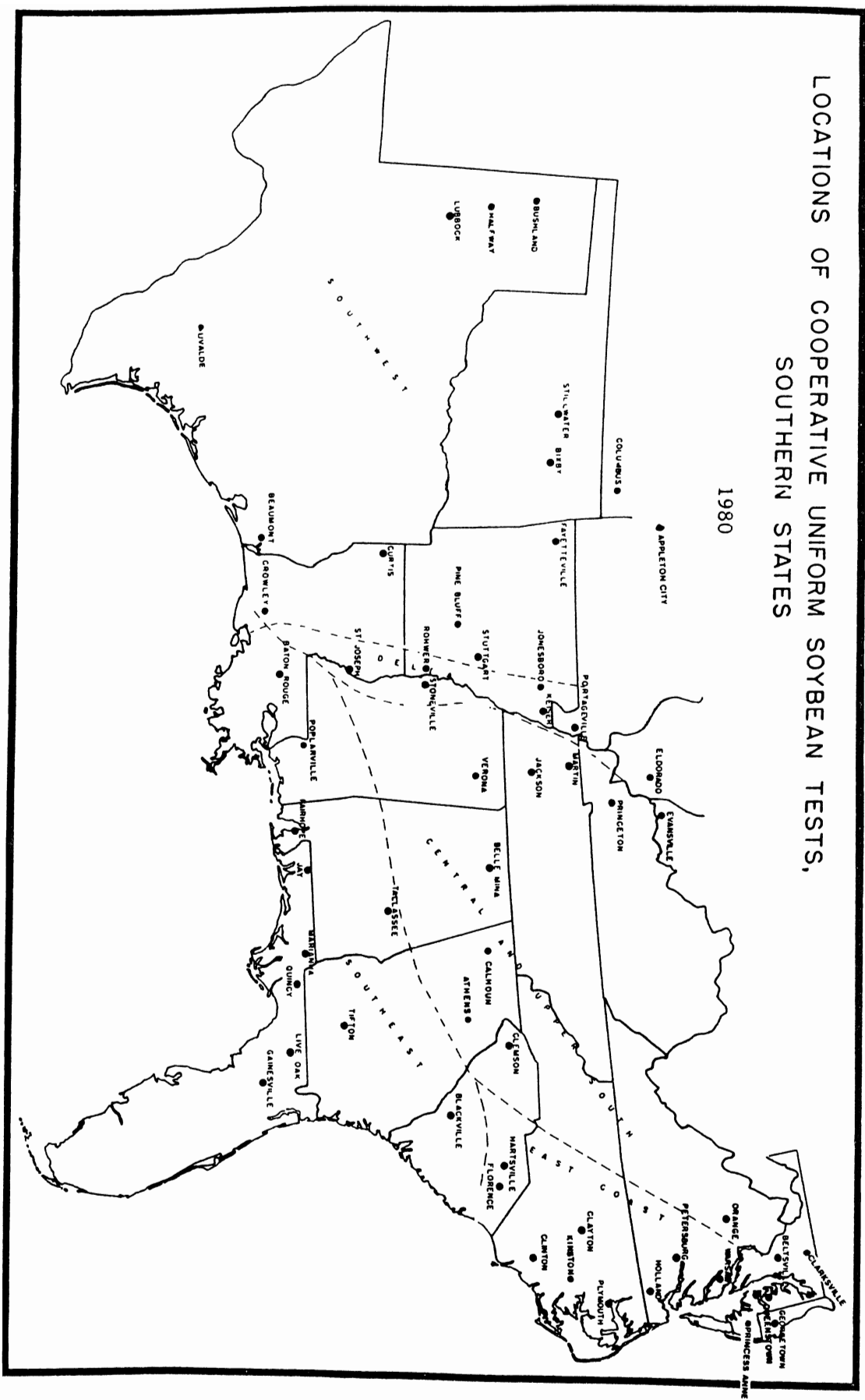


THE UNIFORM SOYBEAN TESTS
SOUTHERN STATES
1980

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

LOCATIONS OF COOPERATIVE UNIFORM SOYBEAN TESTS, SOUTHERN STATES

1980



THE UNIFORM SOYBEAN TESTS

SOUTHERN STATES

1980

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INTRODUCTION

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

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

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

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

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

STRAIN IDENTIFICATION

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

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

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

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

* * * * *

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

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

Location	IV	V	VI	VII	VIII	Soil type	P ₂ O ₅	K ₂ O	pH	Ferti- lizer ¹	Yield-adapted variety ²
East Coast											
Queenstown, MD	1*					Mattapex silt loam	H	M	6.5	0 45-90	41.6 - B
Georgetown, DE	1	1*				Norfolk loamy sand	H	M	6.6	0-20-60	35.6 - C
Warsaw, VA	1*	1*	1			Sassafras sandy loam	H-	M-	5.6	0-40-80	23.0 - B
Holland, VA	1	1	1*			Othello f.s. loam	H	M	5.8	18-54-108	27.5 - C
Plymouth, NC	1*	1*	1	1		Bladen f.s. loam	H	H	5.9	0-40-80	44.0 - F
Kinston, NC			1	1		Norfolk sandy loam				0-40-80	25.4 - F
Clinton, NC			1	1	1	Norfolk sandy loam				0-40-80	38.7 - F
Florence, SC			1	1	1	Faceville sandy loam	VH	H	6.0	0-0-0	33.6 - F
Hartsville, SC			1	1	1	Norfolk sandy loam	VH	H	6.2	0-40-80	23.4 - F
Southeast											
Blackville, SC (A)			1	1*	1	Dothan loamy sand	H	H	5.9	0-37-75	23.0 - G
Blackville, SC (B)			1	1*	1*	Dothan loamy sand	H+	M	5.9	0-37-75	20.0 - G
Tifton, GA			1	1*	1	Tifton sandy loam	M	H	6.2	0-50-100	46.5 - H
Tallassee, AL				1*	1	Cahaba l.f.s.	H	H	6.0	0-0-0	36.2 - E
Gainesville, FL				1	1*	Arredonda fine sand	VH	H	6.3	0-45-90	27.0 - G
Marianna, FL				1	1	Orangburg f.s.l.	H	M	5.5	15-45-90	39.2 - H
Quincy, FL			1	1*	1*	Norfolk l.f.s.	VH	VH	5.9	25-50-75	38.0 - G
Jay, FL			1*	1*	1*	Red bay f.s.l.	H	H	5.6	0-150-75	37.0 - F
Fairhope, AL			1	1	1	Malbis f.s.l.	H	H	6.0	0-0-0	29.5 - F
Poplarville, MS				1	1	Sawyer f. sandy loam					31.2 - G
Baton Rouge, LA			1	1*	1	Olivier silt loam	M	M	6.5	0-60-60	32.0 - F
Upper & Central South											
Orange, VA	1	1				Davidson sandy loam	M	M	6.1	12-72-72	41.2 - C
Calhoun, GA		1	1	1		Tyler gravelly f.s.l.	H	H	6.3	4-40-80	20.7 - C
Eldorado, IL						Harco silt loam					38.2 - A
Knoxville, TN	1	1				Sequatchi loam				0-60-60	43.9 - B
Princeton, KY	1	1*				Crider silt loam	M	H	5.3	0-0-54	39.4 - B
Martin, TN	1	1				Falaya silt loam	H	H	6.1	0-40-40	48.8 - C
Tiptonville, TN			1*			Morganfield s.l.	H	L	7.2	0-0-150	39.0 - C
Jackson, TN			1			Grenada s. loam	H	M	6.3	0-0-156	15.0 - C
Belle Mina, AL			1	1*		Decatur clay loam	H	H	7.0	0-0-0	29.5 - C
Athens, GA			1	1	1	Cecil sandy loam	VH	M	6.3	0-50-100	46.2 - F
Clemson, SC			1	1	1	Cecil sandy loam	H	M+	6.0	0-0-60	8.5 - C

Location	IV	V	VI	VII	VIII	Soil type	P ₂ O ₅	K ₂ O	pH	Ferti- lizer ¹	Yield-adapted variety ²
<u>Delta</u>											
Portageville, MO (A)	1	1*	1*			Tiptonville silt loam	VH	M	6.0	10-26-84	34.7 - D
Portageville, MO (B)	1*	1	1			Sharkey clay	VH	VH	7.0	10-26-84	38.5 - C
Keiser, AR	1*	1*	1*			Sharkey clay	H	H	6.4	0-0-0	37.2 - C
Jonesboro, AR	1	1	1			Calloway silt loam	L	H	5.5	0-40-40	6.9 - C
Stoneville, MS (A)	1	1*	1*	1*		Boskey f.s.l.	VH	H	6.5	0-0-0	45.2 - C
Stoneville, MS (B)	1*	1*	1*	1*	1	Sharkey clay	VH	H	6.8	0-0-0	40.0 - E
Rohwer, AR			1	1		Perry clay	H	H	7.5	0-0-0	
St. Joseph, LA	1	1	1	1		Commerce silt loam	H	M	6.0	0-0-0	59.4 - C
<u>West</u>											
Ottawa, KS	1	1					H	H		0-0-0	24.5 - C
Columbus, KS	1	1				Cherokee silt loam	M	M	6.5	0-0-0	14.0 - C
Clinton, MO	1	1				Parson silt loam	M	H		0-0-0	43.1 - C
Pine Bluff, AR	1	1	1			Calloway silt loam	H	M	7.5	0-0-90	45.5 - C
Stuttgart, AR	1	1	1	1		Crowley silt loam	VL	L	6.3	0-40-40	47.0 - C
Bossier City, LA	1	1	1	1		Severn very f.s.l.	H	L	7.4	0-0-0	14.0 - C
Crowley, LA			1	1		Crowley s.l.	L	L	6.0	0-60-60	39.5 - F
Bixby, OK	1	1	1			Reinloch silt loam	H	H	6.5	10-28-80	34.8 - G
Bushland, TX	1	1				Pullman s.c.l.				0-0-0	30.9 - A
Lubbock, TX	1	1				Amarillo loam	M	VH	7.7	0-0-0	45.4 - B
Beaumont, TX	1	1	1	1*	1*	Morrey silt loam	M	L	5.9	12-48-48	41.5 - H
Clovis, NM	1					Pullman silty clay loam				275-0-0	37.4 - A
Uvalde, TX				1 -	1	Uvalde s.c.l.	H	VH	7.2	0-0-0	50.3 - H

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

²Varieties: A = Crawford; B = Essex; C = Forrest; D = Nathan; E = Tracy-M; F = Centennial; G = Braxton; H = Wright; I = Hutton; J = 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 | 4 - 9 to 19% shattered |
| 2 - 1 to 3% shattered | 5 - over 20% shattered |
| 3 - 4 to 8% shattered | |

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

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

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

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

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

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

Seed quality is rated from 1 to 5 according to the following scale:

1 - very good; 2 - good; 3 - fair; 4 - poor; and 5 - very poor

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

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

All strains of V maturity and later are resistant to bacterial pustule. Very little injury was observed from phytophthora rot in 1980.

Plantings were made at Jay, Florida, for Meloidogyne incognita ratings and at Blackville, South Carolina, for M. arenaria ratings. Because of adverse weather conditions, no ratings were obtained.

Plantings were made at Ames Plantation in Tennessee on SCN race 3 infested soil. Ratings were made for vigor of growth. SCN race 4 ratings were based upon greenhouse evaluation.

All strains in Uniform and Preliminary Groups IV-S, V, and VI were planted in Virginia and inoculated with soybean mosaic virus (SMV), peanut mottle virus (PMV), and peanut stunt virus (PSV). Plantings at Plymouth or Clinton, North Carolina, were evaluated for percent mottled seed.

Determinations on percent purple stained seed were also made at Warsaw and Plymouth. However, counts were low for all strains.

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

1980

<u>Variety or strain</u>	<u>Parentage</u>	<u>Generation composited</u>
1. Crawford	Williams X Columbus	F ₄
2. Douglas (K1033)	Williams X Calland	F ₅
3. S76-2392	Essex X Mitchell	F ₄
4. S76-2109	D67-3297 X Essex	F ₄
5. S76-2203	D67-3297 X Essex	F ₄
6. S76-2229	Forrest X V71-480	F ₄
7. V74-315	V66-318 X V68-2331	F ₅
8. V76-398	Essex X SRF 400	F ₅
9. D77-18	Tracy X Forrest	F ₅
10. K1043	Tracy X Williams	F ₅
11. K1044	Tracy X Williams	F ₅
12. Md77-5675	V68-1171 X Columbus	F ₅

Background of breeding lines used as parents:

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

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

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

V68-2331 is a selection from York X Clark.

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

Results of 16 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. The breeding line K1033 has been released as Douglas.

One strain, S76-2392, has been evaluated three years along with the check varieties Crawford and Douglas. S76-2392 has better seed quality than Douglas, but has a lower mean seed yield in all areas except the Delta where it has a yield advantage.

Five strains have been evaluated two years. The strains S76-2109, S76-2203, S76-2229, and V74-315 have produced well. V76-395 has slightly lower average seed yield.

Four strains were grown one year. D77-18 gives a combination of resistance to SCN race 3 and phytophthora rot. K1043 has a lower mean yield than K1044 in the East Coast, Upper and Central South, and Delta regions, but a higher average in the West.

Table 1 - General summary of performance for the strains in Uniform Group IV-S, 1980

	No. of locations	Crawford	Douglas	S76-2392	S76-2109	S76-2203
Seed Yield - 1980						
East Coast	2	36.1	34.9	39.6	43.0	41.8
Upper & Central South	3	36.1	39.5	42.7+	45.6+	42.3+
Delta	5	30.1	24.0	35.5	30.8	32.1
West	4	35.5	39.2	32.1	39.1	34.0
1979-80						
East Coast		38.0	40.1	41.0	43.1	42.5
Upper & Central South		40.1	41.3	42.9	46.4	45.1
Delta		36.1	34.1	38.8	36.5	36.8
West		35.7	42.9	32.7	37.6	33.9
1978-80						
East Coast		38.3	41.9	40.8		
Upper & Central South		42.9	45.9	44.0		
Delta		36.6	36.4	40.4		
West		35.2	41.1	33.9		
Oil Content - 1980						
		20.4	20.7+	20.0-	20.2	19.8-
1979-80		19.9	20.6	19.6	19.7	19.6
1978-80		20.2	20.8	20.0		
Protein Content - 1980						
		43.5	43.5	42.1-	42.9	43.4
1979-80		43.0	42.6	41.7	42.0	42.9
1978-80		43.1	42.7	41.4		
Seed size						
		16.6	18.0	14.0-	14.2-	14.5-
Maturity index						
		10-2	0	+4	+8	+8
Height						
		36	29	30	25	32
Seed quality						
		2.5	3.1	2.3	1.9	2.1
Cyst nematode, race 3						
		S	S	S	S	S
Soybean mosaic virus						
		S	S	S	S	S
Peanut mottle virus						
		S	S	S	S	S
Peanut stunt virus						
		M	R	S	M	M
Flower color						
		P	W	W	W	P
Pubescence color						
		T	T	T	G	G
Pod wall color						
		T	Br	T	T	T

Table 1 - (continued)

	S76-2229	V74-315	V76-398	D77-18	K1043	K1044	Md77-5675
Seed Yield - 1980							
East Coast	45.2	39.7	39.9	37.2	34.6	38.9	36.5
Upper & Central South	41.9+	44.6+	40.3	36.5	36.2	41.1	40.7
Delta	34.6	35.6	25.8	35.0	30.7	36.0	30.9
West	35.1	37.9	34.0	32.8	34.9	28.3-	32.2
1979-80							
East Coast	44.2	40.6	39.0				
Upper & Central South	42.9	46.3	43.9				
Delta	38.8	39.7	33.0				
West	33.5	37.5	34.4				
1978-80							
East Coast							
Upper & Central South							
Delta							
West							
Oil Content - 1980	20.9+	21.5+	21.0+	19.8-	19.6-	19.5-	19.9-
1979-80	20.4	20.8	20.4				
1978-80							
Protein Content - 1980	41.0-	41.4-	42.4-	43.8	45.2+	44.2	44.6+
1979-80	40.5	41.1	41.8				
1978-80							
Seed size	15.2	14.8-	14.3-	15.3	18.0	16.3	16.3
Maturity index	+7	+6	+5	+3	0	+3	+4
Height	35	28	25	29	36	33	31
Seed quality	2.6	2.2	2.4	2.5	2.1	2.3	2.5
Cyst nematode, race 3	S	S	S	R	S	S	S
Soybean mosaic virus	S	S	S	S	S	S	M
Peanut mottle virus	S	S	S	S	S	S	M
Peanut stunt virus	M	M	M	M	M	M	R
Flower color	P	P	P	W	W	W	P
Pubescence color	G	G	T	T	T	T	T
Pod wall color	T	T	Br	T	T	T	T

Table 2 - Seed yield, in bushels per acre, for the strains in Uniform Group IV-S, 1980

Location	Crawford	Douglas	S76-2392	S76-2109	S76-2203	S76-2229	V74-315
<u>EAST COAST</u>							
Queenstown, MD	41.9	40.7	46.3+	47.0+	46.5+	57.5+	48.4+
Georgetown, DE	30.2	29.1	32.9	39.0+	37.1+	33.0	31.0
*Warsaw, VA	16.8	14.3	8.4	17.1	13.2	10.0	9.5
Mean	36.1	34.9	39.6	43.0	41.8	45.2	39.7
<u>UPPER AND CENTRAL SOUTH</u>							
Orange, VA	39.7	35.8	46.5	46.5	47.1	44.3	49.6+
Knoxville, TN	30.4	32.6	36.9	37.2	35.2	37.1	35.6
Eldorado, IL	38.2	50.0+	44.6+	53.2+	44.5+	44.3+	48.8+
*Princeton, KY	32.1	28.5	32.6	37.3	37.3	35.1	37.4
Mean	36.1	39.5	42.7+	45.6+	42.3+	41.9+	44.6+
<u>DELTA</u>							
Portageville, MO (A)	33.3	28.6	31.8	35.9	34.9	35.0	33.9
Portageville, MO (B)	24.3	19.1	48.0+	27.3	29.0	45.9+	48.7+
Martin, TN	27.0	21.1	29.3	30.2	31.9	27.0	31.3
Keiser, AR	35.0	33.7	38.4	37.5	40.5	35.8	37.4
Stoneville, MS (B)	30.8	17.3-	30.2	23.2	24.4	29.7	26.8
Mean	30.1	24.0	35.5	30.8	32.1	34.6	35.6
<u>WEST</u>							
*Ottawa, KS	12.4	12.0	17.6	20.8	13.2	15.6	17.0
*Columbus, KS	11.5	5.8-	15.8+	14.6	15.8+	11.2	12.1
Bixby, OK	25.5	28.7	28.6	24.6	25.2	28.1	27.6
Bushland, TX	30.9	38.0+	22.7-	30.9	23.6-	30.1	36.1
Lubbock, TX	48.3	50.2	42.6-	51.6	43.8	43.0-	46.4
Clovis, NM	37.4	39.9	34.4	49.3+	43.3	39.2	41.4
Mean	35.5	39.2	32.1	39.1	34.0	35.1	37.9

*Not included in mean

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

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

Table 2 - (continued)

Location	V76-398	D77-18	K1043	K1044	Md77-5675	L.S.D. (.05)	C.V. (%)
<u>EAST COAST</u>							
Queenstown, MD	44.5	42.9	41.4	45.9	42.8	4.0	5
Georgetown, DE	35.2+	31.5	27.8	31.8	30.2	3.4	6
Warsaw, VA	14.5	14.4	8.8	14.5	13.4	N.S.	45
Mean	39.9	37.2	34.6	38.9	36.5	N.S.	
<u>UPPER AND CENTRAL SOUTH</u>							
Orange, VA	45.3	33.9	35.5	38.5	43.4	8.2	11
Knoxville, TN	32.2	31.4	30.5	37.5	36.4	5.6	10
Eldorado, IL	43.5+	44.2+	42.6+	47.2+	42.2	4.0	5
Princeton, KY	31.3	29.2	-	30.4	36.9	-	-
Mean	40.3	36.5	36.2	41.1	40.7	5.6	
<u>DELTA</u>							
Portageville, MO (A)	29.7	34.7	31.9	33.7	29.0	4.8	9
Portageville, MO (B)	19.9	48.2+	26.8	48.0+	43.1+	6.6	11
Martin, TN	22.7	29.9	23.5	28.5	28.0	N.S.	18
Keiser, AR	34.6	40.6	39.3	40.5	30.5	6.1	10
Stoneville, MS (B)	22.1-	21.5-	32.1	29.5	23.7	8.1	18
Mean	25.8	35.0	30.7	36.0	30.9	7.0	
<u>WEST</u>							
Ottawa, KS	16.8	12.7	17.4	16.6	15.8	N.S.	28
Columbus, KS	8.8	14.6	14.9+	11.2	12.1	3.2	15
Bixby, OK	24.9	21.8	25.2	20.3	19.7	N.S.	22
Bushland, TX	21.2-	28.1	35.3	23.2-	32.5	5.8	12
Lubbock, TX	50.4	40.7	49.1	42.0	40.6-	5.0	6
Clovis, NM	39.4	40.5	29.8	27.8-	36.2	7.7	12
Mean	34.0	32.8	34.9	28.3-	32.2	6.0	

Table 3 - Chemical composition and seed size for the strains in Uniform Group IV-S, 1980

Location	Crawford	Douglas	S76-2392	S76-2109	S76-2203	S76-2229
<u>OIL PERCENTAGE</u>						
Queenstown, MD	19.1	19.4	19.1	18.4	19.4	20.5
Orange, VA	21.1	21.4	21.8	22.0	19.9	23.0
Knoxville, TN	20.8	21.7	19.9	20.0	19.6	20.1
Eldorado, IL	21.0	20.3	19.9	20.1	21.0	20.7
Portageville, MO (B)	20.9	21.5	20.5	21.3	21.2	21.2
Bixby, OK	20.5	21.4	21.0	21.4	20.8	22.1
Lubbock, TX	19.2	18.9	17.5	18.3	17.0	18.9
Mean	20.4	20.7+	20.0-	20.2	19.8-	20.9+
<u>PROTEIN PERCENTAGE</u>						
Queenstown, MD	44.9	44.0	44.2	44.8	45.8	41.5
Orange, VA	39.0	38.3	36.0	39.5	39.0	36.9
Knoxville, TN	44.9	46.5	44.7	44.2	46.1	43.4
Eldorado, IL	44.2	42.4	42.4	42.3	42.6	40.5
Portageville, MO (B)	41.6	42.6	40.3	42.0	41.3	40.9
Bixby, OK	46.0	45.9	44.0	45.0	45.7	42.6
Lubbock, TX	43.7	44.9	43.3	42.6	43.1	40.9
Mean	43.5	43.5	42.1-	42.9	43.4	41.0-
<u>GRAMS PER 100 SEEDS</u>						
Queenstown, MD	18.2	18.5	14.4	13.2	14.6	14.5
Orange, VA	18.7	18.3	14.0	13.7	15.3	14.3
Knoxville, TN	15.1	18.0	18.6	18.8	18.5	20.0
Eldorado, IL	13.5	15.3	10.5	10.6	11.3	12.5
Portageville, MO (B)	15.2	15.7	13.2	13.2	13.2	13.5
Bixby, OK	16.8	19.0	12.4	13.9	13.4	15.4
Lubbock, TX	19.0	21.5	15.2	16.2	15.4	16.5
Mean	16.6	18.0	14.0-	14.2-	14.5-	15.2

Table 3 - (continued)

Location	V74-315	V76-398	D77-18	K1043	K1044	Md77-5675	L.S.D. (.05)
<u>OIL PERCENTAGE</u>							
Queenstown, MD	20.7	20.9	19.6	19.3	19.6	19.2	
Orange, VA	22.1	23.1	21.5	21.2	20.5	21.4	
Knoxville, TN	22.1	21.7	19.6	19.3	19.2	19.4	
Eldorado, IL	20.7	19.0	20.1	19.2	19.4	20.2	
Portageville, MO (B)	22.4	21.4	20.4	20.8	20.7	20.8	
Bixby, OK	23.0	21.6	19.0	19.3	20.2	20.8	
Lubbock, TX	19.4	19.3	18.2	18.1	17.1	17.4	
Mean	21.5+	21.0+	19.8-	19.6-	19.5-	19.9-	0.2
<u>PROTEIN PERCENTAGE</u>							
Queenstown, MD	43.7	42.1	43.8	43.9	45.1	45.2	
Orange, VA	37.9	37.4	38.5	41.9	40.3	41.5	
Knoxville, TN	42.5	44.8	46.9	48.5	47.6	46.1	
Eldorado, IL	39.9	43.2	44.8	45.9	44.6	43.6	
Portageville, MO (B)	40.5	41.1	42.6	43.7	41.5	42.5	
Bixby, OK	43.4	45.5	47.0	47.4	46.2	46.9	
Lubbock, TX	41.9	42.4	43.2	45.0	44.1	46.1	
Mean	41.4-	42.4-	43.8	45.2+	44.2	44.6+	1.0
<u>GRAMS PER 100 SEEDS</u>							
Queenstown, MD	14.7	15.0	14.9	18.8	16.7	17.0	
Orange, VA	14.3	14.7	15.7	18.7	17.3	17.3	
Knoxville, TN	19.0	19.0	19.5	22.5	16.5	16.2	
Eldorado, IL	10.6	10.6	11.1	14.5	12.9	13.0	
Portageville, MO (B)	13.9	11.9	13.2	16.3	15.8	14.1	
Bixby, OK	15.5	14.0	15.1	15.7	17.2	17.4	
Lubbock, TX	15.7	14.9	17.4	19.5	17.7	19.4	
Mean	14.8-	14.3-	15.3	18.0	16.3	16.3	1.4

Table 4 - Relative maturity data, days earlier (-) or later (+) than Crawford, for the strains in Uniform Group IV-S, 1980

Location	Date planted	Crawford	Douglas	S76-2392	S76-2109	S76-2203
<u>EAST COAST</u>						
Queenstown, MD		10-10	+1	0	+8	+10
Georgetown, DE	6-7	10-15	-4	+2	+6	+6
*Warsaw, VA	5-16	9-29	+7	+14	+13	+15
Mean		10-13	-2	+1	+7	+8
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	5-30	10-7	-1	+6	+11	+11
Knoxville, TN		9-16	-1	+6	+6	+7
Eldorado, IL	5-21	9-30	-5	-2	+3	+4
*Princeton, KY	5-15	9-22	-1	-1	+4	+2
Mean		9-28	-2	+3	+7	+7
<u>DELTA</u>						
Portageville, MO (A)	5-9	9-28	-9	-1	0	+3
Portageville, MO (B)	5-28	10-6	0	+3	+1	+6
Martin, TN	5-22	9-25	+27	+7	+9	+12
Keiser, AR	6-4	10-12	+3	-3	+2	0
Stoneville, MS (B)	5-6	9-22	-5	-2	-2	+5
Mean		10-1	+3	+1	+2	+5
<u>WEST</u>						
Columbus, KS	6-20	10-8	+1	+4	+7	+7
Bushland, TX	5-23	9-25	-1	+3	+6	+7
Lubbock, TX	5-24	9-23	+4	+9	+17	+4
Clovis, NM	5-13	9-22	+2	+18	+25	+24
Mean		9-27	+2	+9	+14	+11

*Not included in mean

Table 4 - (continued)

Location	S76-2229	V74-315	V76-398	D77-18	K1043	K1044	Md77-5675
<u>EAST COAST</u>							
Queenstown, MD	+12	+9	+1	+4	+6	+6	+8
Georgetown, DE	+8	+6	+6	+3	-1	-1	+3
Warsaw, VA	+22	+18	+5	+11	+21	+19	+12
Mean	+10	+8	+4	+4	+3	+3	+6
<u>UPPER AND CENTRAL SOUTH</u>							
Orange, VA	+1	+6	+8	+2	-1	-5	-1
Knoxville, TN	+15	+6	0	-1	-1	+7	+8
Eldorado, IL	-2	+4	0	-2	-1	+2	+2
Princeton, KY	+4	+4	+2	+2	+4	+5	0
Mean	+5	+5	+3	0	-1	+1	+3
<u>DELTA</u>							
Portageville, MO (A)	0	-1	0	-1	-2	+3	-1
Portageville, MO (B)	+2	+3	+6	+1	+2	+6	0
Martin, TN	+15	+2	+7	+4	0	+12	+9
Keiser, AR	+1	-2	0	-1	+1	+1	0
Stoneville, MS (B)	+6	+3	-2	-3	-5	+5	-1
Mean	+5	+1	+2	0	-1	+5	+1
<u>WEST</u>							
Columbus, KS	+4	+1	+4	+4	-1	+5	+8
Bushland, TX	+4	0	+4	+2	+2	+1	+3
Lubbock, TX	+2	+14	+17	+4	0	-2	+5
Clovis, NM	+13	+16	+17	+15	0	0	+11
Mean	+6	+8	+11	+8	0	+1	+7

Table 5 - Plant height for the strains in Uniform Group IV-S, 1980

Location	Crawford	Douglas	S76-2392	S76-2109	S76-2203	S76-2229
<u>EAST COAST</u>						
Queenstown, MD	41	33	39	32	41	40
Georgetown, DE	27	21	30	24	31	28
Warsaw, VA	36	32	36	27	36	41
Mean	35	29	35	28	36	36
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	41	29	34	28	41	40
Knoxville, TN	34	24	31	27	29	32
Eldorado, IL	53	47	38	39	44	57
Princeton, KY	36	26	32	21	27	38
Mean	41	32	34	29	35	42
<u>DELTA</u>						
Portageville, MO (A)	48	32	27	24	30	42
Portageville, MO (B)	25	20	30	17	30	35
Martin, TN	38	33	33	22	40	30
Keiser, AR	28	31	25	18	23	31
Stoneville, MS (B)	44	24	21	18	23	37
Mean	37	28	27	20	29	35
<u>WEST</u>						
Ottawa, KS	28	26	29	22	30	28
Columbus, KS	20	16	19	14	19	16
Bixby, OK	33	31	27	21	27	30
Bushland, TX	25	21	21	20	26	26
Lubbock, TX	31	25	28	22	30	34
Clovis, NM	35	31	30	28	35	35
Mean	29	25	24	21	28	28

Table 5 - (continued)

Location	V74-315	V76-398	D77-18	K1043	K1044	Md77-5675
<u>EAST COAST</u>						
Queenstown, MD	37	30	33	40	36	37
Georgetown, DE	26	24	31	28	24	28
Warsaw, VA	35	30	35	38	30	35
Mean	33	28	33	35	30	33
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	36	33	30	41	35	36
Knoxville, TN	26	23	27	35	27	26
Eldorado, IL	41	39	41	54	49	44
Princeton, KY	25	22	23	30	31	28
Mean	32	29	30	40	36	34
<u>DELTA</u>						
Portageville, MO (A)	24	22	27	46	42	32
Portageville, MO (B)	20	20	27	33	31	32
Martin, TN	39	19	32	37	41	34
Keiser, AR	20	19	25	32	33	20
Stoneville, MS (B)	18	17	20	43	37	24
Mean	24	19	26	38	37	28
<u>WEST</u>						
Ottawa, KS	23	24	27	28	30	31
Columbus, KS	14	15	18	21	20	20
Bixby, OK	27	23	27	35	28	32
Bushland, TX	21	21	23	26	24	25
Lubbock, TX	25	22	33	33	32	26
Clovis, NM	31	29	31	35	31	32
Mean	24	22	27	30	28	28

Table 6 - Lodging scores for the strains in Uniform Group IV-S, 1980

Location	Crawford	Douglas	S76-2392	S76-2109	S76-2203	S76-2229
<u>EAST COAST</u>						
Queenstown, MD	3.3	1.8	4.3	1.7	3.5	3.7
Georgetown, DE	1.5	1.7	2.0	1.2	1.2	1.7
Warsaw, VA	1.5	1.3	1.9	1.2	1.7	1.6
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	1.3	1.0	2.0	1.0	1.7	1.0
Knoxville, TN	2.0	2.0	4.0	1.0	3.0	3.0
Eldorado, IL	2.3	1.5	2.7	1.4	2.2	2.2
Princeton, KY	1.0	1.0	1.0	1.0	1.0	1.0
<u>DELTA</u>						
Portageville, MO (A)	2.5	1.5	1.5	1.5	1.5	2.0
Portageville, MO (B)	2.0	1.5	2.0	1.0	1.5	1.5
Martin, TN	2.0	1.0	1.0	1.0	2.0	2.0
Keiser, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, MS (B)	3.0	2.0	2.0	2.0	2.0	2.0
<u>WEST</u>						
Ottawa, KS	1.0	1.0	1.0	1.0	1.0	1.0
Columbus, KS	1.0	1.0	1.0	1.0	1.0	1.0
Bixby, OK	1.0	1.0	2.0	1.0	2.0	1.0
Bushland, TX	1.7	1.7	4.3	1.5	4.0	2.2
Lubbock, TX	2.0	1.5	3.0	1.0	1.5	1.5
Clovis, NM	1.0	1.0	4.0	1.3	3.7	1.7

Table 6 - (continued)

Location	V74-315	V76-398	D77-18	K1043	K1044	Md77-5675
<u>EAST COAST</u>						
Queenstown, MD	3.8	2.5	3.8	3.7	1.7	2.7
Georgetown, DE	1.3	1.5	2.2	1.8	1.2	1.3
Warsaw, VA	1.3	1.2	1.5	1.7	1.3	1.4
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	1.3	1.0	1.3	1.0	1.0	1.0
Knoxville, TN	2.0	2.0	5.0	4.0	1.0	3.0
Eldorado, IL	2.0	1.7	3.0	1.9	1.8	1.9
Princeton, KY	1.0	1.0	1.0	1.0	1.0	1.0
<u>DELTA</u>						
Portageville, MO (A)	1.5	1.5	1.5	2.5	2.0	2.0
Portageville, MO (B)	1.0	1.5	2.0	1.5	1.5	1.5
Martin, TN	2.0	1.0	1.0	2.0	1.0	1.0
Keiser, AR	1.0	1.0	2.0	1.0	1.0	1.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
<u>WEST</u>						
Ottawa, KS	1.0	1.0	1.0	1.0	1.0	1.0
Columbus, KS	1.0	1.0	1.0	1.0	1.0	1.0
Bixby, OK	1.0	1.0	2.0	2.0	1.0	2.0
Bushland, TX	1.7	1.5	4.0	1.5	1.5	3.2
Lubbock, TX	1.2	1.2	1.5	1.5	1.5	1.5
Clovis, NM	3.0	1.0	3.3	1.0	1.0	2.7

Table 7 - Seed quality scores for the strains in Uniform Group IV-S, 1980

Location	Crawford	Douglas	S76-2392	S76-2109	S76-2203	S76-2229
<u>EAST COAST</u>						
Queenstown, MD	2.5	3.7	1.2	2.0	2.0	1.2
Georgetown, DE	3.0	3.2	3.2	2.0	2.2	2.0
Warsaw, VA	1.8	1.8	2.7	2.0	2.5	3.0
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	1.0	1.0	2.0	1.0	1.0	1.0
Knoxville, TN	3.0	5.0	2.0	1.0	1.0	3.0
Eldorado, IL	2.7	3.8	2.3	2.3	2.2	2.7
Princeton, KY	3.0	2.0	3.0	2.0	2.0	3.0
<u>DELTA</u>						
Portageville, MO (A)	2.5	2.5	2.5	2.0	2.0	2.5
Portageville, MO (B)	2.5	3.0	2.5	2.5	2.5	2.5
Martin, TN	3.0	4.0	3.0	2.5	3.5	4.0
Keiser, AR	2.0	3.5	1.5	1.5	2.0	3.0
Stoneville, MS (B)	2.0	3.7	2.3	2.0	2.7	3.7
<u>WEST</u>						
Ottawa, KS	2.0	2.0	1.5	1.5	1.5	1.5
Bushland, TX	2.7	3.5	2.7	1.5	2.0	2.5
Lubbock, TX	3.2	4.0	2.0	2.0	2.5	3.0

Table 7 - (continued)

Location	V74-315	V76-398	D77-18	K1043	K1044	Md77-5675
<u>EAST COAST</u>						
Queenstown, MD	1.8	2.5	1.7	2.8	1.2	2.5
Georgetown, DE	2.3	2.5	2.3	2.5	2.0	2.3
Warsaw, VA	3.2	1.8	1.8	2.0	2.8	1.8
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	1.0	1.0	1.3	1.0	1.0	1.0
Knoxville, TN	3.0	3.0	3.0	4.0	2.0	3.0
Eldorado, IL	1.8	2.2	2.2	2.7	2.0	3.0
Princeton, KY	2.0	3.0	3.0	-	4.0	3.0
<u>DELTA</u>						
Portageville, MO (A)	2.5	2.0	2.5	2.5	2.5	2.5
Portageville, MO (B)	2.5	2.5	2.5	2.5	2.5	2.5
Martin, TN	3.0	3.5	3.5	3.0	3.5	4.0
Keiser, AR	1.5	3.0	2.0	1.5	2.0	2.0
Stoneville, MS (B)	2.0	3.7	4.0	2.3	2.3	3.0
<u>WEST</u>						
Ottawa, KS	1.0	1.5	2.0	1.5	2.0	2.0
Bushland, TX	3.0	2.5	3.2	2.5	2.5	2.7
Lubbock, TX	3.0	2.0	2.5	3.2	2.5	2.7

PRELIMINARY GROUP IV-S

1980

Preliminary Group IV-S nurseries, including 16 experimental strains along with Crawford and Hill, were grown at 6 locations. The parentage of each of these strains is reported in Table 8. Performance data are summarized in Tables 9 through 14.

Seed yields were very low at Warsaw and Ottawa. Differences among strains for seed yield were significant at Portageville, Keiser, and Stoneville. With the high variety X location interaction, mean seed yield differences were nonsignificant. S77-7917 and S77-7992 were the highest yielding strains and were also among the latest maturing.

Four strains appeared to be resistant to Soybean Cyst Nematode, race 3, in field plantings at Ames Plantation.

Table 8 - Parentage of the strains grown in Preliminary Group IV-S, 1980

Variety or strain	Parentage	Generation composited
1. Crawford		
2. Hill		
3. D65-2262	D54-2437 X PI 261467	F ₅
4. D78-5096	Tracy X D66-5566	F ₅
5. D78-5097	Tracy X D66-5566	F ₅
6. D78-5109	Tracy X D66-5566	F ₅
7. K1064	Tracy X William	F ₅
8. K1065	Tracy X Columbus	F ₅
9. K1069	William X D60-9647	F ₅
10. L7-1110	Union X (William X PI 88788)	F ₄
11. LS78-124-1	L71L-436 X J74-5	F ₄
12. LS78-248	L71L-436 X J74-5	F ₄
13. LS78-445	L71L-436 X J74-5	F ₄
14. S77-7917	D67-3297 X Essex	F ₄
15. S77-7992	Forrest X V71-480	F ₄
16. S77-8110	Forrest X S63-5328	F ₄
17. V75-50	Essex X V69-862	F ₅
18. V76-411	Essex X SRF 400	F ₅

Table 9 - General summary of performance for the strains grown in Preliminary Group IV-S, 1980

Strain	Seed Yield	Maturity index	Ht.	Percent		SCN race 3	SMV	PMV	PSV
				Oil	Protein				
Crawford	30.9	10-1	31	19.7	46.1	S	S	S	S
Hill	32.5	+5	28	19.5	42.8-	S	S	S	S
D65-2262	29.3	0	26	18.3	45.1	S	S	S	R
D78-5096	30.3	-1	30	19.6	44.2	S	S	S	M
D78-5097	32.6	0	28	18.6	45.6	S	S	S	M
D78-5109	28.0	-4	28	19.2	45.0	S	S	S	M
K1064	31.4	+9	20	19.4	44.5	S	S	M	M
K1065	28.8	+8	20	18.3	45.5	S	S	S	M
K1069	25.6	-1	26	19.7	45.6	S	S	M	R
L7-1110	26.1	-5	33	19.2	44.4	R	S	R	R
LS78-124-1	31.5	+4	27	19.4	43.3	R	S	S	M
LS78-248	30.6	+6	27	19.9	41.5-	R	S	S	M
LS78-445	30.6	+8	37	19.5	44.0	R	S	S	M
S77-7917	34.4	+8	28	19.6	44.3	S	S	S	M
S77-7992	37.3	+6	26	19.8	43.3-	S	S	S	S
S77-8110	31.7	+10	39	18.9	44.0-	S	S	S	M
V75-50	33.3	+7	25	18.9	45.3	S	S	S	M
V76-411	32.0	+5	23	19.9	42.5-	S	S	S	R
L.S.D. (.05)	N.S.			N.S.	1.9				
L.S.D. (.01)	N.S.			N.S.	2.5				

Table 10 - Seed yield, in bushels per acre, for the strains grown in Preliminary Group IV-S, 1980

Strain	Queens- town, MD	*Warsaw, VA	Portage- ville, MO (B)	Keiser, AR	Stone- ville, MS (B)	*Ottawa, KS
Crawford	40.1	10.2	24.1	34.9	24.5	9.3
Hill	45.1	9.6	31.3+	29.1	24.6	11.2
D65-2262	39.7	10.8	32.0+	21.7	24.0	13.1
D78-5096	42.5	17.5+	31.8+	28.9	18.2-	13.0
D78-5097	45.5	12.6	30.8+	36.7	17.6-	14.2
D78-5109	39.6	7.0	29.7+	26.7	16.2-	13.5
K1064	44.8	9.3	36.5+	36.9	7.5-	13.9
K1065	41.0	13.7	33.9+	33.2	7.0-	10.9
K1069	40.3	18.0+	22.6	21.7	17.9-	12.6
L7-1110	40.7	14.0	25.9	22.9	14.8-	10.0
LS78-124-1	43.4	9.6	29.5+	33.3	20.0	11.5
LS78-248	45.1	13.2	33.8+	32.9	10.8-	13.2
LS78-445	43.1	6.6	24.3	33.5	21.6	10.0
S77-7917	47.1	13.0	36.4+	40.0	14.3-	14.0
S77-7992	49.5	12.2	34.0+	42.2	23.5	8.4
S77-8110	41.8	13.8	32.0+	31.7	21.4	9.2
V75-50	45.7	12.1	30.1+	30.5	27.0	12.8
V76-411	52.1	13.5	27.0	26.8	22.0	11.3
L.S.D. (.05)	N.S.	5.4	4.6	N.S.	5.8	N.S.
C.V.	9%	21%	7%	19%	15%	31%

*Not included in mean

Table 11 - Oil percentages for the strains in Preliminary Group IV-S,
1980

Strain	Queenstown, MD	Keiser, AR	Ottawa, KS
Crawford	19.7	21.0	18.4
Hill	19.5	20.6	18.5
D65-2262	19.3	18.7	16.9
D78-5096	19.9	20.5	18.5
D78-5097	19.3	19.7	16.7
D78-5109	19.8	20.0	17.7
K1064	19.3	20.2	18.7
K1065	17.7	19.0	18.3
K1069	19.7	19.8	19.6
L7-1110	18.9	19.3	19.3
LS78-124-1	19.8	20.8	17.6
LS78-248	20.0	21.2	18.4
LS78-445	20.3	20.7	17.5
S77-7917	19.5	20.5	18.9
S77-7992	20.9	19.8	18.7
S77-8110	19.7	20.0	17.1
V75-50	19.7	19.6	17.3
V76-411	20.4	19.9	19.3

Table 12 - Protein percentages for the strains in Preliminary Group IV-S,
1980

Strain	Queenstown, MD	Keiser, AR	Ottawa, KS
Crawford	45.8	43.5	48.9
Hill	41.7	40.9	45.7
D65-2262	44.8	42.1	48.3
D78-5096	43.9	40.9	47.8
D78-5097	44.5	43.2	49.2
D78-5109	44.1	45.0	46.0
K1064	45.0	42.4	46.2
K1065	45.5	44.3	46.8
K1069	44.8	45.4	46.5
L7-1110	43.9	43.1	46.2
LS78-124-1	43.1	40.4	46.4
LS78-248	41.5	39.5	43.6
LS78-445	42.5	42.9	46.7
S77-7917	44.9	40.4	47.7
S77-7992	42.3	41.9	45.8
S77-8110	42.9	41.0	48.0
V75-50	44.1	44.4	47.5
V76-411	42.5	41.7	43.2

Table 13 - Plant height for the strains in Preliminary Group IV-S, 1980

Strain	Queens- town, MD	Warsaw, VA	Portage- ville, MO (B)	Keiser, AR	Stone- ville, MS (B)	Ottawa, KS
Crawford	34	32	42	28	23	28
Hill	41	32	27	24	19	26
D65-2262	37	30	32	20	13	22
D78-5096	38	35	33	30	16	28
D78-5097	40	33	30	24	15	27
D78-5109	36	34	31	26	15	28
K1064	24	15	25	24	7	23
K1065	36	18	18	20	8	21
K1069	35	26	27	26	14	26
L7-1110	44	36	42	28	18	30
LS78-124-1	36	34	32	21	12	25
LS78-248	37	31	30	28	11	27
LS78-445	35	40	46	34	33	33
S77-7917	36	32	33	25	15	26
S77-7992	38	34	31	17	14	24
S77-8110	41	38	48	37	34	35
V75-50	29	30	28	20	15	25
V76-411	36	26	27	15	11	20

Table 14 - Seed quality scores for the strains in Preliminary Group IV-S, 1980

Strain	Queens- town, MD	Warsaw, VA	Portage- ville, MO (B)	Keiser, AR	Stone- ville, MS (B)	Ottawa, KS
Crawford	2.5	1.5	2.0	3.0	3.0	2.0
Hill	1.5	2.5	2.0	2.0	2.5	2.0
D65-2262	1.0	2.0	2.0	1.5	2.0	2.0
D78-5096	2.0	1.4	2.5	2.0	3.0	1.5
D78-5097	2.0	2.0	2.0	1.5	3.0	1.5
D78-5109	1.8	3.5	2.5	1.5	2.5	1.5
K1064	1.5	2.5	2.5	2.0	4.5	2.0
K1065	3.0	3.5	2.0	2.0	3.0	2.0
K1069	3.0	2.2	3.0	3.5	2.0	2.5
L7-1110	2.0	1.8	2.5	3.0	2.5	2.0
LS78-124-1	3.0	2.3	2.5	2.0	4.0	3.0
LS78-248	2.5	2.0	2.5	2.0	3.5	2.5
LS78-445	2.8	2.0	2.5	2.0	3.5	2.5
S77-7917	1.5	2.0	2.5	2.0	2.0	2.5
S77-7992	1.5	2.2	2.5	2.5	3.0	2.0
S77-8110	1.0	2.2	2.5	2.0	3.0	2.0
V75-50	1.5	2.2	2.5	2.0	2.0	2.5
V76-411	1.0	2.0	2.0	1.5	2.5	1.5

UNIFORM GROUP V

1980

<u>Variety or strain</u>		<u>Generation composited</u>
1. Essex	Lee X S5-7075	
2. Forrest	Dyer X Bragg	
3. Nathan (J74-51)	Forrest(2) X (D68-18 X PI 88788)	F ₅
4. V75-345	Essex X Shore	
5. D77-8	Forrest(2) X Tracy	F ₅
6. D77-4874	D74-7631 X J74-57	F ₅
7. D77-5090	Pickett 71(2) X [(Dare(2) X PI 96983)] X J74-47	F ₅
8. N77-179	N70-1549 X N72-3213	F ₅
9. N77-432	N70-1549 X Centennial	F ₅
10. R77-238	[T43 X Davis(2)] X Mack(3)	F ₅
11. S76-8065	D70-3115 X Essex	F ₄
12. V76-200	V68-2331 X V69-495	

Background of breeding lines used as parents:

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

D68-18 is a selection from Dyer X Bragg.

R66-873 is a selection from Jackson X Semmes.

D74-7631 is a selection from Forrest X D70-3001 which was grown in Uniform Group V in 1977. D70-3001 is of the same parentage as Centennial.

J74-57 is a selection from D70-3045 X an F₄ sel. from D68-18 X PI 88788.

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

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

D70-3115 is of the same parentage as Centennial.

V68-2331 is a selection from York X Clark grown in Uniform Group V in 1971.

Results of 31 Uniform Group V nurseries are summarized in Tables 15 through 21. Table 15 gives a general summary of performance along with characteristics of each strain. The strain J74-51 has been released as Nathan to provide a variety somewhat earlier in maturity than Bedford with resistance to SCN race 4. Seed used for planting Nathan was somewhat weak and stands were thin in several of the plantings.

One strain, V75-345, has been grown two years in addition to Nathan. V75-345 was similar to Forrest in maturity in 1979 but slightly later in 1980. Seed yield was slightly higher than that for Forrest in the Upper and Central South, slightly lower in the East Coast and Delta, and similar in the West.

Eight strains were grown one year. Five of these do not appear to merit further evaluation on a regional basis. These are D77-8, D77-4874, N77-432, S76-8065, and V76-200. Of the strains to be evaluated further, D77-5090 carries the Arksoy gene for resistance to phytophthora rot, resistance to SCN races 3 and 4, and resistance to SMV, PMV, and PSV. Seed of R77-238 was mixed in packeting. Consequently, the performance of this strain may not be accurate.

Table 15 - General summary of performance of the strains in Uniform Group V, 1980

	No. of locations	Essex	Forrest	Nathan	V75-345	D77-8
Seed yield - 1980						
East Coast	5	34.8	34.5	29.4-	33.6	31.0-
Upper & Central South	6	35.8	40.3+	31.4-	39.1	35.6
Delta	6	35.7	40.3+	34.8	36.9	38.5
West	5	32.8	36.5	32.1	34.8	32.8
1979-80						
East Coast		37.6	37.5	33.6	36.6	
Upper & Central South		39.6	41.1	36.4	42.4	
Delta		37.7	39.6	34.4	37.4	
West		36.8	38.5	33.7	38.4	
1978-80						
East Coast		41.5	39.2			
Upper & Central South		40.2	40.7			
Delta		37.2	39.0			
West		37.4	39.3			
Oil Content - 1980						
		19.8	20.0	20.2	20.1	19.1-
1979-80		19.8	19.8	20.4	20.0	
1978-80		20.2	20.4			
Protein Content - 1980						
		44.5	41.8-	42.5-	42.8-	44.5
1979-80		43.2	40.7	40.7	41.5	
1978-80		43.0	40.5			
Seed size		13.0	12.9	13.0	15.6+	16.1+
Maturity index		10-5	+3	-2	+6	+4
Height		26	34	35	35	34
Seed quality		2.3	2.5	2.7	2.1	2.3
Bacterial pustule		R	R	R	R	R
Soybean cyst nematode, race 3		S	R	R	S	R
Soybean cyst nematode, race 4		S	S	R	S	S
Percent mottled seed		1	21	16	0	23
Soybean mosaic virus		S	S	S	M	S
Peanut mottle virus		S	S	S	S	S
Peanut stunt virus		R	R	R	S	M
Flower color		R	W	W	P	W
Pubescence color		G	T	T	G	T
Pod wall color		T	T	T	Br	T

Table 15 - (continued)

	D77-4874	D77-5090	N77-179	N77-432	R77-238	S76-8065	V76-200
Seed yield - 1980							
East Coast	25.7-	32.5	34.2	33.4	30.3-	31.8-	32.6
Upper & Central South	28.5-	37.4	37.3	34.5	34.0	36.5	34.9
Delta	31.4-	38.8	39.5	38.7	37.8	39.6	40.9+
West	29.5	36.4	32.0	33.9	37.6	33.5	31.8
1979-80							
East Coast							
Upper & Central South							
Delta							
West							
1978-80							
East Coast							
Upper & Central South							
Delta							
West							
Oil Content - 1980	19.8	19.8	20.0	20.2	20.2	19.6	19.1-
1979-80							
1978-80							
Protein Content - 1980	43.0-	43.4-	42.8-	42.8-	42.4-	44.6	42.5-
1979-80							
1978-80							
Seed size	13.5	14.2+	13.9	14.4+	14.6+	12.7	15.5+
Maturity index	+6	+3	+3	+7	+12	+2	+2
Height	40	31	27	32	33	29	30
Seed quality	2.4	2.4	2.7	2.4	2.3	2.2	2.6
Bacterial pustule	R	R	R	R	R	R	R
SCN, race 3	R	R	S	S	R	R	S
SCN, race 4	R	R	S	S	S	S	S
Percent mottled seed	12	6	7	6	12	15	0
Soybean mosaic virus	S	R	R	M	S	S	M
Peanut mottle virus	S	R	S	S	S	S	S
Peanut stunt virus	S	R	M	R	M	M	M
Flower color	W	P	W	W	P	W	P
Pubescence color	T	G	T	T	T	T	G
Pod wall color	T	T	T	T	T	T	T

Table 16 - Seed yield, in bushels per acre, for the strains in Uniform Group V, 1980

Location	Essex	Forrest	Nathan	V75-345	D77-8	D77-4874	D77-5090
<u>EAST COAST</u>							
Queenstown, MD	41.6	44.8	37.3	44.6	38.1	33.4-	39.8
Georgetown, DE	34.5	35.6	30.2-	37.0	31.5	29.9-	33.4
Warsaw, VA	23.8	21.6	20.8	20.0	17.6-	14.1-	20.8
Holland, VA	31.2	27.5	23.1-	28.0	26.9	16.6-	23.0-
Plymouth, NC	42.9	43.0	35.4	38.4	40.8	34.5	45.5
Mean	34.8	34.5	29.4-	33.6	31.0-	25.7-	32.5
<u>UPPER AND CENTRAL SOUTH</u>							
Orange, VA	39.8	41.2	38.8	42.3	36.6	35.3	43.0
Knoxville, TN	43.9	47.1	36.2-	46.7	42.3	32.6-	51.1+
*Clemson, SC	8.6	8.5	5.8-	8.0	9.5	7.2	8.4
*Calhoun, GA	19.2	20.7	17.7	18.3	18.3	13.6-	16.7
*Athens, GA	17.0	23.8	-	18.5	20.7	22.6	27.1
Belle Mina, AL	27.8	29.5	27.9	36.2+	24.3	20.2-	25.3
Princeton, KY	39.4	35.4	30.3	34.3	33.8	24.2-	34.0
Tiptonville, TN	30.6	39.5+	27.1	38.4+	34.1	33.2	41.8+
Martin, TN	33.3	48.8+	28.2	36.8	42.2+	25.2	29.0
*Jackson, TN	10.8	11.1	12.7	8.8	8.9	4.9	7.0
Mean	35.8	40.3+	31.4-	39.1	35.6	28.5-	37.4
<u>DELTA</u>							
Portageville, MO (A)	26.1	33.4+	34.7+	31.6	32.2	28.3	36.0+
Portageville, MO (B)	30.4	39.5+	28.8	31.2	35.6+	26.4	37.6+
Keiser, AR	31.0	37.2	28.6	36.0	35.2	29.2	33.3
*Jonesboro, AR	4.2	6.9	7.1	5.6	7.4	5.3	5.8
*Pine Tree, AR	7.9	9.2	9.8	10.6	10.5	7.5	12.8
Stoneville, MS (A)	37.7	45.2	39.1	38.6	39.9	38.9	40.9
Stoneville, MS (B)	22.6	27.3	22.7	25.7	34.0	23.5	31.6
St. Joseph, LA	66.3	59.4-	55.0-	58.2-	54.0-	42.2-	53.1-
Mean	35.7	40.3+	34.8	36.9	38.5	31.4-	38.8
<u>WEST</u>							
Ottawa, KS	21.2	24.5	17.7	20.7	20.9	17.6	20.6
*Columbus, KS	12.1	14.0	13.4	15.5+	12.7	15.2+	14.3+
Pine Bluff, AR	29.8	45.5+	32.1	36.2	36.2	31.5	42.8+
Stuttgart, AR	41.5	47.0+	37.8	47.6+	47.1+	41.6	47.8+
*Bossier City, LA	12.0	14.3	17.3+	15.9	11.4	9.1	13.2
Bixby, OK	26.0	21.2	20.5	26.7	21.9	19.2	28.5
Lubbock, TX	45.4	44.2	52.5+	42.9	38.0-	37.7-	42.1
*Beaumont, TX	8.4	10.0	11.7	13.3	13.6	10.3	13.0
Mean	32.8	36.5	32.1	34.8	32.8	29.5	36.4

*Not included in mean

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

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

Table 16 - (continued)

Location	N77-179	N77-432	R77-238	S76-8065	V76-200	L.S.D. (.05)	C.V. (%)
<u>EAST COAST</u>							
Queenstown, MD	42.1	42.7	40.7	40.2	39.2	6.0	9
Georgetown, DE	34.4	34.8	32.3	31.8	32.6	4.2	8
Warsaw, VA	17.0-	17.1-	16.0-	21.6	18.6-	4.2	13
Holland, VA	31.0	26.8	24.3-	26.3	28.7	5.2	12
Plymouth, NC	46.5	45.5	38.1	39.0	44.1	4.4	6
Mean	34.2	33.4	30.3-	31.8-	32.6	2.9	
<u>UPPER AND CENTRAL SOUTH</u>							
Orange, VA	40.2	37.1	36.1	36.8	39.3	N.S.	7
Knoxville, TN	46.3	43.9	42.6	46.6	42.8	4.0	6
Clemson, SC	8.1	9.4	10.9	7.6	9.5	2.5	17
Calhoun, GA	16.9	23.4	13.2-	17.8	19.5	4.6	15
Athens, GA	22.3	24.8	30.1	21.3	22.9	N.S.	22
Belle Mina, AL	26.5	18.9-	22.0-	27.7	21.0-	4.5	10
Princeton, KY	34.4	35.0	29.9-	34.6	31.3-	5.4	10
Tiptonville, TN	39.8+	39.1+	36.7+	39.1+	40.4+	4.0	6
Martin, TN	36.8	32.8	36.5	34.2	34.5	8.2	14
Jackson, TN	8.0	10.5	11.5	10.1	10.2	N.S.	30
Mean	37.3	34.5	34.0	36.5	34.9	3.8	
<u>DELTA</u>							
Portageville, MO (A)	28.1	31.6	37.1+	32.5+	35.4+	6.2	11
Portageville, MO (B)	33.6	34.3	36.4+	35.3	39.2+	5.1	9
Keiser, AR	36.8	33.5	36.7	35.1	35.3	N.S.	13
Jonesboro, AR	5.5	6.1	6.6	4.9	3.8	N.S.	31
Pine Tree, AR	11.3	10.4	16.0	9.4	8.7	3.7	22
Stoneville, MS (A)	43.9	41.4	34.6	42.1	42.4	N.S.	12
Stoneville, MS (B)	28.8	33.9	28.5	28.4	30.5	N.S.	17
St. Joseph, LA	65.9	57.7-	53.5-	64.0	62.4	5.6	6
Mean	39.5	38.7	37.8	39.6	40.9+	4.2	
<u>WEST</u>							
Ottawa, KS	21.4	18.1	18.5	20.9	20.9	3.1	9
Columbus, KS	13.0	12.1	13.4	14.3+	13.4	2.0	9
Pine Bluff, AR	31.4	36.3	49.4+	37.9	28.6	10.1	16
Stuttgart, AR	43.9	45.0	46.8+	45.9+	39.1	3.7	5
Bossier City, LA	16.4	14.5	8.9	15.4	18.6+	5.1	22
Bixby, OK	22.1	26.4	31.7	21.2	29.1	6.9	17
Lubbock, TX	41.1-	43.5	41.7	41.4-	41.2-	3.7	5
Beaumont, TX	16.6	15.4	10.9	11.8	8.0	N.S.	44
Mean	32.0	33.9	37.6	33.5	31.8	N.S.	

Table 17 - Chemical composition and seed size for the strains in Uniform Group V, 1980

Location	Essex	Forrest	Nathan	V75-345	D77-8	D77-4874	D77-5090
<u>OIL PERCENTAGE</u>							
Queenstown, MD	19.7	19.8	20.2	20.0	18.8	19.9	19.0
Warsaw, VA	19.0	19.2	19.4	19.4	18.7	19.2	19.2
Plymouth, NC	20.2	20.5	20.1	19.6	19.3	20.0	19.7
Jackson, TN	18.4	18.8	19.3	20.1	19.1	19.5	18.9
Portageville, MO (B)	20.6	22.0	22.4	22.3	20.4	22.2	21.5
Keiser, AR	20.2	20.7	20.9	19.5	19.4	20.0	21.0
Stoneville, MS (B)	22.0	20.7	20.8	21.3	19.9	20.2	20.9
Stuttgart, AR	19.1	19.6	20.6	20.1	19.4	19.6	20.0
Lubbock, TX	18.7	18.9	18.5	18.6	17.1	17.8	18.1
Mean	19.8	20.0	20.2	20.1	19.1-	19.8	19.8
<u>PROTEIN PERCENTAGE</u>							
Queenstown, MD	44.7	41.4	42.4	42.7	46.3	42.7	45.1
Warsaw, VA	46.8	43.5	44.9	44.5	45.9	44.5	44.9
Plymouth, NC	44.4	42.9	43.4	43.5	46.2	44.7	45.1
Jackson, TN	46.1	45.9	45.0	45.0	45.9	45.4	45.2
Portageville, MO (B)	42.8	36.8	36.8	40.2	42.0	38.7	39.3
Keiser, AR	44.9	39.7	40.9	42.0	42.6	42.3	40.8
Stoneville, MS (B)	42.5	44.7	43.3	44.0	45.9	44.3	43.9
Stuttgart, AR	45.4	42.7	42.9	42.6	44.6	43.2	44.0
Lubbock, TX	42.7	38.8	42.5	40.4	41.3	41.4	42.0
Mean	44.5	41.8-	42.5-	42.8-	44.5	43.0-	43.4-
<u>GRAMS PER 100 SEEDS</u>							
Queenstown, MD	14.8	14.7	14.4	17.6	18.8	16.2	16.4
Warsaw, VA	11.7	12.1	13.0	14.6	16.7	13.1	14.4
Plymouth, NC	14.1	13.0	12.7	16.8	16.7	13.5	14.7
Jackson, TN	9.2	11.1	9.4	11.4	10.8	12.9	10.2
Portageville, MO (B)	13.6	12.1	12.5	13.9	16.5	12.7	13.7
Keiser, AR	14.0	13.2	14.0	16.3	15.5	12.5	14.5
Stoneville, MS (B)	11.8	12.4	13.6	16.0	15.0	12.2	14.2
Stuttgart, AR	12.3	12.8	12.2	16.3	17.8	13.5	14.6
Lubbock, TX	15.1	14.5	14.8	17.1	17.5	14.6	15.1
Mean	13.0	12.9	13.0	15.6+	16.1+	13.5	14.2+

Table 17 - (continued)

Location	N77-179	N77-432	R77-238	S76-8065	V76-200	L.S.D. (.05)
<u>OIL PERCENTAGE</u>						
Queenstown, MD	20.4	19.9	19.8	19.5	19.1	
Warsaw, VA	19.0	19.7	18.8	19.2	18.8	
Plymouth, NC	21.2	20.4	20.5	19.4	19.3	
Jackson, TN	17.9	19.6	19.6	19.9	18.6	
Portageville, MO (B)	21.5	21.2	22.3	21.1	20.4	
Keiser, AR	20.2	19.8	20.5	19.3	19.3	
Stoneville, MS (B)	22.1	21.8	22.6	21.4	19.8	
Stuttgart, AR	19.3	20.9	18.8	19.6	19.2	
Lubbock, TX	18.6	18.3	19.0	17.2	17.3	
Mean	20.0	20.2	20.2	19.6	19.1-	0.5
<u>PROTEIN PERCENTAGE</u>						
Queenstown, MD	42.8	43.0	43.0	46.0	41.8	
Warsaw, VA	44.8	44.2	45.7	46.6	44.4	
Plymouth, NC	42.6	43.6	43.2	45.1	44.1	
Jackson, TN	46.2	46.0	44.3	45.4	46.1	
Portageville, MO (B)	38.8	39.2	38.9	42.9	39.2	
Keiser, AR	41.3	41.7	39.8	44.3	41.7	
Stoneville, MS (B)	42.9	43.7	42.8	43.9	42.0	
Stuttgart, AR	44.1	42.9	42.6	44.9	42.8	
Lubbock, TX	41.4	40.6	41.1	42.5	40.3	
Mean	42.8-	42.8-	42.4-	44.6	42.5-	0.9
<u>GRAMS PER 100 SEEDS</u>						
Queenstown, MD	16.0	16.9	15.4	14.0	18.4	
Warsaw, VA	13.3	14.6	14.4	11.2	14.7	
Plymouth, NC	14.2	15.0	14.7	13.0	17.7	
Jackson, TN	10.1	11.7	12.2	9.2	9.7	
Portageville, MO (B)	14.9	13.8	14.6	12.5	16.7	
Keiser, AR	14.1	14.4	14.0	13.8	16.7	
Stoneville, MS (B)	13.2	11.8	15.0	13.4	14.8	
Stuttgart, AR	14.4	14.5	15.1	12.7	13.5	
Lubbock, TX	15.1	16.6	16.0	14.6	17.5	
Mean	13.9	14.4+	14.6+	12.7	15.5+	0.9

Table 18 - Relative maturity, days earlier (-) or later (+) than Essex, for strains in Uniform Group V, 1980

Location	Date planted	Essex matured	Forrest	Nathan	V75-345	D77-8	D77-4874
<u>EAST COAST</u>							
Queenstown, MD	6-7	10-20	+5	0	+5	+7	+7
Georgetown, DE	6-7	11-4	0	0	+2	+1	-1
Warsaw, VA	5-16	10-11	+4	+2	+5	+6	+8
Holland, VA	5-30	10-25	-6	-10	-1	-8	+2
Plymouth, NC	5-15	10-10	+4	0	+4	+4	+4
Mean		10-20	+1	-2	+3	+2	+4
<u>UPPER AND CENTRAL SOUTH</u>							
Orange, VA	5-30	10-20	+3	0	+6	+1	0
Knoxville, TN	-	10-2	+1	-1	+9	0	0
Clemson, SC	5-12	10-8	+7	-10	-1	+1	+23
Calhoun, GA	5-29	9-22	-4	-6	+10	-3	+9
Athens, GA	5-5	9-19	0	-	+6	-1	-1
Belle Mina, AL	5-1	9-22	0	0	0	0	0
Princeton, KY	5-15	9-28	+11	+1	+14	+11	+14
Martin, TN	6-22	10-8	+9	+3	+7	+9	+9
Jackson, TN	5-9	9-16	+16	+1	+20	+25	+24
Mean		9-29	+5	-2	+8	+5	+12
<u>DELTA</u>							
Portageville, MO (A)	5-9	10-7	0	-3	+4	+3	-2
Portageville, MO (B)	5-28	10-10	+5	+1	+6	+12	+1
Keiser, AR	6-4	10-17	0	-4	+3	+3	-5
Jonesboro, AR	5-28	10-10	+9	0	+7	+21	+9
Pine Tree, AR	6-4	10-5	+2	-5	+4	+4	0
Stoneville, MS (A)	5-12	9-30	+2	-1	+4	+3	+3
Stoneville, MS (B)	5-8,9	9-22	+9	+7	+9	+11	+11
St. Joseph, LA	5-29	9-19	+2	-4	+2	+1	-2
Mean		9-26	+4	-1	+5	+7	+2
<u>WEST</u>							
Columbus, KS	6-20	10-21	+4	-1	+6	+6	+6
Pine Bluff, AR	5-29	10-13	+1	-10	+5	+1	+1
Stuttgart, AR	5-28	9-25	+13	-2	+15	+17	+12
Bossier City, LA	5-29	9-24	+2	-1	+1	-4	+3
Lubbock, TX	5-24	10-17	-1	-3	+5	-3	-1
Beaumont, TX	5-7	9-21	0	0	+1	+1	0
Mean		10-5	+3	-3	+6	+3	+4

Table 18 - (continued)

Location	D77-5090	N77-179	N77-432	R77-238	S76-8065	V76-200
<u>EAST COAST</u>						
Queenstown, MD	+3	+8	+7	+12	+2	+4
Georgetown, DE	-3	-1	+3	+3	-6	-2
Warsaw, VA	+4	+5	+8	+7	+1	+2
Holland, VA	-5	-10	+2	-	+2	-8
Plymouth, NC	+4	0	-6	-	0	+4
Mean	+1	0	+3	+7	0	0
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	0	-3	+4	+4	-1	0
Knoxville, TN	+6	+11	+8	-	0	+8
Clemson, SC	+6	+2	+16	+30	+8	-9
Calhoun, GA	0	+16	+10	+32	+3	-3
Athens, GA	+4	-2	+1	+26	-1	+1
Belle Mina, AL	0	0	0	+31	0	0
Princeton, KY	+9	+2	+15	+14	0	+11
Martin, TN	+6	+3	+4	+9	+2	+6
Jackson, TN	+17	+5	+48	+54	+5	+9
Mean	+5	+4	+11	+25	+2	+3
<u>DELTA</u>						
Portageville, MO (A)	-1	-1	+1	+12	-2	-1
Portageville, MO (B)	+1	+3	+10	+3	+3	+6
Keiser, AR	-5	-1	+4	-4	-1	-3
Jonesboro, AR	+32	+23	+25	+25	+5	+6
Pine Tree, AR	+2	+3	+6	+24	+2	+4
Stoneville, MS (A)	+1	0	+5	-3	+14	+6
Stoneville, MS (B)	+9	+9	+9	0	+9	+11
St. Joseph, LA	-1	0	+2	+7	-1	0
Mean	+5	+5	+8	+8	+4	+4
<u>WEST</u>						
Columbus, KS	+4	0	+6	+6	+8	0
Pine Bluff, AR	-4	+1	+4	+19	0	+4
Stuttgart, AR	+11	+12	+14	+1	+4	+1
Bossier City, LA	+3	+6	+2	+5	0	0
Lubbock, TX	-4	-3	+4	-2	-5	+1
Beaumont, TX	+2	-2	0	+4	+1	+4
Mean	+2	+2	+5	+6	+1	+2

Table 19 - Plant height for the strains in Uniform Group V, 1980

Location	Essex	Forrest	Nathan	V75-345	D77-8	D77-4874
<u>EAST COAST</u>						
Queenstown, MD	34	42	45	43	42	50
Georgetown, DE	27	34	37	37	33	40
Warsaw, VA	28	37	44	38	35	49
Holland, VA	36	48	38	42	45	55
Plymouth, NC	37	39	42	43	44	49
Mean	32	40	41	41	40	49
<u>UPPER & CENTRAL SOUTH</u>						
Orange, VA	31	41	47	45	40	55
Knoxville, TN	25	33	36	35	33	34
Clemson, SC	18	23	26	22	22	26
Calhoun, GA	24	32	28	29	29	36
Athens, GA	17	29	-	30	27	36
Belle Mina, AL	23	30	29	30	30	33
Princeton, KY	30	35	44	40	35	42
Martin, TN	34	47	45	46	45	54
Jackson, TN	31	38	38	43	43	50
Mean	26	39	37	36	34	41
<u>DELTA</u>						
Portageville, MO (A)	20	32	41	44	23	41
Portageville, MO (B)	27	35	38	36	41	42
Keiser, AR	21	27	24	26	32	33
Jonesboro, AR	23	27	26	29	28	34
Pine Tree, AR	18	22	25	24	24	32
Stoneville, MS (A)	27	30	37	39	33	36
Stoneville, MS (B)	16	19	19	17	21	22
St. Joseph, LA	32	40	42	44	42	47
Mean	23	29	32	32	31	36
<u>WEST</u>						
Ottawa, KS	25	33	34	32	32	40
Columbus, KS	16	20	22	21	20	25
Pine Bluff, AR	21	26	26	30	29	37
Stuttgart, AR	27	36	36	37	40	40
Bossier City, LA	18	31	33	36	32	30
Bixby, OK	25	28	29	31	29	36
Lubbock, TX	23	30	31	33	33	35
Beaumont, TX	12	19	14	18	18	19
Mean	21	28	28	30	29	33

Table 19 - (continued)

Location	D77-5090	N77-179	N77-432	R77-238	S76-8065	V76-200
<u>EAST COAST</u>						
Queenstown, MD	38	38	40	39	40	41
Georgetown, DE	30	28	34	37	32	31
Warsaw, VA	34	29	36	35	32	34
Holland, VA	43	38	43	41	40	38
Plymouth, NC	41	33	39	39	38	38
Mean	37	33	38	38	36	36
<u>UPPER & CENTRAL SOUTH</u>						
Orange, VA	42	29	42	42	34	37
Knoxville, TN	29	29	32	32	31	31
Clemson, SC	22	17	23	21	19	20
Calhoun, GA	29	28	28	32	26	26
Athens, GA	26	21	27	32	23	27
Belle Mina, AL	29	24	29	35	27	25
Princeton, KY	30	30	37	39	34	34
Martin, TN	42	39	43	44	39	42
Jackson, TN	38	31	37	47	31	39
Mean	32	28	33	36	29	31
<u>DELTA</u>						
Portageville, MO (A)	29	20	28	36	28	28
Portageville, MO (B)	30	30	33	30	32	31
Keiser, AR	24	20	21	22	23	21
Jonesboro, AR	29	25	26	33	25	26
Pine Tree, AR	20	20	22	27	20	20
Stoneville, MS (A)	31	25	32	31	31	34
Stoneville, MS (B)	19	16	21	18	17	17
St. Joseph, LA	39	34	37	39	34	41
Mean	28	24	28	30	26	27
<u>WEST</u>						
Ottawa, KS	29	25	30	27	27	27
Columbus, KS	19	18	21	21	18	16
Pine Bluff, AR	25	21	25	33	23	21
Stuttgart, AR	31	30	36	41	30	33
Bossier City, LA	28	24	27	30	29	33
Bixby, OK	27	24	29	32	26	27
Lubbock, TX	29	25	28	26	27	28
Beaumont, TX	19	12	18	18	15	15
Mean	26	22	27	29	24	25

Table 20 - Lodging scores for the strains in Uniform Group V, 1980

Location	Essex	Forrest	Nathan	V75-345	D77-8	D77-4874
<u>EAST COAST</u>						
Queenstown, MD	3.0	3.3	4.0	3.2	3.5	4.0
Georgetown, DE	2.2	2.0	2.0	2.2	2.0	2.0
Warsaw, VA	1.8	1.7	1.8	1.4	1.3	3.0
Holland, VA	3.0	2.7	2.7	3.0	3.0	4.0
Plymouth, NC	2.3	2.0	2.0	2.3	2.0	3.0
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	1.0	2.0	2.0	1.7	2.3	3.7
Knoxville, TN	2.0	2.0	3.0	3.0	3.0	5.0
Calhoun, GA	1.0	1.7	1.7	1.3	1.5	2.0
Athens, GA	1.2	1.7	-	1.5	1.3	1.7
Belle Mina, AL	1.7	2.3	2.3	1.0	3.3	3.7
Princeton, KY	1.0	1.0	1.3	1.3	1.3	4.7
Martin, TN	1.0	1.0	2.0	2.0	1.0	2.0
Jackson, TN	1.0	2.0	2.0	1.0	2.0	1.0
<u>DELTA</u>						
Portageville, MO (A)	1.5	1.5	2.0	2.5	1.5	3.0
Portageville, MO (B)	1.5	2.0	2.5	2.5	2.0	3.0
Keiser, AR	1.0	1.0	1.5	1.0	1.0	2.0
Jonesboro, AR	1.0	1.0	1.0	1.0	1.0	1.0
Pine Tree, AR	1.0	2.0	1.0	1.0	1.0	1.0
Stoneville, MS (A)	2.0	2.0	2.3	2.7	2.0	3.3
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	1.7	2.6	1.8	2.4	2.6	4.2
<u>WEST</u>						
Ottawa, KS	1.0	1.0	1.0	1.0	1.0	1.0
Columbus, KS	1.0	1.0	1.0	1.0	1.0	1.0
Pine Bluff, AR	1.0	1.0	1.0	2.0	2.0	2.0
Stuttgart, AR	1.7	1.8	3.2	3.7	3.0	3.0
Bossier City, LA	1.5	2.6	1.7	3.1	1.7	2.6
Bixby, OK	1.0	2.0	2.0	2.0	2.0	4.0
Lubbock, TX	1.7	2.0	2.2	2.2	2.0	2.5

Table 20 - (continued)

Location	D77-5090	N77-179	N77-432	R77-238	S76-8065	V76-200
<u>EAST COAST</u>						
Queenstown, MD	3.8	3.7	3.8	4.0	3.7	3.2
Georgetown, DE	2.0	1.7	2.5	2.5	1.8	1.3
Warsaw, VA	1.9	1.1	1.7	1.8	1.4	1.1
Holland, VA	3.7	5.3	3.0	4.0	3.0	2.0
Plymouth, NC	3.0	2.0	2.3	3.0	2.3	2.0
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	2.3	1.0	2.0	2.3	1.0	1.0
Knoxville, TN	3.0	2.0	3.0	-	3.0	1.0
Calhoun, GA	2.2	1.0	2.0	1.5	1.5	1.0
Athens, GA	1.5	1.0	1.7	2.5	1.5	1.3
Belle Mina, AL	3.0	2.0	2.7	2.0	3.0	1.3
Princeton, KY	1.0	1.0	1.0	2.0	1.0	1.0
Martin, TN	3.0	2.0	1.0	3.0	1.0	1.0
Jackson, TN	1.0	1.0	1.0	2.0	1.0	1.0
<u>DELTA</u>						
Portageville, MO (A)	1.5	1.0	1.5	2.5	1.5	1.0
Portageville, MO (B)	3.0	2.0	2.0	2.0	2.0	1.5
Keiser, AR	1.5	1.0	2.0	2.0	1.0	1.0
Jonesboro, AR	1.0	1.0	1.0	1.0	1.0	1.0
Pine Tree, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stoneville, MS (A)	2.3	2.0	3.0	2.7	2.0	2.3
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	3.5	1.4	2.7	2.4	2.6	1.2
<u>WEST</u>						
Ottawa, KS	1.0	1.0	1.0	1.0	1.0	1.0
Columbus, KS	1.0	1.0	1.0	1.0	1.0	1.0
Pine Bluff, AR	2.0	1.0	1.0	2.0	1.0	1.0
Stuttgart, AR	3.3	1.5	3.5	3.0	2.0	1.0
Bossier City, LA	2.0	1.2	2.5	1.2	3.0	1.2
Bixby, OK	2.0	1.0	2.0	3.0	1.0	1.0
Lubbock, TX	2.0	1.2	2.5	2.0	2.0	1.0

Table 21 - Seed quality scores for the strains in Uniform Group V, 1980

Location	Essex	Forrest	Nathan	V75-345	D77-8	D77-4874
<u>EAST COAST</u>						
Queenstown, MD	2.0	2.0	2.7	1.3	1.7	2.0
Georgetown, DE	2.0	2.0	2.0	1.7	2.0	2.3
Warsaw, VA	1.3	1.5	1.7	1.2	2.3	1.7
Holland, VA	2.7	1.7	1.7	1.0	1.3	2.0
Plymouth, NC	2.0	2.0	2.0	2.5	1.5	2.5
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	1.0	1.0	1.0	1.0	1.0	1.0
Knoxville, TN	2.0	1.0	3.0	1.0	2.0	1.0
Calhoun, GA	2.7	3.0	3.0	2.7	3.0	3.0
Athens, GA	3.8	3.8	-	3.5	4.2	3.8
Princeton, KY	1.0	3.0	3.0	3.0	2.0	3.0
Martin, TN	2.0	2.0	3.0	1.5	2.0	3.0
Jackson, TN	3.0	3.0	2.5	3.0	3.0	3.0
<u>DELTA</u>						
Portageville, MO (A)	2.0	2.0	2.0	2.0	2.0	2.0
Portageville, MO (B)	2.0	2.0	2.5	2.0	2.0	2.0
Keiser, AR	1.5	1.0	2.5	1.0	1.5	2.5
Jonesboro, AR	4.0	4.7	4.0	3.7	4.0	4.0
Pine Tree, AR	4.0	4.3	5.0	4.0	3.0	3.0
Stoneville, MS (A)	2.0	2.0	2.7	2.3	2.0	2.0
Stoneville, MS (B)	2.3	3.7	4.3	3.0	3.0	2.0
<u>WEST</u>						
Ottawa, KS	1.5	2.0	2.0	1.5	1.5	2.0
Columbus, KS	2.0	2.5	2.5	2.0	1.5	1.5
Pine Bluff, AR	2.0	3.0	4.0	1.0	2.0	3.0
Stuttgart, AR	2.2	2.3	2.2	2.0	2.5	1.5
Lubbock, TX	1.5	1.5	2.0	1.2	1.5	2.0
Beaumont, TX	4.0	5.0	5.0	3.0	4.0	5.0

Table 21 - (continued)

Location	D77-5090	N77-179	N77-432	R77-238	S76-8065	V76-200
<u>EAST COAST</u>						
Queenstown, MD	1.7	3.0	2.3	2.0	1.3	2.7
Georgetown, DE	1.8	2.0	1.8	1.8	1.7	1.8
Warsaw, VA	1.6	2.8	1.8	2.5	1.2	1.7
Holland, VA	2.3	1.7	1.3	2.0	2.3	1.3
Plymouth, NC	2.5	2.0	1.5	2.0	2.5	2.5
<u>UPPER AND CENTRAL SOUTH</u>						
Orange, VA	1.0	1.0	1.0	1.0	1.0	1.0
Knoxville, TN	2.0	3.0	2.0	1.0	1.0	2.0
Calhoun, GA	2.8	4.0	3.2	3.0	2.7	2.8
Athens, GA	3.3	4.5	3.5	2.2	2.8	4.5
Princeton, KY	3.0	4.0	3.0	4.0	3.0	4.0
Martin, TN	3.0	2.5	1.5	2.0	3.0	2.0
Jackson, TN	3.0	4.0	3.0	2.5	2.0	4.0
<u>DELTA</u>						
Portageville, MO (A)	2.0	2.0	2.0	2.0	2.0	2.0
Portageville, MO (B)	2.0	2.0	2.5	2.0	2.0	2.0
Keiser, AR	3.0	2.0	1.5	2.0	1.5	1.5
Jonesboro, AR	4.0	5.0	3.0	3.7	4.0	4.3
Pine Tree, AR	3.0	4.3	3.3	3.0	4.0	4.0
Stoneville, MS (A)	2.0	2.3	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.3	3.0	2.3	2.7	2.0	2.7
<u>WEST</u>						
Ottawa, KS	1.5	2.5	2.0	2.0	1.0	2.0
Columbus, KS	2.0	3.5	2.0	3.0	2.0	3.0
Pine Bluff, AR	2.0	2.0	4.0	2.0	3.0	2.0
Stuttgart, AR	2.7	2.8	2.0	1.2	1.3	2.0
Lubbock, TX	1.7	1.5	1.5	2.0	1.2	1.7
Beaumont, TX	5.0	4.0	5.0	4.0	4.0	5.0

PRELIMINARY GROUP V

1980

Preliminary Group V nurseries, including 34 experimental strains along with Forrest and Hill, were grown at 8 locations. The parentage of each of these strains is reported in Table 22. Performance data are summarized in Tables 23 through 28.

Differences among strains for seed yield were significant at 5 of the locations. The combined analysis of variance also showed differences among strains for seed yield to be significant. However, there were no strains having a mean seed yield significantly greater than that for Forrest. There were 6 strains which ranked above Forrest in mean seed yield, but S77-281 should more properly be evaluated with Group VI material.

Eleven strains carry resistance to SCN races 3 and 4. All also carry the Arksoy gene giving resistance to phytophthora rot. Three of these strains were also rated resistant to SMV, PMV, and PSV.

Four strains have resistance to SCN race 3. Data were not obtained on reaction to root-knot nematodes.

Percent mottled seed ranged from 0 to 23 percent at Plymouth.

Strains which appear to merit further evaluation in Uniform Group V are D77-5169, D78-3238, R75-579, S77-7865, and V76-600.

Several of the strains entered were nonuniform for flower color. These included R78-501, R78-781, S77-8059, Tn76-18, Tn76-65, and V76-600.

Table 22 - Parentage of the strains grown in Preliminary Group V, 1980

Strain or variety		Parentage	Generation composited
1.	Forrest		
2.	Hill		
3.	D77-1	Forrest(2) X Tracy	F ₅
4.	D77-4880	D74-7631 X J74-57	F ₅
5.	D77-5169	Centennial X J74-47	F ₅
6.	D78-3008	D72-8707 X D75-10701	F ₅
7.	D78-3041	D72-8707 X D75-10701	F ₅
8.	D78-3052	D72-8707 X D75-10701	F ₅
9.	D78-3100	D72-8707 X D75-10701	F ₅
10.	D78-3110	D72-8707 X D75-10701	F ₅
11.	D78-3238	Forrest(4) X D51-4863	F ₅
12.	D78-5128	Tracy X D66-5566	F ₅
13.	D78-7605	Forrest(3) X D51-4863	F ₅
14.	Ga78-901	Forrest X Bossier	F ₄
15.	J78-542	D72-8707 X D75-10701	F ₅
16.	J78-550	D72-8707 X D75-10701	F ₅
17.	J78-587	D72-8707 X D75-10701	F ₅
18.	K1068	Tracy X Pamona	F ₅
19.	Md71-583	(York X Mukden) X (Delmar X D64-4731)	
20.	Md71-1643-82	Adelphia X PI 157483	
21.	N78-01	N70-1741 X N69-365	F ₆
22.	N78-19	N70-1741 X N69-365	F ₆
23.	N78-24	N70-1741 X N69-365	F ₆
24.	R75-579	Forrest X Mack	F ₄
25.	R78-132	(R76-873 X Mack) X (Mack X York)	F ₅
26.	R78-478	[(D68-B4 X R66-1516) X Ray] X (York X Davis)	F ₄
27.	R78-501	[(D68-B4 X R66-1516) X Ray] X (York X Davis)	F ₄
28.	R78-610	Mack X V72-128	F ₄
29.	R78-781	Davis X Emerald	F ₄
30.	S77-281	D70-3115 X J74-39	F ₄
31.	S77-7865	D69-8201 X R70-332	F ₄
32.	S77-8059	D70-3115 X Essex	F ₄
33.	Tn76-18	Forrest X Essex	F ₄
34.	Tn76-65	Forrest X Essex	F ₄
35.	V77-378	Essex X PI 71506	F ₅
36.	V76-600	V68-920 X V69-862	F ₅

Table 23 - General summary of performance for the strains grown in Preliminary Group V, 1980

Strain	Seed yield	Maturity index	Ht.	Percent		SCN race 4	Percent mottled seed ²	SMV	PMV	PSV
				Oil	Protein					
Forrest	37.1	10-16	33	20.7	41.5	S ¹	13	S	S	R
Hill	32.0-	-8	30	20.8	41.4	S ₁	10	S	S	R
D77-1	35.4	-1	29	20.3	43.6+	S ₁	6	S	S	M
D77-4880	34.3	+3	37	20.2	42.8	R	9	S	S	M
D77-5169	38.9	+1	34	20.2	43.2+	R	10	M	S	M
D78-3008	33.1	0	31	20.4	43.3+	R	3	R	R	R
D78-3041	30.7-	-4	30	20.1	42.2	R	0	S	S	R
D78-3052	35.6	+8	33	19.6-	41.9	R	4	R	M	M
D78-3100	36.8	+7	37	19.5-	43.9+	R	3	R	R	R
D78-3110	33.7	+1	30	19.4-	43.5+	R ₁	5	R	R	R
D78-3238	38.7	-2	31	21.0	41.7	S ₁	12	S	S	M
D78-5128	31.4-	-2	36	20.1	42.6	S	9	S	S	M
D78-7605	33.7	+2	38	20.5	40.7	S ₁	23	S	S	M
Ga78-901	35.3	+4	34	20.2	42.8	S	13	S	S	M
J78-542	34.4	+4	31	19.2-	43.0	R	0	R	R	M
J78-550	32.9	+3	36	19.8-	42.5	R	5	S	S	M
J78-587	33.1	+1	35	19.5-	42.5	R	5	R	R	M
K1068	26.1-	-3	16	19.5-	44.2+	S	18	S	S	M
Md71-583	33.4	-4	35	21.1	41.1	S	0	M	M	M
Md71-1643-82	30.7-	-4	34	22.0+	39.4-	S	5	M	M	M
N78-01	33.1	+1	36	21.1	42.3	S	0	M	M	M
N78-19	34.2	+4	35	19.8-	43.7+	S	0	R	S	M
N78-24	34.4	+8	33	20.5	41.1	S ₁	2	M	S	M
R75-579	40.8	0	30	20.0-	43.3+	S ₁	9	S	S	S
R78-132	36.4	+5	33	20.4	41.8	S	3	M	S	M
R78-478	36.4	+6	36	21.0	41.6	S	4	R	R	R
R78-501	36.7	+3	34	20.7	42.3	S	6	M	M	M
R78-610	34.1	-2	32	20.4	43.7+	S	16	S	S	S
R78-781	35.8	+3	33	20.8	40.6	S	0	R	R	M
S77-281	39.8	+6	31	20.4	41.6	R	13	S	S	M
S77-7865	40.7	+2	33	20.2	43.1	S	17	S	S	R
S77-8059	34.2	-1	30	20.6	43.7+	S	6	S	S	M
Tn76-18	34.6	-3	30	21.1	42.8	S	12	S	S	R
Tn76-65	33.7	-1	25	20.7	42.6	S	10	S	S	M
V77-378	33.3	-2	26	21.8+	42.2	S	2	S	S	R
V76-600	37.9	+1	32	20.2	42.4	S	0	M	M	R
L.S.D. (.05)	4.3			0.7	1.6					
L.S.D. (.01)	5.7			0.9	2.2					

+ or - designations refer to differences from Forrest.

¹Resistant to SCN, race 3.

²Percent mottled seed data - Plymouth.

SMV = Soybean Mosaic Virus.

PMV = Peanut Mosaic Virus.

PSV = Peanut Stunt Virus.

Table 24 - Seed yield, in bushels per acre, for the strains grown in Preliminary Group V, 1980

Strain	George- town, DE	*Warsaw, VA	Plymouth, NC	Portage- ville, MO (B)	Keiser, AR	Stone- ville, MS (B)	Prince- ton, KY	Tipton- ville, TN
Forrest	39.2	13.7	43.8	38.9	38.6	28.4	30.2	40.7
Hill	28.0	12.9	37.6	34.6	33.3	30.7	31.4	28.5-
D77-1	35.9	14.4	42.7	37.6	39.7	21.5	30.4	40.0
D77-4880	28.1	10.8-	39.6	38.1	30.5	31.6	28.1	43.9
D77-5169	39.1	12.8	44.7	40.4	35.8	32.7	28.4	56.2+
D78-3008	29.6	14.0	39.2	37.3	29.0-	30.9	29.7	36.1
D78-3041	33.1	13.6	35.0	28.8-	27.2-	21.8	33.3	35.6
D78-3052	39.1	11.2	41.5	33.9	30.4	35.2	31.6	37.5
D78-3100	34.6	11.7	44.1	35.1	36.3	34.8	30.0	42.7
D78-3110	36.2	14.2	36.5	38.2	33.4	25.5	29.7	36.2
D78-3238	39.0	12.6	40.2	42.4	41.6	39.1	29.2	39.5
D78-5128	34.7	12.8	30.9	35.1	33.8	25.5	27.6	32.6
D78-7605	34.3	13.3	34.1	32.7-	35.7	29.7	32.2	37.3
Ga78-901	35.9	14.3	35.1	35.8	32.1	30.0	39.5	39.1
J78-542	37.0	12.5	37.3	37.7	28.9-	24.6	35.5	40.2
J78-550	33.4	10.7-	40.6	25.0	23.6-	33.4	32.0	42.8
J78-587	35.0	11.5	38.5	36.1	32.9	20.1	27.1	42.3
K1068	22.5	14.8	28.9	30.0-	27.3-	13.4-	32.7	27.8-
Md71-583	40.4	12.2	32.0	35.1	31.7	31.2	30.4	32.9
Md71-1643-82	31.4	9.2-	31.5	36.1	23.6-	25.3	29.6	37.3
N78-01	31.5	11.3	37.8	32.9	35.0	32.3	31.3	31.3-
N78-19	30.8	12.6	40.0	36.5	27.1-	28.4	35.7	40.7
N78-24	35.4	13.5	46.1	33.3	30.8	28.9	25.2	41.6
R75-579	35.7	13.2	47.0	41.8	42.6	39.9	37.2	41.2
R78-132	36.4	11.2	44.8	32.3-	36.3	31.4	37.8	36.2
R78-478	38.6	14.6	36.8	33.8	37.7	30.1	37.3	40.8
R78-501	35.9	14.0	38.8	38.1	35.2	42.7+	28.3	38.0
R78-610	30.8	11.6	37.5	30.5-	30.9	35.6	36.0	37.2
R78-781	35.7	11.9	39.0	39.4	33.8	40.6	28.4	33.6
S77-281	39.2	14.2	43.6	38.5	35.1	41.0	32.1	49.5+
S77-7865	41.4	15.4	43.4	38.6	42.4	40.5	38.5	40.3
S77-8059	32.3	14.3	42.4	34.6	36.1	31.5	31.5	31.2-
Tn76-18	39.2	15.0	39.6	35.1	33.5	23.4	34.2	37.3
Tn76-65	38.1	14.9	42.4	36.1	32.2	15.8	37.2	34.2
V77-378	37.7	12.8	39.4	38.9	33.5	18.1	33.9	32.0-
V76-600	39.5	15.1	43.0	40.1	36.1	36.0	31.6	38.7
L.S.D. (.05)	N.S.	2.6	N.S.	6.1	8.9	12.6	N.S.	8.6
C.V.	13%	10%	10%	8%	13%	21%	13%	11%

*Not included in mean.

Table 25 - Oil percentages for the strains in Preliminary Group V, 1980

Strain	Warsaw, VA	Plymouth, NC	Portageville, MO (B)	Stoneville, MS (B)
Forrest	19.6	20.5	22.4	20.1
Hill	18.7	20.9	22.0	21.5
D77-1	18.6	19.8	22.2	20.4
D77-4880	18.7	19.5	22.2	20.4
D77-5169	19.0	20.0	22.1	19.5
D78-3008	19.3	19.7	22.5	20.1
D78-3041	19.0	19.8	21.7	19.8
D78-3052	18.1	19.6	20.8	19.9
D78-3100	18.6	19.0	20.4	20.0
D78-3110	18.7	18.8	21.2	19.0
D78-3238	19.4	20.6	22.7	21.2
D78-5128	18.2	20.4	21.7	19.9
D78-7605	18.6	20.2	22.4	20.7
Ga78-901	18.2	20.6	21.1	20.8
J78-542	18.3	18.7	20.6	19.0
J78-550	17.8	19.6	22.0	19.9
J78-587	18.5	19.2	21.1	19.3
K1068	18.5	19.2	21.2	19.0
Md71-583	19.3	21.2	22.4	21.3
Md71-1643-82	20.2	21.8	23.5	22.4
N78-01	19.2	21.3	22.6	21.3
N78-19	18.3	19.9	20.9	20.0
N78-24	19.0	20.1	22.3	20.4
R75-579	18.2	19.5	22.3	20.1
R78-132	18.5	20.4	22.0	20.7
R78-478	18.8	21.0	22.3	21.7
R78-501	19.1	20.9	21.3	21.4
R78-610	18.2	19.6	22.5	21.3
R78-781	18.4	21.0	22.0	21.6
S77-281	19.0	20.0	21.8	20.7
S77-7865	18.7	20.2	21.6	20.3
S77-8059	18.9	20.2	21.9	21.2
Tn76-18	19.5	20.9	22.8	21.1
Tn76-65	19.3	20.5	22.4	20.5
V77-378	20.3	21.3	22.4	23.0
V76-600	18.5	19.9	20.8	21.4

Table 26 - Protein percentages for the strains in Preliminary Group V, 1980

Strain	Warsaw, VA	Plymouth, NC	Portageville, MO (B)	Stoneville, MS (B)
Forrest	44.7	41.8	35.8	43.5
Hill	45.1	40.1	38.8	41.4
D77-1	46.8	44.1	39.0	44.3
D77-4880	44.9	44.7	38.5	43.2
D77-5169	44.9	43.8	39.8	44.1
D78-3008	45.8	45.3	38.1	44.1
D78-3041	44.9	44.1	36.9	43.0
D78-3052	42.6	42.2	39.8	43.0
D78-3100	46.4	43.6	41.4	44.0
D78-3110	45.6	45.3	37.5	45.5
D78-3238	46.1	42.9	35.3	42.4
D78-5128	46.3	41.9	38.6	43.4
D78-7605	43.1	43.1	33.8	42.8
Ga78-901	45.6	41.4	40.1	44.2
J78-542	46.0	43.1	38.3	44.7
J78-550	45.5	43.7	37.1	43.7
J78-587	45.0	42.7	39.0	43.2
K1068	47.2	42.5	41.9	45.2
Md71-583	46.0	41.2	36.1	40.9
Md71-1643-82	43.9	38.1	35.1	40.3
N78-01	46.0	41.3	39.2	42.6
N78-19	46.5	42.8	41.1	44.5
N78-24	43.5	41.7	37.3	41.9
R75-579	47.4	44.7	38.0	42.9
R78-132	44.9	42.2	37.9	42.0
R78-478	45.0	40.4	38.3	42.6
R78-501	44.8	41.7	40.2	42.3
R78-610	47.3	44.7	38.8	43.8
R78-781	44.5	39.8	37.3	40.6
S77-281	45.5	42.9	36.7	41.3
S77-7865	44.9	44.0	39.2	44.1
S77-8059	46.6	44.5	39.7	43.9
Tn76-18	46.3	43.1	37.9	44.0
Tn76-65	45.5	42.6	37.9	44.5
V77-378	45.4	42.9	38.4	41.9
V76-600	45.5	43.1	39.7	41.1

Table 27 - Plant height for the strains in Preliminary Group V, 1980

Strain	George- town, DE	Warsaw, VA	Plymouth, NC	Portage- ville, MO (B)	Keiser, AR	Stone- ville, MS (B)	Prince- ton, KY
Forrest	30	38	42	38	26	20	35
Hill	30	30	40	32	24	18	34
D77-1	32	32	36	35	25	16	27
D77-4880	35	41	47	42	28	24	40
D77-5169	36	38	45	39	24	23	35
D78-3008	28	36	40	35	26	15	34
D78-3041	26	34	47	27	24	16	36
D78-3052	34	36	40	38	27	20	38
D78-3100	37	40	44	44	25	24	42
D78-3110	29	36	36	36	19	18	33
D78-3238	30	36	37	36	28	16	33
D78-5128	37	39	46	48	23	21	41
D78-7605	38	42	42	42	32	23	45
Ga78-901	34	38	42	38	23	23	41
J78-542	32	36	36	35	25	18	34
J78-550	33	38	47	41	28	23	40
J78-587	38	39	41	40	27	21	37
K1068	17	15	22	19	17	10	15
Md71-583	30	33	45	42	21	28	49
Md71-1643-82	25	30	40	41	34	30	41
N78-01	33	33	45	38	31	32	41
N78-19	33	36	43	42	28	21	41
N78-24	31	34	42	39	25	23	37
R75-579	27	31	37	37	27	17	34
R78-132	35	32	43	32	35	17	35
R78-478	36	38	44	40	27	22	43
R78-501	35	38	42	37	21	23	43
R78-610	31	34	43	37	24	21	34
R78-781	33	36	42	39	22	23	41
S77-281	29	32	38	39	24	23	34
S77-7865	31	34	41	32	32	20	40
S77-8059	27	30	39	36	23	17	35
Tn76-18	27	34	42	35	25	18	31
Tn76-65	24	28	33	28	20	14	30
V77-378	24	28	34	35	19	13	30
V76-600	34	34	38	33	30	18	37

Table 28 - Seed quality scores for the strains in Preliminary Group V, 1980

Strain	George- town, DE	Warsaw, VA	Plymouth, NC	Portage- ville, MO (B)	Keiser, AR	Stone- ville, MS (B)	Prince- ton, KY
Forrest	2.0	2.8	1.5	2.0	1.5	3.5	3.0
Hill	2.5	2.0	1.5	2.0	2.0	3.0	3.0
D77-1	2.0	2.0	1.5	2.0	1.0	2.5	3.0
D77-4880	2.0	2.0	2.0	2.0	1.5	2.0	3.0
D77-5169	2.0	2.8	2.0	2.0	1.5	2.5	2.0
D78-3008	2.3	2.0	2.0	2.0	2.0	2.5	2.0
D78-3041	2.0	2.8	2.5	2.0	3.0	2.5	4.0
D78-3052	1.8	1.5	2.0	2.0	1.5	2.0	4.0
D78-3100	1.8	1.5	1.5	2.0	1.0	2.0	3.0
D78-3110	1.8	1.8	2.0	3.0	2.0	3.5	5.0
D78-3238	2.0	2.8	1.5	2.0	2.0	2.0	3.0
D78-5128	2.0	1.5	1.5	2.5	1.0	3.0	4.0
D78-7605	2.0	2.2	2.0	2.5	1.0	2.0	2.0
Ga78-901	1.5	2.0	1.5	2.0	1.5	2.5	2.0
J78-542	1.5	1.8	1.5	2.5	2.0	3.5	2.0
J78-550	2.3	2.3	2.0	2.5	2.5	3.0	3.0
J78-587	2.0	1.8	2.0	2.5	1.5	3.0	2.0
K1068	3.0	2.2	2.5	2.5	2.5	3.0	3.0
Md71-583	2.3	2.5	2.0	2.0	2.0	2.5	4.0
Md71-1643-82	3.0	1.8	2.5	2.5	2.0	3.0	3.0
N78-01	2.0	2.0	2.0	2.0	1.5	2.0	4.0
N78-19	1.5	1.6	1.5	2.5	1.5	2.5	2.0
N78-24	1.8	2.3	1.5	2.0	1.5	2.0	4.0
R75-579	1.8	2.0	1.5	2.0	1.5	2.0	2.0
R78-132	2.0	2.0	2.0	2.0	1.5	2.0	3.0
R78-478	1.5	1.8	1.5	2.0	1.0	2.0	3.0
R78-501	2.0	2.0	2.0	2.0	1.5	2.0	3.0
R78-610	1.5	2.0	2.0	2.0	2.0	2.0	3.0
R78-781	2.0	2.5	1.5	2.5	1.0	2.5	4.0
S77-281	2.0	1.8	1.5	2.0	1.5	2.0	2.0
S77-7865	1.8	2.2	1.5	2.0	1.0	2.0	3.0
S77-8059	1.8	2.0	2.0	2.0	1.0	2.0	3.0
Tn76-18	2.0	2.0	1.5	2.0	2.0	2.0	2.0
Tn76-65	2.3	2.2	1.5	2.5	1.5	3.0	2.0
V77-378	2.8	1.5	2.0	2.0	1.5	2.5	1.0
V76-600	1.8	1.8	1.5	2.0	1.0	2.0	2.0

UNIFORM GROUP VI

1980

<u>Variety or strain</u>	<u>Parentage</u>	<u>Generation composited</u>
1. Centennial	D64-4636 X tawny pubescent Pickett 71 type	F ₅
2. Tracy-M	Metribuzin tolerant sel. from Tracy X (D61-618 X D60-9647)	F ₁₀
3. D75-7527	Forrest X Mack	F ₅
4. N75-2213	Davis X Essex	F ₅
5. D76-9665	Forrest X Centennial	F ₅
6. D77-12	Forrest(2) X Tracy	F ₅
7. D77-6057	Centennial X J74-47	F ₅
8. J77-255	D74-7631 X J74-57	F ₅
9. N77-114	Essex X N70-2173	F ₅
10. N77-347	N70-1549 X Centennial	F ₅
11. Jeff (R78-100-8)	Centennial X [R72-2647(3) X D72-C57]	
12. S77-318	D70-3115 X J74-39	F ₅

Background of breeding lines used as parents:

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

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

D74-7631 is a selection from Forrest X D70-3001 which was grown in Uniform Group V in 1977.

J74-57 is a selection from D70-3045 X an F₄ selection from D68-18 X PI 88788.

N70-2173 is a selection from Hutton X Ransom.

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

D72-C57 is a selection from D68-18 X PI 88788.

D70-3115 is of the same parentage as Centennial.

J74-39 is of the same parentage as Bedford.

Results of 35 Uniform Group VI nurseries are summarized in Tables 29 through 35. Table 29 gives a general summary of agronomic qualities, oil and protein content of the seed, and reaction to several pest problems.

Differences in seed yield among strains were significant (.05% level of confidence) at 21 of the locations. Differences among strains were significant in all regions except the Upper and Central South where 3 locations were included in the summary.

Tracy-M, tolerant to metribuzin, replaced Tracy in the 1980 plantings. Two strains, D75-7527 and N75-2213, have been evaluated three years. D75-7527 has averaged 12 days earlier in maturity than Centennial. It has yielded well and is resistant to SCN race 3 and to phytophthora rot. N75-2213 has averaged 7 days earlier than Centennial. Seed yield has been good in all areas.

One strain, D76-9665, has been evaluated two years. It is similar to Centennial in growth type and maturity. It differs from Centennial in that it is moderately resistant to Meloidogyne arenaria. Mean seed yields were somewhat above those for Centennial in 4 of the 5 regions.

Seven strains were evaluated one year. R78-100-8 has been released as Jeff. It has resistance to phytophthora rot and SCN races 3 and 4. It has not been evaluated against Meloidogyne incognita or M. arenaria. Seed yield approximated that for Centennial. D77-6057 and J77-255 are also resistant to phytophthora rot and SCN races 3 and 4. Both were earlier in maturity than Centennial. D77-6057 had a mean seed yield above that for Centennial in the Delta, but averaged somewhat lower in seed yield than Centennial in the other regions. J77-255 averaged lower in seed yield than Centennial in all regions.

D77-12 is resistant to SCN race 3 and carries the two genes for resistance to phytophthora rot from Tracy. It also is sensitive to metribuzin. N77-114, N77-347, and S77-318 each averaged 13 to 15 days earlier in maturity than Centennial. N77-114 yielded well in the East Coast and Delta regions.

Table 29 - General summary of the performance for the strains grown in Uniform Group VI, 1980

	No. of locations	Centennial	Tracy-M	D75-7527	N75-2213	D76-9665
Seed yield - 1980						
East Coast	7	33.7	32.3	31.9	30.7	35.8
Southeast	5	32.0	29.7	28.8	32.0	36.9+
Upper & Central South	3	29.4	25.5	26.1	25.2	22.7
Delta	6	43.6	38.8-	46.4	40.5	44.9
West	4	39.3	30.3-	38.4	33.9	41.1
1979-1980						
East Coast		37.8	36.2	36.5	37.7	39.2
Southeast		35.2	32.6	33.0	35.3	38.6
Upper & Central South		35.1	32.6	33.5	34.7	32.0
Delta		39.5	36.6	40.9	38.7	40.1
West		44.2	38.5	44.8	40.5	44.8
1978-1980						
East Coast		39.2	39.0	39.3	40.0	
Southeast		36.9	32.9	34.1	36.0	
Upper & Central South		32.9	32.4	33.4	34.4	
Delta		37.2	36.2	41.0	37.5	
West		42.0	38.9	44.2	40.3	
Oil Content - 1980						
		19.3	18.6-	20.5+	19.6	19.6
1979-80		19.0	18.3	20.4	19.4	19.5
1978-80		19.3	18.6	21.0	19.8	
Protein Content - 1980						
		43.8	44.1	43.0	44.1	42.0-
1979-80		43.3	43.1	41.8	43.5	40.5
1978-80		43.2	43.1	41.3	43.3	
Seed size		13.5	14.9+	13.1	14.5	12.7
Maturity index		10-23	+1	-15	-8	0
Height		34	34	31	34	36
Seed quality		1.8	2.2	2.5	2.2	2.1
Bacterial pustule		R	R	R	R	R
SCN, race 3		R	S	R	S	R
SCN, race 4		S	S	S	S	S
Percent mottled seed		14	16	6	0	15
Soybean mosaic virus		S	S	S	M	S
Peanut mosaic virus		S	S	S	M	S
Peanut stunt virus		R	M	M	M	M
Flower-Pubescence color		PT	WT	PT	WG	PT

Table 29 - (continued)

	D77-12	D77-6057	J77-255	N77-114	N77-347	Jeff	S77-318
Seed yield - 1980							
East Coast	32.7	30.4	29.2-	35.6	29.9-	34.6	27.5-
Southeast	31.8	29.1	27.6	26.8-	25.8-	31.4	26.8-
Upper & Central South	27.0	26.7	20.2	24.3	25.3	25.0	23.3
Delta	44.3	46.5	38.0-	45.7	42.4	44.3	42.0
West	37.5	36.0	31.0-	32.3-	31.9-	35.5	34.8
1979-1980							
East Coast							
Southeast							
Upper & Central South							
Delta							
West							
1978-1980							
East Coast							
Southeast							
Upper & Central South							
Delta							
West							
Oil Content - 1980	19.3	19.3	19.7	20.6+	20.3+	19.5	19.9+
1979-80							
1978-80							
Protein Content - 1980	43.7	44.2	43.9	42.9	44.1	43.3	43.6
1979-80							
1978-80							
Seed size	12.7	14.3	13.5	13.6	14.2	14.2	13.4
Maturity index	0	-11	-10	-13	-15	+3	-13
Height	33	32	37	26	29	33	32
Seed quality	2.1	2.6	2.7	2.8	2.6	2.2	2.9
Bacterial pustule	R	R	R	R	R	R	R
SCN, race 3	R	R	R	S	S	R	R
SCN, race 4	S	R	R	S	S	R	R
Percent mottled seed	12	40	36	2	4	16	18
Soybean mosaic virus	S	S	S	R	S	S	S
Peanut mosaic virus	S	S	S	S	S	S	S
Peanut stunt virus	M	R	M	M	M	R	M
Flower-Pubescence color	WT	PT	WT	PG	WT	PT	WT

Table 30 - Seed yield, in bushels per acre, for the strains in Uniform Group VI, 1980

Location	Centennial	Tracy-M	D75-7527	N75-2213	D76-9665	D77-12	D77-6057
<u>EAST COAST</u>							
*Warsaw, VA	9.7	15.3+	12.8	12.8	13.5+	13.7+	12.5
Holland, VA	29.9	32.0	32.1	33.9	34.5	33.9	25.1
Plymouth, NC	44.0	38.3	39.6	38.9	46.7	46.2	42.9
Clayton, NC	38.7	38.2	40.3	35.6	45.4+	38.1	41.7
Clinton, NC	40.2	39.7	41.6	37.9	48.1	36.1	34.5
Kinston, NC	25.9	24.0	22.0	26.6	25.7	24.4	24.6
Florence, SC	33.6	32.6	28.0-	21.7-	27.5-	27.0-	27.3-
Hartsville, SC	23.4	21.3	19.7	20.3	22.7	23.1	16.6-
Mean	33.7	32.3	31.9	30.7	35.8	32.7	30.4
<u>SOUTHEAST</u>							
Blackville, SC	20.7	21.0	16.8	22.5	23.6	19.2	16.0
*Tifton, GA	23.0	13.0-	15.6-	15.7-	19.6	22.1	15.0-
Quincy, FL	40.2	26.7	29.5-	40.6	40.1	-	36.4
Jay, FL	37.9	33.4	36.8	32.3	36.0	37.6	34.6
Fairhope, AL	36.2	38.4	35.6	35.6	40.2	36.4	35.1
Baton Rouge, LA	28.5	29.0	25.5	29.0	44.7+	33.2	23.6
Mean	32.0	29.7	28.8	32.0	36.9+	31.6+	29.1
<u>UPPER AND CENTRAL SOUTH</u>							
Athens, GA	46.2	36.7	40.9	40.1	34.6	40.1	41.3
Calhoun, GA	21.7	19.5	15.0-	14.6-	18.5	18.2	14.8-
Belle Mina, AL	20.3	20.3	22.5	20.9	15.0-	22.6	24.1
*Clemson, SC	13.7	11.1	9.4-	9.0-	11.4	12.0	8.5-
*Jackson, TN	6.3	9.9	4.0	5.2	7.3	8.8	6.9
Mean	29.4	25.5	26.1	25.2	22.7	27.0	26.7
<u>DELTA</u>							
Portageville, MO (A)	41.2	36.8	43.7	36.5	39.0	43.4	42.2
Portageville, MO (B)	32.0	33.1	41.6+	38.7+	36.0	39.6+	40.2+
Keiser, AR	41.2	37.0	45.0	39.1	44.4	42.5	46.3
*Jonesboro, AR	6.2	5.0	6.1	5.9	7.6	8.8	5.8
*Pine Tree, AR	19.9	15.7	14.3	11.5	15.5	17.7	11.5
Stoneville, MS (A)	51.4	36.8-	51.3	37.8-	52.3	49.8	52.5
Stoneville, MS (B)	44.6	40.0	34.4-	37.8	46.0	43.4	38.9
St. Joseph, LA	51.4	49.3	62.3+	52.9	51.4	46.9	58.7+
Mean	43.6	38.8-	46.4	40.5	44.9	44.3	46.5
<u>WEST</u>							
Pine Bluff, AR	40.6	28.6-	38.0	26.0-	44.6	33.4	33.7
Stuttgart, AR	42.2	40.2	47.8	45.7	45.7	48.4	45.0
Crowley, LA	39.5	25.4-	29.5-	36.4	38.2	28.8-	30.3-
*Beaumont, TX	11.2	9.9	16.9	16.6	15.1	8.5	13.7
Bixby, OK	34.8	27.0-	38.5	27.2-	35.8	39.3	35.0
Mean	39.3	30.3-	38.4	33.9	41.1	37.5	36.0

*Not included in mean.

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

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

Table 30 - (continued)

Location	J77-255	N77-114	N77-347	Jeff	S77-318	L.S.D. (.05)	C.V. (%)
<u>EAST COAST</u>							
Warsaw, VA	11.5	15.4+	13.9+	13.1+	11.5	3.1	14
Holland, VA	26.1	41.3+	30.2	32.1	21.7	8.8	17
Plymouth, NC	40.5	48.1	34.1	39.8	38.3	N.S.	13
Clayton, NC	34.3	41.4	38.3	46.3+	35.4	6.6	10
Clinton, NC	36.6	48.7	38.3	41.3	32.0	N.S.	15
Kinston, NC	21.5	22.7	19.3	27.6	18.4	N.S.	18
Florence, SC	29.0-	28.8-	30.6	32.9	28.6-	3.8	8
Hartsville, SC	16.3-	18.0-	18.3-	22.2	18.3-	4.2	13
Mean	29.2-	35.6	29.9-	34.6	27.5-	3.4	
<u>SOUTHEAST</u>							
Blackville, SC	14.0-	19.2	12.7-	20.3	12.3-	5.2	17
Tifton, GA	13.9-	19.3	22.9	17.3-	20.5	5.3	17
Quincy, FL	32.4-	22.7-	26.0-	34.0-	29.5-	4.4	8
Jay, FL	33.4	35.7	33.8	39.1	33.4	N.S.	12
Fairhope, AL	34.6	35.8	36.6	34.6	35.4	N.S.	10
Baton Rouge, LA	22.6	20.5	20.0	29.1	23.6	12.4	27
Mean	27.6	26.8-	25.8-	31.4	26.8-	4.7	
<u>UPPER AND CENTRAL SOUTH</u>							
Athens, GA	31.1	35.7	33.1	36.4	35.8	N.S.	14
Calhoun, GA	11.8-	13.4-	20.3	19.8	14.9-	3.6	13
Belle Mina, AL	17.7	27.0+	22.5	18.8	19.2	4.4	12
Clemson, SC	7.8-	6.8-	8.5-	12.3	7.4-	3.0	18
Jackson, TN	6.8	10.1	6.5	8.5	5.6	N.S.	43
Mean	20.2	24.3	25.3	25.0	23.3	N.S.	
<u>DELTA</u>							
Portageville, MO (A)	36.4	46.4	38.7	40.2	39.7	5.6	8
Portageville, MO (B)	36.8	41.0+	41.5+	34.7	34.1	5.6	9
Keiser, AR	33.8-	36.5	38.1	40.7	38.0	6.8	10
Jonesboro, AR	6.4	5.0	5.9	5.5	5.6	N.S.	27
Pine Tree, AR	10.8	11.1	9.4	14.5	13.7	N.S.	35
Stoneville, MS (A)	39.5-	49.1	44.1	50.2	47.5	8.8	11
Stoneville, MS (B)	32.3-	38.5	34.6-	43.0	39.0	7.6	11
St. Joseph, LA	48.9	62.6+	57.6	57.1	53.6	6.4	7
Mean	38.0-	45.7	42.4	44.3	42.0	4.2	
<u>WEST</u>							
Pine Bluff, AR	29.9-	29.1-	24.9-	42.2	33.8	7.2	13
Stuttgart, AR	43.5	40.8	42.6	40.6	47.7	N.S.	8
Crowley, LA	23.3-	23.5-	29.2-	22.7-	27.8-	4.1	8
Beaumont, TX	16.8	9.2	18.1+	12.7	20.6+	6.4	27
Bixby, OK	27.2-	35.9	31.1	36.5	29.8	5.7	10
Mean	31.0-	32.3-	31.9-	35.5	34.8	6.2	

Table 31 - Chemical composition and seed size for the strains in Uniform Group VI, 1980

Location	Centennial	Tracy-M	D75-7527	N75-2213	D76-9665	D77-12
<u>OIL PERCENTAGE</u>						
Warsaw, VA	17.2	17.5	20.0	18.1	18.7	18.4
Plymouth, NC	20.0	19.2	20.8	19.8	20.3	19.5
Clinton, NC	19.0	17.7	20.8	18.9	19.6	19.3
Jay, FL	20.5	19.7	20.9	20.7	20.7	20.1
Jackson, TN	17.3	17.3	17.3	17.8	16.4	17.2
Portageville, MO (B)	19.7	21.4	20.3	22.0	19.1	20.3
Keiser, AR	18.9	17.5	20.6	18.8	19.5	19.0
Stoneville, MS (B)	20.9	18.8	21.8	20.4	21.9	20.4
Stuttgart, AR	19.1	17.4	20.3	19.4	19.5	18.9
Beaumont, TX	19.9	19.8	21.7	20.5	20.2	20.0
Mean	19.3	18.6-	20.5+	19.6	19.6	19.3
<u>PROTEIN PERCENTAGE</u>						
Warsaw, VA	43.9	45.4	45.3	45.8	42.5	45.1
Plymouth, NC	43.6	43.6	41.8	42.9	41.2	43.1
Clinton, NC	44.5	45.5	43.1	45.3	42.1	44.6
Jay, FL	44.4	44.8	43.3	43.7	42.9	44.7
Jackson, TN	44.4	45.7	45.8	46.4	43.1	42.3
Portageville, MO (B)	43.4	39.0	42.4	41.1	42.9	42.9
Keiser, AR	42.5	43.6	41.1	43.9	40.5	42.0
Stoneville, MS (B)	42.5	42.9	42.7	44.1	39.3	42.5
Stuttgart, AR	42.7	44.2	41.5	44.2	41.6	44.9
Beaumont, TX	45.9	46.7	42.6	44.0	43.5	44.5
Mean	43.8	44.1	43.0	44.1	42.0-	43.7
<u>GRAMS PER 100 SEEDS</u>						
Warsaw, VA	13.3	16.0	14.0	16.1	13.0	13.1
Plymouth, NC	15.9	15.4	12.8	13.8	13.0	13.6
Clinton, NC	16.4	17.6	15.4	19.3	13.8	14.1
Jay, FL	11.6	12.9	10.6	12.4	11.3	11.2
Jackson, TN	15.5	14.5	12.6	14.1	13.0	14.0
Portageville, MO (B)	11.8	10.4	12.9	11.7	16.2	13.3
Keiser, AR	13.5	15.8	14.0	13.7	11.8	12.0
Stoneville, MS (B)	12.2	15.6	13.2	15.4	11.4	12.2
Stuttgart, AR	15.6	19.0	14.1	16.3	13.7	14.3
Beaumont, TX	9.6	11.3	11.0	12.3	9.4	9.4
Mean	13.5	14.9+	13.1	14.5	12.7	12.7

Table 31 - (continued)

Location	D77-6057	J77-255	N77-114	N77-347	Jeff	S77-318	L.S.D. (.05)
<u>OIL PERCENTAGE</u>							
Warsaw, VA	18.2	18.7	20.4	19.2	19.1	18.8	
Plymouth, NC	19.2	20.0	20.9	21.0	19.7	19.8	
Clinton, NC	19.2	19.5	20.4	20.4	18.8	20.1	
Jay, FL	19.6	20.5	21.0	20.5	20.5	20.5	
Jackson, TN	17.1	17.2	19.0	18.1	16.5	17.0	
Portageville, MO (B)	21.9	21.1	21.1	22.0	20.7	20.4	
Keiser, AR	19.2	20.0	20.4	19.8	19.1	20.5	
Stoneville, MS (B)	20.4	19.5	22.3	21.4	21.4	20.7	
Stuttgart, AR	18.9	19.6	20.7	20.4	19.4	20.6	
Beaumont, TX	19.5	20.7	20.2	20.6	19.6	20.4	
Mean	19.3	19.7	20.6+	20.3+	19.5	19.9+	0.5
<u>PROTEIN PERCENTAGE</u>							
Warsaw, VA	46.1	46.3	45.2	46.1	44.4	45.4	
Plymouth, NC	43.5	42.7	41.1	41.0	42.8	44.2	
Clinton, NC	44.9	45.1	43.4	44.7	45.6	45.3	
Jay, FL	44.5	43.9	43.2	44.6	43.8	44.2	
Jackson, TN	46.8	45.7	43.3	47.3	45.5	43.0	
Portageville, MO (B)	41.0	41.8	42.5	41.0	41.6	40.6	
Keiser, AR	43.1	42.9	41.8	42.8	41.0	40.6	
Stoneville, MS (B)	44.5	43.9	40.8	44.8	40.9	44.2	
Stuttgart, AR	44.5	44.6	43.6	44.0	42.5	43.8	
Beaumont, TX	43.4	42.1	44.4	44.9	44.7	44.4	
Mean	44.2	43.9	42.9	44.1	43.3	43.6	1.0
<u>GRAMS PER 100 SEEDS</u>							
Warsaw, VA	16.7	13.9	12.5	15.5	15.3	13.5	
Plymouth, NC	15.2	14.1	14.0	12.0	16.4	13.6	
Clinton, NC	17.3	15.8	16.8	17.9	16.9	14.9	
Jay, FL	12.0	11.5	14.3	12.2	13.1	11.7	
Jackson, TN	13.5	14.3	9.1	14.9	13.4	12.5	
Portageville, MO (B)	12.2	11.3	12.9	13.4	12.2	13.3	
Keiser, AR	13.5	13.5	14.5	14.7	14.2	14.0	
Stoneville, MS (B)	14.8	12.4	14.8	15.0	13.8	14.0	
Stuttgart, AR	15.7	16.0	14.3	15.3	17.0	15.0	
Beaumont, TX	11.8	11.7	13.2	11.4	10.1	11.1	
Mean	14.3	13.5	13.6	14.2	14.2	13.4	1.1

Table 32 - Relative maturity data, days earlier (-) or later (+) than Centennial, for the strains in Uniform VI, 1980

Location	Date planted	Centennial	Tracy-M	D75-7527	N75-2213	D76-9665
<u>EAST COAST</u>						
Warsaw, VA	5-16	11-9	-12	-21	-5	-9
Plymouth, NC	5-15	10-26	-2	-12	+4	0
Clayton, NC	5-28	10-30	-2	-6	-6	-6
Clinton, NC	5-30	10-20	+17	+9	+16	+17
Kinston, NC	5-28	11-8	-3	-7	0	-3
Florence, SC	5-15	11-14	0	-30	-15	0
Hartsville, SC		11-2	+2	-20	+2	-8
Mean		11-2	0	-12	-1	-1
<u>SOUTHEAST</u>						
Blackville, SC	5-13	10-27	-8	-33	-15	-6
Tifton, GA		10-10	-1	-5	-1	+3
Quincy, FL		10-23	-5	-8	0	-5
Jay, FL	6-3	10-10	0	-7	0	+1
Fairhope, AL	6-10	10-6	-2	-11	-5	0
Baton Rouge, LA	5-27	10-18	0	-12	-13	-3
Mean		10-16	-3	-13	-6	-1
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	5-5	10-16	-4	-22	-17	0
Calhoun, GA		10-3	-8	-30	-18	-10
Belle Mina, AL	5-1	10-30	-7	-27	-18	-5
Clemson, TN	5-12	11-7	+2	-22	-14	-3
Mean		10-22	-4	-25	-17	-5
<u>DELTA</u>						
Portageville, MO (A)		10-25	+2	-14	-5	+6
Portageville, MO (B)		10-27	0	-5	-2	-2
Keiser, AR	6-4	11-7	-4	-19	-14	-2
Jonesboro, AR		11-5	+21	+12	+21	+10
Pine Tree, AR	6-4	11-5	+6	-25	-14	0
Stoneville, MS (A)	5-12	10-20	-4	-13	-9	+1
Stoneville, MS (B)	5-8,9	10-21	-5	-16	-10	+1
St. Joseph, LA	5-29	10-7	+6	-14	-7	+3
Mean		10-26	+2	-12	-5	+2
<u>WEST</u>						
Pine Bluff, AR	5-29	10-30	+5	-15	-7	+1
Stuttgart, AR	5-28	10-27	+4	-16	-6	0
Crowley, LA	5-1	10-18	-12	-32	-19	+2
Beaumont, TX	5-7	9-30	0	-7	-7	-10
Mean		10-19	-1	-18	-10	-2

Table 32 - (continued)

Location	D77-12	D77-6057	J77-255	N77-114	N77-347	Jeff	S77-318
<u>EAST COAST</u>							
Warsaw, VA	-8	-16	-16	-24	-17	-1	-16
Plymouth, NC	-2	-8	-2	-10	-12	0	0
Clayton, NC	-6	-6	-6	-6	-6	0	-6
Clinton, NC	+9	+9	0	+16	+16	+9	+16
Kinston, NC	-7	-7	-7	-14	-7	-7	0
Florence, SC	+2	-20	-30	-15	-35	+1	-30
Hartsville, SC	-4	-12	-16	-18	-20	0	-6
Mean	-12	-9	-11	-10	-12	0	-6
<u>SOUTHEAST</u>							
Blackville, SC	-10	-15	-24	-18	-24	-1	-28
Tifton, GA	-3	-11	-11	+3	+3	+3	+5
Quincy, FL	-6	-3	-7	+12	+2	+1	+4
Jay, FL	0	-2	-1	-6	-14	+3	-6
Fairhope, AL	0	-4	-4	-7	-3	0	-7
Baton Rouge, LA	0	-4	-8	+9	-9	-2	-4
Mean	-3	-7	-9	-1	-8	+1	-6
<u>UPPER AND CENTRAL SOUTH</u>							
Athens, GA	-1	-16	-20	-21	-24	-1	-21
Calhoun, GA	-13	-8	-25	-30	-33	-3	-25
Belle Mina, AL	-5	-16	-26	-27	-27	-1	-22
Clemson, TN	-1	-26	-9	-34	-20	-1	-18
Mean	-5	-17	-20	-28	-26	-2	-22
<u>DELTA</u>							
Portageville, MO (A)	+1	-4	-13	-16	-16	-2	-13
Portageville, MO (B)	0	-4	-5	-7	-12	-1	-4
Keiser, AR	-3	-12	-13	-15	-18	0	-16
Jonesboro, AR	+10	+12	+12	+14	+12	-1	+12
Pine Tree, AR	+1	-22	-16	-19	-26	+4	-21
Stoneville, MS (A)	-1	-9	-10	-14	-14	0	-11
Stoneville, MS (B)	-1	-15	-10	-12	-14	-1	-12
St. Joseph, LA	-1	-12	-7	-14	-15	+5	-13
Mean	+1	-8	-8	-10	-13	+1	-10
<u>WEST</u>							
Pine Bluff, AR	+2	-14	-12	-9	-14	+3	-12
Stuttgart, AR	-1	-12	-11	-16	-17	+1	-15
Crowley, LA	-5	-26	-15	-32	-32	+10	-32
Beaumont, TX	0	-5	-5	-5	-7	0	-5
Mean	-1	-14	-11	-16	-17	+4	-16

Table 33 - Plant height for the strains in Uniform Group VI, 1980

Location	Centennial	Tracy-M	D75-7527	N75-2213	D76-9665	D77-12
<u>EAST COAST</u>						
Warsaw, VA	36	36	38	41	39	30
Holland, VA	48	46	45	47	53	45
Plymouth, NC	43	40	39	43	44	43
Clayton, NC	39	38	40	38	42	33
Clinton, NC	42	40	44	40	48	40
Kinston, NC	36	35	35	36	40	36
Florence, SC	38	36	32	35	32	36
Hartsville, SC	26	30	26	28	32	26
Mean	39	38	37	39	41	36
<u>SOUTHEAST</u>						
Blackville, SC	33	31	29	35	39	33
Tifton, GA	32	28	30	33	34	29
Quincy, FL	23	21	22	26	25	-
Jay, FL	32	34	34	32	34	34
Fairhope, AL	38	36	34	36	35	36
Baton Rouge, LA	36	32	27	29	36	32
Mean	32	30	29	32	34	33
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	33	30	28	36	36	33
Calhoun, GA	32	32	30	32	35	30
Belle Mina, AL	35	34	32	38	40	35
Clemson, SC	22	25	20	23	23	20
Jackson, TN	40	40	37	44	45	36
Mean	33	32	29	35	36	31
<u>DELTA</u>						
Portageville, MO (A)	44	41	30	42	46	43
Portageville, MO (B)	43	45	41	41	45	43
Keiser, AR	33	35	31	36	46	34
Jonesboro, AR	30	34	34	29	34	28
Pine Tree, AR	27	29	24	28	27	26
Stoneville, MS (A)	41	39	34	41	42	41
Stoneville, MS (B)	32	33	20	25	33	34
St. Joseph, LA	46	46	40	45	48	46
Mean	37	38	32	36	40	37
<u>WEST</u>						
Pine Bluff, AR	31	33	26	26	29	30
Stuttgart, AR	44	44	34	42	46	45
Crowley, LA	22	17	18	17	21	16
Beaumont, TX	18	19	19	17	24	20
Bixby, OK	34	36	31	33	36	34
Mean	30	30	26	27	31	29

Table 33 - (continued)

Location	D77-6057	J77-255	N77-114	N77-347	Jeff	S77-318
<u>EAST COAST</u>						
Warsaw, VA	40	42	32	35	36	38
Holland, VA	48	54	40	40	51	47
Plymouth, NC	42	48	38	38	43	42
Clayton, NC	38	41	34	38	39	38
Clinton, NC	43	45	38	40	40	44
Kinston, NC	37	39	32	32	38	36
Florence, SC	32	37	35	23	32	35
Hartsville, SC	26	32	22	26	28	26
Mean	38	42	34	34	38	38
<u>SOUTHEAST</u>						
Blackville, SC	31	31	22	26	32	32
Tifton, GA	30	36	23	26	30	30
Quincy, FL	25	26	19	21	24	25
Jay, FL	32	38	26	32	32	32
Fairhope, AL	34	45	29	35	37	35
Baton Rouge, LA	30	33	22	25	33	29
Mean	30	35	24	28	31	31
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	33	35	24	26	31	33
Calhoun, GA	33	36	24	30	34	32
Belle Mina, AL	36	41	24	28	36	34
Clemson, SC	22	28	17	21	23	22
Jackson, TN	39	40	33	40	48	41
Mean	33	36	24	29	34	32
<u>DELTA</u>						
Portageville, MO (A)	43	47	26	30	20	20
Portageville, MO (B)	39	44	33	34	42	43
Keiser, AR	32	36	21	26	34	34
Jonesboro, AR	29	34	27	26	29	31
Pine Tree, AR	26	32	19	25	28	30
Stoneville, MS (A)	37	40	31	33	41	39
Stoneville, MS (B)	21	26	19	19	30	23
St. Joseph, LA	42	50	37	40	48	45
Mean	34	39	27	29	34	33
<u>WEST</u>						
Pine Bluff, AR	29	30	21	24	30	28
Stuttgart, AR	36	45	31	35	45	39
Crowley, LA	19	23	14	18	19	17
Beaumont, TX	20	22	16	16	18	18
Bixby, OK	31	37	30	29	34	34
Mean	27	31	22	24	29	27

Table 34 - Lodging scores for the strains in Uniform Group VI, 1980

Location	Centennial	Tracy-M	D75-7527	N75-2213	D76-9665	D77-12
<u>EAST COAST</u>						
Warsaw, VA	1.4	1.3	1.4	1.4	1.4	1.5
Holland, VA	2.0	3.0	2.3	2.7	2.3	3.0
Plymouth, NC	4.3	2.6	2.3	2.6	3.3	3.3
Clayton, NC	2.6	3.0	3.0	2.6	2.6	4.0
Clinton, NC	3.0	3.0	3.0	3.0	3.0	3.7
Kinston, NC	3.0	3.0	2.6	2.3	2.3	3.0
Florence, SC	1.0	1.0	1.0	1.0	1.0	1.0
<u>SOUTHEAST</u>						
Blackville, SC	1.0	1.0	1.0	2.0	1.0	2.0
Tifton, GA	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, FL	1.0	1.0	2.0	1.0	2.0	1.0
Jay, FL	1.0	1.0	1.0	1.0	1.0	2.0
Fairhope, AL	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, LA	1.5	1.6	1.8	1.2	1.0	1.7
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	1.8	2.0	1.5	2.0	1.5	2.3
Calhoun, GA	1.5	1.3	1.8	1.3	1.0	2.3
Belle Mina, AL	2.0	2.0	1.0	1.3	2.3	2.0
Jackson, TN	2.0	2.0	1.0	1.0	2.0	1.0
<u>DELTA</u>						
Portageville, MO (A)	2.5	3.0	1.5	2.5	3.5	3.5
Portageville, MO (B)	2.5	2.5	2.5	2.5	2.5	3.5
Keiser, AR	2.0	2.0	2.0	1.5	2.0	2.0
Jonesboro, AR	1.0	1.0	3.0	2.0	1.0	4.0
Pine Tree, AR	2.0	2.0	2.0	1.0	1.0	2.0
Stoneville, MS (A)	2.7	3.0	2.0	3.0	3.0	3.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.3
St. Joseph, LA	2.3	2.3	2.4	2.3	2.7	3.2
<u>WEST</u>						
Pine Bluff, AR	3.0	5.0	2.0	2.0	3.0	4.0
Stuttgart, AR	3.0	3.2	2.8	3.0	3.3	3.2
Crowley, LA	1.0	1.0	1.0	1.0	1.0	1.0
Bixby, OK	2.0	3.0	2.0	2.0	2.0	4.0

Table 34 - (continued)

Location	D77-6057	J77-255	N77-114	N77-347	Jeff	S77-318
<u>EAST COAST</u>						
Warsaw, VA	1.4	1.6	1.1	1.2	2.5	1.4
Holland, VA	2.0	2.7	1.7	1.7	2.3	2.3
Plymouth, NC	3.0	3.0	2.0	2.0	3.3	3.3
Clayton, NC	2.6	3.0	2.6	2.6	2.6	3.6
Clinton, NC	3.0	3.0	2.3	3.0	3.0	3.0
Kinston, NC	2.6	3.0	2.0	2.0	3.0	3.0
Florence, SC	1.0	1.0	1.0	1.0	1.0	1.0
<u>SOUTHEAST</u>						
Blackville, SC	1.0	2.0	1.0	1.0	2.0	1.0
Tifton, GA	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, FL	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	2.0	1.0	1.0	1.0	1.0	1.0
Fairhope, AL	1.0	1.0	1.0	1.0	1.0	1.3
Baton Rouge, LA	1.5	2.4	1.2	1.0	1.7	1.2
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	1.8	2.0	1.5	1.5	2.0	1.5
Calhoun, GA	1.5	1.8	1.2	1.3	1.7	1.7
Belle Mina, AL	1.7	2.0	1.0	1.0	2.3	1.7
Jackson, TN	1.0	1.0	1.0	1.0	2.0	1.0
<u>DELTA</u>						
Portageville, MO (A)	2.5	2.5	1.0	1.5	2.5	3.0
Portageville, MO (B)	2.0	2.5	1.5	2.0	3.5	2.5
Keiser, AR	1.0	3.0	1.0	1.0	2.5	2.0
Jonesboro, AR	1.0	2.0	1.0	1.0	2.0	1.0
Pine Tree, AR	2.0	3.0	1.0	1.0	2.0	2.0
Stoneville, MS (A)	2.3	3.0	2.0	2.0	3.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
St. Joseph, LA	2.5	2.9	1.8	2.0	2.5	2.9
<u>WEST</u>						
Pine Bluff, AR	2.0	3.0	1.0	1.0	4.0	2.0
Stuttgart, AR	2.7	3.0	1.5	1.2	3.2	3.2
Crowley, LA	1.0	1.0	1.0	1.0	1.0	1.0
Bixby, OK	1.0	2.0	1.0	1.0	3.0	2.0

Table 35 - Seed quality scores for the strains in Uniform Group VI, 1980

Location	Centennial	Tracy-M	D75-7527	N75-2213	D76-9665	D77-12
<u>EAST COAST</u>						
Warsaw, VA	1.5	1.5	1.5	1.6	1.2	1.5
Holland, VA	1.7	1.3	1.7	2.0	1.0	2.0
Plymouth, NC	1.5	1.5	1.5	1.5	1.5	1.5
Clayton, NC	1.5	1.5	1.5	1.5	1.5	1.5
Clinton, NC	1.5	1.5	2.0	1.5	1.5	1.5
Kinston, NC	1.5	1.5	2.0	1.5	1.5	1.5
<u>SOUTHEAST</u>						
Blackville, SC	2.0	4.0	3.0	3.0	2.0	3.0
Tifton, GA	2.5	3.5	5.0	3.5	3.5	3.5
Quincy, FL	1.0	2.0	2.0	1.0	2.0	2.0
Jay, FL	2.0	2.0	3.0	2.0	2.0	2.0
Baton Rouge, LA	1.8	2.2	3.3	2.0	1.8	2.7
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	1.8	1.5	2.0	2.3	1.8	1.5
Calhoun, GA	2.5	2.0	3.0	3.2	2.5	3.0
Jackson, TN	2.0	3.5	4.0	4.0	4.0	3.0
<u>DELTA</u>						
Portageville, MO (A)	2.0	2.0	2.0	2.0	2.5	2.0
Portageville, MO (B)	2.0	2.0	2.0	2.0	2.0	2.0
Keiser, AR	1.5	1.5	2.0	1.0	1.5	1.5
Jonesboro, AR	3.0	3.3	4.0	3.7	3.0	3.0
Pine Tree, AR	3.0	4.0	3.3	3.7	3.0	3.3
Stoneville, MS (A)	2.0	2.0	2.0	2.3	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.3	2.0	2.0	2.0
<u>WEST</u>						
Pine Bluff, AR	1.0	2.0	2.0	2.0	1.0	1.0
Stuttgart, AR	1.0	1.0	1.0	1.0	1.0	1.0
Crowley, LA	2.2	3.0	3.2	2.8	2.8	3.1
Beaumont, TX	2.0	5.0	3.0	1.0	3.0	2.0

Table 35 - (continued)

Location	D77-6057	J77-255	N77-114	N77-347	Jeff	S77-318
<u>EAST COAST</u>						
Warsaw, VA	1.8	1.6	2.0	2.0	1.3	2.3
Holland, VA	1.7	2.3	2.3	1.7	2.0	2.3
Plymouth, NC	1.5	1.5	2.0	1.5	1.5	2.0
Clayton, NC	1.5	1.5	2.0	1.5	1.5	2.0
Clinton, NC	2.0	1.5	2.0	1.5	1.5	2.5
Kinston, NC	1.5	1.5	2.5	2.0	1.5	2.0
<u>SOUTHEAST</u>						
Blackville, SC	3.0	3.0	4.0	5.0	3.0	4.0
Tifton, GA	4.5	5.0	4.5	5.0	3.0	5.0
Quincy, FL	2.0	3.0	2.0	3.0	2.0	3.0
Jay, FL	4.0	3.0	3.0	3.0	3.0	3.0
Baton Rouge, LA	2.5	3.3	3.4	1.8	2.4	3.8
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	2.0	2.5	3.0	3.0	1.7	2.7
Calhoun, GA	3.2	3.2	3.2	3.5	2.5	2.0
Jackson, TN	3.0	3.0	2.0	3.0	3.5	4.0
<u>DELTA</u>						
Portageville, MO (A)	2.0	2.0	2.0	2.0	2.0	2.0
Portageville, MO (B)	2.0	2.0	2.0	2.0	2.0	2.0
Keiser, AR	1.5	1.5	1.5	2.0	2.0	2.0
Jonesboro, AR	4.0	4.7	5.0	4.3	3.0	4.3
Pine Tree, AR	4.0	4.0	4.0	4.0	3.7	3.7
Stoneville, MS (A)	2.3	2.7	2.3	2.0	2.0	3.0
Stoneville, MS (B)	2.0	2.3	2.0	2.7	2.0	2.3
<u>WEST</u>						
Pine Bluff, AR	2.0	3.0	4.0	2.0	1.0	4.0
Stuttgart, AR	1.5	1.5	2.8	1.2	1.3	2.3
Crowley, LA	3.6	4.5	3.0	2.3	3.7	3.5
Beaumont, TX	3.0	3.0	3.0	3.0	3.0	4.0

PRELIMINARY GROUP VI

1980

Eight Preliminary Group VI nurseries, including 34 experimental strains along with Centennial and Bedford, were grown. The parentage for each of the strains is reported in Table 36. Performance data are summarized in Tables 37 through 42.

Differences among strains for seed yield were significant (.05% level of confidence) at 6 of the 8 locations. The combined analysis of variance for seed yield also showed seed yield differences among strains to be significant.

All of the higher yielding strains were later in maturity than Bedford. The two highest yielding strains, D78-5502 and D78-5576, were selections from Forrest(2) X Tracy. Both are resistant to SCN race 3 and carry the two genes from Tracy giving resistance to Phytophthora megasperma. Both are also sensitive to metribuzin. D77-6166 is resistant to phytophthora rot and SCN races 3 and 4. R74-39K and N78-906 were rated resistant to SMV.

Table 36 - Parentage of the strains in Preliminary Group VI, 1980

Strain or variety		Parentage	Generation composited
1.	Centennial		
2.	Bedford		
3.	D77-4912	D74-7731 X J74-57	F ₅
4.	D77-6166	Centennial X J74-47	F ₅
5.	D77-7091	Hood(2) X Semmes	F ₅
6.	D78-5167	Tracy X D65-5566	F ₅
7.	D78-5448	Forrest(2) X Tracy	F ₅
8.	D78-5502	Forrest(2) X Tracy	F ₅
9.	D78-5576	Forrest(2) X Tracy	F ₅
10.	D78-5633	D71-4863 X Essex	F ₅
11.	D78-5821	D73-7725 X Lee	F ₅
12.	D78-5861	D73-7725 X Lee	F ₅
13.	D78-6072	D73-7725 X Lee	F ₅
14.	Ga77-16	Hutton X D64-4636	F ₆
15.	Ga77-320	Essex X Davis	F ₆
16.	Ga77-603	R67-141 X Tracy	F ₆
17.	Ga78-502	Hutton X Ga70-276	F ₄
18.	GaT75-87	Davis X Forrest	F ₅
19.	GaT76-113	Davis X Forrest	F ₅
20.	GaT77-157	Davis X Forrest	F ₅
21.	N78-159	N70-1610 X N70-2173	F ₆
22.	N78-496	N70-1488 X N70-402	F ₆
23.	N78-521	N70-1488 X N70-2205	F ₆
24.	N78-764	N70-1488 X N70-2205	F ₆
25.	N78-810	N70-1488 X N70-2205	F ₆
26.	N78-906	Davis X N70-2173	F ₆
27.	N78-975	N70-1488 X N70-1616	F ₆
28.	N78-1027	N70-1488 X N70-1616	F ₆
29.	R74-39K	Davis X York	F ₅
30.	R78-154S	Davis X Tracy	F ₅
31.	R78-198	(Tracy X Lee 74) X PI 201428	F ₅
32.	R78-250	Tracy X R73-12	F ₅
33.	R78-320	Davis X Tracy	F ₅
34.	R78-979	(Forrest X Tracy) X Verde	F ₄
35.	S77-296	D70-3115 X J74-39	F ₄
36.	S77-314	D70-3115 X J74-39	F ₄

Table 37 - General summary of performance for the strains in Preliminary Group VI, 1980

Strain	Seed yield	Maturity index	Ht.	Oil	Percent Protein	SCN race 3	Percent mottled seed	SMV	PMV	PSV
Centennial	37.3	10-25	38	20.0	43.6	R ₁	8	S	S	R
Bedford	35.6	-14	38	20.9+	40.7-	R ₁	35	S	S	M
D77-4912	33.0-	-10	41	20.3	42.3	R ₁	54	S	S	M
D77-6166	37.0	-3	38	20.1	41.2-	R ₁	9	M	S	M
D77-7091	32.8-	-9	30	21.1	41.7-	S	0	R	S	S
D78-5167	33.6	-12	35	20.0	43.5	S	0	M	S	M
D78-5448	34.7	-15	34	20.3	42.2-	R	23	S	S	M
D78-5502	39.8	0	35	20.4	41.7-	R	9	S	S	M
D78-5576	38.0	-2	34	20.2	41.7-	R	10	M	S	M
D78-5633	33.3	-14	34	20.7+	42.5	S	0	S	S	S
D78-5821	32.8-	-3	35	20.0	42.3	S	2	R	R	R
D78-5861	32.0-	0	40	19.8	41.9-	S	5	R	R	R
D78-6072	29.7-	0	35	19.5	42.2-	S	3	S	S	R
Ga77-16	31.1-	-2	37	19.4	43.2	S	20	S	S	R
Ga77-320	31.6-	-6	37	20.6	42.5	S	2	S	S	S
Ga77-603	34.5	-1	37	20.0	42.2-	S	6	S	S	M
Ga78-502	30.5-	+2	41	19.6	42.4	S	9	S	S	M
GaT75-87	33.1-	-1	40	20.3	41.1-	S	18	S	S	M
GaT76-113	35.2	-7	39	20.6	41.5-	S	22	S	S	S
GaT77-157	35.0	-6	39	20.8+	41.3-	S	8	M	M	M
N78-159	33.0-	-8	34	20.5	42.5	S	5	M	M	S
N78-496	30.7-	-1	37	21.0+	41.4-	S	19	M	S	R
N78-521	36.2	0	34	21.6+	38.5-	S	1	M	S	R
N78-764	33.1-	-10	29	21.3+	40.8-	S	2	S	S	M
N78-810	30.8-	-8	29	20.7+	39.4-	S	1	S	S	R
N78-906	36.3	-9	30	21.1+	40.5-	S	2	R	S	M
N78-975	32.4-	-4	34	20.6	40.6-	S	0	S	S	M
N78-1027	32.3-	-2	35	20.8+	41.0-	S	0	S	S	R
R74-39K	36.4	-6	37	20.8+	40.9-	S	0	R	M	M
R78-154S	33.7	+1	39	19.5	41.6-	S	0	R	R	R
R78-198	34.9	-4	37	19.4	44.1	S	0	S	S	M
R78-250	32.3-	-5	37	19.6	42.9	S	0	S	S	M
R78-320	32.4-	-5	33	19.7	42.4	S	17	S	S	M
R78-979	34.5	-2	40	21.0+	40.5-	S	4	S	S	S
S77-296	34.3	-10	37	20.5	42.3	R	10	S	S	M
S77-314	35.3	-6	38	20.7+	41.6-	R	11	S	S	M
L.S.D. (.05)	4.1			0.6	1.3					
L.S.D. (.01)	5.4			0.9	1.8					

¹Also resistant to SCN race 4.

Table 38 - Seed yield, in bushels per acre, for the strains in Preliminary Group VI, 1980

Strain	Holland, VA	Ply- mouth, NC	Portage- ville, MO (B)	Keiser, AR	Stone- ville, MS (A)	Stone- ville, MS (B)	Jay, FL	Belle Mina, AL
Centennial	31.1	42.8	31.5	41.6	50.4	42.1	37.2	21.6
Bedford	25.2	43.5	30.0	34.5	50.9	37.9	37.8	25.4
D77-4912	25.0	38.9	37.3	33.8	43.0	34.3	28.8	22.7
D77-6166	21.8-	49.9	26.9	39.2	57.0	50.2	37.2	13.8-
D77-7091	26.0	35.8	29.8	42.2	40.4-	40.0	27.0-	21.3
D78-5167	26.4	36.8	33.2	41.4	42.7	37.5	30.8	20.3
D78-5448	30.5	38.6	32.2	41.7	49.3	29.2	33.9	22.2
D78-5502	30.3	46.2	32.2	44.9	56.2	48.1	39.4	21.3
D78-5576	33.4	44.1	35.0	40.2	53.4	42.3	34.9	20.7
D78-5633	24.1	42.0	34.6	29.8-	45.1	39.1	30.5	21.6
D78-5821	23.1	39.3	28.7	29.3-	44.5	43.8	35.0	19.1
D78-5861	22.2-	33.8	25.1	39.7	43.6	44.6	29.3	18.3
D78-6072	20.4-	36.4	28.2	40.8	45.8	26.2	24.2-	16.1
Ga77-16	28.9	33.0	31.0	35.8	42.1-	36.1	24.2-	17.7
Ga77-320	24.0	40.0	28.5	25.9-	40.0-	43.5	28.7	22.2
Ga77-603	24.6	37.6	30.2	34.8	46.9	44.7	36.1	21.2
Ga78-502	28.5	26.9-	25.8	33.8	44.3	39.8	27.6-	17.4
GaT75-87	27.2	41.6	28.9	38.2	46.4	35.5	27.1-	20.3
GaT76-113	30.1	40.6	27.4	38.1	48.8	43.2	32.7	20.6
GaT77-157	34.8	40.8	29.1	32.6	50.4	37.6	35.0	19.8
N78-159	21.1-	44.7	33.8	30.6-	43.6	41.1	27.7-	21.7
N78-496	26.1	33.6	29.3	34.8	42.2	38.6	25.4-	15.5-
N78-521	28.9	47.7	29.3	39.6	44.2	47.4	23.3-	19.5
N78-764	31.7	39.2	28.3	38.6	46.2	36.2	27.0-	17.3
N78-810	37.0	42.9	22.1	25.6-	39.0-	36.2	26.4-	17.0
N78-906	31.9	45.6	29.5	32.8-	45.5	40.8	40.6	24.3
N78-975	28.4	39.4	27.0	32.2-	42.8	41.4	30.5	18.0
N78-1027	36.3	39.2	29.6	35.6	40.6-	42.3	15.8-	19.4
R74-39K	33.7	48.0	32.5	36.5	45.8	48.1	31.6	14.7-
R78-154S	27.4	30.7-	30.4	43.3	43.5	48.2	30.4	15.5-
R78-198	28.4	38.2	31.4	36.2	48.8	44.0	34.4	18.2
R78-250	25.6	43.8	29.4	32.5-	43.4	40.3	28.2	15.0-
R78-320	26.5	43.1	28.5	35.8	40.5-	42.9	24.8-	17.3
R78-979	28.9	30.3-	28.6	39.8	53.8	42.2	34.9	17.5
S77-296	22.1-	34.8	35.8	37.3	51.3	37.9	36.0	19.7
S77-314	21.9-	36.8	34.5	39.6	49.8	45.7	33.8	20.5
L.S.D. (.05)	8.7	10.8	N.S.	8.1	8.2	N.S.	9.2	5.6
C.V.	16%	13%	12%	11%	9%	15%	15%	14%

Table 39 - Oil percentages for the strains in Preliminary Group VI, 1980

Strain	Holland, VA	Plymouth, NC	Portageville, MO (B)	Stoneville, MS (B)	Jay, FL
Centennial	19.0	20.0	19.7	20.9	20.5
Bedford	20.4	20.4	22.7	20.8	20.4
D77-4912	20.2	20.2	21.8	19.9	19.4
D77-6166	19.1	19.6	21.4	20.7	19.5
D77-7091	19.6	20.8	22.4	22.0	20.5
D78-5167	18.8	20.0	21.4	21.0	18.7
D78-5448	19.8	20.0	22.6	20.2	19.0
D78-5502	19.6	20.3	21.3	20.5	20.2
D78-5576	19.4	19.8	21.1	21.2	19.7
D78-5633	19.9	20.2	22.1	21.6	19.6
D78-5821	18.7	19.1	21.1	21.0	20.1
D78-5861	18.1	19.6	21.1	21.1	19.1
D78-6072	18.3	19.1	20.9	20.0	19.4
Ga77-16	18.6	19.3	21.1	19.5	18.3
Ga77-320	19.8	20.3	21.7	20.8	20.5
Ga77-603	19.0	19.4	21.8	20.6	19.4
Ga78-502	17.9	19.7	20.6	20.1	19.7
GaT75-87	19.0	20.2	21.4	20.8	20.1
GaT76-113	20.1	20.2	22.0	21.1	19.5
GaT77-157	20.1	20.3	22.1	21.3	20.0
N78-159	20.0	20.3	22.0	20.5	19.6
N78-496	19.7	20.5	22.8	21.4	20.4
N78-521	20.0	21.0	21.6	23.3	21.9
N78-764	20.2	21.4	22.0	23.1	19.6
N78-810	19.9	20.1	22.1	21.3	20.2
N78-906	20.7	20.2	21.7	22.0	21.0
N78-975	19.4	20.7	21.8	20.9	20.3
N78-1027	19.9	20.9	21.8	21.8	19.4
R74-39K	19.4	20.4	21.8	21.8	20.5
R78-154S	18.2	19.9	19.6	20.1	19.6
R78-198	18.7	19.0	20.0	20.0	19.3
R78-250	18.9	19.2	20.8	19.7	19.3
R78-320	19.1	19.1	20.1	20.7	19.7
R78-979	20.0	21.1	22.1	21.6	20.1
S77-296	19.4	19.8	22.1	21.0	20.1
S77-314	19.4	19.7	22.1	21.6	20.6

Table 40 - Protein percentages for the strains in Preliminary Group VI, 1980

Strain	Holland, VA	Plymouth, NC	Portageville, MO (B)	Stoneville, MS (B)	Jay, FL
Centennial	43.9	43.6	43.4	42.5	44.4
Bedford	42.1	43.0	35.3	41.7	41.3
D77-4912	42.8	43.5	39.5	43.3	42.4
D77-6166	43.1	43.3	36.2	40.9	42.3
D77-7091	42.8	42.3	37.9	42.1	43.3
D78-5167	44.9	44.7	38.1	43.6	46.2
D78-5448	44.0	44.3	34.0	43.8	45.1
D78-5502	43.3	42.7	39.0	41.7	42.0
D78-5576	43.9	43.0	36.6	41.3	43.8
D78-5633	44.7	43.0	38.3	43.1	43.5
D78-5821	44.6	44.3	38.1	41.1	43.6
D78-5861	43.5	42.8	37.4	42.2	43.4
D78-6072	44.5	42.7	36.7	43.0	43.9
Ga77-16	44.9	43.2	39.8	42.9	45.4
Ga77-320	45.6	42.4	39.5	43.1	42.0
Ga77-603	44.6	43.6	36.3	43.1	43.3
Ga78-502	45.0	41.9	37.5	43.8	43.6
GaT75-87	44.1	41.4	35.5	42.2	42.1
GaT76-113	43.3	43.3	35.3	42.1	43.3
GaT77-157	42.3	42.7	37.0	42.6	42.0
N78-159	43.8	43.5	38.5	42.3	44.3
N78-496	43.9	42.5	36.0	42.0	42.4
N78-521	41.5	40.0	35.3	36.9	39.0
N78-764	42.1	40.4	37.7	39.8	43.9
N78-810	41.6	40.4	34.0	38.9	42.0
N78-906	42.2	42.2	38.1	39.4	40.3
N78-975	43.5	41.0	35.8	40.1	42.7
N78-1027	42.5	41.8	37.1	41.1	42.5
R74-39K	42.4	42.4	38.1	40.6	41.1
R78-154S	43.5	40.1	38.8	42.7	42.9
R78-198	45.4	45.7	41.4	43.6	44.2
R78-250	44.4	44.7	38.3	42.9	44.1
R78-320	44.8	42.0	41.2	41.2	43.0
R78-979	42.1	39.8	36.4	41.2	42.9
S77-296	44.1	43.4	35.7	44.1	44.1
S77-314	44.1	43.7	35.9	42.0	42.2

Table 41 - Plant height for the strains in Preliminary Group VI, 1980

Strain	Holland, VA	Ply mouth, NC	Portage- ville, MO (B)	Keiser, AR	Stone- ville, MS (A)	Stone- ville, MS (B)	Jay, FL	Belle Mina, AL
Centennial	48	43	43	33	41	32	32	35
Bedford	53	43	48	33	39	19	30	36
D77-4912	56	50	48	32	43	25	36	36
D77-6166	49	41	43	31	42	28	34	37
D77-7091	37	33	38	30	34	20	24	27
D78-5167	45	40	45	34	38	17	30	27
D78-5448	42	41	48	27	34	18	30	28
D78-5502	50	39	38	30	38	26	28	32
D78-5576	45	37	41	31	37	25	26	32
D78-5633	41	36	39	32	39	24	28	30
D78-5821	48	38	38	29	38	29	32	30
D78-5861	50	45	45	36	39	33	36	37
D78-6072	42	37	43	32	39	24	28	33
Ga77-16	45	40	42	37	40	30	28	36
Ga77-320	48	42	43	28	39	28	34	35
Ga77-603	43	39	42	31	39	27	28	28
Ga78-502	55	47	41	36	43	33	36	36
GaT75-87	55	43	48	30	44	31	34	37
GaT76-113	52	44	43	36	42	28	32	38
GaT77-157	52	46	44	31	42	24	36	35
N78-159	50	45	46	27	29	20	26	28
N78-496	44	38	45	28	41	31	32	34
N78-521	40	37	42	26	40	29	26	31
N78-764	36	32	38	25	30	16	26	25
N78-810	37	34	31	25	34	21	24	27
N78-906	39	38	32	25	29	18	28	27
N78-975	45	39	44	26	40	25	24	29
N78-1027	44	38	42	28	40	27	26	31
R74-39K	45	41	43	31	41	31	30	35
R78-154S	45	41	46	32	43	36	32	40
R78-198	46	39	39	29	41	37	34	33
R78-250	46	45	41	30	40	26	34	35
R78-320	43	40	34	28	35	26	26	29
R78-979	48	43	48	33	45	29	34	40
S77-296	47	44	39	31	40	24	36	36
S77-314	46	42	41	33	43	29	36	37

Table 42 - Seed quality scores for the strains in Preliminary Group VI, 1980

Strain	Holland, VA	Plymouth, NC	Portage- ville, MO (B)	Keiser, AR	Stone- ville, MS (A)	Stone- ville, MS (B)	Jay, FL
Centennial	1.7	1.5	2.0	1.5	2.7	2.0	2.0
Bedford	1.5	2.0	2.5	2.0	2.5	2.5	3.0
D77-4912	1.5	1.5	2.0	1.0	2.5	3.0	4.0
D77-6166	2.0	1.5	2.0	1.5	2.0	2.0	2.0
D77-7091	2.5	1.5	2.0	2.0	2.5	2.0	3.0
D78-5167	1.5	1.5	2.0	1.5	2.0	2.0	4.0
D78-5448	1.5	2.0	2.0	1.5	3.0	3.5	5.0
D78-5502	2.0	1.5	2.0	1.5	2.0	2.0	3.0
D78-5576	2.5	1.5	2.0	2.0	2.0	2.0	3.0
D78-5633	3.0	2.0	2.0	1.5	2.0	2.0	2.0
D78-5821	3.0	1.5	2.0	1.0	2.0	2.0	2.0
D78-5861	2.0	1.5	2.0	1.5	2.0	2.0	2.0
D78-6072	3.0	1.5	2.0	1.5	2.0	2.0	2.0
Ga77-16	2.5	1.5	2.0	1.5	2.0	2.0	2.0
Ga77-320	2.0	1.5	2.0	1.5	2.0	2.0	2.0
Ga77-603	2.0	1.5	2.0	1.0	2.0	2.0	3.0
Ga78-502	2.0	1.5	2.0	1.5	2.0	2.0	5.0
GaT75-87	1.5	1.5	2.0	1.5	2.0	2.0	1.0
GaT76-113	1.5	1.5	2.0	1.5	2.0	2.0	3.0
GaT77-157	1.0	1.5	2.0	1.5	2.0	2.5	3.0
N78-159	3.0	2.0	2.0	1.5	2.5	2.0	4.0
N78-496	1.0	1.5	2.0	1.5	2.0	2.0	3.0
N78-521	2.0	1.5	2.0	2.0	2.0	2.0	3.0
N78-764	2.5	1.5	2.0	2.0	2.0	2.0	3.0
N78-810	1.0	1.5	2.0	2.0	2.5	2.0	3.0
N78-906	1.5	1.5	2.0	2.0	2.5	2.0	3.0
N78-975	2.0	1.5	2.0	1.0	2.0	2.0	3.0
N78-1027	2.0	1.5	2.0	1.5	2.0	2.0	4.0
R74-39K	1.5	1.5	2.0	2.0	2.0	2.0	3.0
R78-154S	2.0	1.5	2.0	2.0	2.0	2.0	3.0
R78-198	1.5	1.5	2.0	2.0	2.0	2.0	3.0
R78-250	2.0	1.5	2.0	1.0	2.0	2.0	3.0
R78-320	2.5	1.5	2.0	2.0	2.0	2.0	3.0
R78-979	2.0	1.5	2.0	1.0	2.0	2.0	2.0
S77-296	1.5	1.5	2.0	1.5	2.5	2.5	3.0
S77-314	2.5	1.5	2.0	1.0	2.0	2.0	3.0

UNIFORM GROUP VII

1980

<u>Variety or strain</u>	<u>Parentage</u>	<u>Generation composited</u>
1. Braxton	F59-1505 X [Bragg(3) X D60-7965]	
2. Wright	Bragg X Lee	
3. F76-8757	Centennial X [Forrest X (Cobb X D68-216)]	F ₅
4. D77-6103	Centennial X J74-47	F ₅
5. D77-7926	Centennial X D73-10204	F ₅
6. D77-7969	Centennial X D73-10204	F ₅
7. F77-1576	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
8. F77-1965	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
9. F77-1981	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
10. F77-2000	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
11. GaT75-731	Dare X Hampton 266A	F ₅
12. N77-940	N70-1540 X Centennial	F ₅

Background for breeding lines used as parents:

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

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

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

J74-47 is of the same parentage as Bedford.

D73-10204 is a selection from D62-7562 X Semmes. D62-7562 is a root-knot resistant selection from D49-2491 X Laredo.

N70-1540 is a selection from Dare X D65-6765.

Results of 31 Uniform Group VII nurseries are summarized in Tables 43 through 49. Table 43 gives a general summary of agronomic qualities, oil and protein percentages of the seed, and reaction to several pest problems. The two newly released varieties, Braxton and Wright, were used as check varieties. All previously evaluated breeding lines were replaced with new strains from the 1979 preliminary nursery.

Drouth stress resulted in low yields at several of the locations. Differences among strains were nonsignificant (.05% level) at 16 of the 31 locations. The combined analysis of variance showed differences to be significant in 3 of the 4 regions.

Information was not obtained on reaction to either Meloidogyne incognita or M. arenaria. One strain, D77-6103, is resistant to both SCN race 3 and 4. F76-8757, D79-7969, F77-1576, F77-1965, F77-1981, and F77-2000 are resistant to SCN race 3.

Table 43 - General summary of performance for the strains in Uniform Group VII, 1980

	No. of locations	Braxton	Wright	F76-8757	D77-6103	D77-7926
Seed yield - 1980						
East Coast	8	28.5	32.5+	30.9	29.5	29.8
Southeast	9	30.2	30.7	33.3	30.8	29.2
Upper & Central South	2	36.5	33.1	32.1-	29.2-	31.7-
Delta & West	8	38.9	43.5	42.5	42.0	39.9
1979-80						
East Coast		37.8	37.7			
Southeast		35.2	34.7			
Upper & Central South		41.9	39.3			
Delta & West		41.5	43.5			
1978-80						
East Coast		39.3	38.6			
Southeast		36.1	35.4			
Upper & Central South		40.5	38.6			
Delta & West		39.0	41.8			
Oil Content - 1980		19.3	19.7+	19.7+	19.6	19.2
1979-80		19.5	19.8			
1978-80		19.8	20.0			
Protein Content - 1980		43.6	43.6	43.8	44.5+	44.1
1979-80		42.6	42.1			
1978-80		42.6	42.3			
Seed size		16.8	14.6-	14.0-	14.6-	11.9-
Maturity index		10-31	-2	+1	-3	+1
Height		34	34	33	34	30
Seed quality		1.8	1.6	1.8	1.9	1.8
Bacterial pustule		R	R	R	R	R
SCN race 3		S	S	R	R	S
SCN race 4		S	S	S	R	S
Percent mottled seed		4	7	7	6	8

Table 43 - (continued)

	D77-7969	F77-1576	F77-1965	F77-1981	F77-2000	GaT75-731	N77-940
Seed yield - 1980							
East Coast	25.9	32.5+	30.6	30.9	33.5+	31.6	30.1
Southeast	28.2	34.0+	32.1	33.2	33.7+	30.6	30.5
Upper & Central South	28.0-	33.8	32.2-	31.0-	35.4	33.9	34.2
Delta & West	38.5	44.4	38.0	38.8	40.5	39.2	40.7
1979-80							
East Coast							
Southeast							
Upper & Central South							
Delta & West							
1978-80							
East Coast							
Southeast							
Upper & Central South							
Delta & West							
Oil Content - 1980	19.4	20.0+	19.8+	19.6	19.9+	19.8+	19.7+
1979-80							
1978-80							
Protein Content - 1980	44.7+	43.8	42.6-	43.8	42.7-	43.0	43.6
1979-80							
1978-80							
Seed size	13.0-	13.0-	12.3-	12.0-	12.1-	13.5-	13.3-
Maturity index	-5	-1	-2	+1	+1	-1	-1
Height	29	35	31	37	33	32	30
Seed quality	1.9	1.7	1.7	1.6	1.5	1.7	1.7
Bacterial pustule	R	R	R	R	R	R	R
SCN race 3	R	R	R	R	R	R	S
SCN race 4	S	S	S	S	S	S	S
Percent mottled seed	11	4	3	0	2	0	4

Table 44 - Seed yield, in bushels per acre, for the strains in Uniform Group VII, 1980

Location	Braxton	Wright	F76-8757	D77-6103	D77-7926	D77-7969	F77-1576
<u>EAST COAST</u>							
Plymouth, NC	24.6	35.7+	41.9+	38.3+	36.0+	36.4+	41.5+
Clayton, NC	40.0	44.4	36.8	38.3	43.0	36.0	41.8
Kinston, NC	23.6	29.3	28.6	28.3	27.7	21.2	30.7
Clinton, NC	32.8	38.3	34.1	30.8	34.6	29.6	32.0
Florence, SC (A)	32.9	33.9	30.3	31.3	32.1	22.2-	33.6
Florence, SC (B)	30.3	31.6	29.8	28.3	31.1	27.8	30.8
Hartsville, SC (A)	25.0	24.2	23.5	21.8	19.9-	17.4-	25.6
Hartsville, SC (B)	19.2	22.2	22.5	18.9	14.0	16.5	24.2
Mean	28.5	32.5+	30.9	29.5	29.8	25.9	32.5+
<u>SOUTHEAST</u>							
Blackville, SC	23.0	18.7-	19.6	13.7-	19.3	14.0-	19.8
Tallassee, AL	20.7	15.9	18.8	17.2	17.3	13.8	21.4
Tifton, GA	31.8	40.2	41.3	41.6	37.9	34.9	32.7
Gainesville, FL	27.1	25.7	26.4	28.1	27.2	23.4	27.3
Marianna, FL	31.7	39.7	36.7	34.2	34.9	32.3	45.5
Quincy, FL	38.0	35.2	40.2	35.2	28.7	26.4	42.1
Jay, FL	31.2	27.4	44.0+	40.2+	36.1	41.0+	41.0+
Fairhope, AL	41.1	40.4	35.1-	37.6	34.1-	35.9-	39.1
*Poplarville, MS	17.4	15.3	16.9	13.3	14.0	15.0	17.6
Baton Rouge, LA	27.3	32.8	37.3	29.3	27.7	32.6	37.4
Mean	30.2	30.7	33.3	30.8	29.2	28.2	34.0+
<u>UPPER AND CENTRAL SOUTH</u>							
Athens, GA	43.6	40.8	40.7	36.9	39.7	37.0	41.5
Calhoun, GA	29.3	25.3	23.4	21.5	23.6	19.0	26.2
*Clemson, SC	12.5	12.9	13.3	12.7	12.0	11.7	14.1
Mean	36.5	33.1	32.1-	29.2-	31.7-	28.0-	33.8
<u>DELTA AND WEST</u>							
Stoneville, MS (A)	40.3	37.9	44.0	52.0+	41.3	45.3	48.8+
Stoneville, MS (B)	40.5	41.9	42.9	43.5	37.6	40.1	46.1+
Pine Bluff, AR	25.8	33.7+	41.4+	33.7+	39.9+	35.0+	40.8+
Suttgart, AR	35.2	43.4+	40.3+	44.7+	36.2	41.1+	44.9+
St. Joseph, LA	55.3	53.9	51.1	60.4	43.1-	46.2-	54.2
*Bossier City, LA	17.7	14.3	13.4	14.3	17.0	16.1	17.9
Crowley, LA	36.5	45.4+	35.3	33.5	37.1	29.0-	37.6
Beaumont, TX	36.8	41.5	41.6	32.3	33.4	34.1	41.1
Uvalde, TX	40.9	50.3	43.3	35.9	50.9	37.1	41.9
Mean	38.9	43.5	42.5	42.0	39.9	38.5	44.4

*Not included in mean.

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

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

Table 44 - (continued)

Location	F77-1965	F77-1981	F77-2000	GaT75-731	N77-940	L.S.D. (.05)	C.V. (%)
<u>EAST COAST</u>							
Plymouth, NC	45.0+	39.0+	38.9+	34.8+	36.1+	6.9	7
Clayton, NC	39.6	46.1	39.2	40.5	39.1	N.S.	13
Kinston, NC	29.5	27.9	29.5	32.3	26.0	N.S.	15
Clinton, NC	34.8	33.8	37.0	39.7+	37.6	5.7	10
Florence, SC (A)	29.3	25.5-	36.9	31.6	26.5-	5.5	11
Florence, SC (B)	27.0	30.6	31.1	31.6	33.9	N.S.	10
Hartsville, SC (A)	20.9-	25.6	30.2+	24.2	20.9-	3.6	9
Hartsville, SC (B)	19.1	18.6	24.8	18.4	20.7	N.S.	20
Mean	30.6	30.9	33.5+	31.6	30.1	2.9	
<u>SOUTHEAST</u>							
Blackville, SC	16.0-	15.5-	19.7	19.1	14.3-	4.2	14
Tallassee, AL	21.9	21.6	20.3	22.1	15.1	N.S.	19
Tifton, GA	30.7	31.8	31.0	31.2	35.1	N.S.	19
Gainesville, FL	30.8	30.3	29.7	29.0	25.1	N.S.	14
Marianna, FL	41.6	39.3	36.0	38.3	38.2	N.S.	13
Quincy, FL	30.7	38.2	37.2	38.8	35.9	N.S.	16
Jay, FL	46.2+	42.8+	48.5+	32.3	39.4+	7.0	11
Fairhope, AL	38.9	38.9	39.4	36.6-	35.6-	4.1	10
Poplarville, MS	18.8	13.8	14.5	15.0	13.9	N.S.	19
Baton Rouge, LA	32.0	40.5	41.8	28.3	35.6	N.S.	26
Mean	32.1	33.2	33.7+	30.6	30.5	3.3	
<u>UPPER AND CENTRAL SOUTH</u>							
Athens, GA	40.2	41.3	43.1	43.5	44.5	N.S.	10
Calhoun, GA	24.2	20.7	27.7	24.3	23.8	N.S.	16
Clemson, SC	10.9	14.8	13.8	12.7	13.5	N.S.	17
Mean	32.2-	31.0-	35.4	33.9	34.2	3.4	
<u>DELTA AND WEST</u>							
Stoneville, MS (A)	40.9	41.9	43.4	39.0	39.2	7.7	11
Stoneville, MS (B)	37.7	39.7	38.9	35.9	41.0	5.4	8
Pine Bluff, AR	32.1+	33.6+	43.6+	25.9	38.4+	6.0	10
Suttgart, AR	41.8+	37.7	38.8+	38.4+	40.5+	2.8	4
St. Joseph, LA	40.8-	49.5	44.1-	55.3	45.6-	8.5	10
Bossier City, LA	20.8	14.5	15.4	12.7	18.4	N.S.	34
Crowley, LA	31.1-	34.6	35.7	35.2	29.3-	4.4	7
Beaumont, TX	36.5	36.2	39.9	29.8-	38.5	5.2	8
Uvalde, TX	43.2	37.1	39.6	54.1+	53.2+	11.2	15
Mean	38.0	38.8	40.5	39.2	40.7	N.S.	

Table 45 - Chemical composition and seed size for the strains in Uniform Group VII, 1980

Location	Braxton	Wright	F76-8757	D77-6103	D77-7926	D77-7969
<u>OIL PERCENTAGE</u>						
Clinton, NC	18.3	18.8	19.1	18.6	18.8	18.0
Blackville, SC	18.8	18.2	17.5	18.6	17.3	18.4
Athens, GA	21.2	20.9	21.0	21.1	20.6	21.3
Tifton, GA	18.9	19.2	19.8	19.5	19.2	18.8
Gainesville, FL	18.8	20.5	19.8	19.9	19.4	19.2
Jay, FL	19.5	19.5	19.7	19.7	19.8	19.9
Baton Rouge, LA	19.2	19.6	19.4	19.0	18.7	19.4
Stoneville, MS (B)	20.1	21.3	21.2	20.9	19.8	20.8
Stuttgart, AR	18.5	18.6	19.1	18.8	18.1	18.4
Beaumont, TX	19.8	20.4	20.1	19.8	19.8	19.5
Mean	19.3	19.7+	19.7+	19.6	19.2	19.4
<u>PROTEIN PERCENTAGE</u>						
Clinton, NC	44.5	44.6	43.2	43.8	43.0	44.8
Blackville, SC	43.6	47.2	44.4	45.5	45.5	47.4
Athens, GA	40.8	39.9	41.7	42.1	41.9	41.6
Tifton, GA	44.3	45.4	45.1	45.9	45.0	47.9
Gainesville, FL	44.2	44.2	45.1	45.1	44.2	44.1
Jay, FL	44.1	43.5	44.0	43.9	43.8	43.0
Baton Rouge, LA	46.4	43.2	45.5	45.9	47.1	45.3
Stoneville, MS (B)	42.0	41.2	42.2	42.9	42.4	42.4
Stuttgart, AR	43.0	42.9	42.8	43.7	45.0	45.1
Beaumont, TX	43.2	43.5	43.6	46.1	43.5	45.8
Mean	43.6	43.6	43.8	44.5+	44.1	44.7+
<u>GRAMS PER 100 SEEDS</u>						
Clinton, NC	18.5	15.5	14.6	14.9	11.4	13.4
Athens, GA	18.4	15.1	16.0	16.2	13.2	13.9
Tifton, GA	17.5	15.5	13.8	16.3	12.1	13.5
Gainesville, FL	16.0	14.6	15.3	13.9	11.3	12.5
Jay, FL	15.0	13.4	12.5	11.8	12.2	12.0
Baton Rouge, LA	16.5	13.6	13.8	14.9	11.4	12.0
Stoneville, MS (B)	15.0	14.2	12.8	13.2	11.4	12.2
Stuttgart, AR	18.3	16.3	14.3	16.0	12.0	15.0
Beaumont, TX	15.9	13.2	13.2	13.9	11.7	12.5
Mean	16.8	14.6-	14.0-	14.6-	11.9-	13.0-

Table 45 - (continued)

Location	F77-1576	F77-1965	F77-1981	F77-2000	GaT75-731	N77-940	L.S.D. (.05)
<u>OIL PERCENTAGE</u>							
Clinton, NC	19.6	19.3	19.2	19.5	19.5	19.0	
Blackville, SC	18.4	18.0	18.1	18.5	18.3	18.4	
Athens, GA	21.4	20.9	20.3	21.2	21.2	21.2	
Tifton, GA	20.0	19.4	19.1	19.7	20.0	19.6	
Gainesville, FL	19.7	20.2	20.2	20.5	20.2	19.9	
Jay, FL	19.8	19.7	19.9	19.5	19.7	20.3	
Baton Rouge, LA	19.5	20.1	18.9	19.9	19.4	19.0	
Stoneville, MS (B)	21.6	21.3	20.5	21.2	20.6	21.0	
Stuttgart, AR	19.8	18.7	19.3	19.2	19.0	18.6	
Beaumont, TX	20.4	20.4	20.0	20.1	20.4	19.6	
Mean	20.0+	19.8+	19.6	19.9+	19.8+	19.7+	0.3
<u>PROTEIN PERCENTAGE</u>							
Clinton, NC	43.9	42.9	42.8	41.9	42.7	43.8	
Blackville, SC	45.3	44.6	45.0	45.6	44.8	47.1	
Athens, GA	40.4	38.6	41.1	39.7	40.3	39.9	
Tifton, GA	45.3	45.7	46.3	45.2	44.4	45.5	
Gainesville, FL	44.4	43.5	44.6	43.1	43.7	44.1	
Jay, FL	44.5	41.7	42.4	42.6	43.7	42.4	
Baton Rouge, LA	44.8	42.6	47.6	43.2	43.9	45.6	
Stoneville, MS (B)	42.4	40.8	42.3	40.6	40.4	40.7	
Stuttgart, AR	42.3	43.0	41.8	42.2	43.2	43.3	
Beaumont, TX	44.5	42.9	44.3	42.9	43.1	43.4	
Mean	43.8	42.6-	43.8	42.7-	43.0	43.6	0.8
<u>GRAMS PER 100 SEEDS</u>							
Clinton, NC	12.2	12.4	11.5	12.4	14.1	14.8	
Athens, GA	15.0	14.0	13.5	13.8	15.2	14.5	
Tifton, GA	13.2	12.2	11.7	12.2	14.5	13.6	
Gainesville, FL	13.1	11.6	11.7	12.2	13.4	12.3	
Jay, FL	11.3	11.1	10.2	10.3	12.6	11.7	
Baton Rouge, LA	13.8	12.3	12.1	12.0	12.0	13.4	
Stoneville, MS (B)	11.6	11.4	11.2	11.4	12.6	12.0	
Stuttgart, AR	14.0	14.0	13.7	13.0	14.3	14.0	
Beaumont, TX	12.7	12.0	12.4	11.7	12.6	13.3	
Mean	13.0-	12.3-	12.0-	12.1-	13.5-	13.3-	0.6

Table 46 - Relative maturity data, days earlier (-) or later (+) than Braxton, for the strains in Uniform Group VII, 1980

Location	Date planted	Braxton matured	Wright	F76-8757	D77-6103	D77-7926
<u>EAST COAST</u>						
Plymouth, NC	5-15	11-2	0	+4	+4	+4
Clayton, NC	5-28	11-10	+3	0	0	+2
Kinston, NC	5-27	11-12	-4	0	0	0
Clinton, NC	5-30	11-8	0	0	0	-3
Hartsville, SC (A)	5-28	11-2	0	+4	0	+2
Hartsville, SC (B)	6-23	11-8	-2	+2	-6	+4
Mean		11-7	-1	+2	0	+2
<u>SOUTHEAST</u>						
Tifton, GA	5-13	10-17	0	+2	-4	0
Gainesville, FL	6-23	10-30	-7	-4	-8	-8
Marianna, FL	6-27	11-12	-12	-7	-20	-4
Quincy, FL	7-4	10-24	0	0	+1	+1
Jay, FL	6-3	10-20	-1	0	-6	0
Fairhope, AL	6-10	10-20	-4	-2	-6	-2
Poplarville, MS	5-13	11-6	-7	-2	-9	-2
Baton Rouge, LA	5-27	10-27	-1	-1	-2	0
Mean		10-27	-4	-2	-7	-2
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	5-5	10-20	-2	+3	-3	+3
Calhoun, GA	5-29	11-5	0	+1	0	+3
Clemson, SC	5-12	11-9	-2	+1	-3	+2
Mean		11-1	-1	+2	-2	+3
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	5-12	10-30	+2	+2	-5	+4
Stoneville, MS (B)	5-8,9	10-28	0	-1	-2	-2
Pine Bluff, AR	5-29	11-7	+3	+1	-5	+5
Stuttgart, AR	5-28	10-30	+1	+3	+2	+4
St. Joseph, LA	5-29	10-16	-1	-2	-3	-2
Bossier City, LA	5-29	10-20	-1	-1	-4	-1
Crowley, LA	5-1	10-29	-6	-3	-6	-4
Beaumont, TX	5-7	10-18	-3	-2	0	0
Uvalde, TX	6-6	11-2	+3	+8	-4	+8
Mean		10-27	0	+1	-3	+1

Table 46 - (continued)

Location	D77-7969	F77-1576	F77-1965	F77-1981	F77-2000	GaT75-731	N77-940
<u>EAST COAST</u>							
Plymouth, NC	0	0	+4	+4	+4	0	0
Clayton, NC	+2	0	0	+3	+2	0	0
Kinston, NC	-4	-2	-7	0	0	-2	0
Clinton, NC	-1	-2	-10	-1	0	0	-2
Hartsville, SC (A)	-8	+2	0	+2	+4	+4	0
Hartsville, SC (B)	-6	-2	0	0	+4	+2	-2
Mean	-3	-1	-2	+1	+2	+1	-1
<u>SOUTHEAST</u>							
Tifton, GA	-2	0	-2	+3	+2	+3	-2
Gainesville, FL	-16	-1	-9	-1	+1	-7	-7
Marianna, FL	-16	-9	-19	-8	-9	-1	-19
Quincy, FL	+1	-1	0	-1	+3	+4	-7
Jay, FL	-5	+5	0	+4	+4	+1	-4
Fairhope, AL	-7	0	-5	+1	+1	-4	-4
Poplarville, MS	-2	-7	-9	-9	-7	-9	-9
Baton Rouge, LA	-12	0	-4	0	0	-3	-1
Mean	-7	-2	-6	-1	-1	-2	-7
<u>UPPER AND CENTRAL SOUTH</u>							
Athens, GA	-6	+1	-2	+4	+3	+2	-2
Calhoun, GA	-1	0	0	+3	+1	0	+3
Clemson, SC	-6	0	+1	+1	+1	-2	-1
Mean	-4	0	0	+3	+2	0	0
<u>DELTA AND WEST</u>							
Stoneville, MS (A)	-4	+2	-7	+3	+4	-4	-5
Stoneville, MS (B)	-7	+2	-3	+3	0	-1	-5
Pine Bluff, AR	-8	+1	0	+1	+1	+2	+2
Stuttgart, AR	0	+4	+2	+6	+6	+3	+2
St. Joseph, LA	-7	+2	-6	+2	-2	-1	-5
Bossier City, LA	-2	-2	+2	+2	+3	0	+1
Crowley, LA	-14	-2	-8	-3	-1	-8	-6
Beaumont, TX	-2	-3	-1	0	0	-1	-1
Uvalde, TX	-6	+8	+8	+8	+8	+8	+8
Mean	-6	+1	-1	+2	+1	0	-1

Table 47 - Plant height for the strains in Uniform Group VII, 1980

Location	Braxton	Wright	F76-8757	D77-6103	D77-7926	D77-7969
<u>EAST COAST</u>						
Plymouth, NC	45	45	46	45	40	41
Clayton, NC	42	40	39	41	37	37
Kinston, NC	41	37	39	41	31	31
Clinton, NC	43	43	45	45	38	40
Florence, SC (A)	36	32	33	32	31	23
Florence, SC (B)	32	33	29	36	27	28
Hartsville, SC (A)	30	30	32	34	28	26
Hartsville, SC (B)	20	24	18	22	18	18
Mean	36	36	35	37	31	31
<u>SOUTHEAST</u>						
Tifton, GA	39	36	33	37	31	26
Gainesville, FL	32	33	32	34	31	30
Marianna, FL	25	27	23	25	25	22
Quincy, FL	22	23	21	26	18	17
Jay, FL	36	34	36	34	30	32
Fairhope, AL	37	38	35	37	36	35
Poplarville, MS	23	24	23	26	19	19
Baton Rouge, LA	38	38	33	38	37	32
Mean	32	32	30	32	28	27
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	37	36	38	38	33	32
Calhoun, GA	34	35	34	37	27	27
Clemson, SC	26	25	23	27	19	18
Mean	32	32	32	34	26	26
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	46	43	43	42	41	41
Stoneville, MS (B)	42	40	38	33	38	30
Pine Bluff, AR	35	33	35	36	31	29
Stuttgart, AR	47	46	44	47	40	41
St. Joseph, LA	52	45	47	46	49	47
Bossier City, LA	32	31	36	34	32	30
Crowley, LA	21	22	22	22	21	17
Beaumont, TX	24	25	20	24	23	22
Uvalde, TX	31	27	27	21	31	17
Mean	37	35	35	34	34	30

Table 47 - (continued)

Location	F77-1576	F77-1965	F77-1981	F77-2000	GaT75-731	N77-940
<u>EAST COAST</u>						
Plymouth, NC	48	44	52	45	43	43
Clayton, NC	42	40	44	39	43	38
Kinston, NC	41	35	41	37	39	35
Clinton, NC	43	40	47	43	43	37
Florence, SC (A)	35	33	37	35	32	25
Florence, SC (B)	34	28	34	30	28	30
Hartsville, SC (A)	32	30	34	30	28	26
Hartsville, SC (B)	22	18	24	20	18	20
Mean	37	34	39	35	34	32
<u>SOUTHEAST</u>						
Tifton, GA	41	34	44	41	30	30
Gainesville, FL	33	32	35	32	33	31
Marianna, FL	28	23	31	24	23	23
Quincy, FL	25	21	27	20	22	21
Jay, FL	36	34	38	36	34	30
Fairhope, AL	40	35	41	39	39	33
Poplarville, MS	26	21	26	24	22	21
Baton Rouge, LA	25	35	40	38	36	31
Mean	32	29	35	32	30	28
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	41	35	44	37	35	31
Calhoun, GA	38	33	37	33	32	31
Clemson, SC	25	23	27	23	22	22
Mean	35	30	36	31	30	28
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	45	41	48	42	42	39
Stoneville, MS (B)	37	35	44	40	35	31
Pine Bluff, AR	34	28	36	31	33	29
Stuttgart, AR	48	44	53	46	44	44
St. Joseph, LA	50	45	57	51	47	44
Bossier City, LA	34	36	42	39	34	32
Crowley, LA	25	19	26	22	21	19
Beaumont, TX	24	24	21	22	21	20
Uvalde, TX	19	18	25	25	27	27
Mean	35	32	39	35	34	32

Table 48 - Lodging scores for the strains in Uniform Group VII, 1980

Location	Braxton	Wright	F76-8757	D77-6103	D77-7926	D77-7969
<u>EAST COAST</u>						
Plymouth, NC	2.3	2.7	3.0	3.3	2.3	3.0
Clayton, NC	2.3	3.3	2.7	3.0	2.0	2.3
Kinston, NC	3.0	4.0	3.0	4.0	2.0	2.3
Clinton, NC	3.0	3.0	3.0	3.3	2.0	2.6
Florence, SC (A)	1.0	1.0	1.0	1.0	1.0	1.0
Florence, SC (B)	1.0	1.0	1.0	1.0	1.0	1.0
<u>SOUTHEAST</u>						
Tifton, GA	1.3	1.5	1.3	1.3	1.0	1.0
Gainesville, FL	1.0	2.0	1.0	2.0	1.0	1.0
Marianna, FL	1.0	1.0	1.0	1.3	1.0	1.0
Quincy, FL	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, AL	1.0	1.3	1.0	1.0	1.0	1.3
Baton Rouge, LA	1.2	2.1	1.1	2.6	1.3	1.4
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	1.0	1.7	1.5	1.3	1.0	1.2
Calhoun, GA	1.2	1.3	1.0	1.2	1.0	1.0
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	2.7	3.3	2.7	2.7	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Pine Bluff, AR	1.0	3.0	3.0	4.0	1.0	2.0
Stuttgart, AR	3.3	4.0	3.5	3.0	2.3	3.3
St. Joseph, LA	2.3	2.9	2.9	3.2	1.9	2.1
Bossier City, LA	2.5	2.0	2.8	2.5	2.0	2.5
Crowley, LA	1.0	1.0	1.0	1.0	1.0	1.0
Beaumont, TX	1.0	2.0	1.0	1.0	1.0	1.0
Uvalde, TX	1.5	2.0	1.5	1.0	1.2	1.0

Table 48 - (continued)

Location	F77-1576	F77-1965	F77-1981	F77-2000	GaT75-731	N77-940
<u>EAST COAST</u>						
Plymouth, NC	3.0	3.3	4.0	3.7	2.7	2.7
Clayton, NC	3.0	2.0	2.7	2.7	2.0	2.0
Kinston, NC	3.0	3.3	3.0	3.0	3.0	3.0
Clinton, NC	3.3	3.0	3.0	3.0	3.0	3.0
Florence, SC (A)	1.0	1.0	1.0	1.0	1.0	1.0
Florence, SC (B)	1.0	1.0	1.0	1.0	1.0	1.0
<u>SOUTHEAST</u>						
Tifton, GA	1.5	1.3	1.0	1.3	1.0	1.0
Gainesville, FL	1.0	1.0	1.0	1.0	1.0	1.0
Marianna, FL	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, FL	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, AL	1.0	1.0	1.0	1.0	1.0	1.0
Baton Rouge, LA	1.4	1.3	2.3	1.3	1.4	1.2
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	1.7	1.0	1.5	1.3	1.2	1.0
Calhoun, GA	2.0	1.2	1.2	1.3	1.3	1.2
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	3.3	3.0	3.0	3.0	3.0	3.0
Stoneville, MS (B)	2.0	2.0	2.3	2.7	2.0	2.0
Pine Bluff, AR	3.0	1.0	4.0	2.0	1.0	3.0
Stuttgart, AR	4.0	3.3	3.5	4.2	4.0	3.8
St. Joseph, LA	2.8	2.8	3.2	3.2	2.8	2.7
Bossier City, LA	2.5	2.0	2.5	2.5	2.0	1.5
Crowley, LA	1.0	1.0	1.0	1.0	1.0	1.0
Beaumont, TX	1.0	1.0	1.0	1.0	1.0	1.0
Uvalde, TX	1.2	1.2	1.5	1.8	1.2	1.5

Table 49 - Seed quality scores for the strains in Uniform Group VII,
1980

Location	Braxton	Wright	F76-8757	D77-6103	D77-7926	D77-7969
<u>EAST COAST</u>						
Plymouth, NC	1.5	1.5	1.5	1.5	1.5	1.5
Clayton, NC	1.5	1.5	1.5	1.5	1.5	1.5
Kinston, NC	1.5	1.5	1.5	1.5	1.5	2.0
Clinton, NC	1.5	1.5	1.5	1.5	1.5	1.5
<u>SOUTHEAST</u>						
Tifton, GA	2.5	2.0	2.0	2.5	1.3	2.0
Gainesville, FL	3.0	2.0	2.0	1.3	1.0	1.3
Quincy, FL	2.0	1.0	2.0	2.0	2.0	2.0
Jay, FL	3.0	2.0	2.0	3.0	3.0	3.0
Baton Rouge, LA	1.5	1.6	1.6	1.7	1.6	1.8
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	1.5	1.5	1.5	2.3	1.8	1.8
Calhoun, GA	2.0	2.0	2.5	2.2	2.2	2.5
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Pine Bluff, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stuttgart, AR	1.0	1.0	1.0	1.0	1.0	1.3
Crowley, LA	2.7	2.5	2.8	2.9	2.1	3.0
Beaumont, TX	1.0	1.0	2.0	2.0	3.0	2.0

Table 49 - (continued)

Location	F77-1576	F77-1965	F77-1981	F77-2000	GaT75-731	N77-940
<u>EAST COAST</u>						
Plymouth, NC	1.5	1.5	1.5	1.5	1.5	1.5
Clayton, NC	1.5	1.5	1.5	1.5	1.5	1.5
Kinston, NC	1.5	1.5	1.5	1.5	1.5	1.5
Clinton, NC	1.5	1.5	1.5	1.5	1.5	1.5
<u>SOUTHEAST</u>						
Tifton, GA	1.5	3.0	1.5	1.5	2.0	2.5
Gainesville, FL	1.3	1.7	1.0	1.0	1.7	2.0
Quincy, FL	2.0	1.0	1.0	1.0	2.0	1.0
Jay, FL	2.0	2.0	1.0	1.0	3.0	2.0
Baton Rouge, LA	1.6	1.5	1.8	1.8	1.7	1.2
<u>UPPER AND CENTRAL SOUTH</u>						
Athens, GA	1.5	1.5	1.5	1.5	1.7	1.5
Calhoun, GA	2.5	2.0	2.0	2.2	1.5	3.0
<u>DELTA AND WEST</u>						
Stoneville, MS (A)	2.0	2.0	2.0	2.0	2.0	2.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Pine Bluff, AR	1.0	1.0	1.0	1.0	1.0	1.0
Stuttgart, AR	1.0	1.0	1.0	1.0	1.0	1.0
Crowley, LA	3.0	2.8	2.8	2.6	2.7	2.3
Beaumont, TX	1.0	1.0	2.0	1.0	1.0	2.0

PRELIMINARY GROUP VII

1980

Thirty-four experimental strains along with Braxton and Centennial were grown in the Preliminary Group VII nursery at 9 locations. The parentage of each of the strains is reported in Table 50. Performance data are summarized in Tables 51 through 56. Seed yields were not reported for Tifton. Seed yields were low at Blackville, Tallassee, and Beaumont.

Differences among strains for seed yield were significant (.05% level) at 7 of the locations. However, with the high variety X location interaction, mean seed yield differences were nonsignificant. Eight strains had a mean seed yield slightly greater than that for Braxton.

Information was not obtained on reaction to root-knot nematodes. Ten strains were considered resistant to SCN race 3.

The strains, D78-4240 through D78-4552, were selected to incorporate resistance to foliar-feeding insects. All ranked below Braxton in mean seed yield, although D78-4525 had a mean yield within 0.6 bu. of Braxton.

Percent mottled seed at Clinton, North Carolina ranged from 0 to 25 percent.

Table 50 - Parentage of strains in Preliminary Group VII, 1980

Variety or strain	Parentage	Generation composited
1. Braxton		
2. Centennial		
3. D76-9454	Forrest X Centennial	F ₅
4. D77-7360	D69-8765 X D71-9966	F ₅
5. D78-4240	D73-10243 X sel [Pickett 71(2) X PI 171451]	F ₅
6. D78-4310	D73-10243 X sel [Pickett 71(2) X PI 171451]	F ₅
7. D78-4395	D73-10243 X sel [Pickett 71(2) X PI 227687]	F ₅
8. D78-4447	D73-10243 X sel [Pickett 71(2) X PI 227687]	F ₅
9. D78-4525	D73-10243 X sel [Pickett 71(2) X PI 227687]	F ₅
10. D78-4552	D73-10243 X sel [Pickett 71(2) X PI 227687]	F ₅
11. D78-4786	D69-8765 X D71-9966	F ₅
12. F75-5293	Forrest X [D68-201 X (D67-10502(2) X Hampton)]	F ₄
13. F76-3271	Forrest X [D68-201 X (D67-10502(2) X Hampton)]	F ₅
14. F77-1815	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
15. F77-1880	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
16. F77-5889	Forrest X (Cobb X D68-216)	F ₅
17. F77-6519	Centennial X [Forrest X (Cobb X D68-216)]	F ₄
18. F77-7016	Forrest X (Cobb X D68-216)	F ₅
19. F77-7074	Forrest X (Cobb X D68-216)	F ₅
20. F77-7142	Forrest X (Cobb X D68-216)	F ₅
21. F78-6513	Centennial X [Forrest X (Cobb X D68-216)]	F ₄
22. Ga77-23	Hutton X D64-4636	F ₆
23. Ga77-36	Hutton X D64-4636	F ₆
24. Ga77-614	R67-141 X Tracy	F ₆
25. Ga77-663	R67-141 X Tracy	F ₆
26. Ga78-564	Hutton X Ga70-276	F ₄
27. GaT75-404	Davis X Hampton 266A	F ₅
28. GaT75-458	Davis X Hampton 266A	F ₅
29. GaT76-102	Davis X Forrest	F ₅
30. GaT76-143	Davis X Hampton 266A	F ₅
31. N78-164	N70-1610 X N70-2173	F ₆
32. N78-252	N70-1741 X N69-365	F ₆
33. N78-454	N70-1488 X N70-402	F ₆
34. N78-587	N70-1488 X N70-2205	F ₆
35. N78-796	N70-1488 X N70-2205	F ₆
36. N78-915	Davis X N70-2173	F ₆

Table 51 - General summary of performance for the strains in Preliminary Group VII, 1980

Strain	Seed Yield	Maturity index	Ht.	Percent		SCN		Percent mottled seed
				Oil	Protein	race 3	race 4	
Braxton	35.1	10-27	36	19.6	44.0	S	S	7
Centennial	36.9	-9	33	19.5	44.5	R	S	14
D76-9454	37.3	-1	34	19.9	43.0	R	S	10
D77-7360	35.7	0	36	19.5	43.2	S	S	7
D78-4240	29.6	-2	37	19.1	44.5	S	S	4
D78-4310	30.1	-3	28	19.5	43.8	S	S	12
D78-4395	29.8	-2	32	19.0	43.9	S	S	18
D78-4447	30.9	-1	36	19.4	44.3	S	S	20
D78-4525	34.5	-3	37	19.2	44.5	S	S	12
D78-4552	33.2	+2	35	18.9	44.3	S	S	22
D78-4786	34.4	-4	30	20.3	43.4	S	S	25
F75-5293	34.8	-4	31	20.1	43.1	R	S	13
F76-3271	33.9	-3	30	20.3	42.7	R	S	10
F77-1815	33.2	+1	29	20.4+	43.0	R	S	20
F77-1880	37.5	0	34	19.9	44.0	R	S	10
F77-5889	35.6	+1	33	20.1	44.6	R	S	5
F77-6519	34.9	+2	32	19.7	44.0	R	S	11
F77-7016	36.3	-1	37	20.4+	42.6	R	S	13
F77-7074	34.1	0	32	19.8	43.9	R	S	19
F77-7142	35.9	+1	38	19.9	43.2	R	S	0
F78-6513	35.2	+2	34	20.0	42.9	R	S	9
Ga77-23	31.6	-3	30	19.7	43.9	S	S	6
Ga77-36	33.4	-4	33	20.0	43.1	S	S	12
Ga77-614	29.5	-3	36	19.5	44.1	S	S	6
Ga77-663	33.3	-1	37	19.8	43.8	S	S	13
Ga78-564	33.6	-4	37	19.4	43.3	S	S	0
GaT75-404	33.7	-2	33	20.7+	42.5	S	S	2
GaT75-458	30.7	0	32	20.4+	42.6	S	S	0
GaT76-102	35.6	0	32	19.8	43.8	S	S	15
GaT76-143	35.1	0	34	20.1	43.2	S	S	3
N78-164	28.4	-5	31	20.6+	43.1	S	S	0
N78-252	33.9	-2	29	20.7+	42.6	S	S	10
N78-454	34.9	-2	37	19.8	44.4	S	S	3
N78-587	34.4	-3	33	20.5+	43.4	S	S	0
N78-796	33.3	-5	30	20.6+	42.0-	S	S	6
N78-915	33.5	0	32	20.3	43.7	S	S	8
L.S.D. (.05)	N.S.			0.7	1.5			
L.S.D. (.01)	N.S.			0.9	2.0			

Table 52 - Seed yield, in bushels per acre, for the strains in Preliminary Group VII, 1980

Strain	Clinton, NC	*Black- ville, SC	*Tallas- see, AL	Jay, FL	*Baton Rouge, LA	Stone- ville, MS (A)	Stone- ville, MS (B)	Beau- mont, TX
Braxton	40.2	19.8	16.0	29.3	29.4	36.5	43.5	25.9
Centennial	42.2	22.4	16.8	37.2	28.7	50.4+	42.1	12.0-
D76-9454	41.9	18.4	13.8	31.6	45.4	47.3+	40.7	25.1
D77-7360	39.0	16.7	11.0	31.0	29.7	37.7	41.5	29.2
D78-4240	30.4-	14.6-	12.6	25.9	38.0	36.5	36.2-	19.1
D78-4310	34.8	12.5-	14.9	30.5	35.9	33.5	35.9-	15.8
D78-4395	25.8-	15.6	13.7	33.3	25.8	34.2	42.8	13.2-
D78-4447	30.9-	14.2-	14.5	27.7	31.9	34.6	39.8	21.5
D78-4525	39.5	17.1	14.4	35.5	45.4	38.0	41.0	18.7
D78-4552	39.6	17.2	21.5	27.1	34.9	32.3	35.8-	31.5
D78-4786	35.2	13.8-	12.9	29.9	35.4	43.2	43.2	20.6
F75-5293	37.6	14.2-	9.2	31.6	30.4	44.1	43.2	17.7
F76-3271	40.5	13.2-	14.5	32.1	27.6	44.8+	37.1	15.1-
F77-1815	42.5	9.4-	7.2	27.1	-	35.5	38.0	23.0
F77-1880	37.2	20.5	10.2	38.9+	43.1	43.4	41.7	26.4
F77-5889	40.2	22.5	14.4	37.8+	35.4	34.3	39.8	26.0
F77-6519	32.5	19.7	12.2	37.8+	42.5	39.6	39.9	24.6
F77-7016	36.6	10.2-	18.0	35.5	35.2	42.6	42.8	24.1
F77-7074	37.1	19.7	13.1	31.6	45.2	33.5	42.6	25.7
F77-7142	33.7	16.5	16.2	45.1+	42.3	41.8	44.7	14.2-
F78-6513	32.1-	21.7	11.3	40.0+	35.8	37.0	38.6	28.4
Ga77-23	37.2	16.7	9.5	24.4	31.9	31.5	40.9	23.1
Ga77-36	34.0	19.8	12.9	28.2	39.7	35.4	44.4	25.1
Ga77-614	35.6	19.3	10.9	29.3	41.2	27.3-	39.4	15.9
Ga77-663	38.1	17.3	10.0	31.0	35.7	35.4	36.4-	26.0
Ga78-564	37.0	17.9	17.4	30.5	34.1	40.3	38.8	21.2
GaT75-404	36.0	22.6	10.2	34.4	39.5	37.0	36.8-	24.4
GaT75-458	40.1	18.5	15.2	28.2	40.2	33.4	30.9-	21.2
GaT76-102	40.5	15.4	11.7	33.3	40.9	34.7	41.1	28.7
GaT76-143	41.3	14.8-	9.2	34.9	-	41.8	37.2	20.2
N78-164	29.8-	11.0-	13.0	27.1	43.4	32.1	36.5-	16.9
N78-252	37.4	10.4-	18.6	32.1	42.0	41.1	38.0	21.0
N78-454	37.1	17.1	13.7	29.3	41.2	35.7	39.2	33.3
N78-587	41.6	16.4	18.6	24.8	31.6	39.2	41.9	24.7
N78-796	38.0	15.4	15.8	35.0	26.9	32.2	44.1	17.5
N78-915	37.2	15.1	9.1	28.8	31.3	37.9	37.7	25.8
L.S.D. (.05)	7.9	4.9	N.S.	7.3	10.9	7.8	6.6	10.4
C.V.	10%	15%	31%	11%	15%	10%	8%	23%

*Not included in mean.

Table 53 - Oil percentages for the strains in Preliminary Group VII, 1980

Strain	Clinton, NC	Blackville, NC	Jay, FL	Stoneville, MS (B)	Beaumont, TX
Braxton	19.0	19.4	20.1	20.4	19.0
Centennial	19.0	19.9	17.8	20.9	19.8
D76-9454	19.1	19.9	20.9	21.3	18.4
D77-7360	18.9	19.0	19.6	20.0	20.1
D78-4240	18.9	18.6	19.2	19.9	19.0
D78-4310	19.2	18.8	20.3	20.6	18.7
D78-4395	19.2	17.7	19.2	19.7	19.0
D78-4447	19.3	19.5	19.2	20.8	18.4
D78-4525	18.6	18.9	19.3	20.0	19.3
D78-4552	18.6	18.9	18.4	19.5	18.9
D78-4786	19.0	19.9	20.8	22.8	19.2
F75-5293	19.6	20.7	20.6	21.2	18.4
F76-3271	19.6	20.0	20.9	22.4	18.4
F77-1815	20.1	20.6	20.1	22.0	19.0
F77-1880	19.3	18.9	19.7	21.4	20.3
F77-5889	19.5	20.4	20.0	21.6	19.0
F77-6519	19.3	19.4	19.8	21.8	18.4
F77-7016	19.8	20.4	20.7	21.6	19.3
F77-7074	19.4	18.8	19.6	21.3	19.7
F77-7142	19.5	19.2	19.3	21.5	19.8
F78-6513	19.7	19.7	20.0	21.5	19.0
Ga77-23	18.5	19.4	19.5	21.5	19.7
Ga77-36	18.3	19.8	20.0	21.5	20.3
Ga77-614	18.6	19.4	20.2	20.1	19.4
Ga77-663	18.6	19.3	20.3	21.1	19.7
Ga78-564	19.2	18.6	19.2	20.5	19.6
GaT75-404	20.0	21.0	21.1	21.5	20.0
GaT75-458	19.7	20.6	20.9	21.4	19.5
GaT76-102	19.4	19.7	19.8	21.3	18.7
GaT76-143	19.9	19.4	20.3	21.4	19.5
N78-164	20.3	20.0	21.0	22.9	19.0
N78-252	19.9	20.6	20.6	23.2	19.3
N78-454	19.2	19.4	19.8	21.2	19.6
N78-587	20.1	20.3	20.6	22.4	19.2
N78-796	20.0	20.6	21.0	22.1	19.3
N78-915	20.1	19.5	20.0	21.3	20.5

Table 54 - Protein percentages for the strains in Preliminary Group VII, 1980

Strain	Clinton, NC	Blackville, SC	Jay, FL	Stoneville, MS (B)	Beaumont, TX
Braxton	45.3	44.1	43.3	42.1	45.0
Centennial	44.5	44.3	48.1	42.5	43.1
D76-9454	44.3	44.3	42.4	41.4	42.4
D77-7360	43.8	44.1	43.6	41.8	42.9
D78-4240	44.7	45.7	46.1	43.0	42.8
D78-4310	43.7	46.7	43.2	41.1	44.4
D78-4395	44.7	45.0	43.6	43.3	43.1
D78-4447	44.9	44.8	45.3	41.8	44.9
D78-4525	44.8	45.9	45.3	44.4	42.2
D78-4552	44.4	45.0	45.8	43.7	42.7
D78-4786	43.8	44.8	43.4	41.9	43.2
F75-5293	42.2	44.2	42.6	40.5	46.2
F76-3271	43.5	44.2	42.0	39.4	44.6
F77-1815	42.3	43.0	43.0	42.4	44.1
F77-1880	44.5	43.9	44.7	43.1	43.7
F77-5889	44.8	44.9	44.0	42.0	47.4
F77-6519	43.8	44.3	44.1	41.5	46.5
F77-7016	42.5	43.3	41.7	40.8	44.6
F77-7074	44.6	44.5	44.7	41.8	43.7
F77-7142	43.2	44.2	44.5	41.4	42.6
F78-6513	42.7	42.4	43.0	41.1	45.3
Ga77-23	45.5	44.2	43.7	42.0	43.9
Ga77-36	44.0	44.1	43.4	40.9	42.9
Ga77-614	45.7	44.2	43.7	42.9	43.8
Ga77-663	45.9	45.0	43.6	42.4	42.2
Ga78-564	44.2	44.4	42.1	41.7	43.9
GaT75-404	42.3	43.7	42.1	40.9	43.5
GaT75-458	43.5	42.8	40.6	41.8	44.2
GaT76-102	43.9	44.6	42.4	42.0	46.2
GaT76-143	43.9	44.6	42.0	40.1	45.4
N78-164	43.8	45.0	41.7	40.3	44.5
N78-252	44.0	44.9	41.8	38.4	43.7
N78-454	46.1	45.6	42.8	43.2	44.2
N78-587	43.3	44.3	42.2	40.1	47.0
N78-796	42.6	43.4	39.5	39.7	44.8
N78-915	43.8	46.5	43.7	42.1	42.2

Table 55 - Plant height for the strains in Preliminary Group VII, 1980

Strain	Clinton, NC	Jay, FL	*Baton Rouge, LA	Stoneville, MS (A)	Stoneville, MS (B)	Beaumont TX
Braxton	48	30	34	43	37	20
Centennial	40	32	36	41	33	18
D76-9454	46	28	40	46	29	22
D77-7360	44	34	38	43	36	21
D78-4240	40	26	34	37	30	16
D78-4310	41	26	37	36	25	12
D78-4395	40	26	30	42	37	15
D78-4447	44	34	41	43	38	22
D78-4525	43	34	43	48	42	18
D78-4552	44	30	32	42	34	23
D78-4786	41	26	32	34	29	19
F75-5293	41	26	30	42	31	16
F76-3271	38	24	29	42	25	20
F77-1815	40	24	-	37	30	16
F77-1880	41	28	38	43	35	24
F77-5889	43	30	37	41	35	18
F77-6519	40	28	40	40	36	18
F77-7016	46	32	38	49	35	22
F77-7074	46	28	39	36	34	17
F77-7142	49	30	43	50	43	18
F78-6513	41	30	40	42	32	23
Ga77-23	40	24	35	37	32	18
Ga77-36	41	28	34	41	37	17
Ga77-614	42	28	38	44	43	22
Ga77-663	45	30	37	49	41	25
Ga78-564	43	28	34	45	33	19
GaT75-404	44	32	41	40	31	20
GaT75-458	43	30	40	39	29	19
GaT76-102	38	26	40	43	35	20
GaT76-143	44	34	-	42	33	18
N78-164	40	28	36	40	26	19
N78-252	42	30	37	33	25	17
N78-454	48	34	39	48	35	21
N78-587	43	32	36	40	30	18
N78-796	41	30	34	38	26	17
N78-915	45	32	38	37	29	17

*Not included in mean.

Table 56 - Seed quality scores for the strains in Preliminary Group VII, 1980

Strain	Clinton, NC	Jay, FL	*Baton Rouge, LS	Stoneville, MS (A)	Stoneville, MS (B)	Beaumont, TX
Braxton	1.5	3.0	1.5	2.0	2.0	2.0
Centennial	1.5	3.0	1.8	2.0	2.0	2.0
D76-9454	1.5	3.0	1.9	2.0	2.0	4.0
D77-7360	1.5	2.0	1.4	2.0	2.0	2.0
D78-4240	1.5	5.0	2.1	2.0	2.0	2.0
D78-4310	1.5	3.0	1.4	2.0	2.0	2.0
D78-4395	1.5	3.0	1.9	2.0	2.0	1.0
D78-4447	1.5	3.0	2.0	2.0	2.0	3.0
D78-4525	1.5	3.0	1.5	2.0	2.0	2.0
D78-4552	1.5	4.0	1.8	2.0	2.0	1.0
D78-4786	1.5	2.0	1.6	2.0	2.0	1.0
F75-5293	1.5	3.0	2.0	2.0	2.0	2.0
F76-3271	1.5	2.0	1.0	2.0	2.0	3.0
F77-1815	1.5	2.0	-	2.0	2.0	2.0
F77-1880	1.5	2.0	1.4	2.0	2.0	1.0
F77-5889	1.5	2.0	1.6	2.0	2.0	2.0
F77-6519	1.5	2.0	1.3	2.0	2.0	2.0
F77-7016	1.5	2.0	2.0	2.0	2.0	1.0
F77-7074	1.5	1.0	1.1	2.0	2.0	3.0
F77-7142	1.5	2.0	1.4	2.0	2.0	2.0
F78-6513	1.5	1.0	1.9	2.0	2.0	2.0
Ga77-23	1.5	3.0	1.0	2.0	2.0	2.0
Ga77-36	1.5	3.0	1.0	2.0	2.0	2.0
Ga77-614	1.5	3.0	2.0	2.0	2.0	1.0
Ga77-663	1.5	3.0	1.8	2.0	2.0	3.0
Ga78-564	1.5	3.0	1.5	2.0	2.0	2.0
GaT75-404	1.5	2.0	1.5	2.0	2.0	2.0
GaT75-458	1.5	2.0	1.8	2.0	2.0	2.0
GaT76-102	1.5	3.0	2.0	2.0	2.0	3.0
GaT76-143	1.5	2.0	-	2.0	2.0	2.0
N78-164	1.5	3.0	2.5	2.0	2.0	1.0
N78-252	1.5	3.0	2.0	2.0	2.0	2.0
N78-454	1.5	1.0	1.4	2.0	2.0	2.0
N78-587	1.5	2.0	1.6	2.0	2.0	1.0
N78-796	1.5	3.0	1.4	2.0	2.0	2.0
N78-915	1.5	3.0	2.0	2.0	2.0	3.0

*Not included in mean.

UNIFORM GROUP VIII

1980

<u>Variety or strain</u>	<u>Parentage</u>	<u>Generation composited</u>
1. Hutton	F55-822 X (Roanoke X CNS-4)	F ₆
2. Cobb	F57-735 X D58-3358	F ₆
3. F76-8827	Centennial X [Forrest X (Cobb X D68-216)]	F ₅
4. N76-1507	N70-2173 X Hutton	F ₅
5. Co76-853	(N64-2451 X Dyer) X Pickett 71	F ₅
6. F77-1661	Forrest X (Cobb X D68-216)	F ₆
7. F77-1790	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
8. F77-1797	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
9. F77-1840	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
10. F77-1995	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
11. F77-2658	D68-201 X [D67-10507(2) X Hampton]	F ₇
12. N77-1602	Hutton X N70-2205	F ₆

Background of breeding lines used as parents:

F55-822 is the parent line of Bragg.

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

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

D68-216 is a selection from Dyer X Bragg.

N70-2173 is a selection from Hampton X Ransom.

N64-2451 is a selection from (N55-3831 X N55-2908) X D56-1185. It was grown in Uniform Group VII in 1968.

D68-201 is of the same parentage as D68-216.

D67-10507 is a selection from Dyer X Bragg resistant to SCN race 3.

N70-2205 is a selection from Hampton X Ransom.

Results of 20 Uniform Group VIII nurseries are summarized in Tables 57 through 63. Table 57 gives a general summary of agronomic qualities, oil and protein percentages, and field reactions to several pest problems. Two-year data are presented for the 2 strains which have been evaluated two years.

Differences among strains for seed yield were significant at the .05 percent level of confidence at only 9 locations. The combined analysis of variance for seed yield showed differences among strains to be nonsignificant.

Eight strains are resistant to SCN race 3. Information was not obtained on reaction to root-knot nematodes.

The strain, F76-8827, is being increased for release as a variety.

Table 57 - General summary of performance for the strains in Uniform Group VIII, 1980

	No. of locations	Hutton	Cobb	F76-8827	N76-1507	Co76-853	F77-1661
Seed Yield - 1980	16	30.9	31.5	33.1	33.1	31.7	32.3
1979-80		35.6	35.2	36.5	38.1		
1978-80		36.2	35.2				
Oil Content - 1980		19.4	20.4+	20.1+	20.3+	20.3+	19.7
1979-80		19.6	20.2	20.2	20.1		
1978-80		19.8	20.7				
Protein Content - 1980		45.0	42.3-	42.4-	43.7-	44.0	43.6-
1979-80		44.0	41.4	41.6	42.6		
1978-80		44.1	41.1				
Seed size		16.2	12.9-	12.7-	15.9	13.8-	12.4-
Maturity index		10-29	+3	0	-2	-4	+1
Height		31	34	32	28	32	35
Seed quality		1.8	1.5	1.6	1.7	1.6	2.1
Bacterial pustule		R	R	R	R	R	R
SCN race 3		S	S	R	S	R	R
Flower color		P	W	P	P	P	W
Pubescence color		T	G	G	T	G	T
Pod wall color		T	T	T	T	T	T

Table 57 - (continued)

	F77-1790	F77-1797	F77-1840	F77-1995	F77-2658	N77-1602
Seed Yield - 1980 1979-80 1978-80	33.5	35.6	34.3	33.1	31.4	32.9
Oil Content - 1980 1979-80 1978-80	19.6	19.9+	19.9+	19.8	20.4+	20.1+
Protein Content - 1980 1979-80 1978-80	44.5	43.8-	43.1-	43.0-	43.3-	44.3
Seed size	13.8-	13.5-	12.2-	11.8-	13.2-	17.3+
Maturity index	+3	+2	-1	0	-5	-1
Height	33	32	32	31	29	29
Seed quality	1.7	1.7	1.9	1.8	1.7	1.8
Bacterial pustule	R	R	R	R	R	R
SCN race 3	R	R	R	R	R	S
Flower color	P	P	W	W	W	P
Pubescence color	T	T	T	G	T	T
Pod wall color	T	T	T	T	T	T

Table 58 - Seed yield, in bushels per acre, for the strains in Uniform Group VIII, 1980

Location	Hutton	Cobb	F76-8827	N76-1507	Co76-853	F77-1661	F77-1790
Clinton, NC	37.4	29.9-	32.2-	39.2	36.3	39.0	34.7
Florence, SC (A)	36.0	31.9	33.1	27.3-	26.7-	27.2-	35.7
Florence, SC (B)	28.5	30.3	30.0	27.3	25.6	28.8	26.0
Hartsville, SC (A)	24.2	28.2+	28.6+	27.4	27.7	25.0	32.0+
Hartsville, SC (B)	26.9	31.5	29.6	24.9	27.8	34.7	28.9
Blackville, SC	19.2	22.0	19.2	22.5	18.6	17.8	20.1
Athens, GA	37.7	34.5	38.2	39.8	40.7	38.5	43.0
*Tallassee, AL	13.8	17.4	15.9	18.1	13.3	14.1	15.0
Tifton, GA	32.3	36.8	32.2	35.3	40.3+	33.3	35.4
Gainesville, FL	20.8	22.5	19.8	22.2	19.1	21.3	22.6
Marianna, FL	32.9	42.6	44.6	35.7	32.0	38.3	35.5
Quincy, FL	31.2	36.5	36.8	34.7	30.0	40.3	39.1
Jay, FL	25.5	23.7	34.6+	30.4+	41.0+	36.4+	40.6+
Fairhope, AL	45.5	42.7	45.2	44.4	41.4-	40.4-	40.9-
*Poplarville, MS	14.9	15.5	14.4	12.2	13.5	18.0	16.0
Stoneville, MS (B)	37.1	37.0	38.6	44.6+	38.8	41.2	40.3
Beaumont, TX	34.0	25.9	36.8	38.7	31.6	24.2	30.1
Uvalde, TX	34.0	39.1	40.2	42.9	38.8	41.6	41.6
Mean	30.9	31.5	33.1	33.1	31.7	32.3	33.5

*Not included in mean.

Table 58 - (continued)

Location	F77-1797	F77-1840	F77-1995	F77-2658	N77-1602	L.S.D (.05)	C.V. %
Clinton, NC	39.5	31.2-	37.1	31.7-	35.9	4.1	7
Florence, SC (A)	35.4	33.6	35.2	31.6	28.8-	4.6	9
Florence, SC (B)	26.3	27.2	28.5	28.0	25.5	N.S.	11
Hartsville, SC (A)	35.5+	29.9+	35.5+	32.0+	30.1+	3.7	7
Hartsville, SC (B)	28.3	28.5	29.9	29.5	29.3	N.S.	13
Blackville, SC	21.6	20.4	17.2	14.0-	16.3	3.9	12
Athens, GA	39.0	38.8	38.6	38.2	42.9	N.S.	11
Tallassee, AL	12.4	14.3	14.8	13.9	16.7	N.S.	15
Tifton, GA	40.9+	34.0	33.5	34.7	44.1+	5.9	10
Gainesville, FL	22.1	23.0	20.2	22.7	18.7	N.S.	15
Marianna, FL	40.5	44.4	36.6	36.2	39.9	N.S.	15
Quincy, FL	35.0	38.5	32.0	34.0	28.9	N.S.	13
Jay, FL	42.1+	40.6+	43.2+	37.6+	26.3	4.5	13
Fairhope, AL	41.9	42.9	42.4	38.6-	47.7	3.7	5
Poplarville, MS	19.2	16.4	13.4	14.7	20.2+	4.7	18
Stoneville, MS (B)	46.4+	38.6	39.0	37.6	44.0+	4.8	7
Beaumont, TX	35.9	37.5	32.7	25.6	33.3	N.S.	27
Uvalde, TX	48.6	49.1	38.2	40.1	43.2	N.S.	17
Mean	35.6	34.3	33.1	31.4	32.9	N.S.	

Table 59 - Chemical composition and seed size for the strains in Uniform Group VIII, 1980

Location	Hutton	Cobb	F76-8827	N76-1507	Co76-853	F77-1661	F77-1790
<u>OIL PERCENTAGE</u>							
Hartsville, SC (A)	20.1	21.1	20.8	20.7	21.5	20.8	20.8
Blackville, SC	18.8	19.3	19.1	19.6	19.0	18.7	18.3
Tifton, GA	19.3	21.1	20.5	20.1	20.2	20.0	19.9
Gainesville, FL	18.9	20.6	19.8	20.1	20.0	19.6	19.3
Jay, FL	19.0	19.7	20.0	20.1	20.6	19.4	19.6
Beaumont, TX	20.2	20.7	20.5	21.0	20.2	19.7	19.5
Mean	19.4	20.4+	20.1+	20.3+	20.3+	19.7	19.6
<u>PROTEIN PERCENTAGE</u>							
Hartsville, SC (A)	42.9	40.2	39.3	41.5	41.4	41.1	41.0
Blackville, SC	46.1	44.4	44.4	46.2	45.2	45.2	44.8
Tifton, GA	45.2	41.3	43.1	43.7	43.8	42.7	44.0
Gainesville, FL	45.9	42.2	41.8	44.8	44.9	44.5	47.1
Jay, FL	44.9	42.6	42.5	42.5	43.8	43.7	44.7
Beaumont, TX	44.7	42.8	43.1	43.5	44.6	44.3	45.6
Mean	45.0	42.3-	42.4-	43.7-	44.0	43.6-	44.5
<u>GRAMS PER 100 SEEDS</u>							
Hartsville, SC (A)	19.0	14.5	14.1	17.5	14.5	13.1	14.3
Tifton, GA	16.4	12.4	12.6	16.0	14.0	12.7	13.2
Gainesville, FL	14.6	14.0	11.9	15.8	13.4	11.4	14.8
Jay, FL	15.8	11.8	11.8	15.5	12.7	12.5	13.5
Beaumont, TX	15.0	12.0	13.1	14.8	14.2	12.5	13.4
Mean	16.2	12.9-	12.7-	15.9	13.8-	12.4-	13.8-

Table 59 - (continued)

Location	F77-1797	F77-1840	F77-1995	F77-2658	N77-1602	L.S.D. (.05)
<u>OIL PERCENTAGE</u>						
Hartsville, SC (A)	20.9	20.6	20.8	21.3	20.0	
Blackville, SC	18.8	18.3	18.6	19.6	19.8	
Tifton, GA	20.4	20.4	20.5	20.4	20.1	
Gainesville, FL	19.8	19.9	19.7	19.5	19.8	
Jay, FL	19.6	19.7	19.7	20.9	20.2	
Beaumont, TX	19.8	20.3	19.7	20.8	20.5	
Mean	19.9+	19.9+	19.8	20.4+	20.1+	0.4
<u>PROTEIN PERCENTAGE</u>						
Hartsville, SC (A)	41.6	41.0	40.8	41.0	44.4	
Blackville, SC	43.7	43.3	44.8	45.2	44.4	
Tifton, GA	43.5	43.7	41.7	42.5	43.0	
Gainesville, FL	44.8	44.5	44.2	45.2	46.5	
Jay, FL	43.9	43.7	42.5	42.4	44.2	
Beaumont, TX	45.4	42.1	44.0	43.3	43.2	
Mean	43.8-	43.1-	43.0-	43.3-	44.3	1.0
<u>GRAMS PER 100 SEEDS</u>						
Hartsville, SC (A)	13.7	12.5	13.0	14.8	20.4	
Tifton, GA	13.7	11.7	11.7	14.8	17.6	
Gainesville, FL	13.3	12.9	11.7	12.2	16.0	
Jay, FL	13.0	12.0	10.7	11.6	15.5	
Beaumont, TX	13.8	12.1	12.1	12.5	16.9	
Mean	13.5-	12.2-	11.8-	13.2-	17.3+	1.0

Table 60 - Relative maturity, days earlier (-) or later (+) than Hutton, for strains in Uniform Group VIII, 1980

Location	Date planted	Hutton matured	Cobb	F76-8827	N76-1507	Co76-853	F77-1661
Clinton, NC	5-30	11-10	0	0	0	-2	0
Hartsville, SC (A)	5-27	11-8	+2	0	-2	-2	-2
Hartsville, SC (B)	6-23	11-4	0	0	-2	-4	0
Athens, GA	5-5	10-22	+3	+2	-3	-1	+2
Tifton, GA	5-14	10-20	+4	+2	-2	0	+1
Gainesville, FL	6-23	10-26	+5	-1	-2	-4	-1
Marianna, FL		11-12	+2	0	-4	-9	-2
Quincy, FL	7-4	10-25	+9	0	0	-2	+3
Jay, FL	6-3	10-29	+5	0	-1	-9	0
Fairhope, AL	6-10	10-21	+3	+1	-4	-4	+1
Stoneville, MS (B)	5-6	11-5	0	0	-1	-6	+2
Beaumont, TX	5-7	10-17	+3	0	+4	0	+2
Mean		10-29	+3	0	-2	-4	+1

Table 60 - (continued)

Location	F77-1790	F77-1797	F77-1840	F77-1995	F77-2658	N77-1602
Clinton, NC	-2	-2	-2	+2	-2	0
Hartsville, SC (A)	+2	0	-2	0	-4	+4
Hartsville, SC (B)	0	0	-4	-2	-6	-2
Athens, GA	+8	+5	0	+4	-4	-2
Tifton, GA	+2	+2	-1	+1	-2	0
Gainesville, FL	+7	+7	+7	0	-8	-3
Marianna, FL	-7	-5	-8	-6	-10	+2
Quincy, FL	+2	+2	0	+1	-1	-1
Jay, FL	-2	-2	-2	-2	-10	-9
Fairhope, AL	+3	+2	-3	+1	-7	-4
Stoneville, MS (B)	+4	+2	-2	0	-7	-4
Beaumont, TX	0	+3	+1	0	0	+3
Mean	+3	+2	-1	0	-5	-1

Table 61 - Plant height for the strains in Uniform Group VIII, 1980

Location	Hutton	Cobb	F76-8827	N76-1507	Co76-853	F77-1661
Clinton, NC	44	46	43	43	45	47
Florence, SC (A)	36	40	36	23	31	40
Florence, SC (B)	30	26	28	26	30	31
Hartsville, SC (A)	30	34	32	26	32	34
Hartsville, SC (B)	26	30	26	18	26	30
Athens, GA	31	37	36	32	34	45
Tifton, GA	33	37	37	26	33	37
Gainesville, FL	33	33	31	29	35	38
Marianna, FL	22	24	22	22	26	25
Quincy, FL	22	27	25	24	22	26
Jay, FL	34	34	30	32	34	36
Fairhope, AL	36	43	39	35	36	45
Poplarville, MS	29	34	30	23	28	34
Stoneville, MS (B)	41	44	43	39	43	43
Beaumont, TX	25	21	24	19	20	24
Uvalde, TX	29	33	27	25	30	31
Mean	31	34	32	28	32	35

Table 61 - (continued)

Location	F77-1790	F77-1797	F77-1840	F77-1995	F77-2658	N77-1602
Clinton, NC	44	43	45	46	46	45
Florence, SC (A)	37	37	35	37	28	33
Florence, SC (B)	25	30	30	26	30	26
Hartsville, SC (A)	34	34	34	30	30	32
Hartsville, SC (B)	28	24	24	22	24	22
Athens, GA	36	38	35	33	34	32
Tifton, GA	33	32	36	36	26	27
Gainesville, FL	35	30	35	31	33	29
Marianna, FL	21	24	19	24	18	22
Quincy, FL	26	21	25	22	24	19
Jay, FL	36	32	32	34	32	30
Fairhope, AL	43	38	37	36	36	35
Poplarville, MS	30	29	28	30	25	26
Stoneville, MS (B)	42	43	42	42	35	47
Beaumont, TX	27	26	25	20	19	19
Uvalde, TX	27	24	28	22	24	26
Mean	33	32	32	31	29	29

Table 62 - Lodging scores for the strains in Uniform Group VIII, 1980

Location	Hutton	Cobb	F76-8827	N76-1507	Co76-853	F77-1661
Clinton, NC	3.3	3.0	3.3	3.0	3.0	3.7
Florence, SC (A)	1.0	1.0	1.0	1.0	1.0	1.0
Florence, SC (B)	1.0	1.0	1.0	1.0	1.0	1.0
Athens, GA	1.5	1.7	2.0	1.5	1.5	1.8
Tifton, GA	1.0	1.0	1.0	1.0	1.0	1.0
Gainesville, FL	1.0	1.0	1.0	1.0	1.0	1.0
Marianna, FL	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, FL	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, AL	1.0	1.0	1.0	1.0	1.3	1.0
Stoneville, MS (B)	3.3	3.0	2.7	2.0	2.3	2.7
Uvalde, TX	1.5	1.5	1.7	1.5	1.7	1.7

Table 62 - (continued)

Location	F77-1790	F77-1797	F77-1840	F77-1995	F77-2658	N77-1602
Clinton, NC	3.0	3.0	3.0	3.0	3.0	3.0
Florence, SC (A)	1.0	1.0	1.0	1.0	1.0	1.0
Florence, SC (B)	1.0	1.0	1.0	1.0	1.0	1.0
Athens, GA	1.5	1.5	1.5	1.5	1.7	1.5
Tifton, GA	1.0	1.0	1.0	1.0	1.0	1.0
Gainesville, FL	1.0	1.0	1.0	1.0	1.0	1.0
Marianna, FL	1.0	1.0	1.0	1.0	1.0	1.0
Quincy, FL	1.0	1.0	1.0	1.0	1.0	1.0
Jay, FL	1.0	1.0	1.0	1.0	1.0	1.0
Fairhope, AL	1.3	1.0	1.0	1.0	1.0	1.0
Stoneville, MS (B)	2.0	2.0	2.0	2.7	2.3	2.0
Uvalde, TX	1.3	1.5	1.3	1.0	1.2	1.7

Table 63 - Seed quality scores for the strains in Uniform Group VIII, 1980

Location	Hutton	Cobb	F76-8827	N76-1507	Co76-853	F77-1661
Clinton, NC	1.5	1.5	1.5	1.5	1.5	1.5
Athens, GA	1.5	1.5	1.5	1.7	1.5	1.5
Tifton, GA	1.3	1.3	1.5	1.5	1.5	2.5
Gainesville, FL	2.3	1.0	1.3	2.0	2.3	1.3
Quincy, FL	1.0	1.0	1.0	1.0	1.0	2.0
Jay, FL	4.0	3.0	2.0	3.0	2.0	3.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, TX	1.0	1.0	2.0	1.0	1.0	3.0

Table 63 - (continued)

Location	F77-1790	F77-1797	F77-1840	F77-1995	F77-2658	N77-1602
Clinton, NC	1.5	1.5	1.5	1.5	1.5	1.5
Athens, GA	1.8	1.7	1.5	1.7	1.5	1.5
Tifton, GA	1.3	1.3	1.5	1.0	1.5	1.3
Gainesville, FL	2.0	1.0	1.7	2.0	1.7	2.0
Quincy, FL	1.0	2.0	2.0	1.0	1.0	1.0
Jay, FL	2.0	3.0	3.0	2.0	2.0	3.0
Stoneville, MS (B)	2.0	2.0	2.0	2.0	2.0	2.0
Beaumont, TX	2.0	1.0	2.0	3.0	2.0	2.0

PRELIMINARY GROUP VIII

1980

Thirty-four experimental strains were grown along with Cobb and Braxton in the Preliminary Group VIII nursery at six locations. Parentage for these strains is reported in Table 64. Performance data are summarized in Tables 65 through 70. Differences among strains for seed yield were significant at the .05 percent level of confidence at only 3 locations. The combined analysis of variance for seed yield also showed differences to be nonsignificant. There were 11 strains which had mean seed yields greater than the mean yield for Cobb.

Thirteen strains were resistant to SCN race 3. Data were not obtained on reaction to root-knot nematodes.

Table 64 - Parentage of strains in Preliminary Group VIII, 1980

	Variety or strain	Parentage	Generation composited
1.	Cobb		
2.	Braxton		
3.	Co79-462	D68-78 X [Pickett 71(2) X Hampton 266A]	F ₅
4.	Co79-482	D68-78 X [Pickett 71(2) X Co68-33]	F ₅
5.	Co79-498	Co71-211 X Centennial	F ₅
6.	Co79-499	Co71-211 X Centennial	F ₅
7.	Co79-501	Co71-211 X Centennial	F ₅
8.	Co79-502	Co71-211 X Centennial	F ₅
9.	Co79-505	[(N64-2451 X Dyer) X Pickett 71] X Mack	F ₅
10.	Co79-506	(N64-2451 X Dyer) X Pickett 71	F ₅
11.	F77-1793	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
12.	F77-1952	Centennial X [Forrest X (Cobb X D68-216)]	F ₆
13.	F77-2835	Forrest X (Cobb X D68-216)	F ₆
14.	F77-7446	Forrest X (Cobb X D68-216)	F ₅
15.	F77-7449	Forrest X (Cobb X D68-216)	F ₅
16.	F77-7450	Forrest X (Cobb X D68-216)	F ₅
17.	F77-7703	Forrest X (Cobb X D68-216)	F ₅
18.	F77-7717	Forrest X (Cobb X D68-216)	F ₅
19.	F78-5760	Cobb X (Bragg X D69-9801)	F ₆
20.	F78-6114	Cobb X Forrest	F ₆
21.	F78-6307	Cobb X Davis	F ₆
22.	F78-6360	Cobb X Forrest	F ₅
23.	F78-6517	Centennial X (Cobb X Hood)	F ₅
24.	F78-7086	Cobb(2) X D69-6344	F ₆
25.	F78-7138	Cobb(2) X D69-6344	F ₆
26.	Ga77-15	Hutton X D64-4636	F ₆
27.	Ga77-20	Hutton X D64-4636	F ₆
28.	Ga77-35	Hutton X D64-4636	F ₆
29.	Ga77-1317	Hutton X Co68-41	F ₆
30.	GaT77-277	Hutton X Davis	F ₅
31.	GaT77-299	Hutton X Davis	F ₅
32.	GaT77-369	Davis X Hood	F ₅
33.	GaT77-402	Dowling X Davis	F ₅
34.	N78-157	N70-1610 X N70-2173	F ₆
35.	N78-1099	N70-148 X N70-1660	F ₆
36.	N78-1123	N70-148 X N70-1660	F ₆

Table 65 - General summary of performance for the strains in Preliminary Group VIII, 1980

Strain	Seed yield	Maturity index	Ht.	Percent		SCN		Seed holding score
				Oil	Protein	race 3	race 4	
Cobb	32.6	11-5	32	20.0	43.0	S	S	2.0
Braxton	29.5	-5	31	19.4	43.7	S	S	1.0
Co79-462	32.6	-9	31	19.6	43.5	R	S	1.0
Co79-482	31.0	-15	28	20.0	43.6	S	S	2.5
Co79-498	30.6	-11	32	19.6	44.7+	R	S	2.5
Co79-499	34.6	-6	30	20.2	44.2	S	S	1.5
Co79-501	35.2	-5	32	19.3-	43.4	S	S	1.0
Co79-502	31.1	-8	30	19.2-	43.4	S	S	2.0
Co79-505	34.8	-8	31	20.2	43.6	R	S	1.0
Co79-506	31.8	-11	31	20.2	43.5	R	S	2.0
F77-1793	35.0	-1	31	19.8	45.1+	R	S	1.0
F77-1952	28.4	-5	25	19.6	44.0	R	S	1.0
F77-2835	32.8	-3	28	19.5	43.3	R	S	1.0
F77-7446	34.4	-2	32	19.7	43.8	R	S	1.5
F77-7449	33.5	-4	33	20.2	43.5	R	S	1.5
F77-7450	36.2	-4	32	19.7	43.3	R	S	1.0
F77-7703	27.5	-8	30	18.6-	44.1	R	S	1.0
F77-7717	32.8	-1	31	18.8-	43.6	R	S	1.0
F78-5760	29.5	0	29	18.9-	44.5+	R	S	1.5
F78-6114	28.3	-3	33	19.6	44.1	R	S	1.5
F78-6307	33.3	+2	32	19.5	43.5	S	S	2.0
F78-6360	31.7	+1	30	19.7	42.6	S	S	1.5
F78-6517	29.3	+1	31	19.5	43.4	S	S	1.0
F78-7086	33.5	-5	28	19.5	41.3-	S	S	1.5
F78-7138	28.2	+1	34	19.1-	43.0	S	S	1.5
Ga77-15	27.6	-6	30	18.9-	43.6	S	S	1.0
Ga77-20	27.6	-9	30	18.7-	45.8+	S	S	1.0
Ga77-35	28.2	-8	27	20.0	44.2	S	S	1.0
Ga77-1317	26.6	-7	25	19.4	45.5+	S	S	1.0
GaT77-277	29.0	-2	29	18.8-	45.4+	S	S	1.0
GaT77-299	28.1	-6	34	18.4-	45.1+	S	S	1.0
GaT77-369	27.2	-4	32	19.8	42.5	S	S	2.5
GaT77-402	29.5	-4	35	18.9-	44.9	S	S	1.0
N78-157	31.0	-11	31	20.2	43.2	S	S	1.0
N78-1099	29.2	-14	28	20.1	43.4	S	S	1.5
N78-1123	28.8	-10	28	19.9	43.5	S	S	1.0
L.S.D. (.05)	N.S.			0.6	1.3			
L.S.D. (.01)	N.S.			0.8	1.7			

Table 66 - Seed yield, in bushels per acre, for the strains in Preliminary Group VIII, 1980

Strain	*Blackville, SC	Gainesville, FL	Quincy, FL	Jay, FL	*Beaumont TX	Stoneville, MS (B)
Cobb	17.4	22.8	39.8	28.2	22.9	39.7
Braxton	22.9	19.3	34.8	26.5	26.1	37.2
Co79-462	16.0	18.4	39.2	38.4	27.5	34.3
Co79-482	12.5	20.8	37.7	33.8	27.6	31.9
Co79-498	19.5	18.9	38.4	32.7	15.8	32.6
Co79-499	16.7	22.3	45.5	41.7+	26.0	29.0
Co79-501	19.1	21.7	42.2	42.3+	26.4	35.0
Co79-502	16.9	15.9	35.7	34.4	21.0	38.8
Co79-505	11.1	23.1	41.9	38.4	23.6	35.9
Co79-506	17.9	21.8	34.1	39.5	19.7	32.1
F77-1793	22.2	25.0	39.6	36.6	28.7	38.8
F77-1952	8.0-	23.2	29.9-	28.2	22.8	32.5
F77-2835	15.4	25.7	45.0	16.9	28.0	26.9
F77-7446	14.0	22.0	46.6	29.3	20.4	39.9
F77-7449	13.4	19.6	45.2	29.9	28.9	39.3
F77-7450	22.3	20.2	45.3	40.0+	25.4	39.3
F77-7703	18.2	21.9	36.3	20.3	29.4	31.7
F77-7717	19.3	27.9	43.0	29.3	-	30.9
F78-5760	20.6	17.7	42.3	26.5	35.1	31.4
F78-6114	23.6	23.9	43.5	17.0	22.7	29.0
F78-6307	18.1	26.5	40.9	30.5	19.9	35.4
F78-6360	21.9	25.6	36.6	25.9	34.4	38.6
F78-6517	19.0	27.0	34.8	19.7	26.3	35.8
F78-7086	16.4	29.2	35.3	29.9	14.0	39.6
F78-7138	20.6	27.4	39.2	13.6-	22.2	32.7
Ga77-15	14.7	19.7	38.1	19.2	35.0	33.4
Ga77-20	7.4	15.5	34.1	20.3	23.2	40.7
Ga77-35	12.4	23.4	34.7	22.0	14.6	32.8
Ga77-1317	12.7	19.9	32.5	22.0	28.6	32.0
GaT77-277	18.1	23.4	40.5	20.3	22.0	32.1
GaT77-299	15.9	15.3-	39.1	25.4	28.6	32.9
GaT77-369	19.6	18.6	36.4	23.1	19.1	30.6
GaT77-402	16.6	23.8	37.8	26.5	26.2	29.8
N78-157	24.4	18.3	42.5	27.1	31.4	36.0
N78-1099	11.6	20.2	34.8	25.9	20.7	36.0
N78-1123	15.7	22.0	36.3	24.2	16.9	32.9
L.S.D. (.05)	7.6	7.3	7.7	11.7	N.S.	N.S.
C.V.	22%	16%	10%	20%	28%	13%

*Not included in mean.

Table 67 - Oil percentages for the strains in Preliminary Group VIII, 1980

Strain	Blackville, SC	Gainesville, FL	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Cobb	19.2	20.4	20.3	20.6	19.6
Braxton	19.0	19.0	20.3	20.0	18.7
Co79-462	19.2	19.7	20.3	19.5	19.5
Co79-482	19.5	20.0	20.5	20.4	19.7
Co79-498	19.5	18.4	20.2	20.1	20.0
Co79-499	19.3	20.3	20.9	20.5	20.0
Co79-501	18.4	17.6	19.9	20.7	20.0
Co79-502	18.4	18.5	20.1	19.1	20.0
Co79-505	18.6	20.7	21.4	19.5	21.0
Co79-506	19.1	20.6	20.7	20.5	20.1
F77-1793	19.3	19.6	20.3	19.9	20.1
F77-1952	19.6	19.8	19.7	19.3	19.5
F77-2835	18.5	19.7	19.7	20.3	19.2
F77-7446	19.3	20.2	19.9	19.7	19.6
F77-7449	19.5	20.8	20.3	20.1	20.4
F77-7450	19.9	20.1	19.8	19.6	19.3
F77-7703	18.6	18.6	18.4	19.2	18.2
F77-7717	18.3	19.3	18.6	-	18.2
F78-5760	19.8	18.1	18.9	18.9	18.8
F78-6114	19.1	20.3	19.0	20.0	19.6
F78-6307	19.6	20.0	19.5	19.2	19.1
F78-6360	19.5	20.2	19.8	20.0	19.0
F78-6517	18.2	19.9	19.9	20.0	19.3
F78-7086	18.5	20.1	19.8	20.3	19.0
F78-7138	18.3	19.4	19.3	19.7	18.7
Ga77-15	18.3	19.4	18.9	19.2	18.7
Ga77-20	18.4	18.4	19.1	19.0	18.8
Ga77-35	18.9	19.8	20.3	20.6	19.7
Ga77-1317	18.8	18.6	19.9	19.7	19.8
GaT77-277	18.5	19.4	19.2	18.6	18.5
GaT77-299	17.4	18.1	18.8	19.4	18.2
GaT77-369	19.3	19.5	20.4	20.8	19.2
GaT77-402	18.2	19.2	19.5	18.9	18.7
N78-157	20.2	20.0	20.6	20.5	19.6
N78-1099	20.1	18.8	20.4	20.8	20.2
N78-1123	19.9	19.4	20.0	20.4	19.7

Table 68 - Protein percentages for the strains in Preliminary Group VIII, 1980

Strain	Blackville, SC	Gainesville, FL	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Cobb	43.3	42.6	42.5	43.6	42.8
Braxton	44.1	45.9	42.2	43.2	43.1
Co79-462	44.2	45.5	41.8	43.8	42.1
Co79-482	45.8	45.2	42.7	41.5	43.0
Co79-498	45.4	46.9	43.8	44.9	42.3
Co79-499	45.0	44.9	44.7	43.8	42.6
Co79-501	44.1	42.3	44.2	43.4	42.9
Co79-502	44.1	45.6	42.9	43.2	41.0
Co79-505	44.3	44.9	42.7	44.9	41.3
Co79-506	45.3	44.4	42.4	43.9	41.6
F77-1793	45.4	45.4	44.6	45.9	44.2
F77-1952	44.7	44.3	44.3	43.4	43.1
F77-2835	43.4	42.6	43.8	44.6	42.3
F77-7446	42.6	45.9	43.3	44.8	42.3
F77-7449	42.7	44.6	43.5	44.5	42.0
F77-7450	43.3	43.2	43.0	44.5	42.3
F77-7703	42.7	45.4	45.3	43.2	44.1
F77-7717	44.1	43.9	45.0	-	41.5
F78-5760	44.0	45.0	44.6	45.0	43.9
F78-6114	44.0	44.2	45.2	44.7	42.6
F78-6307	41.8	43.0	43.3	44.8	44.5
F78-6360	44.0	42.5	41.9	42.1	42.5
F78-6517	41.9	42.3	44.1	44.8	43.8
F78-7086	42.0	40.4	42.1	40.8	41.3
F78-7138	43.6	43.5	43.8	41.8	42.2
Ga77-15	42.5	43.3	44.2	44.1	43.9
Ga77-20	45.6	46.9	45.3	46.7	44.6
Ga77-35	46.7	43.4	42.8	44.1	43.9
Ga77-1317	46.9	45.6	44.6	45.3	45.0
GaT77-277	45.8	44.7	45.2	45.7	45.4
GaT77-299	45.6	45.2	44.5	44.1	46.0
GaT77-369	44.0	44.1	42.1	41.4	40.9
GaT77-402	44.4	43.8	44.7	46.4	45.3
N78-157	45.2	43.5	42.8	42.2	42.2
N78-1099	45.4	44.4	42.8	42.1	42.3
N78-1123	45.1	43.7	43.0	42.8	42.7

Table 69 - Plant height for the strains in Preliminary Group VIII, 1980

Strain	Gainesville, FL	Quincy, FL	Jay, FL	Stoneville, MS (B)
Cobb	34	25	28	41
Braxton	32	20	32	40
Co79-462	31	25	34	35
Co79-482	33	20	24	35
Co79-498	30	27	32	39
Co79-499	34	24	28	33
Co79-501	31	24	32	40
Co79-502	29	24	28	39
Co79-505	34	26	28	37
Co79-506	32	23	30	37
F77-1793	30	22	30	39
F77-1952	26	18	26	30
F77-2835	31	22	26	34
F77-7446	34	25	32	38
F77-7449	34	25	38	36
F77-7450	29	23	32	42
F77-7703	34	25	24	37
F77-7717	33	23	30	38
F78-5760	29	26	26	35
F78-6114	37	25	30	39
F78-6307	35	25	28	39
F78-6360	30	24	26	38
F78-6517	33	24	28	39
F78-7086	28	20	26	39
F78-7138	33	28	32	43
Ga77-15	25	23	30	40
Ga77-20	28	22	30	38
Ga77-35	26	21	26	34
Ga77-1317	24	17	22	37
GaT77-277	29	22	30	34
GaT77-299	34	26	34	40
GaT77-369	32	25	34	35
GaT77-402	37	25	36	41
N78-157	29	26	30	37
N78-1099	27	21	28	36
N78-1123	28	22	28	34

Table 70 - Seed quality scores for the strains in Preliminary Group VIII,
1980

Strain	Gainesville, FL	Quincy, FL	Jay, FL	Beaumont, TX	Stoneville, MS (B)
Cobb	1.0	2.0	2.0	2.0	2.0
Braxton	3.0	2.0	3.0	2.0	2.0
Co79-462	2.5	1.0	2.0	3.0	2.0
Co79-482	3.0	2.0	3.0	1.0	2.0
Co79-498	2.0	2.0	3.0	4.0	2.0
Co79-499	1.5	2.0	2.0	2.0	2.0
Co79-501	2.5	1.0	3.0	1.0	2.0
Co79-502	4.0	4.0	3.0	4.0	2.0
Co79-505	3.0	3.0	3.0	1.0	2.0
Co79-506	2.5	3.0	2.0	1.0	2.0
F77-1793	1.0	2.0	2.0	2.0	2.0
F77-1952	2.0	2.0	2.0	2.0	2.0
F77-2835	1.5	2.0	3.0	3.0	2.0
F77-7446	1.5	2.0	2.0	3.0	2.0
F77-7449	2.0	2.0	3.0	2.0	2.0
F77-7450	2.0	1.0	3.0	1.0	2.0
F77-7703	1.0	2.0	2.0	1.0	2.0
F77-7717	1.5	2.0	2.0	-	2.0
F78-5760	1.5	2.0	2.0	2.0	2.0
F78-6114	1.5	2.0	4.0	3.0	2.0
F78-6307	1.0	2.0	3.0	1.0	2.0
F78-6360	1.0	2.0	2.0	1.0	2.0
F78-6517	1.5	1.0	2.0	1.0	2.0
F78-7086	1.0	2.0	3.0	3.0	2.0
F78-7138	1.0	2.0	2.0	1.0	2.0
Ga77-15	2.0	2.0	2.0	1.0	2.0
Ga77-20	1.5	1.0	3.0	2.0	2.0
Ga77-35	1.5	2.0	3.0	2.0	2.0
Ga77-1317	1.5	1.0	3.0	2.0	2.0
GaT77-277	1.5	2.0	3.0	2.0	
GaT77-299	3.0	1.0	3.0	1.0	2.0
GaT77-369	2.5	1.0	2.0	1.0	2.0
GaT77-402	2.5	2.0	3.0	1.0	2.0
N78-157	2.5	2.0	3.0	1.0	2.0
N78-1099	2.0	2.0	2.0	1.0	2.0
N78-1123	2.5	1.0	3.0	2.0	2.0