	54	51	44	49	42	43	55	38	27
F77-2000	43	45	42	41	40	40	46	34	28
F77-2020	43	38	36	37	36	29	44	30	24
F77-2740	47	44	36	44	42	38	45	30	-
Ga77-207	37	38	36	41	34	31	40	31	24
Ga77-223	40	41	36	40	36	27	44	34	26
Ga77-402	49	45	38	44	36	33	48	33	-
Ga77-501	44	43	37	43	40	30	46	33	28
Ga77-506	42	39	38	42	38	36	46	29	29
GaT75-731	41	38	38	37	38	33	40	31	28
GaT76-1122	40	39	35	41	40	31	43	30	27
N74-1618	37	43	40	44	38	24	43	29	-
N77-822	36	39	37	35	36	27	42	27	24
N77-889	37	41	36	36	32	29	42	30	23
N77-940	40	34	36	37	32	23	42	29	23
N77-1120	38	34	33	34	32	27	42	31	24
N78-10001	41	40	38	40	38	32	45	30	27
N78-10002	42	44	38	44	38	35	46	32	24
N78-10003	42	42	33	44	38	34	48	35	28
Sc76-493	38	41	37	35	36	25	44	28	22
Sc75-8277	42	45	37	35	34	33	42	28	-

*Not included in mean.

Table 49 - Seed quality scores for the strains in Preliminary Group VII, 1979

Strain	Clinton, NC	Blackville, SC	Tifton, GA	Jay, FL	Stone- ville, MS (A)	Stone- ville, MS (B)	Beaumont, TX
Bragg	1.5	1.0	1.5	1.0	2.0	2.0	1.5
Centennial	2.0	2.0	1.5	1.0	2.0	2.0	2.0
D77-6103	1.5	1.0	1.5	1.0	2.0	2.0	2.0
D77-7285	1.5	2.0	1.5	1.0	2.0	2.0	-
D77-7302	1.5	1.0	1.5	1.0	2.0	2.0	1.5
D77-7312	1.5	1.0	1.5	1.0	2.0	2.0	2.0
D77-7336	1.5	2.0	1.5	1.0	2.0	2.0	3.0
D77-7416	1.5	1.0	2.5	1.0	2.0	2.0	2.0
D77-7923	1.5	1.0	2.0	1.0	2.0	2.0	2.0
D77-7926	1.5	2.0	1.5	1.0	2.0	2.0	1.5
D77-7968	1.5	2.0	3.0	1.0	2.0	2.0	2.5
D77-7969	1.5	1.0	2.5	1.0	2.0	2.0	2.0
D77-12244	1.5	1.0	2.5	2.0	2.0	2.0	2.5
F77-1587	1.5	1.0	2.0	1.0	2.0	2.0	1.5
F77-1965	1.5	1.0	2.0	1.0	2.0	2.0	2.0
F77-1981	1.5	2.0	1.5	1.0	2.0	2.0	2.0
F77-2000	1.5	1.0	1.5	1.0	2.0	2.0	2.0
F77-2020	1.5	1.0	2.0	1.0	2.0	2.0	2.0
F77-2740	1.5	1.0	2.0	1.0	2.0	2.0	-
Ga77-207	1.5	1.0	2.0	1.0	2.0	2.0	1.5
Ga77-223	1.5	1.0	1.5	1.0	2.0	2.0	1.5
Ga77-402	1.5	1.0	2.0	1.0	2.0	2.0	-
Ga77-501	1.5	1.0	2.0	2.0	2.0	2.0	2.5
Ga77-506	2.0	1.0	1.5	1.0	2.0	2.0	3.0
GaT75-731	1.5	1.0	1.5	1.0	2.0	2.0	1.0
GaT76-1122	1.5	3.0	2.0	1.0	2.0	2.0	2.0
N74-1618	1.5	3.0	2.0	2.0	2.0	2.0	-
N77-822	1.5	1.0	2.0	1.0	2.0	2.0	2.0
N77-889	1.5	2.0	1.5	1.0	2.0	2.0	1.5
N77-940	1.5	1.0	2.0	1.0	2.0	2.0	2.0
N77-1120	1.5	1.0	1.5	1.0	2.0	2.0	2.5
N78-10001	1.5	1.0	2.0	3.0	2.0	2.0	2.0
N78-10002	1.5	1.0	2.0	1.0	2.0	2.0	2.0
N78-10003	1.5	1.0	1.5	1.0	2.0	2.0	2.0
Sc76-493	1.5	3.0	2.5	2.0	2.0	2.0	4.0
Sc75-8277	1.5	2.0	2.5	2.0	2.0	2.0	-

UNIFORM GROUP VIII

1979

<u>Variety or strain</u>	<u>Parentage</u>	<u>Generation composited</u>
1. Hutton	F55-822 X (Roanoke X CNS-4)	F ₆
2. Cobb	F57-735 X D58-3358	F ₆
3. Coker 338	Hampton 266 X Bragg	F ₄
4. Coker 488	Hampton 266 X Bragg	F ₈
5. F72-6460	Bragg(2) X F59-2496	F ₇
6. F74-1493	F59-1505 X [Bragg(3) X PI 96035]	F ₆
7. Co75-689	(Co208 X N63-858) X Ransom	F ₅
8. F76-8757	Centennial X [Forrest X (Cobb X D68-216)]	F ₅
9. F76-8827	Centennial X [Forrest X (Cobb X D68-216)]	F ₅
10. Ga76-316	Bragg X Ransom	F ₄
11. Ga774-10	Hale 3 X Delmar	F ₅
12. N76-1507	N70-2173 X Hutton	F ₅

Background of breeding lines used as parents:

F55-822 is the parent line of Bragg.

F75-735 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.

F59-2496 is a selection from D55-4090 X D55-4159. D55-4090 is a high protein selection from Ogden X CNS and D55-4159 is a high protein selection from Ogden X Biloxi.

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

Co208 is a subline of Hampton.

N63-858 is a selection from D58-3358 X D59-9289. D58-3358 is a selection from Jackson(4) X D49-2491. D59-9289 is a selection from D51-4877 X D55-4168.

D68-216 is a selection from Dyer X Bragg.

N70-2173 is a selection from Hampton X Ransom.

Results from 19 Uniform Group VIII nurseries are summarized in Tables 50 through 56. Table 50 gives a general summary of agronomic qualities, oil and protein percentages, and field reaction to several pest problems. Two- and three-year data are reported for seed yield and oil and protein data.

Differences among strains were significant at 7 of the 19 locations. A combined analysis of variance for seed yield showed differences among strains to be significant.

Cobb which averages 5 days later than Hutton has a three-year average 0.4 bushels below that for Hutton. However, in 1977 Cobb had a mean seed yield significantly greater than Hutton. Coker 338 and Coker 488 have similar three-year mean seed yields 0.9 bushels per acre greater than Hutton. Each averages a day later in maturity. Each also has a higher rating for *M. incognita*. F72-6460 is similar in maturity to Hutton and has a three-year mean seed yield 2.3 bushels greater. It has good resistance to *M. arenaria*. In 1978 it received a score of 2.0 for *M. incognita* but in 1979 it received a score of 4.0.

Only one strain, F74-1493, has been included 2 years. It has yielded well both years, but its two-year mean is below that for F72-6460.

Of the six strains grown one year, N76-1507 had a mean seed yield significantly greater than that for Hutton. F76-8757 also ranked above Hutton in seed yield. The two strains F76-8757 and F76-8827 are resistant to CN race 3 and to *M. incognita*, but are susceptible to *M. arenaria*.

Table 50 - General summary of performance for the strains in Uniform Group VIII, 1979

	No. of locations	Hutton	Cobb	Coker 338	Coker 488	F72-6460
Seed Yield - 1979	17	40.2	38.8	39.2	39.7	42.0
1978-79		38.9	37.0	38.2	38.3	40.7
1977-79		38.2	37.8	39.1	39.1	40.5
Oil Content - 1979		19.8	20.0	20.7+	20.9+	20.3
1978-79		20.1	20.9	21.3	21.6	20.4
1977-79		20.1	21.0	21.9	22.0	20.6
Protein Content - 1979		43.0	40.4-	41.0-	39.6-	41.5-
1978-79		43.7	40.5	42.0	40.4	42.2
1977-79		43.1	39.8	41.1	39.6	41.8
Seed size		17.2	14.5-	14.6-	15.3-	15.9-
Maturity index		10-27	+5	+1	+1	0
Height		36	39	35	38	37
Seed quality		1.8	1.6	1.6	1.5	1.6
Bacterial pustule		R	R	R	R	R
Cyst nematode race 3		S	S	S	S	S
<i>M. incognita</i>		2.0	2.5	4.5	4.5	4.0
<i>M. arenaria</i>		4.5	5.0	4.8	3.5	2.0
Powdery mildew		1.0	1.0	4.0	1.0	1.0
Flower color		P	W	W	P	W
Pubescence color		T	G	T	T	T
Pod wall color		T	T	Br	T	T

Table 50 - (continued)

	F74-1493	Co75-689	F76-8757	F76-8827	Ga76-316	GaT74-10	N76-1507
Seed Yield - 1979	41.3	38.9	41.0	39.9	39.8	38.9	43.0+
1978-79	39.2						
1977-79							
Oil Content - 1979	19.8	20.9+	19.9	20.2	20.4+	20.4+	19.9
1978-79	20.1						
1977-79							
Protein Content - 1979	41.7-	39.9-	42.1	40.8-	41.1-	41.7-	41.4-
1978-79	42.6						
1977-79							
Seed size	15.8-	15.7-	13.8-	12.0-	16.0-	14.1-	16.9
Maturity index	-2	+2	-2	-1	+2	-1	-1
Height	38	33	37	35	39	36	33
Seed quality	1.7	2.0	1.5	1.4	1.8	1.7	1.6
Bacterial pustule	R	R	R	R	R	R	R
Cyst nematode race 3	S	S	R	R	S	S	S
<i>M. incognita</i>	4.0	5.0	1.5	2.0	5.0	4.0	5.0
<i>M. arenaria</i>	1.5	5.0	4.3	4.2	3.2	4.5	5.0
Powdery mildew	1.0	4.0	1.0	1.0	1.0	4.0	1.0
Flower color	P	P	W	P	W	W	P
Pubescence color	T	T	T	G	T	G	T
Pod wall color	T	T	T	T	T	Br	T

Table 51 - Seed yield, in bushels per acre, for the strains in Uniform Group VIII, 1979

Location	Hutton	Cobb	Coker 338	Coker 488	F72-6460	F74-1493	Co75-689
Clinton, NC	42.9	37.3	46.2	39.0	44.5	42.4	39.0
Florence, SC (A)	58.8	63.6	50.4	60.4	62.4	63.4	53.2
Florence, SC (B)	50.7	54.5	42.0-	48.4	55.8+	48.1	44.6-
Hartsville, SC (A)	24.5	15.4-	24.7	31.0+	31.1+	33.4+	34.5+
Hartsville, SC (B)	34.8	30.1	29.7	38.2	36.6	35.4	35.5
Blackville, SC (A)	37.9	41.2	38.4	41.2	40.9	44.9	36.5
Blackville, SC (B)	30.4	30.9	25.3	24.9	31.0	22.6	23.1
Athens, GA	38.7	34.3	37.2	40.4	42.9	40.4	34.0
Tallassee, AL	45.8	47.0	48.0	45.9	50.2	48.2	53.7+
Tifton, GA	47.1	47.4	40.9	50.4	48.2	46.3	42.0
Gainesville, FL	34.7	35.7	36.8	32.9	37.7	41.9	38.5
Marianna, FL	53.6	46.2	61.9	49.6	52.5	51.5	58.8
Quincy, FL	45.0	36.2-	44.4	37.0-	44.0	40.5	40.6
*Jay, FL	18.8	20.1	17.8	16.1	30.6	25.5	26.6
Fairhope, AL	27.3	19.4-	23.2	24.0	26.8	29.3	21.7-
Poplarville, MS	37.6	37.8	33.2	33.7	36.8	37.2	32.6
Stoneville, MS (B)	44.3	48.6	48.7	41.3	47.0	42.7	44.6
Beaumont, TX	31.5	28.3	33.5	31.2	27.5	28.3	29.9
*Uvalde, TX	24.4	23.9	21.7	28.0	27.6	23.5	28.8
Mean	40.2	38.8	39.2	39.7	42.0	41.3	38.9

*Not included in mean.

Table 51 - (continued)

Location	F76-8757	F76-8827	Ga76-316	GaT74-10	N76-1507	L.S.D. (.05)	C.V. %
Clinton, NC	43.0	44.0	39.3	40.9	46.9	N.S.	12
Florence, SC (A)	59.8	56.6	56.8	59.1	58.7	N.S.	8
Florence, SC (B)	52.2	51.4	51.4	48.7	53.8	5.0	6
Hartsville, SC (A)	34.3+	32.0+	23.8	30.5+	32.2	3.5	7
Hartsville, SC (B)	36.3	30.0	36.0	34.7	39.7	N.S.	12
Blackville, SC (A)	45.3	39.4	42.2	40.1	41.1	N.S.	8
Blackville, SC (B)	28.8	33.5	37.7	23.6	26.2	N.S.	15
Athens, GA	38.4	39.5	38.4	40.8	40.0	N.S.	8
Tallassee, AL	46.0	43.7	39.5-	50.1	50.1	6.2	8
Tifton, GA	45.4	42.1	48.9	43.9	48.6	N.S.	8
Gainesville, FL	36.6	42.4	40.1	32.8	42.3	N.S.	12
Marianna, FL	49.8	52.0	42.1	44.7	56.7	N.S.	15
Quincy, FL	45.4	45.0	45.3	31.6-	46.2	5.9	8
Jay, FL	37.6+	38.3+	22.2	28.6	25.2	12.2	28
Fairhope, AL	24.2	23.0	19.2-	28.5	28.6	5.3	13
Poplarville, MS	36.3	32.9	38.0	36.5	34.6	N.S.	14
Stoneville, MS (B)	43.3	44.7	47.5	39.2	52.2+	5.5	7
Beaumont, TX	31.2	28.3	32.7	33.5	31.9	N.S.	15
Uvalde, TX	16.6	22.1	19.0	20.3	23.4	N.S.	31
Mean	41.0	39.9	39.8	38.9	43.0+	2.4	

Table 52 - Chemical composition and seed size for the strains in Uniform Group VIII, 1979

Location	Hutton	Cobb	Coker 338	Coker 488	F72-6460	F74-1493
<u>OIL PERCENTAGE</u>						
Hartsville, SC (A)	19.6	19.7	20.1	21.0	19.9	20.2
Blackville, SC (A)	18.6	19.5	20.4	20.3	19.4	18.8
Tifton, GA	20.3	21.3	21.6	21.2	20.8	19.9
Tallassee, AL	19.9	20.2	21.8	20.7	21.1	19.8
Gainesville, FL	20.8	21.6	21.5	22.8	20.5	20.4
Jay, FL	19.6	18.4	20.3	20.5	20.1	19.6
Stoneville, MS (B)	18.3	19.1	18.6	19.4	19.0	19.4
Beaumont, TX	20.9	20.2	21.3	21.2	21.8	20.4
Mean	19.8	20.0	20.7+	20.9+	20.3	19.8
<u>PROTEIN PERCENTAGE</u>						
Hartsville, SC (A)	42.3	39.0	40.5	37.9	41.6	40.2
Blackville, SC (A)	43.5	40.2	40.2	39.3	41.4	43.4
Tifton, GA	44.3	38.4	40.0	39.9	41.6	41.7
Tallassee, AL	43.7	40.9	41.3	40.4	42.8	41.4
Gainesville, FL	41.4	39.7	41.5	38.5	41.8	42.7
Jay, FL	45.2	42.8	42.2	41.1	41.6	43.1
Stoneville, MS (B)	43.3	40.9	41.5	39.9	42.9	40.2
Beaumont, TX	40.4	41.4	40.4	40.1	38.6	40.9
Mean	43.0	40.4-	41.0-	39.6-	41.5-	41.7-
<u>GRAMS PER 100 SEEDS</u>						
Hartsville, SC (A)	15.8	10.5	12.3	14.0	14.9	14.7
Blackville, SC (A)	21.2	19.0	14.6	18.1	18.7	19.3
Tifton, GA	20.6	18.2	18.1	19.9	18.7	18.8
Tallassee, AL	17.5	14.9	15.7	16.3	16.4	15.4
Gainesville, FL	17.0	15.0	15.7	14.2	16.2	16.5
Jay, FL	15.8	13.9	12.6	13.0	14.2	13.9
Stoneville, MS (B)	15.4	12.4	14.0	13.4	13.8	14.2
Beaumont, TX	14.3	11.9	14.0	13.7	14.1	13.3
Mean	17.2	14.5-	14.6-	15.3-	15.9-	15.8-

Table 52 - (continued)

Location	Co75-689	F76-8757	F76-8827	Ga76-316	GaT74-10	N76-1507	L.S.D. (.05)
<u>OIL PERCENTAGE</u>							
Hartsville, SC (A)	19.7	19.5	19.6	20.6	19.7	20.0	
Blackville, SC (A)	20.1	20.1	19.9	19.9	19.8	19.5	
Tifton, GA	21.7	20.5	20.9	21.1	20.7	20.0	
Tallassee, AL	22.0	19.6	20.2	20.6	21.5	20.1	
Gainesville, FL	22.2	20.5	21.9	21.7	20.5	21.2	
Jay, FL	20.5	18.6	20.1	19.3	20.3	19.4	
Stoneville, MS (B)	19.3	18.6	18.7	19.2	19.3	19.0	
Beaumont, TX	21.5	21.8	20.5	20.8	21.2	20.3	
Mean	20.9+	19.9	20.2	20.4+	20.4+	19.9	0.5
<u>PROTEIN PERCENTAGE</u>							
Hartsville, SC (A)	40.5	40.8	39.1	40.0	41.6	39.8	
Blackville, SC (A)	40.2	42.9	41.9	41.7	43.4	40.9	
Tifton, GA	39.9	42.7	40.2	40.2	44.1	41.5	
Tallassee, AL	40.5	42.1	40.8	41.9	38.7	43.2	
Gainesville, FL	38.2	43.9	41.1	41.0	44.5	40.2	
Jay, FL	40.9	43.8	42.1	43.6	43.0	43.0	
Stoneville, MS (B)	40.4	41.2	41.0	41.3	41.6	40.9	
Beaumont, TX	38.9	39.6	40.0	39.1	36.3	41.9	
Mean	39.9-	42.1	40.8-	41.1-	41.7-	41.4-	1.2
<u>GRAMS PER 100 SEEDS</u>							
Hartsville, SC (A)	15.2	12.2	9.9	13.5	12.6	15.8	
Blackville, SC (A)	16.8	16.3	13.7	20.2	16.2	16.9	
Tifton, GA	19.3	17.6	15.7	20.0	17.2	22.3	
Tallassee, AL	17.7	12.9	12.3	16.4	14.3	18.2	
Gainesville, FL	15.3	14.5	12.0	16.6	14.3	17.3	
Jay, FL	13.7	12.0	10.6	13.7	12.4	14.6	
Stoneville, MS (B)	14.8	13.0	11.8	14.2	13.4	15.6	
Beaumont, TX	13.1	11.7	10.2	13.5	12.7	14.4	
Mean	15.7-	13.8-	12.0-	16.0-	14.1-	16.9	0.9

Table 53 - Relative maturity, days earlier (-) or later (+) than Hutton, for the strains in Uniform Group VIII, 1979

Location	Date planted	Hutton matured	Cobb	Coker 338	Coker 488	F72-6460	F74-1493
Clinton, NC	-	11-10	+2	0	+2	-2	-4
Florence, SC (A)	5-18	11-14	+2	-5	-1	-7	-5
Florence, SC (B)	6-15	11-2	+14	+11	+10	+11	+6
Hartsville, SC (A)	5-28	10-25	-3	0	+2	0	-2
Hartsville, SC (B)	6-14	10-30	+4	-1	+1	-1	-4
Blackville, SC (A)	5-18	10-31	+10	-5	-1	+2	-3
Blackville, SC (B)	7-2	11-4	0	-1	-6	-4	+2
Athens, GA	5-7	10-21	+3	0	+3	-2	-4
Tallassee, AL	5-19	10-26	+8	+1	0	-1	-2
Tifton, GA	5-17	10-26	0	-2	-2	-2	-3
Gainesville, FL	6-5	10-23	+7	+2	0	+3	-2
Marianna, FL	6-26	10-29	+5	+7	-2	0	-1
Quincy, FL	5-29	10-20	+14	+12	+7	+7	0
Jay, FL	5-29	10-19	+3	0	0	0	-2
Fairhope, AL	-	10-15	+5	0	+2	+2	-2
Poplarville, MS	-	10-15	0	0	-3	0	0
Stoneville, MS (B)	6-14	10-28	+5	-1	-1	-1	-5
Beaumont, TX	6-22	10-23	+5	0	+4	0	-5
Uvalde, TX	6-13	10-26	+1	+1	+1	-1	-2
Mean		10-27	+5	+1	+1	0	-2

Table 53 - (continued)

Location	Co75-689	F76-8757	F76-8827	Ga76-316	GaT74-10	N76-1507
Clinton, NC	+2	-4	-4	0	-2	-2
Florence, SC (A)	-7	-6	-7	-1	-4	-8
Florence, SC (B)	+9	+6	+10	+11	+12	+10
Hartsville, SC (A)	+5	0	0	-4	0	+3
Hartsville, SC (B)	0	-1	0	0	-1	-1
Blackville, SC (A)	-1	-2	-4	+3	-4	-6
Blackville, SC (B)	+4	+1	+2	+2	+4	-3
Athens, GA	+3	0	-2	+1	-1	-1
Tallassee, AL	+3	-2	-3	+3	-4	-3
Tifton, GA	-2	-5	-7	-1	-4	-6
Gainesville, FL	+4	0	0	+5	-3	+1
Marianna, FL	+3	+2	-1	+4	+1	-1
Quincy, FL	+10	+3	+2	+12	+4	+2
Jay, FL	0	-2	0	0	0	-2
Fairhope, AL	+2	-3	-4	+1	-1	-1
Poplarville, MS	0	0	0	-3	0	-3
Stoneville, MS (B)	-1	-3	-2	0	-3	-1
Beaumont, TX	+3	-1	-1	+3	-2	-1
Uvalde, TX	-1	+4	+3	0	-3	-4
Mean	+2	-2	-1	+2	-1	-1

Table 54 - Plant height for the strains in Uniform Group VIII, 1979

Location	Hutton	Cobb	Coker 338	Coker 488	F72-6460	F74-1493
Clinton, NC	44	49	44	45	46	47
Florence, SC (A)	43	46	42	46	44	43
Florence, SC (B)	35	39	37	40	41	41
Hartsville, SC (A)	40	45	41	45	49	46
Hartsville, SC (B)	35	42	37	38	44	42
Blackville, SC (A)	38	44	37	43	39	46
Blackville, SC (B)	34	29	25	31	27	38
Athens, GA	38	40	39	41	40	43
Tallassee, AL	41	45	40	43	44	40
Tifton, GA	43	44	41	46	41	41
Gainesville, FL	28	37	28	29	35	29
Marianna, FL	26	31	26	28	26	26
Quincy, FL	43	40	39	44	40	36
Jay, FL	42	38	36	36	36	34
Fairhope, AL	37	46	36	45	38	47
Poplarville, MS	29	27	31	28	29	29
Stoneville, MS (B)	32	33	31	34	37	33
Beaumont, TX	28	28	29	28	28	28
Uvalde, TX	31	33	27	27	27	29
Mean	36	39	35	38	37	38

Table 54 - (continued)

Location	Co75-689	F76-8757	F76-8827	Ga76-316	GaT74-10	N76-1507
Clinton, NC	42	49	44	48	46	42
Florence, SC (A)	38	46	43	46	45	38
Florence, SC (B)	34	38	37	42	37	38
Hartsville, SC (A)	41	50	46	45	46	37
Hartsville, SC (B)	33	39	39	41	38	33
Blackville, SC (A)	39	43	38	39	42	38
Blackville, SC (B)	23	28	27	25	23	29
Athens, GA	34	40	38	42	41	33
Tallassee, AL	36	43	39	43	42	36
Tifton, GA	40	43	38	43	41	37
Gainesville, FL	25	30	31	34	29	26
Marianna, FL	24	27	25	31	26	24
Quincy, FL	42	41	36	44	38	37
Jay, FL	28	36	36	40	28	32
Fairhope, AL	39	42	34	47	40	35
Poplarville, MS	29	31	26	31	30	29
Stoneville, MS (B)	31	33	34	35	30	31
Beaumont, TX	25	30	28	32	30	26
Uvalde, TX	27	19	19	31	30	28
Mean	33	37	35	39	36	33

Table 55 - Lodging scores for the strains in Uniform Group VIII, 1979

Location	Hutton	Cobb	Coker 338	Coker 488	F72-6460	F74-1493
Clinton, NC	3.0	3.0	3.0	3.0	3.0	3.0
Florence, SC (A)	4.0	4.0	3.0	4.0	3.0	3.0
Florence, SC (B)	2.0	3.0	3.0	3.0	3.0	4.0
Hartsville, SC (A)	3.7	3.3	2.8	2.8	3.2	3.7
Hartsville, SC (B)	3.0	2.8	3.0	2.8	3.0	3.2
Blackville, SC (A)	2.0	3.0	1.0	1.0	2.0	4.0
Blackville, SC (B)	4.0	4.0	3.0	2.0	4.0	4.0
Athens, GA	2.3	2.2	2.3	2.5	3.0	2.5
Tallassee, AL	3.3	2.5	1.5	1.7	2.2	2.3
Tifton, GA	1.5	1.5	1.5	1.0	1.5	1.5
Gainesville, FL	1.0	1.7	1.0	1.0	1.0	1.0
Marianna, FL	1.7	1.3	1.0	1.0	1.7	1.7
Quincy, FL	2.0	2.0	3.0	2.0	3.0	2.0
Jay, FL	2.0	2.0	2.0	2.0	2.0	2.0
Fairhope, AL	3.0	3.0	3.0	3.0	3.0	3.0
Stoneville, MS (B)	2.7	2.7	2.7	2.0	3.0	3.0
Beaumont, TX	1.3	1.3	1.7	1.3	2.0	2.0
Uvalde, TX	1.7	1.8	1.3	1.2	1.5	1.5

Table 55 - (continued)

Location	Co75-689	F76-8757	F76-8827	Ga76-316	GaT74-10	N76-1507
Clinton, NC	3.2	3.0	3.0	3.0	3.6	3.0
Florence, SC (A)	3.0	3.0	4.0	3.0	3.0	4.0
Florence, SC (B)	2.0	3.0	4.0	3.0	3.0	3.0
Hartsville, SC (A)	2.5	3.3	4.8	2.8	3.5	3.0
Hartsville, SC (B)	2.5	3.2	3.3	2.8	3.0	3.2
Blackville, SC (B)	1.0	2.0	3.0	1.0	3.0	3.0
Blackville, SC (B)	2.0	4.0	2.0	3.0	2.0	3.0
Athens, GA	2.3	2.0	3.2	2.3	3.0	1.8
Tallassee, AL	1.7	2.0	2.3	2.0	2.0	1.7
Tifton, GA	1.0	1.5	2.0	1.0	1.5	1.0
Gainesville, FL	1.0	1.0	1.0	1.0	1.0	1.0
Marianna, FL	1.7	1.0	1.7	1.0	1.7	1.7
Quincy, FL	3.0	2.0	3.0	2.0	3.0	2.0
Jay, FL	2.0	1.0	2.0	1.0	2.0	1.0
Fairhope, AL	3.0	3.0	3.0	3.0	3.0	3.0
Stoneville, MS (B)	2.0	2.7	3.0	2.3	2.3	3.0
Beaumont, TX	1.0	2.0	1.7	1.7	1.7	1.0
Uvalde, TX	1.2	1.0	1.2	1.3	2.0	1.2

Table 56 - Seed quality scores for the strains in Uniform Group VIII, 1979

Location	Hutton	Cobb	Coker 338	Coker 488	F72-6460	F74-1493
Clinton, NC	1.5	1.5	1.5	2.0	1.5	1.5
Blackville, SC (A)	2.0	1.0	1.0	1.0	2.0	3.0
Blackville, SC (B)	2.0	1.0	2.0	1.0	1.0	1.0
Athens, GA	1.7	1.5	1.5	1.5	1.5	1.3
Tallassee, AL	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, GA	2.0	2.0	2.5	2.0	2.0	2.0
Gainesville, FL	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, FL	2.0	2.0	1.0	1.0	2.0	2.0
Jay, FL	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
Beaumont, TX	2.7	3.0	2.0	2.3	2.0	2.3

Table 56 - (continued)

Location	Co75-689	F76-8757	F76-8827	Ga76-316	GaT74-10	N76-1507
Clinton, NC	1.5	2.0	1.0	1.5	1.5	1.5
Blackville, SC (A)	3.0	2.0	2.0	3.0	3.0	2.0
Blackville, SC (B)	2.0	2.0	1.0	1.0	2.0	2.0
Athens, GA	1.7	1.3	1.5	1.5	1.5	1.7
Tallassee, AL	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, GA	2.5	1.5	1.5	2.0	2.0	2.0
Gainesville, FL	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, FL	2.0	1.0	1.0	2.0	2.0	1.0
Jay, FL	2.0	1.0	1.0	2.0	1.0	1.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, TX	3.0	2.0	2.3	2.3	2.0	2.3

PRELIMINARY GROUP VIII

1979

Thirty-four experimental strains were grown along with Dowling and Braxton in the Preliminary Group VIII nursery at six locations. Parentage for these strains is reported in Table 57. Performance data are summarized in Tables 58 through 63. Differences among strains were significant at four locations. The combined analysis of variance for seed yield showed differences among strains to be significant.

Dowling had a mean seed yield of 40.2 bushels per acre and Braxton had a mean seed yield of 41.2 bushels per acre. There were no strains having mean seed yields significantly greater than that for Dowling. Two strains ranked above Braxton in seed yield.

Fifteen strains were resistant to CN race 3. Eight of these strains also appeared to have moderate to good resistance to *M. incognita* and *M. arenaria*.

Table 57 - Parentage of strains in Preliminary Group VIII, 1979

Variety or strain	Parentage	Generation composited
1. Dowling		
2. Braxton		
3. D77-12480	Tracy X (Hill X PI 159925)	F ₆
4. Co76-853	(N64-2451 X Dyer) X Pickett 71)	
5. Co76-888	Co68-33 X Hutton	
6. Co77-9	Co68-41 X Co338	
7. Co77-13	Co68-41 X Co338	
8. Co77-42	Co67-21 X Co68-41	
9. Co77-188	Dare X Bragg	
10. F77-1500	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
11. F77-1539	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
12. F77-1576	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
13. F77-1654	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
14. F77-1661	Forrest X (Cobb X D68-216)	F ₆
15. F77-1729	Forrest X (Cobb X D68-216)	F ₆
16. F77-1790	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
17. F77-1797	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
18. F77-1840	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
19. F77-1995	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
20. F77-2034	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
21. F77-2094	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
22. F77-2124	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
23. F77-2658	D68-201 X [D67-10507(2) X Hampton]	F ₆
24. F77-2809	Forrest X (Cobb X D68-216)	F ₇ 6
25. Ga76-432	Lee 68 X Bienville	F ₄
26. Ga76-2819	Bragg X Co68-41	F ₄
27. Ga77-135	Bragg X D64-4636	F ₆
28. Ga77-304	R67-141 X Hutton	F ₆
29. Ga77-417	R67-141 X Bragg	F ₆
30. GaT76-1106	Hampton 266A X Forrest	F ₆ 5
31. GaT76-1124	Dare X D68-180	F ₅
32. GaT76-1169	Dare X D68-180	F ₅
33. GaT76-1177	Dare X D68-180	F ₅
34. N77-1486	Hutton X N70-2205	F ₅
35. N77-1528	Hutton X N70-2205	F ₆
36. N77-1602	Hutton X N70-2205	F ₆ 6

Table 58 - General summary of performance for the strains in Preliminary Group VIII, 1979

Strain	Seed yield	Maturity index	Ht.	Percent		CN-3	Nematode Rating	
				Oil	Protein		<i>M.</i> <i>incognita</i>	<i>M.</i> <i>arenaria</i>
Dowling	40.3	10-29	37	20.3	40.1	S	5.0	5.0
Braxton	41.2	-6	34	19.2-	42.6+	S	1.0	2.0
D77-12480	25.9-	+3	42	18.9-	41.3	S	5.0	5.0
Co76-853	39.5	-8	34	20.0	41.7+	R	5.0	3.0
Co76-888	38.6	-3	35	20.6	41.8+	S	2.5	3.8
Co77-9	36.4	-4	37	20.3	40.5	S	5.0	4.5
Co77-13	37.0	-5	38	20.6	41.3	S	5.0	3.5
Co77-42	35.8	-5	35	21.1+	37.8-	S	2.0	4.5
Co77-188	38.4	-8	35	20.5	42.2+	S	2.0	3.5
F77-1500	35.5	-3	36	19.3-	40.9	R	4.0	4.5
F77-1539	38.4	-8	34	19.5-	41.4+	R	2.0	1.0
F77-1576	40.1	-6	38	20.1	41.9+	R	1.0	3.0
F77-1654	38.3	-2	39	19.8	41.0	R	2.5	4.5
F77-1661	39.9	-1	41	19.2-	40.7	R	2.0	2.0
F77-1729	39.1	-7	32	19.6-	42.1+	Seg	1.5	2.0
F77-1790	42.3	-2	38	19.6-	43.0+	R	1.0	1.5
F77-1797	43.1	-3	37	19.8	42.0+	R	2.0	1.0
F77-1840	40.2	-4	38	19.7	40.8	R	2.0	1.5
F77-1995	39.8	-4	36	20.0	40.7	R	3.0	1.5
F77-2034	35.9	-7	36	19.6-	40.9	R	3.0	5.0
F77-2094	36.7	-9	36	20.2	41.6+	R	2.0	5.0
F77-2124	37.5	-7	38	18.7-	43.8+	R	3.0	4.2
F77-2658	41.0	-8	33	20.1	40.5	R	1.5	4.5
F77-2809	38.3	+1	36	21.2+	38.7-	R	2.0	1.8
Ga76-432	30.9-	-2	41	19.3-	44.3+	S	5.0	4.5
Ga76-2819	36.8	-6	39	20.1	40.8	S	4.0	2.8
Ga77-135	36.0	-5	35	20.4	40.9	S	2.0	4.8
Ga77-304	35.2	-6	35	18.7-	44.0+	S	3.0	5.0
Ga77-417	35.6	-4	35	19.8	40.5	S	5.0	4.0
GaT76-1106	34.5-	-8	37	20.8	38.7-	S	5.0	3.8
GaT76-1124	37.3	-8	33	20.8	40.1	S	5.0	5.0
GaT76-1169	34.8-	-10	35	21.3+	38.9	S	2.0	4.8
GaT76-1177	35.0	-8	36	20.5	40.2	S	3.5	5.0
N77-1486	38.4	-6	32	19.7	41.0	S	3.0	4.5
N77-1528	39.7	-5	31	20.7	40.9	S	2.0	4.5
N77-1602	40.0	-8	30	20.0	41.6	S	2.0	5.0
L.S.D. (.05)	5.3			0.6	1.2			
L.S.D. (.01)	7.0			1.6	1.6			

Table 59 - Seed yield, in bushels per acre, for the strains in Preliminary Group VIII, 1979

Strain	Blackville, SC	Gainesville, FL	Quincy, FL	Jay, FL	*Beaumont, TX	Stoneville, MS (B)
Dowling	37.9	42.5	45.9	30.2	32.2	45.0
Braxton	44.3	41.6	51.8	19.6-	33.6	48.6
D77-12480	30.7	25.4	27.9-	26.2	28.1	19.3-
Co76-853	35.6	41.8	41.2	35.8	34.4	43.0
Co76-888	40.3	43.9	43.5	27.2	34.5	38.4-
Co77-9	38.4	39.9	37.9-	23.7	36.4	42.0
Co77-13	34.4	42.2	44.8	23.7	36.4	39.8
Co77-42	39.2	39.0	40.0	19.6-	27.1	41.2
Co77-188	42.6	41.0	43.9	21.2	32.5	43.6
F77-1500	32.9	36.4	36.9-	30.8	30.7	40.6
F77-1539	34.2	40.9	39.2	34.3	30.9	43.6
F77-1576	41.3	40.2	47.5	31.3	35.7	40.1
F77-1654	36.6	39.4	44.2	34.3	33.1	36.9-
F77-1661	39.5	37.7	41.9	34.3	32.8	46.2
F77-1729	31.7	39.6	49.0	33.8	30.0	41.7
F77-1790	44.7	42.1	44.7	39.4	33.4	40.7
F77-1797	40.4	41.2	51.4	38.4	37.2	44.1
F77-1840	42.0	42.4	43.0	32.2	29.8	41.4
F77-1995	36.0	38.9	39.8	40.4+	31.7	43.8
F77-2034	37.8	35.3	44.9	29.2	39.0	32.4-
F77-2094	32.4	41.4	41.7	29.8	34.9	38.5-
F77-2124	33.9	39.8	37.8-	31.2	31.5	44.6
F77-2658	43.3	39.5	45.4	34.8	29.5	42.3
F77-2809	34.2	36.7	44.6	31.8	27.2	44.5
Ga76-432	32.0	35.7	36.7-	16.6-	32.9	33.5-
Ga76-2819	41.2	38.7	38.9	23.2	27.1	42.3
Ga77-135	40.7	42.2	43.1	16.2-	19.3-	37.8-
Ga77-304	35.4	41.0	39.0	23.2	29.9	37.7-
Ga77-417	39.2	38.6	32.7-	24.2	38.2	43.3
GaT76-1106	35.7	38.7	41.3	14.1-	25.3	42.6
GaT76-1124	37.1	38.2	41.3	28.2	34.6	42.0
GaT76-1169	36.9	36.7	32.9-	24.7	33.3	42.8
GaT76-1177	34.9	35.4	39.7	22.2	33.3	42.9
N77-1486	41.7	43.4	44.3	19.6-	25.5	42.9
N77-1528	41.9	44.1	40.9	25.7	31.9	45.9
N77-1602	40.6	46.2	46.3	19.2-	29.8	47.9
L.S.D. (.05)	N.S.	N.S.	7.2	9.5	7.7	5.6
C.V.	11%	10%	8%	17%	12%	7%

*Not included in mean.

Table 60 - Oil percentages for the strains in Preliminary Group VIII, 1979

Strain	Blackville, SC	Gainesville, FL	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Dowling	19.9	20.8	20.0	21.3	19.5
Braxton	18.9	20.6	18.5	19.6	18.4
D77-12480	17.9	18.7	19.0	21.3	17.6
Co76-853	19.3	20.6	19.0	22.0	19.2
Co76-888	19.9	21.4	20.7	21.4	19.7
Co77-9	20.0	21.3	19.7	21.3	19.2
Co77-13	20.5	21.1	20.1	21.5	19.6
Co77-42	20.8	23.2	19.9	-	19.5
Co77-188	20.4	21.4	20.5	21.3	19.0
F77-1500	18.6	20.4	18.7	20.6	18.1
F77-1539	19.3	20.5	19.0	20.1	18.5
F77-1576	20.0	20.8	19.4	21.5	18.8
F77-1654	19.5	20.6	19.7	20.4	18.9
F77-1661	18.6	19.7	18.1	20.7	19.0
F77-1729	19.7	20.4	19.2	19.7	19.1
F77-1790	19.4	20.6	19.3	20.5	18.3
F77-1797	19.4	20.4	19.6	20.2	19.3
F77-1840	19.0	20.0	19.6	21.8	18.2
F77-1995	19.4	21.1	20.2	20.3	19.0
F77-2034	20.0	19.9	18.5	21.3	18.5
F77-2094	20.0	21.7	20.2	20.3	19.0
F77-2124	17.6	19.1	18.6	20.5	17.6
F77-2658	19.4	21.4	19.5	20.8	19.4
F77-2809	20.3	22.7	20.7	21.9	20.2
Ga76-432	19.2	20.1	19.7	19.8	17.9
Ga76-2819	20.0	21.0	18.8	21.7	18.8
Ga77-135	20.1	22.9	19.5	21.3	18.4
Ga77-304	18.2	19.7	17.7	20.0	18.0
Ga77-417	19.3	20.8	19.2	21.1	18.5
GaT76-1106	20.1	21.6	20.6	22.0	19.6
GaT76-1124	20.7	22.1	20.8	21.4	19.0
GaT76-1169	20.7	22.8	20.0	22.6	20.3
GaT76-1177	20.1	21.5	20.6	21.0	19.2
N77-1486	18.4	20.6	19.6	21.0	18.8
N77-1528	19.6	21.4	20.6	21.7	20.1
N77-1602	19.4	20.7	19.2	21.4	19.2

Table 61 - Protein percentages for the strains in Preliminary Group VIII, 1979

Strain	Blackville, SC	Gainesville, FL	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Dowling	40.2	41.1	41.3	38.6	39.4
Braxton	43.2	43.0	44.8	41.0	41.0
D77-12480	41.0	42.3	42.3	39.1	41.7
Co76-853	43.3	42.8	43.3	39.1	39.8
Co76-888	43.6	43.7	42.5	38.3	41.1
Co77-9	40.4	41.7	41.6	40.0	38.9
Co77-13	41.6	43.4	43.5	37.7	40.3
Co77-42	36.8	37.8	40.4	-	37.5
Co77-188	41.9	43.3	44.0	40.4	41.4
F77-1500	42.3	40.5	43.0	37.8	40.9
F77-1539	42.1	41.7	42.0	39.9	41.5
F77-1576	42.7	43.3	42.8	39.1	41.5
F77-1654	41.5	40.9	43.4	39.3	40.0
F77-1661	40.9	41.5	43.3	39.6	38.1
F77-1729	43.3	41.7	43.1	41.3	41.3
F77-1790	42.9	45.7	43.2	40.4	42.6
F77-1797	42.2	43.0	41.9	42.3	40.8
F77-1840	42.0	42.7	42.3	36.3	40.9
F77-1995	41.6	40.5	41.5	40.1	39.9
F77-2034	40.9	42.1	43.5	38.8	39.4
F77-2094	41.9	40.7	42.0	42.4	41.1
F77-2124	46.0	44.8	44.0	41.6	42.5
F77-2658	42.7	41.2	41.7	38.8	37.9
F77-2809	39.5	38.3	40.0	39.0	36.6
Ga76-432	44.0	45.4	45.6	42.3	44.0
Ga76-2819	40.9	42.1	43.4	38.2	39.6
Ga77-135	41.4	40.7	42.7	38.6	40.9
Ga77-304	45.1	44.7	45.1	42.3	42.9
Ga77-417	41.2	41.2	41.5	39.3	39.5
GaT76-1106	39.5	40.0	39.0	37.7	37.4
GaT76-1124	41.4	40.4	41.5	37.2	39.8
GaT76-1169	40.0	38.4	40.7	37.0	38.2
GaT76-1177	40.6	41.5	39.9	38.5	40.3
N77-1486	42.6	42.2	40.7	39.0	40.6
N77-1528	42.7	41.7	41.7	37.6	41.0
N77-1602	42.6	41.7	42.8	39.2	41.7

Table 62 - Plant height for the strains in Preliminary Group VIII, 1979

Strain	Blackville, SC	Gainesville, FL	Quincy, FL	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Dowling	41	34	44	36	32	33
Braxton	44	28	40	32	30	30
D77-12480	41	47	46	34	38	44
Co76-853	36	35	37	34	32	32
Co76-888	42	36	41	36	25	28
Co77-9	39	35	45	38	32	32
Co77-13	43	36	43	36	33	36
Co77-42	40	31	42	36	29	31
Co77-188	39	33	43	36	26	30
F77-1500	41	38	42	36	26	33
F77-1539	39	33	37	34	28	34
F77-1576	45	39	38	38	34	36
F77-1654	42	36	44	40	32	40
F77-1661	47	38	43	44	32	40
F77-1729	38	30	35	28	27	31
F77-1790	41	37	42	38	32	39
F77-1797	39	37	40	38	30	39
F77-1840	39	38	46	38	28	39
F77-1995	44	32	43	34	29	35
F77-2034	41	33	39	38	32	35
F77-2094	39	34	40	38	29	33
F77-2124	38	36	40	46	30	39
F77-2658	36	31	39	36	28	29
F77-2809	38	40	40	34	33	32
Ga76-432	44	41	44	46	38	35
Ga76-2819	46	38	45	40	24	38
Ga77-135	42	36	40	34	24	31
Ga77-304	39	35	40	34	23	36
Ga77-417	38	32	43	34	26	36
GaT76-1106	41	36	41	36	36	32
GaT76-1124	40	33	39	26	32	27
GaT76-1169	42	35	41	34	27	30
GaT76-1177	38	33	44	36	32	35
N77-1486	42	26	40	32	22	29
N77-1528	37	27	39	32	24	29
N77-1602	33	29	40	26	24	28

Table 63 - Seed quality scores for the strains in Preliminary Group VIII, 1979

Strain	Blackville, SC	Gainesville, FL	Quincy, FL	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Dowling	2.0	1.0	1.0	2.0	2.0	2.0
Braxton	2.0	1.3	2.0	2.0	3.0	2.0
D77-12480	2.0	1.0	1.0	1.0	2.5	2.5
Co76-853	2.0	1.0	2.0	2.0	2.0	2.0
Co76-888	2.0	1.0	2.0	1.0	2.5	2.0
Co77-9	3.0	1.0	3.0	2.0	2.5	2.0
Co77-13	2.0	1.0	2.0	2.0	3.5	2.0
Co77-42	2.0	1.3	2.0	1.0	2.5	2.0
Co77-188	1.0	1.0	2.0	1.0	2.0	2.0
F77-1500	1.0	1.0	2.0	2.0	1.5	2.0
F77-1539	1.0	1.0	1.0	1.0	2.0	2.0
F77-1576	1.0	1.0	1.0	2.0	2.0	2.0
F77-1654	1.0	1.0	2.0	1.0	2.5	2.0
F77-1661	1.0	1.0	2.0	1.0	2.5	2.0
F77-1729	2.0	1.0	2.0	1.0	2.5	2.0
F77-1790	2.0	1.0	2.0	1.0	2.0	2.0
F77-1797	2.0	1.0	1.0	1.0	2.5	2.0
F77-1840	2.0	1.0	1.0	1.0	1.5	2.0
F77-1995	2.0	1.0	1.0	1.0	2.0	2.0
F77-2034	2.0	1.0	2.0	1.0	2.0	2.0
F77-2094	2.0	1.0	2.0	1.0	1.0	2.0
F77-2124	2.0	1.0	2.0	1.0	2.0	2.0
F77-2658	2.0	1.0	2.0	1.0	2.0	2.0
F77-2809	2.0	1.0	1.0	1.0	3.0	2.0
Ga76-432	3.0	1.0	2.0	2.0	2.5	2.0
Ga76-2819	3.0	1.0	3.0	2.0	2.5	2.0
Ga77-135	2.0	1.0	2.0	2.0	2.0	2.0
Ga77-304	4.0	1.3	2.0	1.0	2.0	2.0
Ga77-417	2.0	1.0	2.0	1.0	3.0	2.0
GaT76-1106	2.0	1.0	2.0	1.0	2.0	2.0
GaT76-1124	2.0	1.0	2.0	2.0	2.0	2.0
GaT76-1169	2.0	1.0	3.0	1.0	1.5	2.0
GaT76-1177	3.0	1.0	2.0	1.0	2.5	2.0
N77-1486	3.0	1.0	2.0	2.0	2.0	2.0
N77-1528	4.0	1.0	3.0	2.0	3.0	2.0
N77-1602	2.0	1.0	2.0	2.0	2.0	2.0