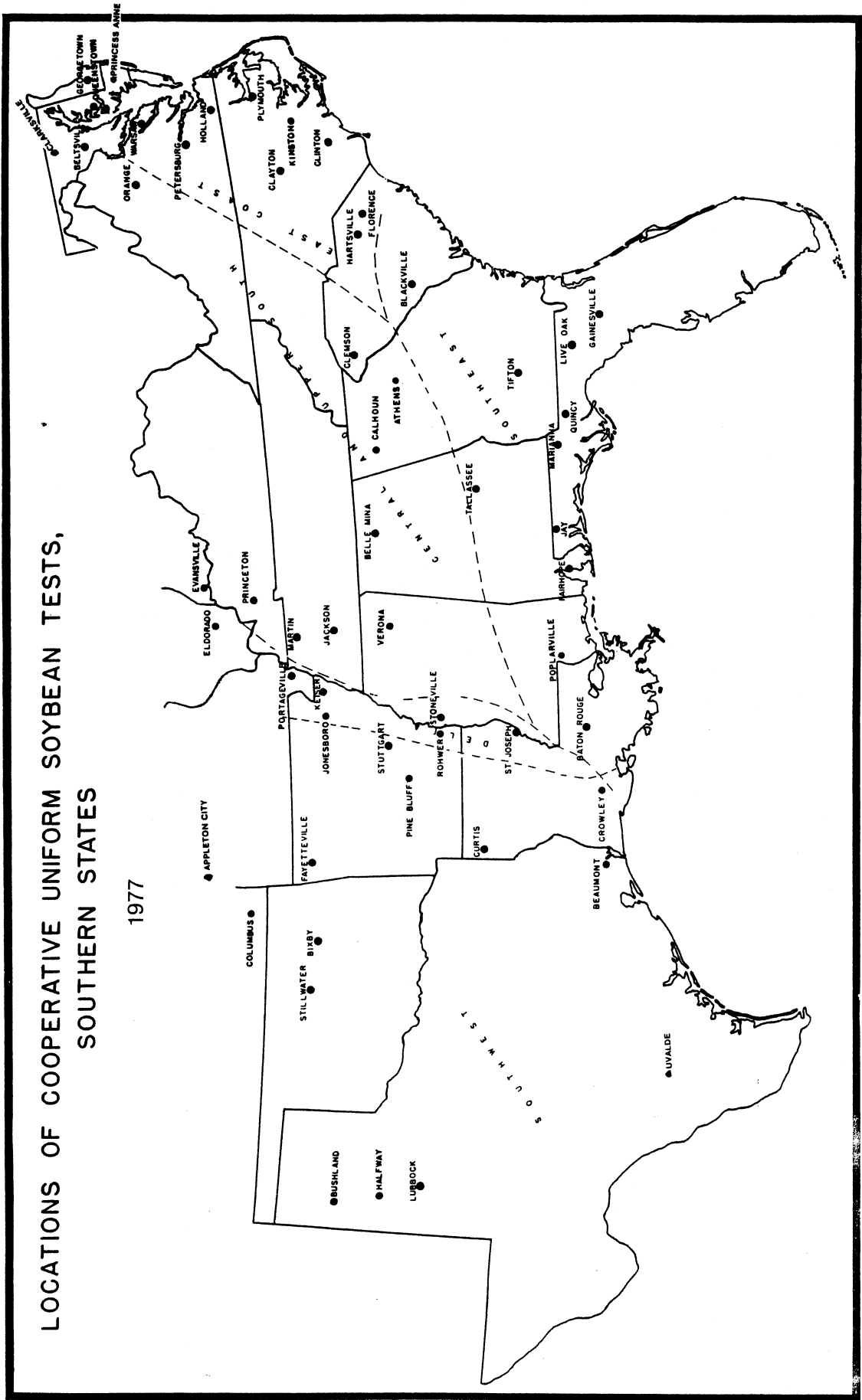


THE UNIFORM SOYBEAN TESTS
SOUTHERN STATES
1977

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

LOCATIONS OF COOPERATIVE UNIFORM SOYBEAN TESTS, SOUTHERN STATES

1977



THE UNIFORM SOYBEAN TESTS

SOUTHERN STATES

1977

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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. In the Southern Region, fundamental studies and breeding programs are conducted at three locations: Stoneville, Mississippi; Raleigh, North Carolina; and Gainesville, Florida. After promising new strains are developed at these breeding centers, or by any other cooperating agency, they are advanced to the preliminary and uniform regional tests, conducted in cooperation with research workers in the southeastern states. This testing program enables the breeder 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. For the groups grown in the southern area, the major check varieties are: Columbus, Essex, Forrest, Tracy, Centennial, Bragg, Ransom, 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: Columbus, September 8; 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 ARS, USDA
- F - Florida Agricultural Experiment Station and ARS, USDA
- Ga - Georgia Agricultural Experiment Station
- J - Delta Branch Experiment Station, West Tennessee Experiment Station and ARS, USDA
- L - Illinois Agricultural Experiment Station and ARS, USDA
- La - Louisiana Agricultural Experiment Station
- Md - Maryland Agricultural Experiment Station and ARS, USDA
- N - North Carolina Agricultural Experiment Station and ARS, USDA
- R - Arkansas Agricultural Experiment Station
- S - Missouri Agricultural Experiment Station and ARS, 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
<u>East Coast</u>											
Queenstown, Md.	1	1*				Mattapex silt loam	H	H	6.4	0-45-90	46.6 - A
Georgetown, Del.	1	1*				Norfolk loamy sand	M+	M+	6.4	0-0-0	42.6 - A
Warsaw, Va.	1	1*	1			Sassafras sandy loam	M	H	6.5	0-55-110	48.6 - B
Petersburg, Va.		1	1*			Marlboro f.s. loam	H	M	6.0	0-0-0	20.3 - C
Holland, Va.		1	1			Bertie f.s. loam	H	M+	6.5	0-0-0	44.1 - C
Plymouth, N.C.		1*	1*	1		Bladen f.s. loam	H	H	5.9	0-40-80	50.6 - C
Clayton, N.C.			1	1		Norfolk sandy loam				0-40-40	38.7 - F
Kinston, N.C.			1	1		Norfolk sandy loam				0-40-80	35.4 - G
Clinton, N.C.			1	1	1	Norfolk sandy loam				0-40-80	52.8 - G
Florence, S.C.			1	1	1	Dunbar sandy loam				0-0-0	
Hartsville, S.C.			1	1	1	Norfolk sandy loam				15-45-90	47.1 - G
<u>Southeast</u>											
Blackville, S.C.(A)			1	1*	1	Varina loamy sand	H	H	5.9	0-0-60	43.2 - F
Blackville, S.C.(B)					1*	Varina loamy sand	H+	M	5.9	0-37-75	40.9 - I
Tifton, Ga.			1	1*	1	Tifton sandy loam	M	H	6.2	0-50-100	63.5 - I
Tallassee, Ala.				1*	1	Cahaba l.f.s.	H	H	6.1	0-28-28	36.0 - G
Gainesville, Fla.				1	1*	Arredonda fine sand	H	L	5.6	0-32-96	37.2 - I
Marianna, Fla.				1	1	Orangburg f.s.l.	H	M	6.0	25-50-75	48.1 - F
Quincy, Fla.			1	1	1*	Norfolk l.f.s.	H	H	5.9	0-70-70	58.3 - E
Jay, Fla.		1	1	1*	1*	Red bay f.s.l.	H	H	5.9	0-150-75	44.5 - E
Fairhope, Ala.			1	1	1	Malbis f.s.l.	H	M	5.8	16-48-48	46.4 - D
Poplarville, Miss.				1	1	Sawyer f. sandy loam	H	H	5.9	0-60-60	43.2 - F
Baton Rouge, La.			1	1*	1	Olivier silt loam	M	M	6.2	0-60-60	27.8 - E
<u>Upper & Central South</u>											
Orange, Va.	1	1				Davidson sandy loam	H	L	6.1	18-54-108	36.8 - A
Calhoun, Ga.		1	1	1		Leadvale silt loam					
Eldorado, Ill.			1			Harco silt loam					
Knoxville, Tenn.	1	1				Sequatchi loam				0-0-60	48.5 - B
Princeton, Ky.	1	1*				Crider silt loam	M	M+	6.7	0-92-120	48.2 - C
Martin, Tenn.	1	1				Grenada silt loam	M	H	7.0	0-65-60	58.9 - C
Jackson, Tenn.		1	1			Dexter loam	M	H	6.2	0-0-0	39.9 - C
Belle Mina, Ala.		1	1	1*		Decatur clay loam	H	H	7.0	0-14-77	19.5 - C
Verona, Miss.		1	1			Tuscumbia silty loam	H+	M	7.0	0-80-100	44.8 - C
Athens, Ga.		1	1	1	1	Cecil sandy loam	VH	H	6.2	0-50-100	45.1 - F
Clemson, S.C.			1	1	1	Cecil sandy loam	M+	M-	6.1	0-35-70	31.2 - D

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	H	6.4	0-30-60	51.8 - C
Portageville, Mo. (B)	1	1	1			Portageville clay	VH	VH	6.0	0-0-0	45.2 - C
Keiser, Ark.	1	1*	1*			Sharkey clay loam	H	H	6.4	0-0-0	34.2 - D
Jonesboro, Ark. ³	1	1	1			Calloway silt loam	L	H	5.5	0-40-40	21.8 - C
Stoneville, Miss. (A)	1	1*	1*	1*		Bosket f.s.l.	H	H	6.8	0-0-0	41.2 - C
Stoneville, Miss. (B)	1	1*	1*	1*	1	Sharkey clay	H	H	6.3	0-0-0	27.8 - D
Rohwer, Ark.	1	1	1	1		Perry clay	H	H	6.7	0-0-0	21.5 - D
St. Joseph, La.	1	1	1	1		Commerce silt loam	H	L	6.0	0-0-0	48.6 - C
West											
Columbus, Kan.	1	1				Cherokee silt loam	L	H	5.8	12-50-50	42.7 - C
Clinton, Mo.	1	1				Parson silt loam	M	H		0-0-0	- C
Pine Bluff, Ark.	1	1	1			Calloway silt loam				0-80-80	- C
Stuttgart, Ark.	1	1	1			Crowley silt loam	VL	H	6.5	0-40-40	44.4 - C
Bossier City, La.	1	1	1			Severn very f.s.l.	H	L	7.4	0-0-0	24.6 - D
Crowley, La.	1	1	1	1		Crowley s.l.	L	L	6.0	0-60-60	26.1 - D
Bixby, Okla.	1	1	1			Reinloch silt loam	H	H	6.5	0-0-0	40.9 - C
Bushland, Texas	1	1				Pullman s.c.l.				0-0-0	43.3 - A
Halfway, Texas	1	1				Pullman clay loam	M	H		0-0-0	42.8 - A
Lubbock, Texas	1	1	1			Amarillo loam	M	VH	8.1	0-0-0	48.9 - B
Beaumont, Texas	1	1	1	1*	1*	Morrey silt loam	ML	L	5.2	0-40-40	41.2 - F
Clovis, N.M.	1									200-0-0	53.9 - A

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

²Varieties: A = Columbus; B = Essex; C = Forrest; D = Tracy; E = Centennial; F = Bragg;

G = Ransom; H = Hutton; I = Cobb.

³Bedford seed yield 35.4 bushels per acre.

*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 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, Columbus; 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 near the Jay Station. Ratings for *M. arenaria* were made from a planting on a heavily infested field near Blackville, South Carolina.

- 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

<u>Variety or strain</u>	1977 <u>Parentage</u>	<u>Generation composited</u>
1. Columbus	C1069 X Clark	F ₈
2. K1017	L66L-140 X Columbus	F ₄
3. Crawford (K1019)	Williams X Columbus	F ₄
4. Md71-407	Clark X D64-4731	F ₆
5. Ts72-824	Bethel X Clark 63	F ₄
6. Md70-1004-94	3rd cycle intercross, 8 parent diallel	
7. Md74-900B-19		
8. Franklin (L71L-436)	L12 X Custer	
9. S75-184	L66L-140 X Columbus	
10. S75-196	L66L-140 X Columbus	
11. S75-212	L66L-140 X Columbus	
12. S75-489	SL-9 X Columbus	

Background of strains used as parents:

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

L66L-140 is a selection from Wayne X L57-0034 which was grown in Uniform Group III in 1969 and 1970.

D64-4731 is a narrow leaf type from the cross Lee(2) X [Clark(2) X T 109].

L12 has Clark as a recurrent parent with light hila, resistance to phytophthora rot and downy mildew.

SL-9 is a selection from Wayne(10) X Kanrich.

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-year data are reported for seed yield, oil and protein percentages of the seed.

Differences among strains for seed yield were significant (odds 19:1 or greater) at 14 locations. A combined analysis of variance for seed yield by production regions showed a significant variety X location interaction for all production regions.

Two strains have been released as varieties -- K1019 as Crawford and L71L-436 as Franklin. The two-year mean seed yield for Crawford is very similar to that for Columbus in the East Coast, Upper and Central South, and Delta, but 1.2 bushels higher than Columbus in the West. Maturity averaged 4 days earlier. Franklin was selected to give a IV maturity variety superior to Custer. Seed yield equaled Columbus in the Upper and Central South. Seed yield was significantly below that for Columbus at 7 of the 18 locations.

Three other strains have been grown two years -- K1017, Md71-407, and Ts72-824. K1017 has a yield advantage over Crawford in the Upper and Central South, but not in other regions. Md71-407 which is 7 days earlier than Columbus will be released by Maryland as Miles. Ts72-824 is similar to Crawford in maturity. Seed yield was superior in the Delta, but not in other regions.

Table 1 - General summary of performance for the strains in Uniform Group IV-S,
1977

	Columbus	K1017	Crawford (K1019)	Md71-407	Ts72-824	Md70-1004-94
Seed Yield - 1977						
East Coast	41.8	37.4	39.9	36.5	38.2	41.0
Upper & Central South	38.4	41.4	36.7	37.1	34.7	39.7
Delta	34.0	35.5	34.9	33.4	37.0	33.4
West	43.8	42.8	46.2	41.7	45.0	40.1
- 1976-77						
East Coast	38.3	37.8	38.0	36.0	36.7	
Upper & Central South	37.2	40.4	37.3	36.3	35.4	
Delta	36.2	37.4	36.7	34.6	38.3	
West	40.5	38.6	41.7	39.5	40.6	
Oil Content - 1977	20.8	21.6+	21.0	20.9	22.0+	22.1+
- 1976-77	20.5	21.3	20.8	20.7	21.5	
Protein Content - 1977	41.7	41.8	41.5	41.3	39.4-	39.9-
- 1976-77	41.5	41.5	41.2	41.1	39.5	
Seed size	17.0	20.1+	17.8	16.3	17.9	19.6+
Maturity index	9-27	-3	-4	-7	-3	+1
Seed quality	2.3	2.5	2.2	2.3	3.0	2.8
Height	36	36	37	33	35	37
Percent mottled seed	18.7	26.0	14.0	6.0	0.0	0.0
Percent purple stain	2.0	2.3	2.7	4.0	5.3	5.0
Shatter resistance	2.0	2.0	2.0	2.0	1.0	2.0
Cyst nematode races	S	S	S	S	S	S
<i>M. incognita</i>	5.0	4.0	4.5	5.0	3.5	5.0
Flower color	P	P	P	P	S	W
Pubescence color	T	T	T	T	G	G

Table 1 - (continued)

	Md74-900B-19	Franklin (L71L-436)	S75-184	S75-196	S75-212	S75-489
Seed Yield - 1977						
East Coast	38.5	29.3-	40.4	39.1	40.8	39.5
Upper & Central South	34.7	38.4	39.2	39.3	32.7	39.4
Delta	36.3	31.0	35.4	39.8	34.1	36.6
West	41.8	32.6-	43.0	45.5	43.2	45.0
- 1976-77						
East Coast						
Upper & Central South						
Delta						
West						
Oil Content - 1977	20.4	22.4+	21.6+	22.5+	21.3	20.1-
- 1976-77						
Protein Content - 1977	41.4	38.3-	39.9-	39.6-	41.2	41.9
- 1976-77						
Seed size	18.0+	16.4	17.8	18.6+	18.8	17.4
Maturity index	-5	-7	+2	-3	-2	-2
Seed quality	2.6	3.0	2.6	2.7	2.4	3.0
Height	28	35	38	37	38	36
Percent mottled seed	0.0	0.0	10.7	33.0	24.7	10.3
Percent purple stain	1.0	6.0	4.7	4.3	3.0	4.3
Shatter resistance	1.0	3.0	2.0	2.0	2.0	2.0
Cyst nematode races	S	R	S	S	S	S
<i>M. incognita</i>	3.5	5.0	4.0	3.5	3.5	4.0
Flower color	W	P	W	W	P	W
Pubescence color	G	G	T	T	T	T

Table 2 - Seed yield, in bushels per acre, for the strains in Uniform Group IV-S, 1977

Location	Crawford					Md70-	Md74-
	Columbus	K1017	(K1019)	Md71-407	Ts72-824	1004-94	900B-19
<u>East Coast</u>							
Queenstown, Md.	46.6	45.6	45.8	48.0	44.7	44.7	43.5
Georgetown, Del.	42.6	39.1	40.3	36.6	38.7	42.9	40.5
Warsaw, Va.	36.3	27.6-	33.6	24.9-	31.3-	35.6	31.5-
Mean	41.8	37.4	39.9	36.5	38.2	41.0	38.5
<u>Upper and Central South</u>							
Orange, Va.	36.8	41.9	34.3	45.5+	31.9	43.6+	40.0
Knoxville, Tenn.	37.3	34.3	31.2	23.2-	31.6	30.1-	26.2-
Princeton, Ky.	41.1	47.9	44.7	42.5	40.8	45.4	38.0
Mean	38.4	41.4	36.7	37.1	34.7	39.7	34.7
<u>Delta</u>							
Portageville, Mo. (A)	46.9	47.4	52.3	42.6	47.9	43.4	46.2
Portageville, Mo. (B)	21.1	31.3+	30.3+	30.2+	26.8+	23.1	27.0
Martin, Tenn.	45.1	35.9	34.2	36.8	38.8	46.0	40.5
Keiser, Ark.	23.1	27.4	23.0	23.9	34.7+	21.1	31.5+
*Stoneville, Miss. (B)	11.1	14.9	13.2	11.1	13.8	13.9	7.5-
Mean	34.0	35.5	34.9	33.4	37.0	33.4	36.3
<u>West</u>							
Columbus, Kan.	32.5	32.8	31.8	27.9-	32.1	32.6	32.1
*Clinton, Mo.	32.7	34.9+	34.7	33.8	32.7	34.1	31.4
Bixby, Okla.	35.0	31.4	35.5	27.7-	34.0	34.2	32.0
Bushland, Tex.	43.8	43.7	49.4+	45.5	41.0	34.3-	38.0-
Halfway, Tex.	42.8	45.6	51.9+	48.2	51.7+	42.4	43.8
Lubbock, Tex.	54.5	53.2	54.8	54.9	55.9	48.3-	51.6
Clovis, N.M.	53.9	50.1	54.0	46.3	55.2	48.8	53.5
Mean	43.8	42.8	46.2	41.7	45.0	40.1	41.8

*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	Franklin (L71L-436)	S75-184	S75-196	S75-212	S75-489	L.S.D. (.05)	C.V. (%)
<u>East Coast</u>							
Queenstown, Md.	41.0-	43.1	48.1	47.4	45.7	3.6	5
Georgetown, Del.	26.6-	42.7	37.7	42.8	42.7	6.6	12
Warsaw, Va.	20.3-	35.4	31.5-	32.1	30.0-	4.6	8
Mean	29.3	40.4	39.1	40.8	39.5	4.6	
<u>Upper and Central South</u>							
Orange, Va.	41.0	38.1	36.7	35.0	38.6	6.2	10
Knoxville, Tenn.	24.9-	33.1	30.9	29.1	33.4	6.9	13
Princeton, Ky.	49.3	46.3	50.4	34.1	46.3	N.S.	12
Mean	38.4	39.2	39.3	32.7	39.4	N.S.	
<u>Delta</u>							
Portageville, Mo.(A)	48.1	49.1	46.5	46.4	45.2	N.S.	14
Portageville, Mo.(B)	25.2	31.7+	37.0+	25.9	33.0+	6.4	13
Martin, Tenn.	31.0	33.9	44.3	36.8	43.4	N.S.	17
Keiser, Ark.	19.8	26.9	31.3+	27.4	25.1	5.5	12
Stoneville, Miss.(B)	9.4	15.3+	15.3+	13.9	13.5	4.1	19
Mean	31.0	35.4	39.8	34.1	36.6	N.S.	
<u>West</u>							
Columbus, Kan.	28.4-	32.1	32.6	31.4	33.8	2.8	5
Clinton, Mo.	32.7	33.1	37.0+	34.0	34.6	2.8	6
Bixby, Okla.	21.3-	35.6	35.4	33.8	35.4	5.4	10
Bushland, Tex.	19.2-	38.5	44.5	43.2	43.0	3.5	5
Halfway, Tex.	34.8-	51.2+	49.1+	48.6+	56.2+	5.3	7
Lubbock, Tex.	49.2-	50.9-	54.9	53.7	52.6	2.8	3
Clovis, N.M.	43.1	49.7	56.7	48.8	49.1	N.S.	15
Mean	32.6-	43.0	45.5	43.2	45.0	3.9	

Table 3 - Chemical composition and seed size for the strains in Uniform Group IV-S, 1977

Location	Columbus	K1017	Crawford (K1019)	Md71-407	Ts72-824	Md70- 1004-94
<u>Oil Percentage</u>						
Queenstown, Md.	21.1	20.9	21.0	20.6	21.1	23.1
Warsaw, Va.	21.7	22.0	21.5	21.0	23.6	21.0
Orange, Va.	20.7	21.2	21.4	21.1	20.6	21.5
Portageville, Mo.(A)	21.1	23.9	21.8	21.3	24.3	23.6
Columbus, Kan.	20.7	21.3	20.5	21.2	21.5	22.2
Bixby, Okla.	20.5	21.3	20.8	21.5	22.3	22.5
Lubbock, Tex.	21.4	21.5	21.1	21.2	22.7	22.2
Halfway, Tex.	20.9	21.8	20.9	20.2	21.9	22.2
Bushland, Tex.	18.9	20.5	20.1	19.8	20.3	21.0
Mean	20.8	21.6+	21.0	20.9	22.0+	22.1+
<u>Protein Percentage</u>						
Queenstown, Md.	40.3	40.5	39.8	39.5	38.5	37.3
Warsaw, Va.	42.9	43.3	43.6	43.5	40.6	41.3
Orange, Va.	41.9	40.4	40.5	39.4	39.9	40.0
Portageville, Mo.(A)	42.0	41.5	40.8	40.8	39.4	39.9
Columbus, Kan.	41.7	42.9	42.2	43.3	40.3	40.3
Bixby, Okla.	42.8	42.7	42.8	39.7	38.9	40.3
Lubbock, Tex.	40.6	41.7	41.0	41.8	38.4	39.2
Halfway, Tex.	40.7	40.7	40.2	41.6	37.9	39.3
Bushland, Tex.	42.6	42.3	42.2	42.1	41.0	41.3
Mean	41.7	41.8	41.5	41.3	39.4-	39.9-
<u>Grams Per 100 Seeds</u>						
Queenstown, Md.	16.7	18.5	17.0	15.1	16.8	18.2
Warsaw, Va.	20.7	21.8	21.0	19.1	21.9	21.7
Orange, Va.	17.9	19.6	17.5	15.6	18.8	21.3
Portageville, Mo.(A)	14.8	18.0	15.5	13.5	15.5	16.8
Columbus, Kan.	16.1	19.7	16.9	16.5	16.1	16.8
Bixby, Okla.	17.4	19.8	17.9	15.7	19.1	22.0
Lubbock, Tex.	19.0	24.7	20.7	18.9	20.9	23.8
Bushland, Tex.	13.6	18.8	16.2	15.8	14.3	16.4
Mean	17.0	20.1+	17.8	16.3	17.9	19.6+

Table 3 - (continued)

Location	Md74- 900B-19	Franklin (L71L-436)	S75-184	S75-196	S75-212	S75-489	L.S.D. (.05)
<u>Oil Percentage</u>							
Queenstown, Md.	19.8	21.4	21.0	21.9	20.6	19.6	
Warsaw, Va.	21.5	25.1	22.8	23.2	21.9	21.1	
Orange, Va.	20.9	21.3	21.6	21.8	21.1	19.5	
Portageville, Mo.(A)	21.4	24.2	22.2	24.4	22.8	21.5	
Columbus, Kan.	19.3	21.2	20.9	22.0	21.0	19.9	
Bixby, Okla.	21.3	22.6	22.4	22.6	21.0	20.1	
Lubbock, Tex.	20.1	21.5	21.7	22.1	21.2	20.6	
Halfway, Tex.	20.3	22.0	21.7	23.1	22.1	20.3	
Bushland, Tex.	18.9	22.5	19.9	21.0	19.8	18.7	
Mean	20.4	22.4+	21.6+	22.5+	21.3	20.1-	0.6
<u>Protein Percentage</u>							
Queenstown, Md.	40.8	37.3	39.0	38.3	40.6	40.8	
Warsaw, Va.	43.0	40.9	41.0	40.7	42.9	43.5	
Orange, Va.	40.4	37.9	39.6	39.0	40.2	41.5	
Portageville, Mo.(A)	41.3	37.7	40.0	39.7	41.0	42.0	
Columbus, Kan.	42.1	40.2	39.6	40.0	41.9	41.9	
Bixby, Okla.	41.0	37.0	40.6	39.9	41.9	43.2	
Lubbock, Tex.	41.0	39.2	39.3	40.0	40.1	41.3	
Halfway, Tex.	40.4	37.0	39.3	38.3	40.3	40.6	
Bushland, Tex.	42.5	37.3	41.0	40.8	42.0	42.1	
Mean	41.4	38.3-	39.9-	39.6-	41.2	41.9	0.6
<u>Grams Per 100 Seeds</u>							
Queenstown, Md.	17.0	15.1	16.9	17.4	19.2	17.0	
Warsaw, Va.	20.9	18.0	21.1	21.6	21.2	20.9	
Orange, Va.	19.6	15.5	18.8	18.0	18.6	18.1	
Portageville, Mo.(A)	16.0	14.2	14.5	16.4	17.2	14.5	
Columbus, Kan.	15.9	17.6	16.6	17.1	18.0	16.4	
Bixby, Okla.	18.9	15.6	18.9	19.6	19.1	17.5	
Lubbock, Tex.	20.2	19.2	21.5	22.3	22.5	20.3	
Bushland, Tex.	15.2	15.6	14.0	16.1	14.8	14.5	
Mean	18.0+	16.4	17.8	17.3	18.6+	17.4	0.9

Table 4 - Relative maturity data, days earlier (-) or later (+) than Columbus, for the strains in Uniform Group IV-S, 1977

Location	Date planted	Columbus matured	K1017	Crawford (K1019)	Md71-407	Ts72-824	Md70-1004-94
<u>East Coast</u>							
Queenstown, Md.	5-27	10-12	-8	-4	-8	-8	-1
Georgetown, Del.	5-24	10-20	-2	-3	-3	-2	+2
Mean		10-16	-5	-4	-6	-5	+1
<u>Upper and Central South</u>							
Orange, Va.	5-19	10-7	-4	-3	-3	-2	+6
Knoxville, Tenn.	5-9	10-10	-11	-13	-22	-14	+6
Princeton, Ky.	6-1	9-30	-1	0	-4	-3	+4
Mean		10-6	-5	-5	-9	-6	+5
<u>Delta</u>							
Portageville, Mo.(A)	5-11	9-28	-6	-2	-9	-4	0
Portageville, Mo.(B)	5-13	9-24	-3	-2	-5	-1	0
Martin, Tenn.	6-23	10-2	+3	+1	+4	+3	+8
Keiser, Ark.		9-22	-3	-3	-3	+2	-3
Stoneville, Miss.(B)	5-10	9-16	-8	-2	-9	-1	+1
Mean		9-24	-5	-2	-6	-1	+2
<u>West</u>							
Columbus, Kan.	6-6	10-3	-3	-3	-6	-3	0
Lubbock, Tex.	5-21	9-23	-4	-3	-6	-1	+1
Clovis, N. M.	5-5	9-23	-9	-7	-11	0	-22
Mean		10-1	-5	-4	-8	-1	-7

Table 4 - (continued)

Location	Md74- 900B-19	Franklin (L71L-436)	S75-184	S75-196	S75-212	S75-489
<u>East Coast</u>						
Queenstown, Md.	-8	-8	0	-7	-7	0
Georgetown, Del.	-4	-2	0	-2	0	-1
Mean	-6	-5	0	-5	-4	-1
<u>Upper and Central South</u>						
Orange, Va.	-4	-10	-1	-3	0	0
Knoxville, Tenn.	-23	-18	-1	-9	-10	-6
Princeton, Ky.	-1	-8	0	-1	-1	-1
Mean	-9	-12	-1	-4	-4	-2
<u>Delta</u>						
Portageville, Mo. (A)	-8	-12	-1	-4	0	-1
Portageville, Mo. (B)	-2	-6	+1	0	-1	-1
Martin, Tenn.	+6	+5	+7	+2	+3	+5
Keiser, Ark.	-5	-3	+2	+1	-2	+2
Stoneville, Miss. (B)	-11	-6	-1	+1	-1	0
Mean	-4	-6	+2	0	0	+1
<u>West</u>						
Columbus, Kan.	-3	-5	0	-2	0	-2
Lubbock, Tex.	-1	-8	+1	-3	0	-1
Clovis, N. M.	+2	-10	+2	-6	+1	-1
Mean	-1	-8	+1	-4	0	-1

Table 5 - Plant height for the strains in Uniform Group IV-S, 1977

Location	Columbus	K1017	Crawford (K1019)	Md71-407	Ts72-824	Md70- 1004-94
<u>East Coast</u>						
Queenstown, Md.	45	46	48	41	43	45
Georgetown, Del.	29	31	28	26	29	29
Warsaw, Va.	27	28	28	26	27	29
Mean	34	35	35	31	33	34
<u>Upper and Central South</u>						
Orange, Va.	39	38	39	35	39	40
Knoxville, Tenn.	37	34	34	31	32	33
Princeton, Ky.	38	39	43	36	36	42
Mean	38	37	39	34	36	38
<u>Delta</u>						
Portageville, Mo. (A)	46	42	45	37	46	46
Portageville, Mo. (B)	35	38	43	37	38	38
Martin, Tenn.	48	47	49	45	42	47
Keiser, Ark.	35	29	33	30	37	32
Stoneville, Miss. (B)	25	27	27	23	27	26
Mean	38	37	39	34	38	38
<u>West</u>						
Columbus, Kan.	29	31	30	27	28	29
Clinton, Mo.	42	41	43	38	44	42
Bixby, Okla.	35	33	35	33	33	38
Bushland, Tex.	34	31	33	29	32	34
Halfway, Tex.	37	35	34	34	36	38
Lubbock, Tex.	36	36	37	34	36	42
Clovis, N. M.	37	35	38	34	36	37
Mean	36	35	36	33	35	37

Table 5 - (continued)

Location	Md74- 900B-19	Franklin (L71L-436)	S75-184	S75-196	S75-212	S75-489
<u>East Coast</u>						
Queenstown, Md.	36	47	44	47	49	46
Georgetown, Del.	28	30	31	30	31	30
Warsaw, Va.	25	28	29	29	31	28
Mean	30	35	35	35	37	35
<u>Upper and Central South</u>						
Orange, Va.	27	35	40	36	40	37
Knoxville, Tenn.	26	29	34	34	34	34
Princeton, Ky.	29	42	44	41	39	40
Mean	27	35	39	37	38	37
<u>Delta</u>						
Portageville, Mo.(A)	29	37	50	44	48	46
Portageville, Mo.(B)	26	38	43	40	40	42
Martin, Tenn.	35	45	49	53	51	44
Keiser, Ark.	18	30	38	34	34	34
Stoneville, Miss.(B)	11	22	30	28	28	24
Mean	24	34	42	40	40	38
<u>West</u>						
Columbus, Kan.	27	30	33	31	32	29
Clinton, Mo.	43	43	46	43	45	44
Bixby, Okla.	29	39	34	38	35	36
Bushland, Tex.	25	32	34	32	34	33
Halfway, Tex.	28	38	36	36	40	39
Lubbock, Tex.	27	37	37	37	38	37
Clovis, N. M.	32	38	38	37	38	35
Mean	30	37	37	36	37	36

Table 6 - Lodging scores for the strains in Uniform Group IV-S, 1977

Location	Columbus	K1017	Crawford (K1019)	Md71-407	Ts72-824	Md70- 1004-94
<u>East Coast</u>						
Queenstown, Md.	2.3	2.7	2.0	2.0	2.0	2.3
Georgetown, Del.	1.8	1.8	1.7	1.7	1.5	1.8
Warsaw, Va.	1.0	1.0	1.0	1.0	1.0	1.0
<u>Upper and Central South</u>						
Orange, Va.	2.0	2.0	1.7	1.0	1.0	1.0
Princeton, Ky.	1.0	1.0	1.0	1.0	1.0	1.0
<u>Delta</u>						
Portageville, Mo.(A)	1.5	1.5	1.7	1.3	1.7	1.3
Portageville, Mo.(B)	1.2	1.5	1.3	1.3	1.0	1.3
Martin, Tenn.	2.0	3.0	4.0	4.0	2.0	1.0
Keiser, Ark.	2.0	1.0	1.0	1.0	1.0	1.0
Stoneville, Miss.(B)	2.0	2.0	2.3	2.0	2.0	2.0
<u>West</u>						
Columbus, Kan.	1.0	1.0	1.0	1.0	1.0	1.0
Clinton, Mo.	3.6	4.1	4.5	3.3	4.4	4.0
Bixby, Okla.	2.0	3.0	2.3	2.7	2.0	1.3
Bushland, Tex.	1.0	1.0	1.0	1.0	1.0	1.0
Halfway, Tex.	2.0	2.0	1.5	1.7	2.0	2.0
Lubbock, Tex.	2.5	2.0	3.0	1.5	1.5	1.5
Clovis, N.M.	2.3	2.0	1.7	1.0	2.3	2.3

Table 6 - (continued)

Location	Md74- 900B-19	Franklin (L71L-436)	S75-184	S75-196	S75-212	S75-489
<u>East Coast</u>						
Queenstown, Md.	3.0	2.0	3.0	2.0	2.3	3.0
Georgetown, Del.	2.0	1.8	1.8	1.5	1.7	2.0
Warsaw, Va.	1.0	1.0	1.0	1.0	1.0	1.0
<u>Upper and Central South</u>						
Orange, Va.	1.3	2.0	2.0	1.7	2.0	1.7
Princeton, Ky.	1.0	1.0	1.0	1.0	1.0	1.0
<u>Delta</u>						
Portageville, Mo.(A)	1.7	1.8	1.7	1.3	1.2	1.8
Portageville, Mo.(B)	1.2	1.0	1.2	1.2	1.3	1.2
Martin, Tenn.	2.0	1.0	2.0	2.0	2.0	2.0
Keiser, Ark.	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, Miss.(B)	1.3	2.0	2.0	2.0	2.0	2.0
<u>West</u>						
Columbus, Kan.	1.0	1.0	1.0	1.0	1.0	1.0
Clinton, Mo.	3.9	4.0	4.3	4.3	3.9	4.1
Bixby, Okla.	3.0	3.0	1.7	1.7	1.0	2.3
Bushland, Tex.	1.5	1.0	1.0	1.0	1.0	1.0
Halfway, Tex.	2.3	2.0	2.0	2.0	2.5	2.5
Lubbock, Tex.	1.7	1.7	2.7	2.0	2.0	1.7
Clovis, N. M.	4.0	1.3	2.6	1.7	2.6	2.7

Table 7 - Seed quality scores for the strains in Uniform Group IV-S, 1977

Location	Columbus	K1017	Crawford (K1019)	Md71-407	Ts72-824	Md70- 1004-94
<u>East Coast</u>						
Queenstown, Md.	2.0	2.0	2.0	2.0	2.7	2.0
Georgetown, Del.	2.2	2.0	2.8	3.0	2.8	2.5
Warsaw, Va.	3.2	3.8	3.5	3.8	3.5	4.0
<u>Upper and Central South</u>						
Orange, Va.	1.7	1.0	1.7	1.0	2.5	1.0
Knoxville, Tenn.	4.0	4.0	4.0	3.0	4.0	5.0
<u>Delta</u>						
Portageville, Mo.(A)	3.0	3.0	2.5	2.5	3.5	2.5
Portageville, Mo.(B)	3.5	2.8	2.0	2.5	3.5	4.0
Martin, Tenn.	2.0	3.0	2.0	3.0	3.0	3.0
Keiser, Ark.	2.0	2.0	2.0	2.0	2.0	3.0
Stoneville, Miss.(B)	3.0	3.0	2.7	2.7	3.0	4.0
<u>West</u>						
Columbus, Kan.	1.3	1.4	1.5	1.8	1.5	1.6
Clinton, Mo.	2.5	2.0	2.3	2.0	2.8	2.8
Bushland, Tex.	1.5	2.5	2.0	1.5	2.0	2.5
Lubbock, Tex.	1.5	2.0	1.5	1.7	2.5	1.5

Table 7 - (continued)

Location	Md74- 900B-19	Franklin (L71L-436)	S75-184	S75-196	S75-212	S75-489
<u>East Coast</u>						
Queenstown, Md.	3.0	2.0	2.0	3.0	2.0	3.0
Georgetown, Del.	3.0	4.3	2.2	2.8	2.2	2.8
Warsaw, Va.	3.0	4.5	3.0	3.2	3.5	3.8
<u>Upper and Central South</u>						
Orange, Va.	2.0	1.0	1.0	1.0	1.0	2.0
Knoxville, Tenn.	2.0	4.0	5.0	4.0	5.0	4.0
<u>Delta</u>						
Portageville, Mo.(A)	2.5	2.5	3.0	3.0	2.5	3.5
Portageville, Mo.(B)	3.5	3.8	3.5	3.0	3.5	3.5
Martin, Tenn.	3.0	3.0	3.0	4.0	2.0	4.0
Keiser, Ark.	1.5	4.0	2.0	2.0	2.0	4.0
Stoneville, Miss.(B)	3.0	4.0	3.0	2.7	2.7	3.0
<u>West</u>						
Columbus, Kan.	1.5	1.9	1.4	1.7	1.3	1.7
Clinton, Mo.	2.8	3.0	2.8	2.5	2.0	2.5
Bushland, Tex.	2.0	2.5	2.5	2.5	2.0	2.0
Lubbock, Tex.	3.5	2.2	1.7	3.2	2.0	3.0

UNIFORM GROUP V

<u>Variety or strain</u>	1977 <u>Parentage</u>	<u>Generation composited</u>
1. Essex	Lee X S5-7075	F ₆
2. Forrest	Dyer X Bragg	F ₅
3. V72-580	York X R62-550	
4. D73-4124	D64-3253 X D65-3168	F ₅
5. N73-40	N66-1783 X Lee 68	F ₅
6. N73-520	Tracy X Ransom	F ₅
7. J74-45	Forrest(2) X (D68-18 X PI 88788)	F ₄
8. Bedford (J74-46)	Forrest(2) X (D68-18 X PI 88788)	F ₄
9. D74-7633	Forrest X D70-3001	F ₅
10. D74-7824	Forrest X D70-3001	F ₅
11. D74-8819	D64-4636 X D67-4694	F ₅
12. S73-86113	Cutler X Mack	F ₅

Background of strains 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.

R62-550 is a selection from (R64-168 X Hill) X (Lee X Dortchsoy 110).

D64-3253 is D49-2491 converted to earlier maturity with Hawkeye as a non-recurrent parent.

D65-3168 is a selection Hill X PI 96983 resistant to phytophthora rot, bacterial pustule, and soybean mosaic virus.

N66-1783 is a selection from N56-4202 X N57-6801. N46-4202 is from N46-1703 X D49-2525. N57-6801 is from Jackson X D49-2491.

D68-18 is a selection from Dyer X Bragg.

D70-3001 is a selection from the same cross as Centennial.

D67-4694 is a high protein selection from D62-3286 X D60-9647. D62-3286 is a high protein line from D49-2491(4) X PI 163453.

Results from 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. Two- and three-year data are reported for seed yield and oil and protein percentages of the seed. Essex, Forrest, and V72-580 are reported for three-year results.

Differences among strains for seed yield were significant (odds 19:1 or greater) in 23 of the 32 comparisons. There was a significant variety X location interaction within each region. Mean seed yields for strains for each region differed significantly.

Separate plantings were made for evaluating strains for reaction to the two root knot nematodes *Meloidogyne incognita* and *M. arenaria*. The planting for *M. incognita* ratings were made at the Western Florida Research Center. The plantings for *M. arenaria* evaluation were made near the Edisto Experiment Station, Blackville, South Carolina.

The strain J74-46 was released as Bedford to provide a variety resistant to Race 4 of the soybean cyst nematode. Bedford yielded well in most areas, but yielded significantly less than Forrest in the Northeastern locations Queenstown, Md., Georgetown, Del., and Warsaw, Virginia. Approximately 475 bushels of seed were available for planting in 1977. Seed was increased in Tennessee, Missouri, Arkansas, Mississippi, and Kentucky. Approximately 35,000 bushels of seed will be available for planting in 1978.

The strain V72-580 is being considered for release in Virginia. V72-580 averaged 2 days later and 6 inches taller than Essex. Mean seed yield averages below that for Essex in all regions.

D74-8819 had an average protein percentage of 46.0 or 15% over that for Forrest, but yielded below Essex or Forrest in all areas.

J74-45, resistant to CN Race 4, averaged above Bedford in seed yield in all regions except the Delta. J74-45 had given indications in other tests of being somewhat weak in seed holding and seed quality.

Table 8 - General summary of performance of the strains in Uniform Group V, 1977

	Essex	Forrest	V72-580	D73-4124	N73-40	N73-520
Seed Yield - 1977						
East Coast	45.6	45.3	43.2	42.9	46.3	43.3
Upper & Central South	43.1	41.0	41.9	41.2	42.0	42.4
Delta	39.5	40.9	36.2	37.4	33.7-	32.9-
West	45.6	43.3	44.1	43.3	41.6	42.0
1976-77						
East Coast	42.7	42.8	41.1	42.5	43.8	42.8
Upper & Central South	41.5	39.6	40.8	37.4	38.7	40.4
Delta	40.3	41.7	37.7	38.6	34.9	36.8
West	44.6	42.1	43.9	40.3	39.3	41.1
1975-77						
East Coast	42.2	42.5	41.7			
Upper & Central South	41.7	40.7	42.0			
Delta	42.3	43.7	40.8			
West	41.4	39.8	41.3			
Oil Content - 1977	21.3	21.1	23.0+	19.8-	20.8	19.9-
1976-77	20.7	20.7	22.0	19.3	20.5	19.8
1975-77	20.8	20.8				
Protein Content - 1977	40.8	39.8-	38.7-	41.9+	40.2	40.4
1976-77	41.0	39.2	38.8	40.1	40.0	40.2
1975-77	41.1	39.1				
Seed size	14.2	13.7	16.3+	17.6+	16.8+	15.7+
Seed quality	2.6	2.4	2.3	2.3	2.4	2.1
Maturity index	10-5	+2	+2	+5	+8	+8
Height	28	36	34	36	39	37
Shatter resistance	2.0	1.0	1.4	1.3	1.0	1.0
Bacterial pustule	R	R	R	R	R	R
Phytophthora rot	2.0	1.5	2.0	1.0	1.0	1.0
Soybean mosaic virus	MR	S	R	R	R	S
<i>M. incognita</i>	4.0	2.0	3.5	5.0	5.0	4.5
<i>M. arenaria</i>	5.0	1.3	4.0	3.0	2.5	4.5
Cyst nematode (Race 3)	S	R	S	S	S	S
Cyst nematode (Race 4)	S	S	S	S	S	S
Flower color	P	W	P	W	P	P
Pubescence color	G	T	G	T	T	T
Pod wall color	T	T	T	T	T	T

Table 8 - (continued)

	J74-45	Bedford (J74-46)	D74-7633	D74-7824	D74-8819	S73-86113
Seed Yield - 1977						
East Coast	42.4	39.0-	44.3	42.3	36.1-	38.6-
Upper & Central South	41.6	39.8	45.4	41.7	33.8-	35.8-
Delta	39.8	40.6	40.9	40.8	34.5-	34.1-
West	45.8	41.7-	42.1	45.7	38.1-	42.0
1976-77						
East Coast						
Upper & Central South						
Delta						
West						
1975-77						
East Coast						
Upper & Central South						
Delta						
West						
Oil Content - 1977	20.8	20.8	21.4	21.3	17.5-	20.5-
1976-77						
1975-77						
Protein Content - 1977	39.7-	39.1-	39.8-	39.5	46.0+	41.8+
1976-77						
1975-77						
Seed size	12.7-	13.7	15.1	12.9-	14.2	16.7+
Seed quality	2.7	2.5	2.3	2.2	2.1	2.2
Maturity index	+1	+4	+6	+2	-3	-1
Height	35	41	39	36	32	31
Shatter resistance	2.0	1.2	1.2	1.0	1.3	1.0
Bacterial pustule	R	R	R	R	R	R
Phytophthora rot	1.5	1.0	1.0	1.0	1.0	1.0
Soybean mosaic virus	S	S	S	S	S	S
<i>M. incognita</i>	4.0	4.0	4.0	3.5	5.0	4.5
<i>M. arenaria</i>	3.2	1.8	1.5	3.5	3.5	1.5
Cyst nematode (Race 3)	R	R	R	R	S	R
Cyst nematode (Race 4)	R	R	S	S	S	S
Flower color	W	W	W	W	P	P
Pubescence color	T	T	T	T	T	T
Pod wall color	Br	T	T	T	T	T

Table 9 - Seed yield, in bushels per acre, for the strains in Uniform Group V, 1977

Location	Essex	Forrest	V72-580	D73-4124	N73-40	N73-520	J74-45
<u>East Coast</u>							
Queenstown, Md.	46.0	43.1	40.1-	39.5-	43.0	39.0-	40.7-
Georgetown, Del.	46.4	47.5	47.3	43.5	46.6	37.9-	45.9
Warsaw, Va.	48.6	45.7	47.0	41.3-	45.8	44.8-	43.0-
*Petersburg, Va.	19.2	20.3	19.1	16.8	18.8	18.8	21.1
Holland, Va.	47.6	44.1	41.5	37.5	43.2	41.9	44.7
Plymouth, N. C.	47.8	50.6	49.8	47.6	45.7	44.1	48.7
Jay, Fla.	29.5	29.3	27.2	38.3	44.9+	42.1+	27.7
Tifton, Ga.	53.4	57.2	49.9	52.6	55.2	53.8	46.5
Mean	45.6	45.3	43.2	42.9	46.3	43.3	42.4
<u>Upper and Central South</u>							
Orange, Va.	33.8	28.8-	33.2	30.2	32.3	33.2	27.5-
Knoxville, Tenn.	48.5	41.6-	53.7	40.6-	44.3	49.9	44.0
Athens, Ga.	29.0	24.8	26.0	23.5	33.2	27.9	31.9
*Belle Mina, Ala.	21.3	19.5	17.8-	16.0-	17.0-	15.0-	18.1-
Princeton, Ky.	42.5	48.2	34.4	43.4	31.8-	38.2	55.6+
Martin, Tenn.	62.9	58.9	63.2	58.3	56.6	53.7	48.3
Jackson, Tenn.	45.8	39.9	45.9	51.8	55.1	48.5	43.0
Verona, Miss.	39.0	44.8	36.8	40.5	41.0	45.4	40.7
Mean	43.1	41.0	41.9	41.2	42.0	42.4	41.6
<u>Delta</u>							
Portageville, Mo. (A)	53.2	51.8	44.1-	39.7-	39.3-	41.2-	53.5
Portageville, Mo. (B)	41.4	45.2	34.0	38.8	29.0-	36.9	38.4
Keiser, Ark.	33.7	38.4+	35.7	37.6	32.5	33.2	38.7+
*Jonesboro, Ark.	11.8	21.8	24.1+	10.9	11.3	22.3+	25.5+
Stoneville, Miss. (A)	36.9	41.2	34.3	33.4	33.7	23.8-	39.7
Stoneville, Miss. (B)	17.4	20.5	19.6	29.8+	29.4+	19.4	23.9+
St. Joseph, La.	54.5	48.6	49.7	45.0	38.1	43.1	44.9
Mean	39.5	40.9	36.2	37.4	33.7-	32.9-	39.8
<u>West</u>							
*Clinton, Mo.	34.7	33.4	34.0	33.0	33.1	33.0	30.1
Columbus, Kan.	39.7	42.7	38.3	41.9	38.0	38.8	40.3
Pine Bluff, Ark.	63.0	57.0	54.0	61.0	63.0	62.0	59.0
Stuttgart, Ark.	43.1	44.4	43.8	43.4	43.2	40.4	45.6
*Bossier City, La.	18.3	19.9	15.3	23.7+	23.5+	22.9+	17.2
Bixby, Okla.	37.2	40.9	34.6	32.7	36.7	33.1	37.1
Lubbock, Tex.	48.9	42.9-	50.9	42.6	38.6-	39.0-	51.2
Halfway, Tex.	41.8	32.1	43.2	38.4	29.6	38.3	41.9
Mean	45.6	43.3	44.1	43.3	41.6	42.0	45.8

*Not included in mean.

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

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

Table 9 - (continued)

Location	Bedford) (J74-46)	D74-7633	D74-7824	D74-8819	S73-86113	L.S.D. (.05)	C.V. (%)
<u>East Coast</u>							
Queenstown, Md.	34.9-	38.6-	42.1	37.9-	39.2-	4.6	7
Georgetown, Del.	39.8-	45.4	43.9	40.9-	40.4-	4.6	7
Warsaw, Va.	42.6-	44.6-	40.2-	35.8-	45.1	3.5	5
Petersburg, Va.	16.8	17.1	13.7	17.9	23.1	N.S.	21
Holland, Va.	39.6	43.5	44.1	38.8	39.8	N.S.	9
Plymouth, N. C.	50.0	43.2	46.0	39.5-	38.1-	5.4	7
Jay, Fla.	20.7	45.1+	32.5	24.4	29.2	10.9	20
Tifton, Ga.	45.5	49.6	47.2	35.6-	38.3-	6.2	7
Mean	39.0-	44.3	42.3	36.1-	38.6-	4.0	
<u>Upper and Central South</u>							
Orange, Va.	28.6	33.5	38.8+	29.4	28.7-	4.8	9
Knoxville, Tenn.	43.1	49.9	46.7	33.8-	38.8-	6.5	9
Athens, Ga.	29.5	26.9	27.1	18.4	23.1	8.7	19
Belle Mina, Ala.	16.2-	12.5-	20.1	17.3-	15.8-	2.8	10
Princeton, Ky.	47.1	52.8	47.0	30.9-	48.6	10.4	14
Martin, Tenn.	54.6	59.8	49.7	48.0	53.4	N.S.	13
Jackson, Tenn.	34.4-	49.6	41.5	40.5	28.5-	9.8	13
Verona, Miss.	41.7	45.6	41.1	35.6	29.8-	6.8	10
Mean	39.8	45.4	41.7	33.8-	35.8-	5.4	
<u>Delta</u>							
Portageville, Mo.(A)	52.6	51.4	57.3	39.0-	42.0-	7.4	9
Portageville, Mo.(B)	41.5	40.3	32.2	34.3	33.9	8.4	13
Keiser, Ark.	39.0+	42.6+	43.6+	31.9	30.6	4.4	7
Jonesboro, Ark.	35.4+	19.1	26.1+	14.0	24.2+	9.5	27
Stoneville, Miss.(A)	38.2	37.2	41.0	33.6	34.7	5.0	8
Stoneville, Miss.(B)	30.4+	29.2+	29.2+	24.7	19.9	5.6	14
St. Joseph, La.	41.8	44.8	41.3	43.4	43.6	N.S.	11
Mean	40.6	40.9	40.8	34.5-	34.1-	4.8	
<u>West</u>							
Clinton, Mo.	30.4	31.3	31.1	32.9	35.9	N.S.	11
Columbus, Kan.	40.1	40.4	40.7	37.3	39.6	N.S.	5
Pine Bluff, Ark.	61.0	58.0	57.0	41.0-	51.0-	10.3	11
Stuttgart, Ark.	44.6	44.4	44.1	38.2	39.3	N.S.	6
Bossier City, La.	17.5	19.3	18.2	16.3	16.3	4.5	14
Bixby, Okla.	34.5	34.6	38.9	29.7-	38.5	5.7	9
Lubbock, Tex.	41.0-	39.1-	49.8	46.9	45.0	6.5	8
Halfway, Tex.	28.8	36.7	43.6	35.7	38.6	N.S.	17
Mean	41.7	42.1	45.7	38.1-	42.0	4.5	

Table 10 - Chemical composition and seed size for the strains in Uniform Group V, 1977

Location	Essex	Forrest	V72-580	D73-4124	N73-40	N73-520	J74-45
<u>Oil Percentage</u>							
Queenstown, Md.	20.1	20.1	20.9	18.7	19.8	18.3	19.3
Warsaw, Va.	20.7	21.3	22.5	19.0	20.2	19.7	20.6
Plymouth, N. C.	20.1	21.2	21.4	19.2	20.5	19.6	19.1
Jackson, Tenn.	22.1	20.9	22.9	21.0	20.7	20.5	22.1
Portageville, Mo.(B)	22.0	22.0	23.6	20.5	21.2	21.7	21.4
Keiser, Ark.	22.6	24.1	26.4	20.5	24.1	21.6	23.0
Stoneville, Miss.(B)	22.6	22.6	25.0	20.9	22.9	21.0	21.7
Stuttgart, Ark.	21.5	20.8	24.3	21.2	21.2	20.0	21.4
Lubbock, Tex.	21.3	19.3	23.2	19.6	19.9	18.5	19.7
Halfway, Tex.	19.7	18.5	19.3	17.7	17.6	18.1	19.5
Mean	21.3	21.1	23.0+	19.8-	20.8	19.9-	20.8
<u>Protein Percentage</u>							
Queenstown, Md.	41.2	38.7	39.1	40.6	39.1	40.3	39.4
Warsaw, Va.	41.8	39.3	39.2	42.5	40.0	41.2	40.0
Plymouth, N. C.	43.5	41.0	41.1	44.0	41.5	42.2	42.1
Jackson, Tenn.	40.8	40.8	38.9	42.0	40.9	40.8	40.7
Portageville, Mo.(B)	39.0	40.5	37.9	43.0	40.5	39.7	38.8
Keiser, Ark.	38.9	36.0	35.2	39.9	37.1	37.3	36.3
Stoneville, Miss.(B)	40.5	40.6	38.2	41.8	40.1	40.2	40.6
Stuttgart, Ark.	41.2	40.8	38.9	41.8	40.9	42.3	40.0
Lubbock, Tex.	40.3	40.0	37.9	41.7	41.3	39.9	40.2
Halfway, Tex.	40.6	40.0	40.7	41.8	40.8	40.4	38.9
Mean	40.8	39.8-	38.7-	41.9+	40.2	40.4	39.7-
<u>Grams Per 100 Seeds</u>							
Queenstown, Md.	14.2	15.2	18.3	18.9	18.0	18.0	14.5
Warsaw, Va.	19.4	18.6	24.7	23.0	22.4	21.5	17.2
Plymouth, N. C.	13.1	13.3	15.5	16.5	17.0	15.8	11.6
Jackson, Tenn.	15.6	15.2	16.5	19.5	18.5	17.6	13.1
Portageville, Mo.(B)	14.2	13.8	15.0	16.2	13.0	13.4	12.5
Keiser, Ark.	13.0	11.0	10.0	14.0	15.0	15.0	10.0
Stoneville, Miss.(B)	11.2	10.8	13.0	14.8	14.2	10.4	10.8
Stuttgart, Ark.	12.7	11.7	16.0	16.0	14.7	14.0	11.0
Lubbock, Tex.	14.6	13.8	17.9	19.4	18.6	15.9	13.5
Mean	14.2	13.7	16.3+	17.6+	16.8+	15.7+	12.7-

Table 10 - (continued)

Location	Bedford (J74-46)	D74-7633	D74-7824	D74-8819	S73-86113	L.S.D. (.05)
<u>Oil Percentage</u>						
Queenstowns, Md.	19.7	20.3	20.8	17.0	18.8	
Warsaw, Va.	20.9	21.5	21.1	17.1	20.5	
Plymouth, N. C.	19.9	21.3	20.7	15.1	19.7	
Jackson, Tenn.	22.3	22.9	23.3	19.6	21.4	
Portageville, Mo.(B)	20.8	21.7	21.3	18.2	20.9	
Keiser, Ark.	22.7	22.1	23.0	17.4	20.5	
Stoneville, Miss.(B)	22.4	22.6	22.4	18.6	21.5	
Stuttgart, Ark.	21.1	21.6	21.2	18.0	21.4	
Lubbock, Tex.	19.2	20.1	20.1	17.4	21.0	
Halfway, Tex.	18.7	19.5	19.5	16.3	19.3	
Mean	20.8	21.4	21.3	17.5-	20.5-	0.7
<u>Protein Percentage</u>						
Queenstown, Md.	37.4	38.3	38.3	45.3	41.8	
Warsaw, Va.	39.0	39.0	38.8	46.0	42.6	
Plymouth, N. C.	41.6	41.3	41.5	48.1	42.8	
Jackson, Tenn.	39.2	39.3	41.0	46.7	41.3	
Portageville, Mo.(B)	39.5	39.7	41.0	44.8	42.5	
Keiser, Ark.	37.2	38.2	37.2	46.1	40.5	
Stoneville, Miss.(B)	38.8	40.3	39.5	46.3	41.7	
Stuttgart, Ark.	39.5	40.7	39.5	46.3	42.6	
Lubbock, Tex.	39.9	40.5	39.7	45.3	41.0	
Halfway, Tex.	38.9	40.3	38.7	45.3	41.6	
Mean	39.1-	39.8-	39.5-	46.0+	41.8+	0.7
<u>Grams Per 100 Seeds</u>						
Queenstown, Md.	15.3	16.4	14.8	14.8	17.2	
Warsaw, Va.	18.3	22.7	16.8	18.3	22.6	
Plymouth, N.C.	13.7	14.8	11.8	12.5	15.7	
Jackson, Tenn.	13.8	16.8	14.3	15.0	16.7	
Portageville, Mo.(B)	14.5	14.2	13.0	14.0	17.5	
Keiser, Ark.	10.0	12.0	11.0	13.0	12.0	
Stoneville, Miss.(B)	11.4	11.6	9.8	11.8	13.0	
Stuttgart, Ark.	11.7	12.3	10.7	13.7	16.7	
Lubbock, Tex.	14.3	15.5	14.0	14.6	19.0	
Mean	13.7	15.1	12.9-	14.2	16.7+	1.0

Table 11 - Relative maturity, days earlier (-) or later (+) than Essex, for the strains in Uniform Group V, 1977

Location	Date planted	Essex matured	Forrest	V72-580	D73-4124	N73-40	N73-520
<u>East Coast</u>							
Queenstown, Md.	5-27	10-18	+9	+10	+9	+9	+11
Georgetown, Del.	5-24	10-25	+6	+6	+7	+7	+6
Warsaw, Va.	5-18	10-24	-2	0	0	+2	0
Petersburg, Va.	-	10-10	-2	-3	+2	+6	+8
Plymouth, N. C.	5-10	10-4	+6	+2	+2	+8	+6
Jay, Fla.	5-25	10-7	-6	-6	-2	0	0
Tifton, Ga.	5-23	9-28	-1	-1	0	+2	-
Mean		10-12	+1	+1	+3	+5	+5
<u>Upper and Central South</u>							
Knoxville, Tenn.	5-9	11-4	-8	-8	-19	-12	-8
Athens, Ga.	5-5	9-15	+2	+3	+10	+20	+23
Belle Mina, Ala.	5-5	9-13	+2	+6	+8	+12	+25
Princeton, Ky.	6-1	10-6	+1	+7	+7	-	-
Martin, Tenn.	6-23	10-5	+7	+10	+6	+15	+13
Jackson, Tenn.	5-11	9-29	+9	+4	+25	+23	+21
Verona, Miss.	5-17	9-21	+8	+12	+11	+14	+15
Mean		10-1	+3	+5	+7	+14	+8
<u>Delta</u>							
Portageville, Mo.(A)	5-13	10-1	+6	+3	+1	+9	+12
Portageville, Mo.(B)	5-13	10-7	+8	+4	+7	+11	+9
Keiser, Ark.	-	10-4	-2	-1	+6	+11	+16
Jonesboro, Ark.	5-18	10-14	0	0	+1	+1	+7
Stoneville, Miss.(A)	5-24	10-1	+2	+1	+4	+5	+7
Stoneville, Miss.(B)	5-9	9-25	-2	0	+3	+10	+10
St. Joseph, La.	5-11	9-19	+1	+1	0	+2	+8
Mean		10-2	+2	+1	+3	+7	+10
<u>West</u>							
Columbus, Kan.	6-6	10-12	+3	+5	+4	+6	+7
Pine Bluff, Ark.	5-17	10-6	-2	0	+10	+10	+8
Stuttgart, Ark.	6-7	9-28	+5	+7	+8	+11	+16
Bossier City, La.	5-10	9-18	+8	+3	+4	+6	+8
Lubbock, Tex.	5-21	10-9	0	-1	+2	+3	+2
Mean		10-4	+3	+3	+6	+7	+8

Table 11 - (continued)

Location	J74-45	Bedford (J74-46)	D74-7633	D74-7824	D74-8819	S73-86113
<u>East Coast</u>						
Queenstown, Md.	+9	+11	+16	+9	+3	+6
Georgetown, Del.	+4	+4	+7	+4	0	-1
Warsaw, Va.	0	-2	0	-4	-12	-3
Petersburg, Va.	0	-10	0	-5	-5	-1
Plymouth, N. C.	+2	+6	+8	+2	0	0
Jay, Fla.	-6	-5	+2	-4	-5	+2
Tifton, Ga.	0	+1	-1	-1	-13	+1
Mean	+1	+1	+5	0	-5	+1
<u>Upper and Central South</u>						
Knoxville, Tenn.	-4	-4	-8	-9	-16	-20
Athens, Ga.	-2	+9	+13	+1	-4	+2
Belle Mina, Ala.	+1	+7	+9	+2	+5	0
Princeton, Ky.	+1	-	-	+7	0	+1
Martin, Tenn.	+1	+8	+12	+8	+6	+7
Jackson, Tenn.	+2	+5	+18	+10	+3	+1
Verona, Miss.	+3	+8	+12	+4	-1	-1
Mean	0	+6	+9	+3	-1	-1
<u>Delta</u>						
Portageville, Mo.(A)	+2	+8	+10	+4	-4	-2
Portageville, Mo.(B)	+2	+8	+8	+5	0	+5
Keiser, Ark.	-4	-1	+4	-4	-1	-1
Jonesboro, Ark.	0	-1	+2	-2	-6	-6
Stoneville, Miss.(A)	+3	+5	+4	+2	0	-2
Stoneville, Miss.(B)	-4	+4	+5	+2	-2	-2
St. Joseph, La.	-2	+2	+2	-3	-7	-1
Mean	0	+4	+5	+1	-3	-1
<u>West</u>						
Columbus, Kan.	0	+5	+6	+3	-4	+1
Pine Bluff, Ark.	-2	-2	+2	0	-6	-4
Stuttgart, Ark.	+4	+8	+9	+6	-3	+2
Rossier City, La.	+8	+9	+11	+8	+4	+4
Lubbock, Tex.	+1	0	+3	0	-6	-4
Mean	+2	+4	+6	+3	-3	0

Table 12 - Plant height for the strains in Uniform V, 1977

Location	Essex	Forrest	V72-580	D73-4124	N73-40	N73-520
<u>East Coast</u>						
Queenstown, Md.	39	49	47	46	53	54
Georgetown, Del.	30	37	37	35	39	37
Warsaw, Va.	27	37	33	33	37	35
Petersburg, Va.	25	31	29	27	34	32
Holland, Va.	30	38	38	36	41	39
Plymouth, N. C.	31	41	39	39	43	39
Jay, Fla.	17	17	21	36	32	20
Tifton, Ga.	25	35	36	33	35	32
Mean	28	36	35	36	39	36
<u>Upper and Central South</u>						
Orange, Va.	28	38	37	30	34	38
Knoxville, Tenn.	29	35	36	34	39	37
Athens, Ga.	19	25	22	24	28	25
Belle Mina, Ala.	31	44	41	41	46	38
Princeton, Ky.	31	38	34	41	42	45
Martin, Tenn.	34	44	43	44	44	42
Jackson, Tenn.	35	44	42	41	46	41
Mean	30	38	36	36	40	38
<u>Delta</u>						
Portageville, Mo.(A)	27	36	34	37	41	39
Portageville, Mo.(B)	23	29	30	29	39	37
Keiser, Ark.	22	28	28	33	32	35
Jonesboro, Ark.	38	41	45	44	48	46
Stoneville, Miss.(A)	29	37	38	38	43	41
Stoneville, Miss.(B)	15	20	14	22	21	26
St. Joseph, La.	28	35	33	39	44	34
Mean	26	32	32	35	38	37
<u>West</u>						
Clinton, Mo.	40	40	40	41	44	41
Columbus, Kan.	25	35	30	37	36	37
Pine Bluff, Ark.	50	47	45	49	50	52
Stuttgart, Ark.	24	38	36	36	42	42
Bossier City, La.	19	24	23	28	27	25
Bixby, Okla.	26	39	32	37	39	38
Lubbock, Tex.	29	37	36	33	35	34
Halfway, Tex.	30	38	40	34	39	39
Mean	30	37	35	37	39	39

Table 12 - (continued)

Location	J74-45	Bedford (J74-46)	D74-7633	D74-7824	D74-8819	S73-86113
<u>East Coast</u>						
Queenstown, Md.	48	57	56	49	44	41
Georgetown, Del.	38	40	42	37	34	34
Warsaw, Va.	35	39	37	34	28	27
Petersburg, Va.	27	31	30	29	25	23
Holland, Va.	38	43	41	38	32	32
Plymouth, N. C.	41	45	44	37	43	35
Jay, Fla.	17	36	30	18	20	17
Tifton, Ga.	33	35	36	35	29	28
Mean	35	41	40	35	32	30
<u>Upper and Central South</u>						
Orange, Va.	37	43	39	35	32	33
Knoxville, Tenn.	36	36	37	36	32	32
Athens, Ga.	25	27	27	25	21	19
Belle Mina, Ala.	39	47	45	41	35	31
Princeton, Ky.	40	46	44	40	33	33
Martin, Tenn.	43	46	49	45	42	42
Jackson, Tenn.	40	48	46	43	42	39
Mean	37	42	41	38	34	33
<u>Delta</u>						
Portageville, Mo.(A)	35	42	39	35	33	30
Portageville, Mo.(B)	28	35	32	32	31	28
Keiser, Ark.	25	37	31	31	23	22
Jonesboro, Ark.	44	52	48	45	38	39
Stoneville, Miss.(A)	34	43	38	37	34	30
Stoneville, Miss.(B)	18	23	21	18	18	15
St. Joseph, La.	31	45	37	38	27	30
Mean	31	40	35	34	29	28
<u>West</u>						
Clinton, Mo.	42	43	41	40	42	41
Columbus, Kan.	30	41	37	33	29	29
Pine Bluff, Ark.	49	48	51	51	43	47
Stuttgart, Ark.	34	42	40	35	26	28
Bossier City, La.	21	31	27	24	20	21
Bixby, Okla.	37	41	38	38	28	29
Lubbock, Tex.	34	38	37	34	35	30
Halfway, Tex.	38	42	42	39	35	32
Mean	36	41	39	37	32	32

Table 13 - Lodging scores for the strains in Uniform Group V, 1977

Location	Essex	Forrest	V72-580	D73-4124	N73-40	N73-520
<u>East Coast</u>						
Queenstown, Md.	3.0	3.3	3.0	4.0	4.3	3.7
Georgetown, Del.	2.0	2.8	2.0	3.2	3.3	2.7
Warsaw, Va.	1.2	2.0	1.7	3.3	3.0	1.8
Petersburg, Va.	1.0	1.0	1.0	3.0	2.0	1.0
Holland, Va.	1.0	2.0	1.2	1.8	2.2	2.3
Plymouth, N. C.	3.0	3.0	3.0	3.0	4.0	3.0
Tifton, Ga.	1.0	1.8	1.5	2.8	2.3	1.8
<u>Upper and Central South</u>						
Orange, Va.	1.0	2.0	1.0	2.0	2.0	1.3
Athens, Ga.	1.2	1.2	1.0	1.6	1.5	1.3
Belle Mina, Ala.	1.0	2.5	1.5	2.0	2.5	2.5
Princeton, Ky.	1.0	1.0	1.0	1.3	1.6	1.0
Martin, Tenn.	1.0	2.0	1.0	3.0	2.0	2.0
Jackson, Tenn.	1.0	1.0	1.0	2.0	2.0	2.0
<u>Delta</u>						
Portageville, Mo. (A)	1.3	2.0	2.0	2.0	2.2	2.5
Portageville, Mo. (B)	1.5	1.3	1.2	1.8	2.0	2.5
Keiser, Ark.	1.0	1.0	1.0	2.0	1.0	2.0
Jonesboro, Ark.	2.3	2.8	2.7	2.7	3.0	3.5
Stoneville, Miss. (A)	2.0	2.7	3.0	3.3	4.0	3.7
Stoneville, Miss. (B)	1.0	2.0	1.0	2.0	2.0	2.0
St. Joseph, La.	1.3	2.5	2.3	2.7	3.5	1.9
<u>West</u>						
Clinton, Mo.	2.8	2.8	2.8	3.0	3.0	2.8
Columbus, Kan.	1.0	1.4	1.1	1.7	1.5	1.7
Pine Bluff, Ark.	1.0	1.0	1.7	3.5	3.0	2.3
Stuttgart, Ark.	1.5	2.7	2.0	2.8	3.0	3.2
Bossier City, La.	1.5	2.5	1.8	3.0	2.3	1.8
Bixby, Okla.	1.3	3.3	1.7	3.7	3.0	2.7
Lubbock, Tex.	2.0	3.2	2.2	3.7	3.5	3.2
Halfway, Tex.	2.3	3.3	3.3	3.0	3.0	2.7

Table 13 - (continued)

Location	J74-45	Bedford (J74-46)	D74-7633	D74-7824	D74-8819	S73-86113
<u>East Coast</u>						
Queenstown, Md.	3.0	4.0	4.0	3.7	2.0	2.3
Georgetown, Del.	2.5	3.0	3.2	2.7	1.7	1.8
Warsaw, Va.	1.5	2.3	2.7	2.8	1.0	1.0
Petersburg, Va.	1.0	2.0	2.0	2.0	1.0	1.0
Holland, Va.	1.2	2.2	2.0	2.2	1.2	1.0
Plymouth, N. C.	3.0	3.0	3.0	3.0	2.0	3.0
Tifton, Ga.	1.5	2.8	1.8	2.0	1.0	1.0
<u>Upper and Central South</u>						
Orange, Va.	2.0	2.0	2.0	3.0	1.0	1.0
Athens, Ga.	1.2	1.2	1.2	1.3	1.0	1.0
Belle Mina, Ala.	1.8	2.7	2.5	2.2	1.0	1.0
Princeton, Ky.	1.6	1.3	2.0	4.0	1.0	1.0
Martin, Tenn.	3.0	2.0	2.0	5.0	1.0	2.0
Jackson, Tenn.	1.0	2.0	2.0	1.0	1.0	1.0
<u>Delta</u>						
Portageville, Mo. (A)	1.8	2.5	1.8	1.8	1.3	1.2
Portageville, Mo. (B)	1.2	1.2	1.5	1.3	1.2	1.2
Keiser, Ark.	1.0	1.0	1.0	2.0	1.0	1.0
Jonesboro, Ark.	2.8	4.2	3.3	4.2	2.0	2.8
Stoneville, Miss. (A)	2.0	3.3	3.0	3.0	2.0	2.0
Stoneville, Miss. (B)	2.0	2.0	2.0	2.0	1.7	1.0
St. Joseph, La.	1.9	2.3	1.7	2.4	1.4	1.0
<u>West</u>						
Clinton, Mo.	2.5	2.6	2.7	2.5	2.8	3.1
Columbus, Kan.	1.1	2.0	1.4	1.7	1.0	1.1
Pine Bluff, Ark.	1.3	1.3	1.3	2.3	1.0	1.3
Stuttgart, Ark.	1.8	3.0	2.5	2.3	1.5	1.5
Bossier City, La.	1.5	3.5	2.8	3.0	1.3	1.5
Bixby, Okla.	3.0	3.3	2.7	3.7	1.0	1.0
Lubbock, Tex.	2.7	3.3	3.0	3.5	1.5	2.0
Halfway, Tex.	3.0	2.3	2.7	3.0	1.3	1.0

Table 14 - Seed quality scores for the strains in Uniform Group V, 1977

Location	Essex	Forrest	V72-580	D73-4124	N73-40	N73-520
<u>East Coast</u>						
Queenstown, Md.	2.0	2.0	2.0	2.0	2.3	2.3
Georgetown, Del.	2.3	2.3	2.2	2.0	2.2	2.2
Warsaw, Va.	1.3	1.4	1.5	1.8	1.7	1.5
Petersburg, Va.	4.0	5.0	4.0	3.0	3.0	3.5
Holland, Va.	2.2	1.7	1.5	1.5	1.8	2.0
Plymouth, N. C.	2.0	1.5	1.5	1.5	2.0	1.5
Jay, Fla.	5.0	4.0	4.0	4.0	3.0	2.0
Tifton, Ga.	3.5	2.0	3.0	2.5	3.0	2.5
<u>Upper and Central South</u>						
Orange, Va.	5.0	5.0	5.0	5.0	5.0	1.0
Knoxville, Tenn.	4.0	3.0	2.0	2.0	2.0	2.0
Athens, Ga.	1.8	2.3	2.0	2.2	2.0	1.7
Martin, Tenn.	3.0	2.0	2.0	2.0	2.0	2.0
Jackson, Tenn.	4.0	4.0	4.0	3.0	3.0	3.0
<u>Delta</u>						
Portageville, Mo.(A)	1.5	1.5	1.5	1.5	1.5	1.5
Portageville, Mo.(B)	2.5	2.0	3.0	2.5	3.0	2.0
Keiser, Ark.	1.5	1.0	2.0	1.5	2.0	2.0
Jonesboro, Ark.	2.7	2.7	1.0	2.3	3.7	4.0
Stoneville, Miss.(A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, Miss.(B)	2.3	2.7	2.0	2.0	2.0	2.3
<u>West</u>						
Columbus, Kan.	1.3	1.8	1.3	1.3	1.5	1.4
Pine Bluff, Ark.	2.5	1.5	1.5	1.5	3.0	1.5
Stuttgart, Ark.	2.0	2.0	2.0	2.8	2.3	2.5
Lubbock, Tex.	1.5	2.2	1.5	2.5	1.5	2.5

Table 14 - (continued)

Location	J74-45	Bedford (J74-46)	D74-7633	D74-7824	D74-8819	S73-86113
<u>East Coast</u>						
Queenstown, Md.	2.0	2.0	2.0	2.0	2.0	3.0
Georgetown, Del.	2.5	2.2	2.3	2.2	2.2	2.2
Warsaw, Va.	1.8	1.5	1.4	1.3	1.0	1.2
Petersburg, Va.	5.0	5.0	4.0	5.0	5.0	4.0
Holland, Va.	2.0	2.0	1.8	1.5	2.5	1.8
Plymouth, N. C.	1.5	1.5	1.5	1.5	1.5	2.0
Jay, Fla.	5.0	2.0	2.0	3.0	2.0	5.0
Tifton, Ga.	2.5	3.5	2.5	3.0	3.5	3.5
<u>Upper and Central South</u>						
Orange, Va.	5.0	5.0	5.0	1.0	1.0	5.0
Knoxville, Tenn.	3.0	3.0	3.0	3.0	2.0	2.0
Athens, Ga.	2.2	2.2	2.7	1.8	1.7	2.2
Martin, Tenn.	2.0	3.0	2.0	3.0	2.0	2.0
Jackson, Tenn.	4.0	4.0	3.0	4.0	4.0	4.0
<u>Delta</u>						
Portageville, Mo.(A)	1.5	1.5	1.5	1.5	1.0	1.5
Portageville, Mo.(B)	2.0	2.0	2.0	3.0	2.0	2.5
Keiser, Ark.	1.5	1.5	1.5	1.0	1.0	2.0
Jonesboro, Ark.	4.0	2.3	2.7	1.7	1.7	1.7
Stoneville, Miss.(A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, Miss.(B)	2.7	2.0	2.0	2.0	2.0	2.3
<u>West</u>						
Columbus, Kan.	2.7	1.8	1.7	1.6	1.3	1.5
Pine Bluff, Ark.	2.5	2.5	1.5	2.0	2.5	2.5
Stuttgart, Ark.	2.5	2.5	2.0	1.8	1.3	3.0
Lubbock, Tex.	2.7	2.2	2.5	2.2	2.5	2.0

PRELIMINARY GROUP V

1977

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 were significant at the 5% level of confidence at 6 locations. The combined analysis of variance for seed yield also showed differences among strains to be significant. Forrest and 3 experimental strains had mean seed yields significantly above that for Hill. Only 3 strains had a mean seed yield slightly above that for Forrest and two of these had Forrest as a parent.

All strains were later in maturity than Hill. The 3 earliest maturing strains averaged 3 days later than Hill but showed no yield advantage.

Two strains, D75-10984 and J74-35, had been selected to give resistance to Race 4 of the soybean cyst nematode. D75-10984 had a mean seed yield 8.7 bushels below that for Forrest while J74-35 averaged 1.1 bushel higher. J74-35 also gave low ratings for the two root knot nematodes.

All strains selected for high protein content of the seed had lower mean seed yields than Forrest.

The strains D75-7685, D75-7778, D75-7987, and R74-511 appear to merit advancement to the regional uniform tests. D75-7685 is segregating for reaction to Race 3 of the soybean cyst nematode. A resistant subline has been selected.

Table 15 - Parentage of the strains in Preliminary Group V, 1977

Variety or strain	Parentage	Generation composited
1. Hill		
2. Forrest		
3. D74-570	D65-2567 X D65-2553	F ₇
4. D74-7332	D66-5566 X D70-2301	F ₅
5. D74-7760	Forrest X D70-3001	F ₅
6. D75-7439	Forrest X Mack	F ₅
7. D75-7454	Forrest X Mack	F ₅
8. D75-7519	Forrest X Mack	F ₅
9. D75-7558	Forrest X D69-4227	F ₅
10. D75-7589	Forrest X D69-4227	F ₅
11. D75-7628	Forrest X D69-4227	F ₅
12. D75-7640	Forrest X D69-4227	F ₅
13. D75-7685	Forrest X D69-4227	F ₅
14. D75-7714	Forrest X D69-4227	F ₅
15. D75-7778	Forrest X D69-4227	F ₅
16. D75-7802	Forrest X D69-4227	F ₅
17. D75-7987	Forrest X D69-6344	F ₅
18. D75-8419	D69-4227 X D70-7040	F ₅
19. D75-8447	D69-4227 X D70-7040	F ₅
20. D75-8502	D69-4227 X D70-7040	F ₅
21. D75-8558	D69-4227 X D70-7040	F ₅
22. D75-10984	D70-3045 X F ₄ sel (D68-18 X PI 88788)	F ₆
23. J74-35	Forrest(2) X ⁴ (D68-18 X PI 88788)	F ₅
24. R74-511	R66-873 X R68-105	F ₄
25. R75-112	R68-105 X York	F ₅
26. R75-180	R68-105 X York	F ₅
27. R75-481	D68-128 X R68-105	F ₄
28. R75-542	D68-128 X R68-105	F ₄
29. S75-165	L66L-140 X Columbus	
30. S75-940	Williams X Mack	
31. Ts75-920	Essex X Clark 63	F ₆
32. V74-273	V67-447 X V67-767	
33. V74-306	V67-447 X V67-767	
34. V74-504	V66-183 X V66-318	
35. V74-657	V68-1242 X Essex	
36. V75-71	Essex X V69-862	

Table 16 - General summary of performance for the strains grown in Preliminary Group V, 1977

Strain	Seed yield	Maturity index	Ht.	Percent		Cyst nematode		Root knot nematode	
				Oil	Protein	Race 3	Race 4	M. <i>incognita</i>	M. <i>arenaria</i>
Hill	38.5	10-3	32	21.3	39.5	S	S	4.0	4.0
Forrest	43.4+	+11	35	21.6	39.2	R	S	2.0	1.8
D74-570	34.7	+11	36	18.5-	42.3+	S	S	3.0	3.5
D74-7332	41.9	+8	32	22.3+	40.1	S	S	4.5	3.4
D74-7760	42.5	+12	39	21.0	41.0+	R	S	5.0	2.5
D75-7439	42.0	+9	36	22.8+	39.4	R	S	3.0	2.3
D75-7454	41.7	+9	37	22.5+	39.7	R	S	4.5	4.0
D75-7519	40.6	+7	40	22.0+	39.9	R	S	4.5	1.6
D75-7558	37.5	+7	40	18.3-	44.3+	S	S	3.0	4.3
D75-7589	38.7	+6	33	18.7-	43.2+	S	S	5.0	4.0
D75-7628	41.3	+10	31	19.9-	41.0+	S	S	3.5	3.8
D75-7640	41.0	+10	32	19.4-	43.2+	S	S	5.0	1.2
D75-7685	41.5	+7	37	20.3-	41.3+	Seg	S	2.0	2.5
D75-7714	30.7-	+10	34	19.0-	41.5+	S	S	1.5	2.5
D75-7778	43.8+	+11	35	20.4-	41.0+	S	S	2.5	2.3
D75-7802	39.9	+9	38	19.3-	42.3+	S	S	5.0	4.0
D75-7987	43.0	+11	38	20.5-	39.6	S	S	1.5	4.0
D75-8419	35.7	+8	31	17.2-	46.2+	S	S	5.0	2.0
D75-8447	37.9	+3	29	18.5-	44.0+	S	S	5.0	2.2
D75-8502	38.3	+4	33	17.8-	44.9+	S	S	5.0	2.0
D75-8558	34.2	+14	38	17.4-	44.2+	S	S	5.0	4.5
D75-10984	34.7	+6	35	21.4	39.0	R	R	2.5	5.0
J74-35	44.4+	+9	32	22.2+	38.9	R	R	2.0	2.6
R74-511	44.1+	+10	31	21.6	39.8	S	S	4.5	2.2
R75-112	40.0	+7	35	22.1+	39.5	S	S	5.0	1.3
R75-180	40.1	+12	33	23.4+	38.7	S	S	4.5	3.6
R75-481	41.5	+11	34	21.5	40.1	R	S	2.5	1.5
R75-542	42.0	+12	36	22.4+	39.5	R	S	3.0	3.4
S75-165	38.5	+3	39	22.9+	39.3	S	S	4.5	5.0
S75-940	36.5	+3	40	21.5	41.1+	S	S	4.0	3.4
Ts75-920	38.7	+5	29	22.8+	38.6	S	S	3.0	5.0
V74-273	41.3	+9	32	19.3-	40.9+	S	S	5.0	5.0
V74-306	40.4	+13	30	18.9-	41.8+	S	S	3.0	4.5
V74-504	41.0	+7	31	21.3	41.0+	S	S	4.5	5.0
V74-657	39.5	+13	34	20.5-	40.9+	S	S	3.0	3.5
V75-71	37.3	+7	32	21.8+	40.4	S	S	3.5	2.6
L.S.D. (.05)	4.5			0.4	1.2				
L.S.D. (.01)	6.0			0.5	1.5				

Table 17 - Seed yield, in bushels per acre, for the strains grown in Preliminary Group V, 1977

Strain	George- town, Del.	*Queens- town, Md.	Warsaw, Va.	Ply- mouth, N.C.	Portage- ville, Mo.	Keiser, Ark.	Stone- ville, Miss.	Prince- ton, Ky.
Hill	46.0	25.2	33.6	34.5	44.7	35.6	31.6	43.6
Forrest	47.9	25.8	39.0	45.2+	55.6+	39.7	29.3	47.2
D74-570	42.7	22.4	34.8	34.8	32.5-	28.5	30.5	39.6
D74-7332	48.9	31.1	37.6	41.3+	44.6	40.8	33.1	47.3
D74-7760	42.4	20.9	37.1	43.2+	49.7	42.2	33.7	49.7
D75-7439	45.0	23.7	37.5	34.9	50.0	43.0	25.5	58.1
D75-7454	47.7	29.3	39.4+	36.6	55.8+	36.4	31.1	45.3
D75-7519	49.0	27.9	35.0	36.5	51.2	33.8	27.8	50.8
D75-7558	45.0	17.0-	32.1	36.4	38.0	31.7	30.0	49.0
D75-7589	43.2	24.3	33.6	42.6+	49.1	30.8	28.3	43.3
D75-7628	43.9	22.0	40.2+	39.2	37.7	37.0	36.1	54.6
D75-7640	46.5	23.8	36.9	44.7+	39.7	40.2	32.6	46.7
D75-7685	45.6	23.5	35.7	47.1+	46.4	37.8	29.3	48.6
D75-7714	48.6	23.9	35.9	42.2+	41.6	29.6	36.9	36.4
D75-7778	48.2	25.5	42.8+	45.0+	44.1	39.1	35.0	52.2
D75-7802	46.5	19.0	39.9+	37.4	38.0	33.6	32.4	51.6
D75-7987	51.6	23.6	41.7+	48.0+	40.1	40.7	28.7	50.1
D75-8419	42.8	20.3	31.2	35.9	36.7	36.0	26.6	41.0
D75-8447	48.4	26.3	32.4	36.8	41.0	36.0	28.1	42.6
D75-8502	47.1	23.8	28.0-	37.9	41.9	36.5	32.0	44.7
D75-8558	42.2	16.9	31.6	36.7	29.3-	33.5	26.9	39.4
D75-10984	39.8	-	31.5	33.8	44.5	31.2	17.8-	44.8
J74-35	43.2	29.5	37.3	48.0+	62.2+	35.4	33.0	51.8
R74-511	47.0	28.9	40.7+	47.9+	55.0+	39.7	26.7	51.8
R75-112	44.4	29.9	36.6	44.9+	42.9	35.3	24.7	51.1
R75-180	45.3	26.9	35.8	36.9	47.5	37.1	26.4	52.1
R75-481	41.5	30.4	40.6+	44.9+	53.5+	36.4	24.2	49.2
R75-542	44.7	27.0	39.2+	44.9+	52.9	36.2	31.6	44.8
S75-165	42.7	25.5	43.1+	40.4	44.2	32.3	18.0-	49.3
S75-940	45.9	33.7+	33.2	36.3	37.5	27.6	21.6-	53.7
Ts75-920	37.4	30.4	47.1+	42.3+	46.7	28.9	18.7-	49.7
V74-273	47.6	27.6	42.0+	40.4	47.8	27.4	31.9	52.1
V74-306	46.4	22.3	38.7	39.7	40.1	30.9	34.5	52.7
V74-504	42.6	22.5	43.4+	47.1+	48.0	27.7	23.0	55.5
V74-657	46.4	28.9	41.2+	39.7	42.4	31.5	21.5-	53.9
V75-71	46.6	21.0	40.8+	41.5+	41.1	24.2-	20.2-	46.7
L.S.D. (.05)	N.S.	7.6	5.5	6.4	8.3	10.2	9.5	N.S.
C.V.	12%	15%	7%	8%	9%	14%	17%	11%

*Not included in mean.

Table 18 - Oil percentages for the strains in Preliminary Group V, 1977

Strain	Queenstown, Md.	Warsaw, Va.	Plymouth, N.C.	Keiser, Ark.	Stoneville, Miss.
Hill	19.9	20.6	20.5	22.9	22.7
Forrest	19.7	21.9	20.5	23.5	22.2
D74-570	18.6	17.0	17.5	20.2	19.4
D74-7332	19.6	22.0	21.2	24.0	24.5
D74-7760	19.0	20.8	20.6	22.2	22.5
D75-7439	20.1	23.7	21.6	25.0	23.6
D75-7454	20.4	22.2	21.2	24.5	24.1
D75-7519	19.8	21.8	21.0	24.7	22.9
D75-7558	17.3	18.3	17.4	19.3	19.0
D75-7589	17.7	18.9	17.5	19.6	19.6
D75-7628	18.0	20.5	18.8	21.2	21.1
D75-7640	17.6	19.4	18.9	20.6	20.6
D75-7685	19.1	19.9	19.7	22.0	21.0
D75-7714	17.2	19.1	17.8	21.0	19.9
D75-7778	19.1	20.2	19.4	21.7	21.8
D75-7802	16.5	19.7	18.4	20.8	21.3
D75-7987	17.7	19.9	20.0	22.3	22.4
D75-8419	15.5	17.1	17.0	18.5	18.1
D75-8447	18.8	18.6	16.3	19.6	19.2
D75-8502	17.0	17.9	16.9	18.6	18.5
D75-8558	17.1	16.8	16.7	18.1	18.2
D75-10984	20.7	21.2	19.0	23.7	22.2
J74-35	21.0	21.5	20.8	25.8	22.1
R74-511	19.3	21.5	21.4	23.0	23.0
R75-112	20.0	21.4	20.8	24.1	24.4
R75-180	20.1	22.4	22.0	26.6	25.9
R75-481	20.2	21.6	21.0	22.8	22.1
R75-542	20.9	22.1	21.8	23.8	23.5
S75-165	20.3	22.2	21.2	26.3	24.7
S75-940	20.0	20.1	20.3	23.9	23.3
Ts75-920	20.7	22.6	21.3	25.3	23.9
V74-273	18.6	18.2	18.2	20.8	20.9
V74-306	17.1	18.8	18.2	19.4	21.0
V74-504	18.1	21.0	20.5	23.9	23.0
V74-657	19.2	20.1	19.8	21.9	21.7
V75-71	18.8	21.6	20.8	23.6	24.4

Table 19 - Protein percentages for the strains in Preliminary Group V, 1977

Strain	Queenstown, Md.	Warsaw, Va.	Plymouth, N.C.	Keiser, Ark.	Stoneville, Miss.
Hill	39.6	40.0	41.6	36.1	40.2
Forrest	39.5	38.8	40.8	36.5	40.5
D74-570	40.7	44.0	45.5	38.8	42.5
D74-7332	41.5	40.7	41.4	37.2	39.5
D74-7760	41.9	41.2	42.5	39.4	40.2
D75-7439	40.4	39.1	41.6	36.2	39.9
D75-7454	40.3	40.2	42.5	36.1	39.5
D75-7519	40.6	40.4	41.8	36.5	40.2
D75-7558	44.7	44.6	45.6	42.8	44.0
D75-7589	43.3	44.0	44.8	40.8	43.3
D75-7628	40.2	40.9	43.4	39.8	40.8
D75-7640	42.6	42.7	45.5	41.4	43.8
D75-7685	41.2	41.3	43.4	38.3	42.3
D75-7714	40.8	41.7	43.2	39.7	42.2
D75-7778	40.3	41.8	43.1	39.0	41.0
D75-7802	43.4	42.3	44.6	39.7	41.7
D75-7987	40.5	40.2	41.6	36.9	39.0
D75-8419	46.2	46.4	48.1	44.7	45.8
D75-8447	41.8	45.3	46.5	42.7	43.5
D75-8502	44.2	45.3	47.6	43.5	43.7
D75-8558	45.2	45.2	45.0	42.0	43.7
D75-10984	37.4	39.7	42.5	36.0	39.4
J74-35	38.7	39.8	42.1	34.4	39.7
R74-511	41.1	39.6	41.4	37.3	39.5
R75-112	41.0	40.1	41.9	36.4	38.3
R75-180	39.7	39.7	41.2	35.2	37.7
R75-481	39.0	40.1	41.6	39.6	40.3
R75-542	38.6	40.3	41.1	38.0	39.6
S75-165	40.7	40.6	40.9	36.0	38.1
S75-940	40.6	42.7	43.9	39.1	39.3
Ts75-920	39.6	38.9	40.6	35.4	38.5
V74-273	40.1	41.6	42.6	40.2	39.8
V74-306	43.0	41.4	42.7	41.1	40.8
V74-504	43.9	40.8	42.3	37.7	40.3
V74-657	41.8	41.3	41.8	38.0	41.4
V75-71	42.4	40.7	41.9	37.8	39.4

Table 20 - Plant height for the strains in Preliminary Group V, 1977

Strain	George- town, Del.	Queens- town, Md.	Warsaw, Va.	Ply- mouth, N.C.	Portage- ville, Mo.	Keiser, Ark.	Stone- ville, Miss.	Prince- ton, Ky.
Hill	34	38	35	36	33	25	21	36
Forrest	36	43	36	39	39	26	19	43
D74-570	36	44	32	37	40	32	30	39
D74-7332	34	40	36	36	27	26	20	39
D74-7760	36	50	38	44	43	34	19	46
D75-7439	42	46	38	41	33	29	18	43
D75-7454	41	46	40	41	38	32	21	40
D75-7519	38	54	36	45	41	32	22	46
D75-7558	36	44	35	43	41	32	22	46
D75-7589	33	41	32	41	33	30	20	37
D75-7628	39	38	34	33	32	22	16	38
D75-7640	33	42	32	35	32	26	19	38
D75-7685	35	46	36	42	40	29	19	47
D75-7714	35	40	37	36	34	30	23	38
D75-7778	36	44	36	37	35	33	20	42
D75-7802	36	46	39	42	43	32	19	47
D75-7987	34	52	36	42	38	35	21	45
D75-8419	31	39	32	36	34	24	17	35
D75-8447	33	35	30	32	29	23	15	35
D75-8502	37	50	38	38	41	36	21	44
D75-8558	40	44	38	40	39	36	25	40
D75-10984	34	-	36	40	44	32	17	42
J74-35	32	38	30	36	42	23	17	40
R74-511	31	41	31	34	32	29	17	37
R75-112	37	44	37	39	35	30	19	41
R75-180	36	43	34	39	31	27	16	39
R75-481	33	46	34	35	35	29	19	40
R75-542	37	42	38	41	39	30	22	41
S75-165	35	38	36	41	46	39	33	47
S75-940	30	45	34	42	47	36	33	51
Ts75-920	27	37	30	35	35	22	14	35
V74-273	32	40	31	35	35	29	19	38
V74-306	30	37	30	34	29	25	20	33
V74-504	30	42	32	38	33	19	15	43
V74-657	33	40	34	38	35	31	20	41
V75-71	34	41	34	33	32	25	16	39

Table 21 - Seed quality scores for the strains in Preliminary Group V, 1977

Strain	George- town, Del.	Queens- town, Md.	Warsaw, Va.	Plymouth, N.C.	Portage- ville, Mo.	Keiser, Ark.	Stone- ville, Miss.
Hill	2.0	3.0	1.8	1.5	1.5	1.5	2.5
Forrest	2.0	3.0	1.5	1.5	1.5	1.0	2.0
D74-570	2.5	2.5	1.7	1.5	1.5	1.0	2.0
D74-7332	2.0	2.0	1.3	2.0	1.5	1.5	2.0
D74-7760	2.0	2.5	1.8	1.5	2.0	2.5	2.0
D75-7439	1.8	2.0	1.5	2.0	1.5	1.0	2.0
D75-7454	2.0	2.5	1.5	1.5	1.5	1.5	2.0
D75-7519	2.0	2.5	1.5	1.5	1.5	1.0	2.0
D75-7558	2.0	3.5	1.5	1.5	2.0	2.0	2.5
D75-7589	2.3	3.0	1.7	2.0	2.0	1.0	2.5
D75-7628	2.3	2.5	1.6	1.5	1.5	1.5	2.0
D75-7640	2.5	2.5	1.8	1.5	1.5	2.0	2.5
D75-7685	2.0	3.0	1.5	1.5	1.5	1.0	2.0
D75-7714	2.3	3.0	1.7	1.5	2.0	2.5	2.0
D75-7778	2.3	3.0	1.7	1.5	1.5	1.5	2.0
D75-7802	2.0	3.5	1.3	2.0	1.5	2.0	2.0
D75-7987	2.3	3.0	1.7	1.5	2.0	1.0	2.0
D75-8419	2.3	3.0	1.5	2.0	2.0	1.5	2.0
D75-8447	2.5	3.0	1.8	1.5	1.5	1.0	2.0
D75-8502	2.3	3.0	1.5	1.5	1.5	1.0	2.0
D75-8558	2.5	4.0	1.4	1.5	2.0	1.0	2.0
D75-10984	2.0	-	1.8	2.0	3.0	2.5	2.5
J74-35	2.5	2.5	1.5	1.5	2.0	2.0	2.0
R74-511	2.0	2.0	1.2	2.0	1.5	1.5	2.5
R75-112	2.0	2.0	1.7	2.0	2.0	1.0	2.0
R75-180	2.0	3.0	1.2	2.0	1.5	2.5	3.0
R75-481	2.0	2.0	1.5	1.5	2.0	1.0	2.0
R75-542	2.0	2.0	1.2	1.5	2.0	2.0	2.0
S75-165	2.3	3.0	2.5	3.5	2.5	3.0	3.0
S75-940	2.5	3.0	2.5	4.5	4.0	3.5	2.5
Ts75-920	2.0	2.0	1.8	2.0	1.5	1.5	2.5
V74-273	2.0	2.0	1.6	2.5	2.5	2.5	2.0
V74-306	2.0	2.0	1.4	2.0	3.0	2.5	2.5
V74-504	2.3	3.0	1.3	2.0	2.0	1.5	2.0
V74-657	2.0	2.0	1.5	2.0	2.0	1.5	2.0
V75-71	2.0	3.0	1.8	1.5	1.5	2.5	2.0

UNIFORM GROUP VI

1977		Generation composited
<u>Variety or strain</u>	<u>Parentage</u>	
1. Tracy	D61-618 X D60-9647	F ₅
2. Centennial	D64-4636 X tawny pubescence Pickett 71 type	F ₅
3. N72-137	D65-6765 X (D67-B5 X N64-2451)	F ₅
4. N72-3058	F65-1376 X Ransom	F ₅
5. N72-3148	D67-B5 X N64-2451	F ₅
6. R73-81	R56-49 X D68-B2	F ₅
7. D74-7741	Forrest X D70-3001	F ₅
8. N73-693	D68-216 X Ransom	F ₅
9. N73-877	F67-3944 X Ransom	F ₅
10. N73-882	F67-3944 X Ransom	F ₅
11. N73-1102	Tracy X Ransom	F ₅
12. R75-12	R72-2647(3) X sel [D68-18 X PI 88788]	F ₄

Background of strains used as parents:

D61-618 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.

D65-6765 is a Group VII line grown in Uniform Group VII in 1968 and 1969. It is a selection from D58-3358 [Jackson(4) X D49-2491] X D59-9289 (a selection from D51-4877 X D55-4168).

D67-B5 is D49-2491 converted to a narrow leaf, phytophthora resistant type.

N64-2451 is from the same cross as Ransom. It was grown in Uniform Group VII in 1968.

F65-1376 is a selection from (F55-224 X D55-4073) X (F58-5788 X D56-4065) which was grown in Uniform Group VII in 1968 and 1969.

R56-49 was an off-type plant selected from Lee which made taller growth

D68-B2 is a Lee type resistant to phytophthora rot and Races 1 and 3 of the soybean cyst nematode.

D70-3001 same parentage as Centennial.

D68-216 same parentage as Forrest.

F67-3944 is a selection from Bragg(2) X D60-7965.

R72-2647 is a Lee type resistant to CN Race 3.

Results of 33 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 among strains were significant at the 5% level of confidence at 26 locations. The combined analysis of variance for seed yield by production area showed differences among strains to be significant in all regions. There was a significant variety by location interaction in all regions except the East Coast.

Special plantings were made for *Meloidogyne incognita* evaluation at the Western Florida Research Center and for *M. arenaria* near the Edisto Experiment Station, Blackville, South Carolina.

Three-year mean seed yields for Tracy and Centennial show Centennial to have a higher yield in the Southeast and Tracy to have an advantage in the Delta. For other regions, seed yields are nearly similar.

Four strains have been grown two years. N72-137 and N72-3148 yielded very well in the East. N72-3058 and N72-3148 yielded well in the West. R73-81 showed no yield advantage in any of the regions

Of the six strains grown one year, D74-7741, N73-593, and N73-1102 appear to merit further testing.

Table 22 - General summary of the performance for the strains in Uniform Group VI,
1977

	Tracy	Centennial	N72-137	N72-3058	N72-3148	R73-81
Seed Yield - 1977						
East Coast	40.2	40.0	43.0	41.6	44.4+	39.8
Southeast	43.8	45.8	41.7	39.7	40.2	38.7
Upper & Central South	39.3	39.9	36.2	35.4	35.5	38.2
Delta	33.1	30.6	33.1	32.2	34.1	32.4
West	32.9	32.9	31.0	34.5	35.8	34.1
1976-77						
East Coast	37.3	37.4	40.3	38.7	41.1	37.1
Southeast	39.5	42.4	39.3	38.4	39.6	38.1
Upper & Central South	35.5	34.7	33.7	34.8	33.1	34.9
Delta	38.4	36.5	37.9	38.8	38.0	38.2
West	36.0	35.1	34.7	38.1	38.1	36.4
1975-77						
East Coast	38.7	38.2				
Southeast	40.0	42.4				
Upper & Central South	38.2	37.2				
Delta	40.8	38.9				
West	36.4	35.2				
Oil Content - 1977	18.3	20.0+	20.3+	21.4+	21.0+	21.4+
1976-77	17.9	19.7	20.0	20.9	20.8	21.1
1975-77	17.9	19.5				
Protein Content - 1977	42.8	41.4-	42.2	41.7-	39.2-	40.0-
1976-77	42.6	41.4	42.3	42.0	39.5	40.1
1975-77	42.6	41.9				
Seed size	16.6	13.3-	13.1-	16.0	14.6-	16.2
Maturity index	10-19	+1	+1	+2	+3	+1
Height	36	36	34	33	31	32
Seed quality	1.9	1.7	2.0	1.7	1.7	2.0
Bacterial pustule	R	R	R	R	R	R
Phytophthora rot	1.0	1.0	1.0	1.0	1.0	1.0
<i>M. incognita</i>	5.0	1.5	4.0	3.5	5.0	5.0
<i>M. arenaria</i>	5.0	5.0	5.0	5.0	5.0	3.4
Cyst nematode (Race 3)	S	R	S	S	S	S
Cyst nematode (Race 4)	S	S	S	S	S	S
Flower color	W	P	W	P	P	P
Pod wall color	T	T	T	T	T	Br
Percent purple stain	2.0	1.0	3.0	0.0	1.5	2.8
Percent mottled	2.3	0.7	4.0	1.0	0.0	0.0

Table 22 - (continued)

	D74-7741	N73-693	N73-877	N73-882	N73-1102	R75-12
Seed Yield - 1977						
East Coast	43.7+	42.1	43.5+	41.7	45.1+	37.4
Southeast	42.9	46.8	38.1-	45.0	41.6	35.4-
Upper & Central South	36.6	41.4	32.7-	34.1	38.9	35.5
Delta	36.6	34.1	32.4	31.0	32.9	27.1-
West	36.7+	35.7	34.7	33.8	38.5+	32.3
1976-77						
East Coast						
Southeast						
Upper & Central South						
Delta						
West						
1975-77						
East Coast						
Southeast						
Upper & Central South						
Delta						
West						
Oil Content - 1977	23.3+	21.2+	20.9+	21.3+	20.5+	20.3+
1976-77						
1975-77						
Protein Content - 1977	38.7-	40.2-	41.2-	40.2-	40.3-	40.6-
1976-77						
1975-77						
Seed size	13.7-	15.1-	15.5-	15.9	16.9	14.0-
Maturity index	-6	+2	+2	+3	0	+1
Height	33	33	33	33	34	30
Seed quality	2.2	2.0	2.1	2.0	1.7	2.3
Bacterial pustule	R	R	R	R	R	R
Phytophthora rot	1.0	1.0	1.0	1.0	1.0	3.0
<i>M. incognita</i>	1.0	3.5	4.0	5.0	5.0	5.0
<i>M. arenaria</i>	3.0	5.0	4.1	2.5	4.4	2.4
Cyst nematode (Race 3)	R	S	S	S	S	R
Cyst nematode (Race 4)	S	S	S	S	S	R
Flower color	W	P	W	P	P	P
Pod wall color	T	T	Br	T	Br	T
Percent purple stain	5.0	1.0	1.0	1.0	1.5	1.5
Percent mottled	0.0	0.3	0.0	0.0	0.3	0.0

Table 23 - Seed yield, in bushels per acre, for the strains in Uniform Group VI, 1977

Location	Tracy	Centennial	N72-137	N72-3058	N72-3148	R73-81	D74-7741
<u>East Coast</u>							
Warsaw, Va.	36.2	33.8	36.1	40.2+	35.8	34.5	38.7
*Petersburg, Va.	23.8	21.9	23.1	18.0	23.9	17.7	25.8
Holland, Va.	36.9	37.4	39.5	44.7+	39.0	37.5	45.4+
Plymouth, N.C.	44.3	43.9	46.1	40.6	50.1	40.6	43.6
Clayton, N.C.	33.9	37.9	45.8+	34.9	41.9+	35.7	34.9
Clinton, N.C.	51.4	50.2	48.6	50.5	56.3	53.7	54.6
Kinston, N.C.	43.2	37.9	40.3	42.6	39.5	36.1	40.8
Hartsville, S.C.	35.8	39.1	44.8	37.5	48.1	40.3	47.8
Mean	40.2	40.0	43.0	41.6	44.4+	39.8	43.7+
<u>Southeast</u>							
Blackville, S.C.	43.4	46.8	35.9	43.4	34.6-	37.4	41.8
Tifton, Ga.	49.6	53.7	53.0	54.2	55.2	41.4-	56.3
Quincy, Fla.	54.8	58.3	60.5+	54.1	57.3	47.1-	55.7
Jay, Fla.	45.6	44.3	40.8	34.0-	38.1	38.8	46.3
Fairhope, Ala.	46.4	43.8	38.2	34.9	41.8	37.0	32.7
Baton Rouge, La.	22.9	27.8	21.7	17.6	14.5	30.5	24.5
Mean	43.8	45.8	41.7	39.7	40.2	38.7	42.9
<u>Upper and Central South</u>							
Athens, Ga.	39.9	40.3	34.4-	42.0	40.6	41.4	43.2
*Belle Mina, Ala.	16.0	18.4	17.5	19.5+	16.6	15.0	11.5-
Clemson, S.C.	35.0	30.2	33.5	26.7	28.8	28.4	24.3
Jackson, Tenn.	38.1	46.6+	35.4	31.4-	38.3	42.6	32.1
Verona, Miss.	44.1	42.6	41.7	41.4	34.2	40.4	46.8
Mean	39.3	39.9	36.2	35.4	35.5	38.2	36.6
<u>Delta</u>							
Portageville, Mo. (A)	38.3	38.4	37.6	38.0	33.7	43.8	53.2+
Portageville, Mo. (B)	44.3	36.7-	35.7-	38.0-	34.5-	36.5-	49.6
Keiser, Ark.	34.2	32.3	32.2	34.6	40.6+	34.7	31.7-
Jonesboro, Ark.	30.7	30.3	30.9	24.3	30.5	29.9	29.6
Stoneville, Miss. (A)	28.0	23.6-	34.7+	24.2	33.5+	27.2	29.2
Stoneville, Miss. (B)	27.8	22.5-	31.2	28.5	32.2+	29.9	35.4+
St. Joseph, La.	40.3	35.4	35.4	42.9	42.8	32.2	40.8
Rohwer, Ark.	21.5	25.9	27.2+	27.3+	24.9	24.9	23.9
Mean	33.1	30.6	33.1	32.2	34.1	32.4	36.6
<u>West</u>							
Pine Bluff, Ark.	49.0	48.0	48.0	55.0	59.0	57.0	52.0
Stuttgart, Ark.	41.4	35.6-	35.7-	40.0	36.7-	41.9	44.2
Bossier City, La.	24.6	26.5	17.9-	24.7	25.9	19.8	21.0
Crowley, La.	26.1	27.6	28.6	27.7	29.9	29.1	38.8+
Beaumont, Tex.	36.9	42.9	32.4	35.5	41.2	38.4	32.9
Bixby, Okla.	21.7	22.4	25.7	26.2	23.8	21.3	30.5+
Lubbock, Tex.	30.8	27.1	29.0	32.4	34.5	31.4	37.3+
Mean	32.9	32.9	31.0	34.5	35.8	34.1	36.7+

*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	N73-693	N73-877	N73-882	N73-1102	R75-12	L.S.D. (.05)	C.V. (%)
<u>East Coast</u>							
Warsaw, Va.	36.0	35.1	34.9	40.8+	32.3-	3.4	5
Petersburg, Va.	25.4	24.2	15.3-	28.1	18.4	6.5	17
Holland, Va.	40.0	44.9+	41.4+	45.2+	39.5	4.3	6
Plymouth, N.C.	46.2	43.5	47.1	47.7	32.9-	8.3	11
Clayton, N.C.	40.2+	38.3	37.1	39.8+	34.7	5.9	9
Clinton, N.C.	49.6	51.1	48.1	54.6	43.7	N.S.	9
Kinston, N.C.	42.7	43.6	38.6	44.7	38.3	N.S.	9
Hartsville, S.C.	40.1	47.8	44.9	42.8	40.5	N.S.	17
Mean	42.1	43.5+	41.7	45.1+	37.4	3.2	
<u>Southeast</u>							
Blackville, S.C.	49.8	39.3	47.0	42.9	34.7-	7.8	11
Tifton, Ga.	54.2	53.3	59.1+	48.7	34.3-	6.9	8
Quincy, Fla.	60.2+	53.0	55.9	55.9	38.2-	4.3	5
Jay, Fla.	46.6	30.5-	44.6	44.8	39.3	8.0	11
Fairhope, Ala.	48.0	39.6	44.2	39.9	42.0	N.S.	14
Baton Rouge, La.	22.3	12.7-	19.4	17.3	23.6	9.6	27
Mean	46.8	38.1-	45.0	41.6	35.4-	5.6	
<u>Upper and Central South</u>							
Athens, Ga.	40.1	41.3	42.5	41.6	38.0	4.8	7
Belle Mina, Ala.	18.8	11.7-	10.9-	17.5	15.6	3.3	13
Clemson, S.C.	32.4	30.7	32.6	33.5	26.6	N.S.	14
Jackson, Tenn.	45.9+	33.5	39.1	36.6	37.9	6.4	10
Verona, Miss.	47.3	25.5-	22.1-	43.9	39.4	10.1	15
Mean	41.4	32.7	34.1	38.9	35.5	N.S.	
<u>Delta</u>							
Portageville, Mo.(A)	36.6	36.6	32.3	33.2	30.5	7.8	12
Portageville, Mo.(B)	38.1-	37.4-	31.2-	36.5-	22.6-	5.5	9
Keiser, Ark.	34.1	34.9	38.5+	33.4	26.9-	3.2	5
Jonesboro, Ark.	32.9	33.2	21.9	28.8	32.0	N.S.	15
Stoneville, Miss.(A)	26.8	25.0	24.9	25.3	24.2	4.1	9
Stoneville, Miss.(B)	31.8	26.8	24.6	25.8	20.9-	4.2	9
St. Joseph, La.	41.5	39.6	49.8+	54.1+	40.4	9.2	13
Rohwer, Ark.	31.1	25.5	24.9	26.2	19.7	5.1	12
Mean	34.1	32.4	31.0	32.9	27.1-	4.4	
<u>West</u>							
Pine Bluff, Ark.	62.0	50.0	51.0	57.0	50.0	N.S.	10
Stuttgart, Ark.	39.5	40.4	37.5-	45.3+	35.4-	3.6	5
Bossier City, La.	20.8	27.4	19.9	27.2	21.1	4.9	13
Crowley, La.	32.1	28.0	29.5	29.2	25.4	6.0	12
Beaumont, Tex.	37.8	36.3	34.9	36.9	35.2	N.S.	22
Bixby, Okla.	26.5+	28.1+	26.5+	30.9+	23.8	4.6	11
Lubbock, Tex.	31.9	32.3	37.4+	43.6+	35.8+	3.8	7
Mean	35.7	34.7	33.8	38.5+	32.3	3.5	

Table 24 - Chemical composition and seed size for the strains in Uniform Group VI, 1977

Location	Tracy	Centennial	N72-137	N72-3058	N72-3148	R73-81
<u>Oil Percentage</u>						
Warsaw, Va.	16.6	18.1	19.0	19.3	18.6	19.4
Clayton, N.C.	15.6	17.5	19.3	20.2	18.6	19.2
Clinton, N.C.	17.9	19.5	20.9	21.4	20.5	21.9
Jay, Fla.	20.7	22.1	22.0	23.6	23.6	23.9
Jackson, Tenn.	17.4	19.5	19.4	21.1	20.6	20.8
Portageville, Mo.(A)	18.9	19.6	19.8	21.3	21.0	20.4
Portageville, Mo.(B)	17.9	20.5	20.1	20.9	21.1	21.3
Stoneville, Miss.(B)	18.8	21.3	20.7	22.5	21.7	22.4
Keiser, Ark.	18.9	20.8	21.0	21.9	21.5	21.9
Stuttgart, Ark.	18.9	19.9	19.3	19.7	20.5	20.9
Beaumont, Tex.	20.2	21.7	21.4	23.7	23.0	23.1
Mean	18.3	20.0+	20.3+	21.4+	21.0+	21.4+
<u>Protein Percentage</u>						
Warsaw, Va.	42.7	40.9	42.1	42.0	39.6	39.9
Clayton, N.C.	43.3	40.0	42.2	42.4	40.5	40.7
Clinton, N.C.	43.9	43.2	43.4	42.3	41.0	40.4
Jay, Fla.	43.1	42.7	43.5	41.9	39.1	42.0
Jackson, Tenn.	40.0	40.0	42.2	42.1	38.3	38.7
Portageville, Mo.(A)	42.8	41.5	42.2	41.5	39.7	40.5
Portageville, Mo.(B)	42.0	40.0	40.3	40.4	37.0	38.2
Stoneville, Miss.(B)	43.0	40.8	41.3	40.6	38.4	39.3
Keiser, Ark.	42.0	39.9	39.3	40.0	37.5	37.7
Stuttgart, Ark.	44.1	42.8	44.0	42.8	40.5	41.0
Beaumont, Tex.	43.7	43.1	43.2	42.7	39.9	41.8
Mean	42.8	41.4-	42.2	41.7-	39.2-	40.0
<u>Grams Per 100 Seeds</u>						
Warsaw, Va.	19.5	13.9	16.4	19.4	15.7	16.7
Clayton, N.C.	16.9	13.9	13.9	17.4	16.5	18.0
Clinton, N.C.	16.2	12.7	12.4	15.9	15.8	17.0
Jay, Fla.	17.2	14.1	14.3	16.4	16.6	19.4
Jackson, Tenn.	20.3	17.1	16.4	19.7	17.3	18.0
Portageville, Mo.(B)	14.2	11.5	10.0	14.0	11.5	13.5
Stoneville, Miss.(B)	11.4	10.2	10.8	12.4	12.4	13.6
Keiser, Ark.	15.5	13.5	11.0	15.0	13.0	14.0
Stuttgart, Ark.	16.3	13.0	12.7	14.0	12.7	15.7
Beaumont, Tex.	18.5	13.1	13.3	15.3	14.8	15.8
Mean	16.6	13.3-	13.1-	16.0	14.6-	16.2

Table 24 - (continued)

Location	D74-7741	N73-693	N73-877	N73-882	N73-1102	R75-12	L.S.D. (.05)
<u>Oil Percentage</u>							
Warsaw, Va.	21.8	19.6	18.7	19.2	18.0	18.2	
Clayton, N.C.	23.1	20.7	19.9	18.6	18.7	18.6	
Clinton, N.C.	22.5	20.8	21.0	20.7	20.3	20.5	
Jay, Fla.	24.9	22.3	21.6	24.0	23.8	22.2	
Jackson, Tenn.	22.8	20.5	19.7	20.8	19.9	19.5	
Portageville, Mo.(A)	22.5	20.5	21.1	21.6	20.2	18.4	
Portageville, Mo.(B)	22.2	21.5	21.5	21.7	20.3	20.4	
Stoneville, Miss.(B)	23.4	22.1	22.3	22.5	21.1	21.1	
Keiser, Ark.	24.5	21.5	21.0	21.7	20.9	21.3	
Stuttgart, Ark.	22.6	20.7	21.0	21.2	20.4	19.9	
Beaumont, Tex.	25.8	23.5	21.7	22.2	21.5	22.9	
Mean	23.3+	21.2+	20.9+	21.3+	20.5+	20.3+	0.5
<u>Protein Percentage</u>							
Warsaw, Va.	39.3	39.6	40.8	39.8	40.2	40.0	
Clayton, N.C.	38.1	40.0	41.8	40.6	40.8	40.6	
Clinton, N.C.	38.9	41.4	41.8	41.8	41.1	41.1	
Jay, Fla.	38.8	42.3	43.6	41.2	40.6	42.0	
Jackson, Tenn.	39.0	39.2	41.6	38.3	40.2	39.5	
Portageville, Mo.(A)	38.6	41.6	40.9	40.5	41.1	42.5	
Portageville, Mo.(B)	38.9	37.9	38.8	37.3	38.9	38.7	
Stoneville, Miss.(B)	37.1	39.4	39.2	40.4	40.3	40.1	
Keiser, Ark.	36.8	37.7	40.1	38.2	37.8	39.7	
Stuttgart, Ark.	39.4	41.4	41.6	41.0	41.6	41.5	
Beaumont, Tex.	41.3	42.1	43.1	42.7	41.0	41.1	
Mean	38.7-	40.2-	41.2-	40.2-	40.3-	40.6-	0.6
<u>Grams Per 100 Seeds</u>							
Warsaw, Va.	18.4	17.0	16.7	17.3	19.3	15.5	
Clayton, N.C.	14.4	16.5	17.3	17.5	18.7	14.9	
Clinton, N.C.	13.4	15.8	15.4	15.7	15.6	14.0	
Jay, Fla.	13.6	17.0	16.4	18.0	19.3	16.7	
Jackson, Tenn.	15.8	17.6	19.8	18.6	19.4	16.8	
Portageville, Mo.(B)	11.2	13.2	13.5	13.5	14.0	11.5	
Stoneville, Miss.(B)	11.4	11.8	11.8	13.0	12.2	11.6	
Keiser, Ark.	12.0	14.0	15.0	15.5	15.0	12.5	
Stuttgart, Ark.	12.3	14.0	14.7	15.7	18.0	13.3	
Beaumont, Tex.	14.2	13.9	14.2	13.9	17.2	13.1	
Mean	13.7-	15.1-	15.5-	15.9	16.9	14.0-	0.8

Table 25 - Relative maturity data, days earlier (-) or later (+) than Tracy, for the strains in Uniform Group VI, 1977

Location	Date planted	Tracy matured	Centennial	N72-137	N72-3058	N72-3148
<u>East Coast</u>						
Plymouth, N.C.	5-10	10-28	0	-4	+2	0
Clayton, N.C.	6-2	11-4	0	0	0	0
Clinton, N.C.	5-17	10-21	+5	-2	0	+6
Hartsville, S.C.	6-8	10-18	+3	+3	+3	+6
Mean		10-27	+2	-1	+1	+3
<u>Southeast</u>						
Blackville, S.C.	5-12	10-10	+3	+2	+4	+5
Tifton, Ga.	5-18	10-5	+7	+9	+5	+12
Quincy, Fla.	5-17	10-7	+3	+8	+3	+7
Jay, Fla.	5-25	10-16	-8	+1	0	+2
Fairhope, Ala.	6-3	10-9	0	+4	+6	+6
Baton Rouge, La.	5-18	10-15	-2	-2	-1	-1
Mean		10-10	-1	+4	+3	+5
<u>Upper and Central South</u>						
Athens, Ga.	5-5	10-14	+5	+5	+3	+5
Belle Mina, Ala.	5-5	10-20	-5	-3	-2	-5
Clemson, S.C.	5-27	10-30	+5	+2	+8	+6
Jackson, Tenn.	5-11	11-2	0	-2	-2	-1
Verona, Miss.	5-17	10-18	+2	0	+3	-1
Mean		10-23	+1	0	+2	+1
<u>Delta</u>						
Portageville, Mo. (A)	5-11	10-21	+4	+1	+1	+1
Portageville, Mo. (B)	5-13	10-21	+5	+1	+4	+4
Keiser, Ark.		10-26	-3	+2	+3	+7
Jonesboro, Ark.	5-18	10-25	+3	0	-2	+5
Stoneville, Miss. (A)	5-24	10-16	-1	+4	+4	+8
Stoneville, Miss. (B)	5-9	10-10	+5	+5	+3	+6
St. Joseph, La.	5-11	10-3	0	+1	+2	+3
Rohwer, Ark.	6-7	10-28	0	+7	0	-7
Mean		10-19	+2	+3	+2	+3
<u>West</u>						
Pine Bluff, Ark.	5-17	10-17	-1	0	0	+2
Stuttgart, Ark.	6-7	10-16	+1	0	0	+3
Bossier City, La.	5-10	10-15	+2	-1	+5	+1
Crowley, La.	5-5	10-28	0	+4	0	+4
Beaumont, Tex.	5-13	10-9	0	-2	0	+2
Lubbock, Tex.	5-21	10-16	+3	0	0	+4
Mean		10-17	+1	0	+1	+3

Table 25 - (continued)

Location	R73-81	D74-7741	N73-693	N73-877	N73-882	N73-1102	R75-12
<u>East Coast</u>							
Plymouth, N.C.	0	-6	+2	0	0	-4	-2
Clayton, N.C.	+4	-7	0	0	0	0	0
Clinton, N.C.	0	-4	-1	+1	+3	-2	-3
Hartsville, S.C.	+3	-6	-2	+2	+3	0	-2
Mean	+2	-6	0	+1	+2	-2	-2
<u>Southeast</u>							
Blackville, S.C.	+3	-5	+3	+4	+6	-2	+2
Tifton, Ga.	+8	+2	+8	+7	+8	0	+8
Quincy, Fla.	+6	-5	+7	+9	+10	-1	0
Jay, Fla.	+4	-9	+1	-2	0	-7	+1
Fairhope, Ala.	+2	-9	+6	+4	+3	-1	0
Baton Rouge, La.	0	-9	+1	+9	+9	+4	-2
Mean	+4	-6	+4	+5	+6	-1	+2
<u>Upper and Central South</u>							
Athens, Ga.	+4	-7	+4	+6	+5	+1	0
Belle Mina, Ala.	-3	-18	-5	-3	-5	-2	-5
Clemson, S.C.	+2	-6	+6	+5	+7	+2	+5
Jackson, Tenn.	-1	-10	-2	0	0	-2	-4
Verona, Miss.	-5	-9	+3	-7	-8	+2	-4
Mean	-1	-10	+1	0	0	0	0
<u>Delta</u>							
Portageville, Mo.(A)	+1	-7	+2	+2	+3	-1	-2
Portageville, Mo.(B)	+2	-3	+4	+3	+5	+1	0
Keiser, Ark.	+4	-11	+1	+3	+7	0	-2
Jonesboro, Ark.	0	-3	+5	+6	+5	+1	+2
Stoneville, Miss.(A)	-1	-4	+6	+3	+7	+7	+3
Stoneville, Miss.(B)	+5	-10	+6	+6	+6	+6	+5
St. Joseph, La.	+2	-12	+2	+2	+8	+2	+4
Rohwer, Ark.	-3	-12	0	+7	+4	+7	-5
Mean	+1	-8	+3	+4	+6	+3	+1
<u>West</u>							
Pine Bluff, Ark.	+1	+1	+2	-1	+4	-2	0
Stuttgart, Ark.	0	-6	+2	+2	+6	0	0
Bossier City, La.	0	-1	+2	+4	+3	-1	+1
Crowley, La.	0	-31	+4	0	0	+4	0
Beaumont, Tex.	+5	+2	0	0	+1	0	0
Lubbock, Tex.	0	-2	-1	-1	+5	-3	+1
Mean	+1	-1	+2	+1	+3	+1	0

Table 26 - Plant height for the strains in Uniform Group VI, 1977

Location	Tracy	Centennial	N72-137	N72-3058	N72-3148	R73-81
<u>East Coast</u>						
Warsaw, Va.	39	39	36	36	35	39
Petersburg, Va.	31	31	29	24	24	27
Holland, Va.	41	41	43	39	37	39
Plymouth, N.C.	42	43	43	41	38	41
Clayton, N.C.	36	38	37	35	36	36
Clinton, N.C.	39	41	40	39	35	39
Kinston, N.C.	32	28	30	27	24	27
Hartsville, S.C.	36	41	38	33	35	33
Mean	37	38	37	34	33	35
<u>Southeast</u>						
Blackville, S.C.	32	32	28	23	20	27
Tifton, Ga.	29	32	21	24	28	23
Quincy, Fla.	27	30	28	23	26	25
Jay, Fla.	36	36	28	17	27	19
Fairhope, Ala.	22	24	16	23	17	19
Baton Rouge, La.	26	34	28	21	21	27
Mean	29	31	25	22	23	23
<u>Upper and Central South</u>						
Athens, Ga.	30	30	27	25	26	26
Belle Mina, Ala.	39	39	37	36	31	34
Clemson, S.C.	29	27	26	26	22	25
Jackson, Tenn.	50	48	49	49	48	48
Verona, Miss.	36	33	34	35	32	31
Mean	37	35	35	34	32	33
<u>Delta</u>						
Portageville, Mo.(A)	46	41	43	44	40	38
Portageville, Mo.(B)	44	42	43	42	40	43
Keiser, Ark.	39	37	33	34	32	30
Jonesboro, Ark.	41	44	39	44	37	40
Stoneville, Miss.(A)	44	42	41	44	39	39
Stoneville, Miss.(B)	41	32	33	37	35	31
St. Joseph, La.	41	43	41	40	39	40
Rohwer, Ark.	31	32	29	29	28	30
Mean	41	39	38	39	36	36
<u>West</u>						
Pine Bluff, Ark.	49	51	53	50	49	50
Stuttgart, Ark.	43	45	43	40	39	41
Bossier City, La.	32	30	28	28	27	25
Crowley, La.	33	31	30	28	26	27
Beaumont, Tex.	20	23	19	20	18	15
Bixby, Okla.	37	37	39	35	34	37
Lubbock, Tex.	38	37	38	42	39	36
Mean	36	36	36	35	33	33

Table 26 - (continued)

Location	D74-7741	N73-693	N73-877	N73-877	N73-1102	R75-12
<u>East Coast</u>						
Warsaw, Va.	37	35	34	38	37	36
Petersburg, Va.	28	27	25	28	32	27
Holland, Va.	38	39	39	40	42	38
Plymouth, N.C.	43	42	42	45	44	37
Clayton, N.C.	29	35	33	35	36	32
Clinton, N.C.	39	36	39	37	40	33
Kinston, N.C.	31	27	31	29	30	25
Hartsville, S.C.	38	36	33	38	38	33
Mean	35	35	35	36	37	33
<u>Southeast</u>						
Blackville, S.C.	25	26	24	20	29	20
Tifton, Ga.	30	21	26	28	24	20
Quincy, Fla.	28	25	24	25	28	22
Jay, Fla.	28	34	24	24	35	18
Fairhope, Ala.	18	21	19	19	22	19
Baton Rouge, La.	28	25	25	28	27	25
Mean	26	25	24	24	28	21
<u>Upper and Central South</u>						
Athens, Ga.	28	27	26	28	27	24
Belle Mina, Ala.	39	35	34	36	35	29
Clemson, S.C.	22	25	24	25	31	36
Jackson, Tenn.	48	47	49	48	49	46
Verona, Miss.	35	35	34	38	38	33
Mean	34	34	33	35	36	34
<u>Delta</u>						
Portageville, Mo.(A)	38	37	43	40	44	35
Portageville, Mo.(B)	39	39	41	40	44	34
Keiser, Ark.	31	34	33	37	37	29
Jonesboro, Ark.	47	36	36	41	42	39
Stoneville, Miss.(A)	40	41	41	41	42	38
Stoneville, Miss.(B)	29	33	35	35	43	26
St. Joseph, La.	41	35	40	40	40	35
Rohwer, Ark.	28	30	29	31	31	26
Mean	37	36	37	38	40	33
<u>West</u>						
Pine Bluff, Ark.	48	51	53	52	54	47
Stuttgart, Ark.	38	39	40	41	44	38
Bossier City, La.	28	26	28	28	33	24
Crowley, La.	34	29	30	30	29	22
Beaumont, Tex.	22	23	23	19	20	16
Bixby, Okla.	35	35	36	36	35	34
Lubbock, Tex.	38	37	41	36	43	36
Mean	35	34	36	31	37	31

Table 27 - Lodging scores for the strains in Uniform Group VI, 1977

Location	Tracy	Centennial	N72-137	N72-3058	N72-3148	R73-81
<u>East Coast</u>						
Warsaw, Va.	2.2	2.0	1.5	1.2	2.0	2.0
Petersburg, Va.	1.0	1.0	1.0	1.0	1.0	1.0
Holland, Va.	2.7	1.7	2.3	2.2	2.3	2.5
Plymouth, N.C.	3.7	3.0	2.7	2.3	2.7	3.0
Clayton, N.C.	3.0	3.0	3.0	1.7	3.0	3.0
Clinton, N.C.	4.0	3.0	3.0	2.0	3.0	3.0
Kinston, N.C.	3.0	2.7	3.0	2.3	2.7	2.7
Hartsville, S.C.	2.5	2.3	2.7	1.3	2.5	2.2
<u>Southeast</u>						
Blackville, S.C.	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, Ga.	2.0	1.0	1.0	1.0	1.0	1.0
Quincy, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Jay, Fla.	2.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	1.8	2.4	2.0	1.8	1.7	2.5
<u>Upper and Central South</u>						
Athens, Ga.	1.5	1.3	1.0	1.0	1.0	1.3
Belle Mina, Ala.	2.0	1.5	1.3	1.5	1.0	1.5
Clemson, S.C.	1.0	1.0	1.0	1.0	1.0	1.0
Jackson, Tenn.	3.0	2.0	1.0	2.0	2.0	1.7
<u>Delta</u>						
Portageville, Mo. (A)	3.8	3.5	3.3	3.0	3.2	4.0
Portageville, Mo. (B)	2.8	2.5	2.3	1.7	2.0	2.5
Keiser, Ark.	2.1	1.0	2.0	1.0	1.0	2.0
Jonesboro, Ark.	3.5	3.8	3.5	2.8	3.5	4.0
Stoneville, Miss. (A)	4.0	4.0	3.7	3.3	4.0	3.0
Stoneville, Miss. (B)	3.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, La.	2.6	2.6	2.8	2.1	2.5	2.3
Rohwer, Ark.	2.7	2.0	1.0	1.3	1.3	1.3
<u>West</u>						
Pine Bluff, Ark.	4.3	1.7	2.3	2.3	2.3	1.7
Stuttgart, Ark.	3.0	3.0	2.2	1.8	2.3	2.7
Bossier City, La.	2.7	1.7	2.2	1.2	1.5	1.7
Crowley, La.	2.0	1.3	1.3	1.0	1.0	1.0
Beaumont, Tex.	1.0	1.0	1.0	1.0	1.0	1.0
Bixby, Okla.	3.3	2.0	2.0	1.3	1.3	3.0
Lubbock, Tex.	4.0	3.7	3.2	2.0	3.5	3.7

Table 27 - (continued)

Location	D74-7741	N73-693	N73-877	N73-882	N73-1102	R75-12
<u>East Coast</u>						
Warsaw, Va.	2.3	2.2	1.3	2.0	1.3	2.3
Petersburg, Va.	3.0	1.0	1.0	1.0	1.0	2.0
Holland, Va.	2.5	3.3	2.2	2.2	2.2	2.8
Plymouth, N.C.	3.7	3.0	3.0	3.0	2.7	3.0
Clayton, N.C.	3.0	3.0	3.0	3.0	2.7	3.0
Clinton, N.C.	3.0	3.0	3.0	3.0	3.0	3.0
Kinston, N.C.	3.0	2.7	2.3	2.7	2.3	3.0
Hartsville, S.C.	2.7	2.7	2.0	3.0	2.5	2.0
<u>Southeast</u>						
Blackville, S.C.	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, Ga.	1.0	1.0	1.0	1.5	1.0	1.0
Quincy, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	2.7	1.8	2.0	1.9	1.8	2.0
<u>Upper and Central South</u>						
Athens, Ga.	1.3	1.5	1.0	1.3	1.0	1.2
Belle Mina, Ala.	1.5	1.5	1.2	1.3	1.0	1.0
Clemson, S.C.	1.0	1.0	1.0	1.0	1.0	1.0
Jackson, Tenn.	1.0	2.0	2.0	2.0	1.7	1.7
<u>Delta</u>						
Portageville, Mo.(A)	4.2	4.0	3.0	3.2	3.3	4.3
Portageville, Mo.(B)	2.2	2.5	1.5	2.0	1.8	2.3
Keiser, Ark.	2.0	1.0	1.0	1.0	1.0	2.0
Jonesboro, Ark.	4.3	3.3	3.0	2.8	2.8	4.0
Stoneville, Miss.(A)	3.0	4.0	3.0	4.0	3.7	3.0
Stoneville, Miss.(B)	2.0	2.3	2.0	2.3	2.3	2.0
St. Joseph, La.	3.3	2.5	2.6	2.2	2.5	2.5
Rohwer, Ark.	1.7	2.7	1.0	1.0	1.0	2.3
<u>West</u>						
Pine Bluff, Ark.	2.7	3.0	1.7	2.3	2.3	2.7
Stuttgart, Ark.	2.3	3.2	2.3	2.7	2.2	3.0
Bossier City, La.	3.7	1.7	1.3	1.5	1.5	1.8
Crowley, La.	3.0	1.7	1.0	1.0	1.0	1.0
Beaumont, Tex.	1.0	1.0	1.0	1.0	1.0	1.0
Bixby, Okla.	3.0	2.7	1.3	1.7	1.7	2.7
Lubbock, Tex.	4.0	4.3	1.7	3.5	2.0	4.0

Table 28 - Seed quality scores for the strains in Uniform Group VI, 1977

Location	Tracy	Centennial	N72-137	N72-3058	N72-3148	R73-81
<u>East Coast</u>						
Warsaw, Va.	1.8	1.5	1.5	1.4	1.8	1.8
Petersburg, Va.	3.0	3.0	3.0	3.0	3.0	2.0
Holland, Va.	2.5	2.7	2.3	2.0	2.7	2.8
Plymouth, N.C.	2.0	2.0	3.0	2.5	3.0	3.0
Clayton, N.C.	2.0	1.5	1.5	1.5	1.5	2.0
Clinton, N.C.	1.5	1.5	2.0	1.5	1.5	2.0
Kinston, N.C.	2.0	2.0	2.0	1.5	1.5	1.5
<u>Southeast</u>						
Blackville, S.C.	3.0	1.0	1.0	1.0	1.0	1.0
Tifton, Ga.	2.5	1.5	2.8	2.3	2.0	2.7
Quincy, Fla.	1.3	1.0	2.0	2.3	2.7	2.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.2	1.0	1.3	1.7	1.0	1.5
<u>Upper and Central South</u>						
Athens, Ga.	1.3	1.2	1.5	1.7	1.5	2.2
Jackson, Tenn.	1.0	1.0	1.0	1.0	1.0	1.0
<u>Delta</u>						
Portageville, Mo.(A)	1.5	1.5	2.0	1.0	1.5	2.0
Portageville, Mo.(B)	1.5	2.0	2.0	1.5	2.0	2.0
Keiser, Ark.	1.0	1.5	2.0	1.5	1.0	2.5
Jonesboro, Ark.	1.0	2.3	3.0	1.3	1.0	2.3
Stoneville, Miss.(A)	2.0	2.7	2.0	2.0	2.0	2.3
Stoneville, Miss.(B)	2.0	2.0	2.0	2.0	2.0	2.0
Rohwer, Ark.	3.5	2.2	3.0	2.8	2.5	3.5
<u>West</u>						
Pine Bluff, Ark.	2.0	2.0	1.5	1.5	1.5	3.0
Stuttgart, Ark.	2.3	2.5	1.7	2.0	1.7	2.7
Beaumont, Tex.	3.0	1.8	3.0	1.0	1.5	2.8
Lubbock, Tex.	3.0	1.5	2.0	2.0	1.7	1.5

Table 28 - (continued)

Location	D74-7741	N73-693	N73-877	N73-882	N73-1102	R75-12
<u>East Coast</u>						
Warsaw, Va.	1.3	2.1	1.8	1.8	1.2	2.0
Petersburg, Va.	2.5	2.0	2.5	3.0	2.0	4.0
Holland, Va.	1.8	2.7	2.0	3.0	1.7	2.7
Plymouth, N.C.	2.5	2.5	4.0	3.0	2.5	3.0
Clayton, N.C.	1.5	1.5	1.5	1.5	1.5	2.0
Clinton, N.C.	1.5	1.5	2.0	1.5	1.5	2.0
Kinston, N.C.	2.0	1.5	1.5	1.5	1.5	2.0
<u>Southeast</u>						
Blackville, S.C.	1.0	1.0	1.0	1.0	2.0	1.0
Tifton, Ga.	2.3	2.3	2.0	2.5	2.0	2.5
Quincy, Fla.	2.0	1.7	3.0	2.0	1.7	3.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	2.0
Fairhope, Ala.	1.8	1.0	1.3	1.3	1.0	1.0
<u>Upper and Central South</u>						
Athens, Ga.	2.2	1.5	1.5	1.8	1.0	1.8
Jackson, Tenn.	2.0	1.0	1.0	1.0	1.0	1.0
<u>Delta</u>						
Portageville, Mo.(A)	1.5	1.5	2.0	2.0	1.5	2.0
Portageville, Mo.(B)	2.0	2.0	2.0	2.0	1.5	2.0
Keiser, Ark.	3.0	1.0	2.0	2.0	2.0	3.0
Jonesboro, Ark.	1.3	1.7	2.3	2.0	2.3	2.3
Stoneville, Miss.(A)	3.0	2.3	2.7	2.3	2.3	3.0
Stoneville, Miss.(B)	2.0	2.0	2.0	2.0	2.0	2.0
Rohwer, Ark.	3.5	2.8	2.7	3.2	2.7	3.5
<u>West</u>						
Pine Bluff, Ark.	3.0	2.5	2.5	3.0	2.0	2.5
Stuttgart, Ark.	1.8	2.5	3.0	2.8	2.2	3.0
Beaumont, Tex.	5.0	1.7	1.5	1.5	1.5	3.2
Lubbock, Tex.	2.5	2.2	2.5	2.2	2.0	1.5

PRELIMINARY GROUP VI

1977

Preliminary Group VI nurseries, including 34 experimental strains along with Centennial and D64-4636 as checks, were grown at eight locations. 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 the 5% level of confidence at six locations. Seed yields at Belle Mina were very low as a result of drouth stress and were not included in calculating mean seed yields.

The combined analysis of variance for seed yield showed differences among strains to be significant. Only two strains, N75-2213 and D75-7527, had mean seed yields significantly greater than that for Centennial. Twenty-four strains ranked higher in seed yield than Centennial. There was a tendency for earlier maturing strains to have higher seed yields.

Five strains selected for higher protein from the cross D69-4227 X D70-7040 all had low mean seed yields. D74-2249 had a mean protein percentage of 46 or 12% greater than that for Centennial, and had a mean seed yield 1.8 bushels per acre less than Centennial.

Strains which appear to merit advancement to Uniform Group VI are D75-16, D75-7527, N75-1245, and N75-2213.

Table 29 - Parentage of the strains in Preliminary Group VI, 1977

Variety or strain	Parentage	Generation composited
1. Centennial		
2. D64-4636		
3. D74-2249	D67-4823 X Tracy	F ₅
4. D74-2808	D68-216 X Pickett 71	F ₅
5. D74-7871	Forrest X D70-3001	F ₅
6. D74-8278	Tracy X (D65-2532 X D66-11005)	F ₅
7. D74-8350	Tracy X (D65-2532 X D66-11005)	F ₅
8. D74-8486	Hood X Lee 68	F ₅
9. D74-9099	D68-216 X Pickett 71	F ₅
10. D75-16	D64-4636 X Tawny Pickett 71 type	F ₈
11. D75-7527	Forrest X Mack	F ₅
12. D75-7533	Forrest X Mack	F ₅
13. D75-7722	Forrest X D69-4227	F ₅
14. D75-8535	D69-4227 X D70-7040	F ₅
15. D75-8585	D69-4227 X D70-7040	F ₅
16. D75-8601	D69-4227 X D70-7040	F ₅
17. D75-8612	D69-4227 X D70-7040	F ₅
18. D75-9022	D69-4227 X D70-7040	F ₅
19. D75-9853	Semmes X Hood	F ₅
20. D75-9897	Semmes X Hood	F ₅
21. GaT72-418	Davis X Hood	
22. N74-1245	D66-8666 X Davis	F ₅
23. N74-5076	Pickett 71(3) X [Dare(2) X PI 96983]	
24. N75-2155	Davis X Essex	F ₅
25. N75-2178	Davis X Essex	F ₅
26. N75-2213	Davis X Essex	F ₅
27. N75-2500	N67-4063 X D68-216	F ₅
28. N75-2810	Ransom(2) X N71-6004	F ₅
29. N75-2835	Ransom(2) X N71-6004	F ₅
30. R74-440	R66-873 X R68-105	F ₄
31. R74-1625	York X Davis	F ₄
32. R75-140	R68-105 X York	F ₅
33. R75-655	(T207 X Davis) X R68-105	F ₄
34. R75-832	(R68-873 X R68-105) X (R68-105 X York)	F ₄
35. R75-1955	Ransom X Mack	F ₅
36. R75-3575	Ransom X Mack	F ₅

Table 30 - General summary of performance for the strains in Preliminary Group VI, 1977

Strain	Seed yield	Mat. index	Ht.	Percent		Seed-holding	C.N. Race 3	Root knot	
				Oil	Protein			M. <i>incognita</i>	M. <i>arenaria</i>
Centennial	33.7	10-20	37	20.5	41.2	1.0	R	2.0	5.0
D64-4636	35.5	-10	32	21.0	39.5-	1.0	S	2.0	4.6
D74-2249	31.9	-7	40	18.3-	46.0+	1.0	S	4.5	5.0
D74-2808	34.5	0	33	21.0	40.0	1.0	R	4.5	3.0
D74-7871	38.2	-13	37	22.4+	38.2-	1.0	R	5.0	5.0
D74-8278	36.9	-2	34	21.1	41.0	1.0	S	5.0	4.6
D74-8350	34.3	-2	35	20.0	41.2	1.0	S	5.0	4.0
D74-8486	36.5	-11	33	22.6+	38.3-	1.0	S	5.0	5.0
D74-9099	35.4	-6	37	20.7	39.9-	1.0	R	3.0	2.7
D75-16	37.8	-13	30	21.8	40.8	1.0	R	1.0	4.8
D75-7527	39.7+	-14	31	24.2+	37.9-	1.0	R	4.5	1.6
D75-7533	32.3	-10	34	22.5	40.4	1.0	R	3.0	1.6
D75-7722	35.5	-12	35	21.5	41.3	1.0	S	3.0	3.8
D75-8535	34.8	-7	41	18.0-	45.2+	1.0	S	4.5	1.3
D75-8585	29.6	-9	29	18.1-	44.5+	1.0	S	5.0	3.0
D75-8601	27.5-	-7	33	17.8-	44.8+	1.0	S	3.5	1.9
D75-8612	28.8	-7	34	18.2-	45.8+	1.0	S	5.0	2.6
D75-9022	30.6	-6	31	18.9-	44.1+	1.0	S	5.0	1.3
D75-9853	29.7	-8	36	21.7	39.7-	1.0	S	4.5	5.0
D75-9897	32.8	-9	35	21.1	39.6-	1.0	S	4.0	1.7
GaT72-418	36.8	-6	37	22.2+	38.6-	1.0	S	5.0	3.6
N74-1245	38.8	-11	32	22.2+	39.7-	1.0	S	4.0	1.9
N74-5076	30.0	-4	27	22.2+	38.3-	2.0	R	5.0	5.0
N75-2155	35.4	-11	38	23.8+	38.4-	1.0	S	5.0	3.0
N75-2178	36.0	-15	30	24.2+	37.3-	1.5	S	3.5	5.0
N75-2213	40.4+	-8	40	21.3	40.1	1.0	S	5.0	5.0
N75-2500	28.4	+2	29	21.1	40.7	1.0	S	5.0	3.5
N75-2810	34.7	-13	29	23.3+	40.0	2.0	S	5.0	5.0
N75-2835	29.0	-4	31	22.5+	39.1-	1.0	S	5.0	5.0
R74-440	26.2-	-14	29	21.9+	41.0	1.0	S	5.0	1.3
R74-1625	36.9	-6	33	21.5	39.9-	1.0	S	5.0	4.5
R75-140	35.7	-10	33	23.7+	38.0-	2.0	S	5.0	1.8
R75-655	34.7	-6	34	20.9	39.6-	1.0	S	5.0	4.5
R75-832	36.4	-6	36	22.3+	38.6-	1.0	S	5.0	4.8
R75-1955	34.2	+2	35	22.0+	39.3-	1.0	S	5.0	1.5
R75-3575	36.8	+1	34	22.8+	38.0-	1.0	S	4.5	3.6
L.S.D. (.05)	5.9			1.3	1.2				
L.S.D. (.01)	7.8			1.7	1.6				

Table 31 - Seed yield, in bushels per acre, for the strains in Preliminary Group VI, 1977

Strain	*Peters- burg, Va.	Ply- mouth N.C.	Portage- ville, Mo.	Keiser, Ark.	Stone- ville, Miss. (A)	Stone- ville, Miss. (B)	Jay, Fla.	*Belle Mina, Ala.
Centennial	32.8	45.4	39.5	32.6	22.6	20.2	41.6	18.0
D64-4636	26.3-	43.1	34.5	31.5	28.7	32.9+	37.4	13.8
D74-2249	16.4-	34.3	30.4	29.9	26.1	31.6+	39.3	14.3
D74-2808	19.9-	38.0	43.8	28.8	27.2	27.5+	42.0	17.7
D74-7871	25.2-	38.8	42.7	36.7	35.0+	34.5+	41.6	11.2-
D74-8278	22.2-	43.2	37.1	34.6	29.1+	33.8+	43.1	12.6
D74-8350	25.8-	38.1	37.0	35.0	24.9	25.2	45.8	11.4-
D74-8486	26.3-	35.7	42.5	38.4	34.6+	32.0+	35.9	11.2-
D74-9099	26.3-	39.7	34.3	34.0	27.7	29.3+	47.2	20.6
D75-16	22.3-	40.2	53.8+	32.9	33.7+	31.2+	35.2	19.9
D75-7527	26.3-	41.8	48.3	32.4	40.0+	36.6+	39.0	8.7-
D75-7533	28.1	44.0	43.2	34.6	31.4+	26.8+	14.0-	8.3-
D75-7722	26.3-	41.7	35.3	31.2	40.3+	40.6+	24.2-	16.7
D75-8535	17.6-	39.7	32.3	33.2	32.3+	34.2+	37.0	17.9
D75-8585	20.0-	41.0	38.3	27.1	22.9	26.7+	22.0-	14.5
D75-8601	22.8-	36.9	28.5-	32.6	23.7	28.0+	30.2-	11.9-
D75-8612	20.5-	40.3	34.2	28.5	28.7+	32.6+	8.3-	17.0
D75-9022	25.2-	39.5	32.8	33.7	28.9+	28.3+	20.4-	13.4
D75-9853	16.4-	31.1	46.5	26.7	24.7	32.3+	31.8	11.7-
D75-9897	16.4-	38.6	34.5	29.8	25.3	29.2+	39.7	5.8-
GaT72-418	24.6-	41.5	30.8	33.4	35.8+	35.1+	44.2	10.7-
N74-1245	23.6-	43.8	47.2	30.1	37.1+	33.6+	40.8	8.7-
N74-5076	13.4-	37.9	37.2	29.7	24.0	19.3	31.8	13.3
N75-2155	24.6-	40.4	36.4	27.9	21.1	39.1+	47.6	10.4-
N75-2178	24.0-	43.5	45.3	29.3	25.9	37.2+	35.2	12.2
N75-2213	27.0-	46.8	41.0	38.2	28.7+	40.0+	47.6	15.3
N75-2500	7.6-	41.1	28.9-	31.2	24.5	23.3	21.2-	14.6
N75-2810	31.7	43.2	41.9	34.4	24.3	26.6+	39.0	7.3-
N75-2835	24.0-	45.2	36.6	36.0	31.1+	35.3+	26.5-	15.8
R74-440	25.2-	39.5	50.0	26.8	33.7+	30.2+	26.8-	15.5
R74-1625	32.8	45.2	41.1	34.6	33.0+	29.9+	37.4	15.6
R75-140	25.8-	43.5	35.5	32.6	25.2	33.0+	44.6	7.3-
R75-655	20.0-	36.7	40.8	32.0	26.3	25.9	46.5	2.4-
R75-832	27.6	44.3	35.1	38.2	32.1+	28.5+	40.1	14.1
R75-1955	10.0-	43.3	33.4	35.6	24.4	22.2	46.5	10.0-
R75-3575	15.2-	42.7	37.7	34.6	28.5+	27.8+	49.6	11.9-
L.S.D. (.05)	6.3	N.S.	10.4	N.S.	5.7	6.0	11.3	5.8
C.V.	14%	9%	13%	12%	10%	10%	15%	23%

*Not included in mean.

Table 32 - Oil percentages for the strains in Preliminary Group VI, 1977

Strain	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(B)	Jay, Fla.
Centennial	20.0	19.8	20.3	21.9
D64-4636	19.3	22.7	20.9	21.1
D74-2249	17.9	17.8	18.1	19.5
D74-2808	19.3	21.1	21.3	22.3
D74-7871	20.6	23.9	22.9	22.2
D74-8278	19.5	20.9	21.0	23.1
D74-8350	19.0	19.6	20.4	20.8
D74-8486	21.1	23.6	22.9	22.8
D74-9099	18.8	22.1	20.9	21.1
D75-16	20.8	23.3	21.9	21.3
D75-7527	22.5	26.7	24.0	23.6
D75-7533	21.2	25.2	22.5	21.1
D75-7722	20.2	22.4	22.7	20.6
D75-8535	17.6	17.8	17.9	18.6
D75-8585	17.1	19.2	17.9	18.0
D75-8601	17.0	18.5	18.2	17.6
D75-8612	17.0	19.6	18.9	17.3
D75-9022	19.7	19.3	18.3	18.2
D75-9853	20.0	22.1	22.9	21.6
D75-9897	18.9	21.4	21.9	22.1
GaT72-418	19.0	22.6	22.6	24.5
N74-1245	20.5	23.9	22.2	22.2
N74-5076	20.5	22.5	22.8	23.0
N75-2155	21.6	24.6	24.4	24.4
N75-2178	22.0	26.1	24.1	24.7
N75-2213	19.4	21.3	22.2	22.2
N75-2500	19.3	21.6	20.8	22.7
N75-2810	21.0	23.7	23.5	24.8
N75-2835	21.0	22.6	22.1	24.1
R74-440	20.9	22.6	21.9	22.0
R74-1625	20.4	21.6	21.4	22.5
R75-140	21.9	24.0	24.1	24.8
R75-655	20.2	20.1	20.0	23.2
R75-832	20.7	22.7	22.7	22.9
R75-1955	20.5	22.3	21.3	23.7
R75-3575	21.4	21.3	23.1	25.4

Table 33 - Protein percentages for the strains in Preliminary Group VI, 1977

Strain	Portageville, Mo.	Keiser, Ark.	Stoneville, Miss.(B)	Jay, Fla.
Centennial	40.9	40.4	41.9	42.2
D64-4636	40.6	36.8	39.7	41.0
D74-2249	46.4	46.5	45.6	45.4
D74-2808	41.7	38.4	39.7	40.2
D74-7871	39.8	35.6	38.2	39.3
D74-8278	42.7	39.4	40.8	41.1
D74-8350	42.2	41.0	40.8	40.7
D74-8486	39.6	36.3	38.2	39.1
D74-9099	41.1	37.5	40.4	40.7
D75-16	42.1	37.9	40.6	42.5
D75-7527	38.1	35.0	37.9	40.4
D75-7533	41.4	37.5	40.8	42.0
D75-7722	41.9	39.2	40.4	43.8
D75-8535	45.8	44.6	45.1	45.3
D75-8585	45.3	43.2	44.5	45.0
D75-8601	44.9	43.9	44.5	45.8
D75-8612	46.3	44.3	45.3	47.3
D75-9022	43.1	42.2	44.2	46.8
D75-9853	41.4	37.2	38.2	42.0
D75-9897	41.5	37.7	39.6	39.7
GaT72-418	40.7	36.6	38.4	38.5
N74-1245	40.6	38.5	39.0	40.5
N74-5076	39.7	36.2	37.1	40.0
N75-2155	39.9	36.8	37.9	39.1
N75-2178	38.6	35.5	37.0	38.0
N75-2213	42.4	38.6	38.6	40.8
N75-2500	42.5	37.0	40.0	43.2
N75-2810	40.9	38.4	39.9	40.8
N75-2835	40.9	36.3	38.8	40.5
R74-440	41.6	38.1	40.8	43.3
R74-1625	41.5	37.8	39.1	41.1
R75-140	39.2	35.0	37.7	39.9
R75-655	40.7	38.4	40.2	39.2
R75-832	39.0	36.4	38.5	40.5
R75-1955	40.5	37.0	39.6	39.9
R75-3575	39.6	37.0	37.7	37.7

Table 34 - Plant height for the strains in Preliminary Group VI, 1977

Strain	Peters- burg, Va.	Ply- mouth, N.C.	Portage- ville, Mo.	Keiser, Ark.	Stone- ville, Miss.(A)	Stone- ville, Miss.(B)	Jay, Fla.	Belle Mina, Ala.
Centennial	32	42	46	33	41	33	26	44
D64-4636	29	39	35	28	33	30	26	39
D74-2249	34	43	48	39	41	39	36	40
D74-2808	29	40	42	32	38	32	16	37
D74-7871	32	43	41	36	41	26	32	47
D74-8278	29	42	40	32	38	30	24	38
D74-8350	33	36	41	37	39	33	24	39
D74-8486	26	39	44	30	40	24	18	40
D74-9099	31	43	46	34	42	36	28	40
D75-16	26	40	40	27	32	22	17	40
D75-7527	29	41	34	31	38	21	17	40
D75-7533	30	46	41	32	39	24	14	47
D75-7722	29	44	43	33	41	28	21	43
D75-8535	31	46	47	39	46	41	36	44
D75-8585	26	37	31	28	30	27	18	35
D75-8601	26	43	38	30	37	30	26	36
D75-8612	27	42	40	37	40	32	18	40
D75-9022	25	36	35	29	34	28	22	40
D75-9853	28	42	44	34	41	31	27	39
D75-9897	28	43	46	30	41	32	20	38
GaT72-418	30	43	43	33	42	34	30	41
N74-1245	26	44	41	30	36	22	18	40
N74-5076	25	34	33	23	33	22	14	31
N75-2155	31	43	46	34	42	36	28	45
N75-2178	24	35	39	30	35	21	22	36
N75-2213	31	44	51	38	42	33	32	47
N75-2500	25	35	33	28	35	25	17	31
N75-2810	25	35	38	27	32	22	18	33
N75-2835	29	39	40	30	33	27	18	32
R74-440	27	36	39	26	36	18	14	37
R74-1625	28	43	43	31	38	23	15	40
R75-140	26	41	40	32	41	23	17	41
R75-655	31	36	41	28	42	38	18	39
R75-832	31	42	47	33	41	25	26	40
R75-1955	28	41	39	36	40	35	22	37
R75-3575	28	36	41	32	41	33	24	38

Table 35 - Seed quality for the strains in Preliminary Group VI, 1977

Strain	Peters- burg, Va.	Portage- ville, Mo.	Keiser, Ark.	Stone- ville, Miss.(A)	Stone- ville, Miss.(B)	Jay, Fla.
Centennial	2.5	2.0	1.0	3.0	2.0	1.0
D64-4636	3.0	2.5	2.0	3.0	2.0	2.0
D74-2249	3.0	2.0	1.5	2.5	2.0	2.0
D74-2808	4.0	2.0	1.0	2.0	2.0	1.0
D74-7871	4.0	2.0	2.5	2.5	2.0	1.0
D74-8278	3.5	2.0	1.0	2.0	2.0	2.0
D74-8350	3.0	3.5	1.5	2.5	2.0	1.0
D74-8486	2.0	2.0	2.5	3.0	2.0	2.0
D74-9099	4.0	2.0	1.0	2.5	2.0	1.0
D75-16	3.0	2.5	2.5	3.0	2.0	2.0
D75-7527	2.0	2.5	3.0	3.0	2.0	4.0
D75-7533	3.0	2.5	2.5	3.0	2.0	4.0
D75-7722	2.0	2.0	2.0	3.0	2.0	3.0
D75-8535	3.0	2.0	1.5	2.0	2.0	1.0
D75-8585	4.0	2.0	1.5	3.0	2.0	2.0
D75-8601	4.0	2.0	1.5	3.0	2.0	3.0
D75-8612	4.0	4.0	2.0	3.0	2.0	4.0
D75-9022	3.5	2.0	1.0	3.0	2.0	2.0
D75-9853	4.0	2.0	2.5	3.0	2.0	1.0
D75-9897	3.0	2.5	3.0	3.0	2.0	2.0
GaT72-418	2.0	2.0	1.5	3.0	2.0	1.0
N74-1245	3.0	2.0	2.5	3.0	2.0	2.0
N74-5076	3.0	2.0	1.5	2.5	2.0	1.0
N75-2155	4.0	2.0	3.0	3.0	2.0	2.0
N75-2178	2.0	2.5	3.5	3.0	2.0	1.0
N75-2213	3.0	2.0	1.5	2.0	2.0	1.0
N75-2500	0.0	2.0	1.0	2.0	2.0	3.0
N75-2810	3.0	2.0	2.5	3.0	3.0	1.0
N75-2835	4.0	2.0	1.5	3.0	2.0	2.0
R74-440	2.0	2.0	3.0	3.0	2.3	3.0
R74-1625	2.0	2.0	1.0	2.5	2.0	1.0
R75-140	2.0	2.5	2.5	3.0	2.0	3.0
R75-655	4.0	2.0	1.0	3.0	2.0	2.0
R75-832	3.0	2.5	2.5	3.0	2.0	3.0
R75-1955	4.0	2.0	1.0	2.5	2.0	1.0
R75-3575	4.0	2.0	1.0	2.0	2.0	2.0

UNIFORM GROUP VII

1977

<u>Variety or strain</u>	<u>Parentage</u>	<u>Generation composited</u>
1. Bragg	Jackson X D49-2491	F ₆
2. Ransom	(N55-5931 X N53-3818) X D56-1185	F ₅
3. GaSoy 17	Bragg X Hood	F ₄
4. Govan (D66-8666)	Bragg X Semmes	F ₂
5. F71-1180	F59-1505 X [Bragg(3) X D60-7965]	F ₅
6. F71-1138	F59-1505 X [Bragg(3) X D60-7965]	F ₅
7. N72-3189	D65-6765 X Ransom	F ₅
8. F72-6831	Bragg(3) X D60-7965	F ₅
9. Ga72-663	Bragg X Lee	F ₄
10. Ga72-666	Bragg X Lee	F ₄
11. La73-1148	Pickett 71 X Ransom	F ₅
12. N73-1286	Tracy X Ransom	F ₆

Background of strains used as parents:

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

N55-5931 is a selection from Roanoke X D49-2491 which was grown in Uniform Group VII in 1958.

N55-3818 is a selection from (N45-2994 X Ogden) X (N44-92 X N58-1867) which was grown in Preliminary VI in 1957. N45-2994 is from Arksoy X Ogden, N44-92 is from Haberlandt X Ogden, and N48-1867 is from Roanoke X N45-745.

D56-1185 is a selection from Perry X Lee.

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.

D65-6765 is a selection from D58-3358 X D59-9289. It was included in Uniform Group VII in 1968 and 1969.

Results of 28 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 of the seed.

Differences among strains for seed yield were significant at the 5% level of confidence at 16 locations. The combined analysis of variance for seed yield by regions showed a significant variety X location interaction for the Southeast and Delta and West. There were significant differences in mean strain yields in all regions except the Upper and Central South.

Special plantings were made for root knot nematode evaluation. Plantings for *M. incognita* evaluation were made at the Western Florida Research Center. Plantings for *M. arenaria* evaluation were made near the Edisto Experiment Station, Blackville, South Carolina.

F71-1180 is the only strain to have been evaluated three years. Its three-year mean yield is above that for either Braag or Ransom in any of the production regions. F71-1180 has rated low for both *M. incognita* and *M. arenaria* each year. Plans are underway for increase and release of this strain.

GaSoy 17 has good 2-year regional mean yields. However, it rates very susceptible to root knot nematodes. D66-8666 has been released as Govan to provide a variety moderately resistant to both *M. incognita* and *M. arenaria*. Its 2-year mean is good in the Southeast and Delta. F71-1138 has a good 2-year mean seed yield, but not better than F71-1180. It does not have as high a level of resistance to root knot nematodes as F71-1180.

The two first year strains, La73-1148 and N73-1286, did not produce as well as the check varieties.

Table 36 - General summary of performance for the strains in Uniform Group VII,
1977

	Bragg	Ransom	GaSoy 17	Govan (D66-8666)	F71-1180	F71-1138
Seed Yield - 1977						
East Coast	40.6	41.1	44.6	39.6	43.7	46.0+
Southeast	38.6	36.5	40.2	39.4	41.1	41.4
Upper & Central South	39.7	38.1	39.3	37.5-	40.3	43.4
Delta & West	31.9	29.2	33.8	30.5	35.1	33.7
1976-77						
East Coast	40.0	40.3	43.7	37.6	43.5	43.4
Southeast	38.4	37.4	39.9	38.1	40.9	40.9
Upper & Central South	34.0	31.8	34.9	30.4	35.7	37.3
Delta & West	34.0	33.9	36.8	34.0	38.3	37.1
1975-77						
East Coast	41.1	42.4			45.2	
Southeast	40.8	41.7			43.4	
Upper & Central South	38.9	37.1			39.7	
Delta & West	35.5	35.8			38.7	
Oil Content - 1977	20.3	23.0+	21.4+	20.1	20.3	20.9+
1976-77	20.5	22.9	21.0	19.8	20.2	20.6
1975-77	20.4	22.8			20.2	
Protein Content - 1977	42.0	40.0-	39.6-	41.9	41.5	40.9-
1976-77	41.5	39.6	39.6	42.3	41.3	40.9
1975-77	41.7	40.0			41.6	
Seed size	15.1	16.2+	14.8	12.8-	17.4+	18.0+
Maturity index	10-25	+1	+1	-1	+2	+3
Height	38	31	38	34	36	35
Shatter resistance	1.0	1.0	1.0	1.0	1.0	1.0
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	1.0
Phytophthora rot	1.0	2.5	2.0	1.0	1.5	1.5
<i>M. incognita</i>	2.5	4.5	5.0	3.0	2.5	3.5
<i>M. arenaria</i>	2.6	5.0	3.8	2.0	1.8	2.8
Flower color	W	P	W	W	P	P
Pubescence color	T	T	G	G	T	T
Pod wall color	T	Br	T	T	T	T

Table 36 - (continued)

	N72-3189	F62-6831	Ga72-663	Ga72-666	La73-1148	N73-1286
Seed Yield - 1977						
East Coast	41.7	41.5	44.6	43.2	38.9	40.2
Southeast	36.9	39.7	40.2	40.4	35.6	39.4
Upper & Central South	36.8-	41.6+	39.1	42.1+	32.3-	38.8
Delta & West	30.7	34.2	34.3	33.1	30.0	29.6
1976-77						
East Coast	40.2					
Southeast	37.1					
Upper & Central South	31.3					
Delta & West	36.8					
1975-77						
East Coast						
Southeast						
Upper & Central South						
Delta & West						
Oil Content - 1977	23.4 ⁺	20.2	20.9 ⁺	20.9 ⁺	22.2 ⁺	21.1 ⁺
1976-77	22.9					
1975-77						
Protein Content - 1977	38.8-	41.8	40.4-	40.9-	39.7-	41.5
1976-77	39.0					
1975-77						
Seed size	15.4	17.4+	14.7	14.3-	12.7-	17.1+
Maturity index	+2	-1	+2	0	+1	+3
Height	31	37	36	36	30	37
Shatter resistance	1.0	1.0	1.0	1.0	1.0	1.0
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	1.0
Phytophthora rot	2.0	1.0	1.5	1.0	1.5	1.0
<i>M. incognita</i>	4.5	2.5	3.0	4.0	5.0	4.0
<i>M. arenaria</i>	5.0	4.5	2.1	1.5	3.4	3.6
Flower color	W	W	P	P	P	W
Pubescence color	T	T	T	T	G	W
Pod wall color	T	T	T	T	T	T

Table 37 - Seed yield, in bushels per acre, for the strains in Uniform Group VII, 1977

Location	Bragg	Ransom	GaSoy 17	Govan (D66-8666)	F71-1180	F71-1138	N72-3189
<u>East Coast</u>							
Plymouth, N.C.	36.8	40.5	40.2	32.9	44.3	49.4+	46.2+
Clayton, N.C.	38.7	29.2	46.3+	41.2	30.9	42.4	30.1
Kinston, N.C.	34.5	35.4	39.4+	34.8	35.8	38.7	32.9
Clinton, N.C.	46.6	52.8	50.0	45.2	53.2	51.3	50.0
Hartsville, S.C.(A)	47.1	47.2	48.7	46.0	51.2+	50.4	49.3
Hartsville, S.C.(B)	39.7	41.7	42.7	37.6	46.8+	43.6	42.0
Mean	40.6	41.1	44.6	39.6	43.7	46.0	41.7
<u>Southeast</u>							
Blackville, S.C.	31.8	33.8	35.1	33.6	35.1	35.1	33.5
Tallassee, Ala.	30.5	36.0	39.2	34.4	38.8	40.2	35.1
Tifton, Ga.	45.6	43.3	53.6+	43.3	52.8+	54.1+	46.6
Gainesville, Fla.	34.1	25.1-	33.0	28.4-	32.8	38.0	22.3-
Marianna, Fla.	48.1	46.2	48.7	47.7	48.0	52.7	46.2
*Quincy, Fla.	47.5	52.2	51.0	32.5	52.8	55.7+	44.1
Jay, Fla.	41.8	44.4	36.8	44.1	44.6	42.9	42.6
Fairhope, Ala.	44.2	42.3	47.8	46.6	51.1	49.0	44.4
Poplarville, Miss.	43.2	38.2	39.4	44.5	43.2	42.6	36.0
Baton Rouge, La.	27.7	19.4	28.1	31.8	23.6	18.4	25.8
Mean	38.6	36.5	40.2	39.4	41.1	41.4	36.9
<u>Upper and Central South</u>							
Athens, Ga.	45.1	44.0	43.7	43.4	44.2	47.9	44.2
Clemson, S.C.	34.3	32.1	34.9	31.6	36.4	38.9	29.3
Mean	39.7	38.1	39.3	37.5-	40.3	43.4	36.8
<u>Delta and West</u>							
Stoneville, Miss.(A)	27.6	23.0	35.3+	29.4	36.4+	32.9+	23.9
Stoneville, Miss.(B)	24.5	16.5-	28.7+	26.2	31.2+	32.3+	23.6
Pine Bluff, Ark.	63.0	51.0-	53.0	55.0	53.0	48.0-	50.0-
Stuttgart, Ark.	33.9	40.2	37.1	34.5	37.3	37.8	37.8
Rohwer, Ark.	19.1	20.6	24.7+	23.1+	23.3	22.7	22.6
St. Joseph, La.	39.0	35.1	38.2	22.4-	47.9+	42.7	40.6
Bossier City, La.	20.5	24.0	22.0	26.0	27.2	24.7	15.6
Crowley, La.	18.8	16.1	19.6	21.8	20.1	18.9	23.1
Beaumont, Tex.	41.2	36.0	45.6	36.4	40.4	43.3	39.2
Mean	31.9	29.2	33.8	30.5	35.1	33.7	30.7

*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	F72-6831	Ga72-663	Ga72-666	La73-1148	N73-1286	L.S.D. (.05)	C.V. %
<u>East Coast</u>							
Plymouth, N.C.	38.9	45.2+	42.7	38.1	44.4	7.8	11
Clayton, N.C.	38.4	42.6	36.2	40.8	26.9	6.6	10
Kinston, N.C.	33.9	34.5	35.5	24.3-	34.6	4.7	8
Clinton, N.C.	52.1	54.5	53.1	49.7	54.0	N.S.	8
Hartsville, S.C.(A)	46.6	48.1	49.3	44.3	45.2	3.6	4
Hartsville, S.C.(B)	39.2	42.4	42.4	36.1	36.4	4.8	7
Mean	41.5	44.6	43.2	38.9	40.2	N.S.	
<u>Southeast</u>							
Blackville, S.C.	31.5	36.1	39.0+	32.7	30.8	4.6	8
Tallassee, Ala.	37.3	36.1	36.2	29.7	41.5	N.S.	19
Tifton, Ga.	49.1	47.5	47.2	40.8	46.1	6.0	7
Gainesville, Fla.	36.9	26.7-	25.8-	19.7-	31.9	5.3	10
Marianna, Fla.	50.1	54.6	58.2	48.6	52.1	N.S.	9
Quincy, Fla.	54.0	50.0	47.7	48.7	51.2	7.0	8
Jay, Fla.	39.1	47.0	48.4	42.9	41.6	N.S.	12
Fairhope, Ala.	45.4	47.3	48.3	44.7	48.3	N.S.	10
Poplarville, Miss.	50.7	44.2	40.3	30.8	40.3	N.S.	14
Baton, Rouge, La.	17.8	22.2	20.6	30.5	22.7	N.S.	26
Mean	39.7	40.2	40.4	35.6	39.4	3.5	
<u>Upper and Central South</u>							
Athens, Ga.	45.1	43.8	46.5	39.6-	42.8	4.7	6
Clemson, S.C.	38.1	34.5	37.9	25.0	34.7	N.S.	15
Mean	41.6+	39.2	42.2+	32.3-	38.8		
<u>Delta and West</u>							
Stoneville, Miss.(A)	27.1	26.4	28.3	25.8	26.1	4.8	10
Stoneville, Miss.(B)	27.4	25.0	23.0	23.1	20.3-	3.9	9
Pine Bluff, Ark.	58.0-	57.0-	49.0-	52.0-	42.0-	10.3	12
Stuttgart, Ark.	37.6	37.5	39.5	40.3	37.3	N.S.	6
Rohwer, Ark.	23.9+	27.6+	26.6+	23.3+	23.1	3.8	10
St. Joseph, La.	44.4	43.0	43.2	20.5-	35.7	7.6	12
Bossier City, La.	24.7	27.8	25.6	22.9	25.1	N.S.	18
Crowley, La.	21.0	19.1	19.0	21.3	16.7	N.S.	26
Beaumont, Tex.	43.9	45.0	44.0	40.7	40.0	N.S.	13
Mean	34.2	34.3	33.1	30.0	29.6	3.8	

Table 38 - Chemical composition and seed size for the strains in Uniform Group VII, 1977

Location	Bragg	Ransom	GaSoy 17	Govan (D66-8666)	F71-1180	F71-1138
<u>Oil Percentage</u>						
Clayton, N.C.	17.2	18.0	18.0	16.2	16.2	16.8
Clinton, N.C.	19.5	21.4	20.1	19.2	19.1	19.6
Blackville, S.C.	20.3	23.5	21.8	19.2	20.6	20.6
Tifton, Ga.	21.0	24.0	22.5	20.8	21.2	21.4
Gainesville, Fla.	22.1	25.4	23.4	22.5	21.9	22.6
Jay, Fla.	21.9	25.0	23.4	21.2	21.5	22.7
Baton Rouge, La.	20.5	23.3	21.7	21.5	22.2	21.9
Stuttgart, Ark.	19.6	22.1	20.0	18.8	19.4	20.4
Stoneville, Miss.(B)	20.1	22.8	20.8	20.4	20.4	21.5
Beaumont, Tex.	20.4	24.0	22.2	20.7	20.8	21.1
Mean	20.3	23.0+	21.4+	20.1	20.3	20.9+
<u>Protein Percentage</u>						
Clayton, N.C.	42.1	42.2	39.4	42.8	44.2	42.7
Clinton, N.C.	41.6	40.9	40.6	42.3	42.5	41.6
Blackville, S.C.	42.1	39.2	39.6	42.1	40.8	41.3
Tifton, Ga.	42.1	39.9	40.1	41.7	42.0	41.5
Gainesville, Fla.	41.6	39.2	39.6	41.9	41.6	40.8
Jay, Fla.	41.5	39.2	39.1	41.5	41.1	40.1
Baton Rouge, La.	43.5	39.9	39.7	40.1	40.0	40.1
Stuttgart, Ark.	41.4	40.7	40.3	42.5	41.3	41.1
Stoneville, Miss.(B)	40.6	39.5	38.3	41.2	39.6	38.5
Beaumont, Tex.	43.0	39.2	39.4	42.5	41.7	41.2
Mean	42.0	40.0-	39.6-	41.9	41.5	40.9-
<u>Grams Per 100 Seeds</u>						
Clayton, N.C.	19.1	20.6	16.1	14.5	22.5	20.4
Clinton, N.C.	13.5	15.6	13.4	11.6	15.8	16.6
Blackville, S.C.	13.0	14.0	13.5	11.0	14.5	16.5
Tifton, Ga.	18.2	18.6	17.5	15.2	20.6	21.4
Gainesville, Fla.	16.6	16.9	16.4	14.4	20.1	20.1
Jay, Fla.	16.0	16.1	15.4	14.0	18.4	20.9
Stuttgart, Ark.	14.7	16.0	14.7	12.0	15.7	17.0
Stoneville, Miss.(B)	11.5	12.2	12.4	9.6	13.2	13.2
Beaumont, Tex.	13.5	15.4	13.9	12.5	15.7	15.9
Mean	15.1	16.2+	14.8	12.8-	17.4+	18.0+

Table 38 - (continued)

Location	N72-3189	F72-6831	Ga72-663	Ga72-666	La73-1148	N73-1286	L.S.D. (.05)
<u>Oil Percentage</u>							
Clayton, N.C.	18.2	15.7	16.4	17.2	20.5	15.9	
Clinton, N.C.	22.3	19.7	19.4	19.9	21.8	20.2	
Blackville, S.C.	23.1	20.7	20.9	20.8	21.5	21.8	
Tifton, Ga.	24.4	20.5	21.6	21.3	23.1	21.4	
Gainesville, Fla.	25.8	22.6	23.3	22.9	24.7	23.7	
Jay, Fla.	25.7	20.9	22.2	22.4	24.1	22.5	
Baton Rouge, La.	25.1	20.6	21.6	21.4	21.6	21.4	
Stuttgart, Ark.	22.1	19.2	20.3	20.2	20.9	19.6	
Stoneville, Miss.(B)	23.2	21.0	21.4	21.4	20.9	21.4	
Beaumont, Tex.	23.7	20.8	21.5	21.1	22.6	22.7	
Mean	23.4 ⁺	20.2	20.9 [±]	20.9 ⁺	22.2 ⁺	21.1 [±]	0.5
<u>Protein Percentage</u>							
Clayton, N.C.	41.4	43.1	42.3	42.6	38.9	43.7	
Clinton, N.C.	40.0	42.2	41.1	41.2	39.2	41.1	
Blackville, S.C.	39.2	41.3	39.6	40.2	40.1	40.5	
Tifton, Ga.	38.3	42.6	40.7	41.5	39.5	42.6	
Gainesville, Fla.	38.8	40.7	39.7	40.4	39.9	39.2	
Jay, Fla.	37.2	41.8	40.6	40.4	38.8	41.5	
Baton Rouge, La.	38.0	42.5	40.0	40.6	40.4	42.3	
Stuttgart, Ark.	39.6	41.8	40.5	41.3	40.7	42.3	
Stoneville, Miss.(B)	37.3	39.9	38.3	39.4	39.4	41.0	
Beaumont, Tex.	38.6	42.1	40.7	41.5	40.0	40.7	
Mean	38.8-	41.8	40.4-	40.9-	39.7-	41.5	0.6
<u>Grams Per 100 Seeds</u>							
Clayton, N.C.	19.8	20.7	17.8	16.6	14.5	20.2	
Clinton, N.C.	14.0	15.5	13.8	13.9	11.0	15.6	
Blackville, S.C.	13.5	15.0	12.0	12.0	11.0	14.5	
Tifton, Ga.	18.7	21.0	17.7	17.2	14.9	20.2	
Gainesville, Fla.	16.2	19.9	15.9	15.8	14.3	16.6	
Jay, Fla.	16.3	18.0	15.8	15.4	13.8	19.3	
Stuttgart, Ark.	14.0	16.7	14.7	14.3	12.7	17.3	
Stoneville, Miss.(B)	11.8	13.2	11.2	10.4	10.0	13.6	
Beaumont, Tex.	14.3	16.9	13.5	13.4	12.0	16.9	
Mean	15.4	17.4 ⁺	14.7	14.3-	12.7-	17.1 ⁺	0.7

Table 39 - Relative maturity data, days earlier(-) or later(+) than Bragg, for the strains in Uniform Group VII, 1977

Location	Date planted	Bragg matured	Ransom	GaSoy 17	Govan (D66-8666)	F71-1180	F71-1138
<u>East Coast</u>							
Plymouth, N.C.		10-30	0	+3	0	-2	0
Clayton, N.C.	6-7	11-12	-8	+5	-1	+3	-1
Clinton, N.C.	5-17	10-28	0	0	0	+4	+4
Hartsville, S.C.(A)	6-8	10-25	0	0	-2	-1	+4
Hartsville, S.C.(B)	6-15	10-25	+2	+2	-1	+1	+3
Mean		10-30	-1	+2	-1	+1	+2
<u>Southeast</u>							
Blackville, S.C.	5-30	10-20	-2	-2	-1	0	+1
Tallassee, Ala.	5-24	10-17	+2	-5	+1	0	+2
Tifton, Ga.	5-18	10-17	+2	0	-3	0	0
Gainesville, Fla.	6-23	10-22	-4	-1	-2	+2	+1
Marianna, Fla.	6-21	10-21	+3	-2	0	+2	+2
*Quincy, Fla.	5-17	10-14	+8	0	-4	+2	+4
Jay, Fla.	5-26	10-17	+2	0	+2	+2	+4
Fairhope, Ala.	6-3	10-17	0	-2	-1	+3	+3
Poplarville, Miss.	5-24	10-26	-3	-8	-5	-1	+1
Baton Rouge, La.	5-18	10-26	-2	+1	+3	-2	-1
Mean		10-20	0	-2	-1	+1	+1
<u>Upper and Central South</u>							
Athens, Ga.	5-5	10-22	+1	+2	0	+2	+2
Clemson, S.C.	5-27	11-1	+5	+3	+4	+4	+6
Mean		10-27	+3	+3	+2	+3	+4
<u>Delta and West</u>							
Stoneville, Miss.(A)	5-24	10-25	+3	+5	-2	+1	+5
Stoneville, Miss.(B)	5-9	10-23	+5	+5	-2	+5	+7
Pine Bluff, Ark.	5-17	10-31	+1	-10	-4	+3	0
Stuttgart, Ark.	6-7	10-25	+1	-1	-2	-1	-1
Rohwer, Ark.	6-7	10-31	+4	0	0	0	+2
St. Joseph, La.	5-11	10-14	-5	-1	-9	+2	+2
Bossier City, La.	5-10	10-20	-1	0	+2	-1	+2
Crowley, La.	5-5	10-28	+4	-8	-8	0	+4
Beaumont, Tex.	5-13	10-16	+3	+3	0	+4	+3
Mean		10-24	+2	-1	-3	+1	+3

*Not included in mean.

Table 39 - (continued)

Location	N72-3189	F72-4831	Ga72-663	Ga72-666	La73-1148	N73-1286
<u>East Coast</u>						
Plymouth, N.C.	0	-2	-2	-2	0	0
Clayton, N.C.	+3	0	0	+3	0	+3
Clinton, N.C.	0	0	+4	+4	0	0
Hartsville, S.C.(A)	+1	0	+1	-1	+5	0
Hartsville, S.C.(B)	+2	+1	+2	-1	+5	+1
Mean	+1	0	+1	+1	+3	+1
<u>Southeast</u>						
Blackville, S.C.	-1	-3	-3	-3	+3	-2
Tallassee, Ala.	+1	-4	+1	+3	+4	+2
Tifton, Ga.	+2	0	+2	+3	+3	+3
Gainesville, Fla.	-7	0	-1	-2	-2	0
Marianna, Fla.	+3	-1	+1	+1	+3	+3
Quincy, Fla.	+14	0	+5	+6	+1	+6
Jay, Fla.	+5	+2	+3	+1	+2	+5
Fairhope, Ala.	+3	-1	+3	0	0	0
Poplarville, Miss.	0	-7	-2	-5	-4	-3
Baton Rouge, La.	-1	-2	+3	+2	+4	+1
Mean	+1	-2	+1	0	+1	+1
<u>Upper and Central South</u>						
Athens, Ga.	-1	-1	-1	-1	0	0
Clemson, S. C.	+6	+3	+5	+4	+4	+7
Mean	+3	+1	+2	+2	+2	+4
<u>Delta and West</u>						
Stoneville, Miss.(A)	+2	+4	+6	+5	+3	+10
Stoneville, Miss.(B)	+1	+3	+7	+2	+2	+7
Pine Bluff, Ark.	+3	0	+2	0	-2	+1
Stuttgart, Ark.	+1	0	0	-1	0	+2
Rohwer, Ark.	+4	+1	0	+1	0	+4
St. Joseph, La.	-8	-1	+2	0	-5	-2
Bossier City, La.	0	-2	+4	+3	+5	+2
Crowley, La.	+4	-2	0	0	-16	+4
Beaumont, Tex.	+3	0	+3	+3	0	+4
Mean	+1	0	+3	+1	-1	+4

Table 40 - Plant height for the strains in Uniform Group VII, 1977

Location	Bragg	Ransom	GaSoy 17	Govan (D66-8666)	F71-1180	F71-1138
<u>East Coast</u>						
Plymouth, N.C.	47	39	46	45	49	43
Clayton, N.C.	42	37	35	33	35	40
Kinston, N.C.	36	34	39	29	34	32
Clinton, N.C.	46	41	48	45	47	47
Hartsville, S.C.(A)	45	37	44	42	45	43
Hartsville, S.C.(B)	37	31	39	37	39	34
Mean	42	37	42	39	42	40
<u>Southeast</u>						
Blackville, S.C.	40	30	42	36	37	37
Tallassee, Ala.	33	23	33	26	29	31
Tifton, Ga.	37	30	37	34	34	33
Gainesville, Fla.	21	16	22	18	20	21
Marianna, Fla.	28	24	25	26	25	21
Quincy, Fla.	33	23	35	22	31	32
Jay, Fla.	36	26	36	32	36	36
Fairhope, Ala.	31	26	31	26	27	28
Poplarville, Miss.	30	24	33	26	29	29
Baton Rouge, La.	33	24	32	29	26	26
Mean	32	25	32	28	29	29
<u>Upper and Central South</u>						
Athens, Ga.	38	31	39	33	38	35
Clemson, S.C.	35	26	32	28	29	31
Mean	37	29	36	31	34	33
<u>Delta and West</u>						
Stoneville, Miss.(A)	49	43	49	48	50	49
Stoneville, Miss.(B)	45	31	44	41	33	40
Pine Bluff, Ark.	51	50	53	52	50	46
Stuttgart, Ark.	49	41	48	44	45	47
Rohwer, Ark.	37	31	37	33	36	33
St. Joseph, La.	46	41	42	44	43	48
Bossier City, La.	38	30	40	34	38	38
Crowley, La.	34	23	40	34	36	33
Beaumont, Tex.	30	21	32	24	28	25
Mean	42	35	43	39	40	40

Table 40 - (continued)

Location	N72-3189	F72-6831	Ga72-663	Ga72-666	La73-1148	N73-1286
<u>East Coast</u>						
Plymouth, N.C.	39	49	46	46	38	47
Clayton, N.C.	35	39	38	42	38	39
Kinston, N.C.	32	36	33	35	23	34
Clinton, N.C.	43	48	44	44	36	45
Hartsville, S.C.(A)	38	45	43	41	36	42
Hartsville, S.C.(B)	32	37	34	37	33	35
Mean	37	42	40	41	34	40
<u>Southeast</u>						
Blackville, S.C.	33	40	39	39	34	39
Tallassee, Ala.	25	29	29	29	27	29
Tifton, Ga.	28	35	34	31	29	34
Gainesville, Fla.	16	22	19	17	18	21
Marianna, Fla.	20	28	23	25	23	27
Quincy, Fla.	23	32	33	30	26	31
Jay, Fla.	24	36	32	28	28	40
Fairhope, Ala.	23	30	27	30	25	33
Poplarville, Miss.	20	32	30	31	25	29
Baton Rouge, La.	26	25	29	22	32	33
Mean	24	31	29	28	27	32
<u>Upper and Central South</u>						
Athens, Ga.	30	34	39	36	30	39
Clemson, S.C.	27	31	33	31	26	35
Mean	29	33	36	34	28	37
<u>Delta and West</u>						
Stoneville, Miss.(A)	42	49	48	50	36	49
Stoneville, Miss.(B)	31	41	39	42	31	44
Pine Bluff, Ark.	46	49	46	51	45	55
Stuttgart, Ark.	41	47	46	47	38	48
Rohwer, Ark.	33	36	34	36	28	36
St. Joseph, La.	36	46	40	43	38	40
Bossier City, La.	26	39	38	36	29	39
Crowley, La.	25	35	35	28	26	31
Beaumont, Tex.	25	27	22	28	21	30
Mean	34	41	39	40	32	41

Table 41 - Lodging scores for the strains in Uniform Group VII, 1977

Location	Bragg	Ransom	GaSoy 17	Govan (D66-8666)	F71-1180	F71-1138
<u>East Coast</u>						
Plymouth, N.C.	3.3	3.0	3.0	2.0	3.0	3.7
Clayton, N.C.	3.0	2.0	3.0	2.0	3.0	3.0
Kinston, N.C.	3.0	3.0	3.0	2.0	2.3	2.7
Clinton, N.C.	4.0	2.0	5.0	2.0	3.0	5.0
Hartsville, S.C.(A)	3.0	2.5	4.0	2.2	2.5	2.7
Hartsville, S.C.(B)	3.0	2.2	3.5	1.5	2.2	2.3
<u>Southeast</u>						
Blackville, S.C.	1.0	1.0	1.0	1.0	1.0	1.0
Tallassee, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, Ga.	2.0	1.3	2.0	1.3	1.5	1.8
Gainesville, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Marianna, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, Fla.	1.7	1.0	1.7	1.0	1.0	1.7
Jay, Fla.	2.0	1.0	3.0	1.0	1.0	4.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	2.0	1.8	3.3	2.0	1.9	2.7
<u>Upper and Central South</u>						
Athens, Ga.	1.7	1.3	1.7	1.0	1.2	1.7
Clemson, S.C.	1.0	1.0	1.0	1.0	1.0	1.0
<u>Delta and West</u>						
Stoneville, Miss.(A)	3.3	3.0	4.0	2.3	3.3	3.7
Stoneville, Miss.(B)	3.0	2.0	3.3	2.0	3.0	3.0
Pine Bluff, Ark.	2.3	2.0	2.7	3.0	3.0	2.7
Stuttgart, Ark.	2.8	2.5	3.2	2.2	2.5	3.0
Rohwer, Ark.	2.7	2.0	2.0	1.3	1.3	1.7
St. Joseph, La.	2.8	2.8	2.8	2.5	2.5	2.7
Bossier City, La.	2.5	1.7	2.0	1.8	2.0	2.5
Crowley, La.	2.7	1.0	2.7	1.3	2.3	1.3
Beaumont, Tex.	1.0	1.0	1.0	1.0	1.0	1.0

Table 41 - (continued)

Location	N72-3189	F72-6831	Ga72-663	Ga72-666	La73-1148	N73-1286
<u>East Coast</u>						
Plymouth, N.C.	3.0	3.3	4.0	3.7	3.3	4.0
Clayton, N.C.	3.0	3.0	3.0	3.0	3.0	3.0
Kinston, N.C.	2.7	3.0	2.7	3.0	2.7	3.0
Clinton, N.C.	2.0	3.0	5.0	5.0	4.0	4.0
Hartsville, S.C.(A)	2.5	3.2	3.3	3.1	3.8	3.1
Hartsville, S.C.(B)	2.2	2.8	2.7	3.0	2.7	2.8
<u>Southeast</u>						
Blackville, S.C.	1.0	1.0	1.0	2.0	1.0	2.0
Tallassee, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, Ga.	1.3	2.0	2.0	1.5	1.5	2.0
Gainesville, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Marianna, Fla.	1.0	1.3	1.0	1.0	1.3	1.7
Quincy, Fla.	1.0	1.3	2.0	2.0	1.0	2.7
Jay, Fla.	1.0	2.0	2.0	2.0	1.0	3.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	1.5	2.5	2.3	2.3	3.3	2.5
<u>Upper and Central South</u>						
Athens, Ga.	1.2	1.8	2.3	1.8	1.8	1.8
Clemson, S.C.	1.0	1.0	1.0	1.0	1.0	1.0
<u>Delta and West</u>						
Stoneville, Miss.(A)	3.0	3.7	3.7	4.0	3.0	4.3
Stoneville, Miss.(B)	2.0	2.3	2.7	2.7	2.0	3.3
Pine Bluff, Ark.	2.7	2.3	3.0	2.7	2.7	3.0
Stuttgart, Ark.	2.7	2.8	3.3	3.0	3.2	3.2
Rohwer, Ark.	2.0	2.7	3.7	3.0	2.3	1.7
St. Joseph, La.	2.4	2.6	2.9	2.7	2.4	3.5
Bossier City, La.	1.3	2.5	2.8	2.8	2.3	2.5
Crowley, La.	1.0	3.0	3.3	2.0	1.3	2.7
Beaumont, Tex.	1.0	1.0	1.0	1.0	1.0	1.0

Table 42 - Seed quality scores for the strains in Uniform Group VII, 1977

Location	Bragg	Ransom	GaSoy 17	Govan (D66-8666)	F71-1180	F71-1138
<u>East Coast</u>						
Plymouth, N.C.	3.0	3.0	3.5	3.5	3.0	3.0
Clayton, N.C.	1.5	1.5	1.5	1.5	1.5	1.5
Kinston, N.C.	2.0	1.5	2.0	2.0	2.5	1.5
Clinton, N.C.	1.5	1.5	1.5	1.5	1.5	1.5
<u>Southeast</u>						
Blackville, S.C.	2.0	1.0	1.0	1.0	2.0	2.0
Tifton, Ga.	1.5	2.0	1.5	1.5	2.0	2.0
Gainesville, Fla.	1.7	1.7	1.7	1.3	1.0	1.0
Quincy, Fla.	2.7	2.0	2.7	1.0	2.0	2.7
Jay, Fla.	2.0	2.0	2.0	2.0	3.0	2.0
Fairhope, Ala.	1.0	1.3	1.0	1.0	1.0	1.2
<u>Upper and Central South</u>						
Athens, Ga.	1.7	2.2	1.5	1.5	1.5	2.0
<u>Delta and West</u>						
Stoneville, Miss.(A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, Miss.(B)	2.0	2.0	2.0	2.0	2.0	2.0
Pine Bluff, Ark.	2.0	1.5	1.0	2.5	3.0	2.5
Stuttgart, Ark.	2.0	1.8	1.7	1.5	2.3	3.0
Rohwer, Ark.	2.5	2.2	2.5	2.5	3.0	3.0
Beaumont, Tex.	1.5	2.3	1.0	1.5	3.3	3.0

Table 42 - (continued)

Location	N72-3189	F72-6831	Ga72-663	Ga72-666	La73-1148	N73-1286
<u>East Coast</u>						
Plymouth, N.C.	2.5	2.5	3.0	2.5	3.5	3.0
Clayton, N.C.	1.5	1.5	1.5	1.5	1.5	1.5
Kinston, N.C.	1.5	1.5	1.5	1.5	2.0	1.5
Clinton, N.C.	1.5	1.5	1.5	1.5	1.5	1.5
<u>Southeast</u>						
Blackville, S.C.	2.0	1.0	1.0	1.0	2.0	1.0
Tifton, Ga.	3.0	1.5	1.5	1.5	1.0	2.0
Gainesville, Fla.	1.7	1.3	1.7	1.7	1.7	1.3
Quincy, Fla.	2.3	2.0	1.7	2.3	2.7	2.3
Jay, Fla.	3.0	3.0	2.0	2.0	1.0	2.0
Fairhope, Ala.	1.2	1.0	1.0	1.0	1.3	1.0
<u>Upper and Central South</u>						
Athens, Ga.	2.0	1.8	1.5	1.5	2.0	1.5
<u>Delta and West</u>						
Stoneville, Miss.(A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, Miss.(B)	2.0	2.0	2.0	2.0	2.0	2.0
Pine Bluff, Ark.	2.5	2.5	2.0	3.5	2.0	1.0
Stuttgart, Ark.	2.8	1.7	2.2	1.8	1.5	2.2
Rohwer, Ark.	2.8	2.7	2.2	2.2	1.5	2.0
Beaumont, Tex.	2.2	1.3	1.2	1.5	1.0	1.5

PRELIMINARY GROUP VII

1977

Preliminary Group VII nurseries, including 34 experimental strains along with the varieties Bragg and Centennial, were grown 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 for seed yield were significant at 8 locations. The combined analysis of variance for seed yield showed differences among strains to be significant. However, only one strain had a mean seed yield significantly higher than that for Bragg. Two strains averaged significantly lower in yield than Bragg.

Five of the strains had been selected for resistance to foliar-feeding insects. Two of these yielded significantly less than Bragg. D75-11061 has good agronomic qualities and a moderate reaction to the two species of root knot nematodes. Its mean seed yield was 1.4 bushels below that for Bragg.

Strains which appear to merit advancement to Uniform Group VII are D75-9925, F73-7082, F74-1849, and N74-1872.

Table 43 - Parentage of strains in Preliminary Group VII, 1977

Variety or strain	Parentage	Generation composited
1. Bragg		
2. Centennial		
3. D74-6987	D69-6341 X F ₄ sel (Bragg X PI 229358)	F ₅
4. D74-9420	D69-6341 X F ₄ sel (Bragg X PI 229358)	F ₅
5. D74-9482	D69-6341 X F ₄ sel (Bragg X PI 229358)	F ₅
6. D74-9491	D69-6341 X F ₄ sel (Bragg X PI 229358)	F ₅
7. D75-9925	Semmes X Hood	F ₅
8. D75-9943	Semmes X Hood	F ₅
9. D75-9995	Semmes X Hood	F ₅
10. D75-10027	Semmes X Hood	F ₅
11. D75-10040	Semmes X Hood	F ₅
12. D75-11061	D66-8666 X (Bragg X PI 229358)	F ₅
13. F71-1747	Bragg(3) X D60-7965	F ₇
14. F72-6818	Bragg(3) X D60-7965	F ₇
15. F73-7082	Bragg(3) X D60-7965	F ₇
16. F74-1349	F59-1505 X [Bragg(3) X D60-7965]	F ₆
17. F74-1485	F59-1505 X [Bragg(3) X D60-7965]	F ₆
18. Ga71-169	Jackson X Lee	F ₄
19. Ga71-221	Bragg X Lee	F ₄
20. Ga72-643	Bragg X Lee	F ₄
21. Ga75-217	Hardee X Ransom	F ₄
22. GaT72-630	Jackson X Lee	
23. GaT72-3284	Bragg X Co240	
24. GaT73-36	Bragg X F66-242	
25. GaT75-1701	Bragg X Hood	
26. GaT75-1745	Bragg X Hood	
27. N74-1341	D66-8666 X Ransom	F ₅
28. N74-1360	D66-8666 X Ransom	F ₅
29. N74-1572	D66-8666 X Davis	F ₅
30. N74-1682	RS ₁ C ₄ -154 X Ransom	F ₅
31. N75-2285	F66-698 X Ransom	F ₅
32. N75-2385	N67-4063 X D68-216	F ₅
33. N75-2571	Ransom(2) X N71-6004	F ₅
34. N75-2852	Ransom(2) X N71-6004	F ₅
35. Ts75-31	F69-1998 X Ransom	F ₅
36. Ts76-34	Ransom X N66-1337	F ₅

Table 44 - General summary of performance for the strains in Preliminary Group VII, 1977

Strain	Seed yield	Mat. index	Ht.	Percent		PR	Root Knot	
				Oil	Percent		M. <i>incognita</i>	M. <i>arenaria</i>
Bragg	37.2	10-20	40	20.7	41.8	1.0	2.0	2.6
Centennial	37.9	-6	35	21.0	42.1	1.0	1.0	4.2
D74-6987	34.2	-1	38	20.0	41.6	1.0	2.5	3.5
D74-9420	29.4-	+2	40	19.0-	40.7-	1.0	1.0	4.4
D74-9482	32.6-	+2	35	19.9-	42.2	1.0	1.0	3.4
D74-9491	35.9	+1	37	19.4-	42.2	1.0	1.0	5.0
D75-9925	41.6+	-1	32	20.8	41.1	1.0	2.5	4.8
D75-9943	37.0	+1	36	20.0	41.9	1.0	5.0	1.2
D75-9995	35.6	-1	31	21.9+	39.7+	1.0	4.5	4.8
D75-10027	37.5	+3	37	21.3	40.9-	1.0	2.5	5.0
D75-10040	37.1	-7	37	21.5+	42.2	1.0	4.5	1.4
D75-11061	35.8	-2	36	19.5-	42.7+	1.0	3.5	2.6
F71-1747	36.4	0	34	21.6+	41.3	1.0	4.5	5.0
F72-6818	39.2	-1	37	20.6	41.6	1.0	4.0	2.7
F73-7082	40.4	+1	37	21.0	41.1	1.0	2.0	2.1
F74-1349	41.2	+1	39	20.4	41.1	1.0	2.5	2.9
F74-1485	35.1	-1	41	20.8	40.9-	1.0	2.0	3.9
Ga71-169	38.4	+2	41	22.4+	40.9-	1.0	4.0	2.7
Ga71-221	36.6	0	39	20.0	42.5	1.0	3.5	4.4
Ga72-643	38.2	-2	37	20.4	41.6	2.0	4.0	2.6
Ga75-217	37.2	-3	32	21.8+	41.2	2.0	5.0	4.9
GaT72-630	36.1	+1	41	21.2	40.7-	2.0	1.5	1.4
GaT72-3284	38.5	+1	40	20.8	41.8	1.0	2.5	3.6
GaT73-36	35.0	0	37	20.5	41.7	2.8	3.5	2.2
GaT75-1701	39.3	0	42	21.7+	39.7-	1.0	4.0	5.0
GaT75-1745	40.4	0	40	21.8+	39.9-	1.0	4.5	4.0
N74-1341	41.2	+1	37	22.6+	39.6-	1.0	5.0	3.3
N74-1360	41.3	-6	30	23.8+	39.9-	1.0	3.0	5.0
N74-1572	41.5	-3	36	20.7	41.4	1.0	3.0	4.4
N74-1682	34.2	-1	28	20.5	44.1+	1.0	4.5	3.7
N75-2285	39.4	-1	34	21.5+	42.4	1.0	4.0	5.0
N75-2385	37.0	-2	30	21.1	41.6	2.0	3.0	4.8
N75-2571	38.0	-1	29	22.5+	41.1	1.0	4.5	5.8
N75-2852	39.5	+5	34	22.4+	39.7-	1.0	5.0	5.0
Ts75-31	35.9	+7	41	20.2	41.0	1.0	4.0	4.1
Ts76-34	36.1	+1	40	21.5+	41.1	1.0	3.0	3.9
L.S.D. (.05)	3.2			0.7	0.8			
L.S.D. (.01)	4.2			1.0	1.0			

Table 45 - Seed yield, in bushels per acre, for the strains in Preliminary Group VII, 1977

Strain	Clinton, N.C.	Black- ville, S.C.	Tifton, Ga.	Tallas- see Ala.	Jay, Fla.	Baton Rouge, La.	Stone- ville, Miss.(A)	Stone- ville, Miss.(B)	Beaumont, Tex.
Bragg	47.5	33.3	62.4	35.0	39.0	22.3	28.1	27.6	39.7
Centennial	45.7	37.3	57.9	42.9+	40.4	26.3	26.7	21.3-	42.6
D74-6987	45.0	33.0	50.1-	32.8	33.3	29.2	27.4	18.4-	38.3
D74-9420	42.1	31.7	46.7-	26.7-	34.0	15.9	18.8-	17.9-	30.9
D74-9482	44.2	28.7	50.8-	35.0	37.8	23.4	23.1	17.8-	32.4
D74-9491	46.0	33.0	51.4-	41.5	42.4	23.8	26.0	18.2-	40.9
D75-9925	52.9	38.1	59.3	47.0+	44.6	28.7	30.6	30.1	43.5
D75-9943	43.7	32.2	53.9	37.0	50.8+	22.0	21.0-	23.5	49.0
D75-9995	46.6	35.8	51.7-	39.1	35.2	21.8	26.5	22.3-	41.8
D75-10027	50.1	33.4	63.6	38.6	43.4	24.8	21.4	26.8	36.2
D75-10040	50.8	32.9	55.7	35.7	42.3	21.1	28.6	23.0-	44.0
D75-11061	48.4	35.5	56.6	32.9	45.8	19.9	21.0-	19.9-	42.3
F71-1747	48.0	32.0	61.3	39.5	38.6	20.3	24.5	27.6	36.1
F72-6818	47.2	38.0	62.8	39.3	45.4	23.8	26.4	24.0	46.2
F73-7082	51.5	37.8	64.5	40.4	48.0	19.8	28.3	27.0	46.5
F74-1349	49.9	35.3	61.9	39.6	46.2	24.3	32.6	28.9	52.5
F74-1485	51.4	34.3	56.0	37.6	38.6	15.1	23.2	22.5-	37.7
Ga71-169	49.5	32.3	55.8	42.8+	43.8	25.4	24.5	21.5-	50.0
Ga71-221	44.1	32.3	56.3	38.0	36.3	21.8	29.2	25.7	46.0
Ga72-643	49.5	34.6	62.5	39.1	41.2	22.3	24.8	22.0-	48.0
Ga75-217	50.2	36.6	53.1	39.8	40.0	25.3	25.0	21.6-	43.0
GaT72-630	48.7	34.7	62.2	30.7	41.6	19.7	21.2-	20.2-	46.1
GaT72-3284	54.6	36.0	60.4	39.1	42.4	21.5	26.5	26.3	39.3
GaT73-36	51.8	33.4	58.3	39.8	24.2-	22.0	21.2-	23.1-	41.2
GaT75-1701	53.6	37.0	63.2	42.8+	38.2	22.0	29.2	29.4	39.0
GaT75-1745	53.3	38.3	70.0	39.4	40.8	26.3	33.5	29.8	32.9
N74-1341	52.0	34.0	64.1	46.8+	46.9	26.3	24.7	23.3	52.6
N74-1360	51.6	33.9	60.0	44.7+	45.4	31.6+	32.5	27.1	45.1
N74-1572	59.2+	38.5+	61.0	43.2+	48.4	19.9	31.2	27.5	45.0
N74-1682	52.2	28.7	53.5	36.2	42.4	20.4	17.8-	19.4-	37.4
N75-2285	52.6	34.3	64.7	35.5	34.4	30.8+	34.1	27.5	41.0
N75-2385	58.6+	30.5	58.6	39.1	38.6	23.1	27.4	22.1-	35.0
N75-2571	46.2	32.3	57.3	36.6	37.8	29.9	33.3	26.2	42.1
N75-2852	46.6	36.2	62.0	48.4+	48.4	27.2	22.8	19.2-	45.0
Ts75-31	48.4	34.5	63.0	40.6	36.7	14.4	24.7	22.1-	39.3
Ts76-34	50.2	35.5	62.9	34.0	28.8	22.0	18.2-	27.6	45.6
L.S.D. (.05)	8.4	5.2	9.4	7.0	10.4	8.1	6.7	4.3	N.S.
C.V.	8%	5%	8%	9%	13%	17%	13%	9%	16%

Table 46 - Oil percentages for the strains in Preliminary Group VII, 1977

Strain	Clinton, N.C.	Blackville, S.C.	Jay, Fla.	Baton Rouge, La.	Stoneville, Miss.(B)	Beaumont, Tex.
Braag	19.9	20.6	21.4	20.5	20.8	20.7
Centennial	19.8	20.1	21.9	21.1	21.0	22.1
D74-6987	18.9	19.8	20.9	20.4	19.1	20.7
D74-9420	18.5	19.4	19.6	18.6	19.0	19.1
D74-9482	19.6	20.3	20.7	20.0	18.3	20.2
D74-9491	18.3	19.6	20.5	19.4	18.8	19.7
D75-9925	19.6	20.3	22.0	21.3	20.8	20.8
D75-9943	19.1	20.4	20.2	19.6	19.8	21.0
D75-9995	20.2	22.0	23.1	21.6	21.0	23.3
D75-10027	19.4	22.0	23.7	20.3	20.5	21.6
D75-10040	19.6	20.7	23.9	22.8	20.8	21.1
D75-11061	19.6	19.4	20.4	19.1	18.8	19.6
F71-1747	20.1	22.2	22.2	21.0	22.5	21.7
F72-6818	19.6	20.4	22.0	19.7	20.5	21.6
F73-7082	19.6	21.0	22.1	20.7	21.2	21.2
F74-1349	19.3	20.8	20.8	19.7	20.3	21.4
F74-1485	20.4	20.6	21.7	20.4	21.5	20.1
Ga71-169	20.8	23.0	23.2	22.5	22.1	22.6
Ga71-221	19.2	20.1	21.7	18.5	20.0	20.6
Ga72-643	20.2	20.0	20.8	19.9	20.6	20.7
Ga75-217	20.8	22.3	22.7	21.7	21.5	21.7
GaT72-630	20.2	21.4	21.7	20.2	21.9	21.5
GaT72-3284	20.0	20.1	21.8	20.5	20.5	21.6
GaT73-36	19.7	20.0	22.0	19.2	20.2	21.8
GaT75-1701	20.4	21.4	23.3	20.6	22.3	22.4
GaT75-1745	20.4	21.9	23.2	21.2	22.4	21.9
N74-1341	20.9	21.4	23.9	23.9	22.3	22.9
N74-1360	21.1	23.3	26.2	24.8	23.1	24.5
N74-1572	19.8	20.6	21.7	21.4	20.9	19.6
N74-1682	19.7	20.9	20.6	20.7	20.9	20.2
N75-2285	20.4	21.4	21.6	21.9	20.9	22.6
N75-2385	19.7	21.2	22.0	21.9	19.8	21.8
N75-2571	21.4	23.7	24.4	23.2	22.0	20.3
N75-2852	21.3	22.6	23.4	22.3	21.4	23.3
Ts75-31	19.1	19.8	21.5	19.9	20.2	20.9
Ts76-34	21.2	21.4	22.4	21.3	21.2	21.7

Table 47 - Protein percentages for the strains in Preliminary Group VII, 1977

Strain	Clinton, N.C.	Blackville, S.C.	Jay, Fla.	Baton Rouge, La.	Stoneville, Miss. (B)	Beaumont, Tex.
Bragg	41.4	41.7	41.3	43.5	39.9	42.9
Centennial	42.5	41.9	42.0	43.5	40.8	42.1
D74-6987	42.4	41.5	41.1	42.0	41.3	41.4
D74-9420	41.1	40.5	40.7	40.9	39.6	41.5
D74-9482	42.0	41.0	41.7	43.3	42.2	42.9
D74-9491	42.2	41.3	41.6	43.1	41.9	43.0
D75-9925	41.9	41.0	40.2	42.7	38.6	42.0
D75-9943	42.4	40.9	42.6	43.6	40.6	41.5
D75-9995	41.4	39.3	39.0	41.6	37.5	39.5
D75-10027	42.6	40.8	40.1	42.0	39.2	40.5
D75-10040	42.9	42.4	40.7	43.0	40.7	43.4
D75-11061	42.5	42.4	42.8	43.5	41.9	42.9
F71-1747	42.4	39.7	41.4	43.3	38.0	43.0
F72-6818	41.9	41.5	41.3	43.8	40.4	40.5
F73-7082	41.6	41.0	41.3	43.0	38.0	41.4
F74-1349	42.5	40.3	42.0	42.0	38.6	40.8
F74-1485	41.2	41.0	41.3	42.8	37.9	41.2
Ga71-169	41.5	39.8	41.2	41.3	39.9	41.7
Ga71-221	42.4	42.3	42.5	44.9	40.9	41.9
Ga72-643	41.5	41.4	42.5	43.1	39.6	41.4
Ga75-217	41.8	40.3	41.0	42.9	39.1	42.3
GaT72-630	40.9	40.6	41.0	42.0	39.2	40.4
GaT72-3284	41.9	42.3	41.5	44.0	39.4	41.6
GaT73-36	42.0	42.0	42.3	43.2	39.8	40.9
GaT75-1701	40.4	40.0	38.7	42.6	37.3	39.3
GaT75-1745	40.3	39.6	39.1	41.6	38.1	40.9
N74-1341	40.3	39.6	39.2	40.6	38.1	40.0
N74-1360	40.0	39.1	39.8	40.8	38.1	41.5
N74-1572	41.2	41.4	41.1	42.4	39.7	42.5
N74-1682	44.5	43.8	44.8	44.6	42.0	44.6
N75-2285	42.6	42.3	42.7	43.7	40.0	42.8
N75-2385	41.9	41.4	42.2	42.5	40.6	41.0
N75-2571	42.2	40.2	41.0	42.0	39.4	42.0
N75-2852	40.5	39.5	39.9	40.4	39.5	38.6
Ts75-31	41.6	41.0	40.5	42.5	39.3	41.2
Ts76-34	40.4	40.9	41.4	43.0	39.0	41.9

Table 48 - Plant height for the strains in Preliminary Group VII, 1977

Strain	Clinton, N.C.	Black- ville, S.C.	Tifton, Ga.	Tallas- see, Ala.	Jay, Fla.	Baton Rouge, La.	Stone- ville, Miss.(A)	Stone- ville, Miss.(B)	Beau- mont, Tex.
Bragg	49	44	38	35	36	33	51	46	32
Centennial	43	36	36	31	26	38	47	33	24
D74-6987	47	38	38	32	32	39	48	35	30
D74-9420	48	41	37	34	36	40	51	44	33
D74-9482	42	36	34	30	25	36	45	36	36
D74-9491	44	41	34	26	32	39	48	39	34
D75-9925	39	33	35	27	28	35	42	31	22
D75-9943	44	35	31	34	28	36	43	38	32
D75-9995	40	32	33	26	28	32	40	32	21
D75-10027	44	39	34	32	36	42	44	40	23
D75-10040	45	39	41	28	36	36	46	32	32
D75-11061	45	39	30	28	40	33	47	38	24
F71-1747	45	33	33	28	26	39	44	37	23
F72-6818	48	38	36	28	32	35	48	42	24
F73-7082	48	41	32	33	38	28	49	41	24
F74-1349	48	40	36	32	30	39	51	44	30
F74-1485	51	46	36	33	40	38	53	44	30
Ga71-169	48	43	45	35	38	36	51	41	30
Ga71-221	45	41	36	34	36	38	53	42	29
Ga72-643	46	40	37	32	30	35	47	37	28
Ga75-217	40	36	31	23	26	34	41	34	23
GaT72-630	50	42	41	35	36	40	53	42	30
GaT72-3284	49	42	35	31	38	39	54	44	27
GaT73-36	47	41	38	30	36	39	49	34	24
GaT75-1701	50	46	38	35	36	44	52	45	34
GaT75-1745	49	43	36	32	30	45	52	41	36
N74-1341	46	40	38	30	34	36	44	39	25
N74-1360	37	29	32	24	19	39	42	32	20
N74-1572	45	40	33	31	22	39	46	39	26
N74-1682	38	28	33	20	28	27	43	25	15
N75-2285	45	37	32	29	23	39	45	34	24
N75-2385	39	29	29	25	30	31	38	29	18
N75-2571	35	29	34	23	24	27	39	31	20
N75-2852	41	29	31	29	38	37	46	35	24
Ts75-31	52	44	36	33	36	36	51	49	32
Ts76-34	50	40	43	32	36	41	52	42	24

Table 49 - Seed quality scores for the strains in Preliminary Group VII, 1977

Strain	Clinton, N.C.	Blackville, S.C.	Tifton, Ga.	Jay, Fla.	Stone- ville, Miss.(A)	Stone- ville, Miss.(B)	Beaumont, Tex.
Bragg	1.0	2.0	2.0	2.0	2.0	2.0	1.0
Centennial	1.5	1.0	2.5	2.0	2.0	2.0	1.5
D74-6987	1.5	1.0	2.8	1.0	2.0	2.0	2.0
D74-9420	1.5	1.0	2.0	2.0	3.0	2.0	2.5
D74-9482	1.5	1.0	1.5	2.0	2.0	2.0	1.5
D74-9491	1.5	1.0	2.3	2.0	2.0	2.0	1.5
D75-9925	1.0	1.0	2.5	2.0	2.0	2.0	1.0
D75-9943	1.5	2.0	2.0	2.0	2.0	2.0	1.5
D75-9995	1.5	1.0	2.8	2.0	2.0	2.0	1.7
D75-10027	1.5	1.0	1.8	2.0	2.0	2.0	1.2
D75-10040	1.5	2.0	3.0	4.0	2.0	2.5	1.5
D75-11061	1.5	2.0	2.3	2.0	2.5	2.5	1.0
F71-1747	1.0	1.0	2.5	2.0	2.0	2.0	1.5
F72-6818	1.0	1.0	2.3	2.0	2.0	2.0	1.2
F73-7082	1.0	3.0	2.3	2.0	2.5	2.0	1.7
F74-1349	1.0	1.0	2.3	2.0	2.0	2.0	1.7
F74-1485	1.5	2.0	2.5	2.0	2.0	2.0	1.5
Ga71-169	1.5	1.0	2.0	3.0	2.0	2.0	2.0
Ga71-221	1.0	1.0	2.0	2.0	2.0	2.0	1.2
Ga72-643	1.5	2.0	2.3	2.0	2.0	2.0	2.0
Ga75-217	1.0	1.0	2.5	2.0	2.5	2.5	2.2
GaT72-630	1.5	1.0	2.8	2.0	2.0	2.0	1.5
GaT72-3284	1.0	1.0	2.0	2.0	2.0	2.0	1.5
GaT73-36	1.0	1.0	2.0	2.0	2.0	2.0	2.0
GaT75-1701	1.5	1.0	2.3	1.0	2.0	2.0	1.7
GaT75-1745	1.5	2.0	1.8	1.0	2.0	2.0	1.5
N74-1341	1.5	1.0	2.8	2.0	2.0	2.0	1.0
N74-1360	1.5	1.0	3.0	4.0	2.0	2.0	2.7
N74-1572	1.5	1.0	3.0	2.0	2.5	2.5	2.2
N74-1682	1.5	2.0	4.3	5.0	2.5	3.0	3.2
N75-2285	1.0	2.0	2.3	2.0	2.0	2.0	3.0
N75-2385	1.5	2.0	2.0	2.0	2.0	2.0	1.0
N75-2571	1.5	2.0	2.5	2.0	2.0	2.0	1.7
N75-2852	1.5	2.0	1.8	2.0	2.0	2.0	1.7
Ts75-31	1.5	1.0	2.0	2.0	2.0	2.0	2.0
Ts76-34	1.5	2.0	2.8	3.0	2.0	2.0	2.0

UNIFORM GROUP VIII

1977

<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. Ts72-6	Bragg X PI 200492	F ₈
5. F70-2060	F62-2753 X D62-3286	F ₇
6. Dowling (Ts73-16)	Semmes X PI 200492	F ₈
7. Coker 488 (Co73-410)	Hampton 266 X Bragg	
8. D73-10232	D66-8666 X (Bragg X PI 229358)	F ₅
9. Co74-546	Co208 X R64-502	
10. F72-6460	Bragg(2) X F59-2496	
11. F74-1518	F59-1505 X [Bragg(3) X PI 96035]	
12. GaT72-555	Jackson X Hood	

Background for strains used as parents:

F55-822 is the parent line of Bragg.

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

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

F62-2753 is a selection from D51-5091 X N50-2542. D51-5091 is a tall selection from Roanoke X N45-745 and N50-2542 is a high protein selection from Ogden X Biloxi.

D62-3286 is a high protein selection from D49-2491(4) X PI 163453, a wild type.

Co208 is a subline of Hampton.

R64-502 is from Lee(6) X Arksoy.

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.

Eighteen Uniform Group VIII nurseries were grown. Results 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 percentages of the seed.

Differences among strains were significant at the 5% level of confidence at 12 locations. The combined analysis of variance for seed yield for all locations showed a significant variety X location interaction. Differences among strains for mean seed yield were significant.

Both Cobb and Coker 338 have higher mean seed yields than Hutton.

The strain Ts73-16 has been named Dowling and is being released for production. Co73-410 has been designated Coker 488 and released for production.

F70-2060 has been included 3 years. Its 3-year mean of 39.3 bushels is equal to that for Coker 338. In addition, it carries a high level of resistance to the two species of root knot nematodes. With F71-1180 being increased, the need for this strain is minimized. However, its qualities should be useful as a parent. F70-2060 has the wild type PI 163453 in its background. Its good performance illustrates that very low-yielding, non-productive types can be used successfully as parents.

Of the five strains grown one year, only F72-6460 appears to merit further testing. It yielded well and rated low against *M. arenaria*. D73-10232 was selected for resistance to foliar-feeding insects. Its mean yield of 34.2 bushels per acre was lowest for the group. It is resistant to phytophthora rot and has a low score for *M. arenaria*.

Table 50 - General summary of performance for the strains in Uniform Group VIII, 1977

	Hutton	Cobb	Coker 338	Ts72-6	F70-2060	Dowling (Ts73-16)
Seed Yield - 1977	36.9	39.5	40.8	37.6	40.0	37.4
1976-77	37.1	38.1	39.2	38.3	38.3	37.7
1975-77	36.8	38.7	39.5	38.5	39.3	38.3
Oil Content - 1977	20.1	21.4+	23.1+	20.3	21.7+	20.5
1976-77	19.6	21.0	22.2	20.2	21.3	20.2
1975-77	19.8	20.9	22.1	20.6	21.4	20.6
Protein Content - 1977	42.0	38.5-	39.3-	39.7-	38.7-	39.3-
1976-77	42.6	39.0	40.2	39.7	39.4	39.8
1975-77	42.7	39.3	40.4	39.7	39.7	39.9
Seed size	16.9	14.2-	15.5-	14.0-	12.0-	13.8-
Maturity index	10-29	+5	+1	+4	0	+5
Height	32	38	34	35	32	35
Purple stain	1.0	1.8	1.8	1.5	2.0	1.5
Phytophthora rot	3.0	2.0	2.0	2.0	3.0	2.0
<i>M. incognita</i>	2.0	2.5	3.5	3.5	3.0	4.5
<i>M. arenaria</i>	3.4	4.9	3.6	3.3	1.2	3.9
Shatter resistance	1.0	2.0	2.0	2.0	1.0	2.0
Flower color	P	W	W	W	P	W
Pubescence color	T	G	T	G	G	G

Table 50 - (continued)

	Coker 488 (Co73-410)	D73-10232	Co74-546	F72-6460	F74-1518	GaT72-555
Seed Yield - 1977	40.7	34.7	35.3	40.1	38.0	37.5
1976-77	39.5					
1975-77						
Oil Content - 1977	22.8+	18.9-	21.6+	21.0+	20.2	22.4+
1976-77	22.3					
1975-77						
Protein Content - 1977	38.1-	42.4	40.6-	40.9-	40.9-	38.2-
1976-77	38.8					
1975-77						
Seed size	14.6-	12.4-	12.5-	15.5-	17.0	15.1-
Maturity index	-1	+1	-2	0	-1	+1
Height	37	36	29	36	34	38
Purple stain	2.0	1.0	2.5	2.0	2.0	2.0
Phytophthora rot	2.3	1.0	2.0	1.3	2.0	3.0
<i>M. incognita</i>	4.5	5.0	3.5	3.5	1.5	5.0
<i>M. arenaria</i>	3.8	1.4	1.6	1.6	5.0	4.6
Shatter resistance	1.0	1.0	1.5	1.0	1.0	1.0
Flower color	P	W	P	W	P	P
Pubescence color	T	T	G	T	T	G

Table 51 - Seed yield, in bushels per acre, for the strains in Uniform Group VIII, 1977

Location	Hutton	Cobb	Coker 338	Ts72-6	F70-2060	Dowling (Ts73-16)	Coker 488 (Co73-410)
Clinton, N.C.	43.8	40.6	54.6	43.6	51.2	45.7	56.2
Hartsville, S.C.(A)	47.1	38.8-	52.6	42.1	52.0	43.3	48.4
Hartsville, S.C.(B)	35.7	37.0	45.4+	37.9	39.1+	38.3	42.0+
Blackville, S.C.(A)	31.1	34.9	36.7	34.3	34.3	35.1	35.9
*Blackville, S.C.(B)	-	40.9	39.4	39.0	29.4	34.3	37.6
*Athens, Ga.	-	27.2	37.0	32.5	36.2	32.0	31.4
Clemson, S.C.	35.6	37.5	29.7	37.5	38.3	37.1	33.8
Tallassee, Ala.	42.3	45.8	45.9	44.3	41.3	40.7	41.5
Tifton, Ga.	56.9	63.5+	61.4	60.3	68.3+	63.9+	65.1+
Gainesville, Fla.	22.8	37.7+	31.1	27.1	24.7	27.8	30.8
Marianna, Fla.	43.1	43.6	40.6	40.9	44.5	39.3	45.0
*Quincy, Fla.	56.9	48.7-	57.6	51.5-	51.9-	50.7-	60.4
Jay, Fla.	37.0	41.8	40.8	38.8	42.0	29.9	35.0
Fairhope, Ala.	39.4	39.9	44.7	35.8	41.6	39.7	41.1
Poplarville, Miss.	39.8	52.7	49.7	48.8	44.3	46.5	49.0
Baton Rouge, La.	23.7	27.3+	26.5	24.8	30.7+	27.5	31.5+
Stoneville, Miss.	27.7	29.7	28.7	23.3	24.2	23.6	30.0
Bossier City, La.	27.5	21.3	16.8	24.6	23.6	18.7	25.5
Beaumont, Tex.	36.5	40.5	47.4+	37.9	39.5	41.4	40.4
Mean	36.9	39.5	40.8	37.6	40.0	37.4	40.7

*Not included in mean.

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

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

Table 51 - (continued)

Location	D73-10232	Co74-546	F62-6460	F74-1518	GaT72-555	L.S.D. (.05)	C.V. %
Clinton, N.C.	40.9	48.1	49.1	54.6	47.6	6.3	8
Hartsville, S.C.(A)	43.6	42.6	51.9	48.6	47.7	5.6	7
Hartsville, S.C.(B)	33.3	36.2	41.7+	37.1	39.8+	3.1	5
Blackville, S.C.(A)	31.0	35.4	35.2	33.4	33.4	3.6	6
Blackville, S.C.(B)	32.9	34.8	36.3	32.3	35.3	6.1	10
Athens, Ga.	34.4	29.2	38.9	39.3	27.6	6.4	11
Clemson, S.C.	34.4	31.1	32.6	39.2	34.9	N.S.	14
Tallassee, Ala.	29.8	39.4	43.7	35.5	38.2	8.7	13
Tifton, Ga.	57.0	62.1	65.4+	60.3	60.3	6.4	6
Gainesville, Fla.	22.5	18.1	33.0+	36.7+	27.6	9.5	20
Marianna, Fla.	38.5	37.0	42.1	43.4	43.9	N.S.	9
Quincy, Fla.	21.5-	34.0-	57.9	57.0	51.5-	4.7	5
Jay, Fla.	29.3	30.8	39.4	34.3	37.0	N.S.	15
Fairhope, Ala.	40.6	39.4	43.5	36.8	34.1	N.S.	10
Poplarville, Miss.	46.4	38.7	48.6	46.7	47.6	N.S.	12
Baton Rouge, La.	30.5+	22.5	29.3+	22.7	25.6	4.1	9
Stoneville, Miss.	20.2-	19.4-	30.5	26.2	24.9	4.7	11
Bossier City, La.	21.7	26.4	19.1	20.4	17.7	N.S.	26
Beaumont, Tex.	35.3	38.1	36.5	32.2	39.6	6.5	10
Mean	34.7	35.3	40.1	38.0	37.5	2.4	

Table 52 - Chemical composition and seed size for the strains in Uniform Group VIII,
1977

Location	Hutton	Cobb	Coker 338	Ts72-6	F70-2060	Dowling (Ts73-16)	Coker 488 (Co73-410)
<u>Oil Percentage</u>							
Hartsville, S.C.(A)	19.0	20.2	21.7	18.5	21.7	18.6	21.8
Blackville, S.C.(A)	19.1	21.0	21.6	19.6	19.9	19.3	20.5
Tifton, Ga.	21.1	21.9	24.0	21.4	21.8	21.7	24.0
Tallassee, Ala.	20.6	21.0	23.6	19.9	22.2	20.6	22.9
Gainesville, Fla.	21.1	22.8	24.1	22.0	22.5	21.4	24.9
Stoneville, Miss.	18.7	20.7	22.3	19.0	21.3	19.3	21.7
Baton Rouge, La.	19.8	21.2	23.7	20.3	22.2	21.6	23.1
Beaumont, Tex.	21.0	22.7	23.6	21.6	22.0	21.5	23.8
Mean	20.1	21.4+	23.1+	20.3	21.7+	20.5	22.8+
<u>Protein Percentage</u>							
Hartsville, S.C.(A)	41.9	38.0	39.1	40.0	37.9	39.8	37.8
Blackville, S.C.(A)	43.0	39.6	41.0	40.7	40.0	39.8	40.0
Tifton, Ga.	42.7	38.7	39.5	39.5	39.9	39.3	38.1
Tallassee, Ala.	40.8	37.6	37.1	39.2	36.3	38.4	36.3
Gainesville, Fla.	43.0	38.3	40.8	39.7	40.0	39.9	37.8
Stoneville, Miss.	40.3	37.7	38.2	39.2	37.3	38.9	37.3
Baton Rouge, La.	41.4	39.3	38.7	40.2	38.6	38.5	38.0
Beaumont, Tex.	42.5	38.7	40.0	38.8	39.4	40.1	39.1
Mean	42.0	38.5-	39.3-	39.7-	38.7-	39.3-	38.1-
<u>Grams Per 100 Seeds</u>							
Hartsville, S.C.(A)	17.8	13.8	15.1	15.0	12.0	14.8	14.9
Blackville, S.C.(A)	14.5	14.0	15.0	13.5	10.0	13.0	13.0
Tifton, Ga.	22.6	17.5	19.0	17.5	14.6	16.6	17.9
Gainesville, Fla.	19.8	15.3	18.1	14.8	13.6	14.2	16.6
Stoneville, Miss.	14.1	12.0	12.8	12.0	10.7	12.0	12.2
Baton Rouge, La.	15.2	14.0	14.2	12.6	11.0	13.0	13.3
Beaumont, Tex.	14.5	12.8	14.4	12.7	11.8	12.9	14.0
Mean	16.9	14.2-	15.5-	14.0-	12.0-	13.8-	14.6-

Table 52 - (continued)

Location	D73-10232	Co74-546	F72-6460	F74-1518	GaT72-555	L.S.D. (.05)
<u>Oil Percentage</u>						
Hartsville, S.C.(A)	18.9	20.8	20.1	19.6	21.0	
Blackville, S.C.(A)	17.6	19.8	20.2	18.9	20.6	
Tifton, Ga.	20.0	22.2	22.1	20.2	23.2	
Tallassee, Ala.	19.7	22.2	20.2	20.9	22.9	
Gainesville, Fla.	19.3	23.0	22.0	21.7	24.0	
Stoneville, Miss.	18.3	21.3	21.2	20.3	21.7	
Baton Rouge, La.	18.4	21.6	20.9	20.0	22.7	
Beaumont, Tex.	19.2	21.5	21.0	20.0	23.0	
Mean	18.9-	21.6+	21.0+	20.2	22.4+	0.5
<u>Protein Percentage</u>						
Hartsville, S.C.(A)	41.4	40.2	41.0	40.9	38.8	
Blackville, S.C.(A)	43.2	42.0	41.7	42.5	40.1	
Tifton, Ga.	42.6	40.4	41.3	41.7	38.1	
Tallassee, Ala.	40.0	38.4	39.8	39.1	36.2	
Gainesville, Fla.	44.0	41.9	41.3	41.4	39.3	
Stoneville, Miss.	42.3	39.2	38.7	38.7	36.2	
Baton Rouge, La.	42.7	40.4	40.8	41.2	38.4	
Beaumont, Tex.	42.7	42.2	42.4	42.0	38.7	
Mean	42.4	40.6-	40.9-	40.9-	38.2-	0.6
<u>Grams Per 100 Seeds</u>						
Hartsville, S.C.(A)	13.4	13.0	16.7	19.9	16.0	
Blackville, S.C.(A)	12.0	11.0	14.0	16.0	14.0	
Tifton, Ga.	14.4	15.6	19.2	21.5	18.3	
Gainesville, Fla.	12.2	13.5	16.4	18.1	17.1	
Stoneville, Miss.	10.5	10.8	12.6	14.3	12.2	
Baton Rouge, La.	12.4	11.0	14.9	15.8	14.0	
Beaumont, Tex.	11.9	12.8	15.0	13.3	14.2	
Mean	12.4-	12.5-	15.5-	17.0	15.1-	0.9

Table 53 - Relative maturity, days earlier (-) or later (+) than Hutton, for the strains in Uniform Group VIII, 1977

Location	Date planted	Hutton matured	Cobb	Coker 338	Ts72-6	F70-2060	Dowling (Ts73-16)
Clinton, N.C.	5-17	11-1	+2	0	+3	-4	+4
Hartsville, S.C.(A)	6-8	11-2	+4	0	+6	-2	+4
Hartsville, S.C.(B)	6-15	10-30	+7	+3	+8	-1	+8
Blackville, S.C.(A)	5-30	10-23	+11	+6	+10	-1	+9
Blackville, S.C.(B)	7-5	10-31	+6	+1	+6	-3	+4
Athens, Ga.	5-5	10-25	+2	+1	+4	-2	+5
Clemson, S.C.	5-27	11-11	+3	0	+2	-4	+3
Tallassee, Ala.	5-24	10-22	+7	+2	+7	-2	+7
Tifton, Ga.	5-23	10-24	+4	0	+4	0	+3
Gainesville, Fla.	6-23	10-25	+8	+1	+7	-4	+6
Marianna, Fla.	6-23	10-24	+5	+5	+4	-1	+4
Quincy, Fla.	5-17	10-24	+13	0	+6	-2	+13
Jay, Fla.	5-26	10-24	-3	+2	-1	+2	0
Fairhope, Ala.	6-3	10-24	+6	0	+3	+1	+4
Poplarville, Miss.	5-24	11-10	+6	0	+6	0	+6
Baton Rouge, La.	5-18	11-10	+2	+1	+3	-2	+2
Stoneville, Miss.	5-9	11-4	+1	0	0	-5	0
Bossier City, La.	5-10	10-26	+2	+1	+4	-3	+4
Beaumont, Tex.	5-13	10-20	+2	+4	+4	+2	+4
Mean		10-29	+5	+1	+4	0	+5

Table 53 - (continued)

Location	Coker 488 (Co73-410)	D73-10232	Co74-546	F72-6460	F74-1518	GaT72-555
Clinton, N.C.	-3	+2	-3	0	-3	0
Hartsville, S.C.(A)	-1	+2	-2	-1	0	-1
Hartsville, S.C.(B)	+3	+7	0	+2	+1	0
Blackville, S.C.(A)	+2	+7	0	+2	+1	+5
Blackville, S.C.(B)	+2	+1	-1	0	-1	+1
Athens, Ga.	0	+1	-1	-1	+1	+1
Clemson, S.C.	-2	0	-2	-2	-3	+2
Tallassee, Ala.	+1	0	-2	0	-2	0
Tifton, Ga.	0	+3	-1	+1	0	0
Gainesville, Fla.	+1	+2	-4	+1	+2	+1
Marianna, Fla.	+2	+2	-1	0	-1	0
Quincy, Fla.	-4	0	-7	0	-1	-3
Jay, Fla.	-3	+2	0	0	+2	0
Fairhope, Ala.	0	+2	-7	0	-2	-4
Poplarville, Miss.	-13	-13	-17	-4	-13	0
Baton Rouge, La.	+1	-3	-1	-2	-2	-1
Stoneville, Miss.	0	+2	0	0	0	+1
Bossier City, La.	+3	-4	0	0	-3	-1
Beaumont, Tex.	+2	+4	0	+2	-1	+2
Mean	-1	+1	-2	0	-1	+1

Table 54 - Plant height for the strains in Uniform Group VIII, 1977

Location	Hutton	Cobb	Coker 338	Ts72-6	F70-2060	Dowling (Ts73-16)
Clinton, N.C.	43	53	47	52	45	50
Hartsville, S.C.(A)	39	47	45	44	42	46
Hartsville, S.C.(B)	29	37	33	35	35	37
Blackville, S.C.(A)	41	45	41	44	38	44
Blackville, S.C.(B)	-	35	29	28	26	25
Athens, Ga.	-	38	32	36	31	36
Clemson, S.C.	30	33	30	30	30	31
Tallassee, Ala.	29	33	31	30	29	33
Tifton, Ga.	35	36	38	36	38	36
Gainesville, Fla.	17	23	18	19	19	19
Marianna, Fla.	28	34	32	33	30	31
Quincy, Fla.	29	34	34	32	30	31
Jay, Fla.	30	40	28	36	30	32
Fairhope, Ala.	29	33	29	28	25	28
Poplarville, Miss.	30	36	32	35	32	26
Baton Rouge, La.	26	42	32	35	34	36
Stoneville, Miss.	34	43	38	36	28	35
Bossier City, La.	39	40	37	38	34	39
Beaumont, Tex.	30	37	30	38	25	36
Mean	32	38	34	35	32	35

Table 54 - (continued)

Location	Coker 488 (Co73-410)	D73-10232	Co74-546	F72-6460	F74-1518	GaT72-555
Clinton, N.C.	51	49	41	49	47	53
Hartsville, S.C.(A)	49	43	40	47	45	47
Hartsville, S.C.(B)	39	37	29	36	34	36
Blackville, S.C.(A)	47	45	36	43	42	47
Blackville, S.C.(B)	34	26	27	30	26	30
Athens, Ga.	38	44	27	38	34	41
Clemson, S.C.	33	33	30	34	31	35
Tallassee, Ala.	36	30	27	32	32	33
Tifton, Ga.	41	34	34	36	35	44
Gainesville, Fla.	21	22	17	21	23	21
Marianna, Fla.	37	33	29	32	31	35
Quincy, Fla.	36	32	22	33	33	35
Jay, Fla.	40	40	27	40	36	40
Fairhope, Ala.	32	35	23	31	28	34
Poplarville, Miss.	33	37	25	32	32	34
Baton Rouge, La.	35	34	28	35	30	36
Stoneville, Miss.	36	40	30	40	35	35
Bossier City, La.	41	38	33	38	35	42
Beaumont, Tex.	30	38	25	33	26	35
Mean	37	36	29	36	34	38

Table 55 - Lodging scores for the strains in Uniform Group VIII, 1977

Location	Hutton	Cobb	Coker 338	Ts72-6	F70-2060	Dowling (Ts73-16)
Clinton, N.C.	5.0	5.0	3.0	4.3	4.3	5.0
Hartsville, S.C.(A)	3.3	4.0	2.5	3.5	3.0	3.3
Hartsville, S.C.(B)	2.0	2.7	2.5	3.0	2.3	3.0
Blackville, S.C.(A)	2.0	2.0	1.0	2.0	2.0	2.0
Blackville, S.C.(B)	0.0	2.0	1.0	2.0	1.0	1.0
Athens, Ga.	0.0	1.7	1.7	1.7	1.5	1.7
Clemson, S.C.	1.0	1.0	1.0	1.0	1.0	1.0
Tallassee, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, Ga.	1.5	3.0	1.5	1.5	2.0	2.0
Gainesville, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Marianna, Fla.	1.0	1.3	1.0	1.0	1.0	1.0
Quincy, Fla.	1.0	1.0	1.0	1.0	1.0	2.3
Jay, Fla.	2.0	3.0	3.0	2.0	5.0	3.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	2.0	2.0	2.5	2.5	2.5	2.0
Stoneville, Miss.	2.7	3.0	3.0	2.7	2.0	3.0
Bossier City, La.	2.0	2.3	2.8	2.0	1.8	1.8
Beaumont, Tex.	1.0	1.0	1.0	1.0	1.0	1.0

Table 55 - (continued)

Location	Coker 488 (Co73-410)	D73-10232	Co74-546	F72-6460	F74-1518	GaT72-555
Clinton, N.C.	4.0	5.0	2.0	4.3	4.3	3.3
Hartsville, S.C.(A)	2.5	3.7	2.8	3.5	2.7	2.8
Hartsville, S.C.(B)	2.5	3.0	1.2	3.2	2.3	2.3
Blackville, S.C.(A)	1.0	3.0	1.0	2.0	1.0	1.0
Blackville, S.C.(B)	1.0	1.0	1.0	2.0	1.0	1.0
Athens, Ga.	1.5	3.0	1.3	1.7	1.7	1.2
Clemson, S.C.	1.0	1.0	1.0	1.0	1.0	1.0
Tallassee, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, Ga.	1.5	2.0	1.5	2.0	1.5	2.0
Gainesville, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Marianna, Fla.	1.3	2.0	1.0	1.0	1.0	1.0
Quincy, Fla.	1.0	2.0	1.0	1.7	2.0	1.0
Jay, Fla.	1.0	3.0	1.0	3.0	3.0	3.0
Fairhope, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, La.	2.5	2.2	2.5	2.0	2.5	2.3
Stoneville, Miss.	2.3	3.0	2.0	3.0	2.7	2.3
Bossier City, La.	1.8	2.8	1.3	2.8	2.0	1.5
Beaumont, Tex.	1.0	1.0	1.0	1.0	1.0	1.0

Table 56 - Seed quality scores for the strains in Uniform Group VIII, 1977

Location	Hutton	Cobb	Coker 338	Ts72-6	F70-2060	Dowling (Ts73-16)
Clinton, N.C.	1.5	1.5	1.0	1.5	1.5	1.5
Blackville, S.C.(A)	2.0	1.0	2.0	2.0	1.0	2.0
Blackville, S.C.(B)	0.0	2.0	1.0	1.0	1.0	2.0
Athens, Ga.	0.0	2.8	2.0	2.7	2.3	2.3
Tifton, Ga.	2.0	1.5	2.0	1.5	2.0	1.5
Gainesville, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, Fla.	2.0	1.0	2.3	1.7	1.3	2.0
Jay, Fla.	2.0	2.0	2.0	2.0	2.0	2.0
Fairhope, Ala.	1.3	1.2	1.0	1.8	1.2	1.3
Baton Rouge, La.	2.5	2.3	1.9	3.1	3.0	2.7
Stoneville, Miss.	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, Tex.	2.3	2.0	1.5	1.7	2.0	3.0

Table 56 - (continued)

Location	Coker 488 (Co73-410)	D73-10232	Co74-546	F72-6460	F74-1518	GaT72-555
Clinton, N.C.	1.0	1.5	1.5	1.0	1.0	1.5
Blackville, S.C.(A)	1.0	1.0	1.0	1.0	2.0	1.0
Blackville, S.C.(B)	2.0	1.0	1.0	3.0	3.0	2.0
Athens, Ga.	2.0	2.7	2.2	2.5	2.0	1.7
Tifton, Ga.	1.5	1.5	1.5	1.5	2.5	1.5
Gainesville, Fla.	1.0	1.0	1.0	1.0	1.0	1.3
Quincy, Fla.	1.0	2.0	1.0	3.3	3.3	1.0
Jay, Fla.	2.0	2.0	2.0	2.0	2.0	2.0
Fairhope, Ala.	1.2	1.0	1.0	1.0	1.7	1.7
Baton Rouge, La.	2.0	3.1	2.0	2.3	3.3	1.9
Stoneville, Miss.	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, Tex.	1.2	2.7	3.0	2.3	2.7	1.5

PRELIMINARY GROUP VIII

1977

Preliminary Group VIII nurseries, including 34 experimental strains, along with Hutton and Cobb, were grown at 6 locations. The parentage of these strains is reported in Table 57. Performance data are summarized in Tables 58 through 63 with Table 58 giving a general summary of performance.

Differences among strains were significant at the 5% level of confidence at each location. The combined analysis of variance showed a significant variety X location interaction. Differences among strains for mean seed yield were significant. Only one strain gave a mean seed yield significantly greater than that for Hutton. Three strains had mean seed yields significantly below that for Hutton.

The five D strains had been selected for resistance to foliar-feeding insects. All averaged low in mean seed yield.

Several strains received low ratings for both *M. incognita* and *M. arenaria*.

The strains Co75-756, F74-1468, F74-1493, F74-1747, and GaT74-25 appear to merit advancement to Uniform Group VIII.

Table 57 - Parentage of strains in Preliminary Group VIII, 1977

Variety or strain	Parentage	Generation composited
1. Hutton		
2. Cobb		
3. D75-10169	D66-8666 X F ₄ sel (Bragg X PI 229358)	F ₅
4. D75-10172	D66-8666 X F ₄ sel (Bragg X PI 229358)	F ₅
5. D75-10174	D66-8666 X F ₄ sel (Bragg X PI 229358)	F ₅
6. D75-10230	D66-8666 X F ₄ sel (Bragg X PI 229358)	F ₅
7. D75-11043	D66-8666 X F ₄ sel (Bragg X PI 229358)	F ₅
8. Co74-573	Hutton X N63-858	
9. Co75-678	Co208 X Ransom	
10. Co75-751	Hampton 266 X Ransom	
11. Co75-756	Hampton 266 X Ransom	
12. Co75-786	Hampton 266 X Ransom	
13. Co75-788	Hampton 266 X Ransom	
14. F70-2595	(Hardee X D60-9647) X (Bragg X F59-2496)	F ₇
15. F74-1222	F59-1505 X [Bragg(3) X D60-7965]	F ₆
16. F74-1340	F59-1505 X [Bragg(3) X D60-7965]	F ₆
17. F74-1446	F59-1505 X [Bragg(3) X PI 96035]	F ₆
18. F74-1468	F59-1505 X [Bragg(3) X PI 96035]	F ₆
19. F74-1493	F59-1505 X [Bragg(3) X PI 96035]	F ₆
20. F74-1557	F59-1505 X [Bragg(3) X PI 96035]	F ₆
21. F74-1723	F59-1505 X [Bragg(3) X PI 96035]	F ₆
22. F74-1747	F59-1505 X [Bragg(3) X PI 96035]	F ₆
23. F74-1872	F61-3118 X [Bragg(2) X F59-2496]	F ₆
24. F74-1977	F61-3118 X [Bragg(2) X F59-2496]	F ₆
25. F74-2094	F61-3118 X [Bragg(2) X F59-2496]	F ₆
26. F74-2103	F61-3118 X [Bragg(2) X F59-2496]	F ₆
27. F74-2306	F63-3999 X (F61-3118 X D60-7965)	F ₆
28. F74-2332	F63-3999 X (F61-3118 X D60-7965)	F ₆
29. F74-2354	F63-3999 X (F61-3118 X D60-7965)	F ₆
30. Ga75-223	Hardee X Ransom	F ₄
31. Ga75-224	Hardee X Ransom	F ₄
32. Ga75-263	Hardee X Ransom	F ₄
33. Ga74-25	Bragg X F66-242	
34. N75-2753	Ransom(2) X N71-6004	F ₅
35. Ts75-27	D66-8666 X (Bragg X PI 229328)	
36. Ts75-32	F68-1998 X Ransom	

Table 58 - General summary of performance for the strains in Preliminary Group VIII, 1977

Strain	Seed yield	Mat. index	Ht.	Percent		Seed holding	PR	Root Knot	
				Oil	Protein			M. <i>incognita</i>	M. <i>arenaria</i>
Hutton	32.6	10-25	34	20.3	42.4	1.0	1.5	2.0	3.5
Cobb	37.4	+6	36	21.4	39.5	2.0	2.0	2.0	4.5
D75-10169	27.0	+4	36	18.3-	43.9+	2.0	1.0	4.0	2.0
D75-10172	23.9-	+4	33	18.0-	44.1+	2.0	1.0	2.5	3.5
D75-10174	27.1	+3	35	18.8-	43.6+	1.0	1.0	4.5	1.5
D75-10230	26.6-	-2	32	18.8-	41.4-	2.0	1.0	4.5	2.7
D75-11043	25.6-	+4	34	19.1-	42.2	2.0	1.0	4.5	2.0
Co74-573	32.3	-2	32	20.4	42.4	1.0	2.0	1.5	3.2
Co75-678	33.3	+3	31	22.0+	39.5-	2.0	2.0	5.0	4.8
Co75-751	33.0	+1	29	20.9	40.7	1.0	2.0	5.0	4.4
Co75-756	35.9	+2	33	22.1+	39.3-	1.0	2.0	2.5	4.9
Co75-786	31.4	+4	32	23.6+	39.4-	1.0	1.0	5.0	4.4
Co75-788	32.5	+2	32	22.3+	40.0-	1.0	1.0	3.5	3.5
F70-2595	33.7	+1	33	21.1	41.2-	2.0	1.0	3.0	3.6
F74-1222	32.9	-1	33	20.8	40.9-	1.0	1.0	2.5	1.0
F74-1340	32.7	-1	34	20.4	41.2-	1.0	1.0	3.0	1.3
F74-1446	27.0	-3	35	21.6+	40.7-	1.0	1.0	2.5	2.1
F74-1468	35.1	-3	36	22.4+	40.6-	2.0	1.0	2.0	1.6
F74-1493	35.8	-6	33	21.6+	40.4-	2.0	1.0	2.5	2.6
F74-1557	34.8	-1	32	20.2	41.8-	2.0	1.0	2.0	4.0
F74-1723	34.2	0	33	21.9+	40.3-	2.0	1.0	3.0	1.8
F74-1747	38.5	-1	31	20.9	40.7-	2.0	1.0	2.5	2.7
F74-1872	32.6	+5	43	21.3	40.5-	2.0	2.0	2.5	1.4
F74-1977	32.0	+6	44	20.8	40.9-	2.0	2.0	1.5	3.6
F74-2094	32.2	+5	40	19.6	42.2	2.0	2.0	1.5	4.3
F74-2103	33.6	+6	39	19.1-	42.5	1.0	1.0	3.0	5.0
F74-2306	33.1	+1	34	19.7	42.0	2.0	1.0	2.5	4.7
F74-2332	33.6	+1	35	18.9-	42.1	1.0	2.0	1.5	5.0
F74-2354	35.9	+1	37	19.2	41.6-	2.0	2.0	3.0	4.7
Ga75-223	32.2	0	34	22.0+	41.0-	1.0	2.0	4.0	5.0
Ga75-224	30.6	0	31	21.9+	40.8-	2.0	1.0	5.0	4.7
Ga75-263	32.0	+2	35	22.1+	40.6-	2.0	2.0	4.5	2.7
Ga74-25	35.2	+3	38	20.2	41.6-	2.0	1.0	2.5	3.3
N75-2753	34.2	+2	34	21.1	40.4-	2.0	1.0	3.0	4.2
Ts75-27	30.1	+2	39	20.8	42.0	2.0	1.0	3.5	1.8
Ts75-32	27.1	+2	38	20.4	42.1	2.0	1.0	4.5	1.3
L.S.D. (.05)	5.8			1.1	0.4				
L.S.D. (.01)	7.7			1.4	0.5				

Table 59 - Seed yield, in bushels per acre, for the strains in Preliminary Group VIII, 1977

Strain	Blackville, S.C.	Gainesville, Fla.	*Quincy, Fla.	Jay, Fla.	Beaumont, Tex.	Stoneville, Miss.
Hutton	32.7	32.7	55.9	37.4	36.3	23.9
Cobb	32.5	41.1	54.8	42.7	42.5	28.4
D75-10169	21.4-	24.1	33.7-	29.1	36.1	24.3
D75-10172	22.7-	21.2-	41.8-	26.4-	27.4	21.8
D75-10174	23.0-	28.6	36.5-	36.3	25.0-	22.6
D75-10230	31.0	14.5-	42.8-	38.2	28.1	21.6
D75-11043	26.4-	24.8	34.2-	37.8	19.8-	19.5
Co74-573	32.1	30.6	51.7	31.8	43.5	23.6
Co75-678	31.8	28.0	56.8	36.6	45.5	24.6
Co75-751	35.4	24.7	52.3	37.8	42.6	24.4
Co75-756	31.7	36.9	57.1	39.0	46.2+	26.0
Co75-786	32.2	26.9	53.0	34.8	38.9	24.5
Co75-788	37.6	22.4-	58.1	39.3	40.4	22.6
F70-2595	29.7	32.9	54.8	36.6	41.0	28.5
F74-1222	32.1	27.2	52.2	40.4	32.8	32.2+
F74-1340	31.5	28.8	51.0	40.1	34.0	29.3+
F74-1446	33.6	27.9	45.3-	10.8-	40.4	22.1
F74-1468	35.4	33.0	45.9-	38.6	42.1	26.7
F74-1493	32.9	33.4	49.1-	46.5	37.7	28.4
F74-1557	33.6	37.7	54.1	39.3	36.8	26.6
F74-1723	35.6	30.7	49.3-	36.0	40.6	28.3
F74-1747	35.9	36.0	48.8-	46.1	39.7	34.7+
F74-1872	26.3-	32.6	43.5-	46.5	36.3	21.1
F74-1977	28.6	39.8	47.5-	39.0	31.9	20.7
F74-2094	31.0	36.9	46.1-	37.8	34.2	20.9
F74-2103	28.3	38.0	45.8-	43.4	35.8	22.7
F74-2306	30.8	34.4	48.6-	32.9	40.0	27.3
F74-2332	32.7	35.4	52.4	36.3	40.6	22.9
F74-2354	32.5	42.6	42.1-	39.0	38.9	26.5
Ga75-223	28.4	31.6	52.3	43.1	38.2	19.9
Ga75-224	34.0	27.9	55.9	25.4-	45.6	20.5
Ga75-263	29.4	32.3	55.5	37.4	40.6	20.5
Ga74-25	31.4	32.1	45.6-	43.1	39.9	29.5+
N75-2753	36.0	34.3	46.8-	39.3	36.5	25.0
Ts75-27	29.9	27.6	48.4-	37.0	32.5	23.5
Ts75-32	31.9	21.1-	47.5-	30.2	27.8	24.3
L.S.D. (.05)	5.3	9.9	5.7	9.4	9.7	5.2
C.V.	8%	16%	6%	12%	13%	10%

*Not included in mean.

Table 60 - Oil percentages for the strains in Preliminary Group VIII, 1977

Strain	Blackville, S.C.	Gainesville, Fla.	Jay, Fla.	Beaumont, Tex.	Stoneville, Miss.
Hutton	18.9	21.1	23.6	19.6	18.5
Cobb	20.3	21.8	22.3	22.1	20.7
D75-10169	17.5	16.9	19.3	19.0	18.6
D75-10172	16.6	17.6	19.8	17.0	18.9
D75-10174	16.8	19.1	20.1	19.5	18.4
D75-10230	17.5	19.3	19.4	18.9	18.7
D75-11043	19.3	19.5	20.5	18.3	18.0
Co74-573	18.2	21.6	21.6	20.6	19.8
Co75-678	20.1	22.0	21.2	24.3	22.6
Co75-751	19.7	21.6	19.9	22.4	20.8
Co75-756	20.9	22.8	23.2	21.2	22.4
Co75-786	21.4	24.2	24.1	25.5	22.6
Co75-788	20.1	22.0	23.6	23.8	21.9
F70-2595	18.6	22.1	22.7	21.9	20.4
F74-1222	19.1	22.3	19.5	21.6	21.5
F74-1340	18.2	20.7	21.6	21.2	20.5
F74-1446	19.8	22.8	21.7	22.1	21.4
F74-1468	20.5	24.0	22.8	22.2	22.4
F74-1493	19.5	22.0	21.9	23.0	21.4
F74-1557	18.0	21.1	21.3	20.7	20.1
F74-1723	20.0	21.1	23.7	22.6	22.0
F74-1747	18.6	21.5	21.5	21.2	21.5
F74-1872	19.8	22.2	22.8	21.2	20.5
F74-1977	18.9	21.0	21.9	21.6	20.4
F74-2094	17.8	19.1	22.1	19.6	19.5
F74-2103	18.8	18.8	19.9	18.8	19.2
F74-2306	18.1	19.4	20.7	20.5	19.7
F74-2332	17.7	19.1	19.5	20.1	18.0
F74-2354	17.9	19.8	19.8	19.3	19.1
Ga75-223	20.1	23.9	23.2	22.3	20.7
Ga75-224	21.1	23.1	21.3	23.0	20.9
Ga75-263	20.7	24.4	19.6	24.4	21.3
Ga74-25	18.5	20.6	21.3	20.7	20.0
N75-2753	19.9	21.2	22.3	21.7	20.3
Ts75-27	19.3	20.8	21.9	21.7	20.2
Ts75-32	19.3	20.2	21.5	21.0	19.9

Table 61 - Protein percentages for the strains in Preliminary Group VIII, 1977

Strain	Blackville, S.C.	Gainesville, Fla.	Jay, Fla.	Beaumont, Tex.	Stoneville, Miss.
Hutton	43.5	42.8	41.1	43.6	40.9
Cobb	39.8	39.3	40.1	39.8	38.3
D75-10169	43.9	45.5	43.4	44.4	42.4
D75-10172	44.6	45.1	43.2	44.8	42.9
D75-10174	43.9	44.2	43.4	43.7	42.8
D75-10230	42.6	41.4	41.4	41.1	40.3
D75-11043	42.0	41.6	41.3	43.3	43.0
Co74-573	44.3	42.4	43.2	42.6	39.7
Co75-678	40.1	39.7	41.9	38.9	37.0
Co75-751	41.2	40.8	43.7	39.7	38.1
Co75-756	40.8	39.5	39.1	40.8	36.5
Co75-786	40.4	40.0	39.9	38.5	38.1
Co75-788	40.8	41.0	40.4	39.5	38.5
F70-2595	44.0	40.6	41.0	40.9	39.7
F74-1222	42.4	41.0	43.3	40.4	37.3
F74-1340	42.2	42.6	40.5	41.5	39.3
F74-1446	42.1	41.3	41.1	40.1	38.8
F74-1468	41.0	40.6	41.8	41.3	38.2
F74-1493	41.7	40.1	40.6	41.4	38.3
F74-1557	43.1	41.5	41.4	43.2	39.6
F74-1723	41.2	41.4	40.5	40.8	37.4
F74-1747	42.0	41.2	41.2	41.1	38.0
F74-1872	41.5	40.7	40.2	41.1	39.2
F74-1977	41.0	40.6	41.2	41.3	40.2
F74-2094	43.1	42.5	41.1	42.8	41.4
F74-2103	42.6	42.4	42.6	43.7	41.3
F74-2306	42.7	43.1	42.9	41.9	39.3
F74-2332	43.1	42.3	42.0	42.0	40.9
F74-2354	42.6	41.4	41.7	42.1	40.0
Ga75-223	42.0	40.6	40.3	42.3	39.8
Ga75-224	41.5	41.2	40.6	41.0	39.6
Ga75-263	41.2	39.3	42.3	40.2	39.8
Ga74-25	43.7	41.7	40.6	42.6	39.4
N75-2753	41.5	40.7	40.4	40.0	39.3
Ts75-27	43.2	42.6	41.4	42.5	40.2
Ts75-32	42.6	43.0	42.2	42.3	40.7

Table 62 - Plant height for the strains in Preliminary Group VIII, 1977

Strain	Blackville, S.C.	Gainesville, Fla.	Quincy, Fla.	Jay, Fla.	Beaumont, Tex.	Stoneville, Miss.
Hutton	42	23	31	36	28	43
Cobb	44	27	34	34	34	44
D75-10169	42	25	28	36	42	41
D75-10172	41	24	31	32	34	38
D75-10174	44	25	30	36	38	40
D75-10230	40	18	34	32	28	38
D75-11043	41	23	33	34	34	40
Co74-573	41	20	30	33	31	36
Co75-678	39	22	30	32	26	36
Co75-751	38	20	29	30	28	32
Co75-756	37	23	33	36	32	37
Co75-786	40	18	32	30	34	40
Co75-788	38	21	31	36	31	33
F70-2595	39	22	32	36	32	37
F74-1222	40	20	33	36	28	41
F74-1340	41	23	32	36	30	44
F74-1446	45	22	37	36	32	40
F74-1468	44	21	35	37	36	45
F74-1493	40	22	33	36	31	38
F74-1557	41	25	32	30	25	39
F74-1723	41	21	29	34	32	43
F74-1747	39	20	29	32	28	38
F74-1872	53	26	45	40	46	47
F74-1977	55	32	45	42	44	48
F74-2094	49	28	38	44	42	40
F74-2103	49	29	36	40	39	44
F74-2306	44	23	29	36	32	40
F74-2332	46	24	35	32	34	42
F74-2354	45	26	35	36	40	43
Ga75-223	40	23	34	36	32	39
Ga75-224	37	21	29	32	32	37
Ga75-263	37	22	35	40	36	38
GaT74-25	48	27	34	34	40	48
N75-2753	43	25	28	40	29	41
Ts75-27	48	26	35	42	38	45
Ts75-32	47	24	37	36	38	47

Table 63 - Seed quality scores for the strains in Preliminary Group VIII, 1977

Strain	Blackville, S.C.	Gainesville, Fla.	Quincy, Fla.	Jay, Fla.	Beaumont, Tex.	Stoneville, Miss.
Hutton	1.0	1.0	2.0	2.0	1.0	2.0
Cobb	1.0	1.0	1.0	2.0	2.0	2.0
D75-10169	1.0	1.0	2.0	1.0	3.0	2.0
D75-10172	2.0	1.0	1.5	2.0	1.5	2.0
D75-10174	2.0	1.0	3.0	3.0	2.0	2.0
D75-10230	1.0	1.0	1.0	1.0	3.5	2.0
D75-11043	1.0	1.0	1.0	1.0	1.2	2.0
Co74-573	1.0	1.0	1.0	3.0	3.0	2.0
Co75-678	3.0	2.5	3.5	2.0	2.7	2.0
Co75-751	1.0	1.0	1.0	2.0	2.5	2.0
Co75-756	1.0	1.0	1.5	2.0	4.0	2.0
Co75-786	2.0	1.0	1.0	2.0	2.0	2.0
Co75-788	2.0	1.5	3.0	3.0	2.2	2.0
F70-2595	1.0	1.0	1.5	1.0	1.5	2.0
F74-1222	1.0	1.0	2.0	1.0	2.0	2.0
F74-1340	1.0	1.5	1.5	2.0	1.5	2.0
F74-1446	2.0	1.5	2.5	3.0	1.0	2.0
F74-1468	2.0	1.5	2.0	4.0	2.5	2.0
F74-1493	3.0	1.5	2.5	3.0	1.2	2.0
F74-1557	2.0	1.5	3.5	3.0	1.7	2.0
F74-1723	2.0	1.0	2.0	2.0	1.7	2.0
F74-1747	1.0	1.0	1.5	2.0	1.5	2.0
F74-1872	1.0	1.0	1.5	2.0	1.7	2.0
F74-1977	1.0	1.0	1.5	1.0	1.2	2.0
F74-2094	1.0	1.0	1.0	2.0	1.2	2.0
F74-2103	2.0	1.0	1.0	1.0	2.0	2.0
F74-2306	1.0	1.0	1.0	1.0	1.5	2.0
F74-2332	1.0	1.0	1.0	2.0	2.0	2.0
F74-2354	1.0	1.0	1.0	2.0	2.5	2.0
Ga75-223	1.0	1.5	1.5	3.0	3.5	2.0
Ga75-224	1.0	1.0	1.5	1.0	3.0	2.5
Ga75-263	1.0	1.0	2.5	4.0	3.0	2.0
Ga74-25	2.0	1.0	1.5	2.0	2.5	2.0
N75-2753	1.0	1.0	2.0	2.0	1.5	2.0
Ts75-27	1.0	1.0	2.5	2.0	3.0	2.0
Ts75-32	1.0	1.5	2.0	2.0	3.5	2.0