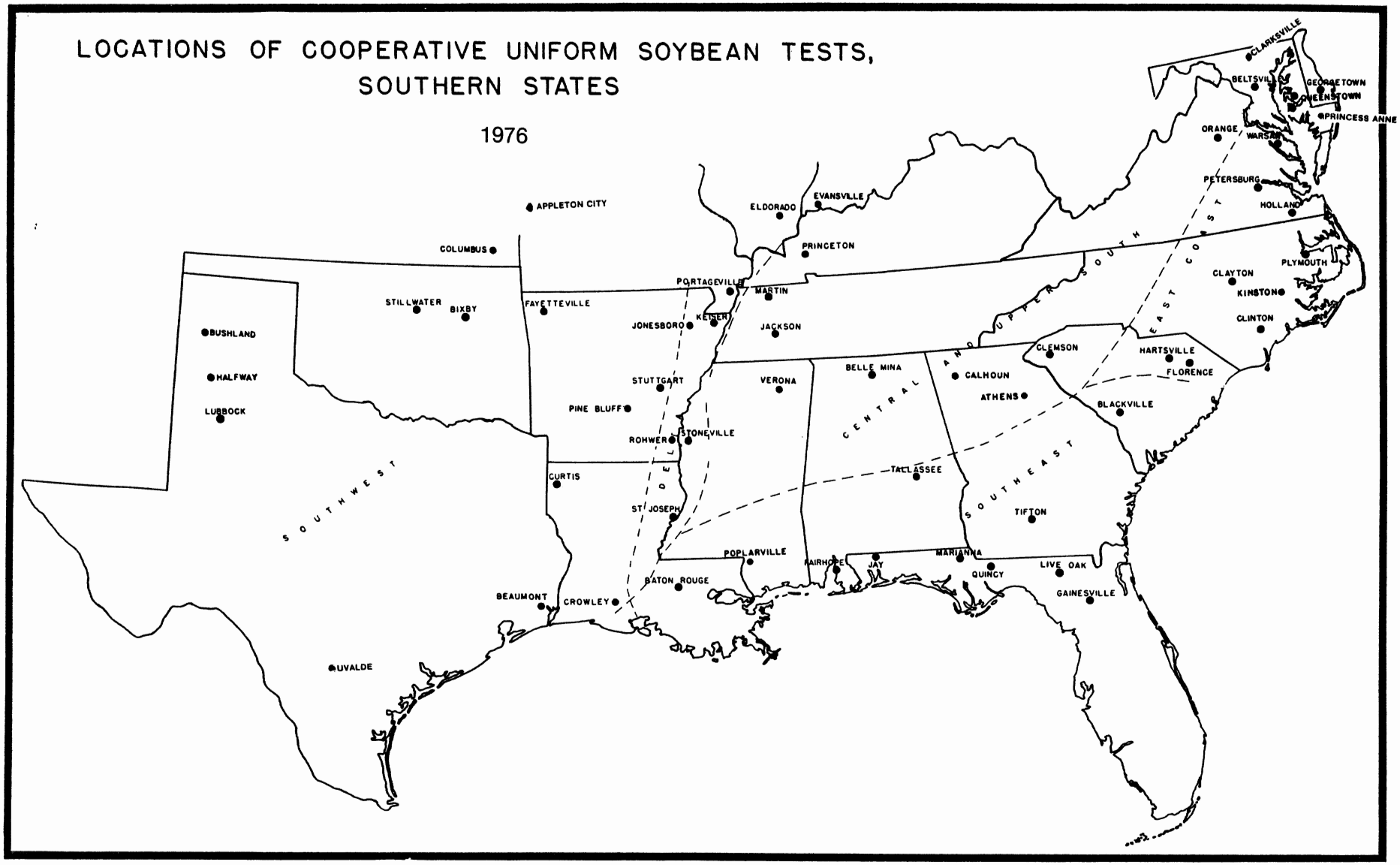
THE UNIFORM SOYBEAN TESTS
SOUTHERN STATES
1976

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

1976



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SOUTHERN STATES

1976

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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: Kent, 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: Kent, 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 Co., Hartsville, S. C.
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.

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

Location	IV	V	VI	VII	VIII	Soil type	P_2O_5	K_2O	pH	Fertilizer[1]	Yield-adapted variety[2]
East Coast											
Queenstown, Md.	1	1*				Mattapex silt loam	H	VH	6.0	0-45-90	42.0 - A
Georgetown, Del.	1	1*				Norfolk loamy sand	H	H	6.2	0-0-120	41.5 - C
Warsaw, Va.	1	1*	1			Sassafras sandy loam	H	M	5.8	0-48-90	36.3 - C
Petersburg, Va.		1	1*			Marlboro f.s. loam	H	M	6.0	0-0-0	24.4 - E
Holland, Va.		1	1			Bertie f.s. loam	H	M+	6.5	0-0-0	51.7 - C
Plymouth, N.C.		1*	1*	1		Bladen f.s. loam	H	H	5.9	0-40-80	46.4 - F
Clayton, N.C.			1	1		Norfolk sandy loam				0-40-80	38.7 - F
Kinston, N.C.			1	1		Norfolk sandy loam				0-40-80	37.0 - C
Clinton, N.C.			1	1	1	Norfolk sandy loam				0-40-80	39.5 - H
Florence, S.C.			1	1	1	Dunbar sandy loam				0-0-0	38.1 - G
Hartsville, S.C.			1	1	1	Norfolk sandy loam				18-54-108	53.0 - H
Southeast											
Blackville, S.C.(A)			1	1*	1	Varina loamy sand	VH	VH	5.8	0-38-75	35.6 - H
Blackville, S.C.(B)					1*	Varina loamy sand	H	M	6.1	0-38-75	
Tifton, Ga.			1	1*	1	Tifton sandy loam	M	H	6.2	0-40-80	53.0 - I
Tallassee, Ala.				1*	1	Cahaba l.f.s.	H	H	6.0	0-28-28	35.4 - G
Gainesville, Fla.				1	1*	Arredonda fine sand	H	M+	6.0	0-40-120	48.8 - J
Marianna, Fla.				1	1	Orangburg f.s.l.	M	H	6.0	25-50-75	42.9 - L
Quincy, Fla.			1	1	1*	Norfolk l.f.s.	H	H	5.9	0-70-70	38.3 - G
Jay, Fla.		1	1	1*	1*	Red bay f.s.l.	H	H	6.0	0-150-100	45.1 - F
Fairhope, Ala.			1	1	1	Malbis f.s.l.	H	M	5.8	16-48-48	49.9 - G
Baton Rouge, La.			1	1*	1	Olivier silt loam	M	M	6.2	0-60-60	48.2 - L
Upper & Central South											
Orange, Va.	1	1				Davidson sandy loam			6.2	18-54-108	35.8 - C
Calhoun, Ga.		1	1	1		Leadvale silt loam	L	M	6.2	0-80-80	19.2 - D
Eldorado, Ill.		1				Harco silt loam	H	M	6.6	0-45-60	48.5 - B
Knoxville, Tenn.	1	1				Sequatchi loam				0-60-60	37.4 - C
Princeton, Ky.	1	1				Crider silt loam	M	M	6.4	0-60-75	39.7 - C
Martin, Tenn.	1	1				Grenada silt loam	L	M	6.5	0-65-65	66.1 - D
Jackson, Tenn.		1	1			Dexter loam	M	H	6.9	0-0-0	41.5 - D
Belle Mina, Ala.		1	1*			Decatur clay loam	H	M	6.0	0-0-60	40.4 - D
Verona, Miss.		1	1			Tuscumbia silty clay	H+	M	7.0	0-80-100	40.3 - F
Athens, Ga.		1	1	1	1	Cecil sandy loam	VH	M	6.7	0-50-100	46.0 - E
Clemson, S.C.			1	1	1	Cecil sandy loam	M	M	6.3	0-35-70	20.2 - E

Location	IV	V	VI	VII	VIII	Soil type	P_2O_5	K_2O	pH	Fertilizer[1]	Yield-adapted variety[2]
Delta											
Evansville, Ind.	1					Montgomery silty clay	M	H	7.1	24-22-96	58.2 - B
Portageville, Mo.(A)	1	1*	1*			Tiptonville silt loam	VH	M	6.7	0-120-12	41.9 - F
Portageville,Mo.(B)	1	1	1			Portageville clay	VH	VH	6.3	0-0-0	33.9 - F
Keiser, Ark.	1	1*	1*			Sharkey clay loam	M	H	6.4	0-0-0	34.9 - E
Jonesboro, Ark.		1	1			Loring silt loam	L	L	5.5	0-42-42	9.5 - D
Stoneville, Miss.(A)		1	1*	1*		Bosket f.s.l.	H	M+	6.7	0-0-0	63.7 - D
Stoneville, Miss.(B)	1	1*	1*	1*	1	Sharkey clay	H	H	6.4	0-0-0	49.3 - E
Rohwer, Ark.			1	1		Gallion s.l.	M	M	6.8	0-0-0	50.9 - F
St. Joseph, La.		1	1	1		Commerce silt loam	H	L	6.0	0-0-0	56.0 - E
West											
Columbus, Kan.	1	1				Cherokee silt loam	L	H	5.8	12-50-50	32.6 - B
Appleton City, Mo.	1	1				Parson silt loam	M	H		0-0-0	14.5 - D
Pine Bluff, Ark.		1	1	1		Calloway silt loam				0-100-188	
Stuttgart, Ark.		1	1	1		Crowley silt loam	VL	L	6.9	0-40-40	54.1 - D
Curtis, La.		1	1	1		Severn very f.s.l.	H	L	7.4	0-0-0	38.5 - F
Crowley, La.			1	1	1	Crowley s.l.	L	L	6.0	0-60-60	42.6 - E
Bixby, Okla.	1	1	1			Reinoch silt loam	VH	M	6.5	0-0-0	29.6 - D
Bushland, Texas	1					Pullman s.c.l.				0-0-0	
Halfway, Texas	1	1				Pullman clay loam	M			0-0-0	38.3 - B
Lubbock, Texas	1	1	1			Amarillo loam	H	VH	8.2	0-0-0	57.0 - C
Beaumont, Texas			1	1*	1*	Morrey silt loam	L	M	7.2	0-40-40	42.2 - F
Uvalde, Texas				1	1	Uvalde s.l.c.	H	VH	7.2	0-0-0	26.3 - L
Clovis, N.M.	1									200-0-0	40.7 - B

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

[2]Varieties: A = Kent; B = Columbus; C = Essex; D = Forrest; E = Tracy; F = Centennial; G = Bragg; H = Ransom; I = GaSoy 17; J = Hutton; K = Coker 338; L = Cobb.

*Preliminary nursery also grown.

METHODS

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

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

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

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

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

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

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

2 - lesions small and few in number

3 - lesions moderate in number and size

4 - lesions numerous and necrosis surround lesions

5 - leaves covered with lesions and much necrosis

B. Root and Stem:

1 - no plants killed

2 - 1 to 3% of plants killed

4 - 9 to 19% of plants killed

5 - over 20% 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 west 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

1976

	Variety or strain	Parentage	Generation composited
1.	Kent	Lincoln X Ogden	F_7
2.	Columbus	C1069 X Clark	F_8
3.	Oksoy	Scott(6) X Blackhawk	F_6
4.	D66-5566	D49-2491(4) X Hawkeye	F_8
5.	V68-1242	PI 80837 X V63-76	F_3
6.	L71L-556	Cutter X Wayne Ir Rpm Rps	
7.	K1017	L66L-140 X Columbus	F_4
8.	K1019	Williams X Columbus	F_4
9.	Md70-2221	3rd cycle intercross, 8 parent diallel	
10.	Md70-8412	D69-17 X Mack	F_6
11.	Md71-407	Clark X D64-4731	F_6
12.	Ts72-824	Bethel X Clark 63	F_4

Background of strains used as parents:

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

D49-2491 is a sister line of Lee.

V63-76 is a selection from Hill X D53-354.

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

D69-17 is a selection from D67-24 X D65-2262. D67-24 is a narrow leaf, phytophthora resistant strain from a cross of a narrow leaf Dorman X a phytophthora rot resistant Hill. D65-2262 is a selection from D54-2437 X PI 261467 which was grown in Uniform IV-S 1967-1970.

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

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- and three-year data are reported for seed yield, oil and protein percentage 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 high variety X location interaction for the East Coast and Delta and strain differences were nonsignificant.

A seven-year comparison between Kent and D66-5566 was reported in the 1975 report. D66-5566 has a consistent advantage over Kent in seed quality. D66-5566 is being considered for release in Maryland. V68-1242, another determinate growth type strain, has a good three-year mean yield. L71L-556 has yielded well but is little better than Kent in seed holding.

Kl017 and Kl019 have been evaluated in northern Group IV. Kl019 is being increased for release in Kansas and other interested states. In these plantings, its yield was similar to Columbus in the Delta and the West. Maturity was 4 days earlier. Seed holding was good.

The two Maryland selections, Md70-2221 and Md71-407, produced well in all areas but Md70-8412 averaged lower than Kent in all areas. Ts72-824 produced satisfactorily but was not uniform for flower color.

Table 1 - General summary of performance for the strains in Uniform Group IV-S, 1976

	Kent	Columbus	Oksoy	D66-5566	V68-1242	L71L-556
Seed Yield - 1976						
East Coast	32.3	34.9	37.0	36.8	33.9	31.8
Upper & Central South	35.0	36.1	35.1	35.6	36.6	35.4
Delta	36.6	38.5	34.8	33.6	35.6	36.8
West	35.4	37.3	34.9	37.4	28.7-	34.4
- 1975-76						
East Coast	35.9	37.5	40.3	40.7	40.5	39.1
Upper & Central South	41.8	40.9	39.9	43.4	44.6	44.3
Delta	42.6	43.5	43.2	40.1	39.3	44.3
West	35.4	35.6	33.9	36.6	29.9	34.6
-1974-76						
East Coast	37.0	37.1	40.6	40.6	40.9	
Upper & Central South	42.2	41.6	39.7	41.7	42.4	
Delta	40.2	40.7	39.8	38.6	38.2	
West	33.8	34.4	32.4	35.8	30.9	
Oil Content - 1976	21.4	20.3-	20.8	20.7-	20.5-	20.4-
- 1975-76	21.4	20.2	20.8	20.7	20.3	20.6
- 1974-76	21.3	20.0	20.4	20.6	20.1	
Protein Content - 1976	40.6	41.3	36.9-	41.0	39.2-	41.8+
1975-76	40.9	41.9	37.6	41.9	39.9	42.3
1974-76	41.2	42.4	38.1	42.1	40.2	
Seed size	17.0	15.3-	14.3-	14.4-	18.6+	16.2-
Maturity index	9-27	+6	+3	0	+5	-4
Seed quality	2.3	1.8	2.2	1.8	1.8	2.2
Height	32	35	36	23	26	32
Bacterial pustule	S	S	R	R	S	S
Percent mottled seed	1.7	3.0	1.0	2.3	0.0	2.0
Percent purple seed coat	1.0	2.0	0.0	0.0	0.0	1.7
Shatter resistance	4.0	1.0	2.5	1.0	1.0	3.0
Flower color	P	P	P	P	P	W&P
Pubescence color	T	T	G	T	G	T
Pod wall	Br	Br	Br	T	T	T
Growth type	I	I	I	D	D	I

Table 1 - (continued)

	K1017	K1019	Md70-2221	Md70-8412	Md71-407	TS72-824
Seed Yield - 1976						
East Coast	38.2	36.1	35.4	31.7	35.6	35.2
Upper & Central South	39.4	38.0	34.8	29.0-	35.6	36.1
Delta	39.4	38.5	35.4	30.5	35.9	39.6
West	34.5	37.3	34.6	30.3-	37.4	36.2
-1975-76						
East Coast						
Upper & Central South						
Delta						
West						
-1974-76						
East Coast						
Upper & Central South						
Delta						
West						
Oil Content - 1976	21.0	20.7-	21.7	19.9-	20.5-	21.1
- 1975-76						
- 1974-76						
Protein Content - 1976	41.3	40.9	39.6-	39.1-	40.9	39.6-
1975-76						
1974-76						
Seed size	17.4	15.6-	15.2	15.5-	14.4-	15.7-
Maturity index	+1	+2	-2	+9	-1	+4
Seed quality	1.8	1.9	2.0	2.0	1.9	1.9
Height	34	35	31	31	32	34
Bacterial pustule	S	S	S	R	S	S
Percent mottled seed	3.3	3.3	0.0	2.3	2.0	2.7
Percent mottled seed coat	0.0	1.7	0.0	0.7	0.0	0.0
Shatter resistance	1.0	1.0	2.0	2.0	1.0	1.0
Flower color	P	P	P	P	P	W&P
Pubescence color	T	T	T	T	T	G
Pod wall	Br	T	Br	Br	T	Br
Growth type	I	I	I	I	I	I

Table 2 - Seed yield, in bushels per acre, for the strains in Uniform Group IV-S, 1976

Location	Kent	Columbus	Oksoy	D66-5566	V68-1242	L71L-556	K1017
			East Coast				
Queenstown, Md.	35.6	34.3	40.8	39.3	36.1	30.5	40.2
Georgetown, Del.	29.1	33.8	38.6	36.5+	30.4	33.9	40.8+
Warsaw, Va.	32.2	36.7+	31.7	34.7+	35.2+	31.1	33.7
Mean	32.3	34.9	37.0	36.8	33.9	31.8	38.2
			Upper and Central South				
Orange, Va.	30.0	31.7	27.6	24.8	31.8	28.7	30.4
Knoxville, Tenn.	24.0	27.5	21.8	24.9	23.3	21.2	33.0+
Eldorado, Ill.	42.6	48.5+	46.6	46.3	44.4	47.2+	51.5+
Princeton, Ky.	43.4	36.5-	44.3	46.3	46.7	44.3	42.8
Mean	35.0	36.1	35.1	35.6	36.6	35.4	39.4
			Delta				
Evansville, Ind.	44.7	58.2	46.8	53.5	57.1	58.0	52.0
Portageville, Mo.(A)	33.2	35.7	36.6	30.1	28.1	33.0	39.9
Portageville, Mo.(B)	29.5	29.2	23.0-	18.1-	20.6-	28.4	27.9
Martin, Tenn.	43.3	45.6	42.0	44.4	46.9+	41.2	47.2+
Keiser, Ark.	32.3	23.9	25.9	31.8	25.3	23.4	26.9
Mean	36.6	38.5	34.8	33.6	35.6	36.8	39.4
			West				
Columbus, Kan.	30.8	32.6	33.5	33.1	25.8	30.0	26.5
Appleton City, Mo.*	13.0	13.6	15.6	13.5	13.8	11.6	14.4
Bixby, Okla.	25.3	26.9	26.1	26.2	24.8	24.3	28.4
Halfway, Texas	40.3	38.3	38.3	41.7	29.0	42.7	36.7
Lubbock, Texas	45.2	51.3	41.4	48.7	35.2-	40.7	46.5
Clovis, N.M.*	40.5	40.7	28.1	34.8	36.1	34.4	40.1
Mean	35.4	37.3	34.9	37.4	28.7-	34.4	34.5

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

Table 2 - (continued)

Location	K1019	Md70-2221	Md70-8412	Md71-407	Ts72-824	L.S.D. (.05)	C.V. (%)
			East Coast				
Queenstown, Md.	35.9	37.3	33.7	37.0	40.5	N.S.	14
Georgetown, Del.	36.7+	36.0+	27.3	35.0	31.7	6.1	13
Warsaw, Va.	35.7+	33.0	34.2+	34.7+	33.4	1.9	3
Mean	36.1	35.4	31.7	35.6	35.2	N.S.	
			Upper and Central South				
Orange, Va.	28.3	30.6	26.2	29.1	32.6	N.S.	12
Knoxville, Tenn.	31.0+	21.5	22.5	22.9	25.4	5.5	13
Eldorado, Ill.	50.7+	44.2	33.9-	45.4	44.5	4.4	6
Princeton, Ky.	42.1	44.0	33.5-	44.9	42.0	4.3	6
Mean	38.0	34.8	29.0-	35.6	36.1	4.6	
			Delta				
Evansville, Ind.	49.7	55.5	56.4	59.3+	48.1	13.8	15
Portageville, Mo.(A)	40.1+	30.8	16.1-	34.9	36.7	6.4	12
Portageville, Mo.(B)	25.7-	20.7-	19.8-	16.7-	31.0	3.7	9
Martin, Tenn.	48.3+	46.1	34.8-	43.9	50.2+	3.1	7
Keiser, Ark.	28.4	24.0	25.5	24.5	32.0	N.S.	20
Mean	38.5	35.4	30.5	35.9	39.6	N.S.	
			West				
Columbus, Kan.	32.9	35.1	24.4-	32.0	25.3	6.3	12
Appleton City, Mo.*	14.8	11.0	14.0	14.7	10.6	2.8	14
Bixby, Okla.	28.2	24.3	21.1-	27.8	27.3	3.3	7
Halfway, Texas	38.9	39.7	38.7	45.0	41.3	N.S.	20
Lubbock, Texas	49.6	39.3-	37.0-	44.8	51.0	5.0	7
Clovis, N. M.*	45.1	37.8	28.3	43.1	40.0		10
Mean	37.3	34.6	30.3-	37.4	36.2	4.7	

Table 3 - Chemical composition and seed size for the strains in Uniform Group IV-S, 1976

Location	Kent	Columbus	Oksoy	D66-5566	V68-1242	L71L-556
			Oil Percentage			
Queenstown, Md.	20.6	19.6	19.7	18.9	19.2	19.4
Warsaw, Va.	22.6	21.6	22.1	21.4	21.5	22.0
Orange, Va.	23.5	20.4	21.2	22.1	22.0	21.8
Knoxville, Tenn.	21.4	19.7	21.7	19.8	20.9	19.9
Evansville, Ind.	20.9	20.9	19.6	21.1	20.0	20.3
Portageville, Mo.(A)	20.5	20.1	22.0	20.9	20.5	20.1
Columbus, Kan.	19.9	19.6	20.1	19.4	20.1	18.8
Bixby, Okla.	21.9	20.7	20.5	21.4	20.0	20.9
Lubbock, Texas	20.9	20.5	20.3	21.2	20.3	20.1
Mean	21.4	20.3-	20.8	20.7-	20.5-	20.4
			Protein Percentage			
Queenstown, Md.	41.6	41.9	38.2	43.3	40.7	42.2
Warsaw, Va.	38.1	39.1	34.8	38.7	37.5	38.9
Orange, Va.	38.1	40.3	35.6	39.0	35.0	39.5
Knoxville, Tenn.	38.6	39.8	32.8	39.7	36.2	40.4
Evansville, Ind.	41.8	41.0	38.4	41.1	39.8	42.2
Portageville, Mo.(A)	42.1	42.7	37.0	42.4	41.0	43.8
Columbus, Kan.	43.4	43.3	39.5	43.6	42.0	44.9
Bixby, Okla.	40.2	41.6	37.8	40.9	40.6	40.9
Lubbock, Texas	41.5	41.9	37.9	40.6	39.7	43.1
Mean	40.6	41.3	36.9-	41.0	39.2-	41.8
			Grams Per 100 Seeds			
Queenstown, Md.	17.1	15.1	15.1	14.3	18.3	16.2
Warsaw, Va.	17.1	16.7	15.4	14.3	20.4	16.5
Orange, Va.	18.4	16.0	15.5	15.3	18.4	16.1
Knoxville, Tenn.	16.0	14.0	12.0	14.0	15.0	14.0
Evansville, Ind.	18.8	15.6	14.7	15.4	21.4	18.9
Portageville, Mo.(A)	14.4	13.6	12.8	12.9	14.9	15.2
Columbus, Kan.	14.6	13.5	13.3	12.7	16.4	13.7
Bixby, Okla.	16.1	14.6	13.1	12.5	18.7	14.9
Lubbock, Texas	20.5	19.0	17.1	18.2	24.2	20.0
Mean	17.0	15.3-	14.3-	14.4-	18.6+	16.2-

Table 3 - (continued)

Location	K1017	K1019	Md70-2221	Md70-8412	Md71-407	Ts72-824	L.S.D. (.05)
			Oil Percentage				
Queenstown, Md.	19.9	20.1	22.2	19.2	19.9	20.3	
Warsaw, Va.	22.1	20.9	23.3	20.9	21.6	21.1	
Orange, Va.	21.8	21.7	23.5	19.5	21.6	22.9	
Knoxville, Tenn.	20.5	20.9	22.4	19.4	20.8	20.7	
Evansville, Ind.	20.8	21.0	20.1	19.5	19.9	21.0	
Portageville, Mo.(A)	21.5	21.5	21.3	19.9	20.5	22.0	
Columbus, Kan.	19.2	19.5	20.6	19.3	19.4	19.1	
Bixby, Okla.	21.7	20.7	20.9	20.6	20.9	21.4	
Lubbock, Texas	21.7	20.3	20.9	20.4	20.2	21.0	
Mean	21.0	20.7-	21.7	19.9	20.5-	21.1	20.7
			Protein Percentage				
Queenstown, Md.	41.1	42.4	39.0	40.5	41.3	40.6	
Warsaw, Va.	40.5	39.9	36.7	36.0	38.6	38.8	
Orange, Va.	39.7	39.1	36.5	37.5	38.6	36.1	
Knoxville, Tenn.	40.1	37.8	36.4	34.6	38.5	37.9	
Evansville, Ind.	41.6	40.3	40.8	40.4	42.1	40.6	
Portageville, Mo.(A)	42.5	41.8	41.4	42.0	42.6	39.6	
Columbus, Kan	44.5	43.9	42.6	42.2	43.1	43.7	
Bixby, Okla.	40.3	41.3	41.2	38.9	40.8	39.5	
Lubbock, Texas	41.4	41.4	41.6	40.0	42.4	39.3	
Mean	41.3	40.9	39.6-	39.1	40.9	39.6-	40.2
			Grams Per 100 Seeds				
Queenstown, Md.	18.2	15.8	15.8	17.2	13.9	16.0	
Warsaw, Va.	17.9	16.2	14.8	16.4	15.0	17.2	
Orange, Va.	17.1	16.3	15.3	16.8	14.9	16.2	
Knoxville, Tenn.	16.0	14.0	12.0	13.0	12.0	14.0	
Evansville, Ind.	19.8	16.2	17.4	17.3	17.2	16.0	
Portageville, Mo.(A)	15.9	13.9	13.9	13.3	12.6	14.2	
Columbus, Kan.	13.7	13.9	14.6	13.3	12.8	13.2	
Bixby, Okla.	15.5	16.3	13.9	14.1	13.5	14.7	
Lubbock, Texas	22.6	17.5	18.9	17.8	18.1	19.9	
Mean	17.4	15.6-	15.2-	15.5-	14.4-	17.7-	15.8

Table 4 - Relative maturity data, days earlier (-) or later (+) than Kent, for the strains in Uniform Group IV-S, 1976

Location	Date planted	Kent matured	Columbus	Oksoy	D66-5566	V68-1242	L71L-556
			East Coast				
Queenstown, Md.	5-24	9-30	+1	+6	-2	+4	-6
Georgetown, Del.	5-24	9-27	+10	+5	0	+14	0
Warsaw, Va.	5-27	9-23	+6	-1	0	+9	-7
Mean		9-27	+6	+3	-1	+9	-4
			Upper and Central South				
Orange, Va.	5-25	9-27	+13	+7	-6	+8	-4
Eldorado, Ill.	5-10	9-20	+13	+6	+4	+10	-3
Princeton, Ky.	5-25	9-23	+4	+3	0	+3	-6
Mean		9-30	+10	+6	-1	+7	-4
			Delta				
Evansville, Ind.	5-4	9-19	+7	+5	0	+11	-1
Portageville, Mo.(A)	5-11	9-19	+5	+1	-4	+3	-6
Portageville, Mo.(B)	5-12	9-23	+2	-2	-5	-3	-7
Martin, Tenn.	6-10	10-7	0	+5	-2	+3	+3
Keiser, Ark.	5-21	9-24	+2	-3	-8	+2	-7
Mean		9-24	+3	+1	-4	-3	-4
			West				
Columbus, Kan.	6-3	9-23	+5	0	+2	+8	-3
Halfway, Texas	5-26	9-25	0	+7	+7	+5	0
Lubbock, Texas	5-18	9-23	+4	0	+13	+11	-3
Clovis, N.M.	5-27	10-5	+2	+2	+2	+2	-1
Mean		9-27	+3	+2	+6	+7	-2

Table 4 - (continued)

Location	Kl017	Kl019	Md70-2221	Md70-8412	Md71-407	Ts72-824
			East Coast			
Queenstown, Md.	+4	+2	-2	+10	-2	+5
Georgetown, Del.	+5	+5	-2	+14	+3	+1
Warsaw, Va.	-1	+2	-5	+9	-4	+3
Mean	+3	+3	-3	+11	-1	+3
			Upper and Central South			
Orange, Va.	-4	-1	0	+13	-4	+8
Eldorado, Ill.	+6	+9	-1	+16	+4	+10
Princeton, Ky.	0	+3	-2	+10	-1	+3
Mean	-1	+4	-1	+13	0	+7
			Delta			
Evansville, Ind.	+1	+1	+1	+17	+7	+3
Portageville, Mo.(A)	+1	+3	-3	+3	-2	+4
Portageville, Mo.(B)	-2	-1	-5	-3	-6	+2
Martin, Tenn.	+3	-2	+2	-2	-1	-2
Keiser, Ark.	0	+2	-9	+3	-5	+1
Mean	+1	+1	-3	+4	-1	+2
			West			
Columbus, Kan.	-2	0	-1	+8	-1	+1
Halfway, Texas	0	0	0	+7	+7	0
Lubbock, Texas	0	+1	-2	+13	-1	+6
Clovis, N. M.	-1	+1	+1	+2	-8	+2
Mean	-1	+1	-1	+8	-1	+2

Table 5 - Plant height for the strains in Uniform Group IV-S, 1976

Location	Kent	Columbus	Oksoy	D66-5566	V68-1242	L71L-556
		East Coast				
Queenstown, Md.	34	39	40	23	24	33
Georgetown, Del.	30	35	35	24	28	27
Warsaw, Va.	29	34	32	22	26	30
Mean	31	36	36	23	26	30
		Upper and Central South				
Orange, Va.	32	35	38	28	34	31
Knoxville, Tenn.	27	31	29	24	26	28
Eldorado, Ill.	41	36	50	33	35	47
Princeton, Ky.	37	39	44	27	30	39
Mean	34	35	40	28	31	36
		Delta				
Evansville, Ind.	40	43	43	32	37	43
Portageville, Mo.(A)	30	38	35	19	23	30
Portageville, Mo.(B)	23	26	20	10	16	22
Martin, Tenn.	36	37	43	21	29	35
Keiser, Ark.	29	30	26	14	19	29
Mean	32	35	33	19	25	32
		West				
Columbus, Kan.	34	38	42	28	28	34
Appleton City, Mo.	24	24	27	22	26	24
Bixby, Okla.	35	38	42	25	23	37
Lubbock, Texas	28	31	34	18	18	28
Clovis, N.M.	28	29	30	17	18	26
Mean	30	32	35	22	23	30

Table 5 - (continued)

Location	K1017	K1019	Md70-2221	Md70-8412	Md71-407	Ts72-824
			East Coast			
Queenstown, Md.	37	38	32	26	31	35
Georgetown, Del.	32	36	28	31	31	33
Warsaw, Va.	31	32	29	29	31	30
Mean	33	35	30	29	31	33
			Upper and Central South			
Orange, Va.	35	36	32	38	33	36
Knoxville, Tenn.	32	34	28	33	28	29
Eldorado, Ill.	45	43	38	41	43	40
Princeton, Ky.	41	40	37	37	37	41
Mean	38	38	34	37	35	37
			Delta			
Evansville, Ind.	41	43	41	36	39	44
Portageville, Mo.(A)	36	38	30	25	33	38
Portageville, Mo.(B)	24	25	23	15	19	25
Martin, Tenn.	37	36	33	34	34	37
Keiser, Ark.	27	28	26	24	28	29
Mean	33	34	31	27	31	35
			West			
Columbus, Kan.	34	36	31	37	34	32
Appleton City, Mo.	27	25	22	27	24	23
Bixby, Okla.	39	38	34	31	36	38
Lubbock, Texas	31	33	29	26	31	32
Clovis, N. M.	28	31	24	28	26	29
Mean	32	33	28	30	30	31

Table 6 - Lodging scores for the strains in Uniform Group IV-S, 1976

Location	Kent	Columbus	Oksoy	D66-5566	V68-1242	L71L-556
			East Coast			
Queenstown, Md.	2.0	3.0	2.7	2.0	2.0	2.0
Georgetown, Del.	2.0	2.3	2.3	2.5	2.0	2.3
Warsaw, Va.	1.0	1.2	1.3	1.0	1.0	1.0
			Upper and Central South			
Orange, Va.	1.0	1.0	1.0	1.0	1.0	1.0
Knoxville, Tenn.	1.0	1.0	1.0	1.0	1.0	1.0
Eldorado, Ill.	4.0	4.5	4.3	3.8	4.1	4.1
Princeton, Ky.	1.3	3.7	1.7	1.0	1.0	1.7
			Delta			
Evansville, Ind.	2.6	4.3	3.2	3.0	3.0	3.0
Portageville, Mo.(A)	1.2	2.0	1.3	1.0	1.0	1.2
Portageville, Mo.(B)	1.3	1.8	1.3	1.2	1.3	1.3
Martin, Tenn.	1.0	2.0	2.0	2.0	1.0	1.0
Keiser, Ark.	1.0	2.0	1.7	1.0	1.0	2.0
			West			
Columbus, Kan.	1.0	1.0	1.0	1.0	1.0	1.0
Appleton City, Mo.	1.7	1.8	1.8	2.4	2.9	1.9
Bixby, Okla.	1.0	1.0	1.3	1.0	1.0	1.0
Lubbock, Texas	1.7	2.0	1.7	1.2	1.0	2.0
Clovis, N.M.	2.0	2.7	3.0	1.3	1.0	2.0

Table 6 - (continued)

Location	K1017	K1019	Md70-2221	Md70-8412	Md71-407	Ts72-824
			East Coast			
Queenstown, Md.	3.7	2.7	1.3	1.7	1.7	3.0
Georgetown, Del.	2.0	2.3	2.0	2.5	2.2	2.0
Warsaw, Va.	1.2	1.1	1.0	1.0	1.0	1.1
			Upper and Central South			
Orange, Va.	1.0	1.0	1.0	1.0	1.0	1.0
Knoxville, Tenn.	1.0	1.0	1.0	1.0	1.0	1.0
Eldorado, Ill.	5.0	4.6	4.2	4.0	4.7	4.8
Princeton, Ky.	2.7	4.0	1.3	2.3	3.0	2.0
			Delta			
Evansville, Ind.	3.7	4.5	2.0	3.8	4.0	3.5
Portageville, Mo.(A)	1.5	1.7	1.0	1.0	1.2	1.5
Portageville, Mo.(B)	1.5	1.8	1.0	1.2	1.2	1.3
Martin, Tenn.	1.0	1.0	1.0	1.0	1.0	1.0
Keiser, Ark.	2.3	1.7	1.3	2.0	2.3	1.3
			West			
Columbus, Kan.	1.0	1.0	1.0	1.0	1.0	1.0
Appleton City, Mo.	1.4	1.4	1.3	2.6	2.1	1.2
Bixby, Okla.	1.0	1.0	1.0	1.0	1.0	1.0
Lubbock, Texas	2.0	2.0	1.0	1.2	1.2	1.5
Clovis, N. M.	1.7	2.0	1.0	2.7	1.0	3.0

Table 7 - Seed quality scores for the strains in Uniform Group IV-S, 1976

Location	Kent	Columbus	Oksoy	D66-5566	V68-1242	L71L-556
			East Coast			
Queenstown, Md.	2.7	2.0	2.0	2.0	1.3	2.7
Georgetown, Del.	3.5	2.5	3.3	2.7	2.5	2.5
Warsaw, Va.	2.3	2.2	2.5	2.0	1.5	3.8
			Upper and Central South			
Orange, Va.	1.0	1.3	1.0	1.0	1.0	2.5
Knoxville, Tenn.	4.0	2.0	3.0	3.0	1.0	2.0
Eldorado, Ill.	3.0	2.5	2.7	2.0	2.3	2.3
Princeton, Ky.	1.0	1.0	1.0	1.0	1.0	1.0
			Delta			
Evansville, Ind.	2.0	1.5	2.0	1.5	2.0	2.0
Portageville, Mo.(A)	1.5	1.5	2.0	1.5	1.5	1.5
Portageville, Mo.(B)	2.0	1.5	2.0	2.0	2.0	2.0
Martin, Tenn.	2.0	2.0	2.0	2.0	2.0	2.0
Keiser, Ark.	2.0	1.0	2.0	1.0	2.5	2.0
			West			
Columbus, Kan.	1.4	1.3	1.7	1.3	1.4	1.6
Appleton City, Mo.	3.0	3.0	3.5	3.5	3.0	3.0
Lubbock, Texas	2.7	1.5	2.2	1.5	2.5	2.7

Table 7 - (continued)

Location	K1017	K1019	Md70-2221	Md70-8412	Md71-407	Ts72-824
			East Coast			
Queenstown, Md.	2.0	2.3	2.0	2.0	2.0	2.0
Georgetown, Del.	2.0	2.5	2.7	3.0	2.5	2.8
Warsaw, Va.	2.0	2.2	2.2	2.8	1.8	2.0
			Upper and Central South			
Orange, Va.	1.2	1.0	1.3	1.0	1.0	1.0
Knoxville, Tenn.	2.0	2.0	2.0	3.0	3.0	2.0
Eldorado, Ill.	2.2	2.2	2.5	2.3	1.7	2.2
Princeton, Ky.	1.0	1.0	1.0	1.0	1.0	1.0
			Delta			
Evansville, Ind.	2.0	2.5	2.0	2.0	2.0	2.0
Portageville, Mo.(A)	1.5	1.5	1.5	1.5	1.5	1.5
Portageville, Mo.(B)	1.5	1.5	1.5	2.0	2.0	1.5
Martin, Tenn.	2.0	2.0	1.0	2.0	2.0	2.0
Keiser, Ark.	1.0	2.0	2.0	1.0	1.5	2.0
			West			
Columbus, Kan.	1.4	1.4	1.7	1.9	1.2	1.7
Appleton City, Mo.	3.5	3.0	3.5	3.0	3.0	3.2
Lubbock, Texas	2.0	1.7	2.5	2.0	2.0	2.0

UNIFORM GROUP V

1976

	Variety or strain	Parentage	Generation composited
1.	Essex	Lee X S5-7075	F_6
2.	Forrest	Dyer X Bragg	F_5
3.	N72-55	D64-3253 X D65-3168	F_5
4.	R71-626	(Davis X Lee 68) X R60-66	F_4
5.	V72-580	York X R62-550	
6.	D73-3867	D65-6555 X York	F_5
7.	D73-4118	D64-3253 X D65-3168	F_5
8.	D73-4124	D64-3253 X D65-3168	F_5
9.	N73-40	N66-1783 X Lee 68	F_5
10.	N73-520	Tracy X Ransom	F_5
11.	OK963		
12.	R73-1195	R68-106 X L62-1251	F_4

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.

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.

R60-66 is a selection from Dortchsoy 67 X Lee.

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

D65-6555 is a selection from D61-475 X D61-2624. D61-475 is a phytophthora rot resistant selection from Hill (2) X PI 171442. D61-2624 is a high protein selection from D49-2491(4) X PI 174862.

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.

Thirty Uniform Group V nurseries were grown. Results 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 percentage of the seed.

Differences among strains for seed yield were significant (odds 19:1 or greater) at 21 locations. The combined analysis of variance for seed yield by production regions showed differences among strains to be nonsignificant in the Delta and West.

Separate plantings were made at the West Florida Research Center to evaluate strains for reaction to the root knot nematode *Meloidogyne incognita*. Additional plantings were made near Blackville, South Carolina, to evaluate strains for reaction to the root knot nematode *M. arenaria*. Phytophthora rot ratings were made at Stoneville for plantings on clay based upon vigor of growth.

Of the strains evaluated two years, V72-580 averaged higher in seed yield than Essex or Forrest in the Upper and Central South and the West. This strain was injured by phytophthora rot in the planting on clay at Stoneville.

Several of the strains have been selected to incorporate resistance to soybean mosaic virus. This resistance does not appear to have had any major influence upon seed yield. Not any of the strains grown one year showed any consistent yield advantage over Essex or Forrest. N73-40 did have a 2-bushel yield advantage over Forrest in the East Coast Region.

The strain UD70-80-DE-45 which was grown in the Preliminary Group V nursery in 1974 has been released in Delaware as Celeste. This strain rated very resistant to the root knot nematode, *Meloidogyne incognita*.

Table 8 - General summary of performance of the strains in Uniform Group V, 1976

	Essex	Forrest	N72-55	R71-626	V72-580	D73-3867
Seed Yield - 1976						
East Coast	39.8	40.4	37.8	37.9	39.0	37.9
Upper & Central South	40.0	38.2	34.8-	35.0-	39.7	35.0-
Delta	41.1	42.5	38.8	38.2	39.3	39.1
West	43.7	40.9	37.9	41.3	43.8	38.3
1975-76						
East Coast	40.5	41.1	39.2	39.2	41.0	
Upper & Central South	40.9	40.6	37.7	37.7	42.1	
Delta	44.0	45.4	41.6	41.2	43.4	
West	38.6	37.6	35.6	38.0	39.3	
1974-76						
East Coast	42.3	39.8				
Upper & Central South	40.5	38.5				
Delta	41.3	43.1				
West	38.6	38.5				
Oil Content - 1976	20.2	20.3	18.2	19.3	21.1	19.1
1975-76	20.5	20.7	18.8	19.6	21.6	
1974-76	20.5	20.7				
Protein Content - 1976	41.2	38.7-	42.3+	41.1	39.0-	41.5
1975-76	41.3	38.7	41.9	41.3	39.0	
1974-76	41.7	39.1				
Seed size	13.1	12.5-	14.2+	13.7+	16.4+	14.7+
Seed quality	1.8	1.8	1.9	1.8	1.7	1.9
Maturity index	10-6	+4	+4	+1	+2	+1
Height	29	37	36	33	37	38
Bacterial pustule	R	R	R	R	R	R
Phytophthora rot	3.3	2.0	1.0	2.0	3.7	1.0
Soybean mosaic virus	MR	S	R	S	R	R
Percent purple stain	6.7	2.0	1.7	3.3	2.3	2.7
M. incognita	5.0	2.0	5.0	5.0	5.0	5.0
M. arenaria	4.3	1.0	4.8	4.0	3.5	5.0
Cyst nematode (race 3)	S	R	S	S	S	S
Shatter resistance	1.0	1.0	1.0	1.0	1.0	1.0
Flower color	P	W	W	W	P	P
Pubescence color	G	T	G	G	G	T
Pod wall color	T	T	T	T	T	T

Table 8 - (continued)

	D73-4118	D73-4124	N73-40	N73-520	OK963	R73-1195
Seed Yield - 1976						
East Coast	38.9	39.7	41.3	42.3	39.9	37.3
Upper & Central South	33.7-	33.7-	35.4-	38.5	36.2-	34.0-
Delta	39.5	39.8	36.2	40.8	39.1	37.2
West	38.3	37.4	37.1	40.3	39.5	37.2
1975-76						
East Coast						
Upper & Central South						
Delta						
West						
1974-76						
East Coast						
Upper & Central South						
Delta						
West						
Oil Content - 1976	18.5	18.9	20.2	19.6	20.1	21.2
1975-76						
1974-76						
Protein Content - 1976	43.3+	41.5	39.8-	40.0-	40-4-	39.2-
1975-76						
1974-76						
Seed size	13.4	16.3+	15.6+	14.9+	14.4+	16.8+
Seed quality	1.8	1.9	1.9	1.9	2.0	2.0
Maturity index	-1	+2	+6	+4	+5	+5
Height	36	37	41	38	30	42
Bacterial pustule	R	R	R	R	R	R
Phytophthora rot	1.0	1.0	1.0	1.0	2.0	1.0
Soybean mosaic virus	R	R	S	S	S	S
Percent purple stain	6.7	3.0	0.7	0.0	1.3	0.0
M. incognita	5.0	5.0	5.0	5.0	5.0	5.0
M. arenaria	1.5	4.3	1.8	5.0	4.3	3.0
Cyst nematode (race 3)	S	S	S	S	S	S
Shatter resistance	1.0	1.0	1.0	1.0	1.0	1.0
Flower color	P	W	P	P	P	P
Pubescence color	G	T	T	T	G	T
Pod wall color	T	T	T	T	Br	T

Table 9 - Seed yield, in bushels per acre, for the strains in Uniform Group V, 1976

Location	Essex	Forrest	N72-55	R71-626	V72-580	D73-3867	D73-4118
			East Coast				
Queenstown, Md.	42.0	43.1	39.2	38.5	40.2	41.5	39.1
Georgetown, Del.	41.5	38.8	32.1-	34.5-	36.9	36.4-	36.7
Warsaw, Va.	36.3	36.8	32.9-	36.7	36.4	31.6	33.3-
Petersburg, Va.	13.4	19.9+	19.6+	19.6+	20.6+	16.3	21.8+
Holland, Va.	51.7	49.3	54.4	51.3	50.7	54.1	51.2
Plymouth, N. C.	42.0	45.0	37.5	40.2	43.5	43.9	35.2-
Jay, Fla.	51.8	49.9	48.9	44.8-	44.6-	41.5-	46.9
Mean	39.8	40.4	37.8	37.9	39.0	37.9	38.9
			Upper and Central South				
Orange, Va.	35.8	29.4	28.3	28.8	30.8	27.5	29.2
Knoxville, Tenn.	37.4	35.4	35.0	36.3	39.5	31.6-	31.4-
Calhoun, Ga.	18.0	19.2	19.5	16.4	24.0	25.5	19.8
Athens, Ga.	40.2	37.0	34.6	34.1	32.9	29.9-	30.0-
Belle Mina, Ala.	37.1	40.4	31.1-	34.1-	43.3+	31.9-	31.1-
Princeton, Ky.	39.7	36.6	29.8	30.0	31.9	34.8	33.5
Martin, Tenn.	65.0	66.1	50.8-	55.7	65.9	54.1-	49.7-
Jackson, Tenn.	42.1	41.5	37.7	40.6	39.9	37.6	34.2
Verona, Miss.	44.3	38.0	44.4	39.5	49.3	41.9	44.3
Mean	40.0	38.2	34.8-	35.0-	39.7	35.0	33.7-
			Delta				
Portageville, Mo.(A)	26.9	33.5+	21.4	13.7-	25.8	28.4	23.5
Portageville, Mo.(B)	29.5	28.1	28.9	28.0	27.0	22.6-	33.6
Keiser, Ark.	35.5	35.6	36.4	42.8+	37.7	43.9+	43.9+
Jonesboro, Ark.*	17.7	14.2	15.1	12.5	18.4	14.7	15.2
Stoneville, Miss.(A)	56.4	63.7	49.3	50.6	53.2	50.1	44.7-
Stoneville, Miss.(B)	40.5	40.3	49.9+	45.5	38.2	41.8	43.6
St. Joseph, La.	57.9	54.1	46.7-	49.0-	54.1	47.5-	47.5-
Mean	41.1	42.5	38.8	38.2	39.3	39.1	39.5
			West				
Appleton City, Mo.*	14.5	14.5	13.7	14.8	15.3	15.1	16.0
Columbus, Kan.	36.7	31.7	31.8	34.3	33.3	31.4	33.6
Stuttgart, Ark.	45.4	54.1+	44.4	47.8+	49.7+	44.0	43.3
Curtis, La.	46.5	36.7-	38.1-	42.6	46.2	37.3-	37.3-
Bixby, Okla.	33.0	29.6	29.8	30.8	32.0	29.9	28.9-
Lubbock, Texas	57.0	52.6	45.4-	50.8-	58.0	49.1-	48.3-
Halfway, Texas*	41.6	28.7-	24.6-	33.5	26.3-	35.4	24.7-
Mean	43.7	40.9	37.9	41.3	43.8	38.3	38.3

*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	D73-4124	N73-40	N73-520	OK963	R73-1195	L.S.D. (.05)	C.V. (%)
		East Coast					
Queenstown, Md.	41.4	41.7	40.9	40.0	37.4	N.S.	9
Georgetown, Del.	38.9	29.4-	37.9	34.1-	29.6-	4.8	10
Warsaw, Va.	31.9-	35.4	35.5	35.2	36.9	2.4	4
Petersburg, Va.	20.1+	25.3+	24.5+	21.5+	23.8+	4.5	12
Holland, Va.	55.5	58.0	53.6	52.8	45.7	N.S.	7
Plymouth, N. C.	45.4	44.9	50.5+	45.7	38.4	5.4	7
Jay, Fla.	44.6	54.8	53.2	49.8	49.2	5.8	7
Mean	39.7	41.3	42.3	39.9	37.3	3.9	
		Upper and Central South					
Orange, Va.	25.9	25.4	32.1	30.3	25.2	N.S.	14
Knoxville, Tenn.	31.4-	30.8	37.7	32.9	35.0	5.3	9
Calhoun, Ga.	19.5	14.4	21.7	12.3	19.2	N.S.	22
Athens, Ga.	31.2-	36.7	36.6	34.2	37.4	8.4	14
Belle Mina, Ala.	27.6-	34.9	39.4	37.9	31.6-	4.9	8
Princeton, Ky.	30.1	31.5	34.8	32.7	27.6	N.S.	14
Martin, Tenn.	59.0	59.3	60.1	63.1	48.0-	9.4	9
Jackson, Tenn.	35.9	45.2	36.0	45.2	44.5	N.S.	11
Verona, Miss.	42.4	40.6	48.6	37.5	38.1	7.0	9
Mean	33.7-	35.4-	38.5	36.2-	34.0-	3.3	
		Delta					
Portageville, Mo.(A)	22.6	23.2	25.7	26.5	21.6	6.5	15
Portageville, Mo.(B)	30.3	24.9	28.6	30.6	33.5	6.1	12
Keiser, Ark.	35.5	29.0	36.2	34.8	35.7	7.7	12
Jonesboro, Ark.*	13.8	12.2	11.6	13.6	13.7	N.S.	24
Stoneville, Miss.(A)	50.2	54.9	54.7	58.1	42.7-	11.1	
Stoneville, Miss.(B)	46.8	38.7	47.1	31.6-	43.3	5.9	8
St. Joseph, La.	53.5	46.4-	52.6	53.1	46.4-	5.2	6
Mean	39.8	36.2	40.8	39.1	37.2	N.S.	
		West					
Appleton City, Mo.*	15.5	15.4	15.9	14.3	14.6	N.S.	14
Columbus, Kan.	29.9	29.6	31.1	29.6	30.5	N.S.	10
Stuttgart, Ark.	38.0-	48.6+	40.6-	44.3	39.0-	2.8	10
Curtis, La.	44.8	37.5-	44.7	43.7	39.6-	6.5	9
Bixby, Okla.	28.4-	23.4-	30.2	28.5-	23.3-	3.7	7
Lubbock, Texas	45.8-	46.5-	54.7	51.7	53.5	5.6	6
Halfway, Texas*	29.9-	22.3-	27.1-	35.2	25.4-	10.6	21
Mean	37.4	37.1	40.3	39.5	37.2	N.S.	

Table 10 - Chemical composition and seed size for the strains in Uniform Group V, 1976

Location	Essex	Forrest	N72-55	R71-626	V72-580	D73-3867	D73-4118
			Oil Percentage				
Queenstown, Md.	18.8	20.2	16.8	18.4	19.1	17.9	17.5
Warsaw, Va.	20.6	21.1	18.2	19.1	20.0	19.2	18.7
Plymouth, N. C.	20.1	21.9	19.1	19.4	21.7	19.0	19.0
Jackson, Tenn.	21.0	21.1	18.6	20.5	22.1	20.6	19.6
Portageville, Mo.(A)	21.0	19.7	17.8	18.5	21.4	19.4	18.2
Keiser, Ark.	19.6	19.5	18.8	18.4	21.2	18.6	18.0
Stoneville, Miss.(B)	21.9	22.0	19.8	21.9	24.0	21.1	19.8
Stuttgart, Ark.	19.4	18.3	17.2	18.5	20.0	17.6	17.6
Lubbock, Texas	19.5	18.9	17.4	18.7	20.3	18.6	17.9
Mean	20.2	20.3	18.2-	19.3-	21.1+	19.1-	18.5-
			Protein Percentage				
Queenstown, Md.	41.9	37.7	42.3	41.4	39.9	42.3	43.4
Warsaw, Va.	38.3	36.6	41.6	40.1	38.9	40.0	41.5
Plymouth, N. C.	43.4	39.3	42.5	43.0	40.3	42.7	44.2
Jackson, Tenn.	39.2	35.2	41.1	37.9	35.9	37.8	40.8
Portageville, Mo.(A)	41.6	40.9	43.9	43.1	39.2	42.8	45.2
Keiser, Ark.	42.5	40.7	42.1	42.6	39.6	42.4	44.3
Stoneville, Miss.(B)	39.1	37.1	40.5	37.9	36.1	39.5	41.3
Stuttgart, Ark.	43.1	42.3	44.9	43.5	41.4	43.7	45.2
Lubbock, Texas	41.5	38.8	41.7	40.7	39.5	42.0	43.4
Mean	41.2	38.7	42.3	41.1	39.0	41.5	43.3
			Grams per 100 Seeds				
Queenstown, Md.	14.1	13.6	15.5	15.4	16.6	15.4	14.7
Warsaw, Va.	15.0	14.7	18.6	17.0	19.2	16.7	15.6
Plymouth, N. C.	11.2	12.9	13.6	13.2	14.9	13.1	11.2
Calhoun, Ga.	12.3	10.3	13.0	12.0	15.3	13.7	12.7
Jackson, Tenn.	14.9	13.5	16.0	15.6	18.4	15.3	15.1
Portageville, Mo.(A)	10.2	10.8	10.2	9.6	13.5	12.4	9.9
Keiser, Ark.	11.6	10.6	11.7	11.6	15.9	13.4	12.8
Stoneville, Miss.(B)	12.2	11.4	12.8	12.8	14.0	13.2	12.2
Stuttgart, Ark.	13.0	12.0	13.3	13.0	15.7	14.7	12.7
Lubbock, Texas	16.0	15.4	17.3	16.8	20.2	18.6	17.1
Mean	14.5	13.9	15.8	15.2	18.2	16.3	14.9

Table 10 - (continued)

Location	D73-4124	N73-40	N73-520	OK963	R73-1195	L.S.D. (.05)
			Oil Percentage			
Queenstown, Md.	17.6	19.7	18.8	18.4	20.6	
Warsaw, Va.	18.7	20.1	19.2	20.4	20.6	
Plymouth, N. C.	19.7	21.1	20.1	20.2	21.5	
Jackson, Tenn.	20.3	21.0	20.5	21.0	21.9	
Portageville, Mo.(A)	18.8	20.0	19.4	19.1	21.1	
Keiser, Ark.	18.2	19.7	19.5	19.4	21.1	
Stoneville, Miss.(B)	21.0	22.9	21.8	23.5	23.7	
Stuttgart, Ark.	17.3	19.1	17.9	19.0	20.4	
Lubbock Texas	18.7	18.4	19.4	19.5	20.3	
Mean	18.9-	20.2	19.6	20.1	21.2+	0.6
			Protein Percentage			
Queenstown, Md.	41.8	39.3	39.9	41.2	38.3	
Warsaw, Va.	40.3	37.5	38.1	38.1	37.2	
Plymouth, N. C.	42.2	40.9	41.4	42.0	41.5	
Jackson, Tenn.	38.1	37.9	36.7	38.2	37.7	
Portageville, Mo.(A)	43.0	41.2	41.2	42.5	40.6	
Keiser, Ark.	42.8	41.7	40.8	41.5	39.5	
Stoneville, Miss.(B)	39.6	36.9	37.8	36.4	36.8	
Stuttgart, Ark.	44.8	41.9	42.3	42.6	41.9	
Lubbock, Texas	40.5	40.5	39.7	41.2	39.3	
Mean	41.5	39.8	40.0	40.4	39.2	0.7
			Grams per 100 Seeds			
Queenstown, Md.	18.1	17.2	16.8	16.6	17.8	
Warsaw, Va.	19.8	17.8	17.1	17.4	20.6	
Plymouth, N. C.	14.4	17.6	15.7	14.8	18.4	
Calhoun, Ga.	15.0	11.7	12.0	12.3	14.0	
Jackson, Tenn.	18.2	17.3	15.4	16.1	18.6	
Portageville, Mo.(A)	12.9	13.6	12.2	12.2	12.3	
Keiser, Ark.	14.5	11.8	13.1	10.2	13.5	
Stoneville, Miss.(B)	14.8	13.8	13.0	12.4	15.2	
Stuttgart, Ark.	14.7	15.0	15.7	14.7	16.7	
Lubbock, Texas	20.8	20.4	18.0	17.7	21.2	
Mean	18.1	17.4	16.6	16.0	18.7	0.3

Table 11 - Relative maturity, days earlier (-) or later (+) than Essex, for the strains in Uniform Group V, 1976

Location	Date planted	Essex matured	Forrest	N72-55	R71-626	V72-580
		East Coast				
Queenstown, Md.	5-24	10-15	+8	+8	0	+4
Georgetown, Del.	5-24	10-19	+3	0	+1	0
Warsaw, Va.	5-27	10-18	+2	+1	0	0
Petersburg, Va.	5-10	10-22	+1	+4	+3	+2
Holland, Va.	5-31	9-28	+12	+15	+12	+9
Jay, Fla.	6-9	9-30	-4	0	0	0
Mean		10-11	+3	+4	+2	+2
		Upper and Central South				
Orange, Va.	5-25	10-20	+1	+1	0	+1
Calhoun, Ga.	5-25	10-7	-3	-3	-6	+1
Athens, Ga.	5-10	9-20	+2	+3	-2	+2
Princeton, Ky.	5-25	10-10	0	+3	+1	+5
Martin, Tenn.	5-25	10-15	+3	-2	+2	+4
Jackson, Tenn.	6-4	10-13	+7	+2	+2	+2
Verona, Miss.	5-20	10-3	+5	+4	+3	+1
Mean		10-11	+2	+1	0	+2
		Delta				
Portageville, Mo.(A)	5-11	9-28	+10	+6	-2	+9
Portageville, Mo.(B)	5-12	9-29	+13	+7	0	+2
Keiser, Ark.	5-21	10-2	+2	+6	+2	+3
Jonesboro, Ark.	5-21	10-7	+1	+2	+3	+2
Stoneville, Miss.(A)	5-10	9-28	+3	+3	-2	-1
Stoneville, Miss.(B)	5-19	9-28	+6	+5	+2	+2
St. Joseph, La.	5-25	9-22	+7	+3	+3	+1
Mean		9-29	+6	+5	+1	+2
		West				
Columbus, Kan.	6-3	10-11	+5	+6	+2	+6
Stuttgart, Ark.	5-20	9-26	+7	+6	+5	+5
Curtis, La.	5-12	9-22	+3	+2	+3	+4
Lubbock, Texas	5-18	10-17	+6	+6	+1	+2
Mean		10-4	+4	+4	+2	+3

Table 11 - (continued)

Location	D73-3867	D73-4118	D73-4124	N73-40	N73-520	OK963	R73-1195
			East Coast				
Queenstown, Md.	+2	0	+4	+8	+3	+8	+9
Georgetown, Del.	+2	0	+2	+3	+3	+1	+3
Warsaw, Va.	-4	-3	-1	+4	+2	+3	+3
Petersburg, Va.	-1	-2	+4	+12	+3	+7	+13
Holland, Va.	+9	0	+6	+15	+15	+15	+15
Jay, Fla.	-4	-4	0	0	-4	-2	-4
Mean	+1	-1	+2	+6	+3	+5	+6
			Upper and Central South				
Orange, Va.	-2	-2	+1	+1	-2	+1	+1
Calhoun, Ga.	-9	-11	-7	-2	-1	-1	-2
Athens, Ga.	-3	-1	+3	+5	+3	+2	+3
Princeton, Ky.	0	+1	0	0	+1	+4	+6
Martin, Tenn.	-7	-4	+3	+5	0	+1	-4
Jackson, Tenn.	+1	0	+3	+5	+2	+6	+4
Verona, Miss.	+2	+1	+2	+7	+5	+7	+6
Mean	+2	-2	+1	+3	+1	+3	+2
			Delta				
Portageville, Mo.(A)	+5	+2	+5	+11	+10	+9	+7
Portageville, Mo.(B)	+1	+4	+2	+13	+7	+8	+13
Keiser, Ark.	+2	+1	+3	+12	+9	+11	+4
Jonesboro, Ark.	-5	-3	+5	+6	+8	+4	+4
Stoneville, Miss.(A)	-1	-1	+2	+7	+5	+3	+5
Stoneville, Miss.(B)	+4	+1	+2	+7	+8	+6	+8
St. Joseph, La.	+2	-2	+1	+8	+9	+5	+3
Mean	+1	0	+3	+9	+8	+7	+6
			West				
Columbus, Kan.	0	+3	+5	+13	+6	0	+7
Stuttgart, Ark.	+6	+2	+5	+9	+12	+10	+8
Curtis, La.	+3	+2	+4	+6	+7	0	+5
Lubbock, Texas	-2	0	+4	0	-1	+6	+5
Mean	+1	+1	+4	+6	+5	+3	+5

Table 12 - Plant height for the strains in Uniform V, 1976

Location	Essex	Forrest	N72-55	R71-626	V72-580	D73-3867
			East Coast			
Queenstown, Md.	36	42	40	39	41	46
Georgetown, Del.	28	34	34	34	38	39
Warsaw, Va.	31	40	37	35	40	40
Petersburg, Va.	31	34	33	28	32	37
Holland, Va.	32	32	35	34	34	37
Plymouth, N. C.	36	42	39	38	44	44
Jay, Fla.	28	31	30	36	35	33
Mean	32	36	35	35	38	39
			Upper and Central South			
Orange, Va.	38	46	43	33	46	47
Knoxville, Tenn.	32	40	42	39	41	41
Calhoun, Ga.	23	29	30	24	29	32
Athens, Ga.	28	37	34	30	33	36
Belle Mina, Ala.	33	39	40	40	39	41
Princeton, Ky.	35	43	40	40	41	40
Martin, Tenn.	34	40	39	38	37	40
Jackson, Tenn.	33	46	43	37	47	49
Verona, Miss.	28	36	36	34	36	34
Mean	32	40	39	35	39	40
			Delta			
Portageville, Mo.(A)	23	31	30	25	33	32
Portageville, Mo.(B)	19	23	22	23	24	22
Keiser, Ark.	24	31	33	32	32	35
Jonesboro, Ark.	20	31	32	22	34	37
Stoneville, Miss.(A)	37	41	41	39	42	42
Stoneville, Miss.(B)	21	29	35	29	23	37
St. Joseph, La.	32	41	40	38	41	41
Mean	25	32	33	30	33	35
			West			
Appleton City, Mo.	26	33	31	28	30	30
Columbus, Kan.	34	45	42	37	42	44
Stuttgart, Ark.	20	31	32	32	33	30
Curtis, La.	32	44	41	41	44	44
Bixby, Okla.	25	37	35	34	38	41
Lubbock, Texas	30	33	32	31	34	31
Mean	28	37	36	34	37	37

Table 12 - (continued)

Location	D73-4118	D73-4124	N73-40	N73-520	OK963	R73-1195
		East Coast				
Queenstown, Md.	37	40	39	44	36	51
Georgetown, Del.	33	38	39	41	30	43
Warsaw, Va.	37	39	41	38	30	38
Petersburg, Va.	33	34	36	34	28	31
Holland, Va.	38	39	46	40	31	41
Plymouth, N. C.	44	44	45	44	36	48
Jay, Fla.	30	35	40	30	25	40
Mean	36	38	41	39	31	42
		Upper and Central South				
Orange, Va.	45	45	51	47	42	43
Knoxville, Tenn.	40	39	46	41	31	49
Calhoun, Ga.	29	31	34	31	24	30
Athens, Ga.	34	34	37	33	26	37
Belle Mina, Ala.	40	40	47	43	33	45
Princeton, Ky.	41	41	47	40	34	43
Martin, Tenn.	41	44	47	39	37	44
Jackson, Tenn.	43	43	47	38	37	43
Verona, Miss.	34	34	34	34	28	48
Mean	39	39	43	38	32	42
		Delta				
Portageville, Mo.(A)	28	32	34	34	23	36
Portageville, Mo.(B)	25	26	26	27	20	34
Keiser, Ark.	32	34	36	37	25	40
Jonesboro, Ark.	33	33	38	33	26	38
Stoneville, Miss.(A)	40	39	46	41	35	47
Stoneville, Miss.(B)	30	34	34	35	26	43
St. Joseph, La.	43	43	47	36	31	45
Mean	33	34	37	34	27	40
		West				
Appleton City, Mo.	28	31	32	29	28	28
Columbus, Kan.	42	42	46	43	32	46
Stuttgart, Ark.	30	29	36	31	23	37
Curtis, La.	43	43	48	39	32	51
Bixby, Okla.	40	37	42	37	27	41
Lubbock, Texas	34	31	34	35	29	40
Mean	36	36	40	36	29	41

Table 13 - Lodging scores for the strains in Uniform Group V, 1976

Location	Essex	Forrest	N72-55	R71-626	V72-580	D73-3867
			East Coast			
Queenstown, Md.	2.0	4.0	3.0	2.0	2.5	3.3
Georgetown, Del.	2.5	2.7	2.5	2.5	2.7	3.0
Warsaw, Va.	1.1	2.3	1.9	1.2	1.4	1.4
Petersburg, Va.	1.0	1.0	1.0	1.0	1.0	1.0
Holland, Va.	1.7	2.8	3.5	2.2	3.0	2.7
Plymouth, N. C.	2.0	3.0	3.5	2.0	2.0	3.0
			Upper and Central South			
Orange, Va.	1.3	3.7	3.7	1.0	2.3	2.3
Knoxville, Tenn.	2.0	3.3	4.0	2.0	3.0	3.0
Calhoun, Ga.	1.0	1.7	1.0	1.3	1.0	1.7
Athens, Ga.	1.2	1.8	2.2	1.3	1.7	2.2
Belle Mina, Ala.	1.5	2.0	3.7	1.5	1.8	2.7
Princeton, Ky.	3.0	2.3	3.0	4.0	2.3	1.7
Martin, Tenn.	1.0	3.0	3.0	1.0	1.0	1.0
Jackson, Tenn.	1.0	2.0	2.0	1.0	1.0	1.0
Verona, Miss.	2.0	2.0	2.0	2.0	2.0	2.0
			Delta			
Portageville, Mo.(A)	1.0	1.2	1.8	1.0	1.7	1.3
Portageville, Mo.(B)	1.3	1.3	1.5	2.2	1.7	1.8
Keiser, Ark.	2.3	2.3	3.7	2.0	2.3	2.7
Jonesboro, Ark.	1.2	1.5	1.5	1.0	1.3	2.3
Stoneville, Miss.(A)	2.0	3.0	4.0	2.7	3.0	3.3
Stoneville, Miss.(B)	1.3	2.0	2.0	2.0	1.7	2.7
St. Joseph, La.	2.2	2.8	3.2	3.7	3.2	2.7
			West			
Appleton City, Mo.	1.7	2.3	2.7	2.2	2.6	2.2
Columbus, Kan.	1.2	1.6	1.7	1.3	1.5	2.0
Stuttgart, Ark.	1.2	1.3	1.7	1.8	1.5	1.7
Curtis, La.	1.0	1.7	2.0	1.5	2.0	2.0
Bixby, Okla.	1.0	1.7	1.7	1.0	1.7	1.0
Lubbock, Texas	1.5	3.0	2.7	1.8	2.0	3.0

Table 13 - (continued)

Location	D73-4118	D73-4124	N73-40	N73-520	OK963	R73-1195
			East Coast			
Queenstown, Md.	2.0	3.5	3.0	3.0	2.0	3.0
Georgetown, Del.	3.0	3.3	2.8	3.0	2.0	2.7
Warsaw, Va.	1.8	2.6	2.9	2.2	1.0	1.3
Petersburg, Va.	2.0	2.0	2.0	2.0	1.0	1.0
Holland, Va.	3.0	3.7	3.8	3.2	1.8	3.5
Plymouth, N. C.	3.0	3.0	2.5	3.0	2.0	3.0
			Upper and Central South			
Orange, Va.	2.3	3.7	4.3	1.7	1.3	3.3
Knoxville, Tenn.	4.0	3.3	4.3	3.0	1.3	3.0
Calhoun, Ga.	1.0	1.3	1.7	1.0	1.0	1.7
Athens, Ga.	1.7	2.3	1.5	1.8	1.2	1.3
Belle Mina, Ala.	2.8	2.5	2.5	2.2	1.3	2.0
Princeton, Ky.	3.0	3.3	4.7	3.3	1.3	4.0
Martin, Tenn.	4.0	3.0	4.0	2.0	1.0	1.0
Jackson, Tenn.	2.0	2.0	2.0	1.0	1.0	1.0
Verona, Miss.	2.0	2.0	3.0	3.0	2.0	4.0
			Delta			
Portageville, Mo.(A)	1.7	2.0	1.8	1.5	1.0	2.0
Portageville, Mo.(B)	1.7	2.0	2.2	2.3	1.5	1.8
Keiser, Ark.	3.0	4.0	4.0	4.0	1.7	3.0
Jonesboro, Ark.	1.5	2.2	1.5	1.3	1.2	2.8
Stoneville, Miss.(A)	3.3	2.7	4.0	3.0	2.0	3.7
Stoneville, Miss.(B)	2.0	2.0	2.3	2.3	1.7	3.0
St. Joseph, La.	3.5	3.3	3.3	2.7	1.2	3.8
			West			
Appleton City, Mo.	2.2	3.0	2.5	2.3	1.7	2.4
Columbus, Kan.	2.4	2.3	1.7	1.8	1.0	2.1
Stuttgart, Ark.	2.2	2.2	3.2	2.5	1.0	3.0
Curtis, Ark.	2.3	2.5	2.3	1.8	0.3	2.3
Bixby, Okla.	2.7	1.7	2.0	2.3	1.0	1.3
Lubbock, Texas	2.5	4.0	3.2	2.5	1.5	2.2

Table 14 - Seed quality scores for the strains in Uniform Group V, 1976

Location	Essex	Forrest	N72-55	R71-626	V72-580	D73-3867
			East Coast			
Queenstown, Md.	2.0	2.0	2.0	2.0	2.0	2.3
Georgetown, Del.	2.0	2.2	1.8	2.0	2.0	2.0
Warsaw, Va.	2.2	1.3	2.2	1.6	1.8	1.9
Petersburg, Va.	4.0	2.0	2.0	2.0	2.0	3.0
Holland, Va.	1.5	1.0	1.0	1.7	1.3	1.5
Plymouth, N. C.	1.5	1.5	1.5	2.0	1.5	1.5
Jay, Fla.	1.0	1.0	2.0	1.0	2.0	2.0
			Upper and Central South			
Orange, Va.	1.0	1.0	3.5	1.0	2.0	1.0
Calhoun, Ga.	2.0	3.0	2.0	2.7	2.0	1.7
Athens, Ga.	2.0	1.6	2.8	2.3	1.5	1.8
Princeton, Ky.	1.0	1.0	1.0	1.0	1.0	1.0
Martin, Tenn.	2.0	1.0	1.0	1.0	1.0	1.0
Jackson, Tenn.	1.0	1.0	1.0	1.0	1.0	1.0
			Delta			
Portageville, Mo.(A)	1.5	1.5	1.5	1.5	1.5	1.5
Portageville, Mo.(B)	1.5	2.5	1.5	1.5	1.5	2.0
Keiser, Ark.	1.0	1.0	1.5	1.0	1.0	1.0
Jonesboro, Ark.	3.7	4.3	3.7	3.3	3.0	3.7
Stoneville, Miss.(A)	2.0	2.0	2.0	2.3	2.0	2.0
Stoneville, Miss.(B)	2.0	2.0	2.0	2.0	2.0	2.0
			West			
Appleton City, Mo.	2.8	2.8	2.5	2.5	2.5	2.5
Columbus, Kan.	1.6	2.2	1.7	1.9	1.8	1.9
Stuttgart, Ark.	1.3	2.0	1.0	1.5	1.7	1.8
Lubbock, Texas	1.0	1.0	1.7	1.5	1.2	2.5

Table 14 - (continued)

Location	D73-4118	D73-4124	N73-40	N73-520	OK963	R73-1195
			East Coast			
Queenstown, Md.	2.3	2.0	2.0	2.0	2.3	2.0
Georgetown, Del.	2.0	2.0	2.2	2.0	2.0	2.0
Warsaw, Va.	2.8	1.8	1.4	1.4	2.0	1.4
Petersburg, Va.	2.0	2.0	1.0	1.0	2.0	1.0
Holland, Va.	1.0	1.0	1.3	1.7	1.5	1.3
Plymouth, N. C.	1.5	1.5	2.0	1.5	2.0	2.0
Jay, Fla.	1.0	1.0	1.0	2.0	3.0	1.0
			Upper and Central South			
Orange, Va.	1.0	1.0	2.0	1.0	1.0	2.0
Calhoun, Ga.	2.0	2.0	1.7	2.7	2.7	2.3
Athens, Ga.	2.3	2.2	2.3	2.0	2.7	2.0
Princeton, Ky.	1.0	1.0	1.0	1.0	1.0	1.0
Martin, Tenn.	2.0	2.0	2.0	2.0	2.0	2.0
Jackson, Tenn.	1.0	1.0	1.0	1.0	1.0	1.0
			Delta			
Portageville, Mo.(A)	1.5	2.0	1.5	1.5	1.5	1.5
Portageville, Mo.(B)	1.5	2.0	2.0	2.0	1.5	2.0
Keiser, Ark.	1.0	2.0	2.0	1.0	1.5	1.0
Jonesboro, Ark.	3.3	3.7	4.0	4.3	3.7	4.3
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
			West			
Appleton City, Mo.	2.5	2.5	3.0	2.8	2.5	3.0
Columbus, Kan.	1.8	2.1	1.9	1.9	2.1	1.9
Stuttgart, Ark.	1.2	2.5	2.3	2.5	2.5	2.7
Lubbock, Texas	2.0	2.5	1.0	2.2	2.2	1.7

PRELIMINARY GROUP V

1976

Preliminary Group V nurseries, including 34 experimental strains and the two check varieties Hill and Forrest, were grown at seven locations. The parentage of these strains is reported in Table 15. Performance data are summarized in Tables 16 through 21.

Differences among strains for seed yield were significant at the 5% level of confidence at five locations. The combined analysis of variance showed differences among strains to be significant. Forrest ranked highest in mean seed yield with a yield of 40 bushels per acre. Twelve strains had mean seed yields significantly lower than Forrest.

The twelve J74 strains had been selected in West Tennessee to incorporate resistance to race 4 of the soybean cyst nematode. Three of the eight strains ranked in the top ten for seed yield. All received higher scores than Forrest for root knot nematodes. J74-67 has the major gene for phytophthora rot resistance. The seed yield was low but this strain would be useful as a parent since it has had a very low cyst count. J74-46 will be increased for production in areas having a race 4 cyst nematode problem.

Ten strains were included from the cross Forrest X D70-3001. All carry the Arksoy gene for resistance to phytophthora rot. Five of these strains were among the top ten in seed yield. D74-7523, D74-7633, and D74-7921 had good resistance to both *M. incognita* and *M. arenaria*.

Two of the three strains selected for high protein yielded significantly less than Forrest. N74-5008, selected to give a SMV resistant type similar to Dare, had a mean yield significantly lower than Forrest. Its yield level was below that for Forrest at each location. The strains D74-7380, D74-7423, and D74-7947 had also been selected as resistant to SMV.

R74-334 carries the Dt_2 gene. It was among the tallest strains. The low mean yield of the Virginia selections is largely attributable to their susceptibility to phytophthora rot at Stoneville.

The strains J74-37, D74-7947, V73-1100, and V73-1261 had in excess of 5% purple stained seed at Warsaw. J74-77 had 14% mottled seed at Warsaw.

Table 15 - Parentage of the strains in Preliminary Group V, 1976

	Variety or strain	Parentage	Generation composited
1.	Hill		
2.	Forrest		
3.	J74-25	Forrest X (D68-18 X PI 88788)	F_5
4.	J74-37	Forrest(2) X (D68-18 X PI 88788)	F_4
5.	J74-45	Forrest(2) X (D68-18 X PI 88788)	F_4
6.	J74-46	Forrest(2) X (D68-18 X PI 88788)	F_4
7.	J74-53	Forrest(2) X (D68-18 X PI 88788)	F_4
8.	J74-67	D70-3045 X F_4 sel (D68-18 X PI 88788)	F_5
9.	J74-77	D70-3045 X F_4 sel (D68-18 X PI 88788)	F_5
10.	J74-116	Forrest X (D68-18 X PI 88788)	F_5
11.	D74-7352	D66-5566 X D70-2301	F_5
12.	D74-7380	D65-3426 X D67-4823	F_5
13.	D74-7423	D65-3426 X D67-4823	F_5
14.	D74-7523	Forrest X D70-3001	F_5
15.	D74-7631	Forrest X D70-3001	F_5
16.	D74-7633	Forrest X D70-3001	F_5
17.	D74-7657	Forrest X D70-3001	F_5
18.	D74-7697	Forrest X D70-3001	F_5
19.	D74-7824	Forrest X D70-3001	F_5
20.	D74-7921	Forrest X D70-3001	F_5
21.	D74-7947	D65-3438 X D66-11005	F_5
22.	D74-8819	D64-4636 X D67-4694	F_5
23.	D74-8970	D64-4636 X D67-4694	F_5
24.	D74-8989	D64-4636 X D67-4694	F_5
25.	D74-9732	Hill X Hardee	F_7
26.	N74-5008	Dare(4) X PI 96983	
27.	R74-106	(R64-502 X Pickett) X (R66-100A X Harosoy 63)	F_5
28.	R74-334	R68-106 X L62-1251	F_5
29.	R74-451	R66-873 X R68-105	F_4
30.	R74-1438	T143 X [Dare(2) X Mack]	F_4
31.	S73-86113	Cutler X Mack	F_5
32.	V73-697	V67-1250 X D64-4731	
33.	V73-1100	V66-183 X V66-318	
34.	V73-1261	V68-1034 X V66-318	
35.	V73-1308	V68-1034 X V66-318	
36.	V73-1309	V68-1034 X V66-318	

Table 16 - General summary of performance for the strains grown in Preliminary Group V, 1976

Strain	Seed yield	Maturity index	Ht.	Percent Oil	Percent Protein	P.R.	C.N. race 3	C.N. race 4	Root knot *M. incognita*	Root knot *M. arenaria*
Hill	35.9	10-3	35	20.0	39.4	2.0	S	S	5.0	4.8
Forrest	40.0	+10	37	20.9+	38.7	2.0	R	S	2.0	1.8
J74-25	38.4	+9	39	20.6	39.5	1.5	R	R	2.5	2.9
J74-37	37.1	+6	32	20.8	39.6	2.5	R	R	5.0	2.5
J74-45	38.6	+9	38	19.7	40.2	1.5	R	R	5.0	4.0
J74-46	38.1	+12	46	20.1	38.7	1.0	R	R	3.5	3.0
J74-53	37.2	+7	43	20.6	39.1	2.0	R	R	4.0	3.2
J74-67	30-3-	+9	50	20.7	39.2	1.0	R	R	2.0	5.0
J74-77	29.3-	+2	43	20.4	39.6	1.0	R	R	5.0	4.8
J74-116	36.9	+13	45	20.9+	38.4	1.5	R	R	5.0	3.5
D74-7352	36.1	+6	35	20.3	41.1+	1.0	S	S	5.0	3.5
D74-7380	36.4	+7	41	19.1	42.3+	1.0	S	S	5.0	5.0
D74-7423	35.2	+5	37	18.4-	44.1+	1.0	S	S	5.0	3.5
D74-7523	37.8	+11	42	21.2+	39.4	1.0	R	S	2.0	1.8
D74-7631	37.5	+11	43	20.4	40.7+	1.0	R	S	4.0	3.8
D74-7633	38.7	+12	43	20.7	39.2	1.0	R	S	2.0	1.8
D74-7657	37.6	+8	37	20.1	40.1	1.0	R	S	3.0	4.5
D74-7697	38.4	+12	39	20.3	39.7	1.0	R	S	5.0	5.0
D74-7824	39.5	+8	38	20.1	39.9	1.0	R	S	4.0	4.2
D74-7921	36.4	+9	40	20.1	40.7+	1.0	R	S	3.0	2.3
D74-7947	31.8-	+3	36	18.8-	41.9+	1.0	S	S	5.0	5.0
D74-8819	36.8	+1	35	17.0-	46.4+	1.5	S	S	5.0	4.5
D74-8970	34.9-	0	36	17.2-	45.5+	1.5	S	S	5.0	3.6
D74-8989	32.9-	+2	38	17.7-	44.4+	1.5	S	S	5.0	5.0
D74-9732	34.9-	+9	38	19.3	40.1	1.5	S	S	5.0	5.0
N74-5008	34.9-	+9	36	20.8	40.0	2.0	S	S	5.0	5.0
R74-106	35.9	+14	38	20.6	41.4+	1.0	S	S	4.0	4.0
R74-334	36.0	+7	48	21.3+	39.5	1.0	S	S	5.0	2.9
R74-451	36.2	+5	37	20.2	42.0+	1.0	S	S	5.0	3.8
R74-1438	33.8-	+7	37	19.9	41.2	3.0	S	S	5.0	2.3
S73-86113	38.1	+2	32	19.6	42.7+	1.0	R	S	5.0	3.0
V73-697	33.2-	+8	26	19.7	41.5	3.5	S	S	5.0	2.0
V73-1100	34.6-	+4	28	21.6+	40.4	3.5	S	S	5.0	5.0
V73-1261	36.0	-2	32	21.2+	41.3	4.0	S	S	5.0	3.2
V73-1308	33.1-	-3	30	21.2+	41.8+	4.0	S	S	5.0	3.5
V73-1309	34.7-	-1	32	21.2+	41.1	3.0	S	S	5.0	3.5
L.S.D.(.05)	5.0			0.8	1.1					
L.S.D.(.01)	6.6			1.0	1.4					

Phytophthora rot scores based upon vigor appearance on clay at Stoneville.

M. incognita ratings made by R. A. Kinloch from plantings in West Florida.

M. arenaria ratings made by H. Musen and J. Maxwell from plantings near Blackville, South Carolina.

Table 17 - Seed yield, in bushels per acre, for the strains grown in Preliminary Group V, 1976

Strain	George-town, Del.	Queens-town, Md.	Warsaw, Va.	Ply-mouth, N.C.	Portage-ville, Mo.	Keiser, Ark.	Stoneville, Miss.
Hill	37.4	35.5	31.6	33.5	33.9	37.0	42.5
Forrest	36.3	43.8	39.7+	42.0+	35.7	39.2	43.2
J74-25	32.6	39.5	35.0	44.1+	39.6	28.0	49.8
J74-37	39.9	36.9	34.9	37.9	40.8	34.2	34.8
J74-45	37.6	38.9	34.3	36.7	34.6	36.3	51.8
J74-46	30.7	36.6	36.3+	41.2	35.8	36.0	49.8
J74-53	31.0	38.3	32.4	40.4	33.1	36.0	49.1
J74-67	31.4	35.7	29.2	32.5	22.1-	17.1-	43.9
J74-77	30.8	31.0	29.5	29.8	29.0	14.2-	40.7
J74-116	26.7	35.1	39.4+	36.0	32.2	34.4	50.1
D74-7352	31.2	39.3	37.0+	32.2	33.6	33.1	46.7
D74-7380	37.4	39.6	36.4+	33.4	30.4	32.6	45.0
D74-7423	36.6	37.6	31.6	36.4	30.0	33.6	40.7
D74-7523	30.4	35.2	36.4+	44.0+	37.0	31.6	49.9
D74-7631	31.8	36.0	34.6	41.4	40.5	37.8	41.3
D74-7633	34.1	37.8	35.8	41.6+	34.7	34.4	52.3
D74-7657	28.2	40.9	38.9+	41.7+	39.0	24.7-	49.6
D74-7697	28.7	42.1	38.9+	42.0	35.4	30.2	51.8
D74-7824	33.6	44.0	35.8	37.0	36.2	37.9	52.0
D74-7921	27.5	37.8	35.4	36.7	34.6	32.2	50.4
D74-7947	30.9	37.3	30.5	37.7	26.3-	27.6	32.5
D74-8819	35.0	36.0	29.7	37.7	35.7	37.5	45.9
D74-8970	30.1	38.4	33.3	31.8	34.1	37.4	39.2
D74-8989	32.1	32.0	27.2	32.5	29.2	32.8	44.8
D74-9732	32.8	36.6	32.1	33.7	27.0-	30.3	51.6
N74-5008	35.0	38.6	37.5+	33.0	30.9	32.6	36.7
R74-106	27.7	37.1	34.2	33.0	33.5	34.6	51.4
R74-334	32.7	40.4	38.2+	31.1	33.0	33.0	43.5
R74-451	34.2	33.8	39.8+	36.5	30.9	28.7	49.7
R74-1438	33.7	36.1	31.7	36.9	31.2	31.2	36.1
S73-86113	36.8	39.2	37.2+	33.1	36.8	36.8	46.7
V73-697	38.0	42.6	41.2+	36.5	31.5	23.0-	19.4-
V73-1100	35.7	35.5	34.3	42.4+	36.9	29.6	27.5-
V73-1261	41.3	39.4	36.4+	37.3	35.6	33.2	28.7-
V73-1308	37.5	39.8	30.9	35.9	38.3	25.6	23.3-
V73-1309	36.1	36.6	37.1+	38.4	32.3	36.2	26.3-
L.S.D.(.05)	N.S.	N.S.	4.4	8.1	8.4	9.4	11.9
C.V.	13%	12%	6%	11%	12%	17%	13%

Table 18 - Oil percentages for the strains in Preliminary Group V, 1976

Strain	Queenstown, Md.	Warsaw, Va.	Plymouth, N.C.	Keiser, Ark.	Stoneville, Miss.
Hill	18.3	19.5	19.8	19.7	22.8
Forrest	20.5	20.9	21.3	19.5	22.3
J74-25	19.4	19.7	21.3	19.7	22.9
J74-37	19.2	20.6	21.0	20.7	22.5
J74-45	19.3	19.5	19.9	19.5	20.5
J74-46	19.4	19.5	20.5	19.7	21.2
J74-53	20.3	19.7	21.1	19.4	22.4
J74-67	19.8	19.3	21.3	20.9	22.4
J74-77	19.7	18.9	19.9	20.2	23.2
J74-116	19.5	20.4	21.7	20.0	23.0
D74-7352	19.3	19.4	20.7	19.9	22.3
D74-7380	17.7	17.6	20.1	18.7	21.6
D74-7423	17.6	17.7	19.1	18.5	19.3
D74-7523	20.3	20.3	22.1	20.8	22.6
D74-7631	20.4	20.0	21.2	18.7	21.5
D74-7633	20.4	19.7	21.4	19.6	22.6
D74-7657	19.3	19.4	21.0	20.0	21.0
D74-7697	19.5	19.7	21.4	19.0	22.1
D74-7824	19.2	19.5	20.6	20.0	21.1
D74-7921	19.8	19.2	20.7	19.6	21.3
D74-7947	18.0	18.2	19.5	17.8	20.6
D74-8819	16.7	17.1	17.1	16.6	17.4
D74-8970	16.7	16.5	17.1	17.0	18.6
D74-8989	17.4	16.8	17.7	17.3	19.1
D74-9732	18.8	19.0	20.0	18.0	20.8
N74-5008	20.0	20.1	21.7	19.9	22.1
R74-106	20.4	19.9	20.8	19.9	22.0
R74-334	20.8	19.6	21.4	20.7	24.0
R74-451	19.5	19.0	20.2	20.0	22.2
R74-1438	19.7	17.9	20.7	18.8	22.5
S73-86113	18.8	19.2	19.9	19.2	20.9
V73-697	19.0	19.2	19.5	18.8	21.8
V73-1100	20.0	20.9	21.4	21.5	24.0
V73-1261	20.0	20.6	20.2	21.4	23.9
V73-1308	19.7	21.3	20.2	21.6	23.4
V73-1309	19.3	20.8	20.3	21.6	24.2

Table 19 - Protein percentages for the strains in Preliminary Group V, 1976

Strain	Queenstown, Md.	Warsaw, Va.	Plymouth, N.C.	Keiser, Ark.	Stoneville, Miss.
Hill	40.2	39.2	41.5	40.4	35.9
Forrest	37.7	37.3	39.9	41.1	37.6
J74-25	39.7	40.0	40.3	40.4	37.2
J74-37	40.6	39.2	40.3	40.2	37.9
J74-45	39.6	40.3	41.4	40.4	39.3
J74-46	37.7	38.7	39.8	39.8	37.7
J74-53	38.2	39.4	39.7	41.0	37.2
J74-67	38.8	40.0	39.8	40.0	37.6
J74-77	39.7	40.4	41.8	40.3	36.0
J74-116	38.4	37.7	39.7	40.2	35.9
D74-7352	41.1	41.4	41.8	42.4	38.6
D74-7380	42.5	43.3	42.9	43.9	39.0
D74-7423	43.9	44.7	43.8	44.9	43.2
D74-7523	38.3	39.9	39.9	41.2	37.8
D74-7631	39.4	40.9	41.1	42.5	39.5
D74-7633	38.0	39.5	40.4	41.2	37.0
D74-7657	39.7	40.6	40.4	41.0	38.9
D74-7697	39.3	39.7	40.1	42.1	37.2
D74-7824	39.8	39.8	41.0	40.8	38.2
D74-7921	39.4	41.5	41.8	41.5	39.4
D74-7947	41.6	41.8	42.5	44.1	39.4
D74-8819	44.8	46.0	48.5	47.3	45.6
D74-8970	44.5	44.7	48.2	46.7	43.4
D74-8989	43.4	44.4	46.0	45.6	42.6
D74-9732	40.4	39.0	42.0	42.2	37.1
N74-5008	40.4	40.5	40.6	41.2	37.5
R74-106	40.6	41.4	42.1	43.1	39.7
R74-334	37.8	40.0	42.0	41.3	36.2
R74-451	41.4	42.9	44.0	42.6	39.3
R74-1438	40.8	42.8	41.8	42.8	37.8
S73-86113	42.4	42.6	44.6	43.6	40.3
V73-697	41.5	40.8	43.0	43.2	39.0
V73-1100	41.1	39.7	42.4	40.9	38.1
V73-1261	41.6	41.5	43.7	41.8	38.0
V73-1308	42.4	39.8	45.2	42.1	39.3
V73-1309	42.3	39.1	44.1	41.8	38.1

Table 20 - Plant height for the strains in Preliminary Group V, 1976

Strain	George-town, Del.	Queens-town Md.	Warsaw, Va.	Ply-mouth, N.C.	Portage-ville, Mo.	Keiser, Ark.	Stone-ville, Miss.
Hill	30	34	36	46	38	32	31
Forrest	36	35	40	45	40	38	26
J74-25	36	49	39	43	40	33	34
J74-37	29	34	37	39	33	26	24
J74-45	34	40	40	46	41	32	30
J74-46	40	61	44	47	47	42	39
J74-53	44	46	45	48	46	36	34
J74-67	50	81	44	50	43	42	39
J74-77	40	52	42	50	50	34	34
J74-116	46	53	44	48	49	40	36
D74-7352	36	30	38	42	39	30	30
D74-7380	37	42	44	46	45	37	33
D74-7423	36	31	40	40	43	35	31
D74-7523	38	45	44	45	47	36	38
D74-7631	40	49	44	45	48	38	37
D74-7633	41	56	44	50	44	36	31
D74-7657	34	35	42	43	41	32	35
D74-7697	32	44	42	45	40	35	35
D74-7824	31	35	42	44	46	34	34
D74-7921	36	41	43	45	43	36	35
D74-7947	31	42	38	42	38	33	29
D74-8819	34	38	34	42	39	30	29
D74-8970	34	38	41	40	40	32	29
D74-8989	36	40	41	41	40	31	35
D74-9732	37	45	38	43	40	32	34
N74-5008	35	41	39	46	39	30	25
R74-106	33	41	40	45	40	34	30
R74-334	46	51	43	49	46	46	54
R74-451	34	40	42	44	36	29	31
R74-1438	35	31	44	42	42	39	29
S73-86113	28	36	32	37	34	27	27
V73-697	23	32	28	35	29	20	15
V73-1100	25	32	32	37	30	21	16
V73-1261	28	33	36	42	38	24	21
V73-1308	28	32	35	42	31	26	15
V73-1309	28	37	38	44	31	26	17

Table 21 - Seed quality scores for the strains in Preliminary Group V, 1976

Strain	George-town, Del.	Queens-town, Md.	Warsaw, Va.	Ply-mouth, N.C.	Portage-ville, Mo.	Keiser, Ark.	Stone-ville, Miss.
Hill	2.3	2.0	2.6	2.0	1.5	1.0	2.0
Forrest	2.8	2.0	1.6	1.5	2.0	1.0	2.0
J74-25	2.3	2.0	1.6	1.5	1.5	1.0	2.0
J74-37	3.0	2.0	3.8	1.5	2.0	1.5	2.0
J74-45	2.8	2.0	2.3	2.0	1.5	1.0	2.0
J74-46	2.5	2.0	1.3	1.5	2.0	1.0	2.0
J74-53	2.5	2.0	1.2	1.5	1.5	1.0	2.0
J74-67	2.3	2.0	1.5	2.0	1.5	3.0	2.0
J74-77	3.0	2.0	2.3	2.0	1.5	2.0	2.0
J74-116	2.5	2.0	1.2	1.5	2.0	1.0	2.0
D74-7352	2.3	2.0	1.9	2.0	1.5	2.0	2.0
D74-7380	2.3	2.0	1.7	1.0	2.0	1.0	2.0
D74-7423	2.3	2.0	2.1	1.0	1.5	1.5	2.0
D74-7523	2.3	2.0	1.4	1.5	1.5	1.5	2.0
D74-7631	2.8	2.0	1.5	1.5	2.0	1.0	2.0
D74-7633	2.8	2.0	1.2	1.5	1.5	1.0	2.0
D74-7657	2.5	2.0	1.5	1.5	1.5	1.5	2.0
D74-7697	2.5	2.0	1.4	1.5	2.0	1.0	2.0
D74-7824	2.8	2.0	1.2	1.5	1.5	1.0	2.0
D74-7921	2.5	2.0	1.3	1.5	1.5	1.0	2.0
D74-7947	2.3	2.0	2.6	1.0	1.5	1.0	2.0
D74-8819	2.3	2.0	2.5	1.0	1.5	1.0	2.0
D74-8970	3.8	2.0	2.8	1.5	1.5	1.0	2.0
D74-8989	2.8	2.0	2.8	2.0	1.5	1.0	2.0
D74-9732	2.0	2.0	1.5	2.0	2.0	1.0	2.0
N74-5008	2.0	2.0	1.7	1.0	1.5	1.0	2.0
R74-106	2.5	2.0	1.3	1.5	1.5	1.0	2.0
R74-334	2.0	2.0	2.0	1.5	1.5	1.0	2.0
R74-451	2.0	2.0	2.5	1.5	1.5	1.0	2.0
R74-1438	2.0	2.0	1.9	1.5	1.5	1.0	2.0
S73-86113	2.3	2.0	2.1	1.5	1.5	1.0	2.0
V73-697	2.3	2.0	1.5	1.5	2.0	1.5	2.0
V73-1100	2.8	2.0	3.0	1.5	1.5	1.0	2.0
V73-1261	3.0	2.0	3.5	1.5	1.5	1.0	2.0
V73-1308	3.0	2.0	3.5	2.0	2.0	1.5	2.5
V73-1309	3.0	2.0	2.8	1.5	1.5	2.0	2.0

UNIFORM GROUP VI

1976

	Variety or strain	Parentage	Generation composited
1.	Tracy	D61-618 X D60-9647	F_5
2.	Centennial (D70-3185)	D64-4636 X tawny pubescence Pickett 71 type	F_5
3.	N70-1501	Dare X D65-6765	F_4
4.	D71-6234	D66-7398 X PI 95960	F_5
5.	N72-3037	D67-B5 X N64-2451	F_5
6.	R71-72	(Bragg X Davis) X (Dare X Davis)	F_5
7.	D73-8105	D67-4823 X Pickett 71	F_5
8.	N72-137	D65-6765 X (D67-B5 X N64-2451)	F_5
9.	N72-546	D65-6765 X (N64-1758 X N64-2451)	F_5
10.	N72-3058	F65-1376 X Ransom	F_5
11.	N72-3148	D67-B5 X N64-2451	F_5
12.	R73-81	R56-49 X D68-B2	F_5

Background of strains used as parents:

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

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

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

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).

D66-7398 is a high protein, yellow hilum strain selected from D61-3505 X (PI 96035 X D61-2624). D61-3505 and D61-2624 have D49-2491 as a recurrent parent and PI 165926 as a nonrecurrent parent.

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.

D67-4823 is a selection from D62-3286 X D60-9647. D62-3286 is a high protein selection from D49-2491(4) X PI 163453.

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.

Results of 35 Uniform Group VI nurseries are summarized in Tables 22 through 28. Table 22 gives a general summary of agronomic qualities, oil and protein percentages of the seed, 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.

Seed yield differences among strains were significant at the 5% level of confidence at 21 locations. The combined analysis of variance for mean seed yield by production regions showed differences to be significant in the East Coast, Southeast, and Upper and Central South regions.

Special plantings were made near the West Florida Research Center, Jay, Florida, to evaluate strains against the root knot nematode, *M. incognita*. Another planting was made near Blackville, South Carolina, to evaluate strains against the root knot nematode, *M. arenaria*. Phytophthora rot ratings were made from the plantings on clay at Stoneville based upon vigor of growth. The rating for shattering is based upon reports from several locations.

D70-3185 has been increased and released as Centennial. Centennial carries the Arksoy type resistance to phytophthora rot, is resistant to races 1 and 3 of the soybean cyst nematode, to the root knot nematode, *M. incognita*, and to reniform nematodes. It is susceptible to the root knot nematode, *M. arenaria*. Centennial has a three-year mean yield above that for Tracy only in the Southeast.

Only one strain, N70-1501, has been evaluated three years. It is 4 or 5 days earlier than Tracy. Mean seed yield for the three years has averaged 0.6 bushels higher than Tracy in the East Coast region, 0.7 bushels higher in the West, equal in the Upper and Central South, 2.1 bushels lower in the Southeast, and 2.4 bushels lower in the Delta.

Three strains, D71-6234, N72-3037 and R71-72, have been evaluated two years. D71-6234 has a protein percentage of 45.5. Seed yield is below that for Tracy in all regions. N72-3037 and R71-72 have yielded well in the East Coast region.

D73-8105, another high protein strain, averaged below Tracy in all regions. N72-137 and N72-3148 produced seed yields significantly higher than Tracy in the East Coast.

Table 22 - General summary of the performance for the strains in Uniform Group VI, 1976

	Tracy	Centennial	N70-1501	D71-6234	N72-3037	R71-72
Seed Yield - 1976						
East Coast	34.4	34.8	35.7	31.8	37.6+	38.2+
Southeast	35.3	39.1	33.3	37.0	37.4	39.3
Upper & Central South	31.7	29.5	32.8	27.8-	30.0	29.5
Delta	43.7	42.4	39.6	39.4	42.0	42.4
West	39.1	37.3	38.7	35.2	36.2	39.7
-1975-76						
East Coast	38.0	37.3	38.1	33.6	39.6	38.7
Southeast	38.1	40.7	35.6	36.7	40.4	40.8
Upper & Central South	37.7	35.9	36.9	34.2	38.1	35.1
Delta	44.7	43.1	41.5	40.3	43.0	42.4
West	38.0	36.3	39.0	34.1	37.5	38.6
-1974-76						
East Coast	37.9	36.5	38.5			
Southeast	41.3	42.1	39.2			
Upper & Central South	38.1	36.1	38.1			
Delta	42.1	39.7	39.7			
West	38.4	37.1	39.1			
Oil Content - 1976	17.5	19.5+	20.5+	17.4	20.7+	20.1+
- 1975-76	17.8	19.3	20.5	17.6	20.8	20.0
- 1974-76	17.6	19.2	20.6			
Protein Content - 1976	42.5	41.4-	40.1-	45.5+	39.8-	40.4-
- 1975-76	42.6	42.1	40.5	45.5	39.8	40.7
- 1974-76	42.9	42.2	40.4			
Seed size	16.6	14.2-	13.4-	12.3-	13.1-	12.3-
Maturity index	10-15	+3	-4	+2	0	+3
Height	36	38	35	38	32	32
Shatter resistance	1.0	1.0	1.5	1.0	2.0	2.0
Bacterial pustule	R	R	R	R	R	R
Phytophthora rot	1.0	1.0	1.5	1.0	1.0	1.0
M. incognita	5.0	1.5	1.0	5.0	5.0	4.0
M. arenaria	5.0	5.0	3.5	5.0	5.0	5.0
Cyst nematode (race 3)	S	R	S	S	S	S
Flower color	W	P	W	W	P	W
Pubescence color	T	T	G	T	T	G
Pod wall color	T	T	T	Br	T	Br

Table 22 - (continued)

	D73-8105	N72-137	N72-546	N72-3058	N72-3148	R73-81
Seed Yield - 1976						
East Coast	33.0	37.7+	35.6	35.9	37.9+	34.5
Southeast	32.3	37.0	35.0	37.2	39.1	37.5
Upper & Central South	28.2-	31.2	29.1	34.3	30.7	31.7
Delta	38.7	42.7	40.1	45.4	41.9	44.1
West	36.2	38.4	38.9	41.7	40.5	38.8
- 1975-76						
East Coast						
Southeast						
Upper & Central South						
Delta						
West						
- 1974-76						
East Coast						
Southeast						
Upper & Central South						
Delta						
West						
Oil Content - 1976	17.8	19.8+	19.1+	20.5+	20.6+	20.9+
- 1975-76						
- 1974-76						
Protein Content - 1976	46.1+	42.5	42.8	42.4	39.8	40.3-
- 1975-76						
- 1974-76						
Seed size	14.0-	12.9-	13.6-	16.4	14.7-	17.2
Maturity index	0	0	0	-3	+3	+2
Height	34	36	35	36	33	35
Shatter resistance	1.0	1.0	1.0	1.0	1.5	1.0
Bacterial pustule	R	R	R	R	R	R
Phytophthora rot	1.0	1.0	2.0	1.0	1.0	1.0
M. incognita	5.0	5.0	4.0	5.0	5.0	4.0
M. arenaria	4.3	5.0	5.0	5.0	5.0	4.5
Cyst nematode (race 3)	S	S	S	S	S	S
Flower color	P	W	P	P	P	P
Pubescence color	T	T	T	T	T	T
Pod wall color	S	T	Br	T	T	Br

Table 23 - Seed yield, in bushels per acre, for the strains in Uniform Group VI, 1976

Location	Tracy	Centennial	N70-1501	D71-6234	N72-3037	R71-72	D73-8105
			East Coast				
Warsaw, Va.	32.1	32.5	36.5+	35.9+	38.0+	38.0+	31.3
Petersburg, Va.	24.4	19.4-	27.0	19.4-	26.8	23.0	17.5-
Holland, Va.	41.5	38.4	43.1	39.6	39.4	40.2	33.5-
Plymouth, N.C.	41.7	46.4	45.8	35.7	48.7	47.4	42.2
Clayton, N.C.	33.0	38.7	32.5	33.8	44.7+	43.6	35.2
Clinton, N.C.	33.3	35.7	36.8	28.7	40.0	39.6	31.7
Kinston, N.C.	32.2	31.3	32.4	28.4	36.0	36.4	28.0
Florence, S.C.	36.9	35.9	33.0	31.7	27.5	39.4	34.0
Hartsville, S.C.	34.8	35.0	33.9	33.3	37.6	36.0	35.2
Mean	34.4	34.8	35.7	31.8	37.6+	38.2+	33.0
			Southeast				
Blackville, S.C.	30.8	33.0	31.8	29.6	35.0+	36.9+	27.2
Tifton, Ga.	38.9	45.0	34.7	42.9	41.2	47.1	35.9
Quincy, Fla.	27.4	37.0+	23.5	37.0+	27.3	24.8	21.7-
Jay, Fla.	48.4	45.1	42.1-	45.4	48.1	47.7	44.1-
Fairhope, Ala.	41.2	39.4	36.9	33.9	45.7	43.2	39.3
Baton Rouge, La.	26.0	34.9+	30.6	33.3	27.4	35.7+	25.5
Mean	35.3	39.1	33.3	37.0	37.4	39.3	32.3
			Upper and Central South				
Athens, Ga.	46.0	41.1	43.8	34.7-	41.1	40.4	35.6-
Calhoun, Ga.	20.4	18.6	23.4	14.9	26.4	19.4	18.6
Belle Mina, Ala.	32.2	31.7	31.4	32.6	33.1	29.0	31.1
Clemson, S.C.	20.2	18.9	26.2+	13.9-	24.5	20.8	15.0-
Jackson, Tenn.	27.4	26.3	30.5	28.8	32.5	27.7	26.7
Verona, Miss.	43.8	40.3	41.3	41.7	40.0	39.8	42.4
Mean	31.7	29.5	32.8	27.8-	30.0	29.5	28.2-
			Delta				
Portageville, Mo.(A)	30.6	41.9+	21.2-	20.4-	20.7-	30.0	21.9-
Portageville, Mo.(B)	30.1	33.9	30.1	31.9	29.2	29.0	31.3
Keiser, Ark.	34.9	33.7	36.4	34.7	33.9	36.8	32.3
Jonesboro, Ark.*	11.8	12.2	12.0	8.9	13.7	11.8	10.5
Stoneville, Miss.(A)	56.8	44.3-	55.3	56.1	55.6	50.0	42.7-
Stoneville, Miss.(B)	49.3	44.5	49.5	46.7	47.2	49.4	41.9-
St. Joseph, La.	56.0	47.9-	40.5-	43.3-	57.0	55.8	52.4
Rohwer, Ark.	48.4	50.9	44.6	42.8-	50.3	46.2	48.3
Mean	43.7	42.4	39.6	39.4	42.0	42.4	38.7
			West				
Stuttgart, Ark.	47.9	51.1	43.5-	43.6	44.5	43.4-	43.6-
Curtis, La.	38.1	38.5	31.8	30.6	42.3	43.9	31.4
Crowley, La.	42.6	39.6	45.0	37.2	38.0	36.9	36.8
Beaumont, Texas	34.4	42.2	34.8	36.9	42.9+	43.4+	36.9
Bixby, Okla.	25.4	23.0	33.5+	22.7	33.2+	32.1+	23.4
Lubbock, Texas	45.9	29.4-	43.7	40.3-	49.8	38.5-	45.0
Mean	39.1	37.3	38.7	35.2	36.2	39.7	36.2

*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	N72-137	N72-546	N72-3058	N72-3148	R73-81	L.S.D. (.05)	C.V. (%)
			East Coast				
Warsaw, Va.	38.2+	34.9	35.7+	35.5+	35.0	3.2	5
Petersburg, Va.	24.2	23.0	23.7	22.6	21.8-	3.2	8
Holland, Va.	41.4	39.2	39.9	42.6	35.0-	5.2	8
Plymouth, N.C.	51.1	47.3	42.9	48.5	45.2	N.S.	11
Clayton, N.C.	49.0	35.9	39.5	42.1+	37.4	7.1	11
Clinton, N.C.	37.5	37.7	36.4	42.5	39.0	N.S.	12
Kinston, N.C.	33.1	36.1	35.1	33.3	31.3	N.S.	16
Florence, S.C.	30.9	32.2	28.8	36.9	28.0	N.S.	19
Hartsville, S.C.	33.4	33.6	41.1	37.2	36.4	N.S.	8
Mean	37.7+	35.6	35.9	37.9+	34.5	2.8	
			Southeast				
Blackville, S. C.	33.6	28.2	33.8	33.9	32.8	4.0	7
Tifton, Ga.	43.7	37.9	43.7	43.2	45.0	N.S.	13
Quincy, Fla.	31.4	22.2-	30.0	36.1+	27.8	6.6	13
Jay, Fla.	47.4	46.9	43.4-	49.4	45.4	3.6	5
Fairhope, Ala.	39.7	38.6	38.5	46.1	36.5	N.S.	11
Baton Rouge, La.	26.7	36.3+	34.2+	25.8	37.6+	7.7	15
Mean	37.0	38.6	35.0	37.2	37.5	4.1	
			Upper and Central South				
Athens, Ga.	39.9	39.1-	48.7	40.6	39.8	6.5	9
Calhoun, Ga.	18.3	19.3	19.3	21.8	20.3	N.S.	18
Belle Mina, Ala.	39.6	29.6	37.9	31.2	37.0	N.S.	12
Clemson, S.C.	21.0	23.0	21.8	16.0	20.9	5.0	15
Jackson, Tenn.	26.0	24.4	29.7	31.6	28.7	N.S.	14
Verona, Miss.	42.5	39.0	48.7	43.0	43.7	N.S.	7
Mean	31.2	29.1	34.3	30.7	31.7	3.2	
			Delta				
Portageville, Mo.(A)	21.9-	21.8-	29.3	19.1-	35.1	6.4	15
Portageville, Mo.(B)	33.0	30.0	39.0+	24.7-	30.7	4.6	9
Keiser, Ark.	36.6	37.2	37.5	35.9	33.9	N.S.	9
Jonesboro, Ark.*	11.3	14.8	12.4	9.9	12.9	N.S.	24
Stoneville, Miss.(A)	56.6	53.4	54.5	52.6	60.1	7.8	8
Stoneville, Miss.(B)	51.9	41.1-	46.7	49.9	48.4	5.6	7
St. Joseph, La.	51.3	50.8	55.2	57.1	52.9	9.2	11
Rohwer, Ark.	47.9	46.6	55.4+	53.7	47.5	5.5	6
Mean	42.7	40.1	45.4	41.9	44.1	N.S.	
			West				
Stuttgart, Ark.	46.5	43.1-	46.5	44.5	49.5	3.8	4
Curtis, La.	36.3	37.0	40.8	44.6	40.0	8.1	13
Crowley, La.	40.4	39.1	37.9	40.1	39.7	N.S.	8
Beaumont, Texas	36.1	34.7	40.9+	39.2	32.3	6.0	9
Bixby, Okla.	27.8	29.8+	31.6+	26.8	25.6	4.1	9
Lubbock, Texas	43.3	50.0	52.5+	48.1	45.7	6.0	8
Mean	38.4	38.9	41.7	40.5	38.8	N.S.	

Table 24 - Chemical composition and seed size for the strains in Uniform Group VI, 1976

Location	Tracy	Centennial	N70-1501	D71-6234	N72-3037	R71-72
			Oil Percentage			
Warsaw, Va.	16.2	18.6	20.3	16.8	21.6	19.4
Plymouth, N.C.	17.3	20.3	21.1	17.6	20.3	20.5
Clinton, N. C.	17.5	20.8	21.6	19.2	22.6	21.3
Jay, Fla.	18.1	19.8	20.9	17.7	21.6	21.0
Jackson, Tenn.	19.1	19.2	20.6	18.0	20.3	19.8
Portageville, Mo.(A)	17.5	19.1	19.6	17.8	19.2	19.6
Keiser, Ark.	17.6	19.4	19.9	16.9	19.7	19.6
Stoneville, Miss.(B)	18.4	19.5	21.7	17.1	21.6	20.6
Stuttgart, Ark.	16.0	18.3	19.0	16.2	19.3	18.9
Beaumont, Texas	17.5	19.9	20.2	16.4	20.9	20.4
Mean	17.5	19.5	20.5	17.4	20.7	20.1
			Protein Percentage			
Warsaw, Va.	42.2	38.1	38.7	45.2	35.9	37.4
Plymouth, N.C.	44.2	42.5	39.5	46.7	41.5	41.6
Clinton, N.C.	42.0	39.8	39.2	44.1	35.9	40.2
Jay, Fla.	42.6	43.6	41.5	46.2	40.1	41.4
Jackson, Tenn.	38.1	38.1	36.9	43.1	38.8	37.6
Portageville, Mo.(A)	42.5	41.8	41.3	44.3	41.3	40.8
Keiser, Ark.	43.5	43.0	41.9	45.7	42.2	41.6
Stoneville, Miss.(B)	42.2	41.9	37.9	45.0	38.1	39.6
Stuttgart, Ark.	43.6	42.9	41.8	46.4	42.4	42.1
Beaumont, Texas	44.2	42.7	42.6	47.8	41.5	41.9
Mean	42.5	41.4	40.1	45.5	39.8	40.4
			Grams Per 100 Seeds			
Warsaw, Va.	18.1	14.5	15.5	13.9	15.7	14.2
Plymouth, N.C.	16.8	16.3	13.4	13.8	13.4	13.0
Clinton, N.C.	18.0	14.8	14.3	11.7	13.5	13.2
Jay, Fla.	18.0	15.0	14.0	12.0	14.0	12.0
Jackson, Tenn.	16.5	14.9	14.4	14.1	13.9	13.7
Portageville, Mo.(A)	14.6	14.3	10.2	9.7	9.7	11.5
Keiser, Ark.	13.5	11.9	11.0	10.7	10.1	10.8
Stoneville, Miss.(B)	14.6	11.8	11.8	11.8	12.0	11.2
Stuttgart, Ark.	17.7	14.7	13.3	12.3	13.3	12.0
Beaumont, Texas	18.0	13.6	15.8	12.6	15.1	11.5
Mean	16.6	14.2	13.4	12.3	13.1	12.3

Table 24 - (continued)

Location	D73-8105	N72-137	N72-546	N72-3058	N72-3148	R73-81	L.S.D. (.05)
			Oil Percentage				
Warsaw, Va.	17.4	19.7	18.9	19.8	20.0	20.0	
Plymouth, N.C.	17.6	19.8	19.1	21.6	21.1	21.0	
Clinton, N.C.	19.0	21.8	20.6	21.7	22.1	22.0	
Jay, Fla.	17.7	20.7	19.5	21.2	21.4	22.1	
Jackson, Tenn.	19.2	20.3	20.4	20.2	19.4	20.0	
Portageville, Mo.(A)	17.9	18.8	18.5	20.0	19.7	20.6	
Keiser, Ark.	17.2	19.3	18.6	19.8	20.3	20.1	
Stoneville, Miss.(B)	18.1	19.2	19.8	21.0	21.3	21.7	
Stuttgart, Ark.	16.7	18.3	17.9	19.1	19.3	20.0	
Beaumont, Texas	17.1	19.7	17.4	20.2	20.9	21.6	
Mean	17.8	19.8	19.1	20.5	20.6	20.9	0.4
			Protein Percentage				
Warsaw, Va.	45.0	40.6	41.9	40.7	37.2	37.9	
Plymouth, N.C.	47.2	43.8	43.9	42.4	40.2	41.6	
Clinton, N.C.	45.5	39.2	41.1	41.1	37.8	38.6	
Jay, Fla.	48.2	42.8	43.7	43.6	39.8	40.2	
Jackson, Tenn.	41.4	38.5	38.6	40.9	38.2	38.4	
Portageville, Mo.(A)	45.8	43.8	43.8	42.1	40.5	40.3	
Keiser, Ark.	46.7	43.9	43.9	43.0	41.2	42.0	
Stoneville, Miss.(B)	45.6	42.4	40.9	41.3	38.7	38.7	
Stuttgart, Ark.	47.0	44.5	44.0	44.0	41.9	41.5	
Beaumont, Texas	48.7	45.3	46.6	45.3	42.9	43.6	
Mean	46.1	42.5	42.8	42.4	39.8	40.3	0.8
			Grams Per 100 Seeds				
Warsaw, Va.	15.3	15.2	15.5	18.7	15.4	18.2	
Plymouth, N.C.	14.4	14.7	15.0	18.0	13.6	17.6	
Clinton, N.C.	14.8	13.0	14.6	16.2	14.8	17.8	
Jay, Fla.	16.0	15.0	14.0	18.0	16.0	18.0	
Jackson, Tenn.	14.3	12.6	14.8	16.7	15.2	15.9	
Portageville, Mo.(A)	10.9	10.0	11.3	13.4	11.4	15.6	
Keiser, Ark.	11.9	10.8	10.9	13.5	13.2	15.7	
Stoneville, Miss.(B)	13.0	11.4	12.0	14.6	14.0	15.8	
Stuttgart, Ark.	14.3	13.0	13.0	16.7	15.7	19.0	
Beaumont, Texas	15.1	13.1	14.8	18.5	18.0	18.8	
Mean	14.0	12.9	13.6	16.4	14.7	17.2	0.8

Table 25 - Relative maturity data, days earlier (-) or later (+) than Tracy, for the strains in Uniform Group VI, 1976

Location	Date planted	Tracy matured	Centennial	N70-1501	D71-6234	N72-3037
			East Coast			
Petersburg, Va.	5-11	10-18	0	0	0	0
Plymouth, N.C.	5-10	10-24	+4	-2	0	-2
Clayton, N.C.	5-24	10-25	+3	-5	0	0
Clinton, N.C.	5-25	10-25	0	0	0	0
Kinston, N.C.		10-22	+3	-4	0	-2
Florence, S.C.	5-19	10-26	+2	-14	+5	+4
Hartsville, S.C.	5-20	10-19	-1	-8	-1	0
Mean		10-21	+1	-5	+1	0
			Southeast			
Blackville, S.C.	5-24	10-25	-3	-5	-1	-5
Tifton, Ga.	5-21	10-10	+4	-9	+8	+5
Quincy, Fla.	5-21	10-4	0	-6	+1	-3
Jay, Fla.	6-9	10-6	+5	-5	+6	+6
Fairhope, Ala.	6-8	10-8	+1	-7	0	+1
Baton Rouge, La.	5-18	10-7	+5	-3	+4	-1
Mean		10-10	+2	-6	+3	0
			Upper and Central South			
Athens, Ga.	5-10	10-2	+5	-6	+2	-2
Calhoun, Ga.	5-25	10-14	+4	-10	0	+1
Belle Mina, Ala.	5-4	10-4	+10	+1	+7	+8
Clemson, S.C.	5-24	10-28	+4	0	0	0
Jackson, Tenn.	6-4	10-22	+8	+3	+1	+3
Verona, Miss.	5-20	10-15	+5	0	+3	+2
Mean		10-14	+6	-2	+2	+2
			Delta			
Portageville, Mo.(A)	5-11	10-14	+7	-3	-2	-2
Portageville, Mo.(B)	5-12	10-14	+7	+1	+2	+1
Keiser, Ark.	5-21	10-17	+3	0	-1	+1
Jonesboro, Ark. (	5-21	10-23	+1	-1	-4	-6
Stoneville, Miss.(A)	5-10	10-15	+6	-7	+8	+5
Stoneville, Miss.(B)	5-20	10-16	+2	-5	+2	+1
St. Joseph, La.	5-25	10-11	+4	-4	+7	+4
Rohwer, Ark.	6-9	10-23	+1	-7	-3	-3
Mean		10-17	+4	-3	+1	0
			West			
Stuttgart, Ark.	5-20	10-19	+4	-5	-1	-2
Curtis, La.	5-12	10-12	0	-3	+2	+1
Crowley, La.	5-28	10-14	+2	-9	0	-9
Beaumont, Texas	5-19	10-6	-3	-3	-1	0
Mean		10-13	+1	-5	0	-3

Table 25 - (continued)

Location	R71-72	D73-8105	N72-137	N72-546	N72-3058	N72-3148	R73-81
			East Coast				
Petersburg, Va.	+2	0	0	0	0	0	+2
Plymouth, N.C.	+4	-4	0	-2	-2	+4	0
Clayton, N.C.	0	+3	0	+3	0	+3	+3
Clinton, N.C.	+2	-3	-3	-3	-3	+3	0
Kinston, N.C.	+3	-2	0	-2	0	0	-2
Florence, S.C.	-14	-4	-4	-6	+5	+4	+2
Hartsville, S.C.	0	-4	-4	-8	+3	+1	+3
Mean	0	-2	-2	-2	0	+2	+1
			Southeast				
Blackville, S.C.	-1	-4	-5	-3	-2	-2	-3
Tifton, Ga.	+6	+2	+5	-4	+6	+8	+6
Quincy, Fla.	-2	-3	-3	-2	+1	+1	-1
Jay, Fla.	+6	0	+7	-2	+6	+7	+7
Fairhope, Ala.	+1	+1	-1	-7	+2	+3	-1
Baton Rouge, Ala.	+9	+5	-3	-3	+5	+7	0
Mean	+3	0	0	-3	+3	+4	+1
			Upper and Central South				
Athens, Ga.	+4	0	+2	-4	+1	+3	+6
Calhoun, Ga.	+3	-1	-2	-14	-1	+3	+2
Belle Mina, Ala.	+13	+3	+8	-2	+8	+10	+11
Clemson, S.C.	+2	0	+4	+4	+2	+2	+2
Jackson, Tenn.	+7	+7	+4	-5	+4	+9	+9
Verona, Miss.	+6	+1	+2	-6	+3	+3	+3
Mean	+6	+2	+3	-4	+3	+5	+5
			Delta				
Portageville, Mo.(A)	+5	-1	-1	-5	+2	+1	+3
Portageville, Mo.(B)	+5	0	+1	-3	+3	+4	+3
Keiser, Ark.	+2	-2	-4	-10	+3	+2	+1
Jonesboro, Ark.	0	-1	-4	-13	0	+1	0
Stoneville, Miss.(A)	+6	+6	0	-4	+2	+10	+7
Stoneville, Miss.(B)	+2	+1	0	-2	+1	+2	+1
St. Joseph, La.	+9	0	+3	-1	+4	+6	+6
Rohwer, Ark.	-1	-5	-5	-6	-4	+1	-4
Mean	+3	0	-1	-6	+1	+4	+2
			West				
Stuttgart, Ark.	0	-4	-3	-6	+1	+1	+1
Curtis, La.	+3	0	+5	-9	+2	+6	+3
Crowley, La.	+2	-2	-7	-11	-1	+5	-3
Beaumont, Texas	0	-2	0	-3	+1	+2	+1
Mean	+1	-2	-1	-7	-1	+3	0

Table 26 - Plant height for the strains in Uniform Group VI, 1976

Location	Tracy	Centennial	N70-1501	D71-6234	N72-3037	R71-72
			East Coast			
Warsaw, Va.	38	39	39	41	36	36
Petersburg, Va.	36	38	33	33	31	30
Holland, Va.	40	42	37	45	35	33
Plymouth, N.C.	44	45	41	42	39	43
Clayton, N.C.	33	35	31	33	30	31
Clinton, N.C.	42	43	41	45	37	36
Kinston, N.C.	38	40	36	41	30	35
Florence, S.C.	32	39	34	38	30	28
Hartsville, S.C.	35	36	33	35	29	27
Mean	38	40	36	39	33	33
			Southeast			
Blackville, S.C.	31	37	33	32	26	28
Tifton, Ga.	36	42	38	35	29	30
Quincy, Fla.	20	22	19	20	14	16
Fairhope, Ala.	36	37	36	40	29	35
Baton Rouge, La.	34	38	33	38	28	32
Mean	31	35	32	33	25	28
			Upper and Central South			
Athens, Ga.	37	37	37	40	25	30
Calhoun, Ga.	31	32	29	30	27	24
Belle Mina, Ala.	40	41	40	42	35	35
Clemson, S.C.	30	32	31	33	29	24
Jackson, Tenn.	41	41	40	46	38	35
Verona, Miss.	34	36	32	38	32	30
Mean	36	37	35	38	31	30
			Delta			
Portageville, Mo.(A)	37	38	31	36	30	30
Portageville, Mo.(B)	37	37	31	36	29	32
Keiser, Ark.	37	35	33	37	31	30
Jonesboro, Ark.	34	38	29	35	31	29
Stoneville, Miss.(A)	45	46	43	42	39	39
Stoneville, Miss.(B)	38	38	31	38	29	33
St. Joseph, La.	41	40	34	40	35	33
Rohwer, Ark.	37	39	38	39	33	33
Mean	38	39	34	38	32	32
			West			
Stuttgart, Ark.	40	42	37	40	35	36
Curtis, La.	39	46	42	48	40	40
Crowley, La.	39	43	36	45	35	34
Beaumont, Texas	30	30	28	32	28	24
Bixby, Okla.	38	38	35	39	34	32
Lubbock, Texas	37	36	36	36	35	32
Mean	37	39	36	40	35	33

Table 26 - (continued)

Location	D73-8105	N72-137	N72-546	N72-3058	N72-3148	R73-81
			East Coast			
Warsaw, Va.	39	39	38	36	35	37
Petersburg, Va.	36	34	33	33	32	34
Holland, Va.	34	43	36	37	38	39
Plymouth, N.C.	40	45	49	47	43	43
Clayton, N.C.	36	31	31	31	31	33
Clinton, N.C.	39	41	42	40	39	43
Kinston, N.C.	31	39	38	39	37	34
Florence, S.C.	31	39	37	34	28	30
Hartsville, S.C.	29	36	35	34	33	33
Mean	35	39	38	37	35	36
			Southeast			
Blackville, S.C.	31	34	30	32	30	33
Tifton, Ga.	33	35	35	33	29	32
Quincy, Fla.	19	19	17	18	16	20
Fairhope, Ala.	33	36	35	33	33	36
Baton Rouge, La.	29	35	36	34	30	38
Mean	29	32	31	30	28	32
			Upper and Central South			
Athens, Ga.	34	37	34	34	30	34
Calhoun, Ga.	31	30	27	28	27	30
Belle Mina, Ala.	37	37	42	39	36	37
Clemson, S.C.	31	36	31	30	30	32
Jackson, Tenn.	43	38	42	44	39	43
Verona, Miss.	28	34	35	36	34	32
Mean	34	35	35	35	33	35
			Delta			
Portageville, Mo.(A)	31	35	33	33	33	37
Portageville, Mo.(B)	33	35	34	37	33	33
Keiser, Ark.	31	36	36	37	34	36
Jonesboro, Ark.	29	38	31	32	26	31
Stoneville, Miss.(A)	35	45	44	44	43	39
Stoneville, Miss.(B)	32	34	31	37	35	32
St. Joseph, La.	40	42	40	38	34	40
Rohwer, Ark.	36	35	37	40	34	38
Mean	33	38	36	37	34	36
			West			
Stuttgart, Ark.	32	38	39	38	34	35
Curtis, La.	42	43	36	43	42	41
Crowley, La.	39	40	36	40	40	40
Beaumont, Texas	28	28	30	32	30	32
Bixby, Okla.	36	37	37	35	35	38
Lubbock, Texas	31	36	37	37	35	33
Mean	35	37	36	38	36	37

Table 27 - Lodging scores for the strains in Uniform Group VI, 1976

Location	Tracy	Centennial	N70-1501	D71-6234	N72-3037	R71-72
			East Coast			
Warsaw, Va.	1.6	2.0	2.7	2.3	4.0	3.0
Petersburg, Va.	2.0	2.0	2.0	1.0	2.0	2.0
Holland, Va.	3.5	3.8	4.3	3.2	4.2	5.0
Plymouth, N.C.	4.0	4.0	3.0	4.0	3.0	4.0
Clayton, N.C.	4.0	3.0	3.0	2.0	4.0	3.0
Clinton, N.C.	3.0	3.0	3.0	2.0	3.0	3.0
Kinston, N.C.	2.0	2.0	2.0	2.0	2.0	2.0
Florence, S.C.	2.0	2.0	2.0	2.0	1.0	1.0
Hartsville, S.C.	2.5	2.5	2.3	2.8	2.2	1.5
			Southeast			
Blackville, S.C.	2.3	2.0	2.0	2.0	2.0	2.0
Tifton, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	2.0	1.0	2.0	1.0	1.0	1.0
Baton Rouge, La.	2.3	1.8	2.0	1.5	0.8	2.0
			Upper and Central South			
Athens, Ga.	2.3	2.0	1.7	1.7	2.0	1.5
Calhoun, Ga.	1.3	1.0	1.0	1.0	1.3	1.0
Belle Mina, Ala.	1.8	3.3	2.0	2.2	2.8	4.2
Clemson, S.C.	1.0	1.0	1.0	1.0	1.0	1.0
Jackson, Tenn.	2.0	3.0	2.0	2.0	2.0	2.0
Verona, Miss.	3.0	2.0	2.0	3.0	3.0	3.0
			Delta			
Portageville, Mo.(A)	2.2	2.0	1.3	1.5	1.5	2.0
Portageville, Mo.(B)	1.5	1.5	1.5	1.5	1.7	1.5
Keiser, Ark.	4.3	2.7	4.0	2.3	4.0	4.0
Jonesboro, Ark.	1.7	2.2	1.2	1.5	1.5	1.2
Stoneville, Miss.(A)	3.6	3.6	4.3	3.6	3.6	3.7
Stoneville, Miss.(B)	3.0	2.7	2.3	3.0	2.3	2.7
St. Joseph, La.	3.2	3.7	4.0	3.5	4.2	3.3
Rohwer, Ark.	1.3	1.3	1.7	1.0	2.7	3.0
			West			
Stuttgart, Ark.	2.3	2.3	2.7	2.0	3.0	3.5
Curtis, La.	2.5	2.0	2.2	1.7	1.2	1.7
Crowley, La.	1.7	2.7	2.0	1.3	1.7	4.0
Beaumont, Texas	2.0	1.0	2.0	1.0	1.0	1.0
Bixby, Okla.	3.3	1.3	1.3	1.3	2.0	1.0
Lubbock, Texas	2.8	3.0	2.5	3.0	3.0	2.5

Table 27 - (continued)

Location	D73-8105	N72-137	N72-546	N72-3058	N72-3148	R73-81
		East Coast				
Warsaw, Va.	2.9	1.6	1.9	1.5	2.5	2.5
Petersburg, Va.	3.0	1.0	1.0	1.0	2.0	3.0
Holland, Va.	4.0	4.2	3.0	3.5	4.2	4.5
Plymouth, N.C.	3.0	3.0	3.0	2.0	3.0	3.0
Clayton, N.C.	4.0	3.0	2.0	3.0	3.0	3.0
Clinton, N.C.	3.0	3.0	2.0	3.0	3.0	3.0
Kinston, N.C.	2.0	2.0	2.0	2.0	0.0	3.0
Florence, S. C.	2.0	1.0	2.0	1.0	1.0	1.0
Hartsville, S.C.	3.0	2.2	2.2	1.5	2.2	2.0
		Southeast				
Blackville, S.C.	2.0	2.0	1.3	2.0	2.3	2.0
Tifton, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.3	1.0	1.0	1.0	1.3	1.0
Baton Rouge, La.	2.0	0.5	1.0	2.2	1.7	1.5
		Upper and Central South				
Athens, Ga.	2.8	1.7	1.7	1.5	1.8	2.2
Calhoun, Ga.	1.7	1.3	1.0	1.0	1.0	1.3
Belle Mina, Ala.	2.0	1.3	1.5	1.5	1.7	1.2
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	3.0	3.0
Verona, Miss.	2.0	2.0	3.0	2.0	3.0	2.0
		Delta				
Portageville, Mo.(A)	2.2	1.0	1.2	1.0	1.5	2.2
Portageville, Mo.(B)	1.7	1.5	1.5	1.5	1.7	1.5
Keiser, Ark.	4.0	3.7	3.0	2.3	3.7	3.3
Jonesboro, Ark.	1.5	1.3	1.7	1.0	1.0	1.5
Stoneville, Miss.(A)	2.7	3.6	3.0	3.3	4.3	2.7
Stoneville, Miss.(B)	2.0	2.0	2.0	2.0	2.3	2.0
St. Joseph, La.	3.2	2.7	3.3	2.7	2.8	2.5
Rohwer, Ark.	1.0	1.0	1.0	1.0	1.0	1.0
		West				
Stuttgart, Ark.	2.7	1.8	1.5	1.5	2.0	1.8
Curtis, La.	2.0	1.3	2.0	1.8	1.5	1.7
Crowley, La.	3.3	2.0	1.0	1.3	2.3	1.0
Beaumont, Texas	1.0	1.0	1.0	1.0	1.0	1.0
Bixby, Okla.	1.7	1.7	1.3	1.0	1.3	1.0
Lubbock, Texas	3.8	2.2	2.5	2.5	3.2	4.5

Table 28 - Seed quality scores for the strains in Uniform Group VI, 1976

Location	Tracy	Centennial	N70-1501	D71-6234	N72-3037	R71-72
			East Coast			
Warsaw, Va.	1.3	1.2	1.3	1.2	1.2	1.6
Petersburg, Va.	1.0	1.0	1.0	1.0	1.0	1.0
Holland, Va.	1.0	1.0	1.0	1.0	1.0	1.0
Plymouth, N.C.	1.5	1.5	1.5	1.5	1.5	2.0
Clayton, N.C.	1.5	1.5	2.0	1.5	1.5	1.5
Clinton, N.C.	1.5	1.0	1.0	1.5	1.0	1.5
Kinston, N.C.	2.0	2.0	2.0	2.0	1.5	2.0
			Southeast			
Blackville, S.C.	4.0	1.3	2.7	1.7	1.7	1.7
Tifton, Ga.	2.8	2.7	3.5	2.7	2.5	2.0
Quincy, Fla.	4.0	1.0	3.0	3.0	1.0	1.0
Jay, Fla.	2.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	2.2	1.3	1.0	2.0	1.2	1.0
			Upper and Central South			
Athens, Ga.	1.8	2.7	1.5	1.5	1.5	1.7
Calhoun, Ga.	2.0	3.0	2.0	2.0	3.0	2.7
Jackson, Tenn.	1.0	1.0	1.0	1.0	1.0	1.0
			Delta			
Portageville, Mo.(A)	1.5	1.5	1.5	1.5	1.5	1.5
Portageville, Mo.(B)	1.5	2.0	1.0	1.5	1.5	1.5
Keiser, Ark.	1.5	1.0	1.0	1.0	1.5	1.0
Jonesboro, Ark.	2.0	1.7	1.3	2.0	2.3	1.3
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
Rohwer, Ark.	3.0	2.0	2.5	2.8	3.0	2.2
			West			
Stuttgart, Ark.	2.0	1.2	1.3	1.2	1.7	1.3
Beaumont, Texas	4.0	2.0	3.0	2.0	3.0	2.0
Lubbock, Texas	2.0	2.7	1.7	2.0	2.5	1.5

Table 28 - (continued)

Location	D73-8105	N72-137	N72-546	N72-3058	N72-3148	R73-81
			East Coast			
Warsaw, Va.	1.3	1.2	1.4	1.2	1.3	1.3
Petersburg, Va.	1.0	1.0	1.0	1.0	1.0	1.0
Holland, Va.	1.0	1.0	1.0	1.0	1.0	1.5
Plymouth, N.C.	1.5	1.5	1.5	1.5	1.0	2.0
Clayton, N.C.	1.0	1.5	1.5	1.0	1.0	1.5
Clinton, N.C.	1.0	1.5	1.0	1.0	1.0	1.0
Kinston, N.C.	2.0	2.0	2.0	1.5	1.5	2.0
			Southeast			
Blackville, S.C.	2.3	2.0	2.3	1.7	1.3	2.3
Tifton, Ga.	2.7	2.7	2.7	2.5	2.0	2.5
Quincy, Fla.	3.0	2.0	3.0	3.0	2.0	3.0
Jay, Fla.	1.0	2.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.0	2.3	2.2	1.0	1.5	2.0
			Upper and Central South			
Athens, Ga.	1.0	1.7	1.5	1.2	1.7	2.8
Calhoun, Ga.	2.7	2.3	2.0	2.3	2.7	2.3
Jackson, Tenn.	1.0	1.0	1.0	1.0	1.0	1.0
			Delta			
Portageville, Mo.(A)	1.5	1.5	1.5	1.5	1.5	1.5
Portageville, Mo.(B)	2.0	1.5	1.5	1.5	1.5	1.5
Keiser, Ark.	1.0	1.0	1.0	1.0	1.0	1.5
Jonesboro, Ark.	1.3	2.0	2.0	1.7	1.7	2.0
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
Rohwer, Ark.	2.5	2.8	2.8	2.8	2.7	2.8
			West			
Stuttgart, Ark.	1.2	1.5	1.2	1.8	1.2	2.0
Beaumont, Texas	3.0	3.0	3.0	4.0	5.0	5.0
Lubbock, Texas	2.7	2.0	1.7	2.0	2.2	2.5

PRELIMINARY GROUP VI

1976

Preliminary Group VI nurseries, including 34 experimental strains along with Centennial and D64-4636 checks, were grown at eight locations. The parentage of these strains is reported in Table 29. Performance data are summarized in Tables 30 through 35. Differences among strains were significant at the 5% level of confidence at seven locations.

The combined analysis of variance for seed yield showed differences among strains to be significant. Seven strains had mean seed yields significantly lower than that for Centennial. There were no strains with mean seed yields significantly greater than Centennial, but eight strains did rank above Centennial in seed yield.

Two strains having resistance to cyst nematode race 4 were included - J74-39 and R74-8-2. Neither ranked in the top ten. Three strains, D74-2535, D74-2680, and D74-7741, have resistance to cyst nematode race 3. D74-7741 is also resistant to phytophthora rot, and the two species of root knot nematode.

Five strains had been selected for high protein. Each averaged lower in seed yield than Centennial.

Strains which appear to merit being advanced to Uniform Group VI are N73-1102, D74-7741, N73-882, R74-1625, N73-693, and N73-877.

Table 29 - Parentage of the strains in Preliminary Group VI, 1976

	Variety or strain	Parentage	Generation composited
1.	Centennial	D64-4636 X tawny pubescent Pickett 71 type	F_5
2.	D64-4636	Hill X D58-3311 [Jackson(4) X D49-2491]	F_5
3.	D73-4408	D65-2553 X D66-1105	F_5
4.	D73-8114	D67-4823 X Pickett 71	F_5
5.	D74-2385	D67-4823 X Tracy	F_5
6.	D74-2391	D67-4823 X Tracy	F_5
7.	D74-2535	Dyer X Bragg	F_8
8.	D74-2680	D68-216 X D70-2301	F_5
9.	D74-7741	Forrest X D70-3001	F_5
10.	D74-8939	D64-4636 X D67-4694	F_5
11.	D74-8946	D64-4636 X D67-4694	F_5
12.	D74-9730	Hill X Hardee	F_7
13.	D74-9747	D65-2567 X D65-2553	F_7
14.	Ga71-773	Davis X Hood	F_4
15.	J74-39	Forrest(2) X (D68-18 X PI 88788)	F_4
16.	La70-11	Dare X Davis	F_5
17.	La73-250	Davis X Lee 68	F_6
18.	La73-1002	Pickett 71 X Ransom	F_5
19.	N73-141	Davis X D68-216	F_5
20.	N73-207	N67-3283 X Tracy	F_5
21.	N73-504	Tracy X Ransom	F_5
22.	N73-555	Tracy X Ransom	F_5
23.	N73-693	D68-216 X Ransom	F_5
24.	N73-750	N67-3283 X Tracy	F_5
25.	N73-860	F67-3944 X Ransom	F_5
26.	N73-877	F67-3944 X Ransom	F_5
27.	N73-882	F67-3944 X Ransom	F_5
28.	N73-1102	Tracy X Ransom	F_5
29.	N74-5075	Pickett 71(3) X [Dare(2) X PI 96983]	F_5
30.	R73-219	R64-502 X Pickett	F_5
31.	R74-8-2	R72-2647(3) X (D68-18 X PI 88788)	F_3
32.	R74-55	D65-2839 X Davis	F_6
33.	R74-114	(R64-502 X Pickett) X R66-100A X Harosoy 63)	F_5
34.	R74-312	R68-106 X L62-1251	F_5
35.	R74-605	R66-873 X R68-105	F_4
36.	R74-1625	York X Davis	F_4

Table 30 - General summary of performance for the strains in Preliminary Group VI, 1976

	Seed yield	Mat. index	Ht.	Percent Oil	Percent Protein	PR	C. N. Race 3	C. N. Race 4	Root knot *M. incognita*	Root knot *M. arenaria*
Centennial	39.8	10-19	41	19.5	42.6	1.0	R	S	1.0	5.0
D64-4636	38.7	-8	36	19.8	40.8-	2.0	S	S	1.5	5.0
D73-4408	32.8-	-6	34	20.7+	41.3	2.0	S	S	5.0	4.8
D73-8114	35.9	-7	32	18.1-	46.1+	1.0	S	S	5.0	3.2
D74-2385	36.5	-10	37	16.9-	47.1+	1.0	S	S	5.0	5.0
D74-2391	37.9	-10	37	16.8-	46.7+	1.0	S	S	5.0	5.0
D74-2535	38.8	-6	38	18.3	42.5	1.0	R	S	5.0	5.0
D74-2680	36.3	0	36	19.4	42.7	1.0	R	S	2.5	3.8
D74-7741	42.6	-7	38	21.3+	40.9-	1.0	R	S	1.0	1.4
D74-8939	32.7	-11	39	16.6-	47.8+	1.5	S	S	5.0	5.0
D74-8946	35.4-	-6	38	16.4-	49.0+	1.0	S	S	5.0	5.0
D74-9730	38.3	-5	39	19.8	40.4-	1.0	S	S	2.0	5.0
D74-9747	32.1-	-12	38	20.5+	39.6-	1.0	S	S	5.0	4.8
Ga71-773	36.2	-2	36	20.7+	40.5-	3.0	S	S	5.0	5.0
J74-39	38.0	-1	38	20.1	40.5-	2.0	R	R	3.5	3.7
La70-11	35.3-	-3	43	21.1+	39.8-	2.5	S	S	5.0	5.0
La73-250	34.2-	+4	51	20.0	40.6-	1.0	S	S	5.0	4.0
La73-1002	35.5-	+3	38	21.3+	39.4-	3.0	S	S	5.0	4.5
N73-141	37.0	-6	36	19.2	42.0	1.5	S	S	3.5	5.0
N73-207	39.4	-3	38	19.2	41.6	2.0	S	S	4.0	5.0
N73-504	40.5	-6	37	20.1	41.5	1.5	S	S	4.5	4.5
N73-555	39.4	-1	38	19.3	41.7	2.0	S	S	5.0	4.5
N73-693	41.4	-1	37	20.7+	40.5-	2.0	S	S	5.0	5.0
N73-750	38.2	-3	37	19.8	41.6	1.5	S	S	5.0	5.0
N73-860	40.0	0	36	20.5+	41.2	2.0	S	S	3.0	4.2
N73-877	40.0	0	38	21.2+	42.1	1.5	S	S	5.0	5.0
N73-882	42.3	0	37	21.2+	39.8-	2.0	S	S	5.0	3.0
N73-1102	42.9	-5	40	20.4	41.1	1.0	S	S	4.5	5.0
N74-5075	37.2	+2	37	20.2	40.4	2.5	-	S	5.0	5.0
R73-219	38.0	0	36	20.4	42.3	1.0	S	S	5.0	5.0
R74-8-2	35.4-	-6	37	21.0+	40.1	1.0	R	R	5.0	4.2
R74-55	36.7	-7	36	20.2	42.6	2.0	S	S	5.0	2.2
R74-114	38.5	-11	38	20.7+	40.6	1.0	S	S	3.0	2.2
R74-312	35.8	-11	44	21.9+	39.7-	1.0	S	S	5.0	2.0
R74-605	38.5	-9	31	21.0+	40.5	2.5	S	S	4.0	2.5
R74-1625	41.5	-3	40	20.6+	41.1	2.0	S	S	5.0	5.0
L.S.D.(.05)	4.0			0.9	1.1					
L.S.D.(.01)	5.2			1.2	1.5					

Table 31 - Seed yield, in bushels per acre, for the strains in Preliminary Group VI, 1976

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	21.6	45.4	37.6	34.1	52.8	42.7	40.5	43.4
D64-4636	20.6	38.6	28.4-	34.3	59.0	44.0	43.9	40.5
D73-4408	20.0	28.8-	25.1-	34.0	41.7-	34.8-	45.4	32.7-
D73-8114	18.7	37.5	33.9	28.6	53.4	40.0	38.6	36.6
D74-2385	22.0	42.0	29.5-	33.1	53.4	43.6	39.3	28.6-
D74-2391	21.0	45.0	28.2-	29.2	56.6	42.9	43.5	37.0
D74-2535	21.0	45.2	35.9	34.8	56.2	43.1	40.9	33.5
D74-2680	22.6	36.5	31.4	27.4	40.7-	40.4	45.0	46.6
D74-7741	27.8+	45.4	36.0	31.6	56.9	52.5+	47.3+	43.6
D74-8939	20.4	37.0	26.8-	25.0	47.9	36.4-	35.2	31.0-
D74-8946	23.8	31.6-	29.8-	30.8	48.4	39.7	38.2	42.4
D74-9730	21.8	37.6	29.5-	27.5	54.4	49.2+	43.9	42.2
D74-9747	21.4	33.3-	31.3-	25.8	39.9-	35.5-	39.3	30.1-
Ga71-773	25.0+	33.7-	30.8-	26.8	50.2	33.0-	42.8	47.3
J74-39	22.4	39.4	31.3-	28.4	59.5	37.8	41.2	43.7
La70-11	19.4	39.5	29.3-	32.0	42.8-	42.4	35.9	41.2
La73-250	15.8-	36.8	36.4	31.3	45.0	38.7	43.2	39.0
La73-1002	23.1	38.2	29.3-	29.6	42.2-	30.5-	47.3+	43.7
N73-141	18.8	41.2	30.3-	32.4	51.9	41.6	45.0	35.2
N73-207	24.3	50.9	32.5-	27.2	51.3	39.0	45.4	44.4
N73-504	28.2+	50.5	35.1	32.6	55.0	36.5-	47.3+	39.1
N73-555	23.1	40.3	35.0	31.2	54.1	43.7	46.2	41.7
N73-693	25.3+	48.5	37.8	27.4	52.1	42.8	50.7+	46.3
N73-750	21.9	44.5	36.5	31.2	50.1	36.3-	48.4+	37.0
N73-860	20.0	53.6	34.3	31.8	48.1	38.1	53.0+	40.8
N73-877	24.2	41.4	38.4	32.0	46.1	49.1+	46.5	42.4
N73-882	24.0	46.8	37.8	35.5	54.7	39.3	56.0+	44.2
N73-1102	28.2+	46.4	37.1	37.6	55.7	42.8	43.5	51.7
N74-5075	24.4	45.7	27.7-	29.0	51.9	36.4-	45.0	38.0
R73-219	21.2	34.0-	31.2-	31.4	55.1	43.1	43.1	45.1
R72-8-2	20.0	34.6-	29.9-	26.8	50.6	42.8	46.9+	31.1-
R74-55	20.9	37.6	33.6	35.8	52.2	39.5	40.9	33.0
R74-114	21.0	33.1-	32.8	31.4	57.0	47.1	41.2	44.0
R74-312	20.3	28.7-	25.0	31.0	53.5	48.6	42.0	37.6
R74-605	25.1+	42.1	36.6	30.1	59.0	34.0-	38.6	43.0
R74-1625	22.8	44.4	36.4	36.6	57.0	43.4	49.6+	41.7
L.S.D.(.05)	2.9	10.0	6.3	N.S.	8.2	5.6	6.0	10.5
C.V.	9%	12%	9%	12%	11%	8%	6%	13%

Table 32 - Oil percentages for the strains in Preliminary Group VI, 1976

Strain	Plymouth, N.C.	Keiser, Ark.	Stoneville, Miss.(B)	Jay, Fla.
Centennial	20.0	18.0	19.2	20.7
D64-4636	20.4	18.2	20.1	20.5
D73-4408	20.4	19.7	21.3	21.4
D73-8114	18.1	16.6	18.7	19.0
D74-2385	17.0	16.4	17.6	16.7
D74-2391	17.5	15.9	17.2	16.6
D74-2535	18.2	17.0	16.9	21.0
D74-2680	19.6	18.7	19.3	19.9
D74-7741	22.5	20.5	20.1	22.0
D74-8939	16.5	15.7	17.1	17.1
D74-8946	16.5	15.4	17.1	16.5
D74-9730	20.5	17.8	20.1	20.7
D74-9747	20.6	18.8	21.3	21.4
Ga71-773	20.4	19.4	21.6	21.2
J74-39	20.2	18.8	20.6	20.6
La70-11	20.9	20.4	21.1	21.8
La73-250	20.2	18.8	20.6	20.3
La73-1002	21.3	20.4	22.0	21.6
N73-141	19.0	18.2	19.3	20.3
N73-207	19.2	18.0	19.8	19.9
N73-504	19.6	19.1	20.2	21.3
N73-555	18.9	18.0	19.8	20.3
N73-693	21.3	19.5	20.2	21.7
N73-750	19.4	18.5	21.5	19.8
N73-860	20.6	18.9	20.9	21.4
N73-877	20.7	20.5	22.5	21.1
N73-882	21.4	20.8	20.8	21.9
N73-1102	20.1	18.9	20.8	21.6
N74-5075	19.3	20.3	20.3	20.9
R73-219	19.2	19.6	21.6	21.2
R74-8-2	20.6	20.4	21.2	21.8
R74-55	20.2	18.6	20.7	21.2
R74-114	20.2	19.0	22.1	21.5
R74-312	21.7	20.6	22.7	22.6
R74-605	21.7	21.8	20.9	19.5
R74-1625	20.4	20.0	20.9	21.1

Table 33 - Protein percentages for the strains in Preliminary Group VI, 1976

Strain	Plymouth, N.C.	Keiser, Ark.	Stoneville, Miss.(B)	Jay, Fla.
Centennial	43.6	42.5	42.1	42.3
D64-4636	42.0	42.2	38.1	40.9
D73-4408	42.3	42.5	38.9	41.4
D73-8114	47.2	47.4	44.8	44.9
D74-2385	48.7	47.5	44.9	47.4
D74-2391	47.6	47.0	44.7	47.5
D74-2535	43.1	42.9	42.8	41.1
D74-2680	42.9	43.5	41.5	42.8
D74-7741	40.1	40.7	40.9	41.7
D74-8939	48.6	47.9	46.5	48.1
D74-8946	50.0	48.8	47.4	49.7
D74-9730	41.0	42.6	38.0	39.9
D74-9747	40.0	41.7	37.0	39.5
Ga71-773	41.8	41.5	37.7	40.8
J74-39	41.0	42.1	38.6	40.4
La70-11	41.7	41.3	37.7	38.6
La73-250	41.4	41.6	38.6	40.9
La73-1002	40.6	40.4	37.6	39.0
N73-141	42.4	43.2	41.0	41.2
N73-207	43.0	43.0	39.0	41.3
N73-504	42.7	42.9	39.7	40.8
N73-555	43.1	43.3	39.2	41.0
N73-693	40.8	42.3	38.7	40.3
N73-750	42.6	43.1	39.3	41.5
N73-860	42.0	43.4	38.6	40.7
N73-877	42.4	42.7	40.5	42.6
N73-882	40.4	40.2	38.0	40.7
N73-1102	42.1	42.7	38.5	40.9
N74-5075	42.4	41.0	37.8	40.4
R73-219	43.1	43.0	40.8	42.4
R74-8-2	41.1	41.0	38.6	39.5
R74-55	43.9	43.6	40.0	42.8
R74-114	40.8	41.9	39.1	40.5
R74-312	40.0	40.3	37.5	40.9
R74-605	40.5	40.8	37.1	43.4
R74-1625	41.8	41.4	39.1	41.9

Table 34 - Plant height for the strains in Preliminary Group VI, 1976

Strain	Peters-burg, Va.	Ply-mouth, N.C.	Portage-ville, Mo.	Keiser, Ark.	Stone-ville, Miss.(A)	Stone-ville, Miss.(B)	Belle Mina, Ala.
Centennial	36	47	43	35	47	36	42
D64-4636	38	38	39	31	39	31	38
D73-4408	27	39	38	34	38	30	34
D73-8114	33	34	33	29	33	29	33
D74-2385	31	39	40	40	42	35	34
D74-2391	28	43	40	33	45	37	36
D74-2535	34	42	40	36	42	37	38
D74-2680	33	41	38	32	40	31	41
D74-7741	34	41	43	38	41	31	41
D74-8939	36	38	40	36	43	36	42
D74-8946	35	45	42	35	41	32	39
D74-9730	32	49	43	34	46	34	37
D74-9747	38	42	39	37	39	34	40
Ga71-773	32	44	40	30	43	24	37
J74-39	33	44	38	32	43	36	38
La70-11	41	45	52	39	45	37	45
La73-250	45	52	58	56	55	42	47
La73-1002	36	45	37	31	42	31	41
N73-141	34	44	39	30	42	30	36
N73-207	35	44	39	38	40	31	36
N73-504	35	44	43	31	40	31	38
N73-555	34	45	38	35	44	34	37
N73-693	31	44	41	34	41	27	38
N73-750	36	46	37	31	44	32	34
N73-860	30	47	40	32	42	29	35
N73-877	31	47	41	36	40	35	33
N73-882	31	42	42	34	41	31	38
N73-1102	33	44	45	40	44	34	38
N74-5075	34	45	35	32	42	31	40
R73-219	34	36	41	32	39	35	34
R74-8-2	34	41	46	32	40	28	40
R74-55	30	42	39	32	43	28	37
R74-114	34	41	41	31	43	36	38
R74-312	31	51	49	38	58	44	39
R74-605	32	37	35	23	37	22	28
R74-1625	34	43	45	38	44	34	41

Table 35 - Seed quality for the strains in Preliminary Group VI, 1976

Strain	Peters-burg, Va.	Ply-mouth, N.C.	Portage-ville, Mo.	Keiser, Ark.	Stone-ville, Miss.(A)	Stone-ville, Miss.(B)	Jay, Fla.
Centennial	1.0	2.0	1.5	1.0	2.0	2.0	1.0
D64-4636	1.0	1.5	1.5	1.0	2.0	2.0	1.0
D73-4408	1.0	2.0	1.5	1.0	2.0	2.0	1.0
D73-8114	1.0	1.5	1.5	1.5	2.0	2.0	1.0
D74-2385	1.0	1.5	1.5	1.0	2.0	2.0	1.0
D74-2391	1.0	1.5	1.5	1.5	2.0	2.0	1.0
D74-2535	1.0	1.5	1.5	1.5	2.0	2.0	1.0
D74-2680	1.0	1.5	1.5	2.0	2.0	2.0	1.0
D74-7741	2.0	1.5	1.5	1.0	2.0	2.0	1.0
D74-8939	2.0	2.0	1.5	1.5	2.0	2.0	1.0
D74-8946	1.0	1.5	1.5	1.0	2.0	2.0	1.0
D74-9730	1.0	2.0	1.5	1.5	2.0	2.0	1.0
D74-9747	1.0	2.0	1.5	1.5	2.0	2.0	1.0
Ga71-773	1.0	1.5	1.5	1.0	2.0	2.0	1.0
J74-39	2.0	2.0	1.5	1.0	2.0	2.0	1.0
La70-11	1.0	1.5	1.5	1.5	2.0	2.0	1.0
La73-250	1.0	1.5	1.5	1.0	2.0	2.0	2.0
La73-1002	1.0	1.5	1.5	1.5	2.0	2.0	1.0
N73-141	1.0	1.5	1.5	1.5	2.0	2.0	1.0
N73-207	1.0	1.5	1.5	1.0	2.0	2.0	1.0
N73-504	1.0	1.5	1.5	1.5	2.0	2.0	1.0
N73-555	1.0	1.5	1.5	1.0	2.0	2.0	1.0
N73-693	1.0	1.5	1.5	1.5	2.0	2.0	1.0
N73-750	1.0	1.5	1.5	1.0	2.0	2.0	1.0
N73-860	1.0	1.0	1.5	1.5	2.0	2.0	1.0
N73-877	1.0	1.5	1.5	1.0	2.0	2.0	1.0
N73-882	1.0	1.5	1.5	1.0	2.0	2.0	1.0
N73-1102	1.0	1.5	1.5	1.0	2.0	2.0	1.0
N74-5075	2.0	1.5	1.5	2.0	2.0	2.0	1.0
R73-219	1.0	2.0	1.5	1.5	2.0	2.0	1.0
R74-8-2	1.0	1.5	1.5	1.5	2.0	2.0	1.0
R74-55	1.0	2.5	1.5	1.5	2.0	2.0	1.0
R74-114	2.0	2.0	1.5	1.0	2.0	2.0	1.0
R74-312	1.0	2.0	1.5	1.0	2.0	2.0	1.0
R74-605	1.0	1.5	1.5	1.5	2.0	2.0	1.0
R74-1625	1.0	1.5	1.5	1.0	2.0	2.0	1.0

UNIFORM GROUP VII

1976

	Variety or strain	Parentage	Generation composited
1.	Bragg	Jackson X 49-2491	F_6
2.	Ransom	(N55-5931 X N55-3818) X D56-1185	F_5
3.	F70-2061	F62-2953 X D62-3286	F_6
4.	N70-2173	Hampton X Ransom	F_4
5.	F71-1180	F59-1505 X [Bragg(3) X D60-7965]	F_5
6.	N72-3167	F65-1376 X Ransom	F_5
7.	N72-3154	D67-B5 X N64-2451	F_5
8.	D66-8666	Bragg X Semmes	F_6
9.	F71-1138	F59-1505 X [Bragg(2) X D60-7965]	F_5
10.	F71-1735	Bragg(3) X D60-7965	F_7
11.	GaSoy 17 (GaT71-1088)	Bragg X Hood	F_4
12.	N72-3189	D65-6765 X Ransom	F_5

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.

F62-2953 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.

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

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

F65-1376 was included in Uniform Group VII in 1968 and 1969.

D67-B5 is D49-2491 converted to narrow leaves and resistance to phytophthora rot.

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 field reaction to several diseases and nematodes. 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 19 locations. The combined analysis of variance for seed yield by production regions showed differences among strains to be significant in the East Coast, Southeast, and Upper and Central South.

Special plantings were made near the West Florida Research Center to evaluate strains for reaction to the root knot nematode, *M. incognita*. Another planting was made near Blackville, South Carolina, to evaluate strains for the root knot nematode, *M. arenaria*. Phytophthora rot ratings were made from plantings on clay at Stoneville based upon vigor of growth or stand loss.

The strain GaT71-1088 is being released by the Georgia Agricultural Experiment Station as GaSoy 17. In its first year of regional tests, GaSoy 17 had a mean yield significantly higher than Bragg or Ransom in the East Coast region. In other regions it ranked above Bragg and Ransom in seed yield. Growth on clay at Stoneville was reasonably good. Ratings for both *M. incognita* and *M. arenaria* were high.

Two strains, F70-2061 and N70-2173, have been evaluated three years. Both have yielded well. F70-2061 rated low for both types of root knot. Of the three strains grown two years, F71-1180, N72-3167, and N72-3154, F71-1180 yielded well in all areas and rated low for both species of root knot nematodes. F71-1180 also ranked above GaSoy 17 in all regions.

D66-8666 was evaluated in Uniform Group VII in 1969 and 1970. Its mean performance was slightly below that for Bragg. It was included in 1976 because it had demonstrated good resistance to both *M. incognita* and *M. arenaria* and a need existed for a variety resistant to *M. arenaria* as well as *M. incognita* in South Carolina. Unfortunately, the seed used for the 1976 plantings had a high level of taller, later maturing plants. Mean yields were significantly lower than for Bragg in the East Coast and Upper and Central South.

Yield of N72-3189 was below that for Bragg in all but the Delta and West where it yielded significantly higher than Bragg in 4 of the 9 plantings.

Table 36 - General summary of performance for the strains in Uniform Group VII, 1976

	Bragg	Ransom	F70-2061	N70-2173	F71-1180	N72-3167
Seed Yield - 1976						
East Coast	39.4	39.5	42.2	38.5	43.3+	39.7
Southeast	38.3	38.3	39.5	40.3	40.7	35.8
Upper & Central South	28.4	25.6	30.3	26.4	31.2	29.2
Delta and West	36.1	38.7	38.6	37.3	41.5	39.7
-1975-76						
East Coast	41.2	42.8	43.4	41.8	45.7	43.5
Southeast	39.1	38.9	40.1	40.1	42.0	38.7
Upper & Central South	38.5	36.6	39.7	36.8	39.4	37.7
Delta and West	37.3	39.1	38.3	38.5	40.5	39.7
-1974-76						
East Coast	40.4	41.9	41.6	41.2		
Southeast	39.9	39.2	40.8	41.0		
Upper & Central South	37.1	37.3	39.7	36.5		
Delta & West	37.6	37.8	37.2	37.8		
Oil Content - 1976	20.6	22.8+	21.4+	21.9+	20.1	21.7+
- 1975-76	20.5	22.7	21.5	21.9	20.1	22.0
- 1974-76	20.4	22.7	21.6	21.9		
Protein Content - 1976	41.1	39.3-	39.8-	39.1-	41.2	40.5
- 1975-76	41.7	40.0	40.0	39.4	41.7	40.8
- 1974-76	41.6	40.1	40.0	39.4		
Seed size	15.3	16.1	14.2-	15.7	17.0+	15.0
Maturity index	10-26	0	0	+1	+2	-1
Height	38	33	36	35	38	33
Shattering	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	1.5	2.5	1.0	3.0	2.0	1.0
M. incognita	1.5	5.0	1.5	4.0	1.0	5.0
M. arenaria	2.8	5.0	1.5	3.5	1.8	5.0
Powdery mildew	1.0	4.0	1.0	4.0	1.0	3.0
Flower color	W	P	P	P	P	P
Pubescence color	T	T	G	T	T	T
Pod wall color	T	Br	T	Br	T	T

Table 36 - (continued)

	N72-3154	D66-8666	F71-1138	F71-1735	GaSoy 17	N72-3189
Seed Yield - 1976						
East Coast	39.9	35.6-	40.9	40.8	42.9+	38.8
Southeast	37.9	36.8	40.5	37.1	39.6	37.3
Upper & Central South	26.0	23.4-	29.2	26.1	30.5	25.8
Delta and West	40.3	37.5	40.6	38.5	39.9	43.0
- 1975-76						
East Coast	44.1					
Southeast	40.7					
Upper & Central South	37.6					
Delta and West	40.5					
- 1974-76						
East Coast						
Southeast						
Upper & Central South						
Delta & West						
Oil Content - 1976	21.0	19.5-	20.2	20.7	20.6	22.3+
- 1975-76	21.0					
- 1974-76						
Protein Content - 1976	39.8-	42.7+	40.9	41.3	39.6-	39.3-
- 1975-76	40.7					
- 1974-76						
Seed size	15.5	14.8	19.4+	16.1	15.7	15.7
Maturity index	0	+1	+4	-2	+2	+1
Height	35	36	38	37	39	33
Shattering	3.0	1.0	1.5	1.0	1.0	2.0
Bacterial pustule	1.0	1.0	1.0	1.0	1.0	1.0
Phytophthora rot	1.0	1.0	2.0	1.0	2.0	1.0
M. incognita	5.0	2.0	2.0	2.0	5.0	5.0
M. arenaria	5.0	1.8	2.8	4.8	5.0	5.0
Powdery mildew	2.0	1.0	1.0	1.0	1.0	3.5
Flower color	P	W	P	W	W	W
Pubescence color	T	G	T	T	G	T
Pod wall color	T	T	T	T	T	T

Table 37 - Seed yield, in bushels per acre, for the strains in Uniform Group VII, 1976

	Bragg	Ransom	F70-2061	N70-2173	F71-1180	N72-3167	N72-3154
			East Coast				
Plymouth, N.C.	46.8	43.8	46.1	48.0	54.3	47.5	47.1
Clayton, N.C.	33.6	29.3	43.3+	22.4-	38.6	33.7	41.2+
Kinston, N.C.	37.0	35.2	34.4	34.7	34.5	34.2	35.0
Clinton, N.C.	36.6	39.5	41.4	39.5	39.0	36.1	37.6
Florence, S. C.(A)	38.1	37.1	43.2	38.4	40.5	36.9	32.6
Florence, S. C.(B)	35.9	35.3	37.2	38.0	40.2	37.5	34.4
Hartsville, S.C.	48.0	53.0	49.8	48.6	56.2	52.3	51.6
Mean	39.4	39.5	42.2	38.5	43.3+	39.7	39.9
			Southeast				
Blackville, S.C.	34.3	35.6	36.3	38.0	36.0	30.9	33.1
Tallassee, Ala.	35.4	33.0	26.0	33.2	33.1	31.4	32.9
Tifton, Ga.	43.6	45.9	48.4	41.1	50.7+	33.6-	42.8
Gainesville, Fla.	42.8	47.7	48.2+	46.5	45.0	44.6	46.1
Marianna, Fla.	30.2	29.3	31.5	32.5	25.9	22.2-	25.3
Quincy, Fla.	38.3	28.1-	34.7	34.2	35.8	27.3-	36.3
Jay, Fla.	44.9	47.4	45.6	52.0+	52.5+	48.6	43.1
Fairhope, Ala.	49.9	48.0	51.2	47.8	56.9	53.1	47.7
Baton Rouge, La.	25.5	30.0	33.8	37.4	30.5	30.2	33.8
Mean	38.3	38.3	39.5	40.3	40.7	35.8	37.9
			Upper and Central South				
Athens, Ga.	40.4	39.1	42.5	38.6	46.0	38.4	39.9
Calhoun, Ga.	21.4	14.9	23.9	16.5	19.7	18.4	17.7
Clemson, S.C.	23.4	22.8	24.6	24.0	27.8	30.7+	20.4
Mean	28.4	25.6	30.3	26.4	31.2	29.2	26.0
			Delta and West				
Stoneville, Miss.(A)	42.5	41.7	48.2	45.0	52.7+	49.9	49.2
Stoneville, Miss.(B)	45.2	32.1-	45.1	25.4-	47.2	43.1	46.2
Stuttgart, Ark.	45.6	48.7	50.5	43.4	50.6	47.0	43.7
Rohwer, Ark.	37.4	45.9+	46.1+	46.0+	45.5+	46.6+	43.5
St. Joseph, La.	46.3	51.8	49.4	50.5	52.5	48.9	47.2
Curtis, La.	26.7	43.0+	31.2	29.2	37.1+	37.5+	35.4
Crowley, La.	32.5	35.4	33.1	31.5	33.8	36.1	43.9+
Beaumont, Texas	31.8	38.8	31.0	40.5+	41.8+	32.3	37.9
Uvalde, Texas	16.5	10.5	12.7	24.4+	12.2	15.5	15.3
Mean	36.1	38.7	38.6	37.3	41.5	39.7	40.3

(+) - 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	D66-8666	F71-1138	F71-1735	GaSoy 17	N72-3189	L.S.D. (.05)	C.V. %
			East Coast				
Plymouth N.C.	38.1	46.2	44.9	46.8	50.9	N.S.	10
Clayton, N.C.	33.6	40.1	41.2+	40.2	33.7	7.0	12
Kinston, N.C.	29.9	32.4	33.1	36.1	31.7	N.S.	10
Clinton, N.C.	33.2	35.7	35.6	39.6	36.8	N.S.	8
Florence, S.C.(A)	35.4	39.9	39.9	42.3	34.0	6.1	9
Florence, S.C.(B)	31.1	41.5	37.3	41.3	34.6	N.S.	9
Hartsville, S.C.	47.6	50.6	53.5	54.2	50.0	N.S.	7
Mean	35.6-	40.9	40.8	42.9+	38.8	3.2	
			Southeast				
Blackville, S.C.	33.4	35.5	29.6	38.7+	36.4	4.0	7
Tallassee, Ala.	28.6	34.2	27.5	29.7	32.8	N.S.	15
Tifton, Ga.	44.2	48.1	47.0	53.0+	35.5-	6.1	9
Gainesville, Fla.	37.1-	45.5	44.9	43.2	39.4	4.7	6
Marianna, Fla.	32.3	32.3	28.0	27.7	21.3-	6.0	13
Quincy, Fla.	25.7-	39.2	24.9-	38.7	23.4-	7.4	14
Jay, Fla.	43.6	48.6	45.9	45.1	52.9+	3.8	5
Fairhope, Ala.	51.2	51.5	54.5	47.5	51.1	N.S.	11
Baton Rouge, La.	35.0	29.5	31.3	33.1	42.6	9.6	17
Mean	36.8	40.5	37.1	39.6	37.3	3.6	
			Upper and Central South				
Athens, Ga.	31.8-	46.1	39.4	43.7	40.0	7.1	10
Calhoun, Ga.	17.8	19.4	17.3	20.0	18.6	N.S.	21
Clemson, S.C.	20.5	21.9	21.5	27.8	18.9	4.5	11
Mean	23.4-	29.2	26.1	30.5	25.8	3.7	
			Delta and West				
Stoneville, Miss.(A)	43.0	57.0+	48.0	46.9	53.1+	8.6	10
Stoneville, Miss.(B)	38.2-	41.8	48.8	42.7	47.7	6.4	8
Stuttgart, Ark.	40.7	44.5	40.7	39.7	49.4	6.8	8
Rohwer, Ark.	44.4	46.2+	41.9	41.8	50.6+	6.2	8
St. Joseph, La.	44.8	53.2	51.7	53.1	51.9	N.S.	11
Curtis, La.	31.9	29.1	26.1	30.5	41.3+	8.8	16
Crowley, La.	35.0	34.0	40.1+	37.8	39.9+	6.5	11
Beaumont, Texas	38.5+	42.4+	31.4	45.8+	30.8	6.4	10
Uvalde, Texas	20.8	17.4	17.5	20.5	22.7	6.6	23
Mean	37.5	40.6	38.5	39.9	43.0	N.S.	

Table 38 - Chemical composition and seed size for the strains in Uniform Group VII, 1976

Location	Bragg	Ransom	F70-2061	N70-2173	F71-1180	N72-3167
			Oil Percentage			
Plymouth, N.C.	19.7	21.2	20.6	20.8	18.9	21.2
Clinton, N.C.	20.8	22.4	21.2	21.8	19.8	22.1
Blackville, S.C.	21.0	22.7	21.0	21.4	20.0	21.7
Tifton, Ga.	21.2	22.6	21.4	22.3	20.6	22.4
Jay, Fla.	22.0	23.5	21.2	21.9	19.6	21.6
Baton Rouge, La.	20.6	23.9	22.8	23.4	21.9	21.8
Stoneville, Miss.(B)	20.0	23.3	21.4	22.0	20.2	21.0
Beaumont, Texas	19.2	22.8	21.2	21.5	19.7	21.7
Mean	20.6	22.8+	21.4+	21.9+	20.1	21.7+
			Protein Percentage			
Plymouth, N.C.	42.1	41.2	40.6	40.0	42.9	41.3
Clinton, N.C.	39.6	37.8	38.8	38.0	40.5	38.9
Blackville, S.C.	40.2	39.4	40.2	39.4	40.0	40.3
Tifton, Ga.	40.6	40.3	40.2	38.7	41.0	40.7
Jay, Fla.	40.7	38.8	40.1	39.5	42.4	40.7
Baton Rouge, La.	42.5	39.2	39.4	38.8	40.3	41.0
Stoneville, Miss.(B)	40.1	35.9	37.2	36.4	39.3	39.0
Beaumont, Texas	42.8	41.5	41.8	42.1	43.1	41.8
Mean	41.1	39.3-	39.8-	39.1-	41.2	40.5
			Grams per 100 Seeds			
Plymouth, N.C.	16.6	15.5	14.1	14.4	17.7	13.7
Clinton, N.C.	16.6	16.7	13.8	17.2	17.9	15.0
Blackville, S.C.	17.6	18.3	16.0	17.5	18.9	16.5
Tifton, Ga.	16.5	17.2	15.5	17.5	19.8	17.4
Jay, Fla.	16.0	18.0	16.0	17.0	16.0	16.0
Baton Rouge, La.	11.8	13.5	12.0	13.5	13.9	13.1
Stoneville, Miss.(B)	14.6	13.8	13.1	12.5	15.6	13.5
Beaumont, Texas	12.8	16.1	13.0	16.0	15.8	14.5
Mean	15.3	16.1	14.2-	15.7	17.0+	15.0

Table 38 - (continued)

Location	N72-3154	D66-8666	F71-1138	F71-1735	GaSoy 17	N72-3189	L.S.D. (.05)
			Oil Percentage				
Plymouth, N.C.	20.0	18.7	19.1	21.1	19.5	22.4	
Clinton, N.C.	21.0	19.8	19.6	20.8	20.3	22.1	
Blackville, S.C.	20.2	19.3	19.8	20.5	20.1	22.3	
Tifton, Ga.	20.8	20.0	21.3	20.7	21.3	22.6	
Jay, Fla.	22.1	19.7	19.7	20.5	21.2	22.5	
Baton Rouge, La.	22.2	20.4	21.3	21.3	22.0	22.9	
Stoneville, Miss.(B)	20.7	18.6	19.7	19.7	19.3	21.5	
Beaumont, Texas	20.8	19.3	20.9	21.0	20.8	21.8	
Mean	21.0	19.5-	20.2	20.7	20.6	22.3+	0.6
			Protein Percentage				
Plymouth, N.C.	41.4	43.9	42.1	39.5	40.9	39.6	
Clinton, N.C.	38.0	41.5	41.2	40.2	38.9	38.3	
Blackville, S.C.	39.8	42.3	41.1	40.7	39.0	39.4	
Tifton, Ga.	41.2	41.9	39.8	42.4	38.0	39.6	
Jay, Fla.	38.7	42.9	41.7	41.7	39.9	38.0	
Baton Rouge, La.	39.2	43.0	41.5	42.5	39.3	39.8	
Stoneville, Miss.(B)	38.2	42.1	38.5	40.7	39.6	37.7	
Beaumont, Texas	42.2	43.8	41.4	42.7	40.8	41.8	
Mean	39.8-	42.7+	40.9	41.3	39.6-	39.3-	0.8
			Grams per 100 Seeds				
Plymouth, N.C.	15.6	13.6	19.8	15.0	15.7	14.4	
Clinton, N.C.	15.6	15.4	22.2	17.2	17.4	16.0	
Blackville, S.C.	17.5	17.9	22.0	18.2	17.0	18.6	
Tifton, Ga.	16.9	15.6	20.1	19.6	15.9	16.4	
Jay, Fla.	16.0	16.0	21.0	17.0	16.0	17.0	
Baton Rouge, La.	12.6	12.9	17.7	13.8	14.9	13.5	
Stoneville, Miss.(B)	13.6	12.3	16.4	15.3	14.4	13.1	
Beaumont, Texas	15.8	14.3	16.0	12.9	14.3	16.5	
Mean	15.5	14.8	19.4+	16.1	15.7	15.7	1.0

Table 39 - Relative maturity data, days earlier (-) or later (+) than Bragg, for the strains in Uniform Group VII, 1976

Location	Date planted	Bragg matured	Ransom	F60-2061	N70-2173	F71-1180	N72-3167
			East Coast				
Plymouth, N.C.	5-10	11-1	0	+2	+4	+4	-4
Clayton, N.C.		10-28	0	+7	-3	+3	+3
Kinston, N.C.		10-22	0	0	0	+6	0
Clinton, N.C.	5-25	10-25	+3	+7	+3	+3	0
Hartsville, S.C.	5-27	10-25	+2	-4	+1	+2	-3
Mean		10-26	+1	+2	+1	+4	0
			Southeast				
Blackville, S.C.	5-24	10-23	+1	+1	+3	+2	-1
Tifton, Ga.	5-4	10-17	+1	+1	+1	+1	0
Gainesville, Fla.	5-2	10-20	-1	-3	-1	+6	-4
Marianna, Fla.	6-21	11-2	+3	-1	+4	+6	+2
Quincy, Fla.	5-21	10-8	+1	-5	-1	+6	-3
Jay, Fla.	6-9	11-2	0	-1	-1	-1	-1
Fairhope, Ala.	6-8	10-16	+3	+3	+2	+5	+2
Baton Rouge, La.	5-18	10-19	-2	0	+4	+3	-2
Mean		10-21	0	0	+1	+4	0
			Upper and Central South				
Athens, Ga.	5-10	10-10	-2	-2	0	+3	-7
Calhoun, Ga.	5-25	10-19	-2	+5	-1	+1	-2
Clemson, S.C.	5-26	10-30	+2	0	0	+2	+2
Mean		10-20	-1	+1	0	+2	-2
			Delta and West				
Stoneville, Miss.(A)	5-10	10-23	+1	0	+1	+1	-1
Stoneville, Miss.(B)	5-20	10-25	0	+1	-1	+1	-2
Stuttgart, Ark.	5-20	10-30	-3	-2	-3	-1	-4
Rohwer, Ark.	6-9	10-30	+4	-4	+4	+2	-4
St. Joseph, La.	5-25	10-20	0	0	0	+1	-1
Curtis, La.	5-12	10-22	+3	-4	+2	+1	-1
Crowley, La.	5-28	10-24	-6	-5	-7	+1	-8
Beaumont, Texas	5-19	10-8	+5	0	0	0	0
Mean		10-23	0	-2	0	0	-3

Table 39 - (continued)

Location	N72-3154	D66-8666	F71-1138	F71-1735	GaSoy 17	N72-3189
			East Coast			
Plymouth, N.C.	+2	+4	+4	+2	+2	+2
Clayton, N.C.	+7	+5	+7	+3	+7	+4
Kinston, N.C.	0	+3	+10	0	+6	0
Clinton, N.C.	+3	+7	+7	0	+7	+3
Hartsville, S.C.	-3	+2	+5	-4	+3	+2
Mean	+2	+4	+7	0	+5	+2
			Southeast			
Blackville, S.C.	-1	+3	+6	0	+5	+6
Tifton, Ga.	-1	+1	+1	-2	+1	+5
Gainesville, Fla.	-5	-3	+6	-3	-1	-4
Marianna, Fla.	+3	-1	+5	0	0	+6
Quincy, Fla.	-3	-3	+6	-5	-1	0
Jay, Fla.	0	0	0	-1	-1	+1
Fairhope, Ala.	+2	+3	+6	-1	-1	+8
Baton Rouge, La.	+1	+4	+5	-5	+6	+2
Mean	0	0	+4	-2	+1	+3
			Upper and Central South			
Athens, Ga.	-2	+1	+7	-4	+3	0
Calhoun, Ga.	-1	-1	+2	-4	+4	-3
Clemson, S.C.	0	0	0	-2	+2	+2
Mean	-1	0	+3	-3	+3	0
			Delta and West			
Stoneville, Miss.(A)	+3	+3	+3	-3	+2	0
Stoneville, Miss.(B)	0	-1	0	-2	+2	0
Stuttgart, Ark.	-5	-2	+2	-4	+2	-3
Rohwer, Ark.	-2	0	+1	-6	+2	+1
St. Joseph, La.	+1	0	+2	-4	0	-1
Curtis, La.	+1	-2	+2	-2	0	+2
Crowley, La.	-9	-3	+3	-9	+1	-9
Beaumont, Texas	0	0	+5	-5	+5	+7
Mean	-1	0	+2	-4	+2	0

Table 40 - Plant height for the strains in Uniform Group VII, 1976

Location	Bragg	Ransom	F70-2061	N70-2173	F71-1180	N72-3167
			East Coast			
Plymouth, N.C.	49	44	47	50	49	45
Clayton, N.C.	41	33	35	34	37	33
Kinston, N.C.	44	41	43	43	48	41
Clinton, N.C.	43	42	42	43	45	42
Florence, S.C.(A)	38	36	38	36	39	34
Florence, S.C.(B)	29	26	29	24	26	22
Hartsville, S.C.	44	39	43	39	43	39
Mean	41	37	40	38	41	37
			Southeast			
Blackville, S.C.	35	32	35	32	36	30
Tallassee, Ala.	34	27	31	29	34	31
Tifton, Ga.	21	20	26	19	27	18
Gainesville, Fla.	34	31	34	33	34	28
Marianna, Fla.	19	18	21	15	21	18
Quincy, Fla.	27	20	24	23	27	19
Jay, Fla.	40	36	34	36	40	36
Fairhope, Ala.	40	34	45	39	41	38
Baton Rouge, La.	41	33	38	37	40	35
Mean	32	28	32	29	33	28
			Upper and Central South			
Athens, Ga.	45	34	38	37	43	33
Calhoun, Ga.	40	31	33	33	34	30
Clemson, S.C.	32	32	32	36	31	31
Mean	39	32	34	35	36	31
			Delta and West			
Stoneville, Miss.(A)	46	43	46	45	46	42
Stoneville, Miss.(B)	40	28	38	29	36	37
Stuttgart, Ark.	45	40	43	44	43	37
Rohwer, Ark.	49	40	43	42	44	39
St. Joseph, La.	42	35	36	33	40	34
Curtis, La.	51	40	50	45	53	43
Crowley, La.	45	38	39	37	43	37
Beaumont, Texas	36	33	36	36	36	28
Uvalde, Texas	21	20	18	17	23	15
Mean	42	35	39	36	40	35

Table 40 - (continued)

Location	N72-3154	D66-8666	F71-1138	F71-1735	GaSoy 17	N72-3189
			East Coast			
Plymouth, N.C.	48	47	49	50	49	45
Clayton, N.C.	36	35	36	41	37	34
Kinston, N.C.	43	45	47	39	47	40
Clinton, N.C.	43	43	41	43	45	38
Florence, S.C.(A)	38	38	40	40	42	36
Florence, S.C.(B)	22	22	25	28	26	22
Hartsville, S.C.	39	43	43	43	46	37
Mean	38	39	40	41	42	36
			Southeast			
Blackville, S.C.	34	30	34	34	38	32
Tallassee, Ala.	31	32	35	35	36	26
Tifton, Ga.	17	21	29	22	31	19
Gainesville, Fla.	30	33	34	34	36	26
Marianna, Fla.	17	19	19	17	14	17
Quincy, Fla.	24	22	29	23	30	18
Jay, Fla.	38	40	40	44	40	35
Fairhope, Ala.	37	39	39	37	42	36
Baton Rouge, La.	38	37	39	43	38	38
Mean	30	30	33	32	34	27
			Upper and Central South			
Athens, Ga.	37	40	45	42	42	35
Calhoun, Ga.	36	33	34	38	38	33
Clemson, S. C.	33	35	31	35	34	30
Mean	35	36	37	38	38	33
			Delta and West			
Stoneville, Miss.(A)	44	45	49	46	45	43
Stoneville, Miss.(B)	30	36	36	40	38	38
Stuttgart, Ark.	41	40	43	42	42	38
Rohwer, Ark.	41	46	45	46	49	37
St. Joseph, La.	33	38	41	42	40	37
Curtis, La.	46	49	50	47	52	45
Crowley, La.	40	44	43	44	46	36
Beaumont, Texas	32	32	36	30	40	30
Uvalde, Texas	18	15	20	21	20	17
Mean	36	38	40	40	41	36

Table 41 - Lodging scores for the strains in Uniform Group VII, 1976

Location	Bragg	Ransom	F70-2061	N70-2173	F71-1180	N72-3167
			East Coast			
Plymouth, N.C.	4.0	3.0	3.0	4.0	3.0	4.0
Clayton, N.C.	4.0	3.0	3.0	3.0	4.0	4.0
Kinston, N.C.	3.0	2.0	2.0	2.0	2.0	2.0
Clinton, N.C.	3.0	3.0	3.0	3.0	3.0	3.0
Florence, S.C.(A)	1.0	1.0	2.0	1.0	2.0	1.0
Florence, S.C.(B)	1.0	1.0	1.0	1.0	1.0	1.0
Hartsville, S.C.	2.7	2.0	2.2	2.2	2.5	2.0
			Southeast			
Blackville, S.C.	2.0	2.0	2.0	2.0	2.0	1.7
Tallassee, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
Gainesville, Fla.	2.0	1.0	1.0	1.0	1.5	1.0
Marianna, Fla.	1.0	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	2.0	2.0	1.0	2.0
Fairhope, Ala.	2.0	1.0	1.0	2.0	1.0	1.0
Baton Rouge, La.	2.8	2.0	2.3	2.3	2.2	1.7
			Upper and Central South			
Athens, Ga.	2.3	2.0	1.8	2.2	1.9	2.2
Calhoun, Ga.	1.3	1.3	1.3	2.0	1.3	1.0
			Delta and West			
Stoneville, Miss.(A)	4.3	4.0	4.0	3.3	5.0	3.3
Stoneville, Miss.(B)	2.3	2.0	2.3	2.0	2.3	2.3
Stuttgart, Ark.	2.5	2.0	2.3	2.0	2.3	3.2
Rohwer, Ark.	2.3	3.3	2.3	2.3	1.7	2.3
St. Joseph, La.	3.3	2.3	2.5	2.2	3.0	3.2
Curtis, La.	1.7	2.3	2.8	2.0	1.2	2.7
Crowley, La.	2.7	1.7	1.7	2.0	2.0	1.7
Beaumont, Texas	3.0	1.0	1.0	2.0	2.0	1.0
Uvalde, Texas	1.3	1.2	1.0	1.3	1.2	1.3

Table 41 - (continued)

Location	N72-3154	D66-8666	F71-1138	F71-1735	GaSoy 17	N72-3189
			East Coast			
Plymouth, N.C.	4.0	3.0	5.0	3.0	3.0	4.0
Clayton, N.C.	4.0	3.0	3.0	4.0	4.0	3.0
Kinston, N.C.	3.0	2.0	3.0	2.0	2.0	2.0
Clinton, N.C.	3.0	3.0	3.0	3.0	3.0	3.0
Florence, S.C.(A)	2.0	1.0	2.0	1.0	2.0	1.0
Florence, S.C.(B)	1.0	1.0	1.0	1.0	1.0	1.0
Hartsville, S.C.	2.2	2.3	2.5	2.5	3.0	2.0
			Southeast			
Blackville, S.C.	2.0	2.0	2.3	2.3	2.7	2.0
Tallassee, Ala.	1.0	1.0	1.2	1.0	1.0	1.0
Tifton, Ga.	1.0	1.0	1.0	1.0	1.0	1.0
Gainesville, Fla.	1.5	1.5	1.5	2.0	1.5	1.0
Marianna, Fla.	1.0	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.	3.0	1.0	2.0	2.0	4.0	1.0
Fairhope, Ala.	1.3	1.0	1.7	1.3	2.3	1.0
Baton Rouge, La.	3.0	2.3	3.5	3.5	3.0	1.6
			Upper and Central South			
Athens, Ga.	2.7	2.2	2.3	2.5	2.2	2.0
Calhoun, Ga.	1.3	2.2	1.7	2.3	1.7	1.7
			Delta and West			
Stoneville, Miss.(A)	5.0	3.7	4.7	3.7	5.0	4.0
Stoneville, Miss.(B)	2.7	2.0	2.0	3.0	2.7	2.7
Stuttgart, Ark.	2.7	1.8	2.2	2.3	2.8	2.2
Rohwer, Ark.	3.0	1.0	1.7	1.7	1.3	2.0
St. Joseph, La.	2.7	2.3	2.5	3.8	2.7	2.5
Curtis, La.	2.7	2.0	2.8	2.7	2.2	1.5
Crowley, La.	2.7	2.0	3.7	3.3	4.3	1.7
Beaumont, Texas	2.0	2.0	3.0	3.0	2.0	1.0
Uvalde, Texas	1.3	1.0	1.5	1.7	1.3	1.2

Table 42 - Seed quality scores for the strains in Uniform Group VII, 1976

Location	Bragg	Ransom	F70-2061	N70-2173	F71-1180	N72-3167
			East Coast			
Plymouth, N.C.	1.5	1.5	1.5	1.5	1.5	1.5
Clayton, N.C.	1.5	1.5	1.5	1.5	1.5	1.5
Kinston, N.C.	2.0	1.5	2.0	1.5	1.5	1.5
Clinton, N.C.	1.0	1.0	1.0	1.0	1.0	1.0
			Southeast			
Blackville, S.C.	1.7	1.3	1.3	1.3	1.7	1.7
Tifton, Ga.	1.5	2.5	2.5	2.0	2.0	2.3
Gainesville, Fla.	1.0	1.0	1.0	1.5	1.5	1.0
Quincy, Fla.	2.0	2.0	2.0	1.0	3.0	2.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.0	1.5	1.7	1.2	1.2	1.2
Baton Rouge, La.	2.0	1.5	1.5	1.0	1.5	1.5
			Upper and Central South			
Athens, Ga.	1.7	1.5	2.2	1.5	1.8	1.5
Calhoun, Ga.	2.0	2.0	2.0	2.7	2.7	2.7
			Delta and West			
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
Stuttgart, Ark.	1.2	1.7	1.8	2.0	1.3	1.3
Rohwer, Ark.	1.7	1.8	1.7	2.3	1.7	1.7
Beaumont, Texas	2.0	3.0	3.0	2.0	2.0	4.0

Table 42 - (continued)

Location	N72-3154	D66-8666	F71-1138	F71-1735	GaSoy 17	N72-3189
			East Coast			
Plymouth, N.C.	1.5	1.5	1.5	1.5	1.5	1.5
Clayton, N.C.	1.5	1.5	1.5	1.5	1.0	1.5
Kinston, N.C.	1.5	2.0	2.0	2.0	1.5	1.5
Clinton, N.C.	1.0	1.5	1.0	1.0	1.0	1.0
			Southeast			
Blackville, S.C.	1.0	2.0	1.7	1.7	1.0	2.7
Tifton, Ga.	3.0	1.8	1.5	2.2	1.7	2.5
Gainesville, Fla.	1.5	1.0	1.5	1.0	1.0	1.0
Quincy, Fla.	2.0	1.0	4.0	1.0	1.0	2.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.5	1.3	1.7	1.3	1.7	1.2
Baton Rouge, La.	2.5	1.0	2.0	1.5	1.0	1.5
			Upper and Central South			
Athens, Ga.	1.5	1.5	2.3	1.7	2.0	1.7
Calhoun, Ga.	2.0	2.0	2.7	2.0	2.0	2.0
			Delta and West			
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
Stuttgart, Ark.	1.5	1.3	1.5	1.2	1.2	1.5
Rohwer, Ark.	2.0	1.5	2.0	1.8	1.7	1.5
Beaumont, Texas	3.0	2.0	3.0	3.0	1.0	4.0

PRELIMINARY GROUP VII

1976

Preliminary Group VII nurseries, including 34 experimental strains and the two check varieties, Bragg and Centennial, were grown at nine 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 seven locations. The combined analysis of variance for seed yield showed differences among strains to be significant. There were no strains having seed yields significantly greater than Bragg or Centennial. One strain yielded significantly less than Bragg.

Five strains, D73-10232, D73-10245, D73-10247, D74-10301, and D74-10467, had been selected for resistance to foliar feeding insects. All ranked lower in seed yield than Bragg. D73-10232 and D74-10301 should be included with Group VIII strains. D74-9141 was selected for resistance to cyst nematode race 3.

Only one strain, Ga72-663, received a low rating for *M. incognita* and *M. arenaria*. Several strains were quite susceptible to phytophthora rot. The range in protein and oil content was limited.

Table 43 - Parentage of strains in Preliminary Group VII, 1976

	Variety or strain	Parentage	Generation composited
1.	Bragg		
2.	Centennial		
3.	D73-10232	D66-8666 X (Bragg X PI 229358)	F_5
4.	D73-10245	D66-8666 X (Bragg X PI 229358)	F_5
5.	D73-10247	D66-8666 X (Bragg X PI 229358)	F_5
6.	D74-10301	D66-8666 X F_4 sel (Bragg X PI 229358)	F_5
7.	D74-10467	D69-6341 X F_4 sel (Bragg X PI 229358)	F_5
8.	D74-9141	Dyer X Bragg	F_8
9.	F71-1142	F59-1505 X [Bragg(3) X D60-7965]	
10.	F72-6831	Bragg(3) X D60-7965	
11.	F72-7112	Bragg(3) X D60-7965	
12.	F72-7461	F59-1505 X [Bragg(3) X D60-7965]	
13.	F73-6355	F59-1505 X [Bragg(3) X D60-7965]	
14.	F73-7358	F59-1505 X [Bragg(3) X D60-7965]	
15.	F74-1672	F59-1505 X [Bragg(3) X D60-7965]	
16.	Ga70-276	Bragg X Hood	F_4
17.	Ga72-627	Bragg X Lee	F_4
18.	Ga72-663	Bragg X Lee	F_4
19.	Ga72-666	Bragg X Lee	F_4
20.	GaT72-208	Bragg X Hood	F_5
21.	GaT72-328	Bragg X Coker 240	F_5
22.	GaT72-354	Bragg X Semmes	F_{11}
23.	La73-446	Pickett 71 X Ransom	F_5
24.	La73-1148	Pickett 71 X Ransom	F_5
25.	La73-1182	Pickett 71 X Ransom	F_5
26.	La73-1300	Cobb X Pickett 71	F_5
27.	N73-495	Tracy X Ransom	F_5
28.	N73-717	D68-216 X Ransom	F_5
29.	N73-813	F67-3944 X Ransom	F_5
30.	N73-1010	F67-1783 X Lee 68	F_5
31.	N73-1286	Tracy X Ransom	F_5
32.	N73-1404	D68-216 X Ransom	F_5
33.	N73-1467	F67-3944 X Ransom	F_5
34.	N73-1619	Tracy X Ransom	F_5
35.	Ts74-20	(Bragg X PI 200492)sel X Ransom	F_6
36.	Ts74-41	N66-1136 X Ransom	

Table 44 - General summary of performance for the strains in Preliminary Group VII, 1976

Strain	Seed yield	Mat. index	Ht.	Percent Oil	Percent Protein	Seed holding	P.R.	Root Knot *M. incognita*	Root Knot *M. arenaria*
Bragg	37.4	10-21	40	20.2	41.4	1.0	1.0	2.5	2.8
Centennial	38.5	-4	37	19.7	42.7	1.0	1.0	1.5	5.0
D73-10232	33.6	+8	39	18.5	43.0+	1.0	1.0	5.0	1.9
D73-10245	35.5	0	34	19.1-	42.9	1.0	1.0	5.0	1.9
D73-10247	34.7	0	33	18.8-	43.2+	1.0	1.0	5.0	2.2
D74-10301	31.0-	+9	37	17.9-	43.8+	1.0	1.0	1.5	3.8
D74-10467	33.2	0	37	17.6-	41.9	1.0	1.0	3.0	5.0
D74-9141	35.2	-1	35	19.8	41.9	1.0	3.0	3.8	3.8
F71-1142	32.9	+2	33	20.6	40.0	1.0	3.0	2.0	4.2
F72-6831	39.8	0	38	19.9	41.3	1.0	1.0	3.0	4.5
F72-7112	39.0	+3	37	19.6	42.6+	1.0	1.5	2.5	3.5
F72-7461	35.4	+2	36	20.3	39.6-	1.0	3.0	3.0	3.0
F73-6355	34.0	+4	34	20.1	40.1	1.0	3.0	-	3.2
F73-7358	37.1	+2	40	19.6	40.6	1.0	2.5	3.0	2.8
F74-1672	37.6	0	38	19.1-	42.0	1.0	1.5	1.5	5.0
Ga70-276	35.9	0	35	20.2	39.8-	1.0	3.5	2.5	4.5
Ga72-627	40.2	0	37	20.4	40.1	1.0	1.5	2.0	2.8
Ga72-663	41.4	+2	36	20.4	40.4	1.0	1.0	2.0	1.5
Ga72-666	41.4	0	36	20.5	40.3	1.0	2.0	3.0	3.0
GaT72-208	37.1	+1	35	21.4+	38.9-	1.0	3.5	2.5	4.5
GaT72-328	38.4	+1	36	20.6	40.8	1.0	2.0	3.5	2.4
GaT72-354	37.2	+1	37	20.8	40.7	1.0	2.5	2.0	3.3
La73-446	38.8	+3	36	22.5+	39.1-	1.0	2.0	3.8	3.0
La73-1148	40.2	+4	33	22.0+	39.4-	1.0	1.0	5.0	5.0
La73-1182	39.2	+1	33	22.4+	39.0-	1.0	2.0	4.0	5.0
La73-1300	37.7	+5	40	20.6	38.6-	1.0	1.5	2.0	3.5
N73-495	36.7	-3	35	21.0+	41.3	1.0	2.0	5.0	5.0
N73-717	37.9	+3	38	20.6	41.4	1.0	2.0	5.0	5.0
N73-813	34.5	0	35	20.4	42.6+	1.0	1.0	4.0	5.0
N73-1010	35.9	-2	30	21.1+	41.3	1.0	2.0	3.0	3.3
N73-1286	39.2	+4	37	20.8	40.8	1.0	1.0	5.0	5.0
N73-1404	34.1	+4	28	21.8+	39.7-	1.0	3.0	5.0	5.0
N73-1467	36.6	+1	35	21.5+	40.5	1.0	2.0	5.0	3.3
N73-1619	39.9	-3	37	20.9+	40.6	1.0	2.0	5.0	5.0
Ts74-20	36.4	+8	42	19.4-	43.8+	1.0	1.0	2.8	5.0
Ts74-41	34.9	0	30	20.7	42.2	2.0	3.0	5.0	5.0
L.S.D.(.05)	4.9			0.7	1.1				
L.S.D.(.01)	6.5			0.9	1.4				

Table 45 - Seed yield, in bushels per acre, for the strains in Preliminary Group VII, 1976

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, Texas
Bragg	36.9	32.7	44.5	30.5	46.8	41.4	41.6	36.9	25.7
Centennial	33.8	29.6	37.9	30.8	37.8-	54.0+	45.6	41.6+	35.6
D73-10232	31.5	32.2	43.5	27.6	40.4-	41.2	32.8	27.2-	26.1
D73-10245	34.0	28.6-	35.6-	25.4	42.4	43.7	36.3	34.2	38.9+
D73-10247	33.2	30.8	39.2	28.3	42.4	29.5	39.5	36.1	33.5
D74-10301	26.7	26.3-	40.6	22.0	40.1-	26.9-	31.3-	27.1-	38.0+
D74-10467	29.5	26.8-	42.9	22.8	36.6-	39.1	37.1	30.0	33.9
D74-9141	28.8	25.9-	30.9-	28.5	40.1-	50.9	50.8	22.8-	38.4+
F71-1142	28.8	24.5-	46.6	28.0	46.5	28.7-	34.7	27.0	31.3
F72-6831	45.0	29.2	46.8	35.6	44.2	33.3	42.7	41.5	39.8+
F72-7112	31.2	33.5	49.1	33.0	49.6	35.2	38.5	39.4	41.9+
F72-7461	34.7	30.4	40.0	32.0	43.4	32.3	35.2	28.0-	42.7+
F73-6355	31.0	28.4-	43.0	27.5	40.8	37.9	34.8	18.3-	44.6+
F73-7358	30.7	30.4	48.4	27.2	42.8	34.4	47.8	34.2	38.1+
F74-1672	35.2	30.4	47.3	27.5	39.0-	36.0	44.1	38.5	41.0+
Ga70-276	37.9	26.4-	45.7	31.4	41.2	41.3	42.7	29.0	33.0
Ga72-627	39.3	23.9-	48.3	30.6	46.2	37.5	44.5	42.2	49.2+
Ga72-663	39.2	30.6	48.4	31.5	50.7	45.6	44.2	39.0	43.2+
Ga72-666	37.0	29.2	46.3	34.2	46.9	53.3	41.5	35.9	48.8+
GaT72-208	39.2	27.1-	49.2	30.3	47.3	34.6	31.5-	27.8	47.0+
GaT72-328	40.3	30.9	46.1	29.6	48.4	32.7	39.8	43.7+	33.9
GaT72-354	42.8	29.6	49.6	29.0	44.6	35.9	40.0	32.2	31.5
La73-446	33.2	30.4	46.4	35.5	48.0	41.1	44.0	31.9	38.8+
La73-1148	40.2	26.4-	41.4	28.5	47.3	48.6	52.8+	39.8	36.6
La73-1182	35.7	28.2-	39.8	31.4	49.9	46.3	47.6	42.9	30.5
La73-1300	27.4	27.2-	49.6	33.0	32.1-	46.5	41.6	39.8	41.8+
N73-495	32.2	26.5-	34.8-	26.5	38.6-	40.6	55.0+	41.3	35.0
N73-717	35.7	28.8	44.9	28.7	41.2	42.6	42.0	32.6	45.1
N73-813	36.2	30.2	41.6	29.5	36.3-	38.7	37.2	34.0	27.3
N73-1010	37.5	25.9-	27.1-	28.6	38.7-	49.9	43.5	40.9	31.0
N73-1286	39.3	27.8-	50.1	26.0	41.6	36.3	44.3	41.3	45.8+
N73-1404	40.2	28.5	18.5-	28.0	40.1-	45.2	49.6	22.8-	33.7
N73-1467	43.3	28.2-	31.4-	23.7	49.2	44.5	47.2	28.9-	33.5
N73-1619	44.4	30.1	48.0	36.6	42.8	44.5	48.6	30.6	33.2
Ts74-20	38.4	32.7	47.0	30.2	37.4-	35.4	30.1-	31.8	44.4+
Ts74-41	39.1	26.9-	37.5	33.2	36.3-	37.8	43.1	26.0-	34.4
L.S.D.(.05)	N.S.	3.9	7.9	N.S.	6.0	12.4	9.2	7.8	11.7
C.V.	21%	7%	8%	13%	8%	15%	10%	11%	15%

Table 46 - Oil percentages for the strains in Preliminary Group VII, 1976

Strain	Clinton, N.C.	Blackville, S.C.	Jay, Fla.	Baton Rouge, La.	Stoneville, Miss.(B)	Beaumont, Texas
Bragg	18.9	20.1	20.3	19.8	21.0	21.2
Centennial	19.8	19.4	19.9	20.2	19.7	19.3
D73-10232	19.0	19.2	18.5	17.7	18.2	18.2
D73-10245	19.8	19.4	19.1	18.3	18.9	19.0
D73-10247	18.9	18.9	18.6	18.5	18.5	19.3
D74-10301	18.2	18.0	17.9	17.2	18.0	17.9
D74-10467	18.2	18.0	16.7	17.2	18.1	17.6
D74-9141	20.0	19.6	20.0	20.2	19.7	19.5
F71-1142	20.4	20.5	20.4	21.0	21.2	20.3
F72-6831	19.5	19.3	20.1	19.9	19.9	20.9
F72-7112	19.9	19.5	19.4	19.6	19.2	19.8
F72-7461	19.1	19.9	19.9	20.4	21.2	21.2
F73-6355	19.5	20.2	19.1	20.4	20.8	20.3
F73-7358	18.7	19.3	19.3	19.3	21.3	19.9
F74-1672	18.6	19.0	19.5	18.8	19.5	19.4
Ga70-276	19.6	20.2	19.9	19.7	20.9	21.0
Ga72-627	20.4	19.6	22.2	19.3	20.6	20.4
Ga72-663	19.8	20.2	20.3	19.9	21.4	20.5
Ga72-666	19.5	20.5	20.2	20.3	21.9	20.6
GaT72-208	21.2	20.8	21.7	20.8	22.5	21.3
GaT72-328	20.2	21.0	20.8	19.7	20.9	20.8
GaT72-354	20.3	20.5	21.0	20.4	21.3	21.2
La73-446	21.3	22.0	23.9	22.9	22.5	22.1
La73-1148	21.9	21.7	22.3	22.0	21.7	22.2
La73-1182	22.2	22.8	23.4	22.4	21.8	21.9
La73-1300	20.7	21.1	20.6	21.2	19.8	20.4
N73-495	21.0	19.8	22.3	21.4	21.2	20.2
N73-717	19.8	20.2	20.6	20.9	20.9	21.1
N73-813	20.5	19.7	20.9	20.8	21.1	19.3
N73-1010	21.1	20.9	21.8	21.2	21.8	19.7
N73-1286	19.7	21.5	21.1	21.2	20.6	20.6
N73-1404	22.2	21.4	22.0	22.9	21.2	20.8
N73-1467	21.0	21.7	21.3	22.1	22.1	20.9
N73-1619	21.0	20.6	21.4	20.9	21.1	20.6
Ts74-20	19.7	19.2	19.4	18.8	19.2	19.8
Ts74-41	21.5	20.6	21.3	20.6	20.8	19.4

Table 47 - Protein percentages for the strains in Preliminary Group VII, 1976

Strain	Clinton, N.C.	Blackville, S.C.	Jay, Fla.	Baton Rouge, La.	Stoneville, Miss.(B)	Beaumont, Texas
Bragg	42.1	41.1	42.2	43.0	38.4	41.6
Centennial	41.0	42.3	42.8	43.7	41.6	44.5
D73-10232	42.2	41.7	43.6	44.3	43.2	43.2
D73-10245	41.4	42.9	42.5	44.2	42.0	44.3
D73-10247	42.1	43.4	43.6	43.8	42.5	43.9
D74-10301	42.4	42.7	44.4	45.4	43.3	44.8
D74-10467	40.7	41.7	42.6	43.1	40.5	43.0
D74-9141	40.0	41.6	41.9	43.0	40.4	44.7
F71-1142	39.7	39.9	40.3	40.9	37.3	41.6
F72-6831	40.5	40.9	41.5	42.8	39.9	42.4
F72-7112	41.6	41.8	42.9	43.7	41.8	43.8
F72-7461	41.1	39.5	40.6	41.2	35.8	39.6
F73-6355	40.8	39.1	42.2	40.6	36.1	41.1
F73-7358	41.9	40.6	41.1	41.9	36.1	41.7
F74-1672	41.8	42.7	41.0	43.3	40.1	43.0
Ga70-276	39.8	39.7	40.1	41.5	36.9	41.0
Ga72-627	39.9	39.9	38.3	43.2	37.7	41.5
Ga72-663	40.5	39.9	40.8	42.7	37.2	41.2
Ga72-666	41.3	39.2	41.0	41.1	38.1	41.2
GaT72-208	37.6	39.0	38.3	41.3	36.8	40.1
GaT72-328	40.0	40.2	40.8	43.3	38.5	41.9
GaT72-354	40.3	40.3	40.4	43.3	38.1	42.0
La73-446	39.9	38.9	38.5	39.3	37.2	41.0
La73-1148	38.3	39.2	38.2	41.3	38.0	41.2
La73-1182	37.6	38.2	38.3	41.0	38.3	40.8
La73-1300	37.0	38.7	37.7	39.2	38.2	41.0
N73-495	40.9	42.0	38.1	43.4	40.3	43.1
N73-717	41.9	41.7	41.8	42.9	38.1	42.2
N73-813	42.2	42.7	41.9	42.8	40.9	45.1
N73-1010	41.5	40.6	40.2	43.0	38.6	44.1
N73-1286	41.0	39.2	39.8	41.9	40.1	42.8
N73-1404	37.1	40.1	39.9	39.8	39.0	42.1
N73-1467	41.3	39.9	40.4	41.2	38.3	41.7
N73-1619	39.9	40.3	39.1	42.8	38.6	42.7
Ts74-20	43.0	43.4	43.9	45.6	43.3	43.7
Ts74-41	40.8	42.8	41.2	43.3	39.4	45.7

Table 48 - Plant height for the strains in Preliminary Group VII, 1976

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, Texas
Bragg	46	33	30	36	48	37	49	39	40
Centennial	41	32	29	32	40	43	46	38	33
D73-10232	43	33	34	36	44	41	43	40	38
D73-10245	41	32	26	30	31	36	44	36	30
D73-10247	43	29	23	27	38	31	43	35	30
D74-10301	44	32	32	35	40	31	41	39	36
D74-10467	45	30	30	33	38	38	44	37	36
D74-9141	44	32	25	32	36	38	43	34	35
F71-1142	37	27	25	29	36	34	41	31	33
F72-6831	45	31	30	36	35	39	47	40	40
F72-7112	42	33	28	36	38	38	46	40	32
F72-7461	42	34	27	34	38	31	45	39	38
F73-6355	43	33	29	34	42	31	38	26	31
F73-7358	47	34	33	39	50	36	50	35	38
F74-1672	42	34	33	35	38	39	49	40	36
Ga70-276	44	31	26	34	36	34	44	33	32
Ga72-627	42	31	31	33	36	32	47	40	38
Ga72-663	43	33	31	32	38	35	43	38	30
Ga72-666	43	30	30	33	38	39	45	35	34
GaT72-208	42	30	25	33	38	35	35	33	40
GaT72-328	44	30	32	34	35	34	47	39	33
GaT72-354	43	31	30	31	40	39	46	37	38
La73-446	39	31	30	32	40	41	44	36	33
La73-1148	37	29	24	30	34	37	38	34	32
La73-1182	39	31	26	29	30	34	38	38	31
La73-1300	39	32	33	40	50	49	46	38	37
N73-495	42	31	25	32	36	30	43	39	35
N73-717	47	33	27	34	46	42	43	32	36
N73-813	44	32	31	32	33	34	46	36	30
N73-1010	40	30	16	25	34	31	38	28	24
N73-1286	43	29	32	34	42	39	47	36	33
N73-1404	40	25	13	25	28	31	34	24	32
N73-1467	44	30	31	31	36	34	46	32	32
N73-1619	44	31	30	36	36	36	46	34	36
Ts74-20	47	37	41	44	46	46	49	43	26
Ts74-41	38	29	21	30	30	22	43	26	30

Table 49 - Seed quality scores for the strains in Preliminary Group VII, 1976

Strain	Clinton, N.C.	Black-ville, S.C.	Tifton, Ga.	Jay, Fla.	Baton Rouge, La.	Stone-ville, Miss(B)	Beaumont, Texas
Bragg	1.5	1.0	2.0	1.0	2.0	2.0	3.0
Centennial	1.5	1.0	2.5	1.0	1.5	2.0	2.0
D73-10232	1.5	2.0	2.3	1.0	2.0	2.0	2.0
D73-10245	1.5	1.0	2.3	1.0	1.0	2.0	2.0
D73-10247	1.0	2.0	2.3	1.0	2.0	2.0	2.0
D74-10301	1.5	2.0	2.0	1.0	2.0	2.0	1.0
D74-10467	1.5	2.0	2.5	1.0	1.5	2.0	2.0
D74-9141	1.5	2.0	1.8	1.0	2.5	2.0	3.0
F71-1142	1.0	1.0	2.0	1.0	1.5	2.0	1.0
F72-6831	1.0	1.0	2.0	1.0	3.0	2.0	2.0
F72-7112	1.5	1.0	1.5	1.0	1.5	2.0	3.0
F72-7461	1.0	1.0	2.5	1.0	2.0	2.0	2.0
F73-6355	1.5	1.0	2.0	1.0	3.0	2.0	3.0
F73-7358	1.0	1.0	2.0	1.0	2.0	2.0	3.0
F74-1672	1.5	1.0	1.8	1.0	2.5	2.0	2.0
Ga70-276	1.5	1.0	1.8	1.0	1.5	2.0	2.0
Ga72-627	1.0	1.0	2.3	1.0	2.5	2.0	1.0
Ga72-663	1.5	2.0	2.3	1.0	3.0	2.0	2.0
Ga72-666	1.5	1.0	2.3	1.0	3.0	2.0	2.0
GaT72-208	1.0	1.0	1.8	1.0	1.5	2.0	2.0
GaT72-328	1.0	2.0	2.0	1.0	2.5	2.0	3.0
GaT72-354	1.5	2.0	1.8	1.0	2.5	2.0	3.0
La73-446	1.5	2.0	2.5	1.0	2.0	2.0	2.0
La73-1148	2.0	2.0	1.5	1.0	2.0	2.0	2.0
La73-1182	2.0	2.0	2.0	1.0	1.5	2.0	2.0
La73-1300	2.0	1.0	2.3	1.0	1.5	2.0	2.0
N73-495	2.0	3.0	3.8	1.0	2.0	2.0	4.0
N73-717	1.5	2.0	2.0	1.0	2.0	2.0	1.0
N73-813	1.5	2.0	2.0	1.0	1.5	2.0	2.0
N73-1010	1.5	1.0	2.3	1.0	4.0	2.0	3.0
N73-1286	1.5	1.0	1.8	1.0	1.5	2.0	1.0
N73-1404	1.0	2.0	2.0	1.0	1.5	2.0	3.0
N73-1467	1.5	2.0	2.3	1.0	1.5	2.0	3.0
N73-1619	1.5	-	3.0	1.0	2.5	2.0	2.0
Ts74-20	2.0	2.0	1.8	1.0	1.0	2.0	1.0
Ts74-41	1.5	1.0	2.5	1.0	2.0	2.0	2.0

UNIFORM GROUP VIII

1976

	Variety or strain	Parentage	Generation composited
1.	Hutton	F55-822 X (Roanoke X CNS-4)	F_6
2.	Cobb	F57-735 X D58-3358	F_6
3.	Coker 338	Hampton 266 X Bragg	F_4
4.	Ts72-6	Bragg X PI 200492	F_8
5.	F70-2060	F62-2953 X D62-3286	F_7
6.	Ts73-16	Semmes X PI 200492	F_8
7.	Co73-410	Hampton 266 X Bragg	
8.	F68-1180	Bragg(3) X D60-7965	F_4
9.	F72-6745	Bragg(3) X D60-7965	F_7
10.	F73-6041	F59-1505 X [Bragg(2) X PI 96035]	F_6
11.	F73-7377	F59-1505 X [Bragg(2) X PI 96035]	F_6
12.	F73-7571	F63-3999 X (F61-3118 X D60-7965)	F_5

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.

F62-2953 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.

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

F63-3999 is from the same cross as Hutton.

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

Nineteen 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 content of the seed, and field reaction to root knot nematodes. Two- and three-year data are reported for seed yield, and oil and protein percentage of the seed.

Differences among strains were significant at nine locations. The combined analysis of variance for seed yield covering all locations showed a highly significant variety X location interaction. Differences among strains for seed yield were nonsignificant.

Coker 338 averages 1 day later than Hutton and 2 days earlier than Cobb. The 3-year mean seed yield averages 1.7 bushels higher than Hutton and 1.6 bushels higher than for Cobb. Hutton and Cobb have a good level of resistance to *M. incognita* while Coker 338 is rated susceptible. The three-year mean seed yield for Ts72-6 is nearly similar to that for Coker 338. Maturity is 4 days later than Coker 338 and 2 days later than Cobb.

F70-2060 averaged lower in seed yield than Hutton in 1976 but has a higher two-year mean seed yield. Ts73-16 has the highest mean yield of the strains grown two years. Co73-410 was the only one of the first year strains to rank above Hutton in seed yield.

Table 50 - General summary of performance for the strains in Uniform Group VIII, 1976

	Hutton	Cobb	Coker 338	Ts72-6	F70-2060	Ts73-16
Seed Yield - 1976	37.3	36.8	37.7	39.0	36.7	38.0
- 1975-76	36.5	38.6	39.7	39.5	39.7	40.3
- 1974-76	37.8	37.9	39.5	39.3		
Oil Content - 1976	19.1	20.6	21.3	20.2	20.9	20.0
- 1975-76	19.6	20.9	21.5	20.7	21.3	20.7
- 1974-76	19.8	21.1	21.9	20.9		
Protein Content - 1976	43.3	39.6	41.2	39.8	40.1	40.4
- 1975-76	43.0	39.7	40.9	39.7	40.2	40.2
- 1974-76	43.1	39.8	40.9	39.8		
Seed size	17.3	14.5	16.6	15.3	12.9	15.0
Maturity index	10-29	+3	+1	+5	-1	+5
Height	37	39	37	38	36	38
Shattering	1.0	1.0	1.0	1.0	1.0	1.0
M. incognita	1.5	2.5	5.0	5.0	2.0	5.0
M. arenaria	5.0	5.0	4.8	4.8	2.8	5.0
Flower color	P	W	W	W	P	W
Pubescence color	T	G	T	G	G	G
Pod wall color	T	T	Br	Br	T	T

Table 50 - (continued)

	Co73-410	F68-1180	F72-6745	F73-6041	F73-7377	F73-7571
Seed Yield - 1976	38.3	36.6	37.2	35.7	37.2	35.3
- 1975-76						
- 1974-76						
Oil Content - 1976	21.9	19.8	20.2	20.4	20.7	19.3
- 1975-76						
- 1974-76						
Protein Content - 1976	39.5	42.0	42.3	41.3	40.9	42.2
- 1975-76						
- 1974-76						
Seed size	16.2	15.8	14.3	15.2	17.1	17.6
Maturity index	0	-3	-5	-4	+1	-2
Height	39	35	36	38	38	37
Shattering	1.0	1.0	1.0	1.0	1.0	1.0
M. incognita	2.5	2.5	3.0	1.5	3.5	4.0
M. arenaria	5.0	3.8	3.5	4.8	4.8	4.8
Flower color	P	W	W	W	P	P
Pubescence color	T	T	T	T	T	T
Pod wall color	T	T	T	T	T	Br

Table 51 - Seed yield, in bushels per acre, for the strains in Uniform Group VIII, 1976

Location	Hutton	Cobb	Coker 338	Ts72-6	F70-2060	Ts73-16	Co73-410
			South				
Clinton, N.C.	39.3	31.5-	35.3	36.0	42.4	34.5	38.0
Florence, S.C.(A)	39.7	35.9	34.4	41.7	37.4	38.8	39.6
Florence, S.C.(B)	33.4	36.9	39.2	34.8	32.8	34.0	32.2
Hartsville,S.C.(A)	50.9	38.1-	46.8	46.6	47.2	43.7	39.5-
Hartsville,S.C.(B)	39.1	38.6	42.9	42.2	39.2	40.8	40.9
Blackville, S.C.	29.1	28.9	38.6	33.5	34.2	32.1	40.9
Athens, Ga.	35.0	33.4	36.1	39.0	35.1	37.4	42.8+
Clemson, S.C.	33.9	26.5-	21.9-	25.5-	19.9-	22.7-	22.9-
Tallassee, Ala.	17.0	20.0	32.5	21.4	16.0	14.9	27.5
Tifton, Ga.	50.1	53.4	47.0	51.7	45.7	49.7	51.6
Gainesville, Fla.	48.8	47.1	50.2	44.2	49.1	47.9	47.1
Marianna, Fla.	34.9	42.9+	38.4	40.8	31.0	44.6+	31.2
Jay, Fla.	47.7	43.1	49.9	47.4	50.1	43.4	47.4
Fairhope, Ala.	52.7	52.5	51.7	55.8	52.2	56.9	54.7
Baton Rouge, La.	35.5	48.2+	40.2	50.1+	41.0	51.4+	39.7
Curtis, La.	31.0	31.2	29.4	32.7	28.2	33.7	35.6
Crowley, La.	30.8	25.2	35.3	28.8	35.8	27.1	38.5
Beaumont, Texas	38.8	40.1	35.8	42.9	36.1	45.8+	39.4
Uvalde, Texas	21.5	26.3	11.0-	26.3	24.0	22.9	18.9
Mean	37.3	36.8	37.7	39.0	36.7	38.0	38.3

(+) - 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	F68-1180	F72-6745	F73-6041	F73-7377	F73-7571	L.S.D. (.05)	C.V. (%)
			South				
Clinton, N.C.	41.9	41.9	38.8	32.9-	37.3	6.0	10
Florence, S.C.(A)	38.2	39.2	36.9	37.4	35.5	N.S.	7
Florence, S.C.(B)	34.0	33.5	34.4	34.8	32.5	N.S.	7
Hartsville,S.C.(A)	51.4	47.7	44.1	52.2	41.9-	7.5	10
Hartsville,S.C.(B)	41.3	41.8	39.6	40.2	38.9	N.S.	5
Blackville, S.C.	30.1	31.8	29.2	28.7	34.4	N.S.	14
Athens, Ga.	38.5	36.2	36.4	42.2+	33.1	6.5	10
Clemson, S.C.	26.4-	26.5-	26.4-	24.9-	23.8-	6.5	15
Tallassee, Ala.	21.6	27.0	19.6	26.2	22.0	N.S.	28
Tifton, Ga.	52.0	45.8	49.3	47.1	48.5	N.S.	6
Gainesville, Fla.	45.9	44.4	46.9	48.9	41.2	N.S.	8
Marianna, Fla.	32.1	32.3	32.8	30.7	34.6	6.7	11
Jay, Fla.	47.2	48.1	44.6	49.4	42.1	N.S.	7
Fairhope, Ala.	50.9	55.1	54.8	53.7	49.3	4.3	4
Baton Rouge, La.	31.2	37.2	30.7	35.6	38.2	6.4	10
Curtis, La.	29.4	40.5	31.7	32.1	31.7	N.S.	15
Crowley, La.	34.3	32.3	38.3	28.1	24.3	N.S.	19
Beaumont, Texas	38.1	33.6	30.0-	39.4	36.2	6.0	9
Uvalde, Texas	11.7-	15.8-	19.6	17.7	27.7+	5.3	16
Mean	36.6	37.2	35.7	37.2	35.3	N.S.	

Table 52 - Chemical composition and seed size for the strains in Uniform Group VIII, 1976

Location	Hutton	Cobb	Coker 338	Ts72-6	F70-2060	Ts73-16	Co73-410
			Oil Percentage				
Blackville, S.C.	19.2	20.6	20.0	19.6	20.6	20.6	21.4
Tifton, Ga.	19.0	20.9	22.0	21.2	21.1	21.3	22.4
Tallassee, Ala.	18.8	20.4	21.4	19.8	20.3	18.8	21.2
Gainesville, Fla.	18.6	21.0	21.9	21.5	21.4	21.5	21.6
Jay, Fla.	18.5	20.2	21.6	19.7	21.0	17.8	22.5
Baton Rouge, La.	19.7	20.6	21.8	19.6	20.9	19.9	22.6
Beaumont, Texas	19.7	20.6	20.2	19.9	20.8	19.9	21.4
Mean	19.1	20.6	21.3	20.2	20.9	20.0	21.9
			Protein Percentage				
Blackville, S.C.	43.5	38.9	41.6	39.2	39.9	39.1	39.8
Tifton, Ga.	42.8	38.5	40.4	38.0	40.3	37.6	38.4
Tallassee, Ala.	43.2	40.4	40.1	40.7	40.6	42.3	39.9
Gainesville, Fla.	43.6	38.9	40.9	38.6	39.8	38.4	40.2
Jay, Fla.	43.8	39.4	40.4	39.8	39.2	44.2	39.1
Baton Rouge, La.	43.0	40.4	41.7	40.9	39.5	40.7	38.8
Beaumont, Texas	43.1	40.7	43.1	41.1	41.1	40.8	40.0
Mean	43.3	39.6	41.2	39.8	40.1	40.4	39.5
			Grams per 100 Seeds				
Hartsville,S.C.(A)	16.2	13.0	15.5	13.8	12.2	13.0	15.8
Blackville, S.C.	18.5	15.8	18.5	16.0	13.9	14.8	17.7
Tifton, Ga.	20.2	16.3	18.7	17.0	15.4	16.3	18.8
Tallassee, Ala.	13.0	11.9	14.3	12.7	9.8	12.5	13.8
Gainesville, Fla.	18.5	14.0	16.8	13.8	14.0	13.9	16.7
Jay, Fla.	20.0	16.0	18.0	18.0	13.0	20.0	16.0
Baton Rouge, La.	15.7	15.0	15.1	16.3	11.3	15.4	15.3
Beaumont, Texas	16.6	13.9	15.6	15.0	13.7	14.3	15.8
Mean	17.3	14.5	16.6	15.3	12.9	15.0	16.2

Table 52 - (continued)

Location	F68-1180	F72-6745	F73-6041	F73-7377	F73-7571	L.S.D. (.05)
			Oil Percentage			
Blackville, S.C.	19.9	19.7	20.3	20.1	19.3	
Tifton, Ga.	20.5	20.3	21.0	21.0	20.6	
Tallassee, Ala.	18.9	19.8	19.0	20.4	18.6	
Gainesville, Fla.	20.6	20.6	20.7	21.5	18.3	
Jay, Fla.	19.2	19.8	20.7	19.8	18.6	
Baton Rouge, La.	20.0	21.1	21.0	21.6	21.0	
Beaumont, Texas	19.7	19.8	20.2	20.6	19.9	
Mean	19.8	20.2	20.4	20.7	19.5	1.2
			Protein Percentage			
Blackville, S.C.	41.5	41.8	41.0	40.9	41.8	
Tifton, Ga.	40.8	42.0	40.9	41.0	41.1	
Tallassee, Ala.	42.3	41.8	42.5	40.5	42.6	
Gainesville, Fla.	40.7	42.6	41.7	41.3	42.9	
Jay, Fla.	42.8	42.0	39.5	39.5	42.9	
Baton Rouge, La.	42.9	42.6	41.1	40.8	41.7	
Beaumont, Texas	42.9	43.3	42.5	42.5	42.3	
Mean	42.0	42.3	41.3	40.9	42.2	1.0
			Grams per 100 Seeds			
Hartsville,S.C.(A)	15.6	13.5	15.4	16.4	17.9	
Blackville, S.C.	16.6	15.3	17.3	18.3	19.2	
Tifton, Ga.	19.1	16.4	17.6	20.1	19.4	
Tallassee, Ala.	12.2	11.3	11.4	14.0	15.5	
Gainesville, Fla.	15.6	15.3	16.6	19.0	17.5	
Jay, Fla.	18.0	15.0	16.0	16.0	18.0	
Baton Rouge, La.	13.6	12.3	13.3	15.6	17.5	
Beaumont, Texas	15.7	15.4	13.7	17.3	15.4	
Mean	15.8	14.3	15.2	17.1	17.6	0.6

Table 53 - Relative maturity, days earlier (-) or later (+) than Hutton, for the strains in Uniform Group VIII, 1976

Location	Date planted	Hutton matured	Cobb	Coker 388	Ts72-6	F70-2060	Ts73-16
			South				
Clinton, N.C.	5-25	11-1	+2	+4	+4	0	+4
Hartsville, S.C.(A)	5-27	10-31	+5	0	+8	-3	+8
Blackville, S.C.	5-24	10-28	+3	+2	+2	-1	+2
Athens, Ga.	5-10	10-17	+4	0	+5	-6	+5
Tifton, Ga.	5-4	10-25	+4	0	+5	+4	+5
Gainesville, Fla.	6-2	10-26	+5	-1	+6	+3	+7
Marianna, Fla.	6-22	11-8	0	+2	0	0	+4
Jay, Fla.	6-9	11-3	+3	-2	+3	-1	+3
Fairhope, Ala.	6-8	10-24	+5	+2	+5	-1	+3
Baton Rouge, La.	5-18	10-27	+4	+4	+8	+1	+7
Curtis, La.	5-12	10-28	+4	+4	+8	+1	+7
Crowley, La.	5-28	11-11	+4	-9	+4	-12	+4
Beaumont, Texas	5-26	10-18	0	0	+4	0	+5
Mean		10-29	+3	+1	+5	-1	+5

Table 53 - (continued)

Location	Co73-410	F68-1180	F72-6745	F73-6041	F73-7377	F73-7571
			South			
Clinton, N.C.	+4	0	0	-3	0	0
Hartsville, S.C.(A)	+2	-3	-8	-5	+1	-4
Blackville, S.C.	0	-2	-4	0	+1	-1
Athens, Ga.	0	-6	-11	-9	-1	-3
Tifton, Ga.	-4	-6	-7	-5	+2	-7
Gainesville, Fla.	+1	-1	-6	0	0	+3
Marianna, Fla.	-1	0	-3	0	+1	+2
Jay, Fla.	-1	-1	-2	-2	+1	-2
Fairhope, Ala.	-1	-4	-7	+2	+5	-5
Baton Rouge, La.	+2	-3	-4	-4	-1	-4
Curtis, La.	+2	-3	-4	-4	-1	-4
Crowley, La.	-10	-9	-12	-13	+2	-1
Beaumont, Texas	+3	0	0	-5	0	-2
Mean	0	-3	-5	-4	+1	-2

Table 54 - Plant height for the strains in Uniform Group VIII, 1976

Location	Hutton	Cobb	Coker 338	Ts72-6	F70-2060	Ts73-16
			South			
Clinton, N.C.	43	47	45	45	40	44
Florence, S.C.(A)	37	42	35	44	35	40
Florence, S.C.(B)	31	32	31	32	28	30
Hartsville, S.C.(A)	45	48	42	46	43	50
Hartsville, S.C.(B)	41	47	43	45	39	44
Blackville, S.C.	39	43	39	41	38	40
Athens, Ga.	37	44	40	43	36	43
Clemson, S.C.	32	32	33	34	31	32
Tallassee, Ala.	32	35	32	34	28	31
Tifton, Ga.	31	36	25	32	28	26
Gainesville, Fla.	38	41	39	38	38	37
Marianna, Fla.	22	23	19	18	19	19
Jay, Fla.	38	42	44	44	46	46
Fairhope, Ala.	40	38	38	38	39	45
Baton Rouge, La.	41	46	42	42	41	45
Curtis, La.	48	51	50	49	46	51
Crowley, La.	41	36	47	33	42	34
Beaumont, Texas	38	38	43	40	39	38
Uvalde, Texas	23	28	23	24	18	24
Mean	37	39	37	38	36	38

Table 54 - (continued)

Location	Co73-410	F68-1180	F72-6745	F73-6041	F73-7377	F73-7571
		South				
Clinton, N.C.	46	39	39	46	44	49
Florence, S.C.(A)	38	35	37	36	42	38
Florence, S.C.(B)	36	24	28	32	36	27
Hartsville, S.C.(A)	47	43	43	45	44	44
Hartsville, S.C.(B)	42	39	44	40	48	41
Blackville, S.C.	41	37	34	38	41	37
Athens, Ga.	40	40	41	42	43	38
Clemson, S.C.	34	32	31	35	29	30
Tallassee, Ala.	36	30	30	34	36	31
Tifton, Ga.	30	26	22	31	33	33
Gainesville, Fla.	41	38	36	38	37	38
Marianna, Fla.	22	18	18	21	21	20
Jay, Fla.	46	42	44	44	44	44
Fairhope, Ala.	43	38	40	43	43	39
Baton Rouge, La.	47	44	45	44	44	46
Curtis, La.	51	49	50	45	49	51
Crowley, La.	45	40	43	44	40	39
Beaumont, Texas	39	37	38	38	32	42
Uvalde, Texas	21	12	20	21	24	22
Mean	39	35	36	38	38	37

Table 55 - Lodging scores for the strains in Uniform Group VIII, 1976

Location	Hutton	Cobb	Coker 338	Ts72-6	F70-2060	Ts73-16
			South			
Clinton, N.C.	4.0	3.0	3.0	3.0	2.0	3.0
Florence, S.C.(A)	1.0	2.0	1.0	2.0	2.0	2.0
Florence, S.C.(B)	1.0	1.0	1.0	1.0	1.0	1.0
Hartsville, S.C.(A)	2.5	3.3	2.3	2.8	2.3	3.3
Hartsville, S.C.(B)	2.5	2.5	2.3	2.3	2.0	2.5
Blackville, S.C.	2.0	2.7	2.0	2.7	2.3	2.3
Athens, Ga.	2.5	2.2	2.3	2.8	1.5	2.5
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.	1.2	1.2	1.0	1.0	1.0	1.5
Gainesville, Fla.	1.5	2.0	1.0	1.5	1.0	2.0
Marianna, Fla.	1.0	1.0	2.0	1.0	1.0	1.0
Jay, Fla.	3.0	3.0	2.0	3.0	2.0	2.0
Fairhope, Ala.	1.3	1.7	1.0	2.0	1.3	1.0
Baton Rouge, La.	3.0	2.8	3.2	3.2	3.0	2.7
Curtis, La.	3.3	3.2	2.2	2.2	3.0	2.7
Crowley, La.	2.3	2.7	3.0	2.0	3.0	2.3
Beaumont, Texas	3.0	1.0	2.0	1.0	2.0	1.0
Uvalde, Texas	1.5	2.2	1.3	2.0	1.3	1.7

Table 55 - (continued)

Location	Co73-410	F68-1180	F72-6745	F73-6041	F73-7377	F73-7571
			South			
Clinton, N.C.	4.0	3.0	3.0	3.0	3.0	3.0
Florence, S.C.(A)	1.0	2.0	1.0	2.0	3.0	2.0
Florence, S.C.(B)	1.0	1.0	1.0	1.0	1.0	1.0
Hartsville, S.C.(A)	2.5	2.5	3.0	2.5	2.8	2.2
Hartsville, S.C.(B)	1.8	2.5	2.5	2.5	3.0	1.5
Blackville, S.C.	2.0	2.0	2.0	2.0	2.0	2.0
Athens, Ga.	2.2	2.0	2.2	2.3	2.3	1.5
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	1.3	1.0
Tifton, Ga.	1.0	1.0	1.0	1.0	1.3	1.0
Gainesville, Fla.	1.5	1.0	1.0	1.5	2.0	1.0
Marianna, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Jay, Fla.	2.0	2.0	2.0	3.0	2.0	2.0
Fairhope, Ala.	1.7	1.0	2.0	1.3	2.3	1.0
Baton Rouge, La.	3.2	3.5	3.5	3.8	3.2	1.7
Curtis, La.	2.5	3.0	2.7	3.7	3.8	1.8
Crowley, La.	1.7	2.7	2.7	4.3	2.0	2.3
Beaumont, Texas	4.0	4.0	1.0	4.0	3.0	3.0
Uvalde, Texas	1.5	1.0	1.2	1.0	1.5	1.3

Table 56 - Seed quality scores for the strains in Uniform Group VIII, 1976

Location	Hutton	Cobb	Coker 338	Ts72-6	F70-2060	Ts73-16
			South			
Clinton, N.C.	1.0	2.0	1.5	1.5	1.5	2.0
Blackville, S.C.	1.0	2.0	1.0	2.0	2.0	1.0
Athens, Ga.	1.8	2.0	1.8	1.7	1.8	2.0
Tallassee, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, Ga.	1.5	1.3	1.7	1.2	2.2	1.5
Gainesville, Fla.	1.0	1.0	1.5	1.0	1.5	1.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, Ala.	1.0	1.3	1.3	1.0	1.0	1.0
Baton Rouge, La.	1.0	1.0	2.0	1.0	1.0	1.0
Beaumont, Texas	2.0	1.0	2.0	1.0	1.0	1.0

Table 56 - (continued)

Location	Co73-410	F68-1180	F72-6745	F73-6041	F73-7377	F73-7571
			South			
Clinton, N.C.	1.5	1.5	1.5	1.5	1.0	1.5
Blackville, S.C.	1.0	2.0	1.0	2.0	1.0	2.0
Athens, Ga.	1.3	1.5	2.2	1.7	1.5	3.3
Tallassee, Ala.	1.0	1.0	1.0	1.0	1.0	1.0
Tifton, Ga.	2.2	1.7	2.5	1.5	1.8	1.5
Gainesville, Fla.	1.5	2.0	2.0	1.0	1.0	1.0
Jay, Fla.	1.0	1.0	1.0	1.0	1.0	2.0
Fairhope, Ala.	1.0	1.0	1.2	1.2	1.0	1.3
Baton Rouge, La.	1.0	1.5	1.0	1.5	1.0	1.0
Beaumont, Texas	2.0	2.0	3.0	2.0	3.0	2.0

PRELIMINARY GROUP VIII

1976

Preliminary Group VIII nurseries, including 34 experimental strains along with the varieties Hutton and Cobb, were planted at six locations. Data reported from only three locations. The parentage of these strains is reported in Table 57. Performance data are summarized in Tables 58 through 63. Differences among strains were significant at the 5% level of confidence at each of the locations. The combined analysis of variance for seed yield also showed differences among strains to be significant. One strain, Co74-546, had a mean yield significantly greater than that of Hutton. Nineteen strains produced mean seed yields significantly lower than that for Hutton.

Eight strains had significantly lower protein content and higher oil content than Hutton. There were no strains higher in protein than Hutton. Only one strain equaled Hutton in resistance to *M. incognita*. Five strains appeared relatively resistant to *M. arenaria*.

Table 57 - Parentage of strains in Preliminary Group VIII, 1976

	Variety or strain	Parentage	Generation composited
1.	Hutton		
2.	Cobb		
3.	Co74-505	Bragg X Co318	
4.	Co74-546	Co208 X R64-502	
5.	Co74-579	Co208 X N63-858	
6.	Co75-690	(Co208 X N63-858) X Ransom	
7.	Co75-785	Hampton 266 X Ransom	
8.	D71-9966	Bragg X PI 230973	F_7
9.	D71-9967	Bragg X PI 230973	F_7
10.	D73-9549	D66-8666(2) X (Hill X PI 274454)	
11.	D74-10269	Bragg X PI 229358	F_8
12.	D74-10301	D66-8666 X F_4 sel (Bragg X PI 229358)	F_5
13.	F70-3198	Bragg(3) X D60-7965	
14.	F72-6460	Bragg(2) X F59-2496	
15.	F73-3605	F63-3999 X Hutton	
16.	F73-3731	Bragg(2) X D60-7965	
17.	F73-4813	Bragg(3) X D60-7965	
18.	F73-4825	Bragg(3) X D60-7965	
19.	F73-7101	Bragg(3) X D60-7965	
20.	F73-9569	F64-2571 X (Bragg X F65-1270)	
21.	F74-1518	F59-1505 X [Bragg(3) X PI 96035]	
22.	F74-1559	F59-1505 X [Bragg(3) X PI 96035]	
23.	F74-1844	F61-3118 X [Bragg(2) X F59-2496]	
24.	F74-1929	F61-3118 X [Bragg(2) X F59-2496]	
25.	F74-2111	F61-3118 X [Bragg(2) X F59-2496]	
26.	F74-2326	F63-3999 X (F61-3118 X D60-7965)	
27.	F74-3191	F59-1505 X (Bragg X F65-1270)	
28.	F74-3328	F63-3999(2) X F65-1270	
29.	F74-3346	F63-3999(2) X F65-1270	
30.	Ga72-504	Davis X Lee	F_4
31.	GaT72-555	Jackson X Hood	
32.	La73-1117	Cobb X Pickett 71	F_5
33.	Ts74-5	Bragg X D61-4269	F_6
34.	Ts74-26	D68-80 X D70-8332	F_6
35.	Ts75-1	F69-1191 X Ransom	F_4
36.	Ts75-5	Hampton 266 X Bragg	F_4

Table 58 - General summary of performance for the strains in Preliminary Group VIII, 1976

Strain	Seed yield	Mat. index	Ht.	Percent		Root Knot	
				Oil	Protein	*M. incognita*	*M. arenaria*
Hutton	50.0	10-26	38	19.0	43.5	2.5	5.0
Cobb	48.2	+5	42	20.1	40.7-	2.5	5.0
Co74-505	47.4	-3	40	19.9	40.3-	4.5	3.1
Co74-546	56.1+	-1	36	21.8+	37.8-	5.0	5.0
Co74-579	43.1-	-1	32	20.8+	41.4-	4.0	3.8
Co75-690	48.7	-1	42	20.7+	41.2-	5.0	5.0
Co75-785	44.7-	-3	33	20.4+	42.2	5.0	4.5
D71-9966	33.5-	-1	38	20.3+	41.5	5.0	5.0
D71-9967	38.7-	+3	41	19.8	41.9	5.0	3.0
D73-9549	48.1	-2	37	21.1	40.8-	5.0	1.8
D74-10269	33.0-	-3	30	17.7	42.4	5.0	5.0
D74-10301	40.9-	0	41	18.2	43.7	3.5	3.2
F70-3198	48.9	0	39	21.4+	40.9-	4.0	4.0
F72-6460	49.3	-2	33	20.3+	41.3-	3.0	2.2
F73-3605	43.7-	-2	31	18.1	44.2	4.0	4.3
F73-3731	40.3-	-2	33	19.3	42.1	3.5	1.8
F73-4813	42.2-	-1	31	19.9	41.3-	3.5	-
F73-4825	46.0	0	31	19.8	41.4-	4.0	3.5
F73-7101	47.2	-1	40	21.6+	40.6-	3.0	2.8
F73-9569	44.6-	+2	40	18.7	42.0	5.0	3.5
F74-1518	50.3	-4	40	19.3	42.3	2.5	4.3
F74-1559	45.1	-2	37	19.3	42.6	3.5	4.3
F74-1844	38.9-	0	44	19.6	43.1	-	5.0
F74-1929	42.6-	+1	43	20.2	40.9-	4.0	1.6
F74-2111	40.6-	0	40	19.6	41.3-	5.0	5.0
F74-2326	43.1-	+1	35	19.2	42.5	4.0	4.8
F74-3191	49.2	+1	37	18.1	43.8	5.0	5.0
F74-3328	46.5	-2	38	19.4	42.9	3.0	4.5
F74-3346	43.0-	0	37	19.3	42.9	4.0	4.2
Ga72-504	43.4-	-3	27	20.6+	41.9	5.0	3.5
GaT72-555	51.0	0	33	21.7+	39.5-	5.0	5.0
La73-1117	42.1-	-1	29	20.8+	39.6	3.0	5.0
Ts74-5	44.8-	-6	35	21.6+	39.5-	5.0	2.1
Ts74-26	41.4-	-2	38	19.5	43.3	5.0	4.3
Ts75-1	41.1-	-1	31	19.6	43.7	4.0	4.3
Ts75-5	47.4	-2	30	20.6+	42.1	5.0	4.8
L.S.D.(.05)	5.1			1.1	1.5		
L.S.D.(.01)	6.7			1.4	2.0		

Table 59 - Seed yield, in bushels per acre, for the strains in Preliminary Group VIII, 1976

Strain	Gainesville, Fla.	Jay, Fla.	Beaumont, Texas
Hutton	56.7	48.8	44.3
Cobb	53.7	47.2	43.8
Co74-505	54.7	44.2	43.4
Co74-546	59.6	53.7	54.9
Co74-579	51.8	45.8	31.8
Co75-690	54.0	51.0	41.0
Co75-785	49.5-	49.6	35.0
D71-9966	41.0-	30.2-	29.2
D71-9967	36.2-	39.4-	40.7
D73-9549	51.8	48.0	44.3
D74-10269	42.7-	24.2-	32.2
D74-10301	42.3-	41.2	39.1
F70-3198	52.1	46.5	48.1
F72-6460	58.3	45.4	44.2
F73-3605	56.5	42.8	31.9
F73-3731	57.7	25.4-	37.9
F73-4813	49.0-	41.2	36.4
F73-4825	56.1	46.9	35.0
F73-7101	52.8	53.0	35.8
F73-9569	48.0-	40.5	45.3
F74-1518	55.5	53.3	42.0
F74-1559	53.8	46.6	35.0
F74-1844	49.3-	34.8-	32.6
F74-1929	51.6	38.6-	37.5
F74-2111	48.0-	37.4-	36.4
F74-2326	51.5	43.2	34.8
F74-3191	54.1	43.8	49.6
F74-3328	45.8-	41.6	51.9
F74-3346	48.7	45.0	35.1
Ga72-504	41.6-	47.2	41.2
GaT72-555	51.8	50.6	50.5
La73-1117	46.7-	47.3	32.4
Ts74-5	52.4	39.8-	42.3
Ts74-26	47.7-	39.8-	36.7
Ts75-1	48.8	42.8	31.7
Ts75-5	48.3	48.8	45.1
L.S.D.(.05)	6.7	7.9	12.8
C.V.	6%	10%	15%

Table 60 - Oil percentages for the strains in Preliminary Group VIII, 1976

Strain	Gainesville, Fla.	Jay, Fla.
Hutton	19.2	18.8
Cobb	20.9	19.2
Co74-505	20.5	19.3
Co74-546	22.9	20.7
Co74-579	21.4	20.2
Co75-690	20.7	20.7
Co75-785	21.4	19.4
D71-9966	21.2	19.4
D71-9967	20.4	19.2
D73-9549	21.6	20.6
D74-10269	17.7	17.7
D74-10301	17.6	18.8
D70-3198	21.5	21.2
F72-6460	20.7	19.8
F73-3605	18.7	17.4
F73-3731	20.4	18.2
F73-4813	20.5	19.3
F73-4825	20.2	19.3
F73-7101	21.9	21.3
F73-9569	18.8	18.5
F74-1518	19.8	18.7
F74-1559	20.2	18.3
F74-1844	19.9	19.3
F74-1929	20.5	19.9
F74-2111	20.6	18.6
F74-2326	20.0	18.4
F74-3191	18.4	17.8
F74-3328	19.6	19.2
F74-3346	19.8	18.7
Ga72-504	21.1	20.1
GaT72-555	22.7	20.7
La73-1117	21.2	20.4
Ts74-5	22.5	20.7
Ts74-26	19.7	19.2
Ts75-1	20.3	18.8
Ts75-5	20.6	20.6

Table 61 - Protein percentages for the strains in Preliminary Group VIII, 1976

Strain	Gainesville, Fla.	Jay, Fla.
Hutton	44.2	42.8
Cobb	39.4	42.0
Co74-505	40.3	40.3
Co74-546	37.4	38.1
Co74-579	41.7	41.0
Co75-690	41.2	41.2
Co75-785	42.6	41.8
D71-9966	40.7	42.2
D71-9967	42.0	41.7
D73-9549	40.6	41.0
D74-10269	42.8	41.9
D74-10301	44.7	42.7
F70-3198	41.2	40.6
F72-6460	41.0	41.5
F73-3605	43.5	44.9
F73-3731	42.1	42.1
F73-4813	40.9	41.7
F73-4825	41.4	41.3
F73-7101	40.4	40.8
F73-9569	42.5	41.4
F74-1518	42.1	42.4
F74-1559	42.0	43.1
F74-1844	43.6	42.6
F74-1929	41.0	40.7
F74-2111	40.2	42.4
F74-2326	42.1	42.9
F74-3191	43.8	43.8
F74-3328	43.4	42.3
F74-3346	42.6	43.2
Ga72-504	42.3	41.4
GaT72-555	39.2	39.8
La73-1117	40.1	39.1
Ts74-5	39.2	39.8
Ts74-26	43.8	42.7
Ts75-1	43.1	44.3
Ts75-5	42.0	42.2

Table 62 - Plant height for the strains in Preliminary Group VIII, 1976

Strain	Gainesville, Fla.	Jay, Fla.	Beaumont, Texas
Hutton	34	44	36
Cobb	39	46	40
Co74-505	37	40	43
Co74-546	31	42	36
Co74-579	31	36	30
Co75-690	36	44	47
Co75-785	29	33	36
D71-9966	32	42	41
D71-9967	36	48	40
D73-9549	36	38	36
D74-10269	26	32	33
D74-10301	36	46	40
F70-3198	37	38	41
F72-6460	28	36	36
F73-3605	28	34	30
F73-3731	28	36	36
F73-4813	24	36	33
F73-4825	30	36	28
F73-7101	33	46	40
F73-9569	39	42	40
F74-1518	34	40	45
F74-1559	33	40	38
F74-1844	43	50	39
F74-1929	40	46	42
F74-2111	38	44	39
F74-2326	35	42	42
F74-3191	37	48	37
F74-3328	38	44	33
F74-3346	37	46	38
Ga72-504	27	38	37
GaT72-555	33	46	38
La73-1117	29	46	36
Ts74-5	35	43	38
Ts74-26	38	44	40
Ts75-1	31	42	38
Ts75-5	30	39	36

Table 63 - Seed quality scores for the strains in Preliminary Group VIII, 1976

Strain	Gainesville, Fla.	Jay, Fla.	Beaumont, Texas
Hutton	1.0	1.0	2.0
Cobb	1.0	1.0	1.0
Co74-505	1.0	1.0	2.0
Co74-546	1.0	1.0	2.0
Co74-579	1.0	1.0	2.0
Co75-690	1.0	1.0	2.0
Co75-785	1.0	1.0	2.0
D71-9966	2.0	1.0	3.0
D71-9967	2.5	1.0	2.0
D73-9549	1.5	1.0	2.0
D74-10269	1.0	1.0	1.0
D74-10301	1.0	1.0	2.0
F70-3198	1.0	1.0	2.0
F72-6460	1.0	1.0	2.0
F73-3605	1.0	1.0	2.0
F73-3731	1.0	1.0	3.0
F73-4813	1.0	1.0	3.0
F73-4825	1.0	1.0	2.0
F73-7101	1.0	1.0	2.0
F73-9569	1.0	1.0	2.0
F74-1518	1.0	1.0	2.0
F74-1559	1.5	1.0	3.0
F74-1844	1.5	1.0	2.0
F74-1929	1.0	1.0	2.0
F74-2111	1.5	1.0	2.0
F74-2326	1.0	1.0	2.0
F74-3191	1.0	1.0	1.0
F74-3328	1.0	1.0	2.0
F74-3346	1.0	1.0	2.0
Ga72-504	1.5	1.0	2.0
GaT72-555	1.0	1.0	1.0
La73-1117	1.0	1.0	2.0
Ts74-5	1.5	1.0	3.0
Ts74-26	1.0	1.0	2.0
Ts75-1	1.5	2.0	3.0
Ts75-5	1.5	1.0	2.0